SCHRUMPFHALTER

SLIMLINE

Slimline-Halter können in allen Hochgeschwindigkeits- und Hochpräzisions-Bearbeitungszentren verwendet werden.

Slimline-Halter können bei einer Vielzahl verschiedener Anwendungen eingesetzt werden.

Hochgenaue Feinbearbeitung

Hohe Drehzahlen und hohe Vorschubgeschwindigkeiten

Hochgeschwindigkeits- und Schwerzerspanung

Synchronisierte 5-Achsen-Bearbeitung

Bearbeitung mit höchster Qualität

Linearmotorantrieb

MIKRON
HSM400 / UCP600, UCP800, UCP1350

DIXI
Jig 1200 5 axes

WILLEMIN-MACODEL
W408-MT, W418, W428, W-518S, W-518MT

Schweiz

KONDIA
Seaska600

NICOLAS CORREA
Pantera, Rapid Aero

Spanien

Italien

FIDIA
HS664RT / KR211 / K199 / K165RT

MECOF
Linea Dynamill 2000

PARPAS
Omnia series / Diamond series

FAMUP
MF560-X5B, HV2000-X5

JOBS
JO' MACH series, JO' MACH2 series, Linx BLITZ, Linx COMPACT,

Medizintechnik

Optische Nachrichtenübertragung

Luftfahrttechnik

Kraftfahrzeugtechnik

Kfz-Batterien

Halbleiterbauelemente

MITSUI SEIKI
VL30 / HU Series

ROKU-ROKU
MEGA Ⅲ / NANO-21 / CEGA-542

SODICK HIGHTECH
MC430L / MC650L / HS150L

MAKINO
V22 / V33 / J3

MORI SEIKI
NVD1500 DCG / NV4000 DCG / NX2000 DCG / NMV5000DCG

MITSUBISHI
μ machining V1

NIPPEI TOYAMA
Zμ3500

BROTHER
TC-32B QT

MATSUURA
LX-1 / LX-0 / MAM72 Series

SUGINO
V9 / Xion- Ⅱ

OKK
VD300

Japan

CINCINNATI MACHINE
V5-2000, V5-3000, V5-4000, H5-800/1000

HAAS AUTOMATION
5-AXIS TRUNNION 5-AXIS PROFILING

U.S.A.

Großbritannien **BRIDGEPORT**
5AX-400, 500, 630

Frankreich

FOREST-LINE
Aerostar, Aeromill, Minumac, Vstar, etc.

HURON
KX8 Five, KX15, KX100, KX200, KXG45

Deutschland

KERN
HSPC2525

OPS-INGERSOLL
OPS600

ROEDERS GMBH
RHP 600

HERMLE
C Series

ALTZMETALL
G800

CHIRON
FZ15KS, FZ15S, FZ18S

DIGMA
HSC800 / 5

DMG
DMC60S-FD

HURCO
MTX U

STAMA
MC526 / MT, MC531 / MT

WALDRICH-SIEGEN
Multi Contour, Multi Profiler

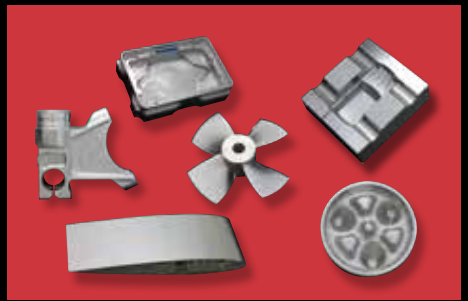
NAK81

Inconel Zirkondioxid

HRC62° Ti-6AI-4V

SKD61 Quarzglas

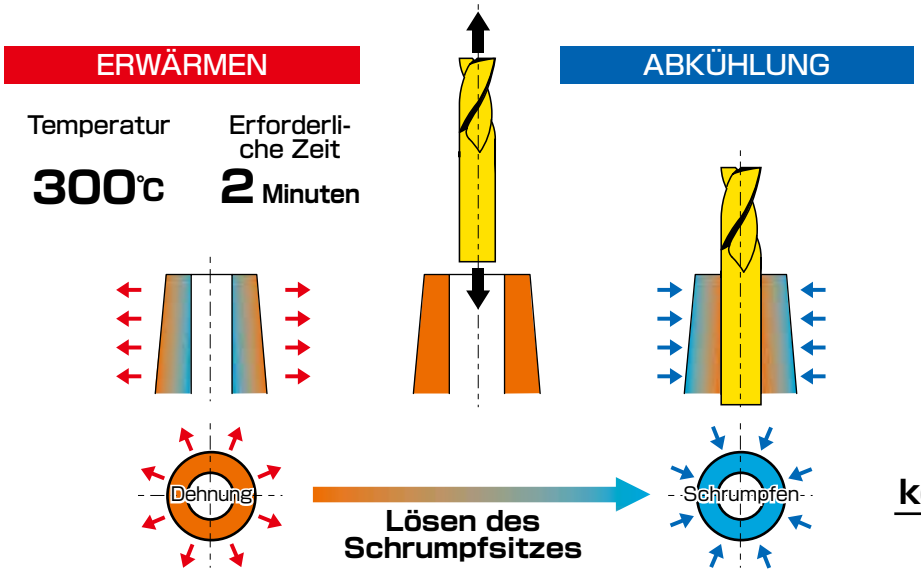
STAVAX

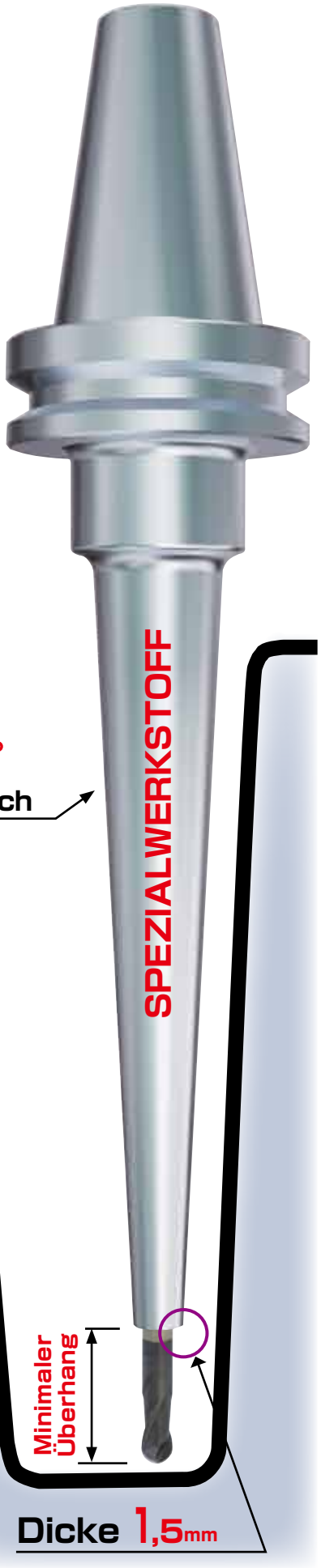


Mechanismus der Wärme-schrumpfung

SLIMLINE

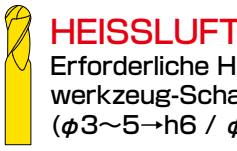
Slimline ist ein Schrumpfhaltersystem, in dem Hartmetall-Bearbeitungswerkzeuge sicher und präzise eingespannt werden können. Mit den einzigartigen und exklusiv für MST hergestellten Materialien, die beim Bau der MST-Werkzeughalter verwendet werden, können bei Temperaturen von 300℃ und darunter Kaltschrumpfpresspassungen hergestellt werden. Slimline verwendet dafür ein auf einem Industrietrockenofen basierendes, weiterentwickeltes Heißluft-Schrumpfsitzheizgerät. Eine Produktpalette von 300 Werkzeughaltern mit unterschiedlichen Formen ist für eine Vielzahl verschiedenster Anwendungen erhältlich. Einfacher Aufbau und ultraschlanke Form ermöglichen äußerst geringe Werkzeugausladung und kraftvolles, stabiles und sicheres Einspannen bei gleichbleibend hoher Genauigkeit.





Spezialmaterial für Schrumpfsitz

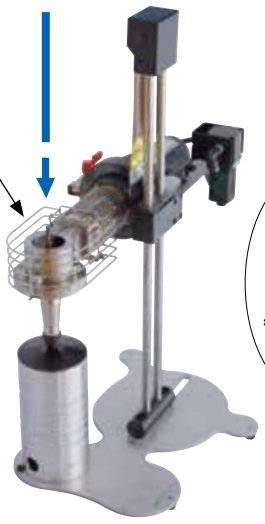
- Der thermische Ausdehnungskoeffizient ist 1,6 mal höher als der von herkömmlichem Stahl.
- Einschrumpfen und Ausschrumpfen wird mit einem Heißluftheizgerät erreicht.
- Kann zum Abkühlen in Wasser eingetaucht werden.
- Keine Überhitzung auch bei langer Erwärmung.
- Extrem dünne, 1,5 mm dicke Wände.



HEISSLUFT-HEIZGERÄT
Erforderliche Hartmetallwerkzeug-Schafttoleranz
(φ3～5→h6 / φ6～25→h7)

Induktionserwärmungssystem

Düse

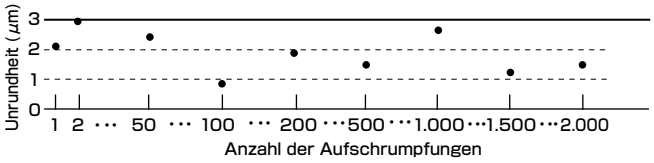


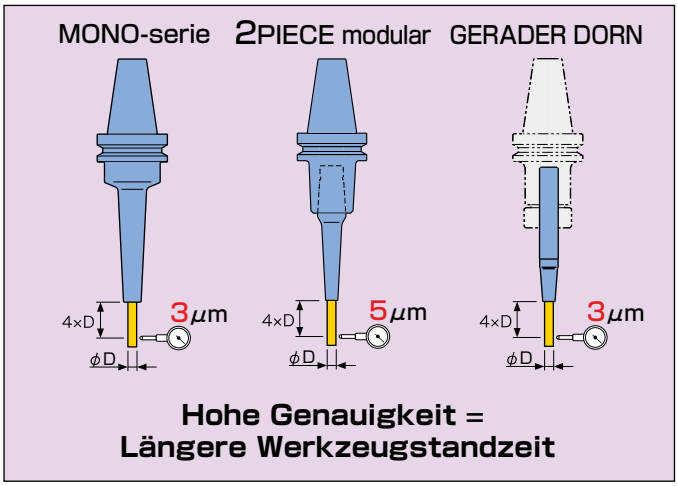
Wasserkühlung
Kann unmittelbar nach dem Aufschrumpfen in Wasser abgekühlt werden. Ein Großkühler wird nicht benötigt.

Hohe Genauigkeit

Unabhängig von Fachkenntnissen und Erfahrung können Werkzeuge fest, sicher und mit hoher Genauigkeit eingesetzt werden. Slimline-Halter können ohne Genauigkeitsverlust für über 2.000 Schrumpfpressverbindungs- und -trennvorgänge verwendet werden.

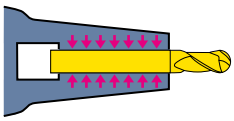
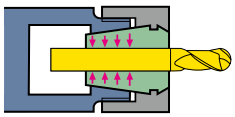
Test mit wiederholtem Aufschrumpfen und Abtrennen





Hohe Genauigkeit =
Längere Werkzeugstandzeit

Hohe Spannkraft

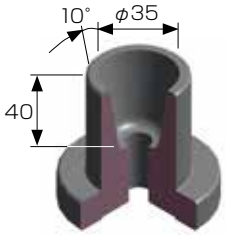
	Schrumpf-Halter (Slimline)	Spannzangenhalter (herkömmlicher Halter)
Einspannmechanismus	Ein Schrumpfpresspassungssystem, das sich die unterschiedlich großen thermischen Ausdehnnugskoeffizienten des Halters und des Hartmetallwerkzeugs zunutze macht.	Ein System, bei dem ein Zerspanungswerkzeug die elastische Verformung einer Spannzange nutzt, die mit Schlitzen versehen ist.
Spannkraft (ϕ6)	6,2 kgm	2,1 kgm
	 Wärmedehnung ➡ Aufschrumpfkraft	 Elastische Verformung

Doppelt so lange Werkzeugstandzeit

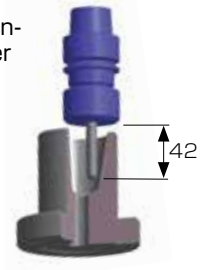
Gesamtbearbeitungslänge Schaftfäser

Prozess	Schruppen		Schlichten	
Werkstoff \ Werkzeug	Spannzangenhalter E32-CTH10-55 (C10-6P)	Slimline E32-SLRA6-50-M22	Spannzangenhalter E32-CTH10-55 (C10-6P)	Slimline E32-SLRA6-50-M22
SKD61 (50HRC)	Das Doppelte → 180m	360m	1,5 mal so lang → 90m	135m
SKD11 (60HRC)	1,5 mal so lang → 40m	60m	Das Doppelte → 45m	90m

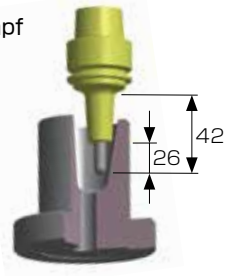
F (Vorschub) : 3.000mm/min.
t (Schnitttiefe) : 0,15mm
N (Drehzahl) : 24.000min^{-1}
Maschine:
SODICK HIGHTECH MC430L
Werkzeug:
MITSUBISHI MATERIAL KOBE TOOLS
Hartmetall-Bearbeitungswerkzeug mit 2 Span-Nuten
Schaftfräser mit runder Stirn IMPACT MIRACLE (R3)
VF-2SB-R0300S06



Spannzangenhalter



Schrumpf Halter



Kompatibel mit Funktion für Kühlmittelzufuhr durch das Werkzeug

Ermöglicht zuverlässige Kühlmittelzufuhr ohne Undichtigkeiten. Kein Zubehör erforderlich.

Kundenspezifische Anfertigung

Eine kundenspezifische Anfertigung (zusätzliche Bearbeitung) ist ebenfalls möglich, um Platzprobleme zu vermeiden – dazu wird die Halterwanddicke auf 1,5 mm reduziert.
Zu Einzelheiten siehe Seite 152.

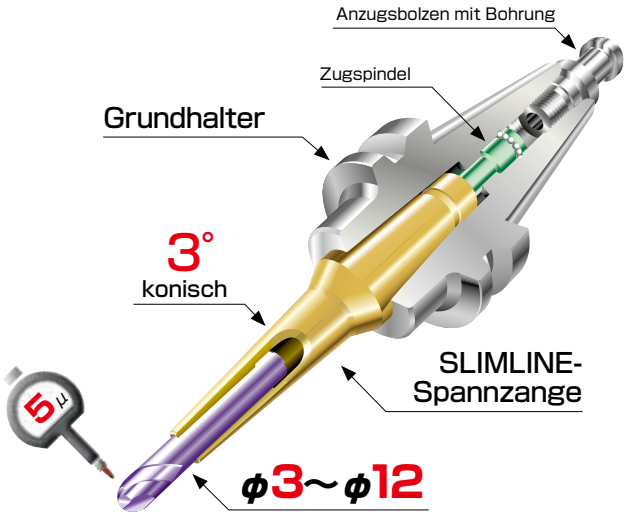
Modulares System

2 PIECE MODULAR SYSTEM

Kompatible Durchmesser von Bearbeitungswerkzeugen

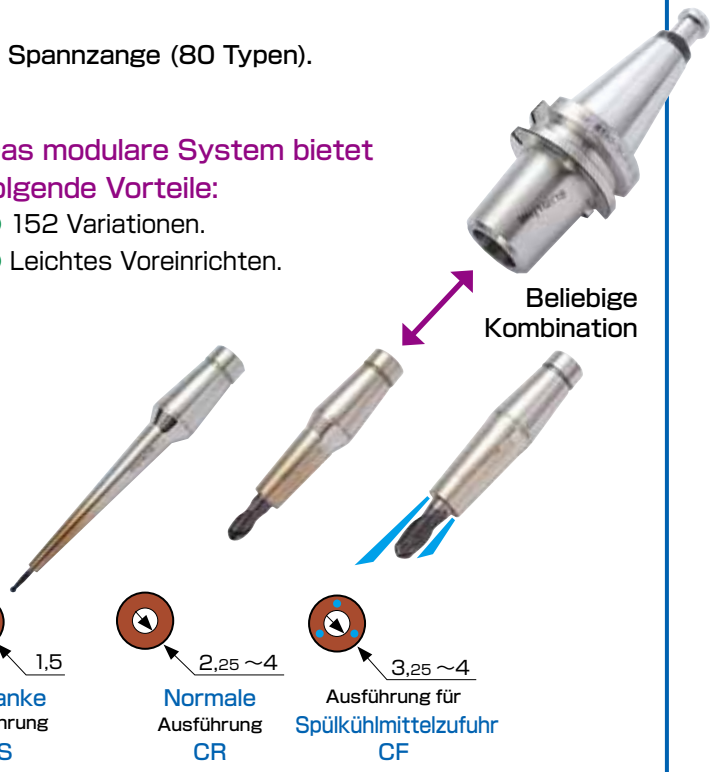
ϕ3~ϕ12

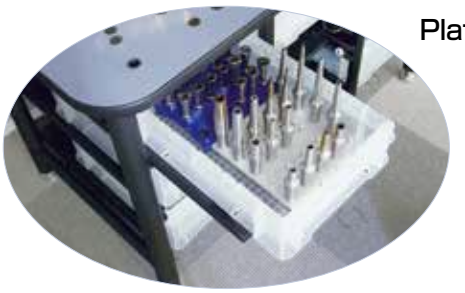
- Kompakt – Einfach zu lagern und zu handhaben.
- Eine Vielzahl von Kombinationen Schaft (21 Typen) / Spannzange (80 Typen).



Das modulare System bietet folgende Vorteile:

- 152 Variationen.
- Leichtes Voreinrichten.





Platzsparend

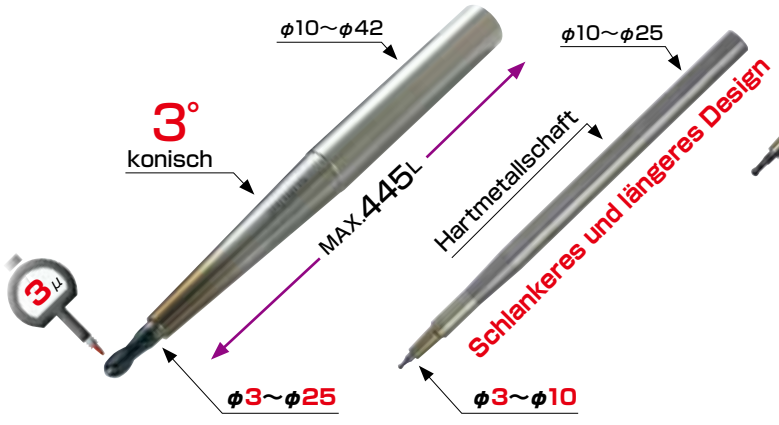
Neuzusammenstellung von Spannzangen

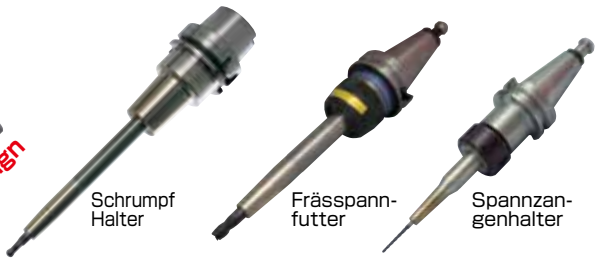
GERADER DORN SYSTEM

Kompatible Durchmesser von Bearbeitungswerkzeugen

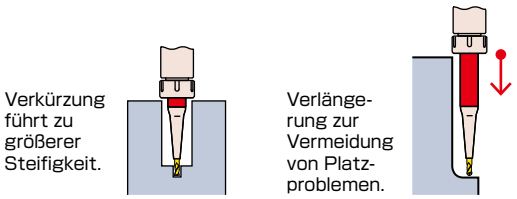
ϕ3~ϕ25

- Vergrößerung der Reichweite von Standardbearbeitungswerkzeugen ohne Präzisionsverlust.
- Bei Kombination mit den verschiedenen Hartmetall-Typen sind insgesamt 111 Variationen möglich.





Zur Gewährleistung eines perfekten Sitzes ist die Länge frei einstellbar.



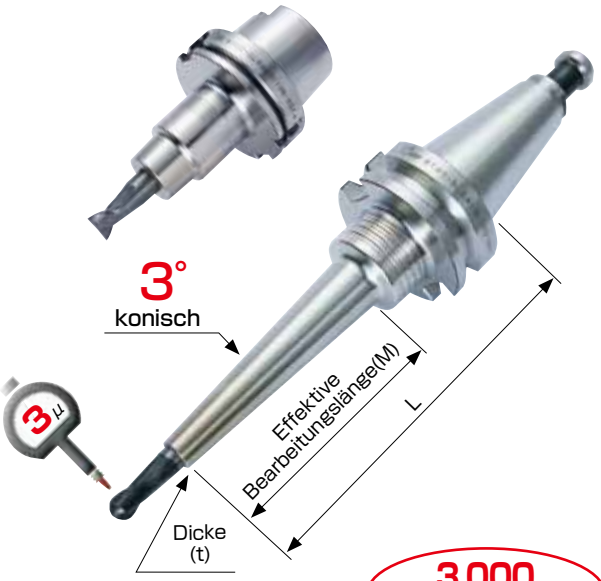
Mono Block Serie

MONO SERIE SYSTEM

Kompatible Durchmesser von Bearbeitungswerkzeugen

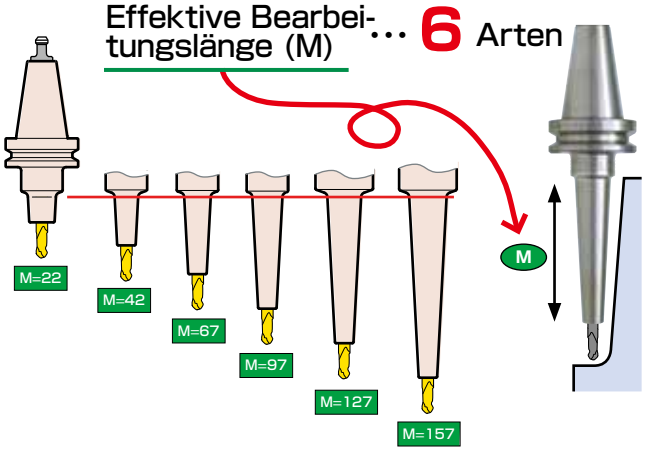
φ3～φ25

➤ Sie können den für Ihre Bearbeitungsanforderungen am besten geeigneten Halter aus 3.000 Variationen von verschiedenen Schaftformen, Aufspanndurchmessern für Zerspanungswerkzeuge, Halterlängen (L), effektiven Bearbeitungslängen (M) und Halterkantendicken auswählen.



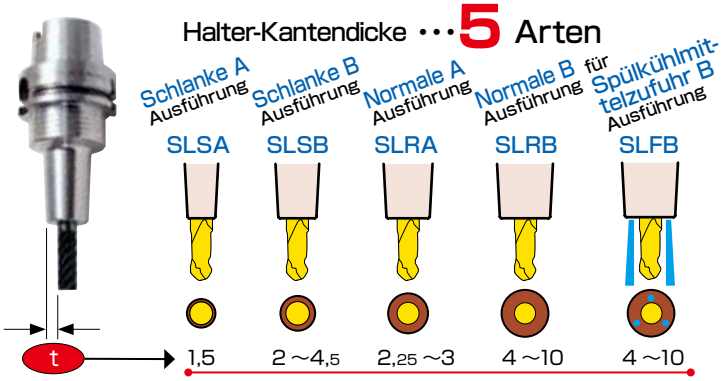
3,000 Variationen

Effektive Bearbeitungslänge (M) ··· **6** Arten



Die optimale Form kann basierend auf den Abmessungen Ihres Werkstücks ausgewählt werden.

Halter-Kantendicke ··· **5** Arten



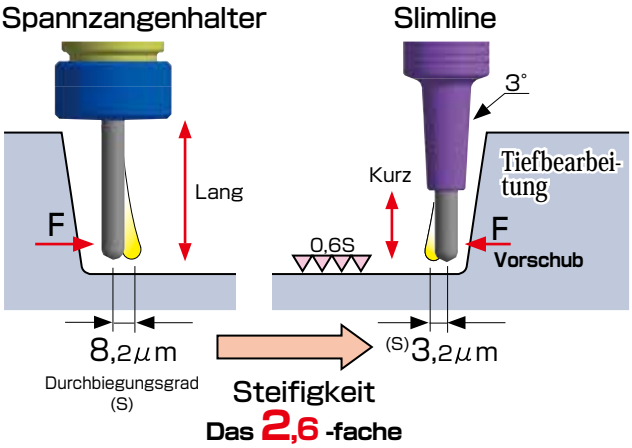
Hohe Steifigkeit

➤ Aufgrund ihrer kompakten und schlanken Bauform mit nur einem Winkel von 3 Grad und einer Wanddicke von lediglich 1,5 mm gibt es zwischen Slimline-Haltern und Werkstücken nur in den seltensten Fällen Platzprobleme.

Slimline gewährleistet eine wesentlich längere Lebensdauer für Ihre Bearbeitungswerkzeugen. Die mit herkömmlichen Haltern schwierig auszuführende Tiefbearbeitung ist nun einfacher möglich.

Perfekte Eignung für tiefe Hohlräume mit dreidimensionaler Form oder die Bearbeitung von 5-Achsen-Turbinenschaufeln.

Nur mimimaler Werkzeugüberstand



➤ **Die am besten geeignete Einstellung für hohe Steifigkeit wird automatisch errechnet.**

Der Überstand des Bearbeitungswerkzeugs hat großen Einfluss auf die Durchbiegung (Steifigkeit).
Die Durchbiegung nimmt proportional zur Überhanglänge (L^3) zu.

$$\text{Durchbiegungsgrad}(S)=\frac{6{,}8\times F\times L^3}{E\times D^4}$$

L:Überhanglänge
E:Elastizitätsmodul (Hartmetall 59000 kg/mm^2)
D:Schaftdurchmesser F:Last

Software zur Berechnung der statischen Steifigkeit für Slimline

Kostenlose Software zur Überprüfung auf mögliche Platzprobleme zwischen Werkstücken und Haltern ist verfügbar.

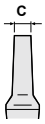
Siehe Seite 155.

SCHRUMPFHALTER
SLIMLINE

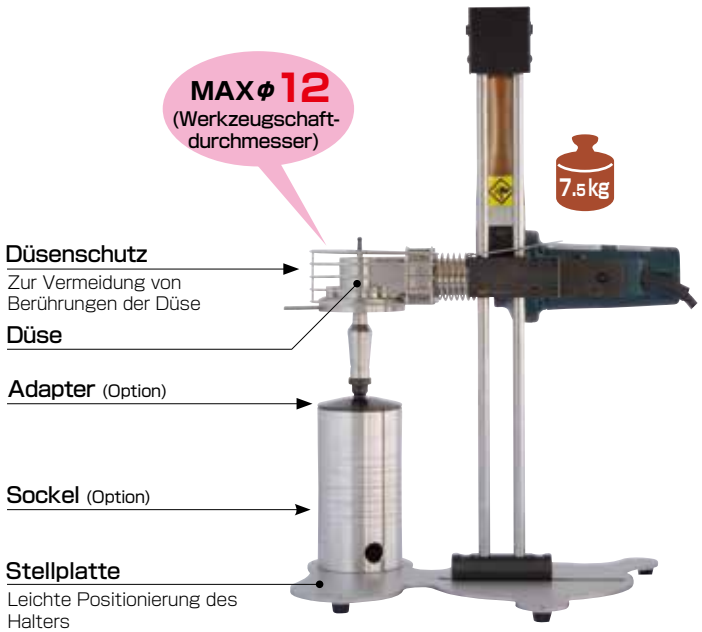
SCHRUMPF-HEIZSYSTEM

HEAT ROBO Baby 1200S

HEISSLUFT-HEIZGERÄT
100 V AC 120 V AC 1.2kW
120 sek. (φ6 Spannzangen)

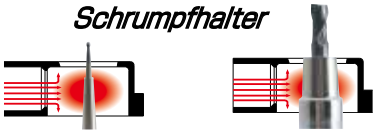
CODE	HRB-02S	HRB-02S-120NA
SPANNUNG	100 V AC	120 V AC
ENERGIE-VERSORGUNG	1200W	
ABMES-SUNGEN	B362 × T105 × H570	
EFFEKTIVE SCHRUMPF-SITZ-ABMES-SUNGEN	 Max. C = Durchm. 32 (Max Durchm. 24 nur für Typ M22)	
ERWÄR-MUNGSZEIT	120 SEK.(Ø6 Spannzange)	

■Standardzubehör •Pinzette •Zeitschaltuhr •Hitzeunmpfindliche Handschuhe
■Option •Bitte wählen Sie unter den allgemein angebotenen Teilen auf Seite 8 aus.



HEAT ROBO Baby 3000S

Verwendbar für alle MST-Schrumpfhalter

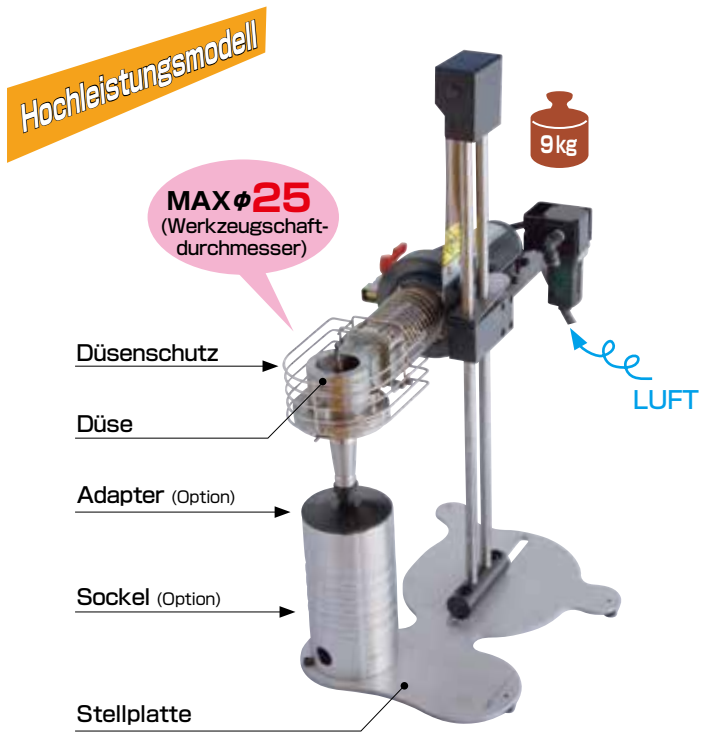


Hochleistungsmodell

HEISSLUFT-HEIZGERÄT
200 V AC 230 V AC 3kW
70 sek. (φ6 Spannzangen)
Luftkühlung 10 Min.
CE 230EU

CODE	HRB-03S	HRB-03S-230NA -230EU -230AS
SPANNUNG	200 V AC	230 V AC
ENERGIE-VERSORGUNG	3000W	
ABMES-SUNGEN	B450 × T215 × H570	
ERWÄR-MUNGSZEIT	70 SEK. (Ø6 Spannzange)	

■Standardzubehör •Pinzette •Zeitschaltuhr •Hitzeunmpfindliche Handschuhe
■Hinweis •Werkstatt-Druckluftquelle (5 kg/cm²) ist erforderlich (Luftverbrauchsmenge : 245 ℓ/min) •Bitte Luftleitung (Außendurchmesser 8 mm) und Anschlusskupplung bereitstellen.
■Option •Bitte Teile auf Seite 8 auswählen



★*Kostengünstiges Heißluft-Modell*

★*Elektromagnetisches Induktionswärmegerät*

★ *Sofortaufschrumpfung*

★ *Leichte Bedienung*

★ *Einfache Positionierung mit einer Hand..*

★*Wasserkühlung – Erheblich verkürzte Kühlzeit*

★ *Niedertemperatur-schrumpfen bei 300°C*

ELEKTROMAGNETISCHES INDUKTIONSWÄRMEGERÄT

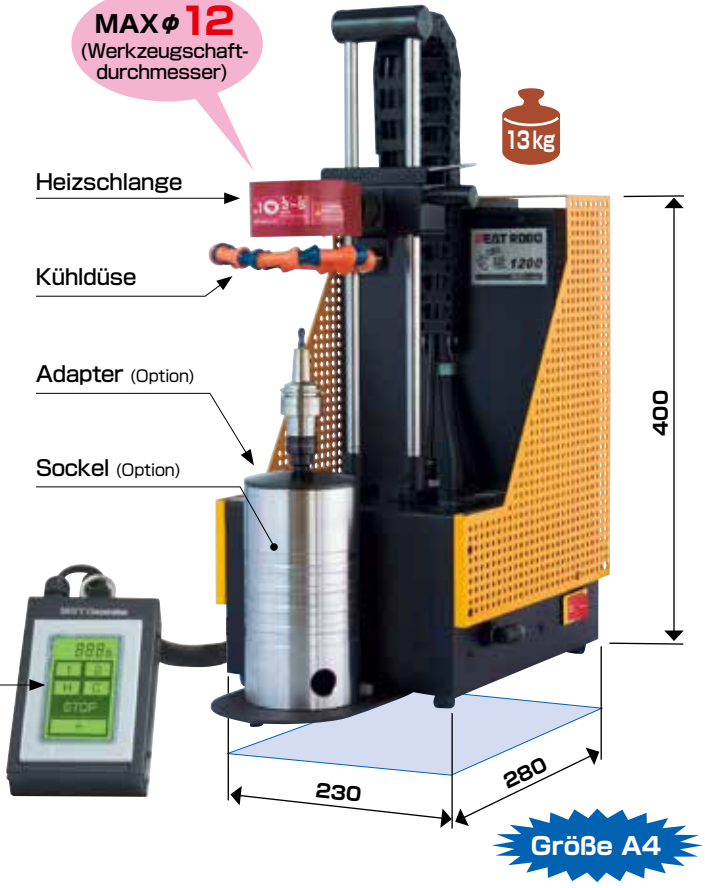
100 V AC 1.2kW

18 sek. (φ6 Spannzangen)

Luftkühlung 1 Min.

CE

Tischgerät



HEAT ROBO

DENJI 電磁 1200

CODE	HRD–01
SPANNUNG	100 V AC
ENERGIE-VERSORGUNG	1200W
ABMESSUNGEN	B270 × T410 × H550
ERWÄRMUNGSZEIT	18 SEK. (Ø6 Spannzange)

■Standardzubehör •Heizschlange (2 Stück) •Pinzette •Hitzeunmpfindliche Handschuhe

■Hinweis •Werkstatt-Druckluftquelle (5 kg/cm²) ist erforderlich (Luftverbrauchsmenge : 245 ℓ/min) •Bitte Luftleitung (Außendurchmesser 8 mm) und Anschlusskupplung bereitstellen.

Transformator für HEAT ROBO DENJI 1200

Der HEAT ROBO DENJI 1200 ist für 100 V ausgelegt. Der Transformator ist für Spannungen von 120 V und 230 V erforderlich. (MST liefert auch Geräte mit diesen Spannungswerten.) Die technischen Daten sind unten angegeben.

Spannungs-ausgang	100 V AC	
Frequenz	50/60Hz	
Nennleistung	1500 W	
Eingang	120V AC	230V AC
Eingangs-buchse	A Typ	SE typ

Heizschlange (Standardzubehör)

	CODE	ERWÄR-MUNGSZEIT	ERWÄR-MUNGSZEIT
Heizschlange 1	HRD–CL1–01	18sec.	φ3～ 6mm
Heizschlange 2	–CL2–01	33sec.	φ7～12mm

Heiz-schlange 1

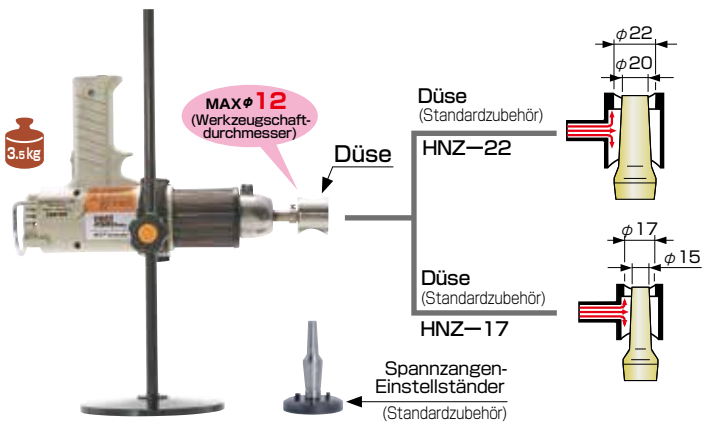
Heiz-schlange 2

HEISSLUFT-HEIZGERÄT

100 V AC 1kW

180 sek. (φ6 Spannzangen)

Wirtschaftliches, vereinfachtes Modell



HEAT ROBO Baby1000

CODE	HRB–01
SPANNUNG	100 V AC
ENERGIE-VERSORGUNG	1000W
ABMESSUNGEN	B340 × T160 × H410
ERWÄRMUNGSZEIT	180 SEK. (Ø6 Spannzange)

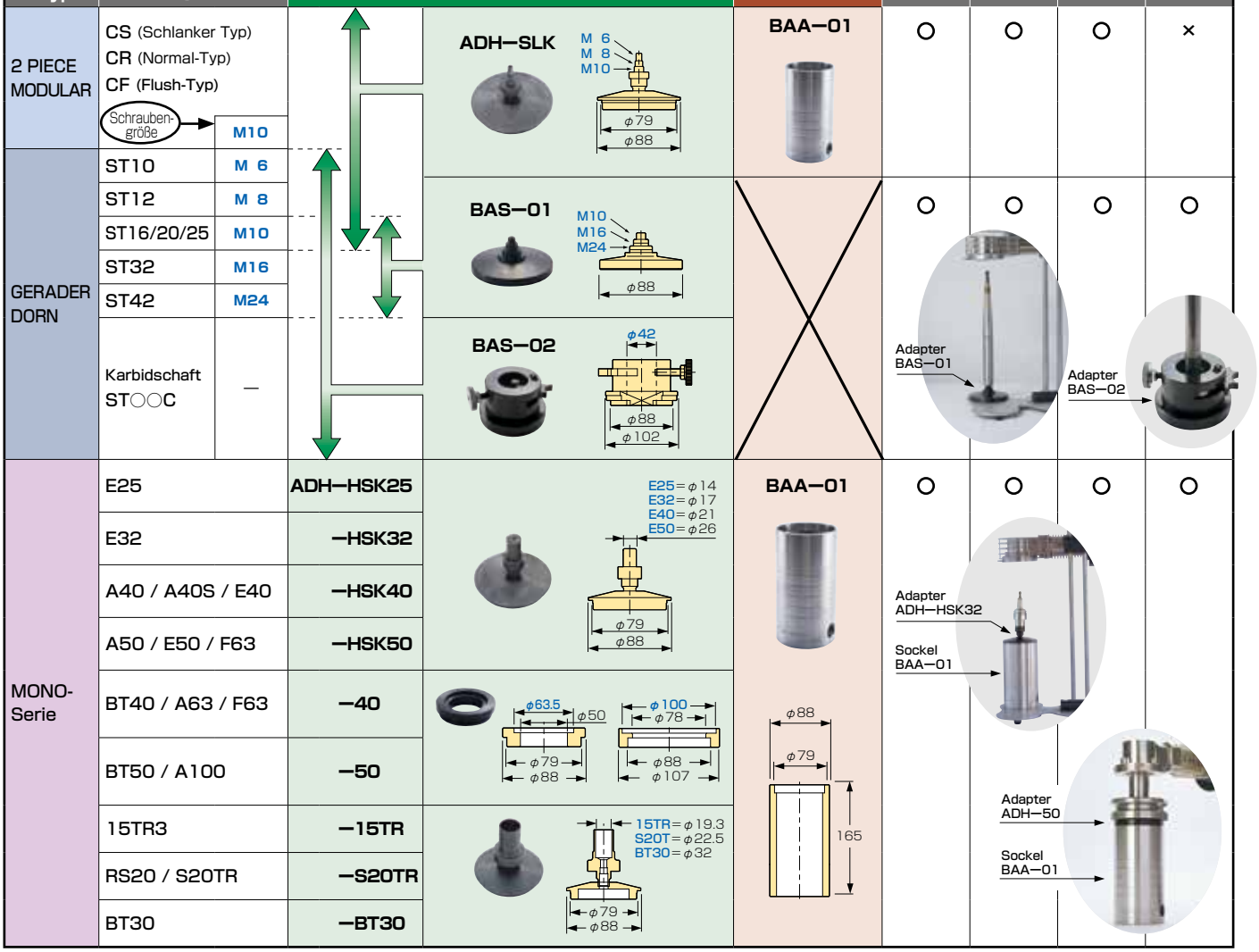
■Standardzubehör •Pinzette •Zeitschaltuhr •Hitzeunmpfindliche Handschuhe •Spannzangen-Einstellständer •Düse(2 Stück)

Erforderlich!

Einrichtlehren für Schrumpfhalter (Adapter・Sockel)

In der nachstehenden Tabelle sind Vorrichtungen zum Befestigen und Positionieren eines Slimline-Schrumpfhalter an einem Schrumpfheizsystem dargestellt. Es werden entweder separate Adapter oder mit einem Sockel kombinierte Adapter verwendet.

Halter Typ	Halter Form		Adapter	Sockel	Schrumpf-Heizgerättypen HRD—01	HRB—02S	HRB—03S	HRB—01
2 PIECE MODULAR	CS (Schlanker Typ) CR (Normal-Typ) CF (Flush-Typ) Schraubengröße →	M10	ADH—SLK	BAA—01	○	○	○	×
GERADER DORN	ST10	M 6						
	ST12	M 8						
	ST16/20/25	M10	BAS—01		○	○	○	○
	ST32	M16						
	ST42	M24						
	Karbidschaft ST○○C	—	BAS—02					
MONO-Serie	E25	ADH—HSK25		BAA—01	○	○	○	○
	E32	—HSK32						
	A40 / A40S / E40	—HSK40						
	A50 / E50 / F63	—HSK50						
	BT40 / A63 / F63	—40						
	BT50 / A100	—50						
	15TR3	—15TR						
	RS20 / S20TR	—S20TR						
	BT30	—BT30						



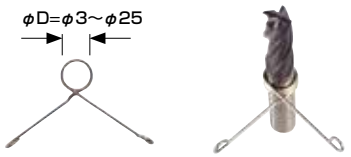
Erforderlich!

Werkzeuganschlag

Wird bei Aufschrumpfvorgängen oder beim Entfernen von Bearbeitungswerkzeugen als Stopper in der Halteröffnung verwendet.

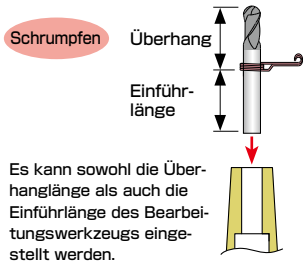
HSA-Typ (Spiralfedertyp)

CODE	D	Anzahl (1 Satz)
HSA—D	3, 3.175, 4, 5, 6, 7, 8, 9, 10, 11, 12, 16, 20, 25	Enthält bei allen Grössen 10 Stück
—F	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Insgesamt 10 Stück pro Satz
—EF	3, 4, 5, 6, 8, 10, 12, 16, 20, 25	Insgesamt 10 Stück pro Satz (bei Schaftfräsergrößenabstufung)



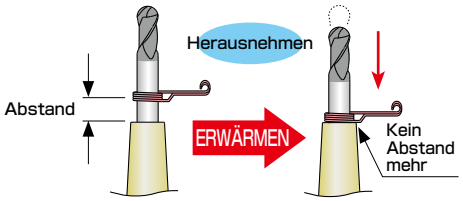
- Kompatibel mit Bearbeitungswerkzeugen mit einem Durchmesser von 3 bis 25 mm. Hinweis: Kann nicht mit Heat Robo Denji verwendet werden.

Einsetzen



Es kann sowohl die Überhanglänge als auch die Einführlänge des Bearbeitungswerkzeugs eingestellt werden.

Herausnehmen



Etwas Abstand lassen und den Anschlag befestigen.

Kann nun herausgenommen werden!

HSB-Typ (Blattfedertyp)

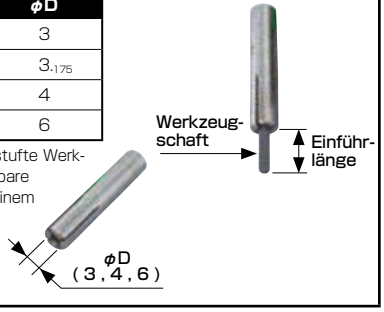
CODE	D
HSB —D	3, 3.175, 4, 6, 8, 10, 12, 16, 20, 25

- Kann sicher festgestellt und stabilisiert werden.

HSC-Typ (Schlitzspannzangen-Typ)

CODE	φD
HSC —3	3
—3.175	3.175
—4	4
—6	6

- Bequem für abgestufte Werkzeuge (nicht wendbare Werkzeuge) mit kleinem Durchmesser.



Praktisches Sonderzubehör **Flexibilität!**

Spannzangenständer

Ständer für Slimline-Spannzangen

CODE
SDK—01

Größe : 190×190

- Zur platzsparenden Aufbewahrung von Slimline-Spannzangen.
- Hergestellt aus Aluminium, gewährleistet hervorragende Kühlung für maximal 25 Spannzangen.

Haltergestell

Gestell für kleine Halter der Slimline Mono Serie (E25, E32)

CODE	HALTERCODE
SDT—01	HSK-E25,E32

Größe : 160×170

- Zur platzsparenden Lagerung von E25 und E32-Haltern.
- Hergestellt aus Aluminium, gewährleistet hervorragende Kühlung für Warmbearbeitungswerkzeuge

Werkzeugablage

Ablage zum Abkühlen von noch heißen Bearbeitungswerkzeugen unmittelbar nach der Entnahme aus dem Halter

CODE
SDH—01

Größe : 170×170

- Zum Abkühlen von Zerspanungswerkzeugen auf der Ablagefläche.
- Aus Aluminium.

Hitzeunmpfindliche Handschuhe

Zusätzliche Sonderartikel

CODE	HINWEIS
HTB—01	—
—R	Rechte Hand
—L	Linke Hand

- Stets wärmeunempfindliche Schutzhandschuhe tragen, da während der Arbeit Hitze entsteht.
- Alle Schrumpf-Heizgerättypen werden mit einem Paar Handschuhe geliefert.

Werkzeugzange

Bei Aufschrumpf- und Entnahmevorgänge sind keine Handschuhe nötig. (Es wird eine Zange verwendet.)

CODE
HPY—01

- Werkzeugschäfte mit einem Durchmesser von 3 bis 12 mm können eingespannt werden.

Zange für Stopper

Zange für Werkzeugan-schlag (HSB Typ)

CODE
SPY—01

Bürstensatz

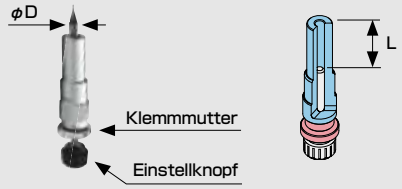
Reinigungsbürste für Slimline-Aufspannbohrung

CODE
AQC—BR—SET

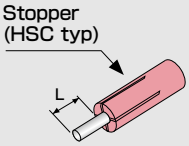
- Satz besteht aus je 1 Bürste 3, 4, 6mm

Werkzeugeinsteller

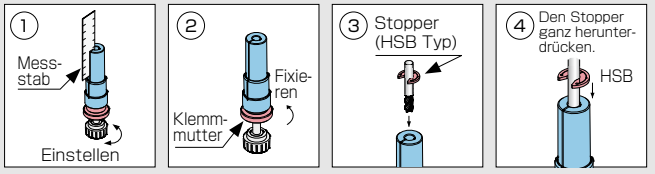
Ermöglicht Ihnen das Einstellen des Überhangs eines Bearbeitungswerkzeugs bzw. das Ausrichten der Längen von mehreren Bearbeitungswerkzeugen. (Wird in Kombination mit einem HSB- oder HSC-Stopper verwendet)



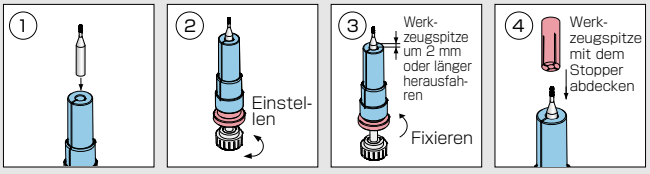
CODE	φD	L
HAJ— 3	3	10~ 30
— $3_{.175}$	$3_{.175}$	
— 4	4	13~ 30
— 6	6	19~ 45
— 8	8	25~ 55
—10	10	31~ 70
—12	12	31~ 85
—16	16	33~ 90
—20	20	41~100
—25	25	46~100



Einstellen der Überhanglänge eines Zerspanungswerkzeugs mit dem HSB-Stopper.



Einstellen der Einführlänge eines Bearbeitungswerkzeugs mit dem HSC-Stopper



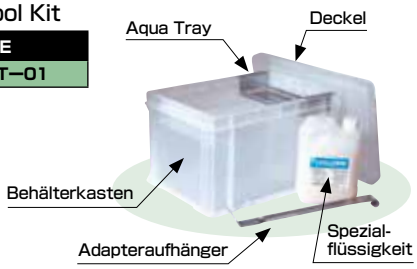
Aqua Cool Kit

Praktischer Wasserkühlsatz zum Abkühlen von Slimline-Haltern nach dem Aufschrumpfen oder der Entnahme

Aqua Cool Kit

CODE
AQC—KIT—01

1. Verkürzung der Kühlzeit — Schon nach 10 Sekunden abgeschlossen.
2. Sicherheit — Damit können Sie einen erwärmten Halter zusammen mit seinem Adapter in Wasser kühlen.
3. Rostschutzwirkung — Eine Rostschutzbehandlung bietet langfristigen Schutz gegen Rostbildung.
4. Reinigungswirkung — Kann auch zum Entfernen von Fett und Schmutz verwendet werden.



Standard Zubehör — Jeder 1 Stück

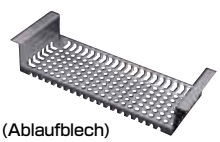
Spezialflüssigkeit

CODE
AQC—EK—01—2

- Inklusive 2ℓ unverdünnter Lösung
- Einsatz mit 3%-iger Verdünnung.

Aqua Tray

CODE
AQC—AT—01



(Ablaufblech)

Adapteraufhänger

CODE
AQC—AH—01

Behälterkasten

CODE
CN—245

Deckel für Behälterkasten

CODE
CN—FT

Aufbewahrungskästen für Werkzeughalter

Aufbewahrungskasten für Schrumpfsitzhalter in kleinen Hochgeschwindigkeitsbearbeitungszentren

Kompakter Lagerungskasten mit Rostschutzbehandlung für Slimline-Schrumpfsitzhalter

Passend für verschiedene Halterausführungen

HALTERCODE
HSK—A40
HSK—A50
HSK—E25
HSK—E32
HSK—E40
HSK—E50 , F63
15T (BROTHER)
20T (SUGINO)

Transparentes

Gehäuse!!

Vielfältige Anordnungsmöglichkeiten

Es kommt eine Grundplatte mit einer großen Anzahl Bohrungen zum Einsatz.
Kompatibilität für verschiedenste Halterausführungen durch Stifte, die beliebig ausgetauscht und neu angeordnet werden können.

Übersichtliche, ordentliche Aufbewahrung mit Typenschildchen!

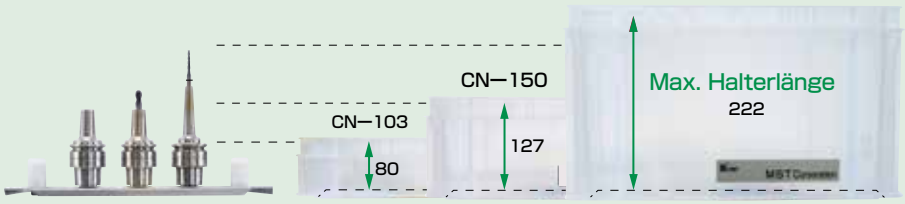
- Maximale Anzahl an aufzubewahrenden Haltern: 40 (Standard: 32) (HSK-E25/32)
- Je nach Lagerungsart kann der Kasten horizontal oder vertikal ausgerichtet werden.

Horizontale Lagerung

Vertikale Lagerung

Stapeln von Kästen

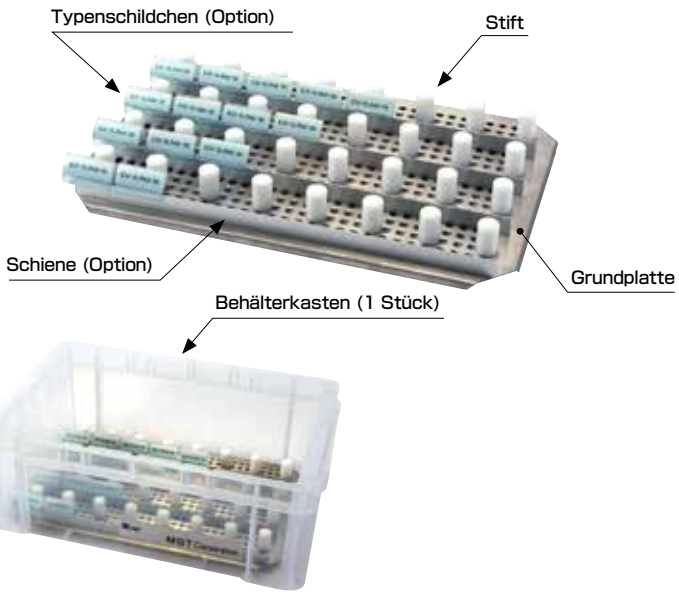
Halter mit drei unterschiedlichen Längen können in drei verschiedenen Lagerkastentypen aufbewahrt werden.



Standardsatz

CODE	Behälterkasten	Max. Anzahl	Anzahl der vorhandenen Stifte
HSK—A40	**HBX—A40**	24	18
—A50	**—A50**	15	15
—E25	**—E25**	40	32
—E32	**—E32**		
—E40	**—E40**	24	18
—E50	**—E50**	15	15
—F63	**—F63**	10	
15T (BROTHER)	**—15T**	40	16
20T (SUGINO)	**—20T**		

■ Inhalt des Satzes •Grundplatte •Behälterkasten •Stift



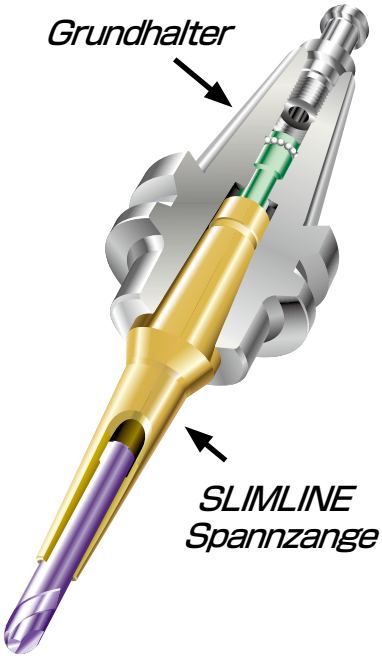
Deckel für Behälterkasten

CODE
CN—FT

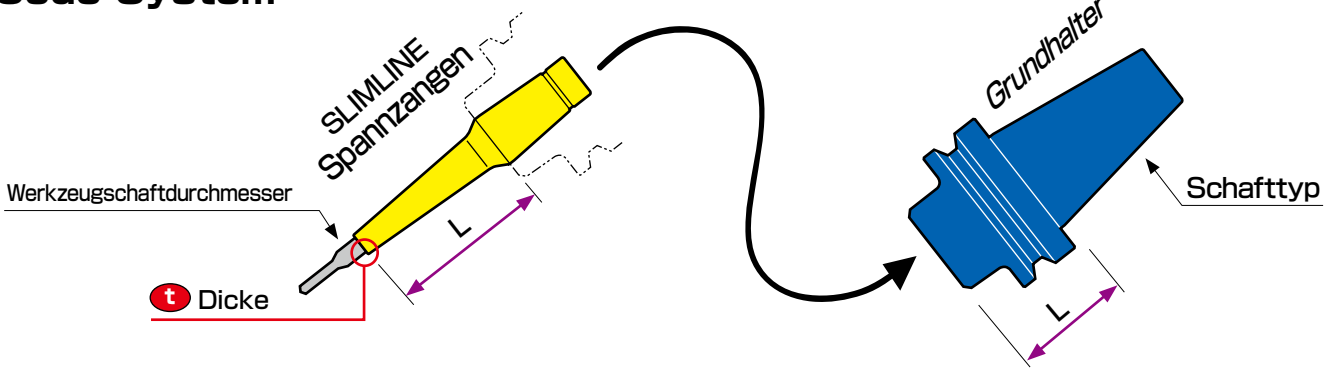
SCHRUMPFHALTER
SLIMLINE

Modulares System

2 PIECE Modular



Code-System



Werkzeugschaft-durchmesser | L

CS 12 – 3 – 110

Spannzangentyp | Größe der Innenbohrung der Spannzange (MAX φ12)

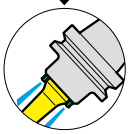
t	3	3.175	4	5	6	7	8	9	10	11	12
CS (Schlanke Ausführung) 1.5 (Konstante)											
CR (Normale Ausführung) 2.25 ~ 4	3		4		6		8		10		12
CF (Ausführung für Spülkühlmittelzufuhr) 3.25 ~ 4	3		4		6		8		10		12

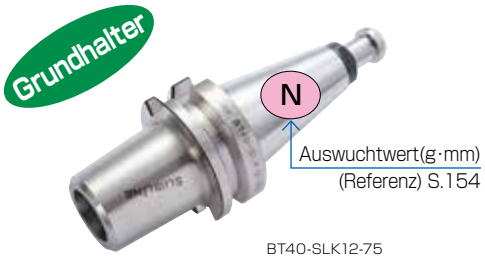
Schafttyp | L

BT40 – SLK12 – 35 F

Bestell-Nr. | Größe der Innenbohrung der Spannzange (MAX φ12) | Mit Düsen für interne Kühlmittelzufuhr

MAS BT30·BT40·BT50
HSK A50·A63·A100 / F63 / E50
DIN DN40·DN50





BT40-SLK12-75

Abb.1

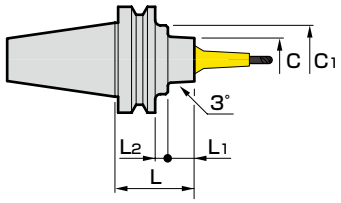
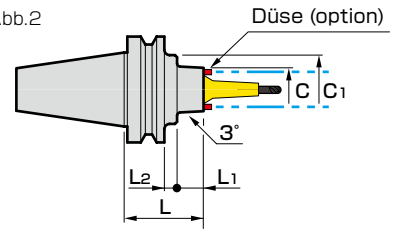


Abb.2



A63-SLK12-75F

Abb.3

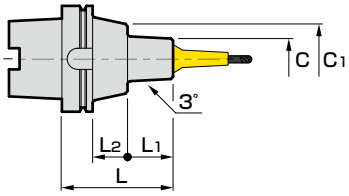
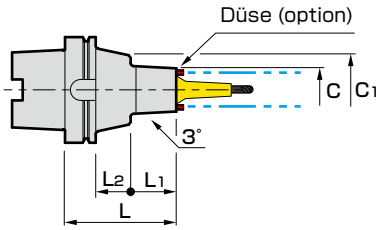


Abb.4



CODE	Abb.	L	φC	L1	L2	φC1	Kg	N
BT30—SLK12— 35	1	35	38	13	—	—	0.4	1.0
BT40—SLK12— 45		45		18			1.1	1.4
— 45F	2		41					1.6
— 75	1	75	38	48			1.4	
— 75F	2		41					1.8
—135F		135		108			2.2	3.2
BT50—SLK12— 75	1	75	38	25	12	65	4.0	4.7
— 75F	2		41					4.9
—105F		105		55			4.4	5.3
—135F		135		85			4.7	5.7
—225	1	225	38	150	37		6.4	14.3
—315		315			127	90	11.0	31.3
A 50—SLK12— 75	3	75	38	49	—	—	0.8	9.6
A 63—SLK12— 75							1.0	5.0
— 75F	4		41				1.1	5.5
—135	3	135	38	109			1.7	8.5
—135F	4		41				1.9	8.6
A100—SLK12—105	3	105	38	43	33	65	3.4	20.7
—105F	4		41				3.5	20.8
—135F		135		73			3.8	21.1
—225	3	225	38	163		83	5.4	36.3
—315		315		150	136		6.4	46.5
E 50—SLK12— 75		75		49	—	—	0.8	2.9
F63M—SLK12— 75							1.0	3.4
DN40AD—SLK12— 45	1	45	38	13.8	12.1	45	1.0	4.6
— 45F	2		41	7.9	18			4.3
— 75	1	75	38	43.8	12.1		1.3	5.8
— 75F	2		41	55.9	—			5.5
DN50AD—SLK12— 75	1	75	38	40	15.9	70	3.4	12.6
— 75F	2						3.5	12.3
—135F		135	41	100			4.3	19.0

BT

HSK

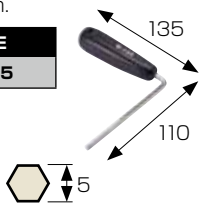
DIN

■Option •Slimline-Spannzange •Schraubenschlüssel •Düse
•Anzugsbolzen (BT , DIN)
■Standardzubehör •Kühlmittelkanal (HSK)
■Hinweis •Ein spezieller Anzugsbolzen gehört zur Standardausstattung beim BT30. Bei der Bestellung angeben, welcher Anzugsbolzen benötigt wird — MAS-I oder MAS-II.
■Achtung •Zum Festziehen des BT30 einen handelsüblichen 14 mm-Einmaulschlüssel verwenden.

Schraubenschlüssel

Zum Festklemmen des Hauptkörpers und der Slimline-Spannzange erforderlich.

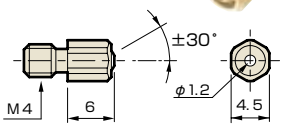
CODE
W—135



■ Hinweis •Zum Festziehen des BT30 einen handelsüblichen 14 mm-Einmaulschlüssel verwenden.

Düse(Für F-Typ)

CODE	Anzahl
NOZ—M4—12	12
—60	60



■ Hinweis •Bei jedem Grundhalter sind vier Düsen erforderlich.

Spannzangenständer

In diesem kompakten Ständer können maximal 25 Spannzangen ordentlich und übersichtlich untergebracht werden. Aus Aluminium, gewährleis-tet hervorragende Kühlung.

CODE
SDK—01

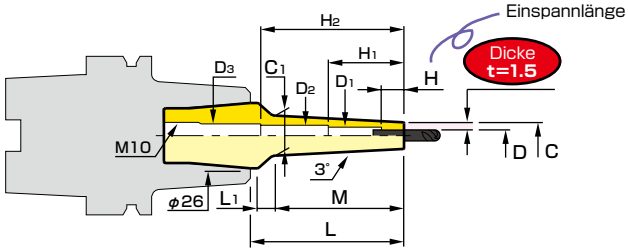
Anzugsbolzen mit Bohrung

Für das Anziehen oder Lösen von Adaptern für Slimline-Kegel muss der Anzugsbolzen mit 6mm Durchmesser nicht entfernt werden.

Durchgangsbohrung für Kühlmittelzufuhr

CS12 (Schlanke Ausführung)

Dicke = 1.5

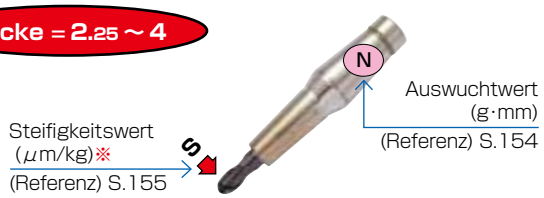


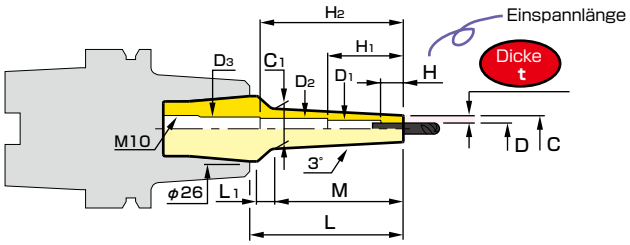
※Die unten angegebenen Werte gelten für den BT40-SLK12-45.
(Die Werte unten sind bei jeder beliebigen Schaftkombination ähnlich.)

CODE	φD	φC	Dicke t	L	M	L1	φC1	H	S	N	Kg	Max. Einführlänge	φD1	φD2	φD3	H1	H2
CS12– 3– 35	3	6	1.5	35	22	9.5	8.4	10	4.8	0.5	0.2	65	–	–	4	–	–
– 55				55	42		10.5		9.5			85					
– 80				80	67		13.1		15.0	0.7		110	4	6	8.6	39.4	74.3
–110				110	97		16.2		20.6	0.8		140					104.3
CS12–3.175 – 35	3.175	6.175	1.5	35	22	9.5	8.5	10	4.6	0.5	0.2	65	–	–	4	–	–
– 55				55	42		10.6		9.0			85					
– 80				80	67		13.2		14.3	0.7		110	4	6	8.6	39.4	74.3
–110				110	97		16.4		19.7	0.8		140					104.3
CS12– 4– 35	4	7	1.5	35	22	9.5	9.4	12	3.8	0.5	0.2	65	–	–	5	–	–
– 55				55	42		11.5		7.5			85					
– 80				80	67		14.1		11.9	0.7		110	5	7	8.6	39.4	74.6
–110				110	97		17.2		16.6	0.9		140					104.6
CS12– 5– 35	5	8	1.5	35	22	9.5	10.4	15	3.0	0.5	0.2	65	–	–	6	–	–
– 55				55	42		12.5		6.0	0.6		85	6		8.6	49.3	
– 80				80	67		15.1		9.7	0.8		110					
–110				110	97		18.2		13.6	1.0		140				69.3	
CS12– 6– 35	6	9	1.5	35	22	9.5	11.4	18	2.4	0.5	0.2	65	–	–	7	–	–
– 55				55	42		13.5		4.9	0.7		85	7		8.6	49.6	
– 80				80	67		16.1		8.0	0.8		110					
–110				110	97		19.2		11.4	1.0		140				69.6	
CS12– 7– 35	7	10	1.5	35	22	9.5	12.4	20	2.0	0.6	0.2	65	–	–	8.6	–	–
– 55				55	42		14.5		4.1	0.7		85					
– 80				80	67		17.1		6.8	0.9		110					
–110				110	97		20.2		9.7	1.2	0.3	140					
CS12– 8– 35	8	11	1.5	35	22	9.5	13.4	25	1.6	0.6	0.2	65	–	–	8.6	–	–
– 55				55	42		15.5		3.4	0.7		85					
– 80				80	67		18.1		5.6	0.9		110					
–110				110	97		21.2		8.2	1.2	0.3	140					
CS12– 9– 35	9	12	1.5	35	22	9.5	14.4	30	1.4	0.7	0.2	60	–	–	9.6	–	–
– 55				55	42		16.5		2.9	0.9							
– 80				80	67		19.1		4.8	1.1							
–110				110	97		22.2		7.1	1.3	0.3						
CS12–10– 35	10	13	1.5	35	22	9.5	15.4	30	1.3	0.8	0.2	60	–	–	10.6	–	–
– 55				55	42		17.5		2.5	0.9							
– 80				80	67		20.1		4.3	1.1							
–110				110	97		23.2		6.2	1.4	0.3						
CS12–11– 35	11	14	1.5	35	22	9.5	16.4	30	1.1	0.9	0.2	60	–	–	11.6	–	–
– 55				55	42		18.5		2.3	1.0							
– 80				80	67		21.1		3.8	1.3							
–110				110	97		24.2		5.6	1.5	0.3						
CS12–12– 35	12	15	1.5	35	22	9.5	17.4	30	1.0	1.0	0.2	60	–	–	12.6	–	–
– 55				55	42		19.5		2.1	1.1							
– 80				80	67		22.1		3.5	1.4							
–110				110	–	–	–		5.0	1.3	0.3						

CR12 (Normale Ausführung)

Dicke = 2.25 ~ 4



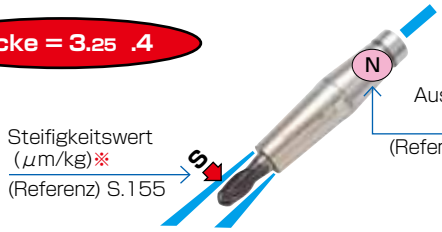


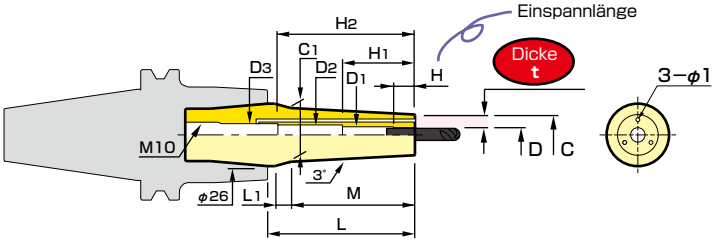
※Die unten angegebenen Werte gelten für den BT40-SLK12-45.
(Die Werte unten sind bei jeder beliebigen Schaftkombination ähnlich.)

CODE	φD	φC	Dicke t	L	M	L1	φC1	H	S	N	Kg	Max. Einführlänge	φD1	φD2	φD3	H1	H2
CR12– 3–35	3	7.5	2.25	35	22	9.5	9.9	10	2.9	0.5	0.2	65	–	–	4	–	–
–55				55	42		12		5.5			85					
–80				80	67		14.6		8.9	0.7		110	4	6	8.6	39.4	74.3
CR12– 4–35	4	10	3	35	22	9.5	12.4	12	1.7	0.5	0.2	65	–	–	5	–	–
–55				55	42		14.5		3.1	0.6		85					
–80				80	67		17.1		5.1	0.8		110	5	7	8.6	39.4	74.6
CR12– 6–35	6	12	3	35	22	9.5	14.4	18	1.3	0.6	0.2	65	–	–	7	–	–
–55				55	42		16.5		2.4	0.7		85	7		8.6	49.6	
–80				80	67		19.1		3.9	0.9		110					
CR12– 8–35	8	14	3	35	22	9.5	16.4	25	1.1	0.6	0.2	65	–	–	8.6	–	–
–55				55	42		18.5		1.9	0.8		85					
–80				80	67		21.1		3.1	1	0.3	110					
CR12–10–35	10	16	3	35	22	9.5	18.4	30	0.9	0.7	0.2	60	–	–	10.6	–	–
–55				55	42		20.5		1.6	0.9							
–80				80	67		23.1		2.6	1.1	0.3						
CR12–12–35	12	20	4	35	22	9.5	22.4	30	0.7	0.9	0.2	60	–	–	12.6	–	–
–55				55	42		24.5		1.1	1.1							
–80				80	–	–	25.5		1.9	1	0.3						

CF12 (Ausführung für Spülkühlmittelzufuhr)

Dicke = 3.25 .4





※Die unten angegebenen Werte gelten für den BT40-SLK12-45.
(Die Werte unten sind bei jeder beliebigen Schaftkombination ähnlich.)

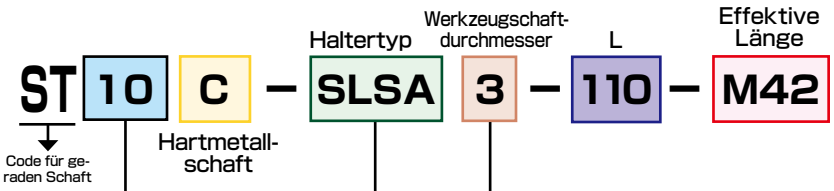
CODE	φD	φC	Dicke t	L	M	L1	φC1	H	S	N	Kg	Max. Einführlänge	φD1	φD2	φD3	H1	H2
CF12– 3–35	3	9.5	3.25	35	22	9.5	11.9	10	1.9	0.5	0.2	65	–	–	4	–	–
–55				55	42		14		3.3	0.6		85					
–80				80	67		16.6		5.3	0.8		110	4	6	8.6	44.4	74.3
CF12– 4–35	4	12	4	35	22	9.5	14.4	12	1.3	0.6	0.2	65	–	–	5	–	–
–55				55	42		16.5		2.2	0.8		85					
–80				80	67		19.1		3.4	0.9		110	5	7	8.6	39.4	74.6
CF12– 6–35	6	14	4	35	22	9.5	16.4	18	1.0	0.7	0.2	65	–	–	7	–	–
–55				55	42		18.5		1.7	0.9		85	7		8.6	49.6	
–80				80	67		21.1		2.7		0.3	110					
CF12– 8–35	8	16	4	35	22	9.5	18.4	25	0.9	0.8	0.2	65	–	–	8.6	–	–
–55				55	42		20.5		1.4	1		85					
–80				80	67		23.1		2.3	1.2	0.3	110					
CF12–10–35	10	18	4	35	22	9.5	20.4	30	0.7	0.9	0.2	60	–	–	10.6	–	–
–55				55	42		22.5		1.1	1.1							
–80				80	–	–	–		1.9	1	0.3						
CF12–12–35	12	20	4	35	22	9.5	22.4	30	0.7	1	0.2	60	–	–	12.6	–	–
–55				55	42		24.5		1.1	1.2							
–80				80	–	–	–		1.9	1.1	0.3						

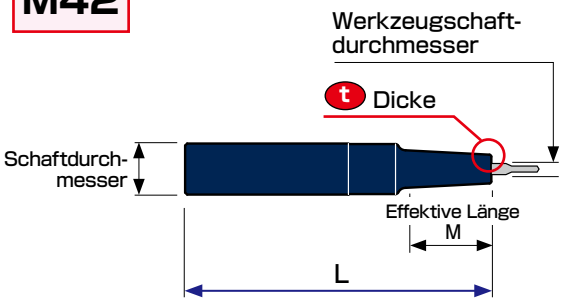
SCHRUMPFHALTER
SLIMLINE

Gerader Schaft

GERADER DORN

Code-System





SLSA (Schlanke A Ausführung)	1.5 (Konstante)
SLSB (Schlanke B Ausführung)	2 ~ 4.5
SLRA (Normale A Ausführung)	2.25~ 3
SLRB (Normale B Ausführung)	4 ~10

Schaftdurchmesser	3	3.175	4	5	6	7	8	9	10	11	12	16	20	25
10	●	●	●	●										
12					●									
16	●		●		●		●							
20	●		●	●	●		●		●		●			
25	●		●	●	●	●	●	●	●	●	●	●		
32					●		●		●		●	●	●	
42									●		●	●	●	●

Abb.1

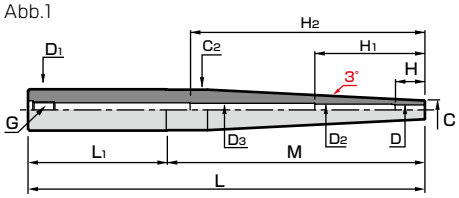


Abb.2

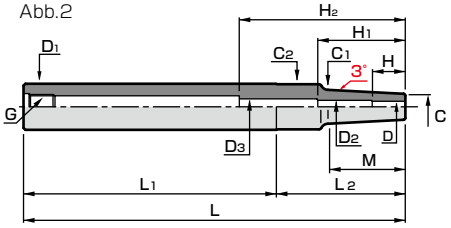
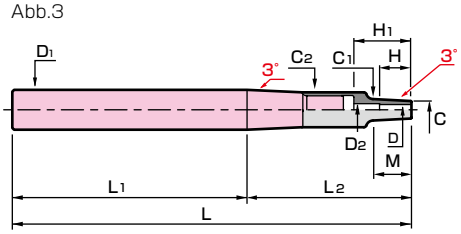


Abb.3



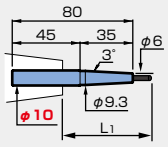
CODE	Abb.	φD	φC	L	M	φD₁	H	L₁	L₂	φC₁	φC₂	G	Max. Einführlänge	Kg	φD₂	φD₃	H₁	H₂	Maßstäbliches Modell
ST10 –SLSA 3– 80–M 35	1	3	6	80	35	10	9	45	35	–	9.3	M 6	64	0.03	4	–	40	–	1
ST16 –SLRA 3– 90–M 22	2		7.5	90	22	16		60	30	9.8	15.5	M10	62	0.09			31.5		2
–SLSA 3–115–M 42			6	115	42				55	10.4			87				51.5		3
–SLRA 3–115–M 42			7.5					65	50	11.9				0.1		8.6		60	4
–SLSA 3–140–M 67			6	140	67			60	80	13			112			6	52.5	82.5	5
–SLRA 3–140–M 67			7.5					65	75	14.5									6
ST10C –SLSA 3–160	3		6	160	12	10		120	40	7.3	10	–	19	0.2		–	15.5	–	7
ST20 –SLRA 3–175–M 97	2		7.5	175	97	20		70	105	17.7	19.5	M10	147			6	51.5	107.5	8
–SLSA 3–200–M 97			6	200				90	110	16.2			172	0.3			52.5	102.5	9
ST25 –SLSA 3–245–M 97				245		25		120	125		24.5		217	0.6		5	47.5	99.5	10
–SLRA 3–245–M 97			7.5							17.7									11
ST16C –SLSA 3–280	3		6	280	12	16		182	98	7.3	10	–	19	0.7		–	15.5	–	12
ST25 –SLSA 3–315–M195	1			315	195	25		120	195	–	24.5	M10	287			5	51.5	104.5	13
–SLRA 3–315–M 67	2		7.5		67			220	95	14.5				0.9			47.5	69.5	14
ST10 –SLSA3.$_{175}$ – 80–M35	1	3.$_{175}$	6	80	35	10	10	45	35	–	9.3	M 6	64	0.03	4	–	40	–	15
ST10 –SLSA 4– 80–M 35	1	4	7	80	35	10	12	45	35	–	9.5	M 6	64	0.03	5	–	40	–	16
ST16 –SLRA 4– 90–M 22	2		10	90	22	16		60	30	12.3	15.5	M10	62	0.09			32.5		17
–SLSA 4–115–M 42			7	115	42				55	11.4			87	0.1			60		18
–SLRA 4–115–M 42			10					65	50	14.4						8.6	52.5	60	19
–140–M 60	1			140	60			80	–	–			112				62.5	85	20
–SLSA 4–140–M 67	2		7		67			60	80	14						6		82.5	21
ST10C –SLSA 4–160	3			160	12	10		120	40	8.3	10	–	19	0.2		–	15.5	–	22
ST20 –SLRA 4–175–M 95	1		10	175	95	20		80	–	–	19.5	M10	147	0.3		6	51.5	97.5	23
–SLSA 4–200–M 97	2		7	200	97			90	110	17.2			172			7	37.5	102.5	24
ST25 –SLSA 4–245–M 97				245		25		120	125		24.5		217	0.6		6	50.5	100.5	25
–SLRA 4–245–M 97			10							20.2									26
ST16C –SLSA 4–280	3		7	280	12	16		182	98	8.3	10	–	19	0.7		–	15.5	–	27
ST25 –SLRA 4–315–M 67	2		10	315	67	25		220	95	17	24.5	M10	287	0.9		6	50.5	70.5	28
–SLSA 4–315–M195	1		7		195			120	–	–				0.7				110.5	29
ST10 –SLSA 5– 80–M 35	1	5	8	80	35	10	15	45	–	–	9.5	M 6	70	0.03	6	–	61.5	–	30
ST20 –SLSA 5–200–M110				200	110	20		90			19.2	M10	182	0.3		8.6	69.2	161.5	31
ST25 –SLSA 5–290–M 97	2			290	97	25		180	97	18.2	24.5		272	0.8				241.5	32
ST12 –SLSA 6– 80–M 35	1	6	9	80	35	12	18	45	–	–	11.5	M 8	52	0.04	7	–	40	–	33
ST16 –SLSA 6–115–M 42	2			115	42	16		60	55	13.4	15.5	M10	87	0.1			60		34
–SLSB 6–115–M 42			10					65	50	14.4						8.6	52.5	60	35
ST20 –SLRB 6–120–M 42			14	120		20		70		18.4	19.5		92	0.2					36
ST16 –SLSB 6–140–M 60	1		10	140	60	16		80	–	–	15.5		112	0.1			62.5	85	37
–SLSA 6–140–M 70			9		70			70									72.5		38
ST20 –SLSA 6–175–M105				175	105	20					19.5		147	0.3			107.5	115	39
–SLSB 6–175–M 95			10		95			80									97.5		40
–SLRB 6–175–M 60			14		60			115									62.5		41
ST12C –SLSB 6–175	3		10		12	12		125	50		12	–	27			–	23.5	–	42
ST25 –SLSB 6–205–M127	2			205	127	25		70	135	23.3	24.5	M10	177	0.5		8.6	102.5	135	43
ST16C –SLSB 6–225	3			225	22	16		165	60	12.3	16	–	32	0.6		–	26.5	–	44
ST25 –SLSA 6–230–M 97	2		9	230	97	25		120	110	19.2	24.5	M10	202	0.5		8.6	92.5	160	45
–SLRB 6–240–M 42			14	240	42			170	70	18.4			212	0.7			45.5	50	46
ST32 –SLSB 6–255–M157			10	255	157	32		70	185	26.5	31.5	M16	227	0.8		8	72.5	163.5	47
ST25 –SLSA 6–305–M185	1		9	305	185	25		120	–	–	24.5	M10	277				75.5	160.5	48
ST20C –SLSB 6–320	3		10	320	22	20		221	99	12.3	16	–	32	1.3			26.5	–	49
ST32 –SLRB 6–345–M 67	2		14	345	67	32		250	95	21	31.5	M16	317	1.6			50.5	73.5	50
ST25C –SLSB 6–360	3		10	360	22	25		242	118	12.3	20	–	38	2.2			31.5	–	51
ST32 –SLSB 6–375–M157	2			375	157	32		190	185	26.5	31.5	M16	347	1.4			72.5	163.5	52

CODE	Abb.	φD	φC	L	M	φD1	H	L1	L2	φC1	φC2	G	Max. Einführlänge	Kg	φD2	φD3	H1	H2	Maßstäbliches Modell
ST25 –SLSA 7–230–M 97	2	7	10	230	97	25	20	120	110	20.2	24.5	M10	212	0.5	8	8.6	69.8	181.5	53
–320–M 97				320				210					302	0.9				271.5	54
ST20 –SLRB 8–100–M 30	1	8	18	100	30	20	24	70	–	–	19.5	M10	72	0.2	8.6	–	40	–	55
ST16 –SLSA 8–115–M 50			11	115	50	16		65			15.5		87	0.1			60		56
ST20 –SLSB 8–145–M 70			13	145	70	20		75			19.5		117	0.2			85		57
ST25 –SLRB 8–160–M 42	2		18	160	42	25		110	50	22.4	24.5		132	0.5			90		58
ST20 –SLSA 8–175–M 85	1		11	175	85	20		90	–	–	19.5		147	0.3			115		59
ST25 –SLSB 8–175–M 97	2		13		97	25		70	105	23.2	24.5			0.4			105		60
–SLRB 8–210–M 90	1		18	210	90			120	–	–			182	0.6			70		61
ST16C–SLSB 8–225	3		13	225	22	16		165	60	15.3	16	—	32				27.5		62
ST25 –SLSA 8–230–M 97	2		11	230	97	25		120	110	21.2	24.5	M10	202				160		63
–SLSB 8–260–M140	1		13	260	140				–	–			232	0.7			120		64
ST20C–SLSB 8–270	3			270	22	20		200	70	15.3	20	—	38	1.1			31.5		65
ST25 –SLSA 8–280–M160	1		11	280	160	25		120	–	–	24.5	M10	252	0.7			140		66
ST32 –SLRB 8–285–M 67	2		18	285	67	32		190	95	25	31.5	M16	257	1.3			73.5		67
ST25C–SLSB 8–360	3		13	360	22	25		242	118	15.3	20	—	38	2.2			31.5		68
ST32 –SLSB 8–375–M157	2			375	157	32		190	185	29.5	31.5	M16	347	1.5		12	72.5	164.5	69
ST25 –SLSA 9–230–M 97	2	9	12	230	97	25	30	120	110	22.2	24.5	M10	60	0.6	9.6	–	181.5	–	70
–320–M 97				320				210						0.9			271.5		71
ST25 –SLRB10–120–M 35	1	10	22	120	35	25	30	85	–	–	24.5	M10	60	0.4	10.6	–	50	–	72
ST20 –SLSB10–120–M 50			16		50	20		70			19.5			0.2			60		73
ST25 –SLSB10–145–M 67	2			145	67	25			75	23	24.5			0.4			75		74
ST20 –SLSA10–145–M 70	1		13		70	20		75	–	–	19.5			0.2			85		75
ST25 –SLSB10–175–M105			16	175	105	25		70			24.5			0.5					76
–SLRB10–210–M 90			22	210	90			120						0.7			70		77
ST32 –SLSB10–240–M170			16	240	170	32		70			31.5	M16	212	0.9		12	59.5	149.5	78
ST25 –SLSA10–255–M135			13	255	135	25		120			24.5	M10	60	0.7		–	115	–	79
ST20C–SLSB10–270	3		16	270	22	20		200	70	18.3	20	—	38	1.1	11		33.5		80
ST25 –SLSB10–275–M105	1			275	105	25		170	–	–	24.5	M10	60	0.8	10.6		85		81
ST32 –SLRB10–285–M 67	2		22	285	67	32		190	95	29	31.5	M16	257	1.4		12	59.5	74.5	82
–SLSA10–340–M210	1		13	340	210			130	–	–			312	1.3				167.5	83
ST25C–SLSB10–360	3		16	360	22	25		242	118	18.3	20	—	38	2.2	11	–	33.5	–	84
ST32 –SLSB10–360–M170	1				170	32		190	–	–	31.5	M16	332	1.5	10.6	12	59.5	149.5	85
ST42 –SLSB10–445–M157	2			445	157	42		260	185	32.5	41.5	M24	417	2.7				162.5	86
ST25 –SLSA11–230–M110	1	11	14	230	110	25	30	120	–	–	24.5	M10	60	0.6	11.6	–	181.5	–	87
–320–M110				320				210						0.9			271.5		88
ST25 –SLSB12–120–M 42	2	12	19	120	42	25	30	70	50	23.4	24.5	M10	60	0.3	12.6	–	50	–	89
ST20 –SLSA12–120–M 50	1		15		50	20			–	–	19.5			0.2			60		90
ST32 –SLRB12–140–M 60			26	140	60	32		80			31.5	M16	112	0.7	13		70		91
ST25 –SLSB12–150–M 80			19	150	80	25		70			24.5	M10	60	0.4	12.6		60		92
ST32 –SLSB12–220–M150				220	150	32					31.5	M16	192	0.9	13		130		93
ST25 –SLSA12–230–M110			15	230	110	25		120			24.5	M10	60	0.6	12.6		160		94
–SLSB12–250–M 80			19	250	80			170						0.8			60		95
ST32 –SLRB12–260–M 70			26	260	70	32		190			31.5	M16	232	1.3	13		190		96
–SLSA12–315–M185			15	315	185			130					287	1.2			165		97
–SLSB12–340–M150			19	340	150			190					312	1.5			130		98
ST42 –SLSB12–445–M157	2			445	157	42		260	185	35.5	41.5	M24	417	2.8	12.6	14	59.5	162.5	99
ST32 –SLRB16–175–M 45	1	16	32	175	45	32	32	130	–	–	–	M16	80	0.8	16.6	–	105	–	100
ST25 –SLSB16–175–M 50			24		50	25		125				M10		0.5					101
ST32 –SLSB16–290–M100				290	100	32		190			31.5	M16		1.4			80		102
ST42 –SLRB16–355–M 67	2		32	355	67	42		260	95	39	41.5	M24	327	2.7	17		73.5		103
–SLSB16–445–M157	1		24	445	157				–	40.5			417	3.0		20	142.5	163.5	104
ST42 –SLRB20–170–M 70	1	20	38	170	70	42	40	100	–	–	41.5	M24	142	1.3	21.6	–	49.5	–	105
ST32 –SLSB20–175–M 50			29	175	50	32		125			31.5	M16	80	0.8			103.5		106
ST42 –SLSB20–255–M155				255	155	42		100			41.5	M24	227	1.7		22	69.5	135	107
–SLRB20–330–M 70			38	330	70			260					302	2.6		–	49.5	–	108
–SLSB20–415–M155			29	415	155								387	2.9		22	69.5	135	109
ST42 –SLRB25–170–M 42	2	25	45	170	42	42	45	100	70	49.4	50	M24	80	1.5	25.6	–	50	–	110
–SLRB25–250–M 42				250				180						2.1					111

φ3

ST10–SLSA3–80–M35

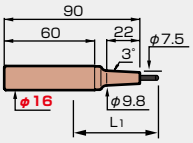
Nr. 1



L1	49
↓	8.3

ST16–SLRA3–90–M22

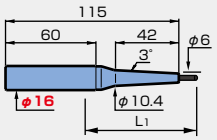
Nr. 2



L1	41
↓	3.0

ST16–SLSA3–115–M42

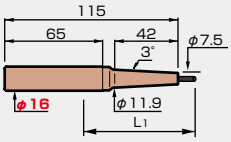
Nr. 3



L1	73
↓	11.0

ST16–SLRA3–115–M42

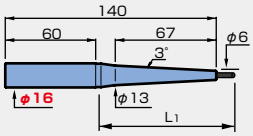
Nr. 4



L1	73
↓	6.5

ST16–SLSA3–140–M67

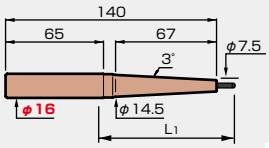
Nr. 5



L1	89
↓	16.3

ST16–SLRA3–140–M67

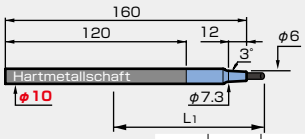
Nr. 6



L1	89
↓	9.8

ST10C–SLSA3–160

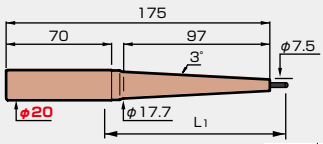
Nr. 7



L1	59	79	99
↓	8.6	11.9	17.4

ST20–SLRA3–175–M97

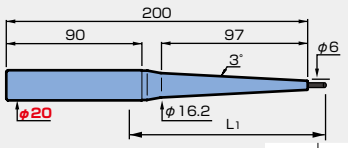
Nr. 8



L1	114
↓	12.7

ST20–SLSA3–200–M97

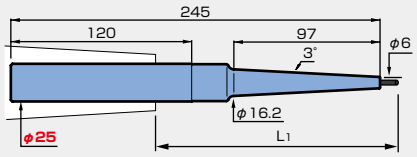
Nr. 9



L1	129
↓	22.4

ST25–SLSA3–245–M97

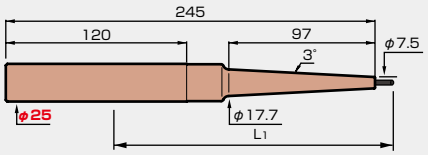
Nr. 10



L1	134	184
↓	21.1	24.3

ST25–SLRA3–245–M97

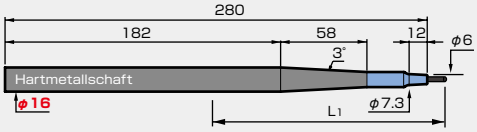
Nr. 11



L1	134	184
↓	13.3	16.5

ST16C–SLSA3–280

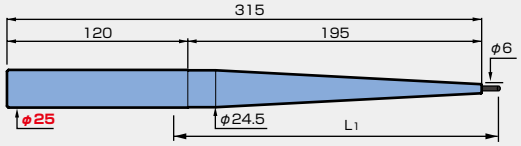
Nr. 12



L1	121	153
↓	12.8	16.0

ST25–SLSA3–315–M195

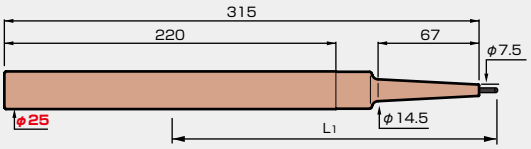
Nr. 13



L1	209
↓	32.3

ST25–SLRA3–315–M67

Nr. 14

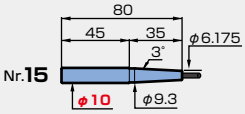


L1	109	159	209
↓	9.3	11.6	15.9

φ3.175

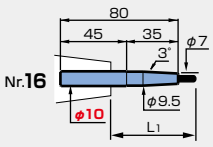
ST10–SLSA3.175–80–M35

Nr. 15



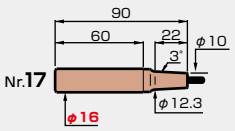
φ4

ST10–SLSA4–80–M35



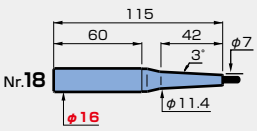
L1	52
↓	7.4

ST16–SLRA4–90–M22



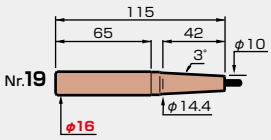
L1	44
↓	1.8

ST16–SLSA4–115–M42



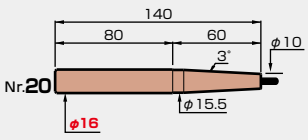
L1	76
↓	8.9

ST16–SLRA4–115–M42



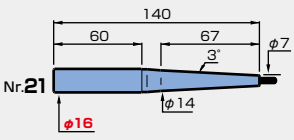
L1	76
↓	4.3

ST16–SLRA4–140–M60



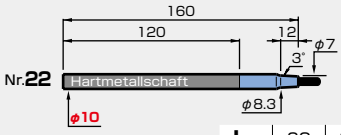
L1	76
↓	4.4

ST16–SLSA4–140–M67



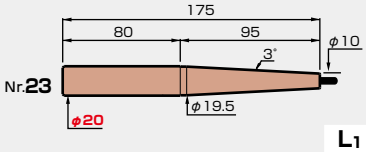
L1	92
↓	13.0

ST10C–SLSA4–160



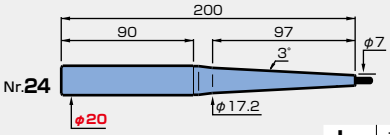
L1	62	82	102
↓	9.6	13.2	19.1

ST20–SLRA4–175–M95



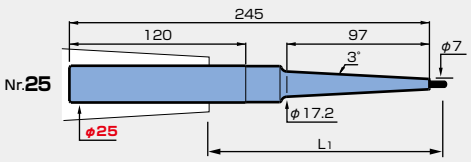
L1	112
↓	7.0

ST20–SLSA4–200–M97



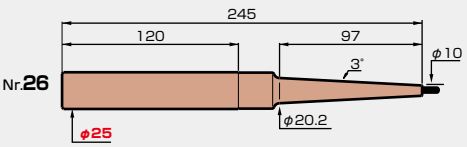
L1	132
↓	18.6

ST25–SLSA4–245–M97



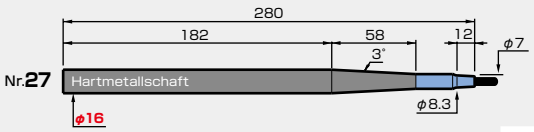
L1	137	187
↓	17.1	20.4

ST25–SLRA4–245–M97



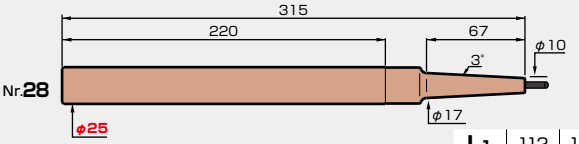
L1	137	187
↓	8.0	11.3

ST16C–SLSA4–280



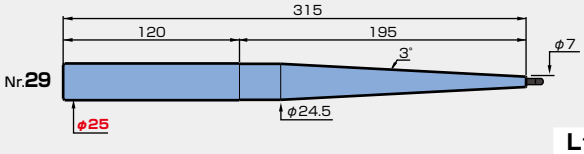
L1	124	156
↓	14.2	17.5

ST25–SLRA4–315–M67



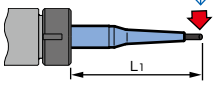
L1	112	162	212
↓	5.5	7.9	12.3

ST25–SLSA4–315–M195



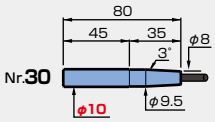
L1	212
↓	26.8

Steifigkeitswert
(μm/kg)
(Referenz) S.155

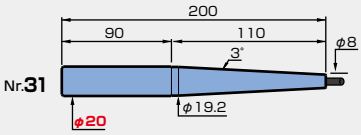


φ5

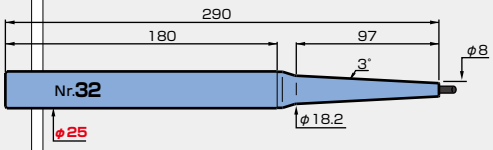
ST10–SLSA5–80–M35



ST20–SLSA5–200–M110

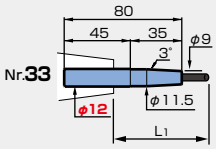


ST25–SLSA5–290–M97



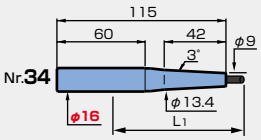
φ6

ST12–SLSA6–80–M35



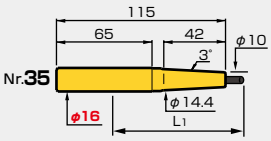
L1	54
↓	4.0

ST16–SLSA6–115–M42



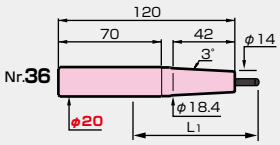
L1	82
↓	6.5

ST16–SLSB6–115–M42



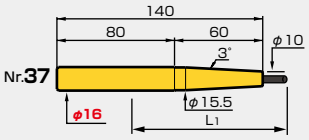
L1	82
↓	5.1

ST20–SLRB6–120– M42



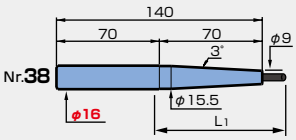
L1	78
↓	2.0

ST16–SLSB6–140–M60



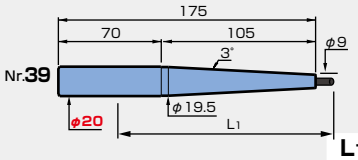
L1	82
↓	5.3

ST16–SLSA6–140–M70



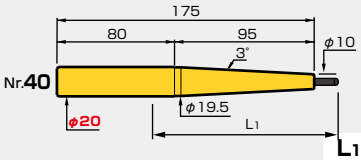
L1	98
↓	9.1

ST20–SLSA6–175–M105



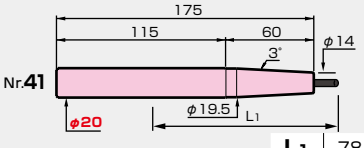
L1	138
↓	12.8

ST20–SLSB6–175–M95



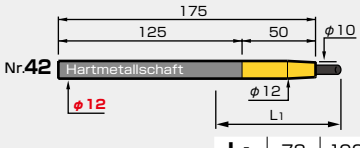
L1	118
↓	8.2

ST20–SLRB6–175–M60



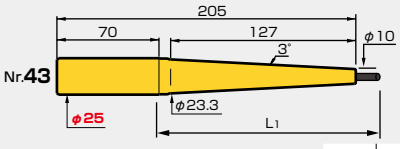
L1	78	118
↓	2.0	4.5

ST12C–SLSB6–175



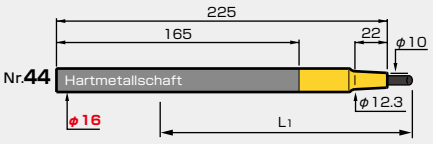
L1	78	102	126
↓	6.9	10.2	15.4

ST25–SLSB6–205–M127



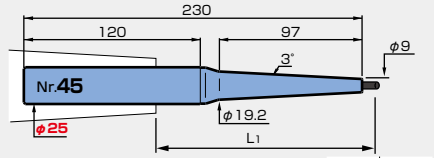
L1	153
↓	10.7

ST16C–SLSB6–225



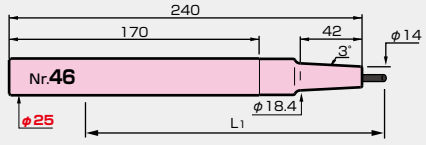
L1	98	130	162
↓	4.6	6.8	10.4

ST25–SLSA6–230–M97



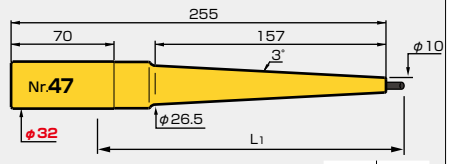
L1	143
↓	11.9

ST25–SLRB6–240–M42



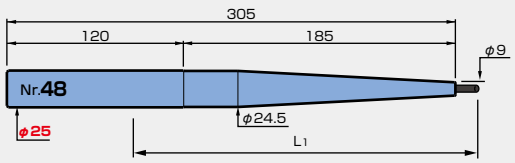
L1	93	143	193
↓	2.0	3.7	7.3

ST32–SLSB6–255–M157



L1	203
↓	13.3

ST25−SLSA6−305−M185

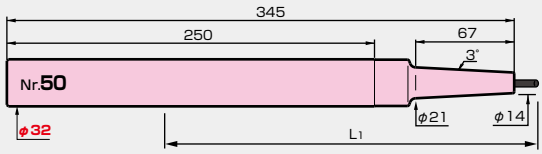


L1	218
⇩	20.0

ST20C−SLSB6−320

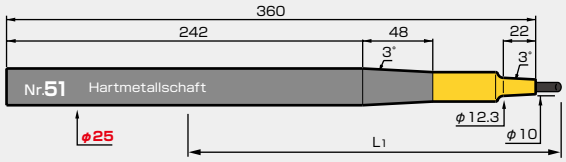
L1	118	158	198
⇩	5.0	6.7	9.4

ST32−SLRB6−345−M67



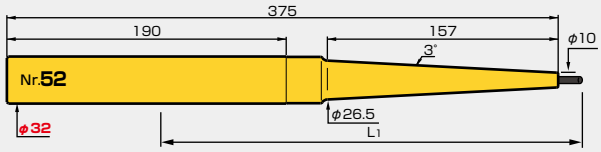
L1	114	178	242
⇩	2.6	4.0	6.7

ST25C−SLSB6−360



L1	143	193	243
⇩	3.9	5.1	7.2

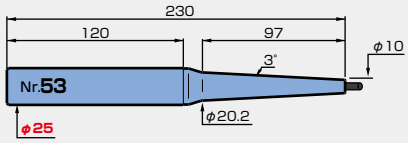
ST32−SLSB6−375−M157



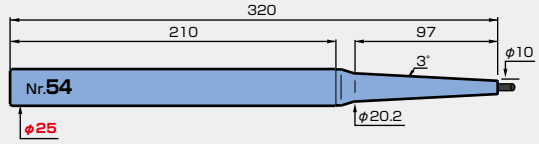
L1	210	274
⇩	13.6	17.3

φ7

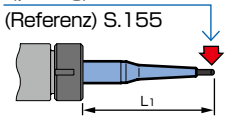
ST25−SLSA7−230−M97



ST25−SLSA7−320−M97

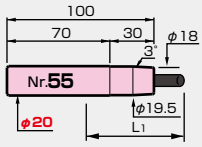


Steifigkeitswert
(μm/kg)
(Referenz) S.155



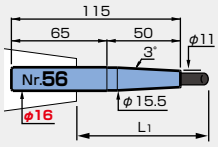
φ8

ST20–SLRB8–100–M30



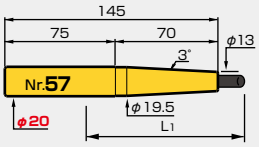
L1	64
↓	1.0

ST16–SLSA8–115–M50



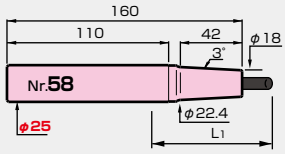
L1	88
↓	5.1

ST20–SLSB8–145–M70



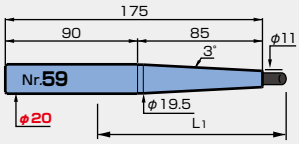
L1	104
↓	4.0

ST25–SLRB8–160–M42



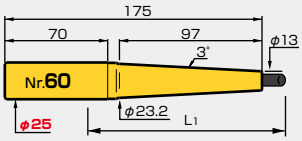
L1	74
↓	1.0

ST20–SLSA8–175–M85



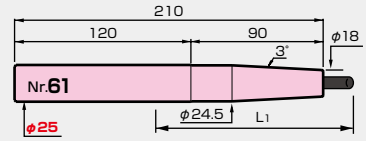
L1	124
↓	7.7

ST25–SLSB8–175–M97



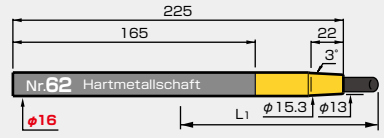
L1	129
↓	5.1

ST25–SLRB8–210–M90



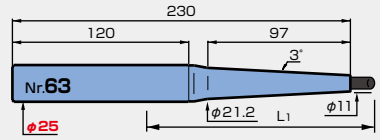
L1	124
↓	2.4

ST16C–SLSB8–225



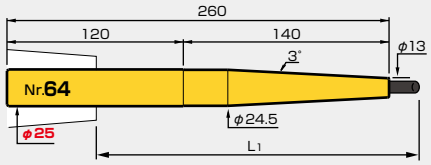
L1	104	136	168
↓	4.4	6.8	10.7

ST25–SLSA8–230–M97



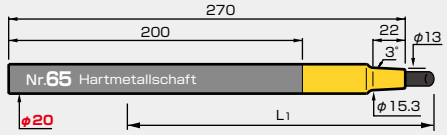
L1	149
↓	8.8

ST25–SLSB8–260–M140



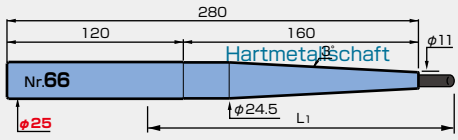
L1	174
↓	7.9

ST20C–SLSB8–270



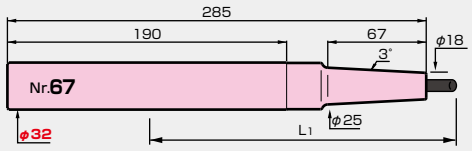
L1	124	164	204
↓	3.2	5.0	7.9

ST25–SLSA8–280–M160



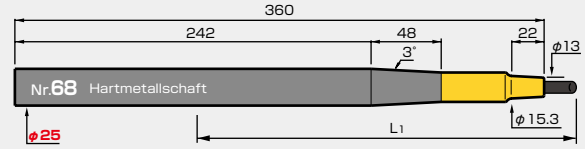
L1	199
↓	13.3

ST32–SLRB8–285–M67



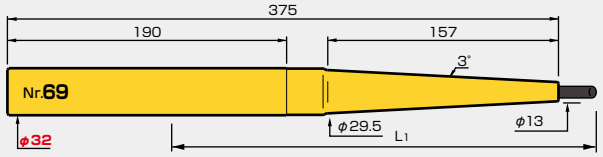
L1	120	184
↓	1.7	3.2

ST25C–SLSB8–360



L1	149	199	249
↓	3.5	4.8	7.0

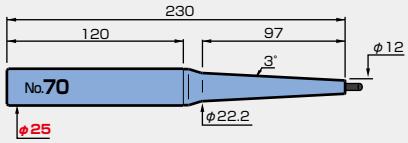
ST32–SLSB8–375–M157



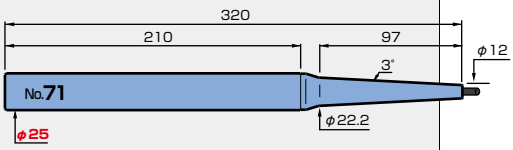
L1	216	280
↓	9.2	13.0

φ9

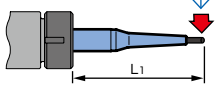
ST25−SLSA9−230−M97



ST25−SLSA9−320−M97

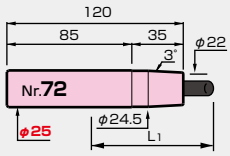


Steifigkeitswert (μm/kg)
(Referenz) S.155



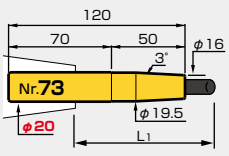
φ10

ST25−SLRB10−120−M35



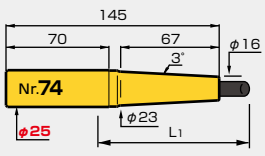
L1	80
↓	0.8

ST20−SLSB10−120−M50



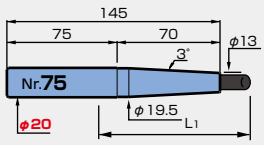
L1	90
↓	2.0

ST25−SLSB10−145−M67



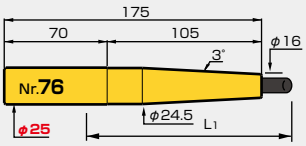
L1	105
↓	2.3

ST20−SLSA10−145−M70



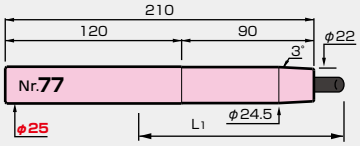
L1	110
↓	4.5

ST25−SLSB10−175−M105



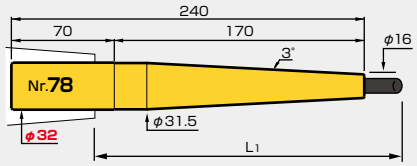
L1	135
↓	3.5

ST25−SLRB10−210−M90



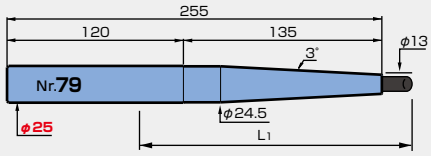
L1	130
↓	2.3

ST32−SLSB10−240−M170



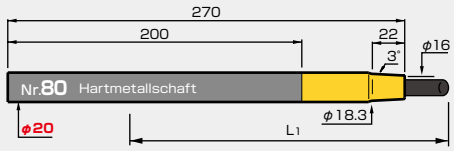
L1	200
↓	5.6

ST25−SLSA10−255−M135



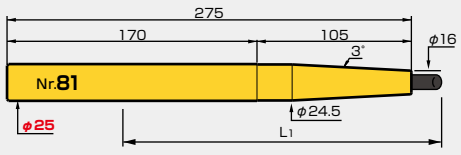
L1	180
↓	8.8

ST20C−SLSB10−270



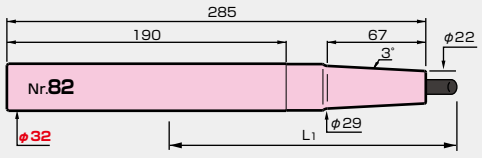
L1	130	170	210
↓	3.2	5.1	8.3

ST25−SLSB10−275−M105



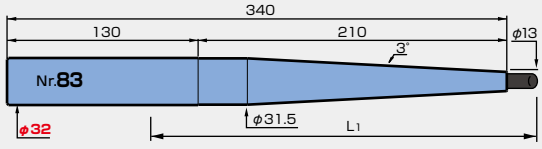
L1	155	205
↓	4.6	8.7

ST32−SLRB10−285−M67



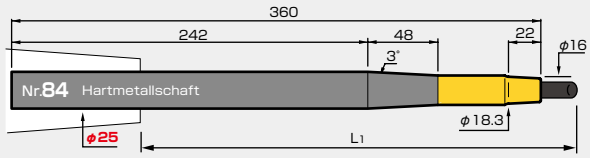
L1	126	190
↓	1.3	2.8

ST32−SLSA10−340−M210



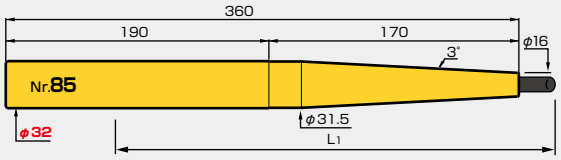
L1	254
↓	12.1

ST25C–SLSB10–360



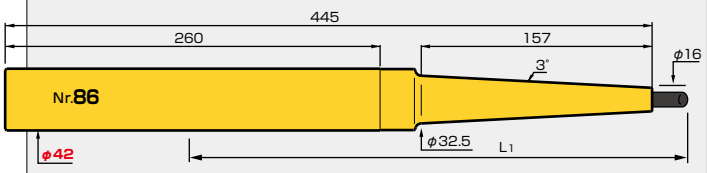
L1	155	205	255
↓	3.5	4.9	7.3

ST32–SLSB10–360–M170



L1	222	286
↓	6.6	10.5

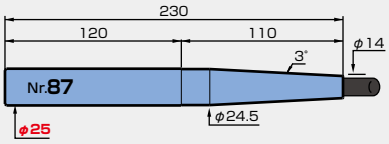
ST42–SLSB10–445–M157



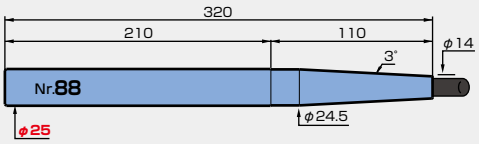
L1	240	324
↓	6.0	8.3

φ11

ST25–SLSA11–230–M110

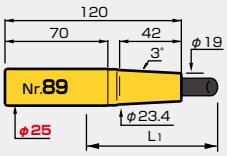


ST25–SLSA11–320–M110



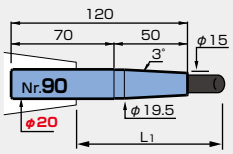
φ12

ST25–SLSB12–120–M42



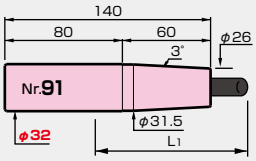
L1	86
↓	1.0

ST20–SLSA12–120–M50



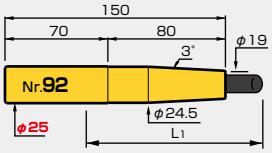
L1	96
↓	2.6

ST32–SLRB12–140–M60



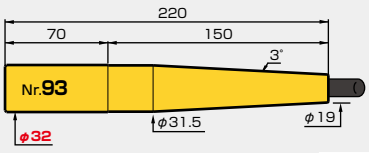
L1	100
↓	0.6

ST25–SLSB12–150–M80



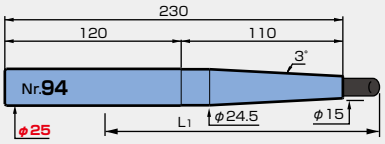
L1	116
↓	1.9

ST32–SLSB12–220–M150



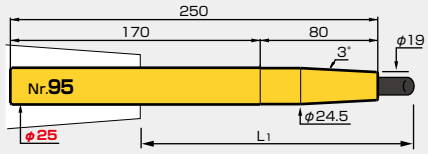
L1	186
↓	3.6

ST25–SLSA12–230–M110



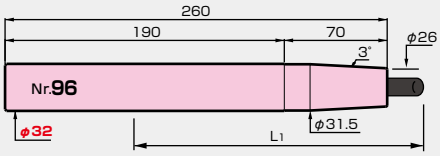
L1	161
↓	5.7

ST25–SLSB12–250–M80



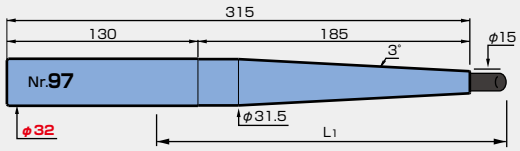
L1	136	186
↓	2.7	6.0

ST32–SLRB12–260–M70



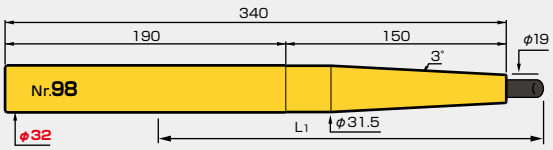
L1	132	196
↓	1.1	2.8

ST32–SLSA12–315–M185



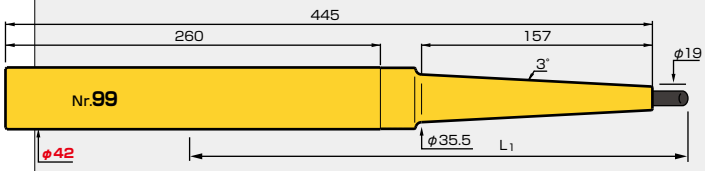
L1	228
↓	8.4

ST32–SLSB12–340–M150



L1	196	260
↓	4.0	7.2

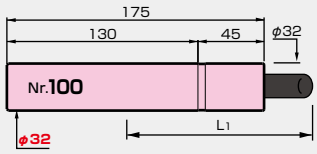
ST42–SLSB12–445–M157



L1	246	330
↓	4.6	6.9

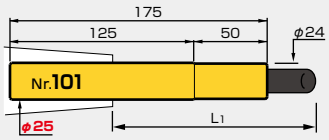
φ16

ST32–SLRB16–175–M45



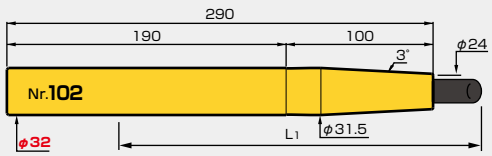
L1	112
↓	0.6

ST25–SLSB16–175–M50



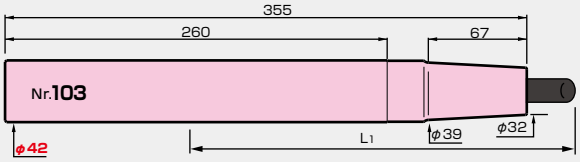
L1	98	148
↓	1.0	3.2

ST32–SLSB16–290–M100



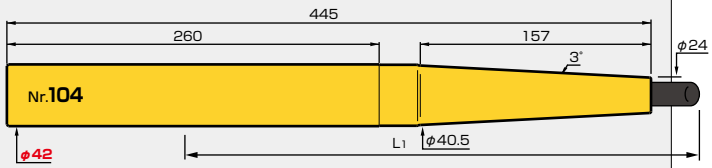
L1	176	240
↓	2.3	5.0

ST42–SLRB16–355–M67



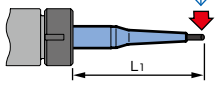
L1	174	258
↓	0.9	2.2

ST42–SLSB16–445–M157



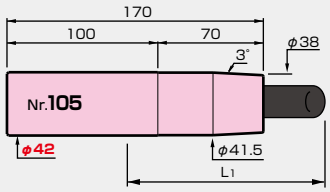
L1	258	342
↓	3.4	5.9

Steifigkeitswert
(μm/kg)
(Referenz) S.155



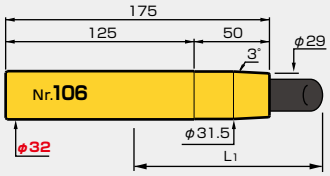
φ20

ST42–SLRB20–170–M70



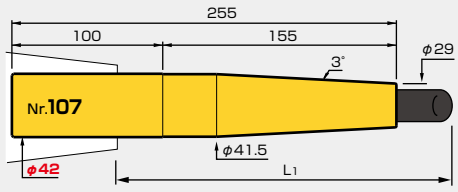
L1	130
↓	0.4

ST32–SLSB20–175–M50



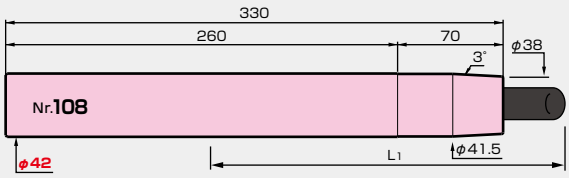
L1	124
↓	0.7

ST42–SLSB20–255–M155



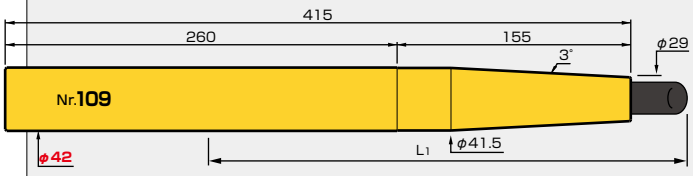
L1	215
↓	1.7

ST42–SLRB20–330–M70

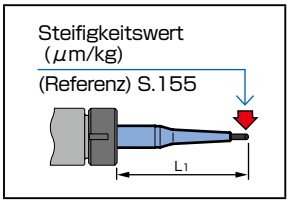


L1	144	228
↓	0.5	1.5

ST42–SLSB20–415–M155

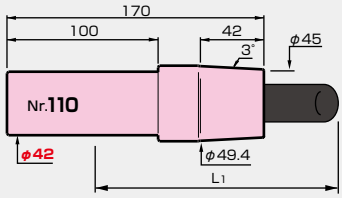


L1	228	312
↓	1.9	4.0



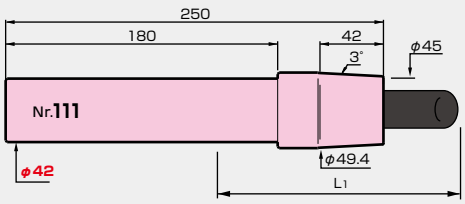
φ25

ST42–SLRB25–170–M42



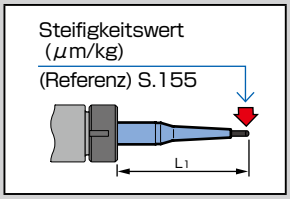
L1	159
↓	0.4

ST42–SLRB25–250–M42



L1	159
↓	0.4

"L1" steht für die Überhanglänge des geraden Dorns über den Basishalter. ↓ zeigt die Steifigkeit des Körpers des geraden Dorns bei dieser Länge. Die Durchbiegung der Basis wird bei der Ermittlung von Steifigkeitswerten nicht berücksichtigt.



Teilecode-Liste für GERADEN DORN aus Hartmetall

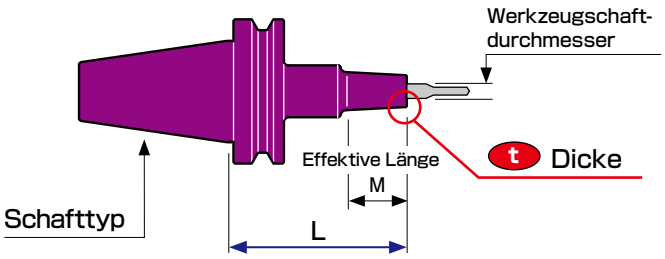
SATZCODE	Hartmetallschaft	Kopf
ST10C–SLSA 3–160	ST10C– 7 –120	SH 7 –SLSA 3–40
–SLSA 4–160		–SLSA 4–40
ST12C–SLSB 6–175	ST12C– 9 –125	SH 9 –SLSB 6–50
ST16C–SLSA 3–280	ST16C– 7 –240	SH 7 –SLSA 3–40
–SLSA 4–280		–SLSA 4–40
–SLSB 6–225	–12.5–165	SH12.5–SLSB 6–60
–SLSB 8–225		–SLSB 8–60
ST20C–SLSB 6–320	ST20C–12.5–260	SH12.5–SLSB 6–60
–SLSB 8–270	–16 –200	SH16 –SLSB 8–70
–SLSB10–270		–SLSB10–70
ST25C–SLSB 6–360	ST25C–16 –290	SH16 –SLSB 6–70
–SLSB 8–360		–SLSB 8–70
–SLSB10–360		–SLSB10–70

SCHRUMPFHALTER
SLIMLINE

Mono Block Serie

MONO-Serie

Code-System



Schafttyp	HALTER-CODE	Werkzeug-schaft-durchmesser	L	Effektive Länge
BT50	SLSA	3	110	M42

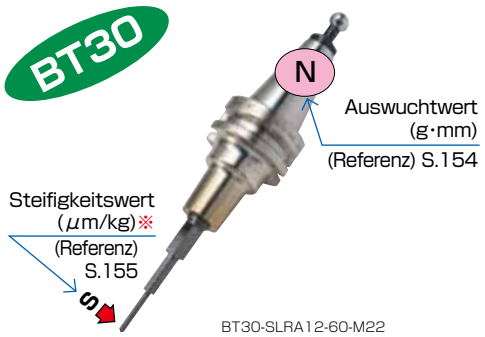
		SEITE
BT (MAS-Norm)	BT30	S. 28
	BT40	S. 30
	BT50	S. 52
HSK (DIN-Norm)	A40	S. 74
	A50	S. 76
	A63	S. 80
	A100	S.102
	E25	S.124
	E32	S.126
	E40	S.128
	E50	S.131
	F63	S.136
Sonderschaft	15T	S.139
	RS20	S.140
	HT20	S.141
	S20T	S.142

3	3.175	4	5	6	8	10	12	16	20	25
●	●	●		●	●	●	●	●	●	
●		●		●	●	●	●	●	●	●
●		●		●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●	
●		●	●	●	●	●	●	●	●	
●		●	●	●	●	●	●	●	●	●
●		●	●	●	●	●	●	●	●	●
●	●	●	●	●						
●	●	●	●	●	●	●	●	●		
●	●	●	●	●	●	●	●	●	●	
●		●	●	●	●	●	●	●	●	
●		●		●	●	●	●	●	●	●
●	●	●	●	●	●	●				
●	●	●	●	●	●	●				
●		●		●	●	●				
●	●	●	●	●	●	●	●			

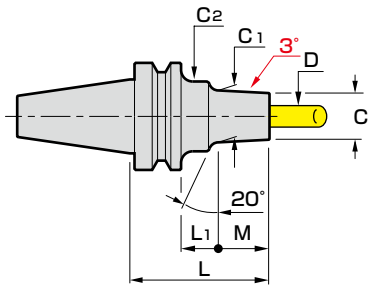
t Dicke

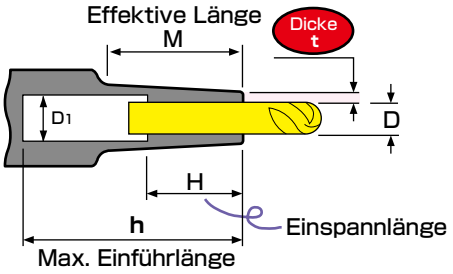
SLSA (Schlanke A Ausführung)	1.5 (Konstante)
SLSB (Schlanke B Ausführung)	2 ～ 4.5
SLRA (Normale A Ausführung)	2.25～ 3
SLRB (Normale B Ausführung)	4 ～10
SLFB (Ausführung für Spülkühlmittelzufuhr B)	3.25～ 10

BT30 CODETABELLE



BT30-SLRA12-60-M22



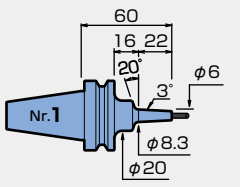


CODE	φD	φC	Dicke t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Maßstäbliches Modell
BT30–SLSA 3– 60–M22	3	6	1.5	60	22	16	8.3	20	4	9	80	0.4	0.8	4.7	1
– 80–M42				80	42		10.4				100			9.4	2
–120–M67				120	67	31	13	25			140	0.5	1.6	15.2	3
–SLRA 3– 75–M22		7.5	2.25	75	22		9.8				95			2.9	4
BT30–SLSA3.175– 60–M22	3.175	6.175	1.5	60	22	16	8.5	20	4	9	80	0.4	0.8	4.5	5
– 80–M42				80	42		10.6				100			0.9	6
BT30–SLSA 4– 60–M22	4	7	1.5	60	22	16	9.3	20	5	12	80	0.4	0.8	3.7	7
– 80–M42				80	42		11.4				100			7.4	8
–120–M67				120	67	31	14	25			140	0.5	1.6	12.2	9
–SLRA 4– 75–M22		10	3	75	22		12.3				95			1.8	10
BT30–SLSA 6– 60–M22	6	9	1.5	60	22	16	11.3	20	7	18	80	0.4	0.9	2.4	11
– 80–M42				80	42		13.4				100			5.0	12
–120–M67				120	67	31	16	25			140	0.5	1.7	8.3	13
–SLRA 6– 60–M22		12	3	60	22	16	14.3	26			80	0.4	0.9	1.3	14
BT30–SLRA 8– 60–M22	8	14	3	60	22	16	16.3	26	8.6	24	80	0.4	0.9	1.0	15
BT30–SLRA10– 60–M22	10	16	3	60	22	16	18.3	26	10.6	30	80	0.4	1.0	0.8	16
BT30–SLRA12– 60–M22	12	20	4	60	22	16	22.3	30	12.6	30	60	0.5	1.2	0.6	17
BT30–SLRA16– 60–M22	16	26	5	60	22	16	28.3	34	16.6	32	60	0.5	1.6	0.5	18
BT30–SLRA20– 65–M22	20	32	6	65	22	21	34.3	40	20.6	38	60	0.6	2.1	0.4	19

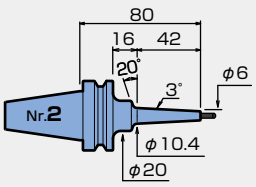
BT30 Maßstäbliches Modell S=1:4

φ3

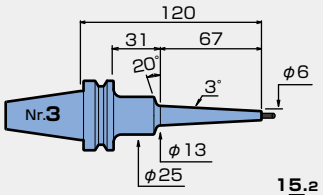
BT30–SLSA3–60–M22



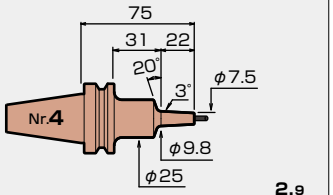
BT30–SLSA3–80–M42



BT30–SLSA3–120–M67

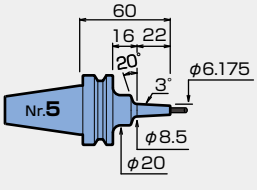


BT30–SLRA3–75–M22

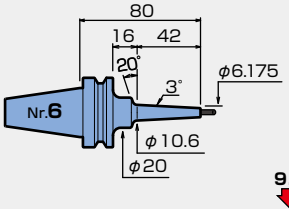


φ3.175

BT30–SLSA3.175–60–M22

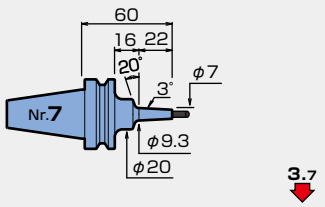


BT30–SLSA3.175–80–M42

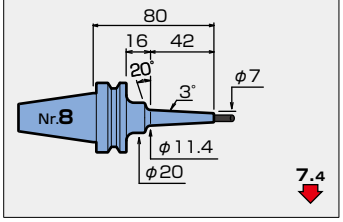


φ4

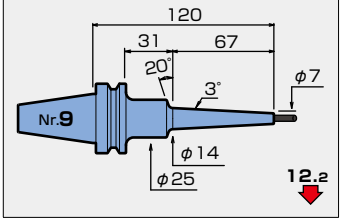
BT30–SLSA4–60–M22



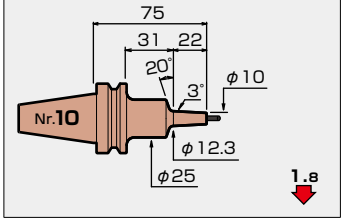
BT30–SLSA4–80–M42



BT30–SLSA4–120–M67

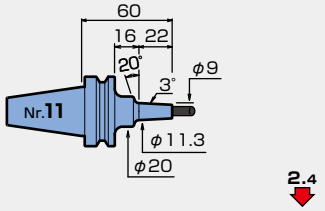


BT30–SLRA4–75–M22

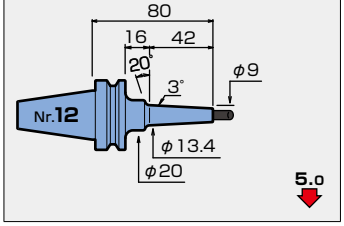


φ6

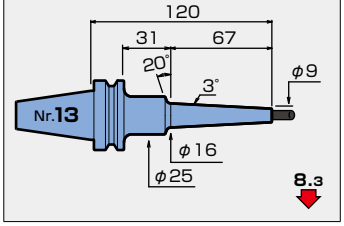
BT30–SLSA6–60–M22



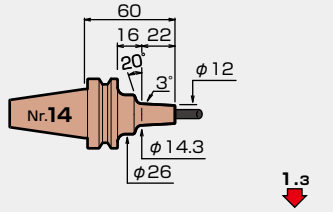
BT30–SLSA6–80–M42



BT30–SLSA6–120–M67

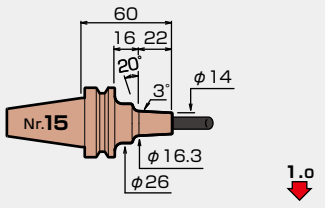


BT30–SLRA6–60–M22



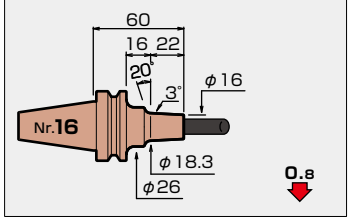
φ8

BT30–SLRA8–60–M22



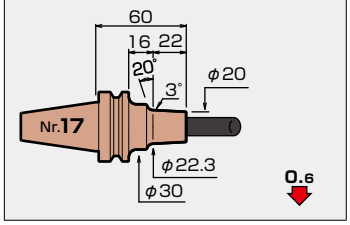
φ10

BT30–SLRA10–60–M22



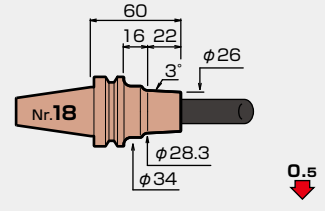
φ12

BT30–SLRA12–60–M22



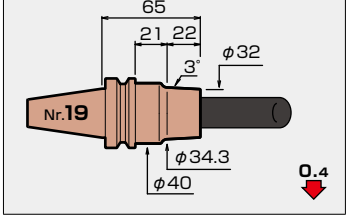
φ16

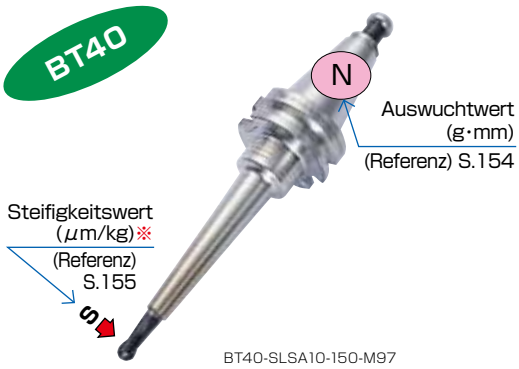
BT30–SLRA16–60–M22



φ20

BT30–SLRA20–65–M22





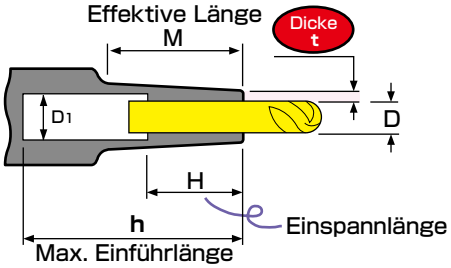


Abb.1

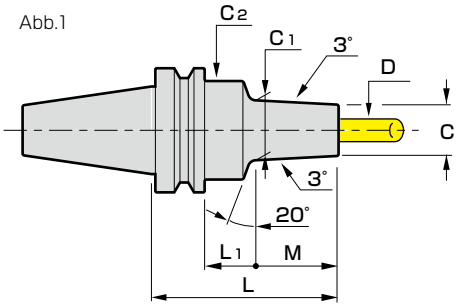
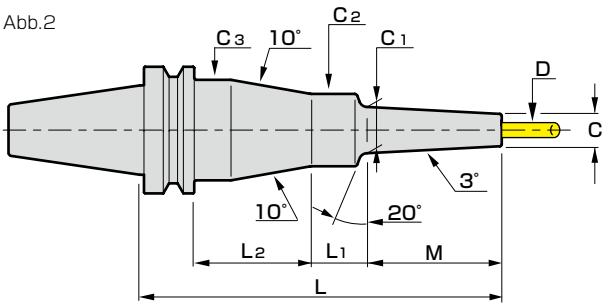


Abb.2



CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT40－SLSA 3－ 95－M 42	1	3	6		95	42	26	—	10.4	26	—	4	9	130	1.0	2.3	9.3	1
－120－M 67					120	67			13					155		3.1	14.9	4
－125－M 42					125	42	56		10.4					160	1.1	2.5	9.9	2
－150－M 67					150	67			13					185		3.2	15.8	5
－M 97				1.5		97	26		16.2							4.0	20.7	7
－155－M 42	2				155	42	33	53	10.4		40			190	1.4	2.7	9.9	3
－180－M 67					180	67			13					215		3.4	15.8	6
－M 97	1					97	56	—	16.2		—				1.2	4.1	22.2	8
－210－M 97	2				210		33	53			40			245	1.4	4.3	22.1	9
－SLRA 3－ 75－M 22	1	3	7.5		75	22	26	—	9.8	26	—	5	9	110	1.0	2.6	2.8	10
－ 95－M 42					95	42			11.9					130		2.9	5.4	13
－105－M 22					105	22	56		9.8					140	1.1	2.7	3.2	11
－120－M 67					120	67	26		14.5					155	1.0	3.4	8.9	16
－125－M 42					125	42	56		11.9					160	1.1	3.0	5.9	14
－135－M 22	2				135	22	33	53	9.8		40			170	1.4	2.9	3.2	12
－150－M 67	1				150	67	56	—	14.5		—			185	1.1	3.5	9.8	17
－M 97				2.25		97	26		17.7							4.1	12.9	19
－155－M 42	2				155	42	33	53	11.9		40			190	1.4	3.2	6.0	15
－180－M 67					180	67			14.5					215		3.7	9.8	18
－M 97	1					97	56	—	17.7		—				1.2	4.2	14.3	20
－M127						127	26		20.8	36					1.1	5.4	15.7	22
－210－M 97	2				210	97	33	53	17.7	26	40			245	1.5	4.4	14.3	21
－M127	1					127	56	—	20.8	36	—				1.3	5.5	16.2	23
－240－M127	2				240		28	58			50			275	1.8	5.8	16.3	24
－SLFB 3－ 75－M 22	1	3	9.5		75	22	26	—	11.8	26	—	5	9	110	1.0	2.4	1.9	25
－ 95－M 42					95	42			13.9					130		2.7	3.2	28
－105－M 22					105	22	56		11.8					140	1.1	2.5	2.2	26
－120－M 67					120	67	26		16.5					155		3.4	5.3	31
－125－M 42				3.25	125	42	56		13.9					160		2.8	3.8	29
－135－M 22	2				135	22	33	53	11.8		40			170	1.4	2.7	2.3	27
－150－M 67	1				150	67	56	—	16.5		—			185	1.2	3.6	6.3	32
－155－M 42	2				155	42	33	53	13.9		40			190	1.4	3.0	3.8	30
－180－M 67					180	67			16.5					215		3.8	6.3	33

BT40

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT40－SLSA 4－ 95－M 42	1	4	7		95	42	26	—	11.4	26	—	5	12	130	1.0	3.1	7.3	34
－120－M 67					120	67			14					155			11.8	37
－125－M 42					125	42	56		11.4					160	1.1	3.3	7.9	35
－150－M 67					150	67			14					185			12.8	38
－M 97				1.5		97	26		17.2							4.1	16.7	40
－155－M 42	2				155	42	33	53	11.4		40			190	1.4	3.5	7.9	36
－180－M 67					180	67			14					215			12.8	39
－M 97	1					97	56	—	17.2		—				1.2	4.2	18.2	41
－210－M 97	2				210		33	53			40			245	1.5	4.4		42
－SLRA 4－ 75－M 22	1	4	10		75	22	26	—	12.3	26	—	6	12	110	1.0	2.7	1.7	43
－ 95－M 42					95	42			14.4					130		3.1	3.1	46
－105－M 22					105	22	56		12.3					140	1.1	2.8	2.1	44
－120－M 67					120	67	26		17					155		3.9	5.1	49
－125－M 42					125	42	56		14.4					160		3.3	3.7	47
－135－M 22	2				135	22	33	53	12.3		40			170	1.4	3.0	2.1	45
－150－M 67	1				150	67	56	—	17		—			185	1.2	4.0	6.1	50
－M 97				3		97	26		20.2						1.1	4.8	7.7	52
－155－M 42	2				155	42	33	53	14.4		40			190	1.4	3.5	3.7	48
－180－M 67					180	67			17					215		4.2	6.1	51
－M 97	1					97	56	—	20.2		—				1.2	4.9	9.2	53
－M127						127	26		23.3	36					1.3	6.8	9.3	55
－210－M 97	2				210	97	33	53	20.2	26	40			245	1.5	5.1	9.1	54
－M127	1					127	56	—	23.3	36	—					7.0	9.9	56
－240－M127	2				240		28	58			50			275	2.0	7.3		57
－SLFB 4－ 75－M 22	1	4	12		75	22	26	—	14.3	26	—	6	12	110	1.0	2.5	1.3	58
－ 95－M 42					95	42			16.4					130	1.1	3.0	2.2	61
－105－M 22					105	22	56		14.3					140		2.7	1.7	59
－120－M 67					120	67	26		19					155		3.8	3.5	64
－125－M 42				4	125	42	56		16.4					160	1.2	3.1	2.8	62
－135－M 22	2				135	22	33	53	14.3		40			170	1.4	2.9	1.8	60
－150－M 67	1				150	67	56	—	19		—			185	1.2	4.0	4.5	65
－155－M 42	2				155	42	33	53	16.4		40			190	1.4	3.3	2.8	63
－180－M 67					180	67			19					215	1.5	4.2	4.5	66
BT40－SLSA 6－ 95－M 42	1	6	9		95	42	26	—	13.4	26	—	7	18	130	1.0	3.3	4.8	67
－120－M 67					120	67			16					155	1.1	4.4	8.0	70
－125－M 42					125	42	56		13.4					160		3.5	5.5	68
－150－M 67					150	67			16					185	1.2	4.5	9.0	71
－M 97				1.5		97	26		19.2	36						5.9	11.0	73
－155－M 42	2				155	42	33	53	13.4	26	40			190	1.4	3.7	5.5	69
－180－M 67					180	67			16					215		4.7	9.0	72
－M 97	1					97	56	—	19.2	36	—					6.1	11.4	74
－210－M 97	2				210		28	58			50			245	1.9	6.4	11.5	75
－SLSB 6－ 95－M 42	1	6	10		95	42	26	—	14.4	26	—	8	18	130	1.0	4.0	3.8	76
－120－M 67					120	67			17					155	1.1	5.4	6.3	79
－125－M 42					125	42	56		14.4					160		4.1	4.5	77
－150－M 67					150	67			17					185	1.2	5.5	7.4	80
－M 97						97	26		20.2	36						7.2	8.9	82
－155－M 42	2				155	42	33	53	14.4	26	40			190	1.4	4.3	4.5	78
－180－M 67					180	67			17					215		5.7	7.4	81
－M 97	1			2		97	56	—	20.2	36	—					7.4	9.3	83
－M127						127	26		23.3						1.3	8.9	11.4	85
－210－M 97	2				210	97	28	58	20.2		50			245	1.9	7.7	9.4	84
－M127	1					127	56	—	23.3		—				1.5	9.1	12.1	86
－M157						157	26		26.5						1.4	10.6	13.7	88
－240－M127	2				240	127	28	58	23.3		50			275	2.0	9.4	12.1	87
－M157	1					157	56	—	26.5		—				1.7	10.8	14.5	89
－270－M157	2				270		28	58			50			305	2.1	11.0	14.6	90

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT40 – SLRB 6 – 75 – M 22	1	6	14		75	22	26	—	16.3	36	—	8	18	110	1.1	3.2	0.9	91
– 95 – M 42					95	42			18.4					130		4.3	1.6	94
– 105 – M 22					105	22	56		16.3					140	1.3	3.3	1.1	92
– 120 – M 67					120	67	26		21					155	1.2	5.6	2.5	97
– 125 – M 42				4	125	42	56		18.4					160	1.3	4.4	1.8	95
– 135 – M 22	2				135	22	28	58	16.3		50			170	1.8	3.6	1.1	93
– 150 – M 67	1				150	67	56	—	21		—			185	1.4	5.8	2.8	98
– 155 – M 42	2				155	42	28	58	18.4		50			190	1.8	4.7	1.8	96
– 180 – M 67					180	67			21					215	1.9	6.1	2.9	99
– SLFB 6 – 75 – M 22	1	6	14		75	22	26	—	16.3	36	—	8	18	110	1.1	3.2	0.9	100
– 95 – M 42					95	42			18.4					130		4.3	1.6	103
– 105 – M 22					105	22	56		16.3					140	1.3	3.3	1.1	101
– 120 – M 67					120	67	26		21					155	1.2	5.6	2.5	106
– 125 – M 42				4	125	42	56		18.4					160	1.3	4.4	1.8	104
– 135 – M 22	2				135	22	28	58	16.3		50			170	1.8	3.6	1.1	102
– 150 – M 67	1				150	67	56	—	21		—			185	1.4	5.8	2.8	107
– 155 – M 42	2				155	42	28	58	18.4		50			190	1.8	4.7	1.8	105
– 180 – M 67					180	67			21					215	1.9	6.1	2.9	108
BT40 – SLSA 8 – 95 – M 42	1	8	11		95	42	26	—	15.4	36	—	9	24	130	1.1	4.6	3.2	109
– 120 – M 67					120	67			18					155		6.3	5.4	112
– 125 – M 42					125	42	56		15.4					160	1.3	4.7	3.4	110
– 150 – M 67					150	67			18					185		6.5	5.7	113
– M 97				1.5		97	26		21.2						1.2	8.4	7.8	115
– 155 – M 42	2				155	42	28	58	15.4		50			190	1.8	5.0	3.4	111
– 180 – M 67					180	67			18					215		6.7	5.7	114
– M 97	1					97	56	—	21.2		—				1.4	8.6	8.3	116
– 210 – M 97	2				210		28	58			50			245	1.9	8.8	8.4	117
– SLSB 8 – 95 – M 42	1	8	13		95	42	26	—	17.4	36	—	10	24	130	1.1	5.3	2.1	118
– 120 – M 67					120	67			20					155		7.4	3.5	121
– 125 – M 42					125	42	56		17.4					160	1.3	5.5	2.3	119
– 150 – M 67					150	67			20					185	1.4	7.6	3.9	122
– M 97						97	26		23.2						1.2	10.0	5.2	124
– 155 – M 42	2				155	42	28	58	17.4		50			190	1.8	5.7	2.4	120
– 180 – M 67					180	67			20					215		7.9	3.9	123
– M 97	1			2.5		97	56	—	23.2		—				1.4	10.2	5.7	125
– M127						127	26		26.3						1.3	12.6	7.0	127
– 210 – M 97	2				210	97	28	58	23.2		50			245	1.9	10.4	5.8	126
– M127	1					127	56	—	26.3		—				1.5	12.7	7.7	128
– M157						157	26		29.5						1.4	15.1	8.5	130
– 240 – M127	2				240	127	28	58	26.3		50			275	2.0	13.0	7.7	129
– M157	1					157	56	—	29.5		—				1.7	15.3	9.4	131
– 270 – M157	2				270		28	58			50			305	2.1	15.6	9.5	132
– SLRB 8 – 75 – M 22	1	8	18		75	22	26	—	20.3	36	—	10	24	110	1.1	3.6	0.7	133
– 95 – M 42					95	42			22.4					130	1.2	5.3	1.0	136
– 105 – M 22					105	22	56		20.3					140	1.3	3.8	0.8	134
– 120 – M 67					120	67	26		25					155	1.2	7.5	1.6	139
– 125 – M 42				5	125	42	56		22.4					160	1.4	5.5	1.2	137
– 135 – M 22	2				135	22	28	58	20.3		50			170	1.8	4.1	0.9	135
– 150 – M 67	1				150	67	56	—	25		—			185	1.5	7.6	1.9	140
– 155 – M 42	2				155	42	28	58	22.4		50			190	1.9	5.8	1.3	138
– 180 – M 67					180	67			25					215		7.9	2.0	141
– SLFB 8 – 75 – M 22	1	8	18		75	22	26	—	20.3	36	—	10	24	110	1.1	3.6	0.7	142
– 95 – M 42					95	42			22.4					130	1.2	5.3	1.0	145
– 105 – M 22					105	22	56		20.3					140	1.3	3.8	0.8	143
– 120 – M 67					120	67	26		25					155	1.2	7.5	1.6	148
– 125 – M 42				5	125	42	56		22.4					160	1.4	5.5	1.2	146
– 135 – M 22	2				135	22	28	58	20.3		50			170	1.8	4.1	0.9	144
– 150 – M 67	1				150	67	56	—	25		—			185	1.5	7.6	1.9	149
– 155 – M 42	2				155	42	28	58	22.4		50			190	1.9	5.8	1.3	147
– 180 – M 67					180	67			25					215		7.9	2.0	150

BT40

BT40

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT40 – SLSA10 – 95 – M 42	1	10	13		95	42	26	—	17.4	36	—	11	30	130	1.1	5.5	2.3	151
– 120 – M 67					120	67			20					155		8.1	4.0	154
– 125 – M 42					125	42	56		17.4					160	1.3	5.7	2.5	152
– 150 – M 67					150	67			20					185	1.4	8.2	4.3	155
– M 97				1.5		97	26		23.2						1.2		5.9	157
– 155 – M 42	2				155	42	28	58	17.4		50			190	1.8	5.9	2.5	153
– 180 – M 67					180	67			20					215		8.5	4.4	156
– M 97	1					97	56	—	23.2		—				1.5		6.4	158
– 210 – M 97	2				210		28	58			50			245	1.9		6.5	159
– SLSB10 – 95 – M 42	1	10	16		95	42	26	—	20.4	36	—	12	30	130	1.1	6.3	1.4	160
– 120 – M 67					120	67			23					155	1.2	9.3	2.4	163
– 125 – M 42					125	42	56		20.4					160	1.3	6.4	1.6	161
– 150 – M 67					150	67			23					185	1.4	9.5	2.7	164
– M 97						97	26		26.2						1.3	13.0	3.6	166
– 155 – M 42	2				155	42	28	58	20.4		50			190	1.8	6.7	1.7	162
– 180 – M 67					180	67			23					215	1.9	9.8	2.8	165
– M 97	1			3		97	56	—	26.2		—				1.4	13.2	4.1	167
– M127						127	26		29.3	50				190	1.5	17.4	4.5	169
– 210 – M 97	2				210	97	28	58	26.2	36	50			245	1.9	13.5	4.1	168
– M127	1					127	56	—	29.3	50	—			220	1.8	17.9	4.7	170
– M157						157	26		32.5						1.6	21.1	5.5	172
– 240 – M127					240	127	86		29.3					250	2.1	18.5	5.0	171
– M157						157	56		32.5						1.8	21.7	5.8	173
– 270 – M157					270		86							305	2.1	22.2	6.2	174
– SLRB10 – 75 – M 22	1	10	22		75	22	26	—	24.3	36	—	12	30	110	1.1	3.8	0.5	175
– 95 – M 42					95	42			26.4					130	1.2	6.3	0.8	178
– 105 – M 22					105	22	56		24.3					140	1.3	4.0	0.7	176
– 120 – M 67					120	67	26		29					155		9.4	1.2	181
– 125 – M 42				6	125	42	56		26.4					160	1.4	6.5	1.0	179
– 135 – M 22	2				135	22	28	58	24.3		50			170	1.8	4.3	0.7	177
– 150 – M 67	1				150	67	56	—	29		—			185	1.5	9.6	1.5	182
– 155 – M 42	2				155	42	28	58	26.4		50			190	1.9	6.8	1.1	180
– 180 – M 67					180	67			29					215	2.0	9.8	1.6	183
– SLFB10 – 75 – M 22	1	10	22		75	22	26	—	24.3	36	—	12	30	110	1.1	3.8	0.5	184
– 95 – M 42					95	42			26.4					130	1.2	6.3	0.8	187
– 105 – M 22					105	22	56		24.3					140	1.3	4.0	0.7	185
– 120 – M 67					120	67	26		29					155		9.4	1.2	190
– 125 – M 42				6	125	42	56		26.4					160	1.4	6.5	1.0	188
– 135 – M 22	2				135	22	28	58	24.3		50			170	1.8	4.3	0.7	186
– 150 – M 67	1				150	67	56	—	29		—			185	1.5	9.6	1.5	191
– 155 – M 42	2				155	42	28	58	26.4		50			190	1.9	6.8	1.1	189
– 180 – M 67					180	67			29					215	2.0	9.8	1.6	192
BT40 – SLSA12 – 95 – M 42	1	12	15		95	42	26	—	19.4	36	—	13	30	130	1.1	7.1	1.8	193
– 120 – M 67					120	67			22					155		10.7	3.2	196
– 125 – M 42					125	42	56		19.4					160	1.3	7.3	2.1	194
– 150 – M 67					150	67			22					185	1.4	10.9	3.6	197
– M 97				1.5		97	26		25.2						1.2	15.3	4.8	199
– 155 – M 42	2				155	42	28	58	19.4		50			190	1.8	7.5	2.1	195
– 180 – M 67					180	67			22					215		11.2	3.6	198
– M 97	1					97	56	—	25.2		—				1.4	15.5	5.3	200
– 210 – M 97	2				210		28	58			50			245	1.9	15.8	5.4	201

BT40

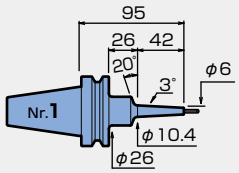
CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT40 – SLSB12 – 95 – M 42	1	12	19		95	42	26	—	23.4	36	—	14	30	130	1.1	8.0	1.1	202
– 120 – M 67					120	67			26					155	1.2	12.2	1.8	205
– 125 – M 42					125	42	56		23.4					160	1.4	8.2	1.3	203
– 150 – M 67					150	67			26					185		12.4	2.1	206
– M 97						97	26		29.2	50				160		17.9	2.4	208
– 155 – M 42	2				155	42	28	58	23.4	36	50			190	1.8	8.4	1.4	204
– 180 – M 67					180	67			26					215	1.9	12.6	2.2	207
– M 97	1			3.5		97	56	—	29.2	50	—			190	1.7	18.4	2.6	209
– M127						127	26		32.3						1.5	22.9	3.2	211
– 210 – M 97					210	97	86		29.2					220	2.1	19.0	2.9	210
– M127						127	56		32.3						1.9	23.5	3.5	212
– M157						157	26		35.5						1.7	27.9	4.0	214
– 240 – M127					240	127	86		32.3					250	2.2	24.0	3.8	213
– M157						157	56		35.5						2.0	28.5	4.4	215
– 270 – M157					270		86							280	2.4	29.1	4.8	216
– SLRB12 – 75 – M 22	1	12	26		75	22	26	—	28.3	50	—	14	30	85	1.1	6.9	0.4	217
– 95 – M 42					95	42			30.4					105	1.3	8.7	0.6	220
– 105 – M 22					105	22	56		28.3					115	1.4	7.5	0.5	218
– 120 – M 67					120	67	26		33					130		12.9	0.8	223
– 125 – M 42				7	125	42	56		30.4					135	1.6	9.3	0.6	221
– 135 – M 22					135	22	86		28.3					145	1.8	8.1		219
– 150 – M 67					150	67	56		33					160	1.7	13.5	0.9	224
– 155 – M 42					155	42	86		30.4					165	2.0	9.9	0.8	222
– 180 – M 67					180	67			33					190	2.1	14.1	1.1	225
– SLFB12 – 75 – M 22	1	12	26		75	22	26	—	28.3	50	—	14	30	85	1.1	6.9	0.4	226
– 95 – M 42					95	42			30.4					105	1.3	8.7	0.6	229
– 105 – M 22					105	22	56		28.3					115	1.4	7.5	0.5	227
– 120 – M 67					120	67	26		33					130		12.9	0.8	232
– 125 – M 42				7	125	42	56		30.4					135	1.6	9.3	0.6	230
– 135 – M 22					135	22	86		28.3					145	1.8	8.1		228
– 150 – M 67					150	67	56		33					160	1.7	13.5	0.9	233
– 155 – M 42					155	42	86		30.4					165	2.0	9.9	0.8	231
– 180 – M 67					180	67			33					190	2.1	14.1	1.1	234
BT40 – SLSB16 – 95 – M 42	1	16	24		95	42	26	—	28.4	50	—	18	32	105	1.2	12.4	0.7	235
– 120 – M 67					120	67			31					130	1.3	19.3	1.1	238
– 125 – M 42					125	42	56		28.4					135	1.6	13.0	0.8	236
– 150 – M 67					150	67			31					160		19.8	1.3	239
– M 97						97	26		34.2						1.5	27.6	1.6	241
– 155 – M 42					155	42	86		28.2					165	1.9	13.5	0.9	237
– 180 – M 67					180	67			31					190	2.0	20.4	1.5	240
– M 97				4		97	56		34.2						1.8	28.1	1.9	242
– M127						127	26		37.3						1.6	35.8	2.2	244
– 210 – M 97					210	97	86		34.2					220	2.1	28.7	2.1	243
– M127						127	56		37.3						2.0	36.4	2.5	245
– M157						157	26		40.5						1.9	44.1	2.8	247
– 240 – M127					240	127	86		37.3					250	2.3	37.0		246
– M157						157	56		40.5						2.2	44.7	3.1	248
– 270 – M157					270		86							280	2.5	45.3	3.5	249
– SLRB16 – 75 – M 22	1	16	32		75	22	26	—	34.3	50	—	18	32	85	1.2	6.9	0.3	250
– 95 – M 42					95	42			36.4					105	1.4	12.5	0.4	253
– 105 – M 22					105	22	56		34.3					115	1.6	7.5		251
– 120 – M 67					120	67	26		39					130	1.5	19.4	0.6	256
– 125 – M 42				8	125	42	56		36.4					135	1.7	13.0	0.5	254
– 135 – M 22					135	22	86		34.3					145	1.9	8.1		252
– 150 – M 67					150	67	56		39					160		20.0	0.8	257
– 155 – M 42					155	42	86		36.4					165	2.0	13.6	0.7	255
– 180 – M 67					180	67			39					190	2.2	20.5	1.0	258

BT40

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT40 – SLFB16 – 75 – M 22	1	16	32		75	22	26	—	34.3	50	—	18	32	85	1.2	6.9	0.3	259
– 95 – M 42					95	42			36.4					105	1.4	12.5	0.4	262
– 105 – M 22					105	22	56		34.3					115	1.6	7.5		260
– 120 – M 67					120	67	26		39					130	1.5	19.4	0.6	265
– 125 – M 42				8	125	42	56		36.4					135	1.7	13.0	0.5	263
– 135 – M 22					135	22	86		34.3					145	1.9	8.1		261
– 150 – M 67					150	67	56		39					160		20.0	0.8	266
– 155 – M 42					155	42	86		36.4					165	2.0	13.6	0.7	264
– 180 – M 67					180	67			39					190	2.2	20.5	1.0	267
BT40 – SLSB20 – 95 – M 42	1	20	29		95	42	26	—	33.4	50	—	22	40	105	1.2	14.2	0.5	268
– 120 – M 67					120	67			36					130	1.4	24.5	0.8	271
– 125 – M 42					125	42	56		33.4					135	1.6	14.8	0.6	269
– 150 – M 67					150	67			36					160	1.7	25.0	1.0	272
– M 97						97	26		39.2						1.5	36.8	1.2	274
– 155 – M 42					155	42	86		33.4					165	1.9	15.3	0.8	270
– 180 – M 67					180	67			36					190	2.0	25.6	1.2	273
– M 97				4.5		97	56		39.2						1.9	37.4	1.4	275
– M127						127	26		42.3						1.8	50.0	1.6	277
– 210 – M 97					210	97	86		39.2					220	2.2	38.0	1.7	276
– M127						127	56		42.3						2.1	50.5	1.9	278
– M157						157	26		45.5						2.0	62.3	2.1	280
– 240 – M127					240	127	86		42.3					250	2.4	51.1	2.3	279
– M157						157	56		45.5							62.9	2.4	281
– 270 – M157					270		86							280	2.7	63.5	2.9	282
– SLRB20 – 95 – M 42	1	20	38		95	42	26	—	42.4	50	—	22	40	105	1.4	14.3	0.4	283
– 120 – M 67					120	67			45					130	1.7	24.6	0.5	286
– 125 – M 42				9	125	42	56		42.4					135	1.8	14.9		284
– 150 – M 67					150	67			45					160	2.0	25.2	0.7	287
– 155 – M 42					155	42	86		42.4					165	2.1	15.4		285
– 180 – M 67					180	67			45					190	2.3	25.7	0.9	288
– SLFB20 – 95 – M 42	1	20	38		95	42	26	—	42.4	50	—	22	40	105	1.4	14.3	0.4	289
– 120 – M 67					120	67			45					130	1.7	24.6	0.5	292
– 125 – M 42				9	125	42	56		42.4					135	1.8	14.9		290
– 150 – M 67					150	67			45					160	2.0	25.2	0.7	293
– 155 – M 42					155	42	86		42.4					165	2.1	15.4		291
– 180 – M 67					180	67			45					190	2.3	25.7	0.9	294
BT40 – SLRB25 – 95 – M 42	1	25	45		95	42	26	—	49.7	50	—	26	45	105	1.5	16.4	0.3	295
– 125 – M 42				10	125		56							135	1.9	17.0	0.5	296
– 155 – M 42					155		86							165	2.2	17.5	0.7	297
– SLFB25 – 95 – M 42	1	25	45		95	42	26	—	49.7	50	—	26	45	105	1.5	16.4	0.3	298
– 125 – M 42				10	125		56							135	1.9	17.0	0.5	299
– 155 – M 42					155		86							165	2.2	17.5	0.7	300

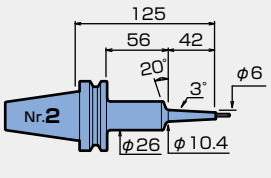
φ3 SLSA t=1.5

BT40-SLSA3-95-M42



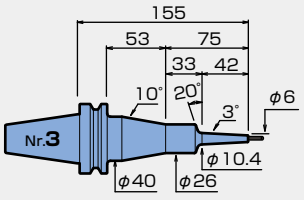
9.3

BT40-SLSA3-125-M42



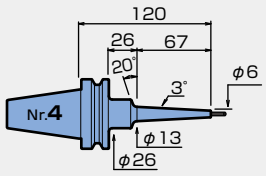
9.9

BT40-SLSA3-155-M42



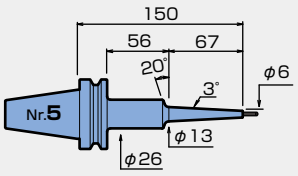
9.9

BT40-SLSA3-120-M67



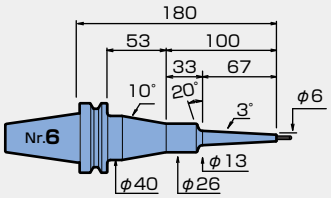
14.9

BT40-SLSA3-150-M67



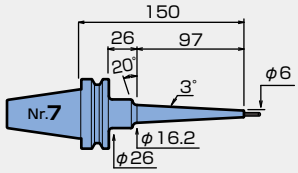
15.8

BT40-SLSA3-180-M67



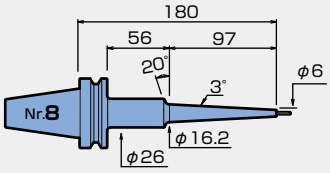
15.8

BT40-SLSA3-150-M97



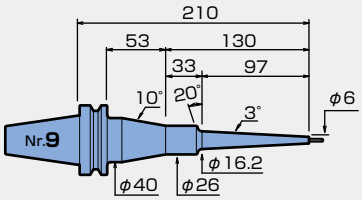
20.7

BT40-SLSA3-180-M97



22.2

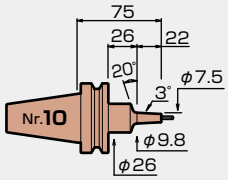
BT40-SLSA3-210-M97



22.1

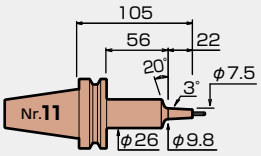
φ3 SLRA t=2.25

BT40-SLRA3-75-M22



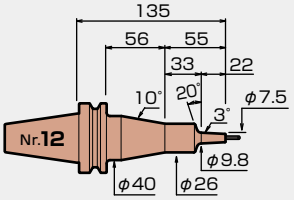
2.8

BT40-SLRA3-105-M22



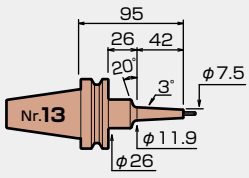
3.2

BT40-SLRA3-135-M22



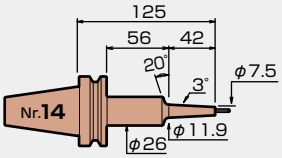
3.2

BT40-SLRA3-95-M42



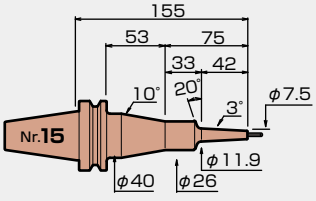
5.4

BT40-SLRA3-125-M42



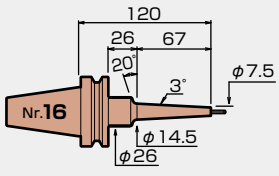
5.9

BT40-SLRA3-155-M42



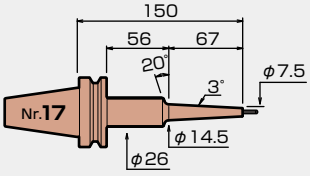
6.0

BT40-SLRA3-120-M67



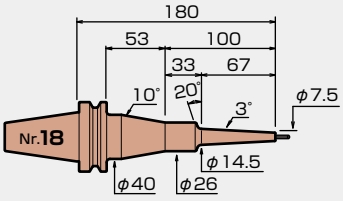
8.9

BT40-SLRA3-150-M67



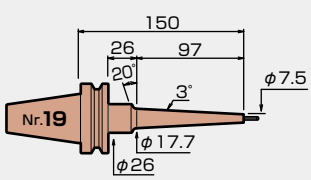
9.8

BT40-SLRA3-180-M67



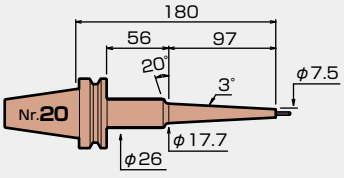
9.8

BT40-SLRA3-150-M97



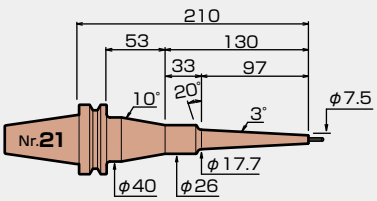
12.9

BT40-SLRA3-180-M97



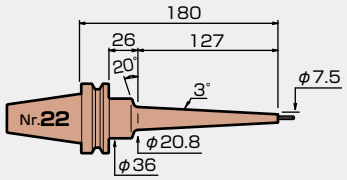
14.3

BT40-SLRA3-210-M97



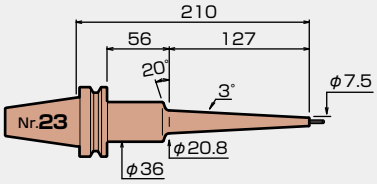
14.3

BT40−SLRA3−180−M127



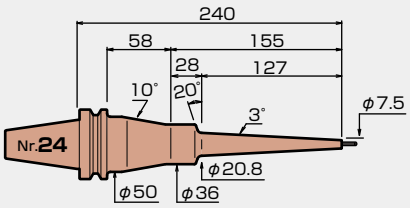
15.7

BT40−SLRA3−210−M127



16.2

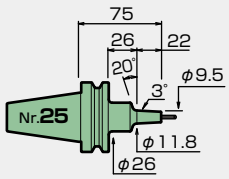
BT40−SLRA3−240−M127



16.3

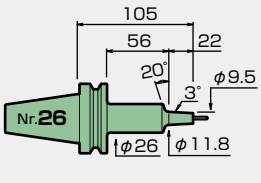
ϕ3 SLFB t=3.25

BT40−SLFB3−75−M22



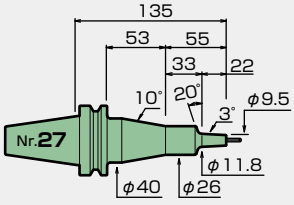
1.9

BT40−SLFB3−105−M22



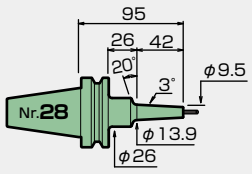
2.2

BT40−SLFB3−135−M22



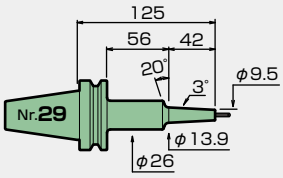
2.3

BT40−SLFB3−95−M42



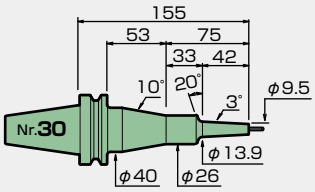
3.2

BT40−SLFB3−125−M42



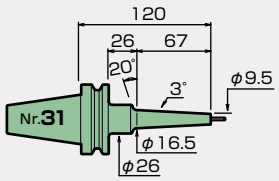
3.8

BT40−SLFB3−155−M42



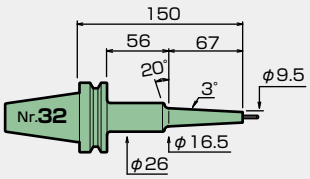
3.8

BT40−SLFB3−120−M67



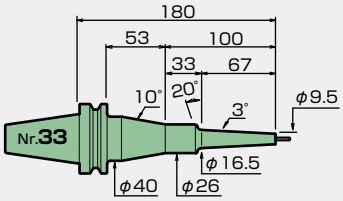
5.3

BT40−SLFB3−150−M67



6.3

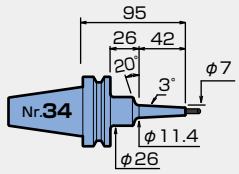
BT40−SLFB3−180−M67



6.3

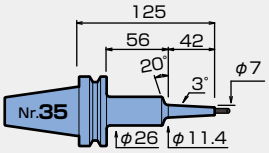
φ4 SLSA t=1.5

BT40-SLSA4-95-M42



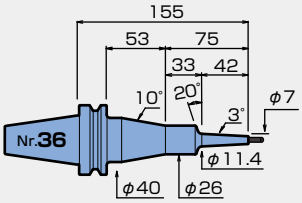
7.3

BT40-SLSA4-125-M42



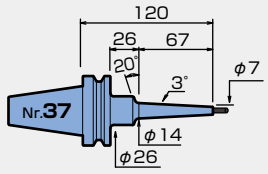
7.9

BT40-SLSA4-155-M42



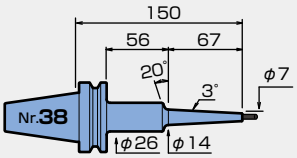
7.9

BT40-SLSA4-120-M67



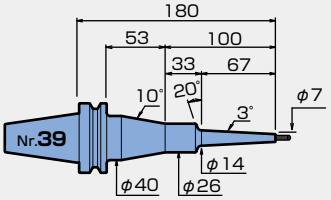
11.8

BT40-SLSA4-150-M67



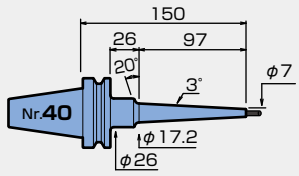
12.8

BT40-SLSA4-180-M67



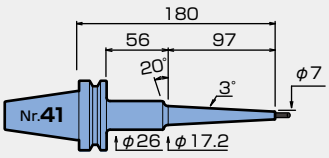
12.8

BT40-SLSA4-150-M97



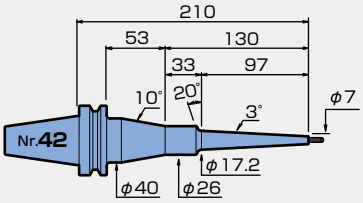
16.7

BT40-SLSA4-180-M97



18.2

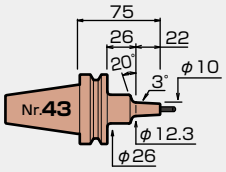
BT40-SLSA4-210-M97



18.2

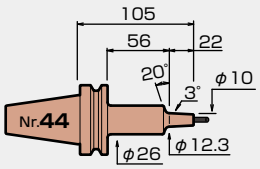
φ4 SLRA t=3

BT40-SLRA4-75-M22



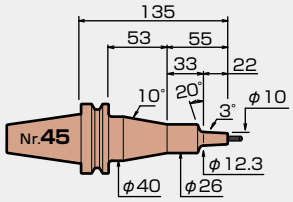
1.7

BT40-SLRA4-105-M22



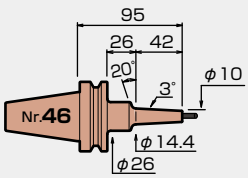
2.1

BT40-SLRA4-135-M22



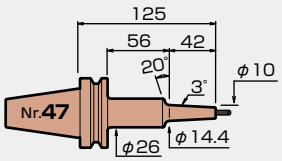
2.1

BT40-SLRA4-95-M42



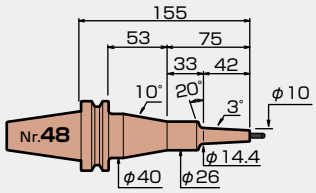
3.1

BT40-SLRA4-125-M42



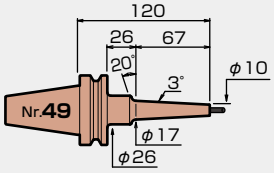
3.7

BT40-SLRA4-155-M42



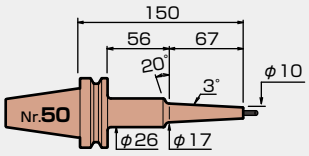
3.7

BT40-SLRA4-120-M67



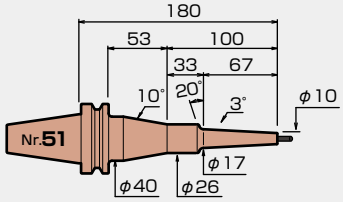
5.1

BT40-SLRA4-150-M67



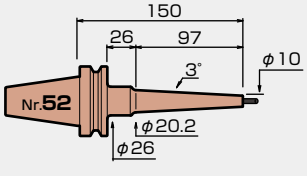
6.1

BT40-SLRA4-180-M67



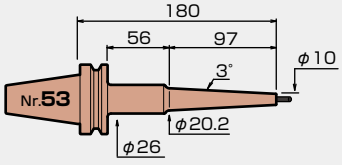
6.1

BT40-SLRA4-150-M97



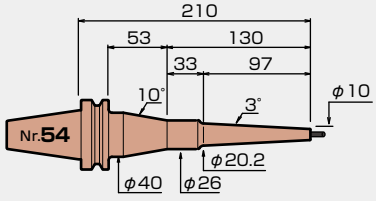
7.7

BT40-SLRA4-180-M97



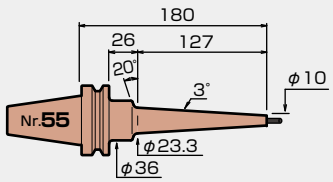
9.2

BT40-SLRA4-210-M97



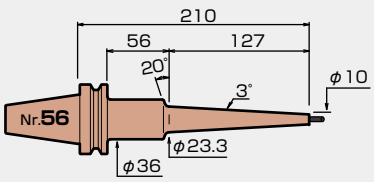
9.1

BT40−SLRA4−180−M127



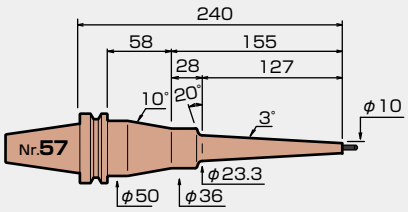
9.3

BT40−SLRA4−210−M127



9.9

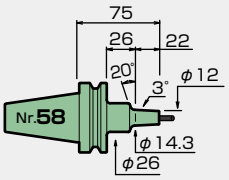
BT40−SLRA4−240−M127



9.9

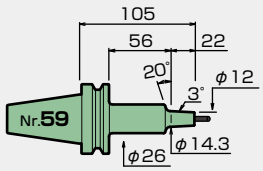
φ4 SLFB t=4

BT40−SLFB4−75−M22



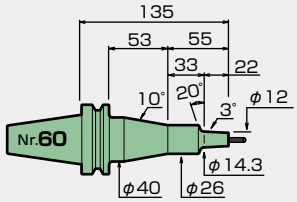
1.3

BT40−SLFB4−105−M22



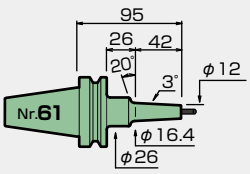
1.7

BT40−SLFB4−135−M22



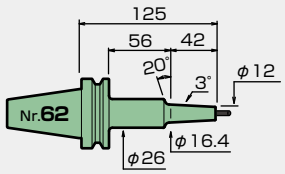
1.8

BT40−SLFB4−95−M42



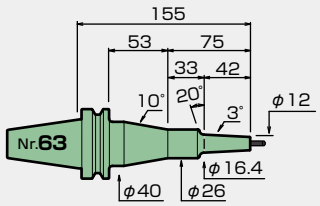
2.2

BT40−SLFB4−125−M42



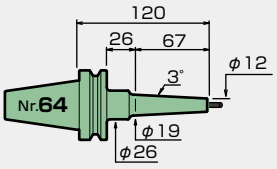
2.8

BT40−SLFB4−155−M42



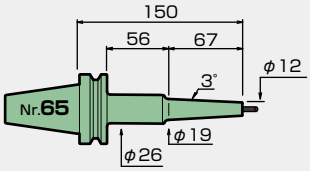
2.8

BT40−SLFB4−120−M67



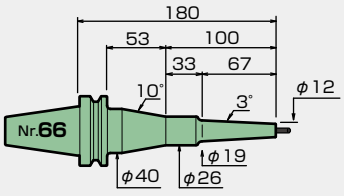
3.5

BT40−SLFB4−150−M67



4.5

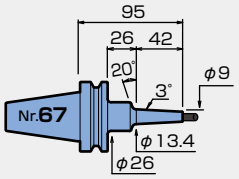
BT40−SLFB4−180−M67



4.5

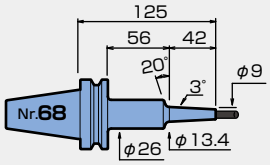
φ6 SLSA t=1.5

BT40−SLSA6−95−M42



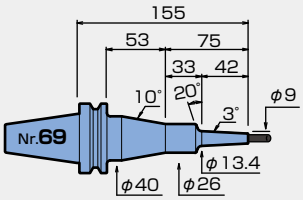
4.8

BT40−SLSA6−125−M42



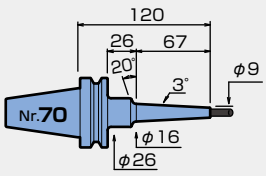
5.5

BT40−SLSA6−155−M42



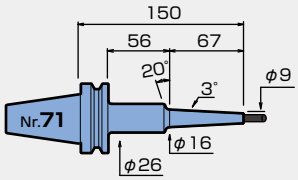
5.5

BT40−SLSA6−120−M67



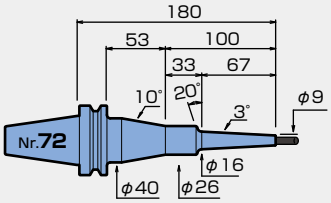
8.0

BT40−SLSA6−150−M67



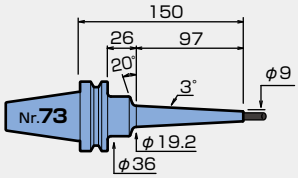
9.0

BT40−SLSA6−180−M67



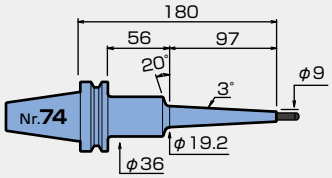
9.0

BT40−SLSA6−150−M97



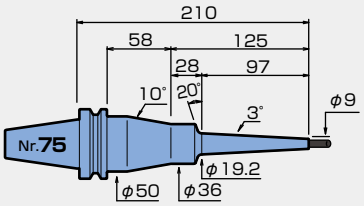
11.0

BT40−SLSA6−180−M97



11.4

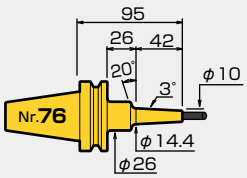
BT40−SLSA6−210−M97



11.5

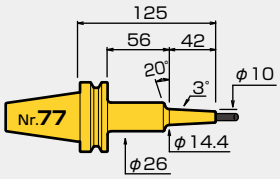
φ6 SLSB t=2

BT40−SLSB6−95−M42



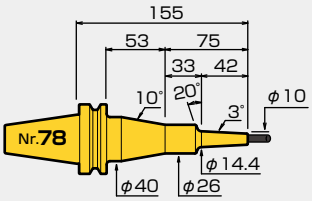
3.8

BT40−SLSB6−125−M42



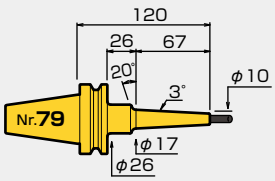
4.5

BT40−SLSB6−155−M42



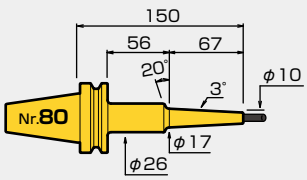
4.5

BT40−SLSB6−120−M67



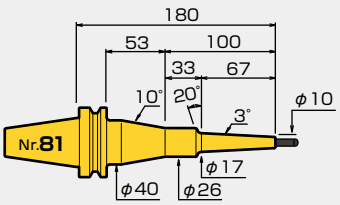
6.3

BT40−SLSB6−150−M67



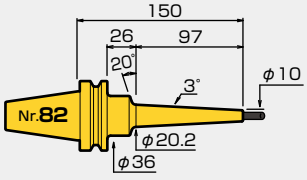
7.4

BT40−SLSB6−180−M67



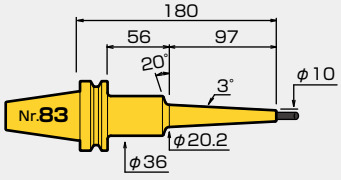
7.4

BT40−SLSB6−150−M97



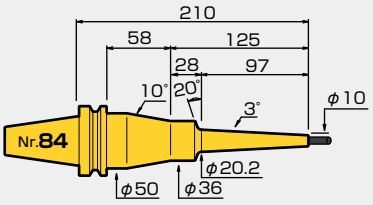
8.9

BT40−SLSB6−180−M97



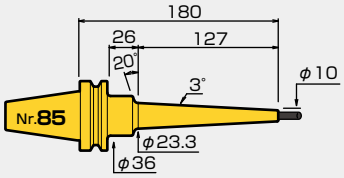
9.3

BT40−SLSB6−210−M97



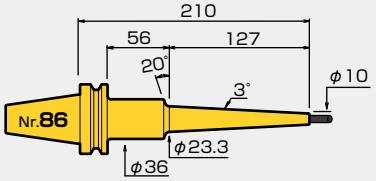
9.4

BT40−SLSB6−180−M127



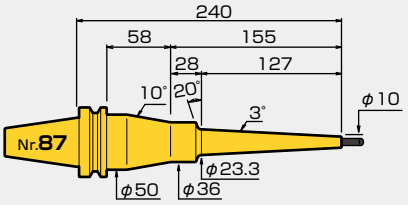
11.4

BT40−SLSB6−210−M127



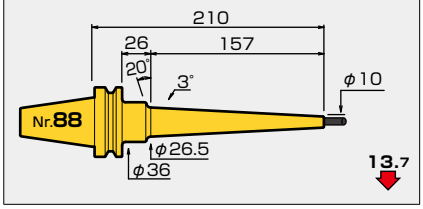
12.1

BT40−SLSB6−240−M127

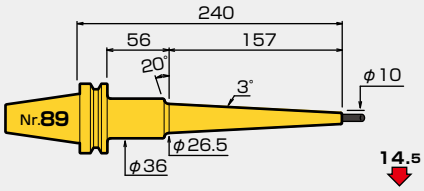


12.1

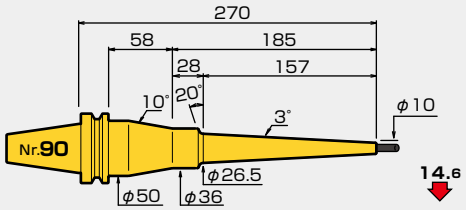
BT40−SLSB6−210−M157



BT40−SLSB6−240−M157

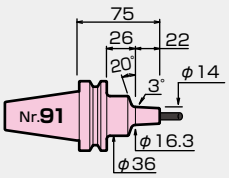


BT40−SLSB6−270−M157

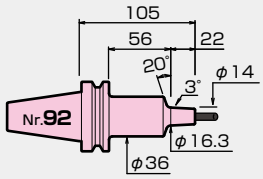


φ6 SLRB t=4

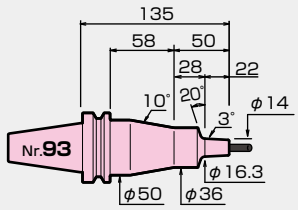
BT40−SLRB6−75−M22



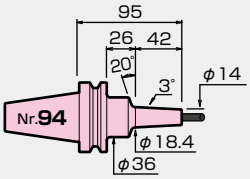
BT40−SLRB6−105−M22



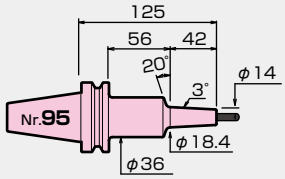
BT40−SLRB6−135−M22



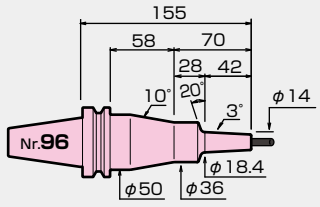
BT40−SLRB6−95−M42



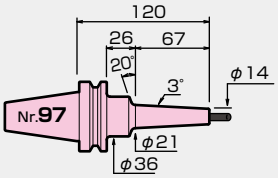
BT40−SLRB6−125−M42



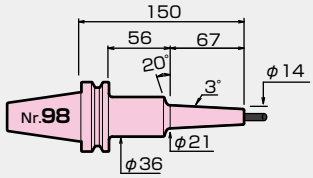
BT40−SLRB6−155−M42



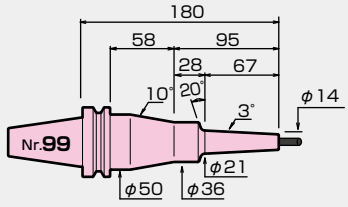
BT40−SLRB6−120−M67



BT40−SLRB6−150−M67

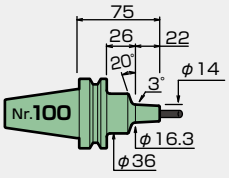


BT40−SLRB6−180−M67

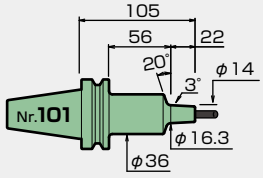


φ6 SLFB t=4

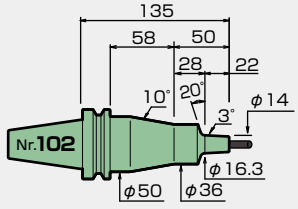
BT40−SLFB6−75−M22



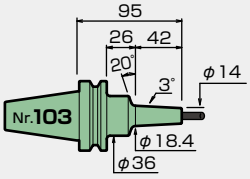
BT40−SLFB6−105−M22



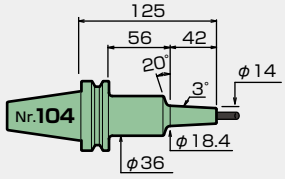
BT40−SLFB6−135−M22



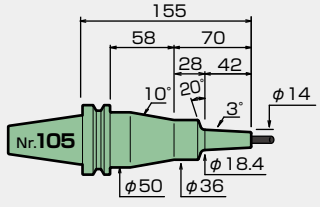
BT40−SLFB6−95−M42



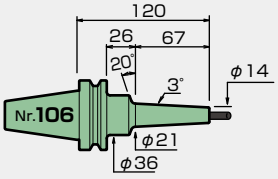
BT40−SLFB6−125−M42



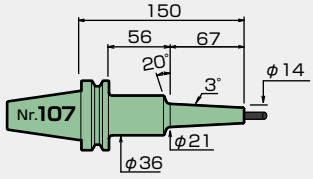
BT40−SLFB6−155−M42



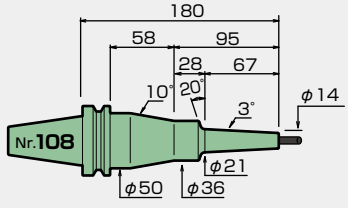
BT40−SLFB6−120−M67



BT40−SLFB6−150−M67

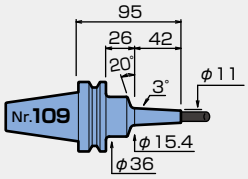


BT40−SLFB6−180−M67



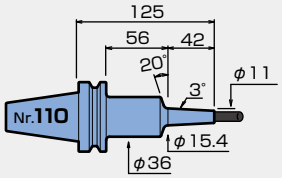
φ8 SLSA t=1.5

BT40−SLSA8−95−M42



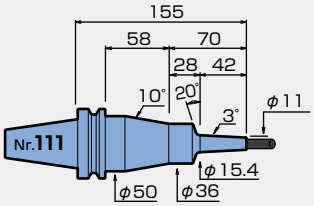
3.2

BT40−SLSA8−125−M42



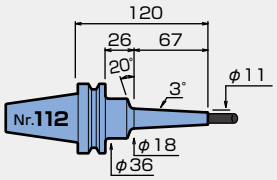
3.4

BT40−SLSA8−155−M42



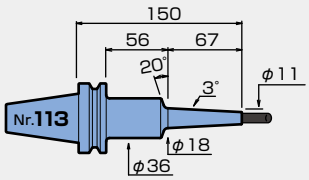
3.4

BT40−SLSA8−120−M67



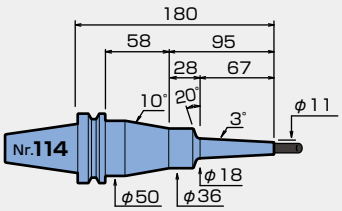
5.4

BT40−SLSA8−150−M67



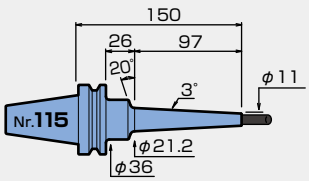
5.7

BT40−SLSA8−180−M67



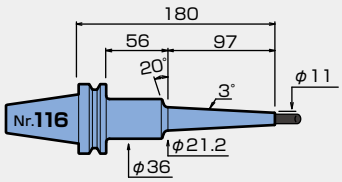
5.7

BT40−SLSA8−150−M97



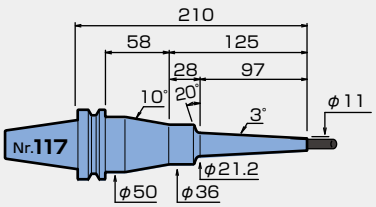
7.8

BT40−SLSA8−180−M97



8.3

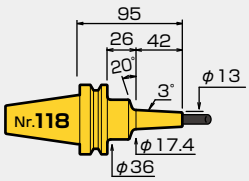
BT40−SLSA8−210−M97



8.4

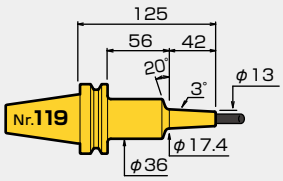
φ8 SLSB t=2.5

BT40−SLSB8−95−M42



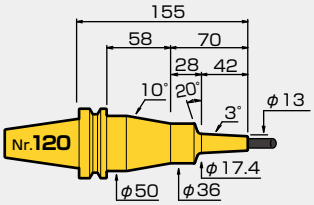
2.1

BT40−SLSB8−125−M42



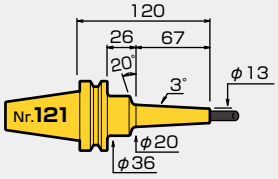
2.3

BT40−SLSB8−155−M42



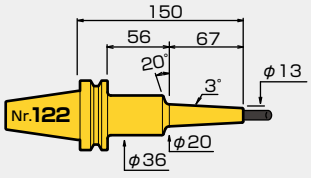
2.4

BT40−SLSB8−120−M67



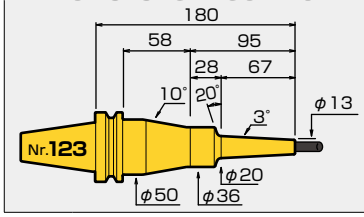
3.5

BT40−SLSB8−150−M67



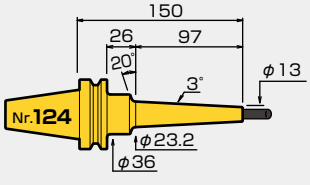
3.9

BT40−SLSB8−180−M67



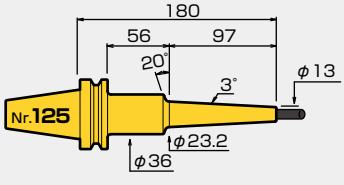
3.9

BT40−SLSB8−150−M97



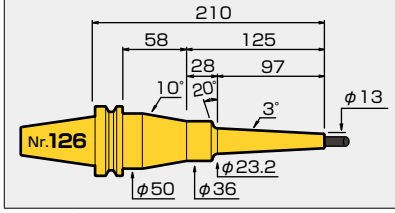
5.2

BT40−SLSB8−180−M97



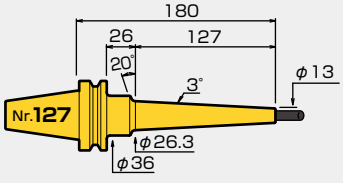
5.7

BT40−SLSB8−210−M97



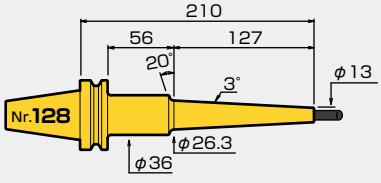
5.8

BT40−SLSB8−180−M127



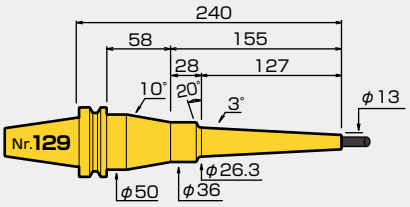
7.0

BT40−SLSB8−210−M127



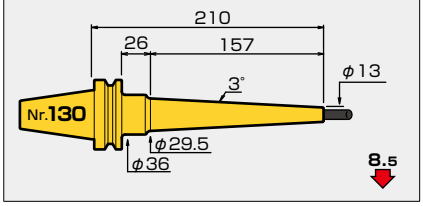
7.7

BT40−SLSB8−240−M127

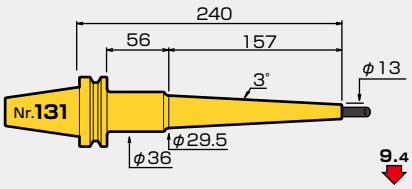


7.7

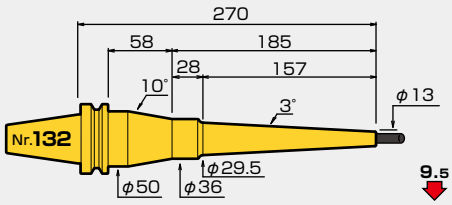
BT40−SLSB8−210−M157



BT40−SLSB8−240−M157

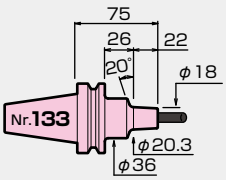


BT40−SLSB8−270−M157

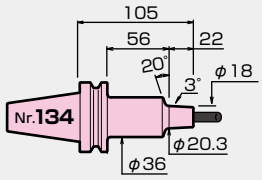


φ8 SLRB t=5

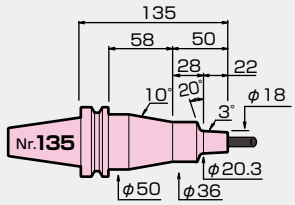
BT40−SLRB8−75−M22



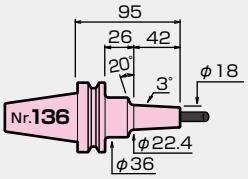
BT40−SLRB8−105−M22



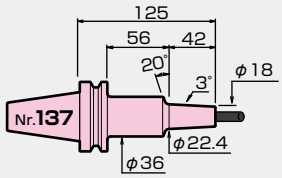
BT40−SLRB8−135−M22



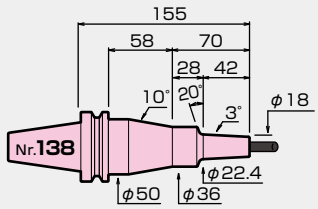
BT40−SLRB8−95−M42



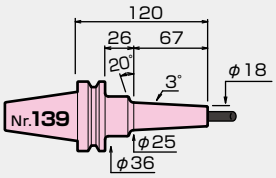
BT40−SLRB8−125−M42



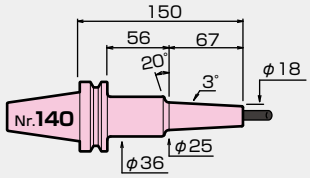
BT40−SLRB8−155−M42



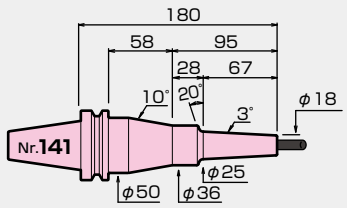
BT40−SLRB8−120−M67



BT40−SLRB8−150−M67

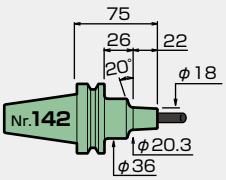


BT40−SLRB8−180−M67

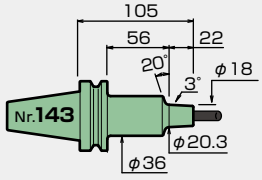


φ8 SLFB t=5

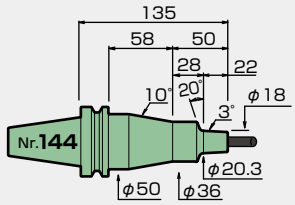
BT40−SLFB8−75−M22



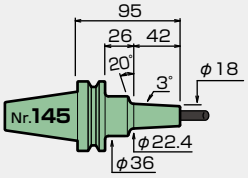
BT40−SLFB8−105−M22



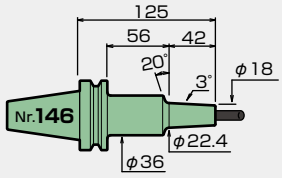
BT40−SLFB8−135−M22



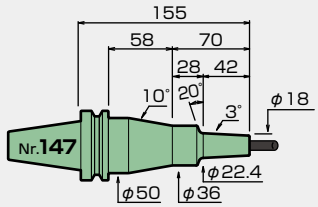
BT40−SLFB8−95−M42



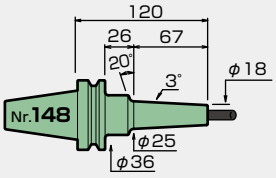
BT40−SLFB8−125−M42



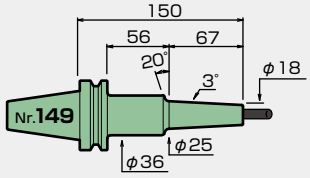
BT40−SLFB8−155−M42



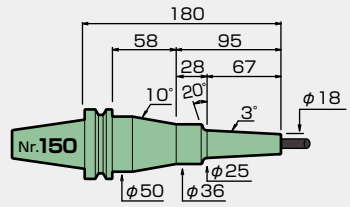
BT40−SLFB8−120−M67



BT40−SLFB8−150−M67

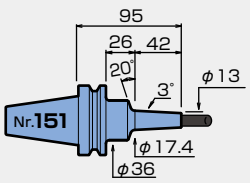


BT40−SLFB8−180−M67



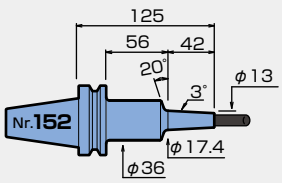
φ10 SLSA t=1.5

BT40−SLSA10−95−M42



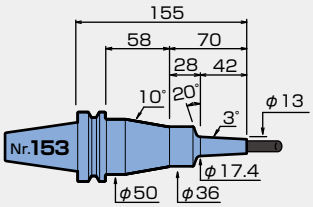
2.3

BT40−SLSA10−125−M42



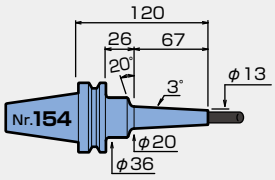
2.5

BT40−SLSA10−155−M42



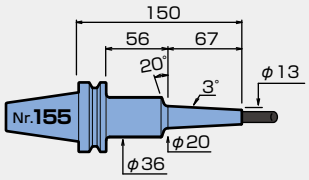
2.5

BT40−SLSA10−120−M67



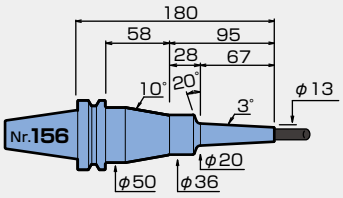
4.0

BT40−SLSA10−150−M67



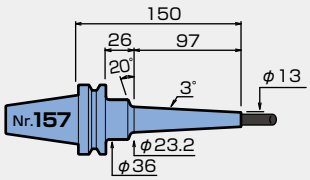
4.3

BT40−SLSA10−180−M67



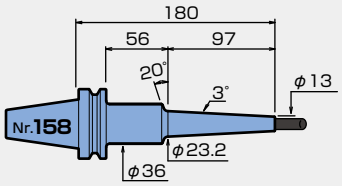
4.4

BT40−SLSA10−150−M97



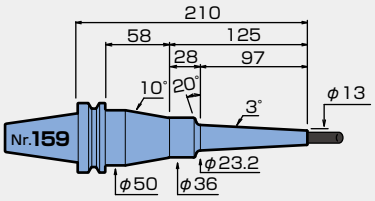
5.9

BT40−SLSA10−180−M97



6.4

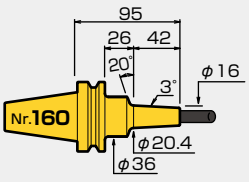
BT40−SLSA10−210−M97



6.5

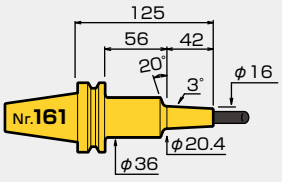
φ10 SLSB t=3

BT40−SLSB10−95−M42



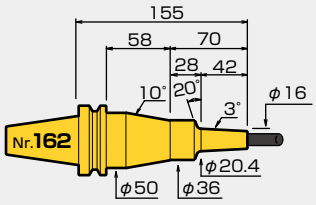
1.4

BT40−SLSB10−125−M42



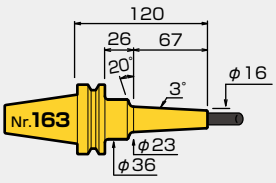
1.6

BT40−SLSB10−155−M42



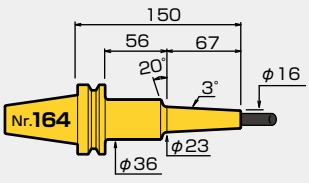
1.7

BT40−SLSB10−120−M67



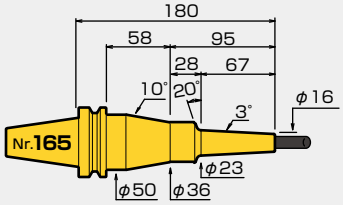
2.4

BT40−SLSB10−150−M67



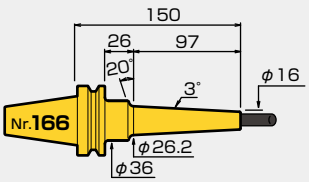
2.7

BT40−SLSB10−180−M67



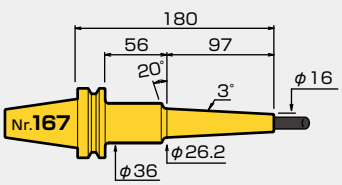
2.8

BT40−SLSB10−150−M97



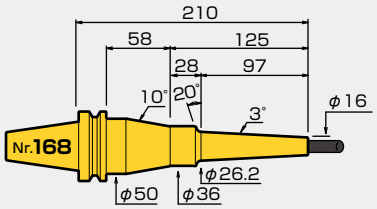
3.6

BT40−SLSB10−180−M97



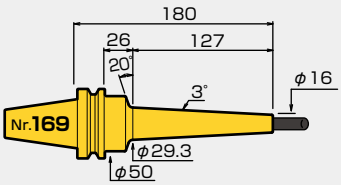
4.1

BT40−SLSB10−210−M97



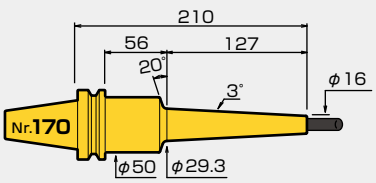
4.1

BT40−SLSB10−180−M127



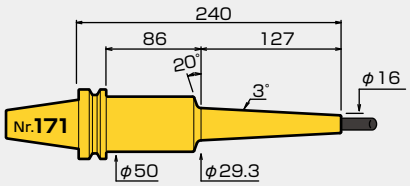
4.5

BT40−SLSB10−210−M127



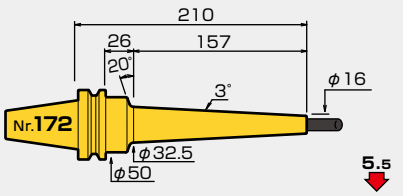
4.7

BT40−SLSB10−240−M127

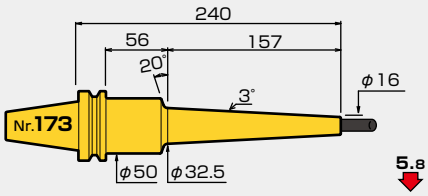


5.0

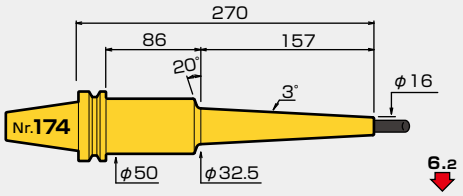
BT40−SLSB10−210−M157



BT40−SLSB10−240−M157

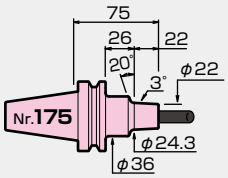


BT40−SLSB10−270−M157

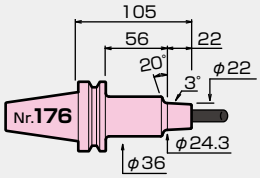


φ10 SLRB t=6

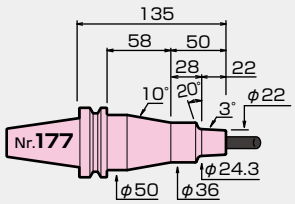
BT40−SLRB10−75−M22



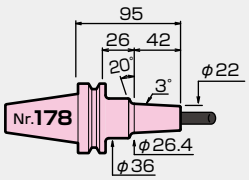
BT40−SLRB10−105−M22



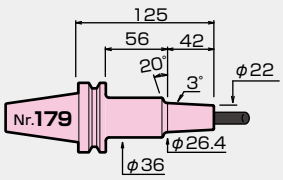
BT40−SLRB10−135−M22



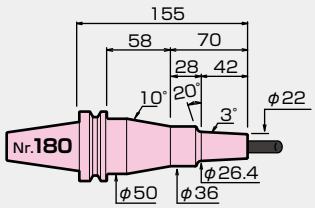
BT40−SLRB10−95−M42



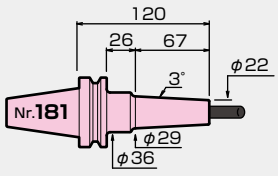
BT40−SLRB10−125−M42



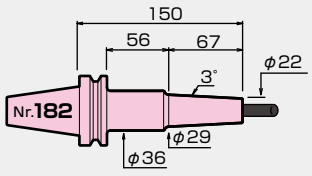
BT40−SLRB10−155−M42



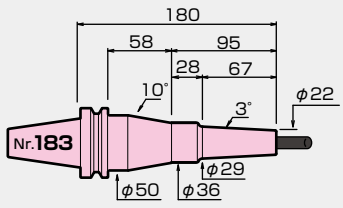
BT40−SLRB10−120−M67



BT40−SLRB10−150−M67

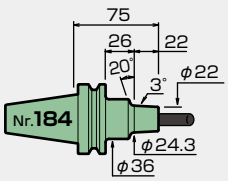


BT40−SLRB10−180−M67

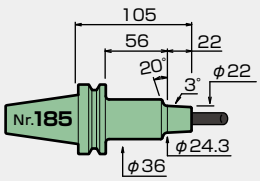


φ10 SLFB t=6

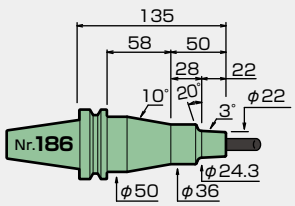
BT40−SLFB10−75−M22



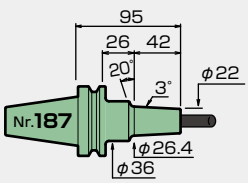
BT40−SLFB10−105−M22



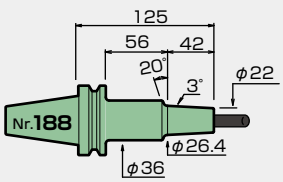
BT40−SLFB10−135−M22



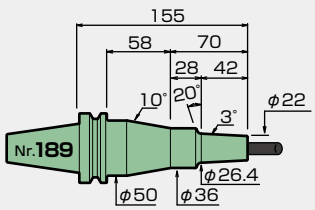
BT40−SLFB10−95−M42



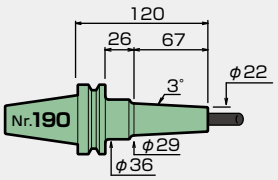
BT40−SLFB10−125−M42



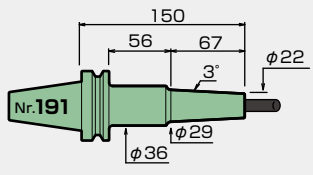
BT40−SLFB10−155−M42



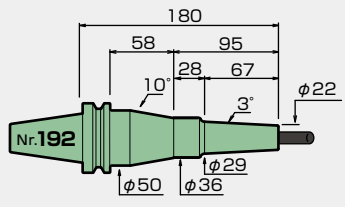
BT40−SLFB10−120−M67



BT40−SLFB10−150−M67

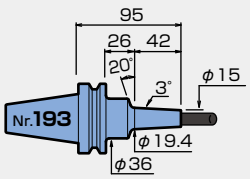


BT40−SLFB10−180−M67



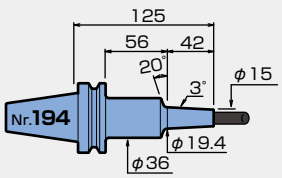
φ12 SLSA t=1.5

BT40−SLSA12−95−M42



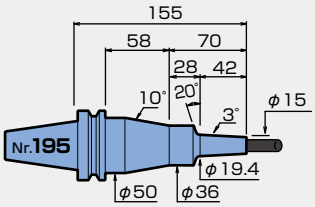
1.8

BT40−SLSA12−125−M42



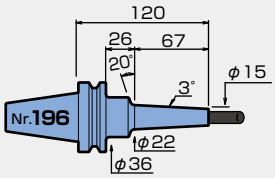
2.1

BT40−SLSA12−155−M42



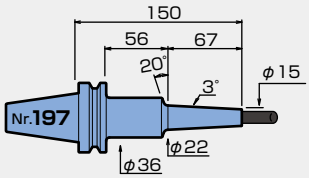
2.1

BT40−SLSA12−120−M67



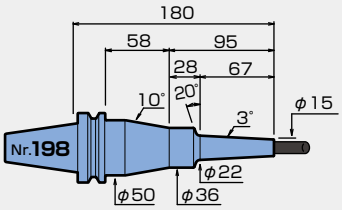
3.2

BT40−SLSA12−150−M67



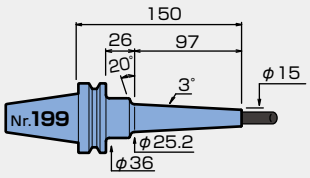
3.6

BT40−SLSA12−180−M67



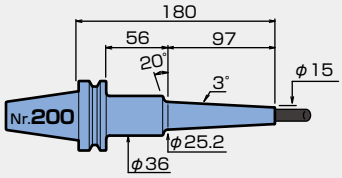
3.6

BT40−SLSA12−150−M97



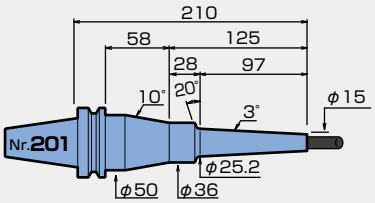
4.8

BT40−SLSA12−180−M97



5.3

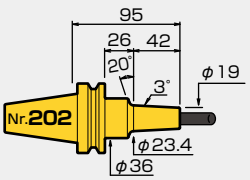
BT40−SLSA12−210−M97



5.4

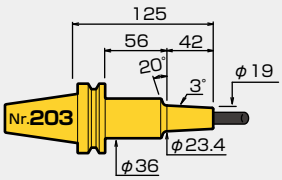
φ12 SLSB t=3.5

BT40−SLSB12−95−M42



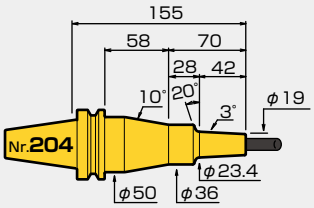
1.1

BT40−SLSB12−125−M42



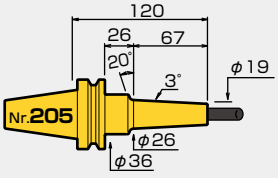
1.3

BT40−SLSB12−155−M42



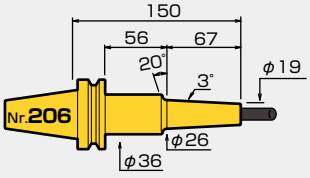
1.4

BT40−SLSB12−120−M67



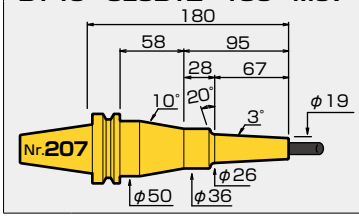
1.8

BT40−SLSB12−150−M67



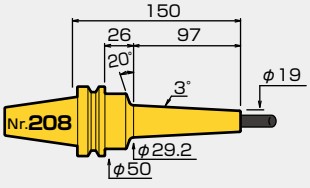
2.1

BT40−SLSB12−180−M67



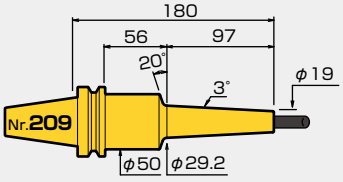
2.2

BT40−SLSB12−150−M97



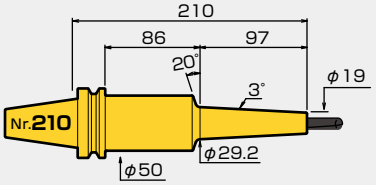
2.4

BT40−SLSB12−180−M97



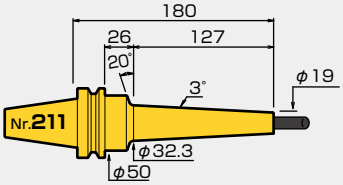
2.6

BT40−SLSB12−210−M97



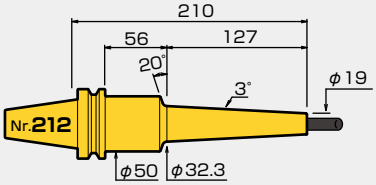
2.9

BT40−SLSB12−180−M127



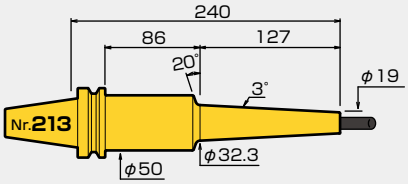
3.2

BT40−SLSB12−210−M127



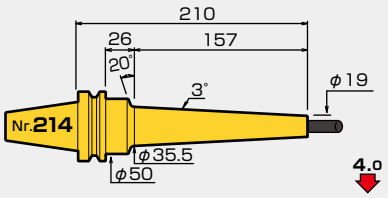
3.5

BT40−SLSB12−240−M127

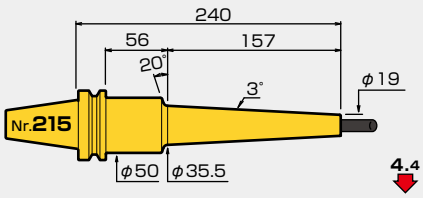


3.8

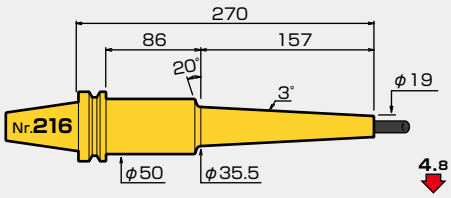
BT40-SLSB12-210-M157



BT40-SLSB12-240-M157

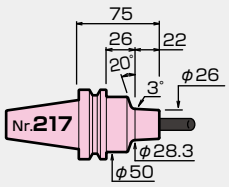


BT40-SLSB12-270-M157

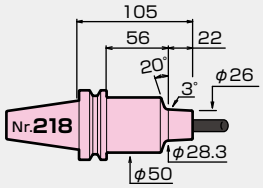


φ12 SLRB t=7

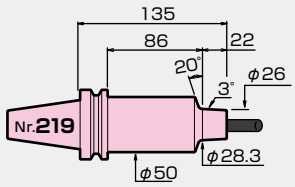
BT40-SLRB12-75-M22



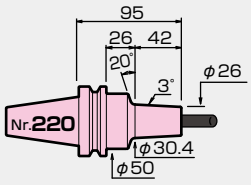
BT40-SLRB12-105-M22



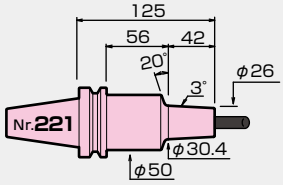
BT40-SLRB12-135-M22



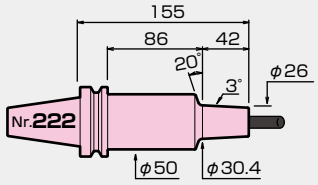
BT40-SLRB12-95-M42



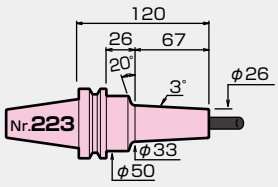
BT40-SLRB12-125-M42



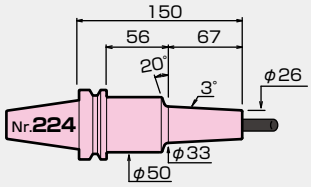
BT40-SLRB12-155-M42



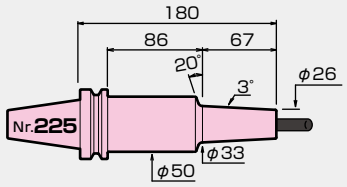
BT40-SLRB12-120-M67



BT40-SLRB12-150-M67

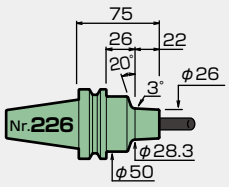


BT40-SLRB12-180-M67

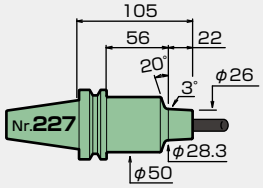


φ12 SLFB t=7

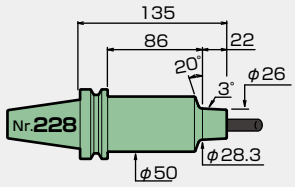
BT40-SLFB12-75-M22



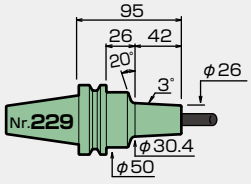
BT40-SLFB12-105-M22



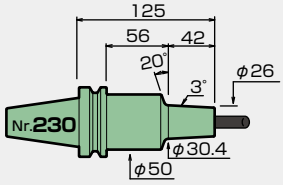
BT40-SLFB12-135-M22



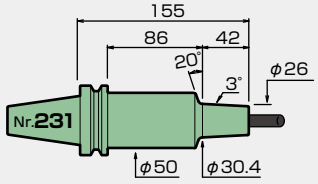
BT40-SLFB12-95-M42



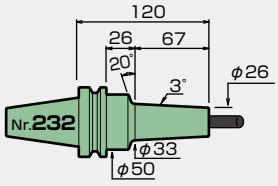
BT40-SLFB12-125-M42



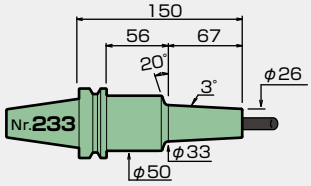
BT40-SLFB12-155-M42



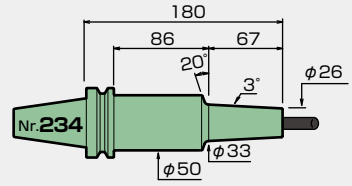
BT40-SLFB12-120-M67



BT40-SLFB12-150-M67

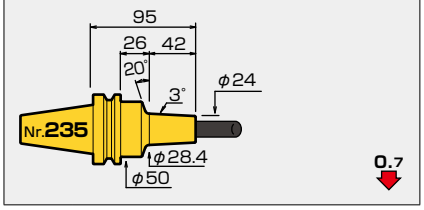


BT40-SLFB12-180-M67



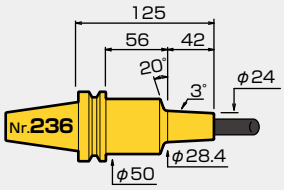
φ16 SLSB t=4

BT40-SLSB16-95-M42



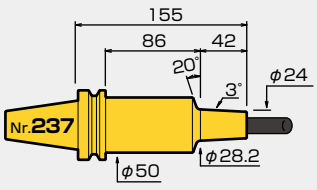
0.7

BT40-SLSB16-125-M42



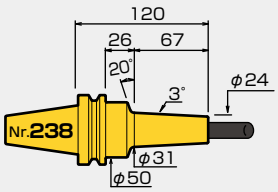
0.8

BT40-SLSB16-155-M42



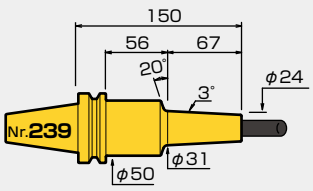
0.9

BT40-SLSB16-120-M67



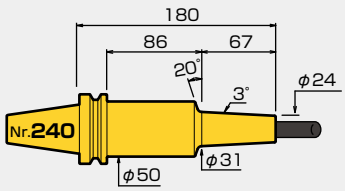
1.1

BT40-SLSB16-150-M67



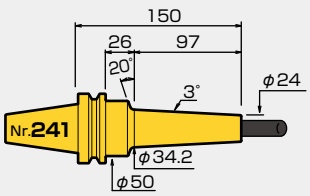
1.3

BT40-SLSB16-180-M67



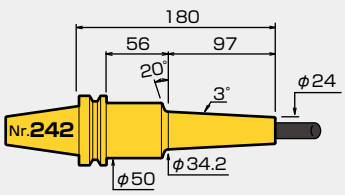
1.5

BT40-SLSB16-150-M97



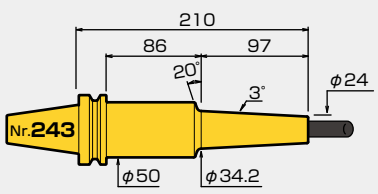
1.6

BT40-SLSB16-180-M97



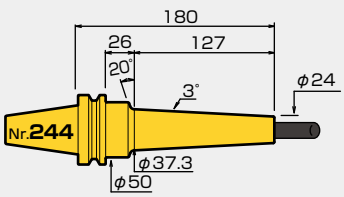
1.9

BT40-SLSB16-210-M97



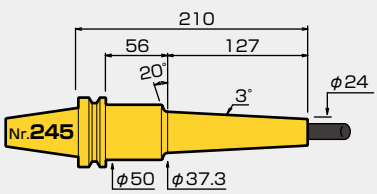
2.1

BT40-SLSB16-180-M127



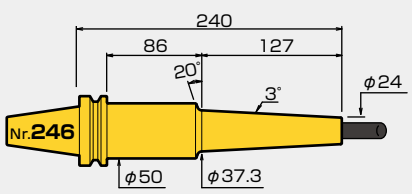
2.2

BT40-SLSB16-210-M127



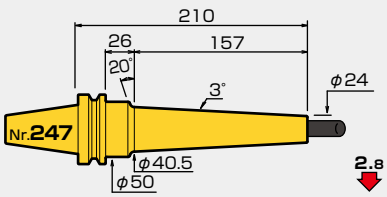
2.5

BT40-SLSB16-240-M127



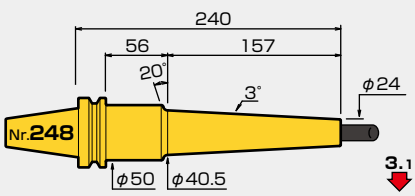
2.8

BT40-SLSB16-210-M157



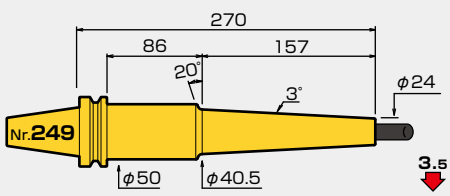
2.8

BT40-SLSB16-240-M157



3.1

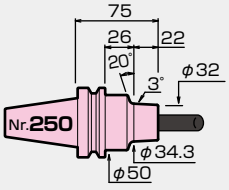
BT40-SLSB16-270-M157



3.5

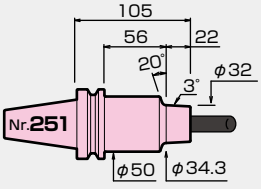
φ16 SLRB t=8

BT40-SLRB16-75-M22



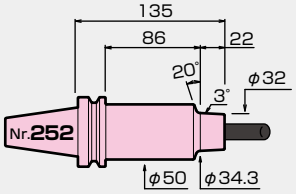
0.3

BT40-SLRB16-105-M22



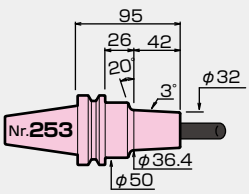
0.4

BT40-SLRB16-135-M22



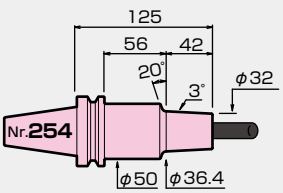
0.5

BT40-SLRB16-95-M42



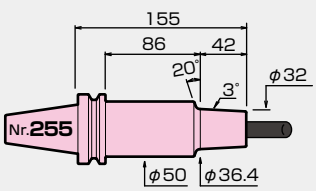
0.4

BT40-SLRB16-125-M42



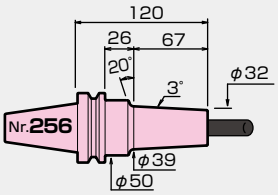
0.5

BT40-SLRB16-155-M42

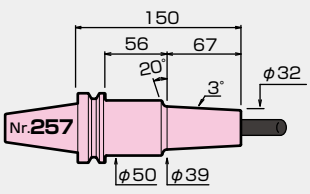


0.7

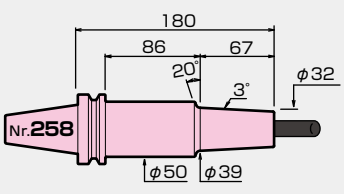
BT40−SLRB16−120−M67



BT40−SLRB16−150−M67

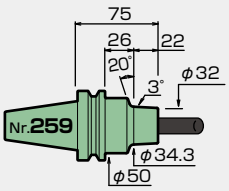


BT40−SLRB16−180−M67

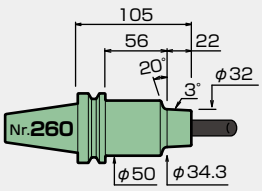


φ16 SLFB t=8

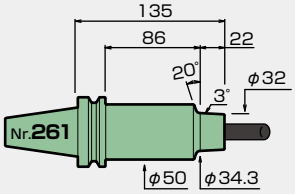
BT40−SLFB16−75−M22



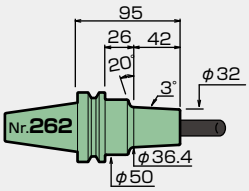
BT40−SLFB16−105−M22



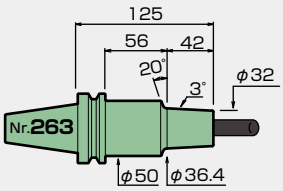
BT40−SLFB16−135−M22



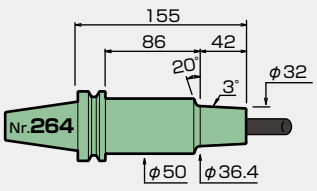
BT40−SLFB16−95−M42



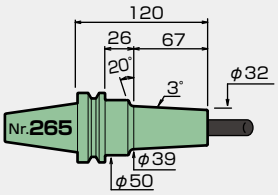
BT40−SLFB16−125−M42



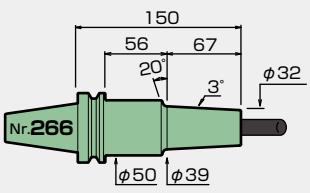
BT40−SLFB16−155−M42



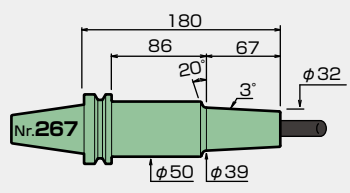
BT40−SLFB16−120−M67



BT40−SLFB16−150−M67

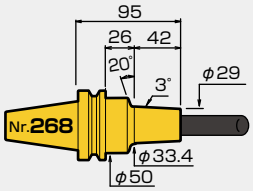


BT40−SLFB16−180−M67



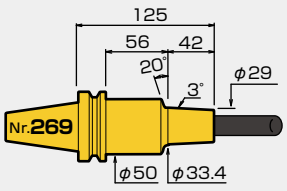
φ20 SLSB t=4.5

BT40−SLSB20−95−M42



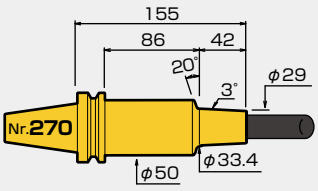
0.5

BT40−SLSB20−125−M42



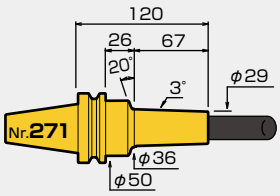
0.6

BT40−SLSB20−155−M42



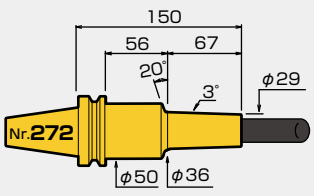
0.8

BT40−SLSB20−120−M67



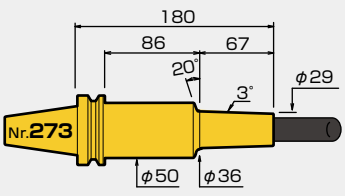
0.8

BT40−SLSB20−150−M67



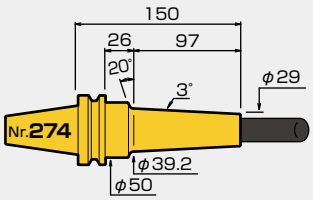
1.0

BT40−SLSB20−180−M67



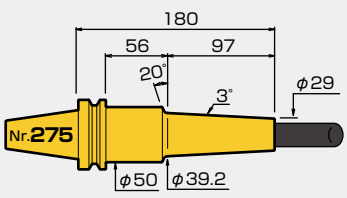
1.2

BT40−SLSB20−150−M97



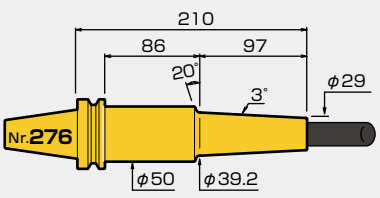
1.2

BT40−SLSB20−180−M97



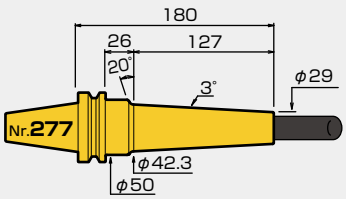
1.4

BT40−SLSB20−210−M97



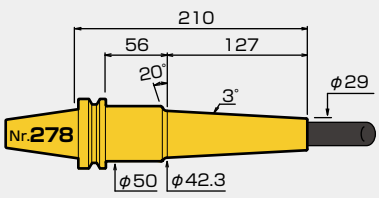
1.7

BT40−SLSB20−180−M127



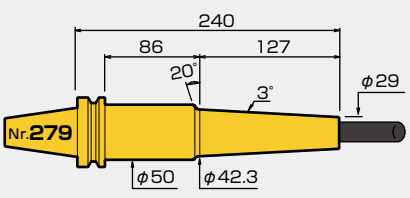
1.6

BT40−SLSB20−210−M127



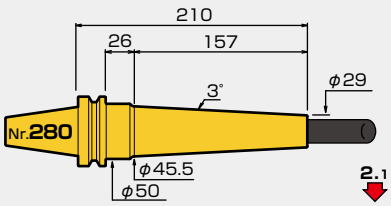
1.9

BT40−SLSB20−240−M127



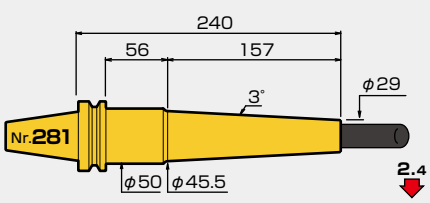
2.3

BT40−SLSB20−210−M157



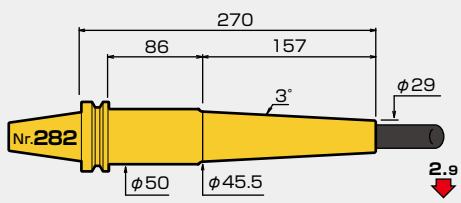
2.1

BT40−SLSB20−240−M157



2.4

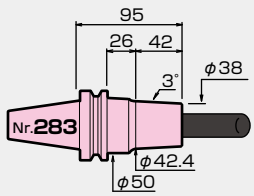
BT40−SLSB20−270−M157



2.9

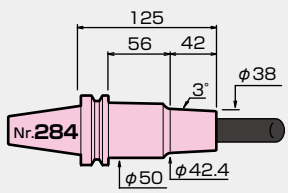
φ20 SLRB t=9

BT40−SLRB20−95−M42



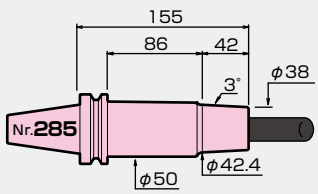
0.4

BT40−SLRB20−125−M42



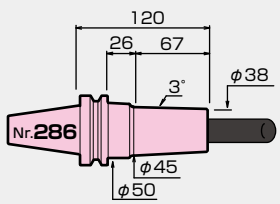
0.5

BT40−SLRB20−155−M42



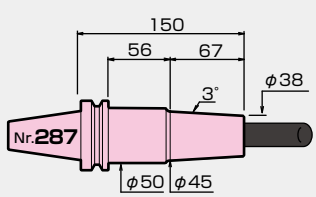
0.7

BT40−SLRB20−120−M67



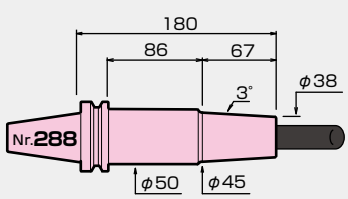
0.5

BT40−SLRB20−150−M67



0.7

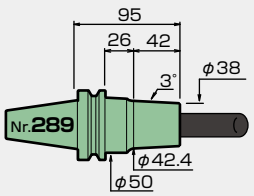
BT40−SLRB20−180−M67



0.9

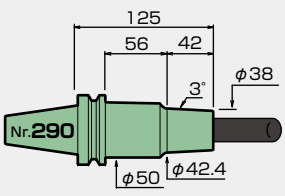
φ20 SLFB t=9

BT40−SLFB20−95−M42



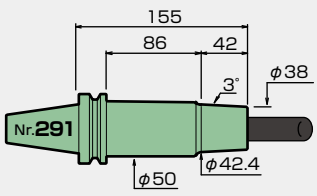
0.4

BT40−SLFB20−125−M42



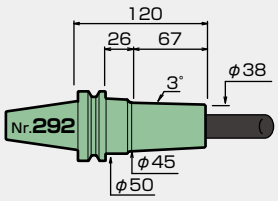
0.5

BT40−SLFB20−155−M42



0.7

BT40−SLFB20−120−M67



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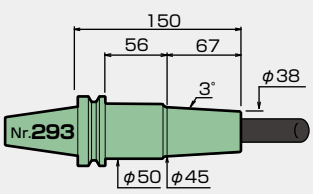
BT40−SLFB20−150−M67



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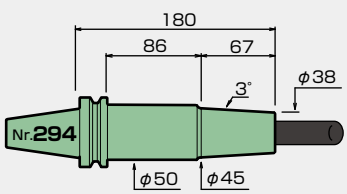
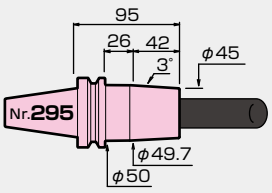
BT40−SLFB20−180−M67



0.9

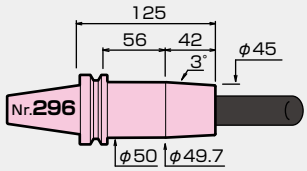
φ25 SLRB t=10

BT40−SLRB25−95−M42



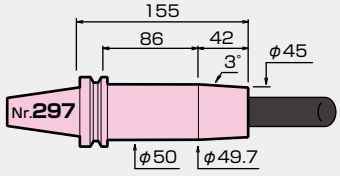
0.3

BT40−SLRB25−125−M42



0.5

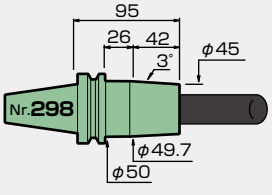
BT40−SLRB25−155−M42



0.7

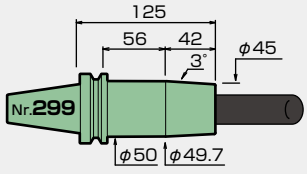
φ25 SLFB t=10

BT40−SLFB25−95−M42



0.3

BT40−SLFB25−125−M42



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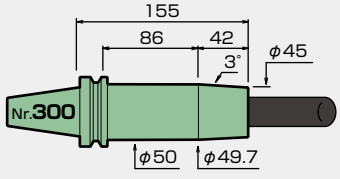
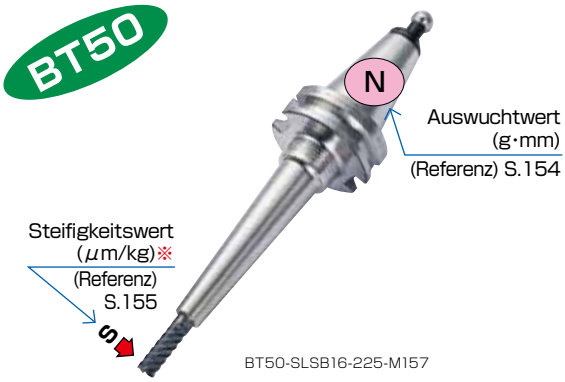
BT40−SLFB25−155−M42



0.7



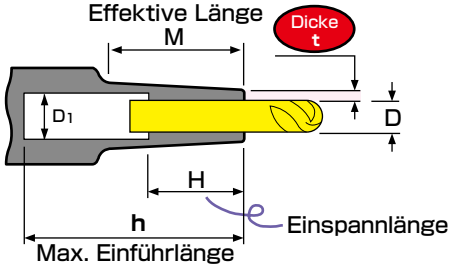


Abb.1

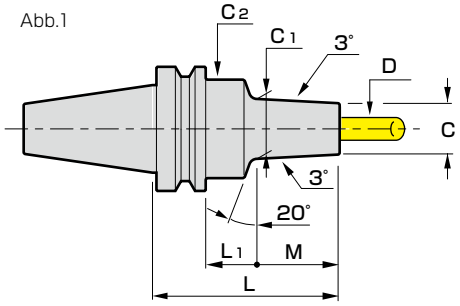
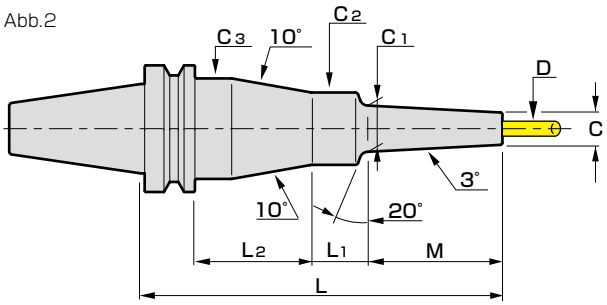


Abb.2



CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT50−SLSA 3−110−M 42	1	3	6		110	42	30	—	10.4	26	—	4	9	165	3.6	4.4	9.4	1
−135−M 67					135	67			13					190	3.7	5.1	15.0	4
−140−M 42					140	42	60		10.4					195	3.8	4.4	10.0	2
−165−M 67					165	67			13					220		5.2	16.0	5
−M 97				1.5		97	30		16.2						3.7	6.0	20.8	7
−170−M 42	2				170	42	33	57	10.4		40			225	4.1	4.6	9.9	3
−195−M 67					195	67			13					250		5.4	15.8	6
−M 97	1					97	60	—	16.2		—				3.8	6.1	22.3	8
−225−M 97	2				225		33	57			40			280	4.1	6.2	22.1	9
−SLRA 3− 90−M 22	1	3	7.5		90	22	30	—	9.8	26	—	5	9	145	3.6	4.6	2.8	10
−110−M 42					110	42			11.9					165	3.7	4.9	5.4	13
−120−M 22					120	22	60		9.8					175		4.7	3.2	11
−135−M 67					135	67	30		14.5					190		5.4	9.0	16
−140−M 42					140	42	60		11.9					195	3.8	5.0	6.0	14
−150−M 22	2				150	22	33	57	9.8		40			205	4.1	4.9	3.2	12
−165−M 67	1				165	67	60	—	14.5		—			220	3.8	5.5	9.9	17
−M 97				2.25		97	30		17.7						3.7	6.1	13.0	19
−170−M 42	2				170	42	33	57	11.9		40			225	4.1	5.1	6.0	15
−195−M 67					195	67			14.5					250		5.7	9.8	18
−M 97	1					97	60	—	17.7		—				3.8	6.2	14.5	20
−M127						127	30		20.8	36						7.7	15.7	22
−225−M 97	2				225	97	33	57	17.7	26	40			280	4.1	6.3	14.3	21
−M127	1					127	60	—	20.8	36	—					7.7	16.3	23
−255−M127	2				255		28	62			50			310	4.6	8.0	16.2	24
− SLFB 3 − 90 − M 22	1	3	9.5		90	22	30	—	11.8	26	—	5	9	145	3.6	4.4	1.9	25
− 110 − M 42					110	42			13.9					165	3.7	4.7	3.3	28
− 120 − M 22					120	22	60		11.8					175	3.8	4.5	2.3	26
− 135 − M 67					135	67	30		16.5					190	3.7	5.4	5.4	31
− 140 − M 42				3.25	140	42	60		13.9					195	3.8	4.8	3.9	29
− 150 − M 22	2				150	22	33	57	11.8		40			205	4.1	4.6	2.3	27
− 165 − M 67	1				165	67	60	—	16.5		—			220	3.8	5.5	6.4	32
− 170 − M 42	2				170	42	33	57	13.9		40			225	4.1	4.9	3.8	30
− 195 − M 67					195	67			16.5					250		5.7	6.3	33

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT50-SLSA 4-110-M 42	1	4	7		110	42	30	—	11.4	26	—	5	12	165	3.7	5.1	7.3	34
-135-M 67					135	67			14					190		5.2	11.9	37
-140-M 42					140	42	60		11.4					195	3.8		8.0	35
-165-M 67					165	67			14					220			12.9	38
-M 97				1.5		97	30		17.2						3.7	6.1	16.8	40
-170-M 42	2				170	42	33	57	11.4		40			225	4.1	5.4	7.9	36
-195-M 67					195	67			14					250			12.8	39
-M 97	1					97	60	—	17.2		—				3.8	6.2	18.4	41
-225-M 97	2				225		33	57			40			280	4.1	6.3	18.1	42
-SLRA 4- 90-M 22	1	4	10		90	22	30	—	12.3	26	—	6	12	145	3.6	4.7	1.7	43
-110-M 42					110	42			14.4					165	3.7	5.1	3.1	46
-120-M 22					120	22	60		12.3					175	3.8	4.8	2.1	44
-135-M 67					135	67	30		17					190	3.7	5.9	5.2	49
-140-M 42					140	42	60		14.4					195	3.8	5.2	3.8	47
-150-M 22	2				150	22	33	57	12.3		40			205	4.1	5.0	2.1	45
-165-M 67	1				165	67	60	—	17		—			220	3.8	5.9	6.2	50
-M 97				3		97	30		20.2							6.8	7.8	52
-170-M 42	2				170	42	33	57	14.4		40			225	4.1	5.4	3.7	48
-195-M 67					195	67			17					250		6.1	6.1	51
-M 97	1					97	60	—	20.2		—				3.9	6.9	9.4	53
-M127						127	30		23.3	36					3.8	9.2	9.3	55
-225-M 97	2				225	97	33	57	20.2	26	40			280	4.2	7.1	9.1	54
-M127	1					127	60	—	23.3	36	—				4.1	9.2	9.9	56
-255-M127	2				255		28	62			50			310	4.6	9.5	9.8	57
-SLFB 4- 90-M 22	1	4	12		90	22	30	—	14.3	26	—	6	12	145	3.7	4.6	1.4	58
-110-M 42					110	42			16.4					165		5.0	2.2	61
-120-M 22					120	22	60		14.3					175	3.8	4.6	1.8	59
-135-M 67					135	67	30		19					190	3.7	5.8	3.6	64
-140-M 42				4	140	42	60		16.4					195	3.8	5.1	2.9	62
-150-M 22	2				150	22	33	57	14.3		40			205	4.1	4.8	1.7	60
-165-M 67	1				165	67	60	—	19		—			220	3.8	5.9	4.6	65
-170-M 42	2				170	42	33	57	16.4		40			225	4.1	5.3	2.8	63
-195-M 67					195	67			19					250	4.2	6.1	4.5	66
BT50-SLSA 6-110-M 42	1	6	9		110	42	30	—	13.4	26	—	7	18	165	3.7	5.4	4.9	67
-135-M 67					135	67			16					190		6.4	8.0	70
-140-M 42					140	42	60		13.4					195	3.8	5.4	5.6	68
-165-M 67					165	67			16					220		6.5	9.2	71
-M 97				1.5		97	30		19.2	36					3.7	8.3	11.0	73
-170-M 42	2				170	42	33	57	13.4	26	40			225	4.1	5.6	5.5	69
-195-M 67					195	67			16					250		6.6	9.0	72
-M 97	1					97	60	—	19.2	36	—				4.0	8.2	11.4	74
-225-M 97	2				225		28	62			50			280	4.5	8.5		75
-SLSB 6-110-M 42	1	6	10		110	42	30	—	14.4	26	—	8	18	165	3.7	6.0	3.9	76
-135-M 67					135	67			17					190		7.4	6.4	79
-140-M 42					140	42	60		14.4					195	3.8	6.1	4.6	77
-165-M 67					165	67			17					220		7.4	7.5	80
-M 97						97	30		20.2	36					3.7	9.6	8.9	82
-170-M 42	2				170	42	33	57	14.4	26	40			225	4.1	6.2	4.5	78
-195-M 67					195	67			17					250		7.6	7.4	81
-M 97	1			2		97	60	—	20.2	36	—				4.0	9.6	9.3	83
-M127						127	30		23.3						3.8	11.3	11.4	85
-225-M 97	2				225	97	28	62	20.2		50			280	4.5	9.9	9.3	84
-M127	1					127	60	—	23.3		—				4.1	11.2	12.1	86
-M157						157	30		26.5						3.9	13.0	13.7	88
-255-M127	2				255	127	28	62	23.3		50			310	4.6	11.5	12.0	87
-M157	1					157	60	—	26.5		—				4.2	12.9	14.5	89
-285-M157	2				285		28	62			50			340	4.7	13.2		90

BT50

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT50–SLRB 6– 90–M 22	1	6	14		90	22	30	—	16.3	36	—	8	18	145	3.6	5.5	0.9	91
–110–M 42					110	42			18.4					165	3.7	6.6	1.6	94
–120–M 22					120	22	60		16.3					175	3.9	5.5	1.1	92
–135–M 67					135	67	30		21					190	3.7	8.0	2.5	97
–140–M 42				4	140	42	60		18.4					195	4.0	6.6	1.8	95
–150–M 22	2				150	22	28	62	16.3		50			205	4.4	5.8	1.1	93
–165–M 67	1				165	67	60	—	21		—			220	4.0	8.0	2.8	98
–170–M 42	2				170	42	28	62	18.4		50			225	4.5	6.9	1.8	96
–195–M 67					195	67			21					250		8.3	2.8	99
–SLFB 6– 90–M 22	1	6	14		90	22	30	—	16.3	36	—	8	18	145	3.6	5.5	0.9	100
–110–M 42					110	42			18.4					165	3.7	6.6	1.6	103
–120–M 22					120	22	60		16.3					175	3.9	5.5	1.1	101
–135–M 67					135	67	30		21					190	3.7	8.0	2.5	106
–140–M 42				4	140	42	60		18.4					195	4.0	6.6	1.8	104
–150–M 22	2				150	22	28	62	16.3		50			205	4.4	5.8	1.1	102
–165–M 67	1				165	67	60	—	21		—			220	4.0	8.0	2.8	107
–170–M 42	2				170	42	28	62	18.4		50			225	4.5	6.9	1.8	105
–195–M 67					195	67			21					250		8.3	2.8	108
BT50–SLSA 8–110–M 42	1	8	11		110	42	30	—	15.4	36	—	9	24	165	3.6	6.9	3.2	109
–135–M 67					135	67			18					190	3.7	8.7	5.4	112
–140–M 42					140	42	60		15.4					195	3.9	6.9	3.4	110
–165–M 67					165	67			18					220	4.0	8.6	5.7	113
–M 97				1.5		97	30		21.2						3.7	10.8	7.8	115
–170–M 42	2				170	42	28	62	15.4		50			225	4.4	7.2	3.4	111
–195–M 67					195	67			18					250	4.5	8.9	5.7	114
–M 97	1					97	60	—	21.2		—				4.0	10.7	8.3	116
–225–M 97	2				225		28	62			50			280	4.5	11.0		117
–SLSB 8–110–M 42	1	8	13		110	42	30	—	17.4	36	—	10	24	165	3.7	7.7	2.1	118
–135–M 67					135	67			20					190	3.7	9.8	3.5	121
–140–M 42					140	42	60		17.4					195	3.9	7.6	2.3	119
–165–M 67					165	67			20					220	4.0	9.8	3.9	122
–M 97						97	30		23.2						3.8	12.4	5.2	124
–170–M 42	2				170	42	28	62	17.4		50			225	4.4	7.9	2.3	120
–195–M 67					195	67			20					250	4.5	10.1	3.9	123
–M 97	1			2.5		97	60	—	23.2		—				4.0	12.3	5.7	125
–M127						127	30		26.3						3.9	14.9	7.0	127
–225–M 97	2				225	97	28	62	23.2		50			280	4.6	12.6	5.7	126
–M127	1					127	60	—	26.3		—				4.1	14.9	7.7	128
–M157						157	30		29.5						4.0	17.5	8.6	130
–255–M127	2				255	127	28	62	26.3		50			310	4.7	15.2	7.6	129
–M157	1					157	60	—	29.5		—				4.3	17.5	9.5	131
–285–M157	2				285		28	62			50			340	4.8	17.8	9.4	132
–SLRB 8– 90–M 22	1	8	18		90	22	30	—	20.3	36	—	10	24	145	3.7	6.0	0.7	133
–110–M 42					110	42			22.4					165		7.7	1.0	136
–120–M 22					120	22	60		20.3					175	3.9	5.9	0.8	134
–135–M 67					135	67	30		25					190	3.8	9.8	1.6	139
–140–M 42				5	140	42	60		22.4					195	4.0	7.7	1.3	137
–150–M 22	2				150	22	28	62	20.3		50			205	4.4	6.2	0.8	135
–165–M 67	1				165	67	60	—	25		—			220	4.1	9.8	1.9	140
–170–M 42	2				170	42	28	62	22.4		50			225	4.5	8.0	1.3	138
–195–M 67					195	67			25					250	4.6	10.1	1.9	141
–SLFB 8– 90–M 22	1	8	18		90	22	30	—	20.3	36	—	10	24	145	3.7	6.0	0.7	142
–110–M 42					110	42			22.4					165		7.7	1.0	145
–120–M 22					120	22	60		20.3					175	3.9	5.9	0.8	143
–135–M 67					135	67	30		25					190	3.8	9.8	1.6	148
–140–M 42				5	140	42	60		22.4					195	4.0	7.7	1.3	146
–150–M 22	2				150	22	28	62	20.3		50			205	4.4	6.2	0.8	144
–165–M 67	1				165	67	60	—	25		—			220	4.1	9.8	1.9	149
–170–M 42	2				170	42	28	62	22.4		50			225	4.5	8.0	1.3	147
–195–M 67					195	67			25					250	4.6	10.1	1.9	150

BT50

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT50–SLSA10–110–M 42	1	10	13		110	42	30	—	17.4	36	—	11	30	165	3.6	7.9	2.3	151
–135–M 67					135	67			20					190	3.7	10.4	4.0	154
–140–M 42					140	42	60		17.4					195	3.9	7.8	2.5	152
–165–M 67					165	67			20					220	4.0	10.4	4.3	155
–M 97				1.5		97	30		23.2						3.8	13.6	5.9	157
–170–M 42	2				170	42	28	62	17.4		50			225	4.4	8.1	2.5	153
–195–M 67					195	67			20					250	4.5	10.7	4.3	156
–M 97	1					97	60	—	23.2		—				4.1	13.5	6.4	158
–225–M 97	2				225		28	62			50			280	4.6	13.8		159
–SLSB10–110–M 42	1	10	16		110	42	30	—	20.4	36	—	12	30	165	3.7	8.6	1.4	160
–135–M 67					135	67			23					190		11.7	2.4	163
–140–M 42					140	42	60		20.4					195	3.9	8.6	1.7	161
–165–M 67					165	67			23					220	4.0	11.7	2.7	164
–M 97						97	30		26.2						3.8	15.4	3.6	166
–170–M 42	2				170	42	28	62	20.4		50			225	4.5	8.9	1.7	162
– 95–M 67					195	67			23					250		12.0	2.7	165
–M 97	1			3		97	60	—	26.2		—				4.1	15.3	4.1	167
–M127						127	30		29.3	50					3.9	20.0	4.4	169
–225–M 97	2				225	97	28	62	26.2	36	50			280	4.6	15.6	4.1	168
–M127	1					127	60	—	29.3	50	—				4.3	20.6	4.6	170
–M157						157	30		32.5						4.1	23.7	5.4	172
–255–M127					255	127	90		29.3					310	4.6	21.1	4.9	171
–M157						157	60		32.5						4.4	24.3	5.7	173
–285–M157					285		90							340	4.8	24.8	6.1	174
–SLRB10– 90–M 22	1	10	22		90	22	30	—	24.3	36	—	12	30	145	3.7	6.2	0.5	175
–110–M 42					110	42			26.4					165		8.7	0.8	178
–120–M 22					120	22	60		24.3					175	4.0	6.2	0.7	176
–135–M 67					135	67	30		29					190	3.8	11.8	1.2	181
–140–M 42				6	140	42	60		26.4					195	4.0	8.6	1.0	179
–150–M 22	2				150	22	28	62	24.3		50			205	4.5	6.5	0.7	177
–165–M 67	1				165	67	60	—	29		—			220	4.1	11.7	1.5	182
–170–M 42	2				170	42	28	62	26.4		50			225	4.5	8.9	1.0	180
–195–M 67					195	67			29					250	4.6	12.0	1.5	183
– SLFB10– 90–M 22	1	10	22		90	22	30	—	24.3	36	—	12	30	145	3.7	6.2	0.5	184
–110–M 42					110	42			26.4					165		8.7	0.8	187
–120–M 22					120	22	60		24.3					175	4.0	6.2	0.7	185
–135–M 67					135	67	30		29					190	3.8	11.8	1.2	190
–140–M 42				6	140	42	60		26.4					195	4.0	8.6	1.0	188
–150–M 22	2				150	22	28	62	24.3		50			205	4.5	6.5	0.7	186
–165–M 67	1				165	67	60	—	29		—			220	4.1	11.7	1.5	191
–170–M 42	2				170	42	28	62	26.4		50			225	4.5	8.9	1.0	189
–195–M 67					195	67			29					250	4.6	12	1.5	192
BT50–SLSA12–110–M 42	1	12	15		110	42	30	—	19.4	36	—	13	30	165	3.6	9.5	1.8	193
–135–M 67					135	67			22					190	3.7	13.1	3.2	196
–140–M 42					140	42	60		19.4					195	3.9	9.4	2.1	194
–165–M 67					165	67			22					220	4.0	13.0	3.6	197
–M 97				1.5		97	30		25.2						3.9	17.7	4.8	199
–170–M 42	2				170	42	28	62	19.4		50			225	4.4	9.7	2.1	195
–195–M 67					195	67			22					250	4.5	13.3	3.6	198
–M 97	1					97	60	—	25.2		—				4.2	17.7	5.3	200
–225–M 97	2				225		28	62			50			280	4.7	18.0		201

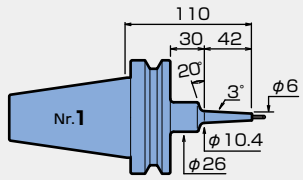
CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT50−SLSB12−110−M 42	1	12	19		110	42	30	—	23.4	36	—	14	30	165	3.7	10.4	1.1	202
−135−M 67					135	67			26					190	3.8	14.6	1.8	205
−140−M 42					140	42	60		23.4					195	4.0	10.3	1.3	203
−165−M 67					165	67			26					220		14.5	2.2	206
−M 97						97	30		29.2	50					3.9	20.5	2.4	208
−170−M 42	2				170	42	28	62	23.4	36	50			225	4.5	10.6	1.3	204
−195−M 67					195	67			26					250		14.8	2.1	207
−M 97	1			3.5		97	60	—	29.2	50	—				4.2	21.1	2.6	209
−M127						127	30		32.3						4.0	25.5	3.2	211
−225−M 97					225	97	90		29.2					280	4.6	21.6	2.8	210
−M127						127	60		32.3						4.4	26.1	3.4	212
−M157						157	30		35.5						4.2	30.6	4.0	214
−255−M127					255	127	90		32.3					310	4.7	26.7	3.7	213
−M157						157	60		35.5						4.6	31.1	4.3	215
−285−M157					285		90							340	4.9	31.7	4.6	216
−SLRB12− 90−M 22	1	12	26		90	22	30	—	28.3	50	—	14	30	145	3.7	9.5	0.4	217
−110−M 42					110	42			30.4					165	3.8	11.4	0.5	220
−120−M 22					120	22	60		28.3					175	4.0	10.1	0.4	218
−135−M 67					135	67	30		33					190	3.9	15.5	0.8	223
−140−M 42				7	140	42	60		30.4					195	4.1	11.9	0.6	221
−150−M 22					150	22	90		28.3					205	4.4	10.7	0.5	219
−165−M 67					165	67	60		33					220	4.2	16.1	0.9	224
−170−M 42					170	42	90		30.4					225	4.5	12.5	0.7	222
−195−M 67					195	67			33					250	4.6	16.7	1.0	225
−SLFB12− 90−M 22	1	12	26		90	22	30	—	28.3	50	—	14	30	145	3.7	9.5	0.4	226
−110−M 42					110	42			30.4					165	3.8	11.4	0.5	229
−120−M 22					120	22	60		28.3					175	4.0	10.1	0.4	227
−135−M 67					135	67	30		33					190	3.9	15.5	0.8	232
−140−M 42				7	140	42	60		30.4					195	4.1	11.9	0.6	230
−150−M 22					150	22	90		28.3					205	4.4	10.7	0.5	228
−165−M 67					165	67	60		33					220	4.2	16.1	0.9	233
−170−M 42					170	42	90		30.4					225	4.5	12.5	0.7	231
−195−M 67					195	67			33					250	4.6	16.7	1.0	234
BT50−SLSB16−110−M 42	1	16	24		110	42	30	—	28.4	50	—	18	32	165	3.7	15.0	0.7	235
−135−M 67					135	67			31					190	3.8	21.9	1.1	238
−140−M 42					140	42	60		28.4					195	4.1	15.6	0.8	236
−165−M 67					165	67			31					220	4.2	22.5	1.2	239
−M 97						97	30		34.2						4.0	30.2	1.6	241
−170−M 42					170	42	90		28.4					225	4.4	16.2	0.9	237
−195−M 67					195	67			31					250	4.5	23.0	1.4	240
−M 97				4		97	60		34.2						4.3	30.7	1.8	242
−M127						127	30		37.3						4.2	38.5	2.1	244
−225−M 97					225	97	90		34.2					280	4.6	31.3	2.0	243
−M127						127	60		37.3						4.5	39.0	2.4	245
−M157						157	30		40.5						4.4	46.8	2.7	247
−255−M127					255	127	90		37.3					310	4.8	39.6		246
−M157						157	60		40.5						4.7	47.3	3.0	248
−285−M157					285		90							340	5.0	47.9	3.4	249
−SLRB16− 90−M 22	1	16	32		90	22	30	—	34.3	50	—	18	32	145	3.7	9.6	0.3	250
−110−M 42					110	42			36.4					165	3.9	15.1	0.4	253
−120−M 22					120	22	60		34.3					175	4.1	10.1		251
−135−M 67					135	67	30		39					190	4.0	22.0	0.6	256
−140−M 42				8	140	42	60		36.4					195	4.2	15.7	0.5	254
−150−M 22					150	22	90		34.3					205	4.4	10.7		252
−165−M 67					165	67	60		39					220		22.6	0.7	257
−170−M 42					170	42	90		36.4					225	4.5	16.2	0.6	255
−195−M 67					195	67			39					250	4.7	23.2	0.9	258

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
BT50−SLFB16− 90−M 22	1	16	32		90	22	30	—	34.3	50	—	18	32	145	3.7	9.6	0.3	259
−110−M 42					110	42			36.4					165	3.9	15.1	0.4	262
−120−M 22					120	22	60		34.3					175	4.1	10.1		260
−135−M 67					135	67	30		39					190	4.0	22.0	0.6	265
−140−M 42				8	140	42	60		36.4					195	4.2	15.7	0.5	263
−150−M 22					150	22	90		34.3					205	4.4	10.7		261
−165−M 67					165	67	60		39					220		22.6	0.7	266
−170−M 42					170	42	90		36.4					225	4.5	16.2	0.6	264
−195−M 67					195	67			39					250	4.7	23.2	0.9	267
BT50−SLSB20−110−M 42	1	20	29		110	42	30	—	33.4	50	—	22	40	165	3.8	16.8	0.5	268
−135−M 67					135	67			36					190	3.9	27.1	0.8	271
−140−M 42					140	42	60		33.4					195	4.1	17.4	0.6	269
−165−M 67					165	67			36					220	4.2	27.7	0.9	272
−M 97						97	30		39.2						4.1	39.4	1.2	274
−170−M 42					170	42	90		33.4					225	4.4	18.0	0.8	270
−195−M 67					195	67			36					250	4.5	28.2	1.1	273
−M 97				4.5		97	60		39.2						4.4	40.0	1.4	275
−M127						127	30		42.3						4.3	52.6	1.6	277
−225−M 97					225	97	90		39.2					280	4.7	40.6	1.7	276
−M127						127	60		42.3						4.6	53.2	1.8	278
−M157						157	30		45.5						4.5	65.0	2.0	280
−255−M127					255	127	90		42.3					310	5.0	53.7	2.2	279
−M157						157	60		45.5						4.9	65.5	2.3	281
−285−M157					285		90							340	5.2	66.1	2.8	282
−SLRB20−110−M 42	1	20	38		110	42	30	—	42.4	50	—	22	40	165	3.9	16.9	0.3	283
−135−M 67					135	67			45					190	4.2	27.2	0.5	286
−140−M 42				9	140	42	60		42.4					195	4.3	17.5		284
−165−M 67					165	67			45					220	4.5	27.8	0.6	287
−170−M 42					170	42	90		42.4					225	4.6	18.1		285
−195−M 67					195	67			45					250	4.8	28.4	0.8	288
−SLFB20−110−M 42	1	20	38		110	42	30	—	42.4	50	—	22	40	165	3.9	16.9	0.3	289
−135−M 67					135	67			45					190	4.2	27.2	0.5	292
−140−M 42				9	140	42	60		42.4					195	4.3	17.5		290
−165−M 67					165	67			45					220	4.5	27.8	0.6	293
−170−M 42					170	42	90		42.4					225	4.6	18.1		291
−195−M 67					195	67			45					250	4.8	28.4	0.8	294
BT50−SLRB25−110−M 42	1	25	45		110	42	30	—	49.7	50	—	26	45	165	4.0	19.0	0.3	295
−140−M 42				10	140		60							195	4.4	19.6	0.4	296
−170−M 42					170		90							225	4.7	20.2	0.6	297
−SLFB25−110−M 42	1	25	45		110	42	30	—	49.7	50	—	26	45	165	4.0	19.0	0.3	298
−140−M 42				10	140		60							195	4.4	19.6	0.4	299
−170−M 42					170		90							225	4.7	20.2	0.6	300

BT50

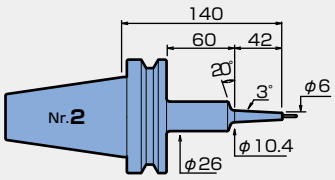
φ3 SLSA t=1.5

BT50-SLSA3-110-M42



9.4

BT50-SLSA3-140-M42



10.0

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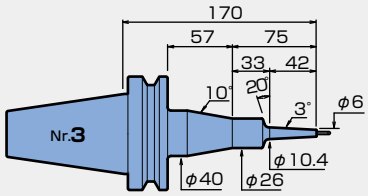
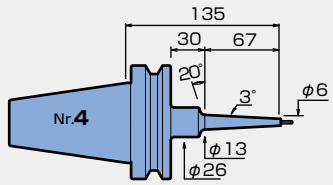


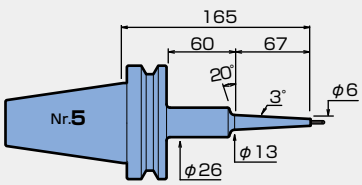
9.9

BT50-SLSA3-135-M67



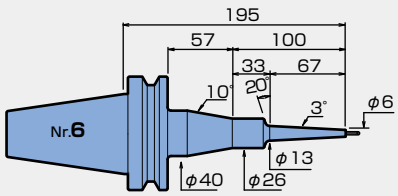
15.0

BT50-SLSA3-165-M67



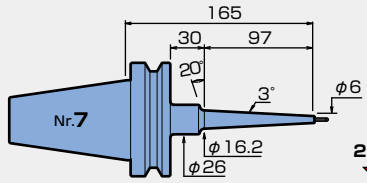
16.0

BT50-SLSA3-195-M67



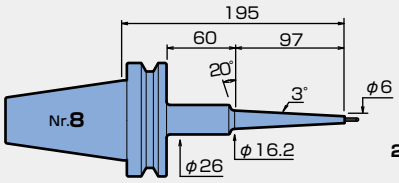
15.8

BT50-SLSA3-165-M97



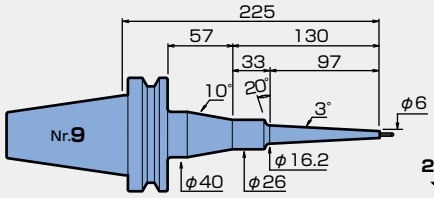
20.8

BT50-SLSA3-195-M97



22.3

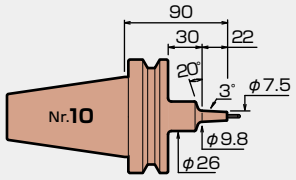
BT50-SLSA3-225-M97



22.1

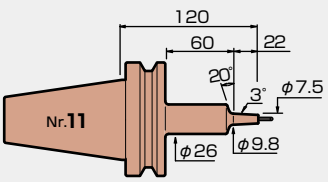
φ3 SLRA t=2.25

BT50-SLRA3-90-M22



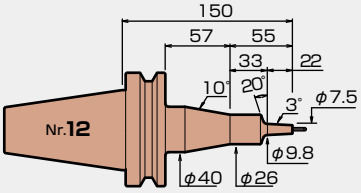
2.8

BT50-SLRA3-120-M22



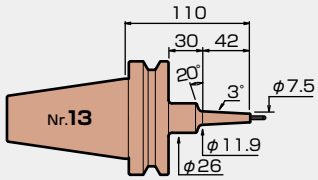
3.2

BT50-SLRA3-150-M22



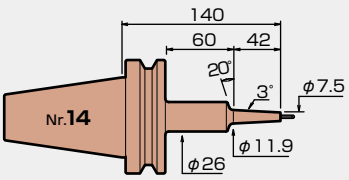
3.2

BT50-SLRA3-110-M42



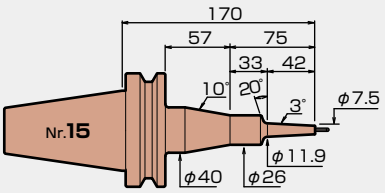
5.4

BT50-SLRA3-140-M42



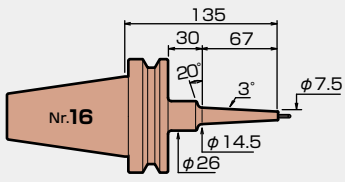
6.0

BT50-SLRA3-170-M42



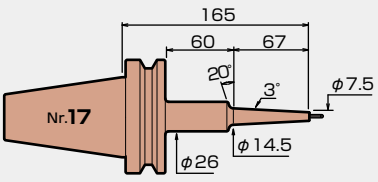
6.0

BT50-SLRA3-135-M67



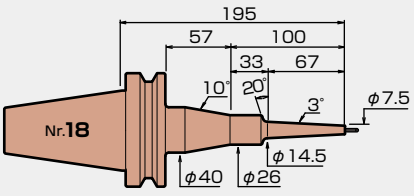
9.0

BT50-SLRA3-165-M67



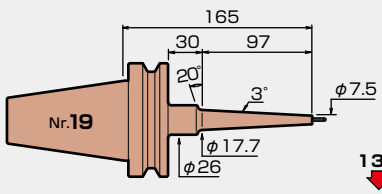
9.9

BT50-SLRA3-195-M67



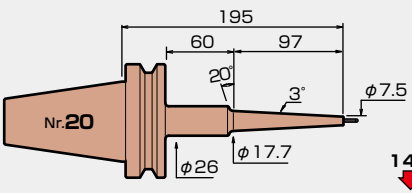
9.8

BT50-SLRA3-165-M97



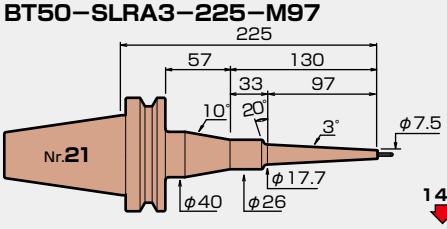
13.0

BT50-SLRA3-195-M97



14.5

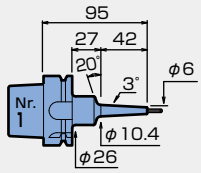
BT50-SLRA3-225-M97



14.3

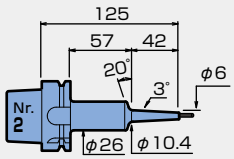
φ3 SLSA t=1.5

A63−SLSA3−95−M42



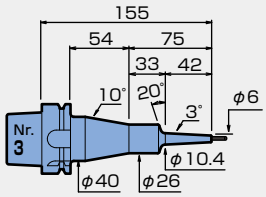
9.3

A63−SLSA3−125−M42



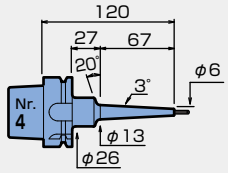
9.6

A63−SLSA3−155−M42



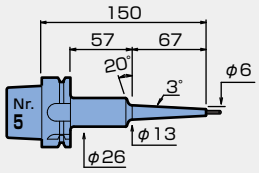
9.9

A63−SLSA3−120−M67



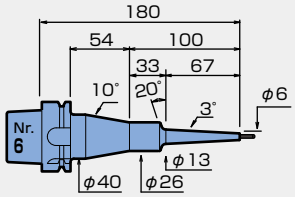
14.9

A63−SLSA3−150−M67



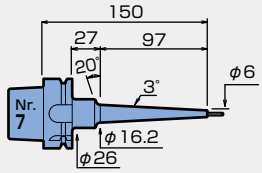
15.9

A63−SLSA3−180−M67



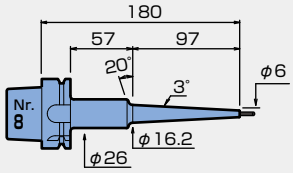
15.8

A63−SLSA3−150−M97



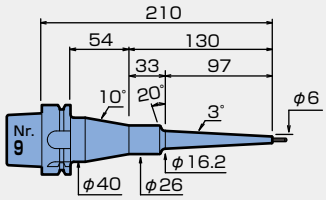
20.7

A63−SLSA3−180−M97



22.2

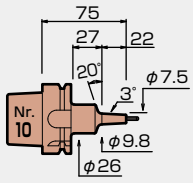
A63−SLSA3−210−M97



22.1

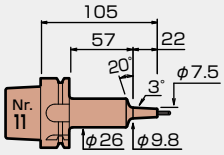
φ3 SLRA t=2.25

A63−SLRA3−75−M22



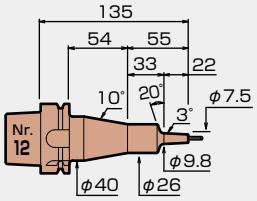
2.8

A63−SLRA3−105−M22



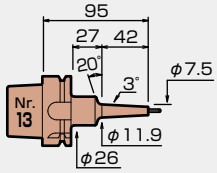
3.2

A63−SLRA3−135−M22



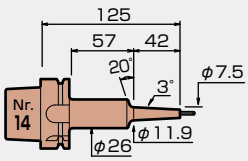
3.2

A63−SLRA3−95−M42



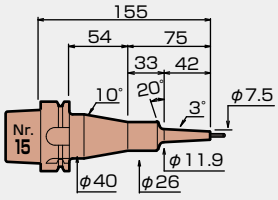
5.4

A63−SLRA3−125−M42



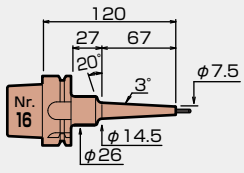
6.0

A63−SLRA3−155−M42



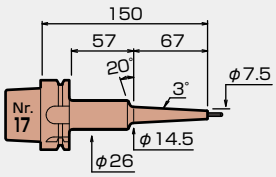
6.0

A63−SLRA3−120−M67



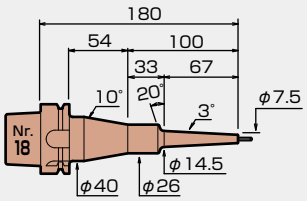
8.9

A63−SLRA3−150−M67



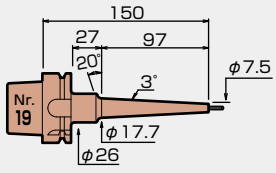
9.8

A63−SLRA3−180−M67



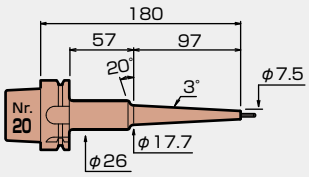
9.8

A63−SLRA3−150−M97



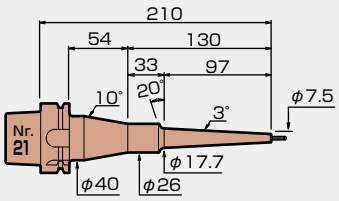
12.9

A63−SLRA3−180−M97



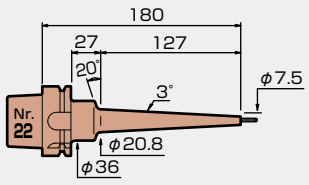
14.4

A63−SLRA3−210−M97



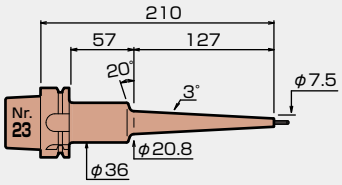
14.3

A63−SLRA3−180−M127



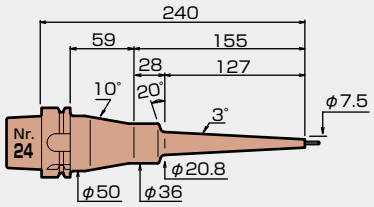
15.7

A63−SLRA3−210−M127



16.2

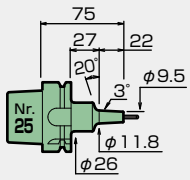
A63−SLRA3−240−M127



16.3

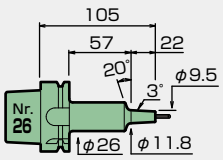
φ3 SLFB t=3.25

A63−SLFB3−75−M22



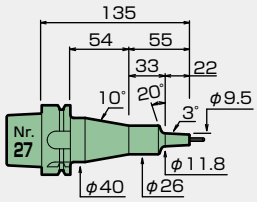
1.9

A63−SLFB3−105−M22



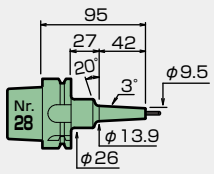
2.3

A63−SLFB3−135−M22



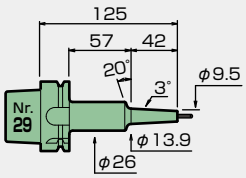
2.3

A63−SLFB3−95−M42



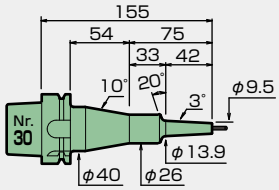
3.3

A63−SLFB3−125−M42



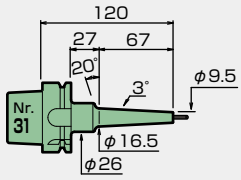
3.8

A63−SLFB3−155−M42



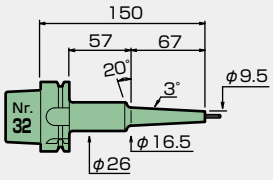
3.8

A63−SLFB3−120−M67



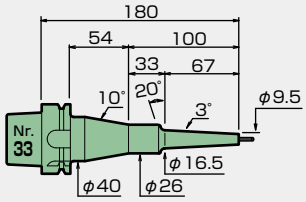
5.3

A63−SLFB3−150−M67



6.3

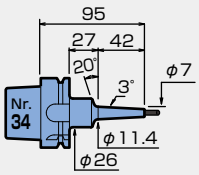
A63−SLFB3−180−M67



6.3

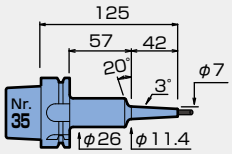
φ4 SLSA t=1.5

A63-SLSA4-95-M42



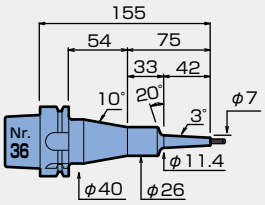
7.3

A63-SLSA4-125-M42



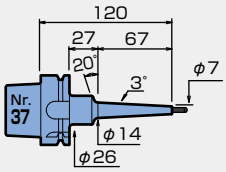
7.9

A63-SLSA4-155-M42



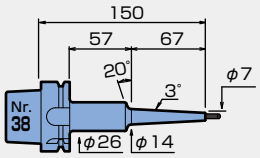
7.9

A63-SLSA4-120-M67



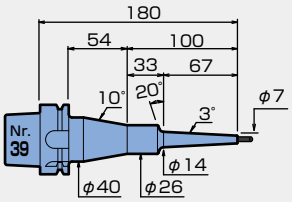
11.9

A63-SLSA4-150-M67



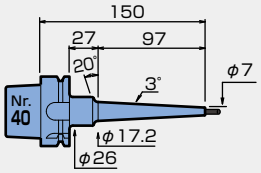
12.8

A63-SLSA4-180-M67



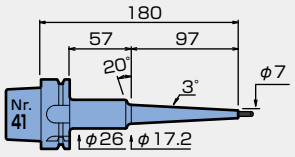
12.8

A63-SLSA4-150-M97



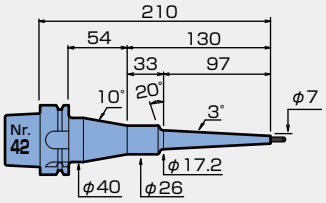
16.7

A63-SLSA4-180-M97



18.2

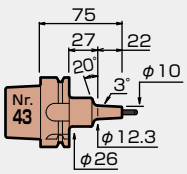
A63-SLSA4-210-M97



18.1

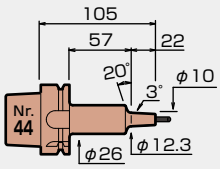
φ4 SLRA t=3

A63-SLRA4-75-M22



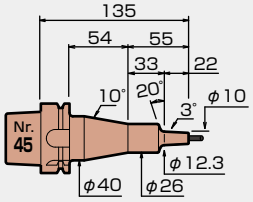
1.7

A63-SLRA4-105-M22



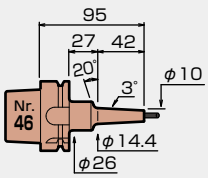
2.1

A63-SLRA4-135-M22



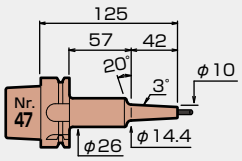
2.1

A63-SLRA4-95-M42



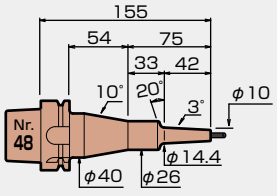
3.1

A63-SLRA4-125-M42



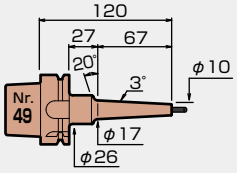
3.7

A63-SLRA4-155-M42



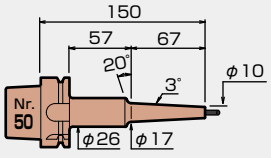
3.7

A63-SLRA4-120-M67



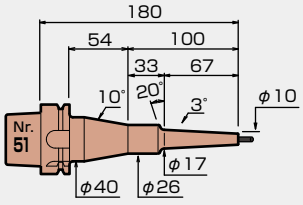
5.1

A63-SLRA4-150-M67



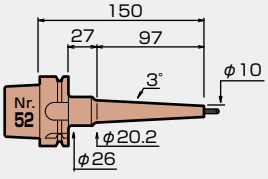
6.1

A63-SLRA4-180-M67



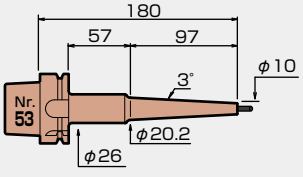
6.1

A63-SLRA4-150-M97



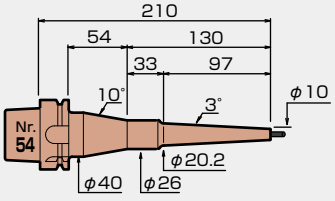
7.7

A63-SLRA4-180-M97



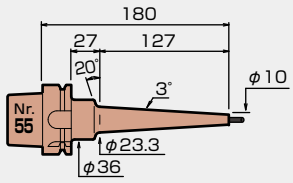
9.2

A63-SLRA4-210-M97



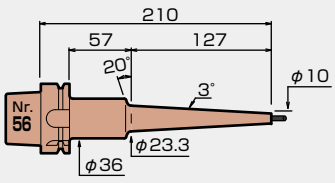
9.1

A63–SLRA4–180–M127



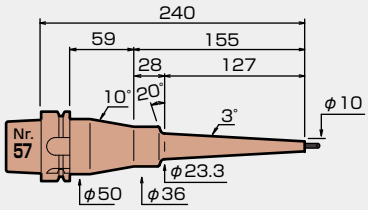
9.3

A63–SLRA4–210–M127



9.9

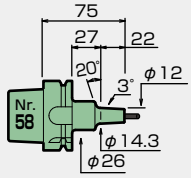
A63–SLRA4–240–M127



9.9

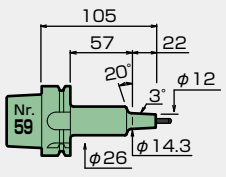
φ4 SLFB t=4

A63–SLFB4–75–M22



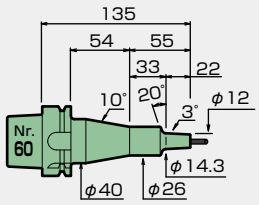
1.3

A63–SLFB4–105–M22



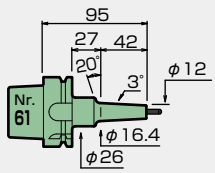
1.7

A63–SLFB4–135–M22



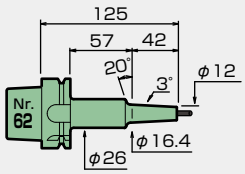
1.7

A63–SLFB4–95–M42



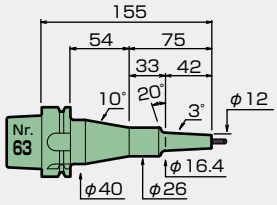
2.2

A63–SLFB4–125–M42



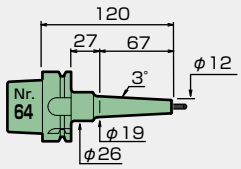
2.8

A63–SLFB4–155–M42



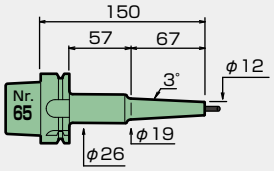
2.8

A63–SLFB4–120–M67



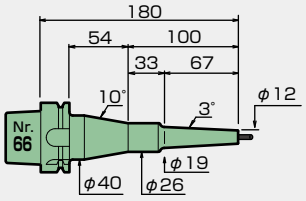
3.5

A63–SLFB4–150–M67



4.5

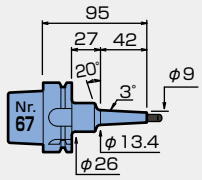
A63–SLFB4–180–M67



4.5

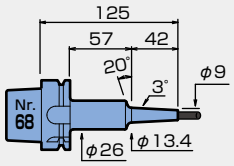
φ6 SLSA t=1.5

A63−SLSA6−95−M42



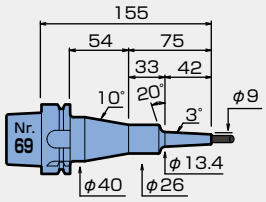
4.8

A63−SLSA6−125−M42



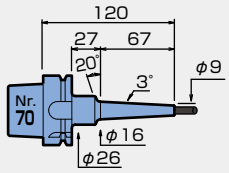
5.5

A63−SLSA6−155−M42



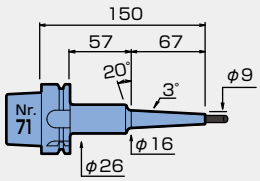
5.5

A63−SLSA6−120−M67



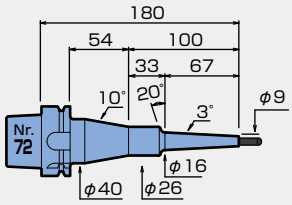
7.9

A63−SLSA6−150−M67



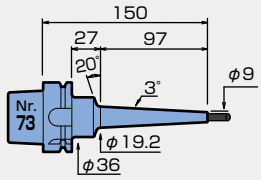
9.1

A63−SLSA6−180−M67



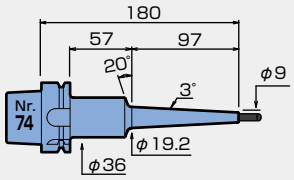
9.0

A63−SLSA6−150−M97



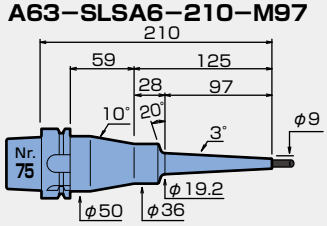
11.0

A63−SLSA6−180−M97



11.4

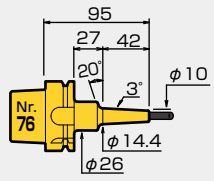
A63−SLSA6−210−M97



11.5

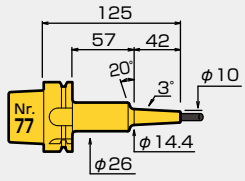
φ6 SLSB t=2

A63−SLSB6−95−M42



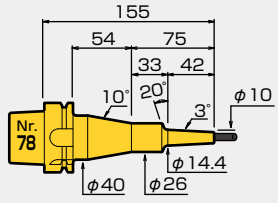
3.8

A63−SLSB6−125−M42



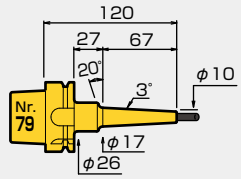
4.5

A63−SLSB6−155−M42



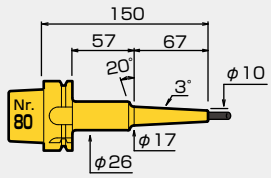
4.5

A63−SLSB6−120−M67



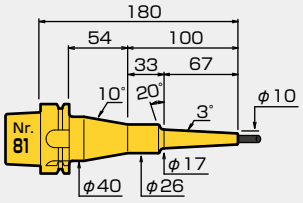
6.3

A63−SLSB6−150−M67



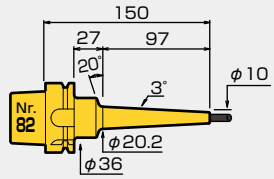
7.4

A63−SLSB6−180−M67



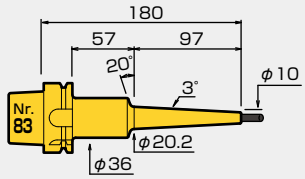
7.4

A63−SLSB6−150−M97



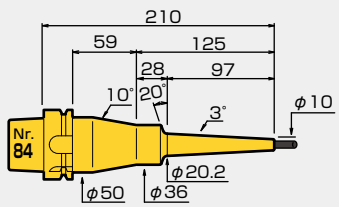
8.9

A63−SLSB6−180−M97



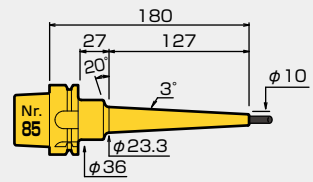
9.3

A63−SLSB6−210−M97



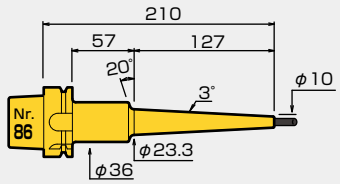
9.3

A63−SLSB6−180−M127



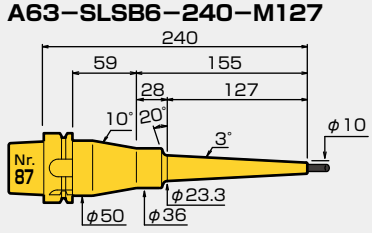
11.4

A63−SLSB6−210−M127



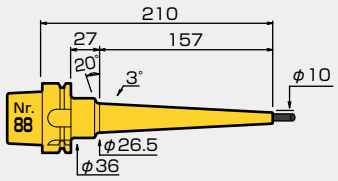
12.0

A63−SLSB6−240−M127



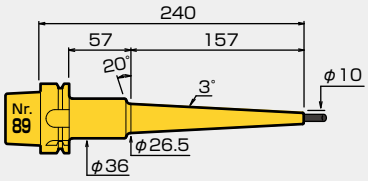
12.1

A63−SLSB6−210−M157



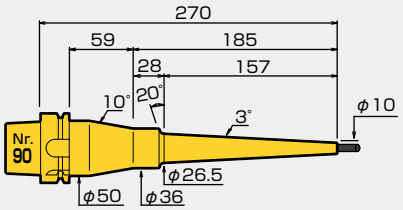
13.6

A63−SLSB6−240−M157



14.5

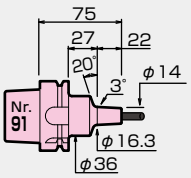
A63−SLSB6−270−M157



14.5

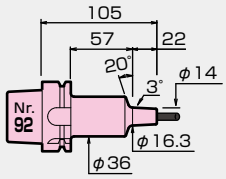
ϕ6 SLRB t=4

A63−SLRB6−75−M22



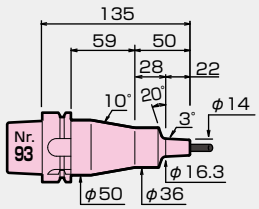
0.9

A63−SLRB6−105−M22



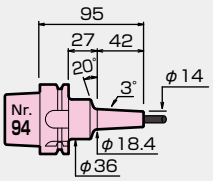
1.1

A63−SLRB6−135−M22



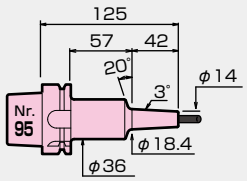
1.1

A63−SLRB6−95−M42



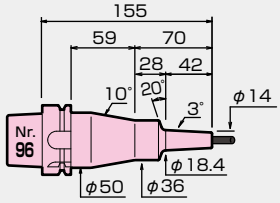
1.6

A63−SLRB6−125−M42



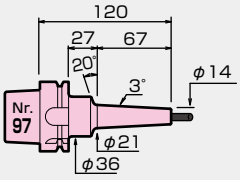
1.8

A63−SLRB6−155−M42



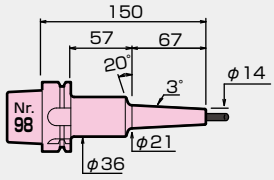
1.8

A63−SLRB6−120−M67



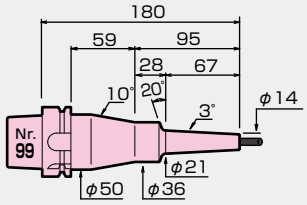
2.5

A63−SLRB6−150−M67



2.8

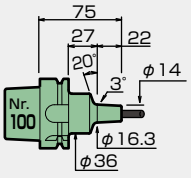
A63−SLRB6−180−M67



2.9

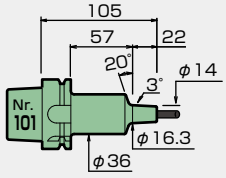
ϕ6 SLFB t=4

A63−SLFB6−75−M22



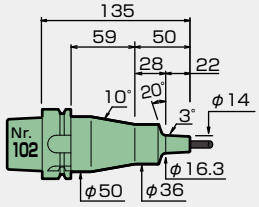
0.9

A63−SLFB6−105−M22



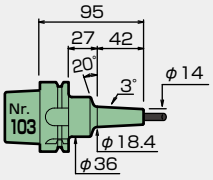
1.1

A63−SLFB6−135−M22



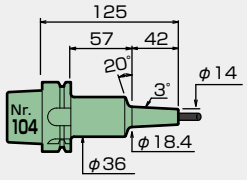
1.1

A63−SLFB6−95−M42



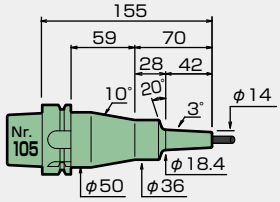
1.6

A63−SLFB6−125−M42



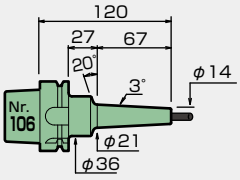
1.8

A63−SLFB6−155−M42



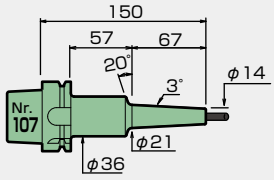
1.8

A63−SLFB6−120−M67



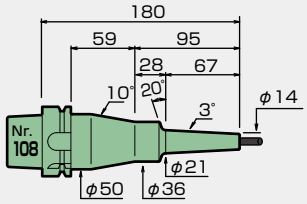
2.5

A63−SLFB6−150−M67



2.8

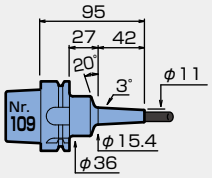
A63−SLFB6−180−M67



2.9

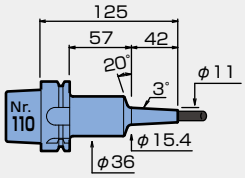
φ8 SLSA t=1.5

A63-SLSA8-95-M42



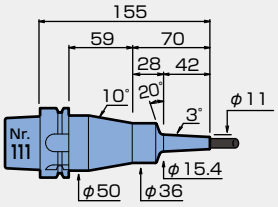
3.2

A63-SLSA8-125-M42



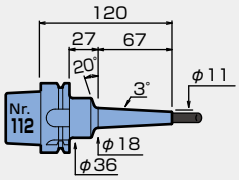
3.4

A63-SLSA8-155-M42



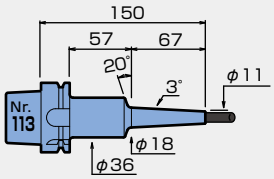
3.4

A63-SLSA8-120-M67



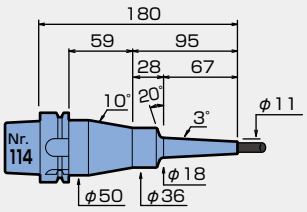
5.4

A63-SLSA8-150-M67



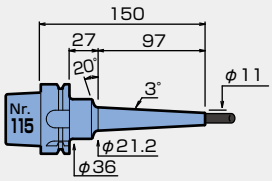
5.7

A63-SLSA8-180-M67



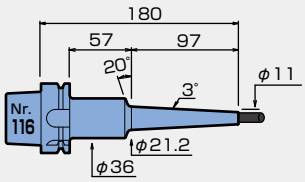
5.7

A63-SLSA8-150-M97



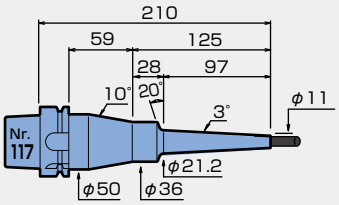
7.8

A63-SLSA8-180-M97



8.3

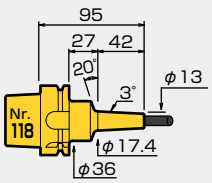
A63-SLSA8-210-M97



8.3

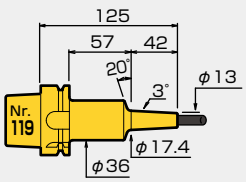
φ8 SLSB t=2.5

A63-SLSB8-95-M42



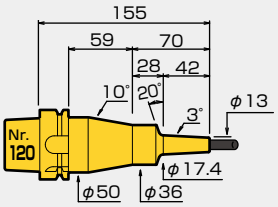
2.1

A63-SLSB8-125-M42



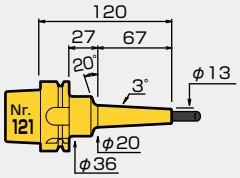
2.3

A63-SLSB8-155-M42



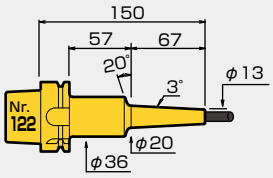
2.3

A63-SLSB8-120-M67



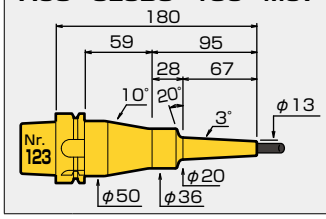
3.5

A63-SLSB8-150-M67



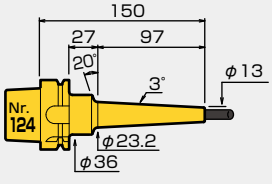
3.9

A63-SLSB8-180-M67



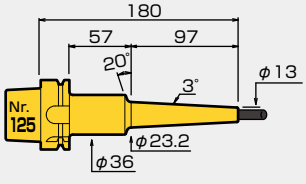
3.9

A63-SLSB8-150-M97



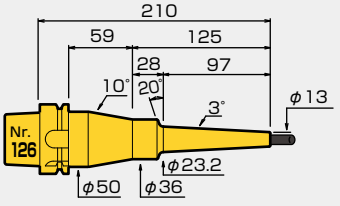
5.2

A63-SLSB8-180-M97



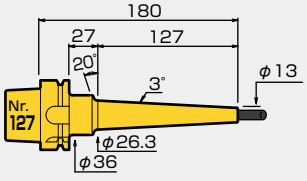
5.7

A63-SLSB8-210-M97



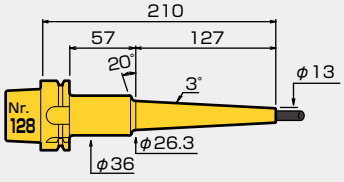
5.7

A63-SLSB8-180-M127



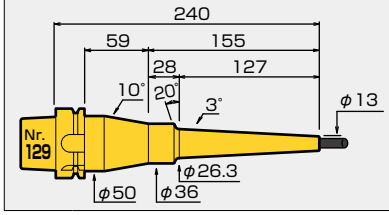
7.0

A63-SLSB8-210-M127



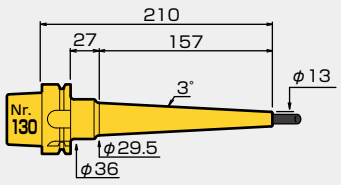
7.7

A63-SLSB8-240-M127



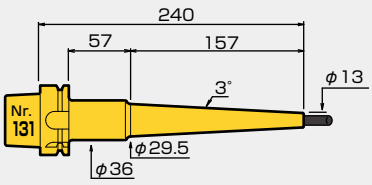
7.7

A63-SLSB8-210-M157



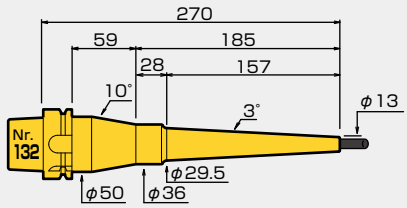
8.5

A63-SLSB8-240-M157



9.4

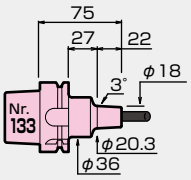
A63-SLSB8-270-M157



9.5

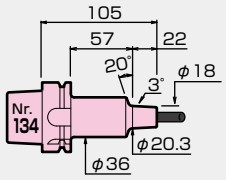
φ8 SLRB t=5

A63-SLRB8-75-M22



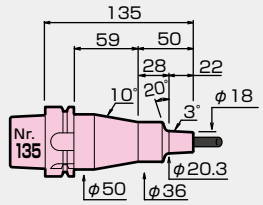
0.7

A63-SLRB8-105-M22



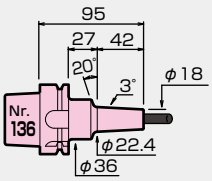
0.8

A63-SLRB8-135-M22



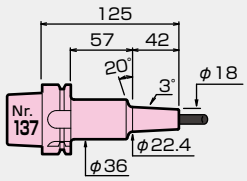
0.8

A63-SLRB8-95-M42



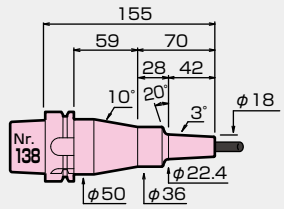
1.0

A63-SLRB8-125-M42



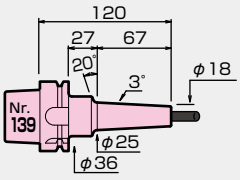
1.2

A63-SLRB8-155-M42



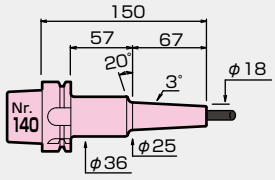
1.3

A63-SLRB8-120-M67



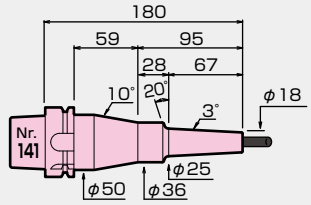
1.6

A63-SLRB8-150-M67



1.9

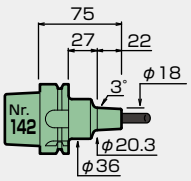
A63-SLRB8-180-M67



2.0

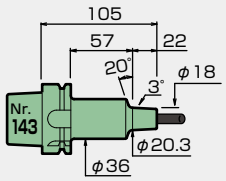
φ8 SLFB t=5

A63-SLFB8-75-M22



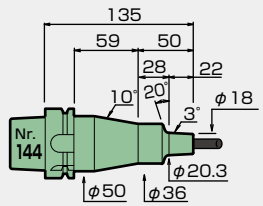
0.7

A63-SLFB8-105-M22



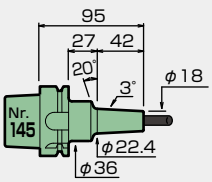
0.8

A63-SLFB8-135-M22



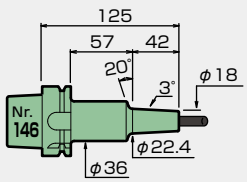
0.8

A63-SLFB8-95-M42



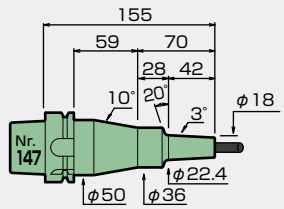
1.0

A63-SLFB8-125-M42



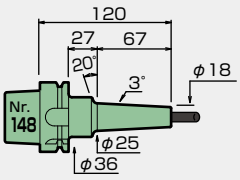
1.2

A63-SLFB8-155-M42



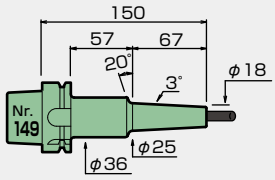
1.3

A63-SLFB8-120-M67



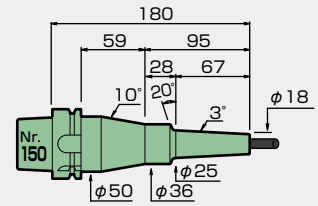
1.6

A63-SLFB8-150-M67



1.9

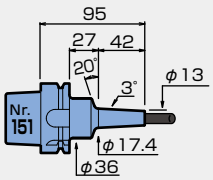
A63-SLFB8-180-M67



2.0

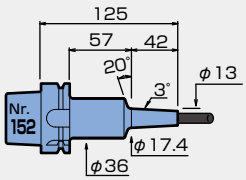
φ10 SLSA t=1.5

A63–SLSA10–95–M42



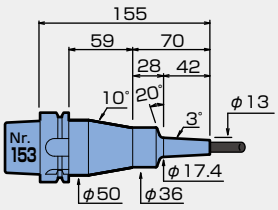
2.3

A63–SLSA10–125–M42



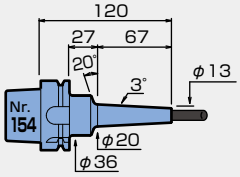
2.5

A63–SLSA10–155–M42



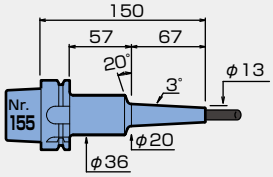
2.5

A63–SLSA10–120–M67



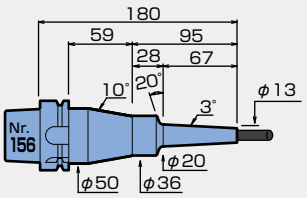
4.0

A63–SLSA10–150–M67



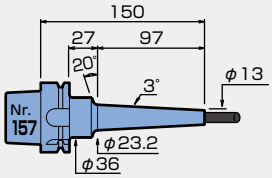
4.3

A63–SLSA10–180–M67



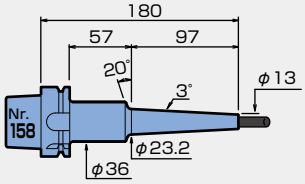
4.4

A63–SLSA10–150–M97



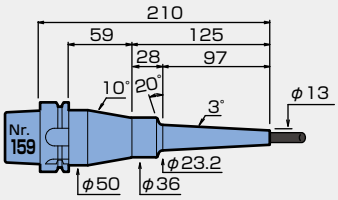
5.9

A63–SLSA10–180–M97



6.4

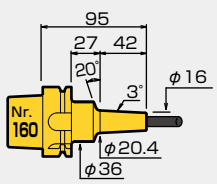
A63–SLSA10–210–M97



6.5

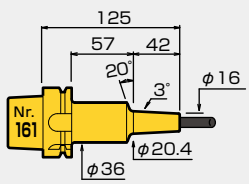
φ10 SLSB t=3

A63–SLSB10–95–M42



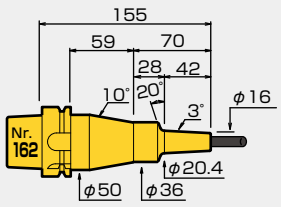
1.4

A63–SLSB10–125–M42



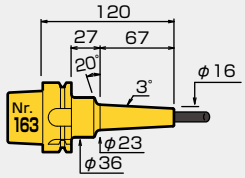
1.6

A63–SLSB10–155–M42



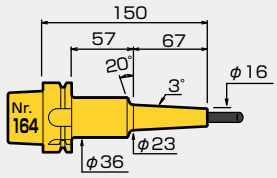
1.7

A63–SLSB10–120–M67



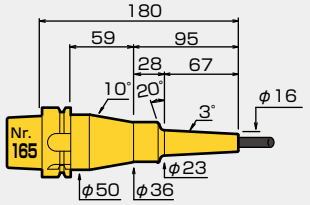
2.4

A63–SLSB10–150–M67



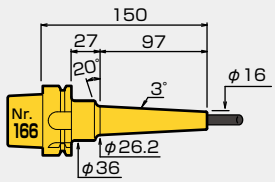
2.7

A63–SLSB10–180–M67



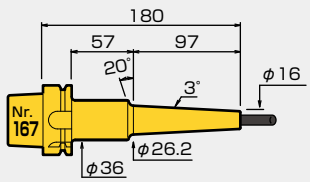
2.7

A63–SLSB10–150–M97



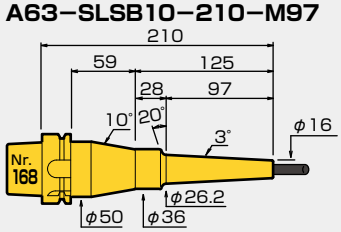
3.5

A63–SLSB10–180–M97



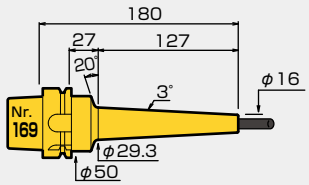
4.1

A63–SLSB10–210–M97



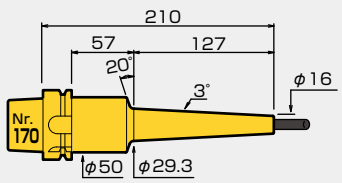
4.1

A63–SLSB10–180–M127



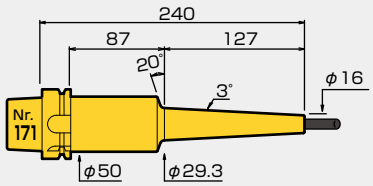
4.4

A63–SLSB10–210–M127



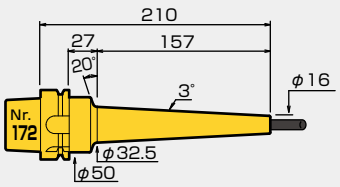
4.4

A63–SLSB10–240–M127



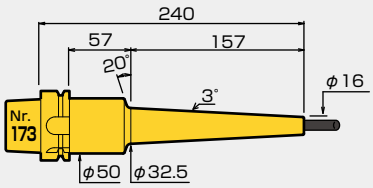
4.9

A63-SLSB10-210-M157



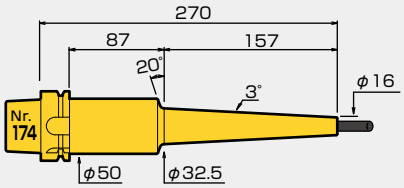
5.5

A63-SLSB10-240-M157



5.8

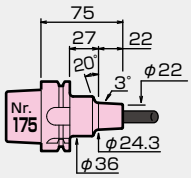
A63-SLSB10-270-M157



6.1

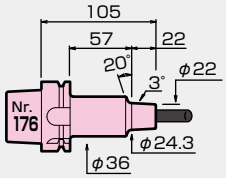
φ10 SLRB t=6

A63-SLRB10-75-M22



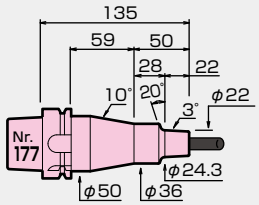
0.5

A63-SLRB10-105-M22



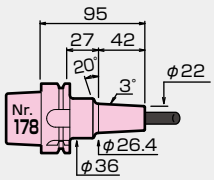
0.7

A63-SLRB10-135-M22



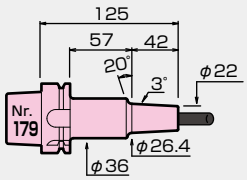
0.7

A63-SLRB10-95-M42



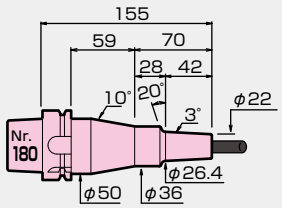
0.8

A63-SLRB10-125-M42



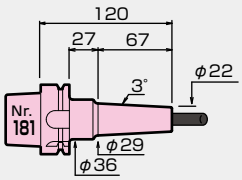
1.0

A63-SLRB10-155-M42



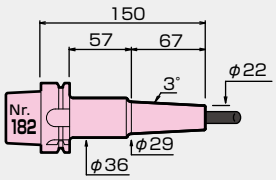
1.0

A63-SLRB10-120-M67



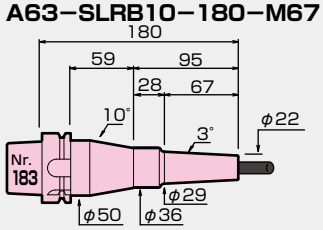
1.2

A63-SLRB10-150-M67



1.5

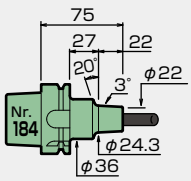
A63-SLRB10-180-M67



1.6

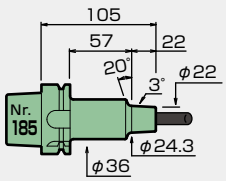
φ10 SLFB t=6

A63-SLFB10-75-M22



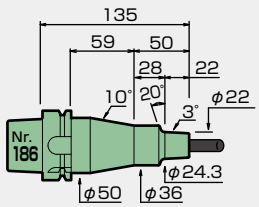
0.5

A63-SLFB10-105-M22



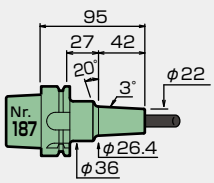
0.7

A63-SLFB10-135-M22



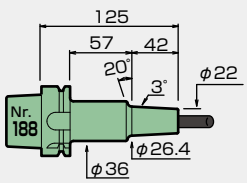
0.7

A63-SLFB10-95-M42



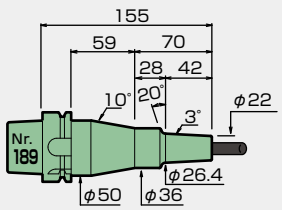
0.8

A63-SLFB10-125-M42



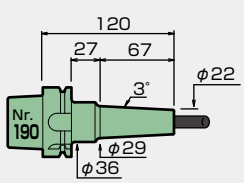
1.0

A63-SLFB10-155-M42



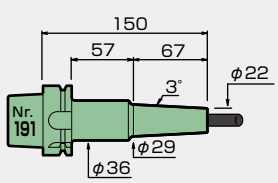
1.0

A63-SLFB10-120-M67



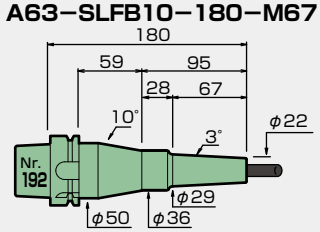
1.2

A63-SLFB10-150-M67



1.5

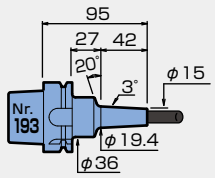
A63-SLFB10-180-M67



1.6

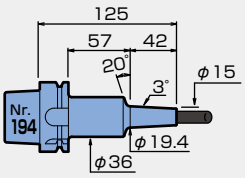
φ12 SLSA t=1.5

A63-SLSA12-95-M42



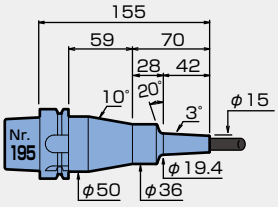
1.8

A63-SLSA12-125-M42



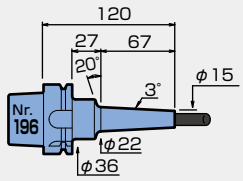
2.1

A63-SLSA12-155-M42



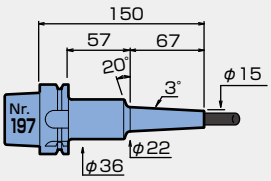
2.1

A63-SLSA12-120-M67



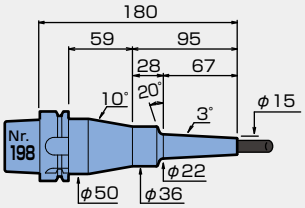
3.2

A63-SLSA12-150-M67



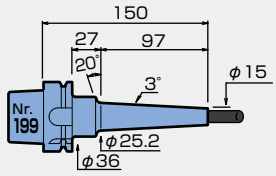
3.6

A63-SLSA12-180-M67



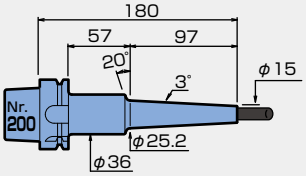
3.6

A63-SLSA12-150-M97



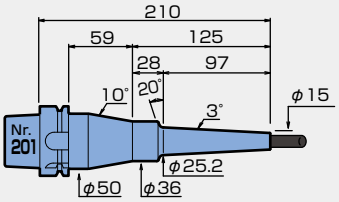
4.8

A63-SLSA12-180-M97



5.3

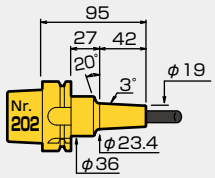
A63-SLSA12-210-M97



5.3

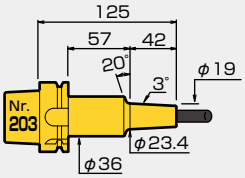
φ12 SLSB t=3.5

A63-SLSB12-95-M42



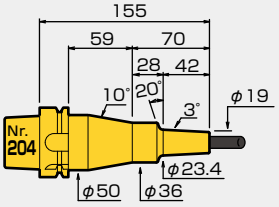
1.1

A63-SLSB12-125-M42



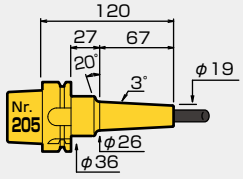
1.3

A63-SLSB12-155-M42



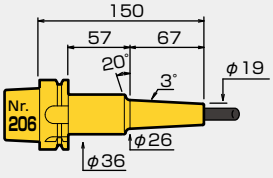
1.4

A63-SLSB12-120-M67



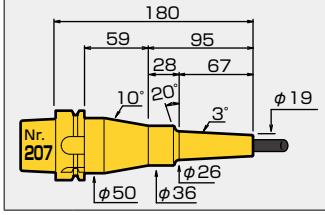
1.8

A63-SLSB12-150-M67



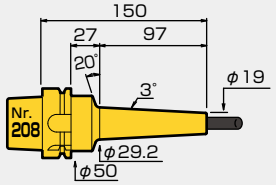
2.1

A63-SLSB12-180-M67



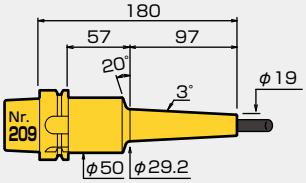
2.2

A63-SLSB12-150-M97



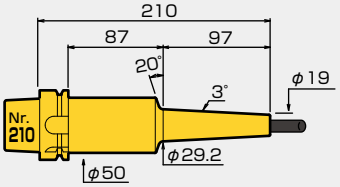
2.4

A63-SLSB12-180-M97



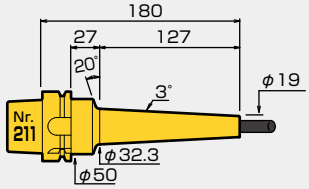
2.6

A63-SLSB12-210-M97



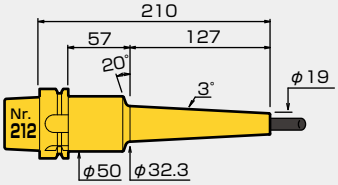
2.8

A63-SLSB12-180-M127



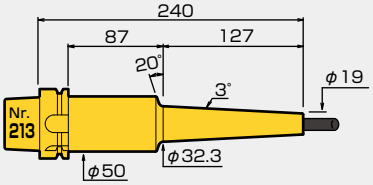
3.2

A63-SLSB12-210-M127



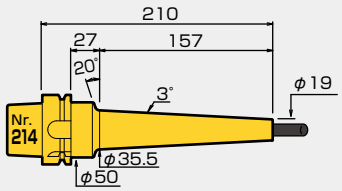
3.5

A63-SLSB12-240-M127



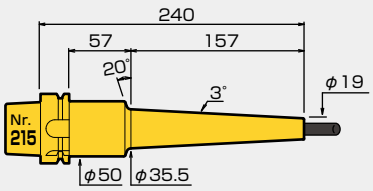
3.8

A63-SLSB12-210-M157



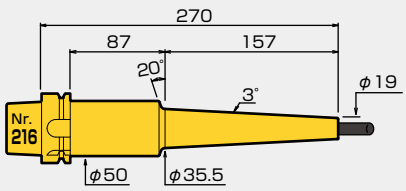
4.0

A63-SLSB12-240-M157



4.3

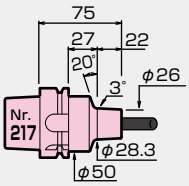
A63-SLSB12-270-M157



4.7

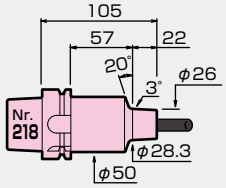
φ12 SLRB t=7

A63-SLRB12-75-M22



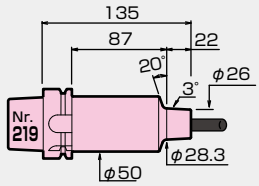
0.4

A63-SLRB12-105-M22



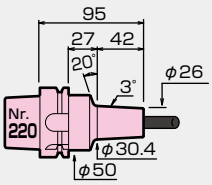
0.5

A63-SLRB12-135-M22



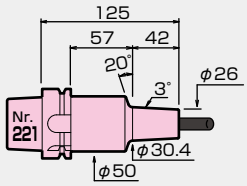
0.6

A63-SLRB12-95-M42



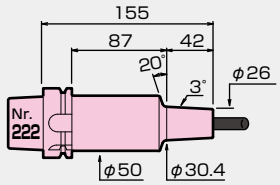
0.5

A63-SLRB12-125-M42



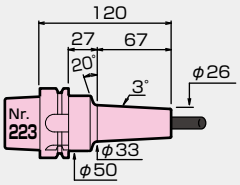
0.6

A63-SLRB12-155-M42



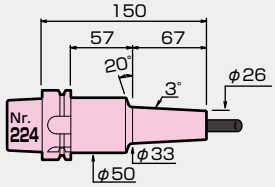
0.8

A63-SLRB12-120-M67



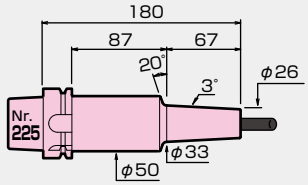
0.8

A63-SLRB12-150-M67



0.9

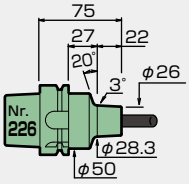
A63-SLRB12-180-M67



1.1

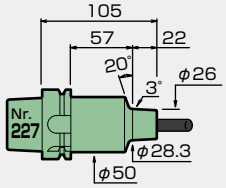
φ12 SLFB t=7

A63-SLFB12-75-M22



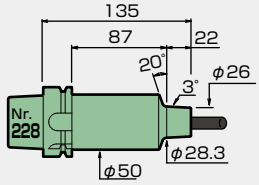
0.4

A63-SLFB12-105-M22



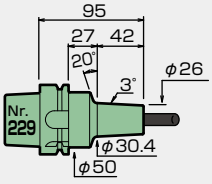
0.5

A63-SLFB12-135-M22



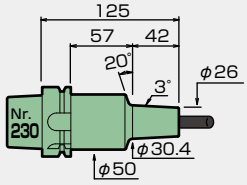
0.6

A63-SLFB12-95-M42



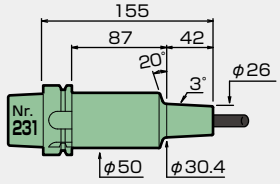
0.5

A63-SLFB12-125-M42



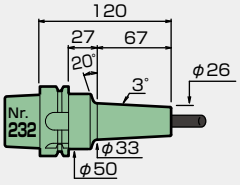
0.6

A63-SLFB12-155-M42



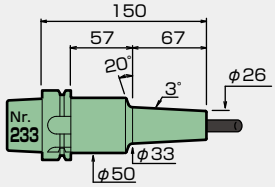
0.8

A63-SLFB12-120-M67



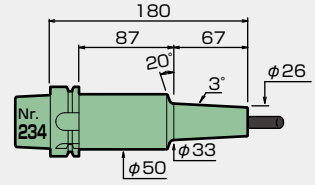
0.8

A63-SLFB12-150-M67



0.9

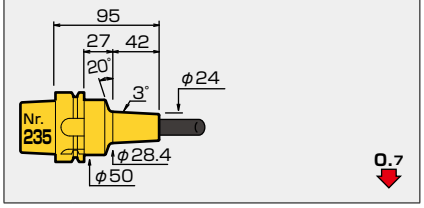
A63-SLFB12-180-M67



1.1

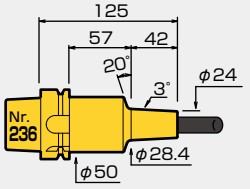
φ16 SLSB t=4

A63-SLSB16-95-M42



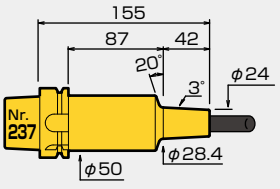
0.7

A63-SLSB16-125-M42



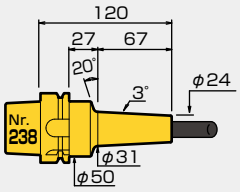
0.8

A63-SLSB16-155-M42



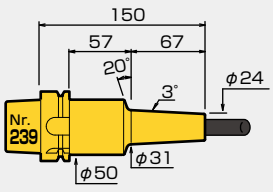
0.9

A63-SLSB16-120-M67



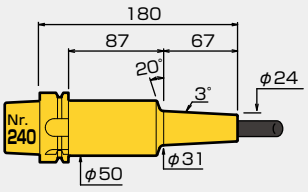
1.1

A63-SLSB16-150-M67



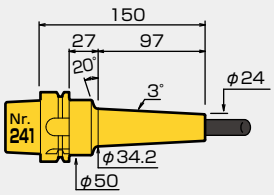
1.2

A63-SLSB16-180-M67



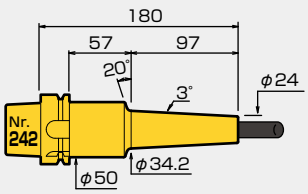
1.4

A63-SLSB16-150-M97



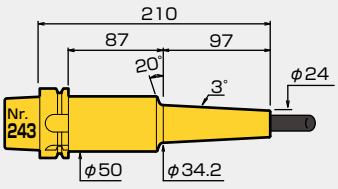
1.6

A63-SLSB16-180-M97



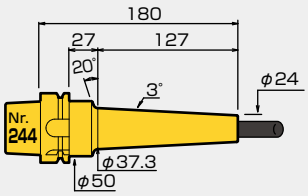
1.8

A63-SLSB16-210-M97



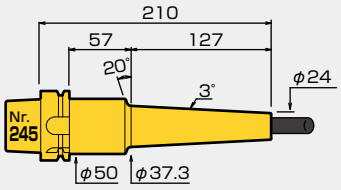
2.1

A63-SLSB16-180-M127



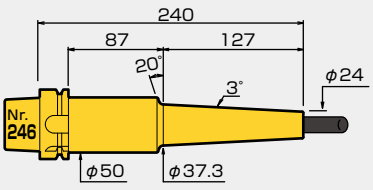
2.2

A63-SLSB16-210-M127



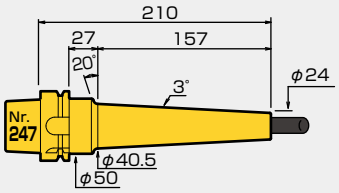
2.4

A63-SLSB16-240-M127



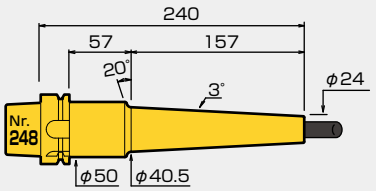
2.8

A63-SLSB16-210-M157



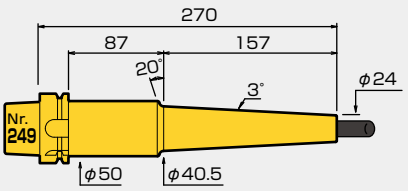
2.7

A63-SLSB16-240-M157



3.1

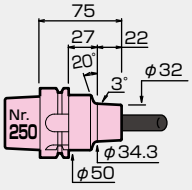
A63-SLSB16-270-M157



3.5

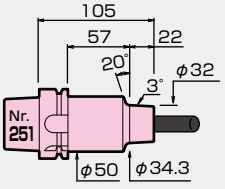
φ16 SLRB t=8

A63-SLRB16-75-M22



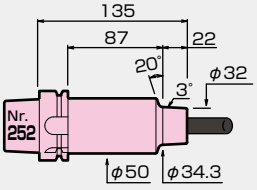
0.3

A63-SLRB16-105-M22



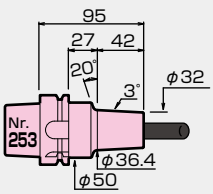
0.4

A63-SLRB16-135-M22



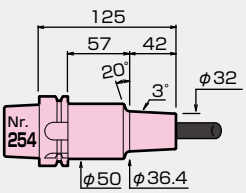
0.5

A63-SLRB16-95-M42



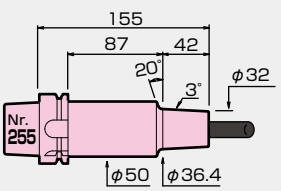
0.4

A63-SLRB16-125-M42



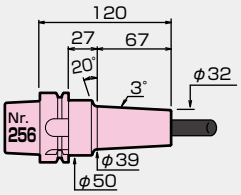
0.5

A63-SLRB16-155-M42



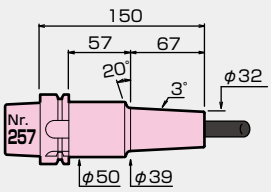
0.7

A63−SLRB16−120−M67



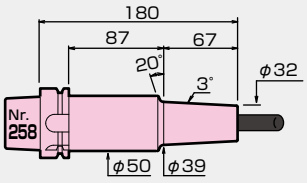
0.6

A63−SLRB16−150−M67



0.7

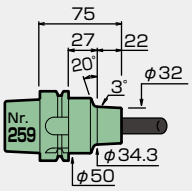
A63−SLRB16−180−M67



0.9

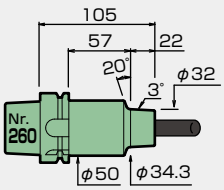
φ16 SLFB t=8

A63−SLFB16−75−M22



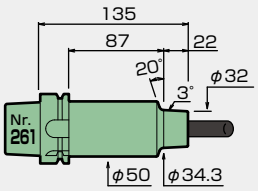
0.3

A63−SLFB16−105−M22



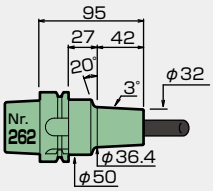
0.4

A63−SLFB16−135−M22



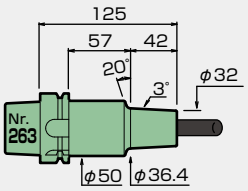
0.5

A63−SLFB16−95−M42



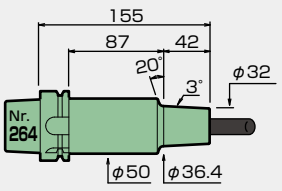
0.4

A63−SLFB16−125−M42



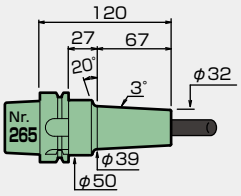
0.5

A63−SLFB16−155−M42



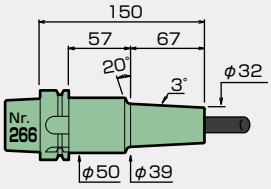
0.7

A63−SLFB16−120−M67



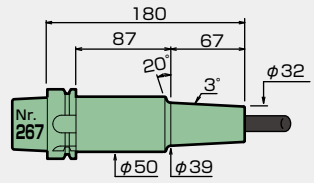
0.6

A63−SLFB16−150−M67



0.7

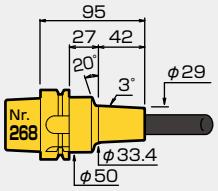
A63−SLFB16−180−M67



0.9

φ20 SLSB t=4.5

A63-SLSB20-95-M42



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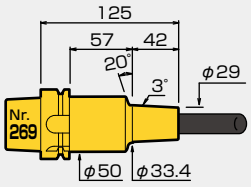
A63-SLSB20-125-M42



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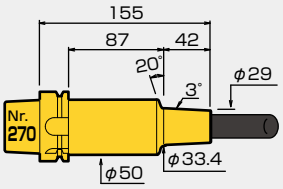
A63-SLSB20-155-M42



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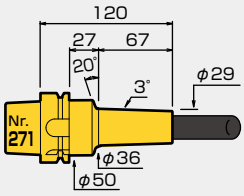
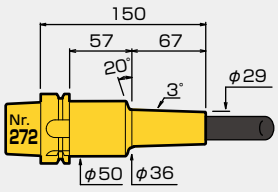
A63-SLSB20-120-M67



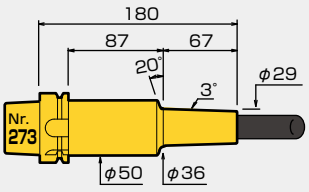
0.8

A63-SLSB20-150-M67



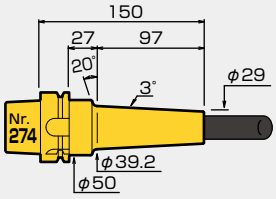
1.0

A63-SLSB20-180-M67



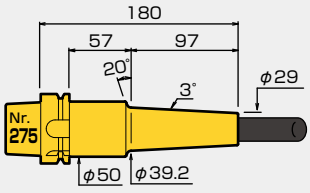
1.2

A63-SLSB20-150-M97



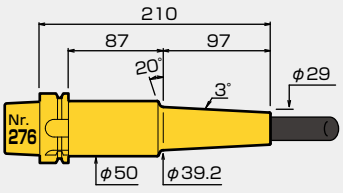
1.2

A63-SLSB20-180-M97



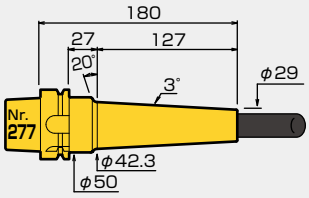
1.4

A63-SLSB20-210-M97



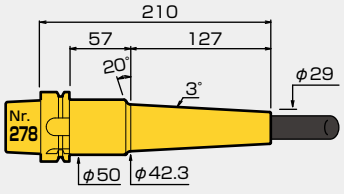
1.7

A63-SLSB20-180-M127



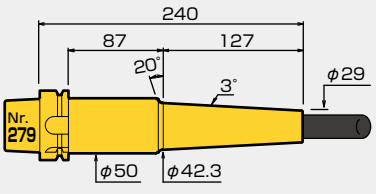
1.6

A63-SLSB20-210-M127



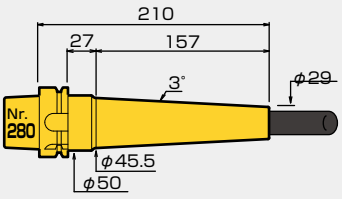
1.9

A63-SLSB20-240-M127



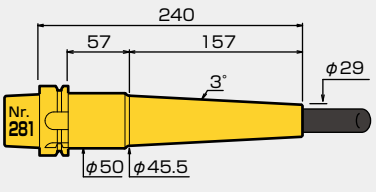
2.3

A63-SLSB20-210-M157



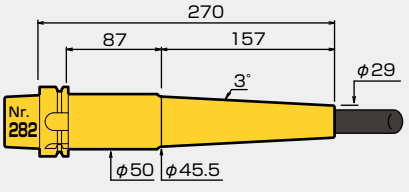
2.0

A63-SLSB20-240-M157



2.4

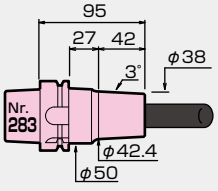
A63-SLSB20-270-M157



2.8

φ20 SLRB t=9

A63-SLRB20-95-M42



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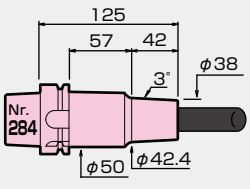
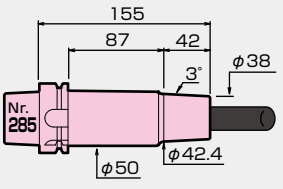
A63-SLRB20-125-M42



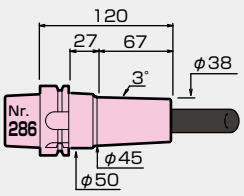
0.5

A63-SLRB20-155-M42



0.6

A63-SLRB20-120-M67



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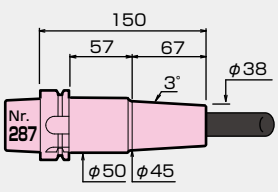
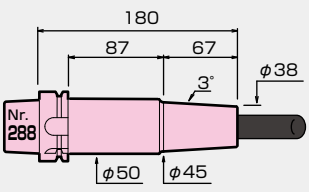
A63-SLRB20-150-M67



0.7

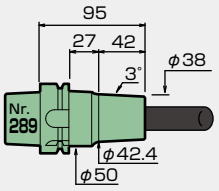
A63-SLRB20-180-M67



0.9

φ20 SLFB t=9

A63-SLFB20-95-M42



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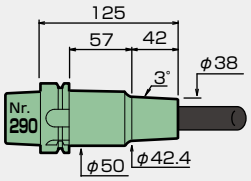
A63-SLFB20-125-M42



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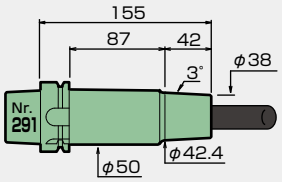

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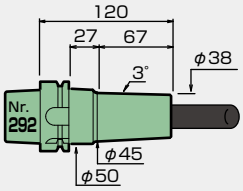
A63-SLFB20-120-M67



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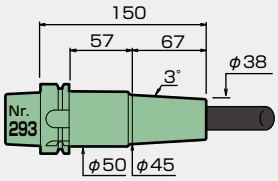

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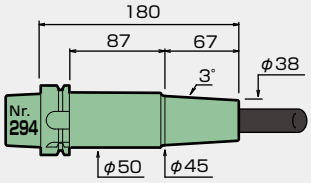
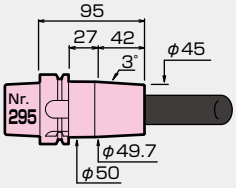
A63-SLFB20-180-M67



0.9

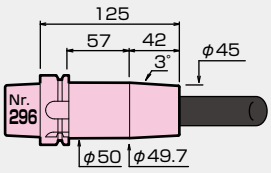
φ25 SLRB t=10

A63-SLRB25-95-M42



0.3

A63-SLRB25-125-M42



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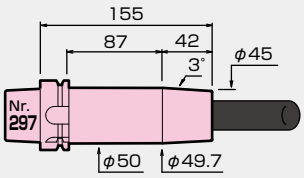
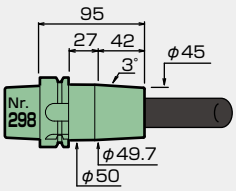
A63-SLRB25-155-M42



0.7

φ25 SLFB t=10

A63-SLFB25-95-M42



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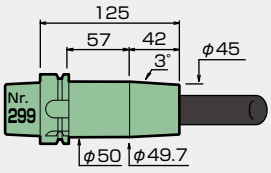
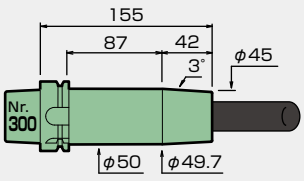
A63-SLFB25-125-M42

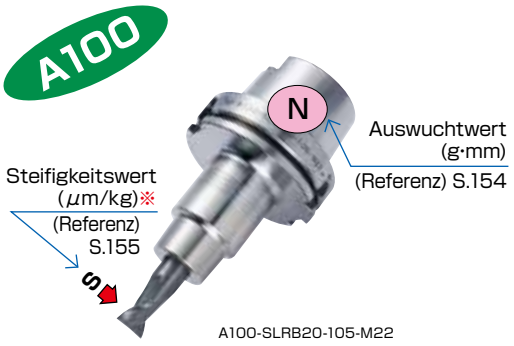


0.5

A63-SLFB25-155-M42



0.7



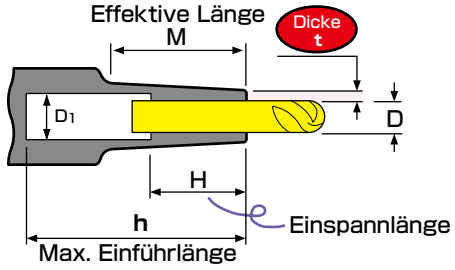


Abb.1

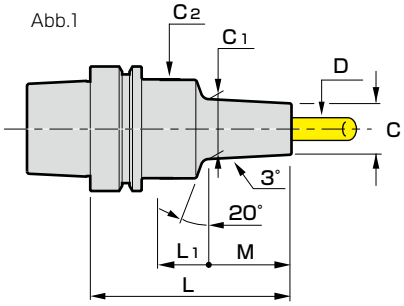
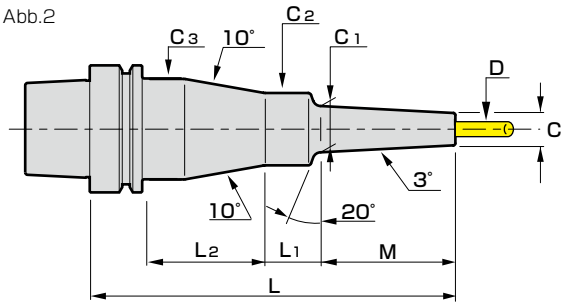


Abb.2



CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A100–SLSA 3–110–M 42	1	3	6		110	42	39	—	10.4	26	—	4	9	80	2.2	19.8	9.4	1
–135–M 67					135	67			13					105	2.3	20.9	15.1	4
–140–M 42					140	42	69		10.4					110		19.9	10.1	2
–165–M 67					165	67			13					135		21.0	16.1	5
–M 97				1.5		97	39		16.2							22.2	21.0	7
–170–M 42	2				170	42	33	66	10.4		40			140	2.6	20.2	10.0	3
–195–M 67					195	67			13					165		21.3	15.9	6
–M 97	1					97	69	—	16.2		—				2.4	22.3	22.5	8
–225–M 97	2				225		33	66			40			195	2.7	22.6	22.2	9
–SLRA 3– 90–M 22	1	3	7.5		90	22	39	—	9.8	26	—	5	9	60	2.2	20.2	2.9	10
–110–M 42					110	42			11.9					80		20.6	5.5	13
–120–M 22					120	22	69		9.8					90	2.3	20.3	3.3	11
–135–M 67					135	67	39		14.5					105		21.4	9.0	16
–140–M 42					140	42	69		11.9					110		20.7	6.1	14
–150–M 22	2				150	22	33	66	9.8		40			120	2.6	20.6	3.2	12
–165–M 67	1				165	67	69	—	14.5		—			135	2.4	21.5	10.1	17
–M 97				2.25		97	39		17.7						2.3	22.4	13.1	19
–170–M 42	2				170	42	33	66	11.9		40			140	2.6	21.0	6.0	15
–195–M 67					195	67			14.5					165		21.8	9.9	18
–M 97	1					97	69	—	17.7		—				2.4	22.5	14.7	20
–M127						127	39		20.8	36						24.5	15.8	22
–225–M 97	2				225	97	33	66	17.7	26	40			195	2.7	22.8	14.4	21
–M127	1					127	69	—	20.8	36	—				2.6	24.6	16.4	23
–255–M127	2				255		28	71			50			225	3.2	24.9	16.3	24
–SLFB 3– 90–M 22	1	3	9.5		90	22	39	—	11.8	26	—	5	9	60	2.2	19.8	1.9	25
–110–M 42					110	42			13.9					80	2.3	20.3	3.3	28
–120–M 22					120	22	69		11.8					90		19.9	2.3	26
–135–M 67					135	67	39		16.5					105		21.4	5.5	31
–140–M 42				3.25	140	42	69		13.9					110		20.4	4.0	29
–150–M 22	2				150	22	33	66	11.8		40			120	2.6	20.2	2.3	27
–165–M 67	1				165	67	69	—	16.5		—			135	2.4	21.5	6.5	32
–170–M 42	2				170	42	33	66	13.9		40			140	2.6	20.7	3.9	30
–195–M 67					195	67			16.5					165		21.8	6.3	33

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A100−SLSA 4−110−M 42	1	4	7		110	42	39	—	11.4	26	—	5	12	80	2.3	21.0	7.4	34
−135−M 67					135	67			14					105			12.0	37
−140−M 42					140	42	69		11.4					110		21.1	8.1	35
−165−M 67					165	67			14					135	2.4		13.1	38
−M 97				1.5		97	39		17.2						2.3	22.4	16.9	40
−170−M 42	2				170	42	33	66	11.4		40			140	2.6	21.4	8.0	36
−195−M 67					195	67			14					165			12.9	39
−M 97	1					97	69	—	17.2		—				2.4	22.5	18.6	41
−225−M 97	2				225		33	66			40			195	2.7	22.8	18.2	42
−SLRA 4− 90−M 22	1	4	10		90	22	39	—	12.3	26	—	6	12	60	2.2	20.3	1.8	43
−110−M 42					110	42			14.4					80	2.3	21.0	3.2	46
−120−M 22					120	22	69		12.3					90		20.4	2.2	44
−135−M 67					135	67	39		17					105		22.0	5.3	49
−140−M 42					140	42	69		14.4					110		21.1	3.9	47
−150−M 22	2				150	22	33	66	12.3		40			120	2.6	20.7	2.2	45
−165−M 67	1				165	67	69	—	17		—			135	2.4	22.1	6.3	50
−M 97				3		97	39		20.2							23.5	7.9	52
−170−M 42	2				170	42	33	66	14.4		40			140	2.6	21.4	3.8	48
−195−M 67					195	67			17					165	2.7	22.5	6.1	51
−M 97	1					97	69	—	20.2		—				2.4	23.5	9.5	53
−M127						127	39		23.3	36					2.5	26.7	9.4	55
−225−M 97	2				225	97	33	66	20.2	26	40			195	2.7	23.9	9.2	54
−M127	1					127	69	—	23.3	36	—					26.8	10.1	56
−255−M127	2				255		28	71			50			225	3.3	27.2	9.9	57
−SLFB 4− 90−M 22	1	4	12		90	22	39	—	14.3	26	—	6	12	60	2.2	20.1	1.4	58
−110−M 42					110	42			16.4					80	2.3	20.8	2.3	61
−120−M 22					120	22	69		14.3					90		20.2	1.8	59
−135−M 67					135	67	39		19					105		22.0	3.7	64
−140−M 42				4	140	42	69		16.4					110	2.4	20.8	2.9	62
−150−M 22	2				150	22	33	66	14.3		40			120	2.6	20.5	1.8	60
−165−M 67	1				165	67	69	—	19		—			135	2.4	22.1	4.7	65
−170−M 42	2				170	42	33	66	16.4		40			140	2.6	21.2	2.8	63
−195−M 67					195	67			19					165	2.7	22.4	4.5	66
A100−SLSA 6−110−M 42	1	6	9		110	42	39	—	13.4	26	—	7	18	80	2.2	21.3	4.9	67
−135−M 67					135	67			16					105	2.3	22.8	8.1	70
−140−M 42					140	42	69		13.4					110		21.4	5.7	68
−165−M 67					165	67			16					135	2.4	22.9	9.3	71
−M 97				1.5		97	39		19.2	36						25.3	11.1	73
−170−M 42	2				170	42	33	66	13.4	26	40			140	2.6	21.7	5.6	69
−195−M 67					195	67			16					165		23.2	9.1	72
−M 97	1					97	69	—	19.2	36	—					25.4	11.6	74
−225−M 97	2				225		28	71			50			195	3.2	25.7	11.5	75
−SLSB 6−110−M 42	1	6	10		110	42	39	—	14.4	26	—	8	18	80	2.2	22.2	3.9	76
−135−M 67					135	67			17					105	2.3	24.3	6.5	79
−140−M 42					140	42	69		14.4					110		22.3	4.7	77
−165−M 67					165	67			17					135	2.4	24.4	7.7	80
−M 97						97	39		20.2	36						27.3	9.0	82
−170−M 42	2				170	42	33	66	14.4	26	40			140	2.6	22.6	4.6	78
−195−M 67					195	67			17					165		24.7	7.5	81
−M 97	1			2		97	69	—	20.2	36	—					27.4	9.5	83
−M127						127	39		23.3						2.5	29.8	11.5	85
−225−M 97	2				225	97	28	71	20.2		50			195	3.2	27.8	9.3	84
−M127	1					127	69	—	23.3		—				2.7	29.9	12.2	86
−M157						157	39		26.5						2.6	32.3	13.8	88
−255−M127	2				255	127	28	71	23.3		50			225	3.2	30.3	12.1	87
−M157	1					157	69	—	26.5		—				2.8	32.4	14.8	89
−285−M157	2				285		28	71			50			255	3.3	32.8	14.5	90

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CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A100–SLRB 6– 90–M 22	1	6	14		90	22	39	—	16.3	36	—	8	18	60	2.3	21.1	1.0	91
–110–M 42					110	42			18.4					80		22.8	1.6	94
–120–M 22					120	22	69		16.3					90	2.5	21.3	1.1	92
–135–M 67					135	67	39		21					105	2.4	24.9	2.6	97
–140–M 42				4	140	42	69		18.4					110	2.5	22.9	1.8	95
–150–M 22	2				150	22	28	71	16.3		50			120	3.1	21.6	1.1	93
–165–M 67	1				165	67	69	—	21		—			135	2.6	25.0	2.9	98
–170–M 42	2				170	42	28	71	18.4		50			140	3.1	23.3	1.8	96
–195–M 67					195	67			21					165	3.2	25.3	2.9	99
–SLFB 6– 90–M 22	1	6	14		90	22	39	—	16.3	36	—	8	18	60	2.3	21.1	1.0	100
–110–M 42					110	42			18.4					80		22.8	1.6	103
–120–M 22					120	22	69		16.3					90	2.5	21.3	1.1	101
–135–M 67					135	67	39		21					105	2.4	24.9	2.6	106
–140–M 42				4	140	42	69		18.4					110	2.5	22.9	1.8	104
–150–M 22	2				150	22	28	71	16.3		50			120	3.1	21.6	1.1	102
–165–M 67	1				165	67	69	—	21		—			135	2.6	25.0	2.9	107
–170–M 42	2				170	42	28	71	18.4		50			140	3.1	23.3	1.8	105
–195–M 67					195	67			21					165	3.2	25.3	2.9	108
A100–SLSA 8–110–M 42	1	8	11		110	42	39	—	15.4	36	—	9	24	80	2.3	23.2	3.2	109
–135–M 67					135	67			18					105		25.8	5.4	112
–140–M 42					140	42	69		15.4					110	2.5	23.4	3.5	110
–165–M 67					165	67			18					135		26.0	5.8	113
–M 97				1.5		97	39		21.2						2.4	29.0	7.9	115
–170–M 42	2				170	42	28	71	15.4		50			140	3.1	23.7	3.4	111
–195–M 67					195	67			18					165		26.3	5.7	114
–M 97	1					97	69	—	21.2		—				2.6	29.1	8.5	116
–225–M 97	2				225		28	71			50			195	3.2	29.5	8.3	117
–SLSB 8–110–M 42	1	8	13		110	42	39	—	17.4	36	—	10	24	80	2.3	24.3	2.1	118
–135–M 67					135	67			20					105		27.5	3.6	121
–140–M 42					140	42	69		17.4					110	2.5	24.5	2.4	119
–165–M 67					165	67			20					135		27.7	4.0	122
–M 97						97	39		23.2						2.4	31.4	5.3	124
–170–M 42	2				170	42	28	71	17.4		50			140	3.1	24.8	2.4	120
–195–M 67					195	67			20					165		28	3.9	123
–M 97	1			2.5		97	69	—	23.2		—				2.6	31.5	5.9	125
–M127						127	39		26.3						2.5	35.3	7.1	127
–225–M 97	2				225	97	28	71	23.2		50			195	3.2	31.9	5.8	126
–M127	1					127	69	—	26.3		—				2.7	35.4	7.9	128
–M157						157	39		29.5						2.6	39.1	8.7	130
–255–M127	2				255	127	28	71	26.3		50			225	3.3	35.7	7.7	129
–M157	1					157	69	—	29.5		—				2.9	39.3	9.7	131
–285–M157	2				285		28	71			50			255	3.4	39.6	9.5	132
–SLRB 8– 90–M 22	1	8	18		90	22	39	—	20.3	36	—	10	24	60	2.3	21.8	0.7	133
–110–M 42					110	42			22.4					80		24.4	1.1	136
–120–M 22					120	22	69		20.3					90	2.5	22	0.9	134
–135–M 67					135	67	39		25					105	2.4	27.6	1.7	139
–140–M 42				5	140	42	69		22.4					110	2.6	24.5	1.3	137
–150–M 22	2				150	22	28	71	20.3		50			120	3.1	22.3	0.8	135
–165–M 67	1				165	67	69	—	25		—			135	2.6	27.8	2.0	140
–170–M 42	2				170	42	28	71	22.4		50			140	3.1	24.9	1.3	138
–195–M 67					195	67			25					165	3.2	28.1	2.0	141
–SLFB 8– 90–M 22	1	8	18		90	22	39	—	20.3	36	—	10	24	60	2.3	21.8	0.7	142
–110–M 42					110	42			22.4					80		24.4	1.1	145
–120–M 22					120	22	69		20.3					90	2.5	22.0	0.9	143
–135–M 67					135	67	39		25					105	2.4	27.6	1.7	148
–140–M 42				5	140	42	69		22.4					110	2.6	24.5	1.3	146
–150–M 22	2				150	22	28	71	20.3		50			120	3.1	22.3	0.8	144
–165–M 67	1				165	67	69	—	25		—			135	2.6	27.8	2.0	149
–170–M 42	2				170	42	28	71	22.4		50			140	3.1	24.9	1.3	147
–195–M 67					195	67			25					165	3.2	28.1	2.0	150

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CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A100–SLSA10–110–M 42	1	10	13		110	42	39	—	17.4	36	—	11	30	80	2.3	24.6	2.3	151
–135–M 67					135	67			20					105		28.5	4.0	154
–140–M 42					140	42	69		17.4					110	2.5	24.8	2.6	152
–165–M 67					165	67			20					135		28.6	4.4	155
–M 97				1.5		97	39		23.2						2.4	33.2	6.0	157
–170–M 42	2				170	42	28	71	17.4		50			140	3.1	25.1	2.5	153
–195–M 67					195	67			20					165		29.0	4.4	156
–M 97	1					97	69	—	23.2		—				2.6	33.3	6.6	158
–225–M 97	2				225		28	71			50			195	3.2	33.7	6.5	159
–SLSB10–110–M 42	1	10	16		110	42	39	—	20.4	36	—	12	30	80	2.3	25.8	1.4	160
–135–M 67					135	67			23					105	2.4	30.4	2.4	163
–140–M 42					140	42	69		20.4					110	2.5	25.9	1.7	161
–165–M 67					165	67			23					135	2.6	30.5	2.8	164
–M 97						97	39		26.2						2.5	35.9	3.7	166
–170–M 42	2				170	42	28	71	20.4		50			140	3.1	26.3	1.7	162
–195–M 67					195	67			23					165	3.2	30.9	2.7	165
–M 97	1			3		97	69	—	26.2		—				2.7	36.1	4.2	167
–M127						127	39		29.3	50					2.8	42.1	4.4	169
–225–M 97	2				225	97	28	71	26.2	36	50			195	3.2	36.4	4.1	168
–M127	1					127	69	—	29.3	50	—				3.1	42.5	4.7	170
–M157						157	39		32.5						3.0	47.7	5.5	172
–255–M127					255	127	99		29.3					225	3.5	42.8	5.0	171
–M157						157	69		32.5						3.3	48.1	5.8	173
–285–M157					285		99							255	3.6	48.4	6.1	174
–SLRB10– 90–M 22	1	10	22		90	22	39	—	24.3	36	—	12	30	60	2.3	22.2	0.6	175
–110–M 42					110	42			26.4					80	2.4	25.9	0.8	178
–120–M 22					120	22	69		24.3					90	2.5	22.3		176
–135–M 67					135	67	39		29					105		30.5	1.2	181
–140–M 42				6	140	42	69		26.4					110	2.6	26.0	1.1	179
–150–M 22	2				150	22	28	71	24.3		50			120	3.1	22.7	0.7	177
–165–M 67	1				165	67	69	—	29		—			135	2.7	30.6	1.6	182
–170–M 42	2				170	42	28	71	26.4		50			140	3.2	26.3	1.0	180
–195–M 67					195	67			29					165	3.3	31.0	1.6	183
–SLFB10– 90–M 22	1	10	22		90	22	39	—	24.3	36	—	12	30	60	2.3	22.2	0.6	184
–110–M 42					110	42			26.4					80	2.4	25.9	0.8	187
–120–M 22					120	22	69		24.3					90	2.5	22.3		185
–135–M 67					135	67	39		29					105		30.5	1.2	190
–140–M 42				6	140	42	69		26.4					110	2.6	26.0	1.1	188
–150–M 22	2				150	22	28	71	24.3		50			120	3.1	22.7	0.7	186
–165–M 67	1				165	67	69	—	29		—			135	2.7	30.6	1.6	191
–170–M 42	2				170	42	28	71	26.4		50			140	3.2	26.3	1.0	189
–195–M 67					195	67			29					165	3.3	31.0	1.6	192
A100–SLSA12–110–M 42	1	12	15		110	42	39	—	19.4	36	—	13	30	79	2.3	27.0	1.9	193
–135–M 67					135	67			22					104		32.5	3.3	196
–140–M 42					140	42	69		19.4					105	2.5	27.2	2.2	194
–165–M 67					165	67			22					130		32.6	3.7	197
–M 97				1.5		97	39		25.2					134		39.4	4.9	199
–170–M 42	2				170	42	28	71	19.4		50			135	3.1	27.5	2.1	195
–195–M 67					195	67			22					160		32.9	3.6	198
–M 97	1					97	69	—	25.2		—				2.7	39.6	5.5	200
–225–M 97	2				225		28	71			50			190	3.3	39.9	5.4	201

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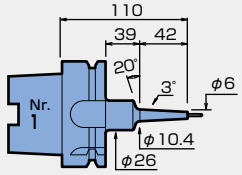
CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A100–SLSB12–110–M 42	1	12	19		110	42	39	—	23.4	36	—	14	30	79	2.3	28.4	1.1	202
–135–M 67					135	67			26					104	2.4	34.7	1.8	205
–140–M 42					140	42	69		23.4					105	2.5	28.5	1.4	203
–165–M 67					165	67			26					130	2.6	34.8	2.3	206
–M 97						97	39		29.2	50					2.7	42.9	2.4	208
–170–M 42	2				170	42	28	71	23.4	36	50			135	3.1	28.9	1.4	204
–195–M 67					195	67			26					160	3.2	35.2	2.2	207
–M 97	1			3.5		97	69	—	29.2	50	—				3.1	43.2	2.6	209
–M127						127	39		32.3						2.9	50.4	3.2	211
–225–M 97					225	97	99		29.2					190	3.4	43.6	2.8	210
–M127						127	69		32.3						3.2	50.8	3.5	212
–M157						157	39		35.5						3.1	58.0	4.0	214
–255–M127					255	127	99		32.3					220	3.6	51.1	3.8	213
–M157						157	69		35.5						3.4	58.3	4.3	215
–285–M157					285		99							250	3.7	58.7	4.7	216
–SLRB12– 90–M 22	1	12	26		90	22	39	—	28.3	50	—	14	30	55	2.6	26.5	0.4	217
–110–M 42					110	42			30.4					75	2.7	29.2	0.5	220
–120–M 22					120	22	69		28.3					85	2.9	26.8		218
–135–M 67					135	67	39		33					100	2.7	35.5	0.8	223
–140–M 42				7	140	42	69		30.4					105	3.0	29.6	0.6	221
–150–M 22					150	22	99		28.3					115	3.2	27.2		219
–165–M 67					165	67	69		33					130	3.1	35.8	0.9	224
–170–M 42					170	42	99		30.4					135	3.3	29.9	0.8	222
–195–M 67					195	67			33					160	3.4	36.2	1.1	225
–SLFB12– 90–M 22	1	12	26		90	22	39	—	28.3	50	—	14	30	55	2.6	26.5	0.4	226
–110–M 42					110	42			30.4					75	2.7	29.2	0.5	229
–120–M 22					120	22	69		28.3					85	2.9	26.8		227
–135–M 67					135	67	39		33					100	2.7	35.5	0.8	232
–140–M 42				7	140	42	69		30.4					105	3.0	29.6	0.6	230
–150–M 22					150	22	99		28.3					115	3.2	27.2		228
–165–M 67					165	67	69		33					130	3.1	35.8	0.9	233
–170–M 42					170	42	99		30.4					135	3.3	29.9	0.8	231
–195–M 67					195	67			33					160	3.4	36.2	1.1	234
A100–SLSB16–110–M 42	1	16	24		110	42	39	—	28.4	50	—	18	32	75	2.6	34.7	0.7	235
–135–M 67					135	67			31					100	2.7	45.0	1.1	238
–140–M 42					140	42	69		28.4					105	2.9	35.0	0.8	236
–165–M 67					165	67			31					130	3.0	45.4	1.2	239
–M 97						97	39		34.2						2.8	57.4	1.6	241
–170–M 42					170	42	99		28.4					135	3.2	35.4	0.9	237
–195–M 67					195	67			31					160	3.3	45.7	1.4	240
–M 97				4		97	69		34.2						3.1	57.8	1.8	242
–M127						127	39		37.3						3.0	69.8	2.2	244
–225–M 97					225	97	99		34.2					190	3.5	58.1	2.1	243
–M127						127	69		37.3						3.3	70.2	2.5	245
–M157						157	39		40.5						3.2	82.3	2.7	247
–255–M127					255	127	99		37.3					220	3.7	70.6	2.8	246
–M157						157	69		40.5						3.6	82.6	3.1	248
–285–M157					285		99							250	3.9	83.0	3.5	249
–SLRB16– 90–M 22	1	16	32		90	22	39	—	34.3	50	—	18	32	55	2.6	26.5	0.3	250
–110–M 42					110	42			36.4					75	2.7	34.8	0.4	253
–120–M 22					120	22	69		34.3					85	2.9	26.9		251
–135–M 67					135	67	39		39					100		45.2	0.6	256
–140–M 42				8	140	42	69		36.4					105	3.1	35.2	0.5	254
–150–M 22					150	22	99		34.3					115	3.2	27.2		252
–165–M 67					165	67	69		39					130		45.5	0.7	257
–170–M 42					170	42	99		36.4					135	3.4	35.5		255
–195–M 67					195	67			39					160	3.6	45.9	0.9	258

A100

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A100−SLFB16− 90−M 22	1	16	32		90	22	39	—	34.3	50	—	18	32	55	2.6	26.5	0.3	259
−110−M 42					110	42			36.4					75	2.7	34.8	0.4	262
−120−M 22					120	22	69		34.3					85	2.9	26.9		260
−135−M 67					135	67	39		39					100		45.2	0.6	265
−140−M 42				8	140	42	69		36.4					105	3.1	35.2	0.5	263
−150−M 22					150	22	99		34.3					115	3.2	27.2		261
−165−M 67					165	67	69		39					130		45.5	0.7	266
−170−M 42					170	42	99		36.4					135	3.4	35.5		264
−195−M 67					195	67			39					160	3.6	45.9	0.9	267
A100−SLSB20−110−M 42	1	20	29		110	42	39	—	33.4	50	—	22	40	75	2.6	37.4	0.5	268
−135−M 67					135	67			36					100	2.7	52.8	0.8	271
−140−M 42					140	42	69		33.4					105	2.9	37.8	0.6	269
−165−M 67					165	67			36					130	3.1	53.2	1.0	272
−M 97						97	39		39.2						2.9	71.3	1.2	274
−170−M 42					170	42	99		33.4					135	3.3	38.1	0.8	270
−195−M 67					195	67			36					160	3.4	53.5	1.2	273
−M 97				4.5		97	69		39.2						3.2	71.7	1.4	275
−M127						127	39		42.3						3.1	91.0	1.6	277
−225−M 97					225	97	99		39.2					190	3.6	72.0	1.7	276
−M127						127	69		42.3						3.5	91.4	1.9	278
−M157						157	39		45.5						3.4	109.6	2.0	280
−255−M127					255	127	99		42.3					220	3.8	91.8	2.3	279
−M157						157	69		45.5						3.7	109.9	2.4	281
−285−M157					285		99							250	4.1	110.3	2.9	282
−SLRB20−110−M 42	1	20	38		110	42	39	—	42.4	50	—	22	40	75	2.8	37.5	0.4	283
−135−M 67					135	67			45					100	3.0	53.0	0.5	286
−140−M 42				9	140	42	69		42.4					105	3.1	37.9		284
−165−M 67					165	67			45					130	3.4	53.3	0.7	287
−170−M 42					170	42	99		42.4					135	3.5	38.2		285
−195−M 67					195	67			45					160	3.7	53.7	0.9	288
−SLFB20−110−M 42	1	20	38		110	42	39	—	42.4	50	—	22	40	75	2.8	37.5	0.4	289
−135−M 67					135	67			45					100	3.0	53.0	0.5	292
−140−M 42				9	140	42	69		42.4					105	3.1	37.9		290
−165−M 67					165	67			45					130	3.4	53.3	0.7	293
−170−M 42					170	42	99		42.4					135	3.5	38.2		291
−195−M 67					195	67			45					160	3.7	53.7	0.9	294
A100−SLRB25−110−M 42	1	25	45		110	42	39	—	49.7	50	—	26	45	75	2.9	40.7	0.3	295
−140−M 42				10	140		69							105	3.2	41.0	0.5	296
−170−M 42					170		99							135	3.5	41.4	0.7	297
−SLFB25−110−M 42	1	25	45		110	42	39	—	49.7	50	—	26	45	75	2.9	40.7	0.3	298
−140−M 42				10	140		69							105	3.2	41.0	0.5	299
−170−M 42					170		99							135	3.5	41.4	0.7	300

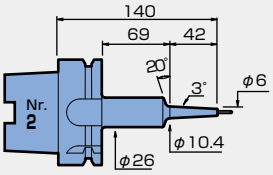
φ3 SLSA t=1.5

A100-SLSA3-110-M42



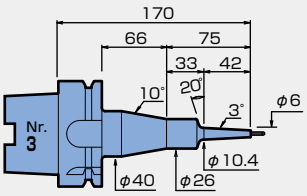
9.4

A100-SLSA3-140-M42



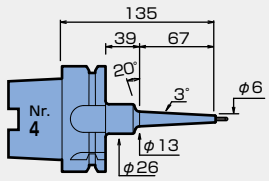
10.1

A100-SLSA3-170-M42



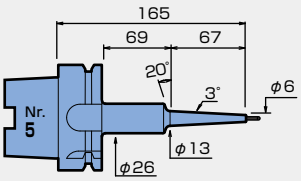
10.0

A100-SLSA3-135-M67



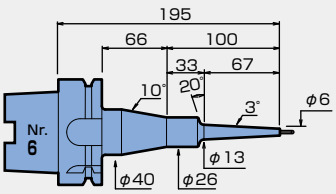
15.1

A100-SLSA3-165-M67



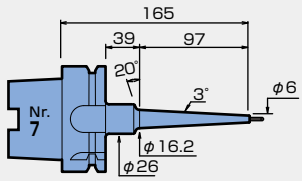
16.1

A100-SLSA3-195-M67



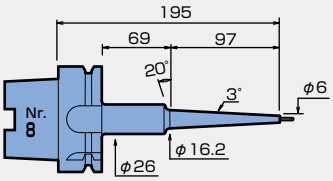
15.9

A100-SLSA3-165-M97



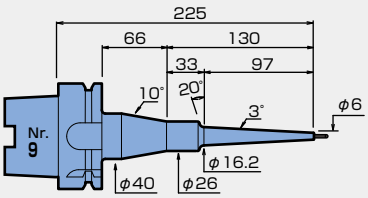
21.0

A100-SLSA3-195-M97



22.5

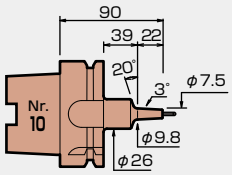
A100-SLSA3-225-M97



22.2

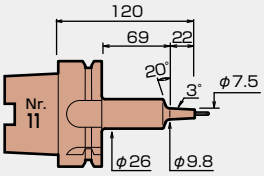
φ3 SLRA t=2.25

A100-SLRA3-90-M22



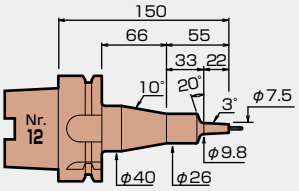
2.9

A100-SLRA3-120-M22



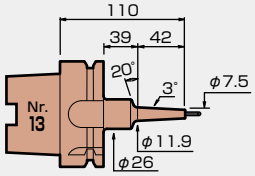
3.3

A100-SLRA3-150-M22



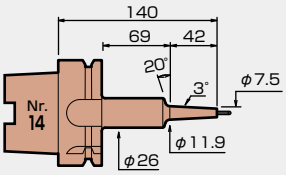
3.2

A100-SLRA3-110-M42



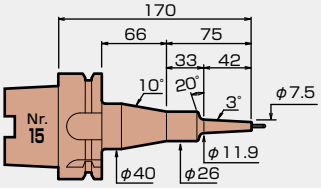
5.5

A100-SLRA3-140-M42



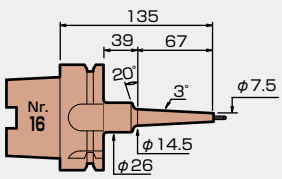
6.1

A100-SLRA3-170-M42



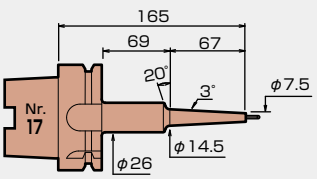
6.0

A100-SLRA3-135-M67



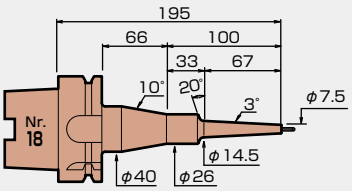
9.0

A100-SLRA3-165-M67



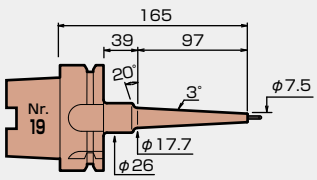
10.1

A100-SLRA3-195-M67



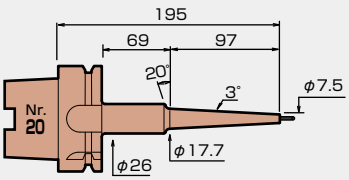
9.9

A100-SLRA3-165-M97



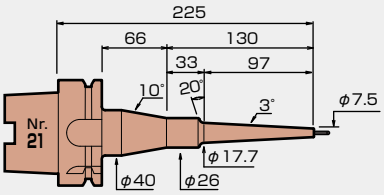
13.1

A100-SLRA3-195-M97



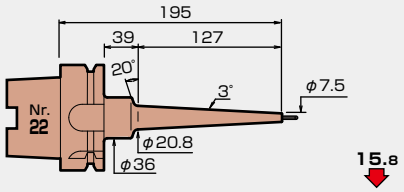
14.7

A100-SLRA3-225-M97



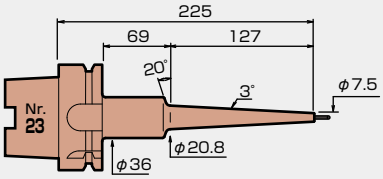
14.4

A100−SLRA3−195−M127



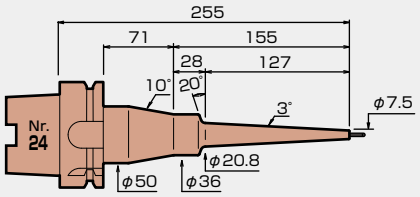
15.8

A100−SLRA3−225−M127



16.4

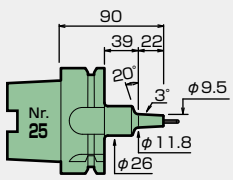
A100−SLRA3−255−M127



16.3

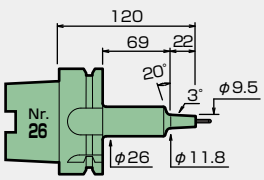
φ3 SLFB t=3.25

A100−SLFB3−90−M22



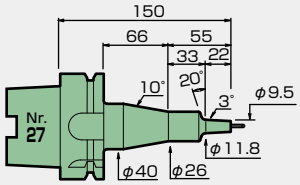
1.9

A100−SLFB3−120−M22



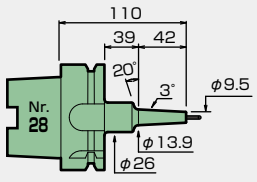
2.3

A100−SLFB3−150−M22



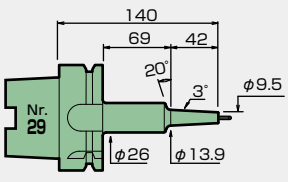
2.3

A100−SLFB3−110−M42



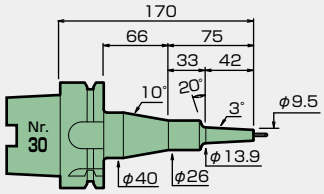
3.3

A100−SLFB3−140−M42



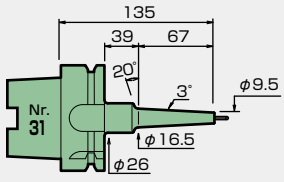
4.0

A100−SLFB3−170−M42



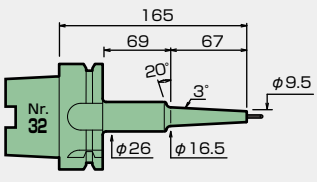
3.9

A100−SLFB3−135−M67



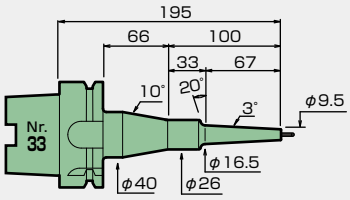
5.5

A100−SLFB3−165−M67



6.5

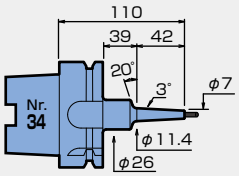
A100−SLFB3−195−M67



6.3

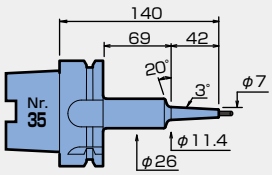
φ4 SLSA t=1.5

A100-SLSA4-110-M42



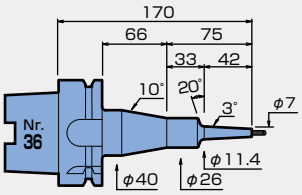
7.4

A100-SLSA4-140-M42



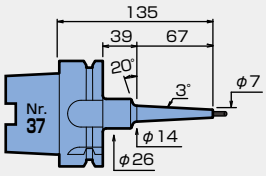
8.1

A100-SLSA4-170-M42



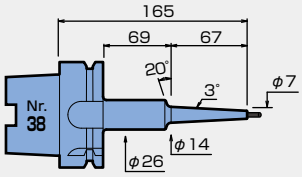
8.0

A100-SLSA4-135-M67



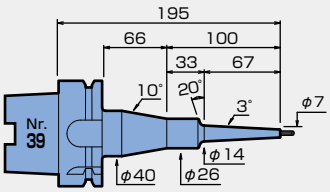
12.0

A100-SLSA4-165-M67



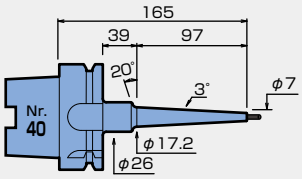
13.1

A100-SLSA4-195-M67



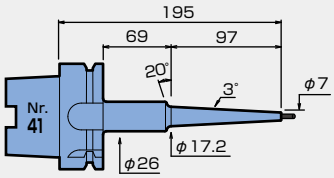
12.9

A100-SLSA4-165-M97



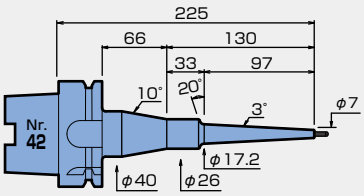
16.9

A100-SLSA4-195-M97



18.6

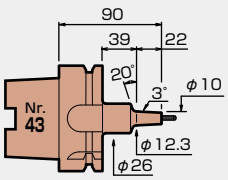
A100-SLSA4-225-M97



18.2

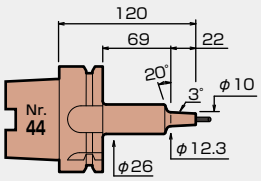
φ4 SLRA t=3

A100-SLRA4-90-M22



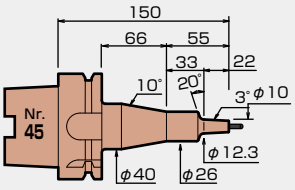
1.8

A100-SLRA4-120-M22



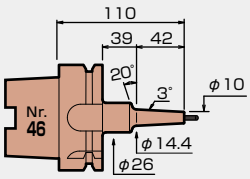
2.2

A100-SLRA4-150-M22



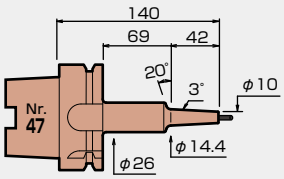
2.2

A100-SLRA4-110-M42



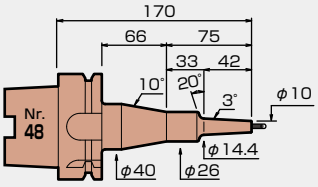
3.2

A100-SLRA4-140-M42



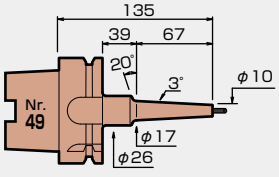
3.9

A100-SLRA4-170-M42



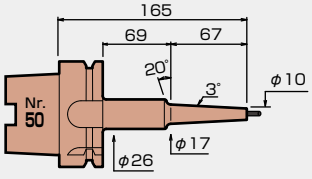
3.8

A100-SLRA4-135-M67



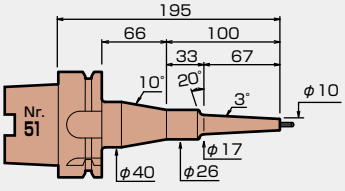
5.3

A100-SLRA4-165-M67



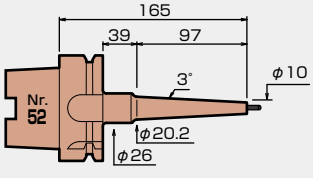
6.3

A100-SLRA4-195-M67



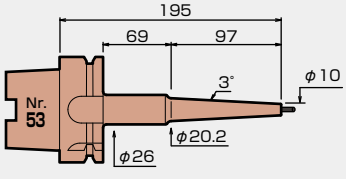
6.1

A100-SLRA4-165-M97



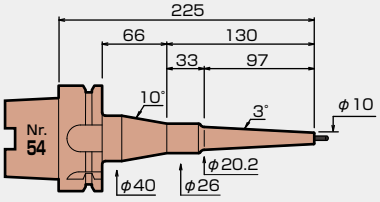
7.9

A100-SLRA4-195-M97



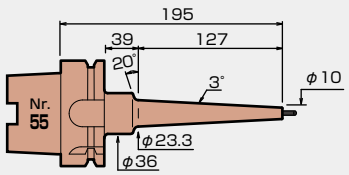
9.5

A100-SLRA4-225-M97



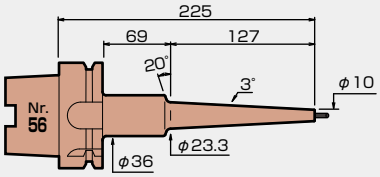
9.2

A100−SLRA4−195−M127



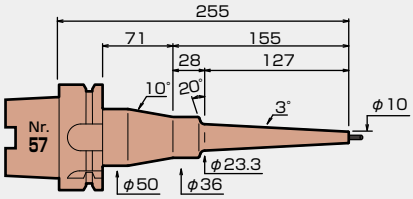
9.4

A100−SLRA4−225−M127



10.1

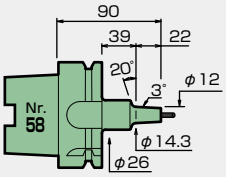
A100−SLRA4−255−M127



9.9

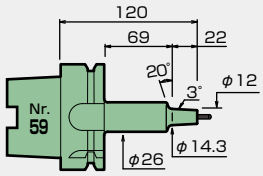
φ4 SLFB t=4

A100−SLFB4−90−M22



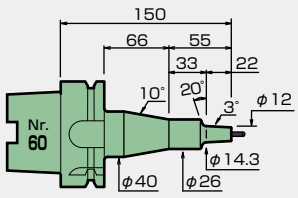
1.4

A100−SLFB4−120−M22



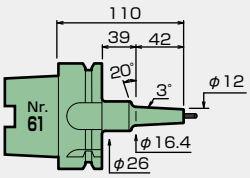
1.8

A100−SLFB4−150−M22



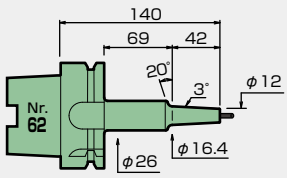
1.8

A100−SLFB4−110−M42



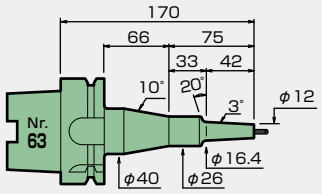
2.3

A100−SLFB4−140−M42



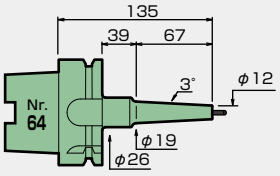
2.9

A100−SLFB4−170−M42



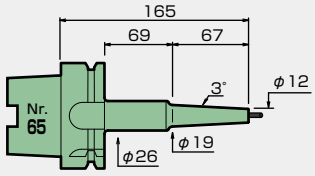
2.8

A100−SLFB4−135−M67



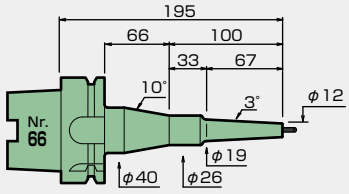
3.7

A100−SLFB4−165−M67



4.7

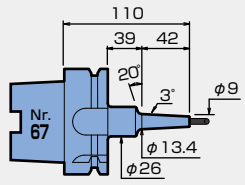
A100−SLFB4−195−M67



4.5

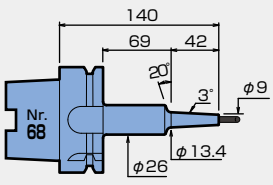
φ6 SLSA t=1.5

A100-SLSA6-110-M42



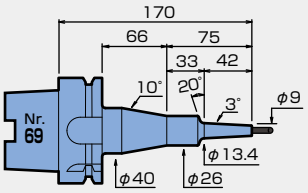
4.9

A100-SLSA6-140-M42



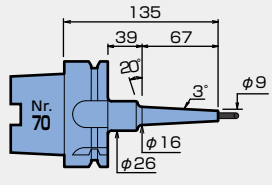
5.7

A100-SLSA6-170-M42



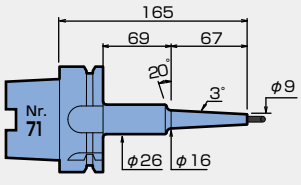
5.6

A100-SLSA6-135-M67



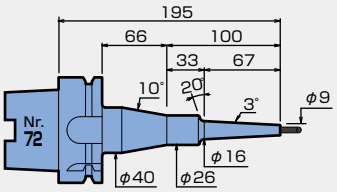
8.1

A100-SLSA6-165-M67



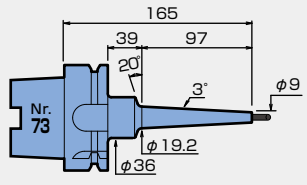
9.3

A100-SLSA6-195-M67



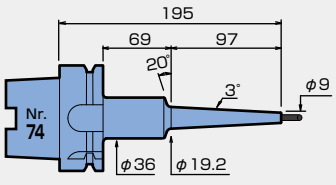
9.1

A100-SLSA6-165-M97



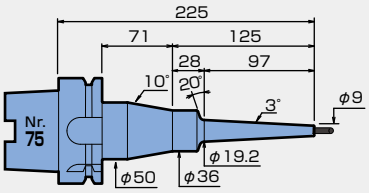
11.1

A100-SLSA6-195-M97



11.6

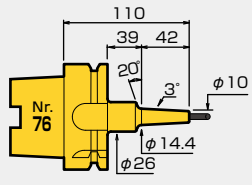
A100-SLSA6-225-M97



11.5

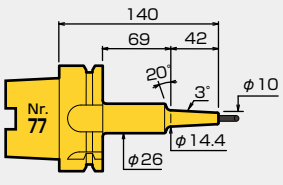
φ6 SLSB t=2

A100-SLSB6-110-M42



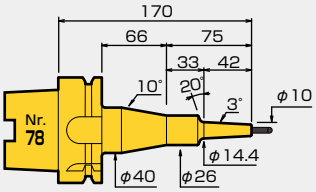
3.9

A100-SLSB6-140-M42



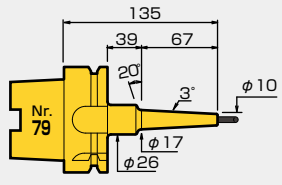
4.7

A100-SLSB6-170-M42



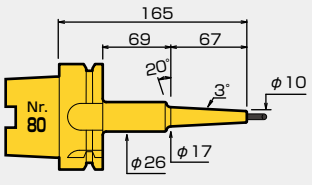
4.6

A100-SLSB6-135-M67



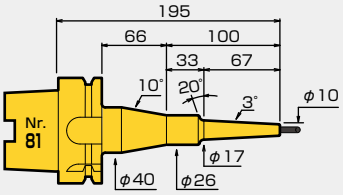
6.5

A100-SLSB6-165-M67



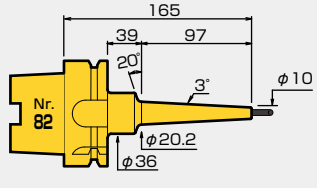
7.7

A100-SLSB6-195-M67



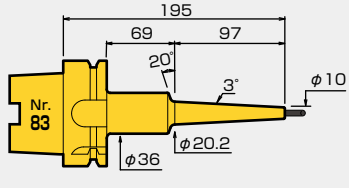
7.5

A100-SLSB6-165-M97



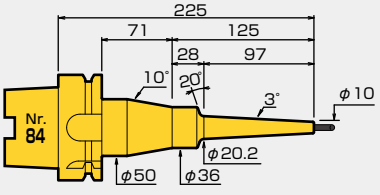
9.0

A100-SLSB6-195-M97



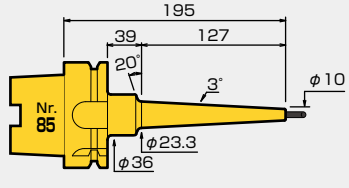
9.5

A100-SLSB6-225-M97



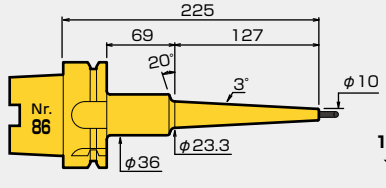
9.3

A100-SLSB6-195-M127



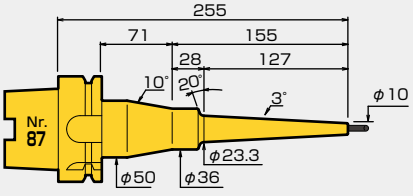
11.5

A100-SLSB6-225-M127



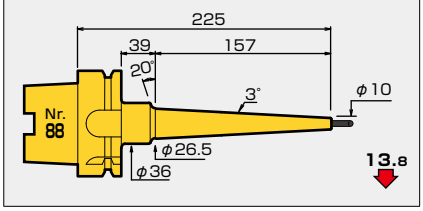
12.2

A100-SLSB6-255-M127



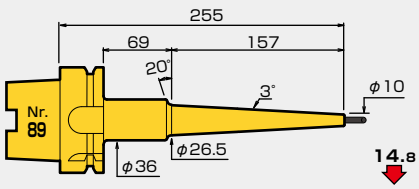
12.1

A100-SLSB6-225-M157



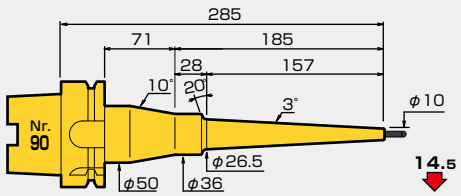
13.8

A100-SLSB6-255-M157



14.8

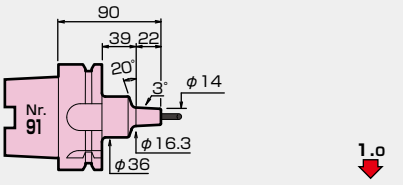
A100-SLSB6-285-M157



14.5

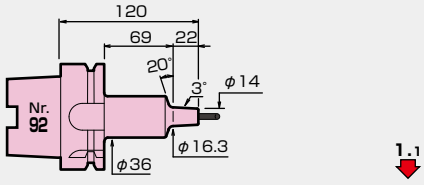
φ6 SLRB t=4

A100-SLRB6-90-M22



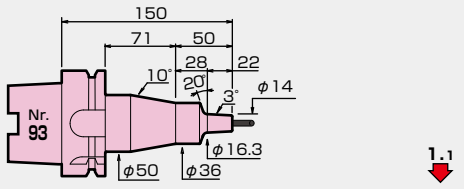
1.0

A100-SLRB6-120-M22



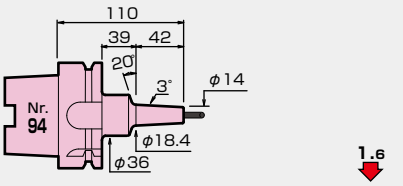
1.1

A100-SLRB6-150-M22



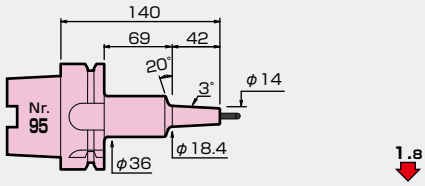
1.1

A100-SLRB6-110-M42



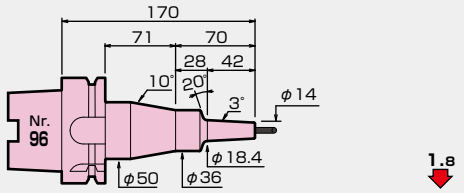
1.6

A100-SLRB6-140-M42



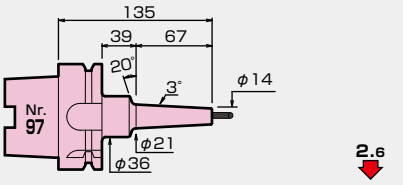
1.8

A100-SLRB6-170-M42



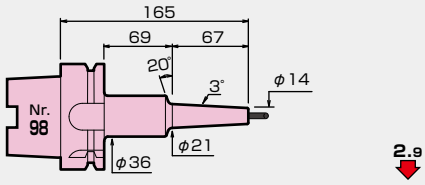
1.8

A100-SLRB6-135-M67



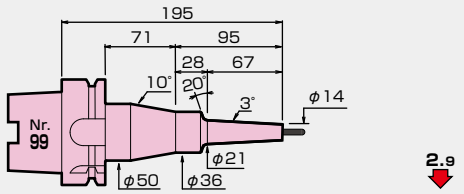
2.6

A100-SLRB6-165-M67



2.9

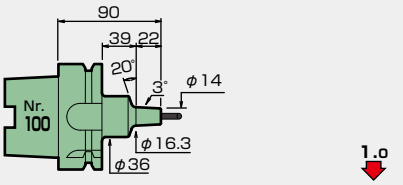
A100-SLRB6-195-M67



2.9

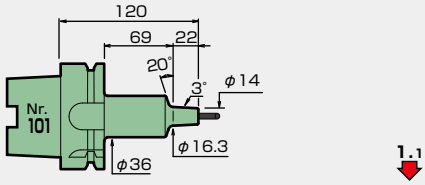
φ6 SLFB t=4

A100-SLFB6-90-M22



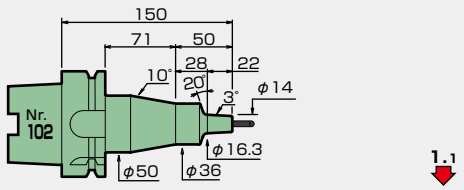
1.0

A100-SLFB6-120-M22



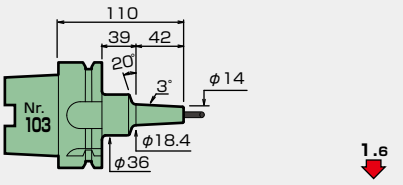
1.1

A100-SLFB6-150-M22



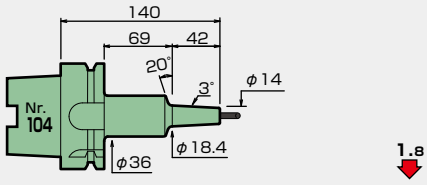
1.1

A100-SLFB6-110-M42



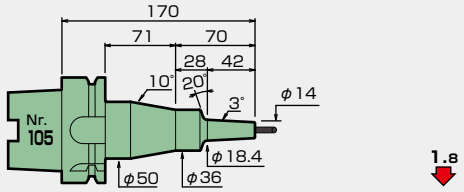
1.6

A100-SLFB6-140-M42



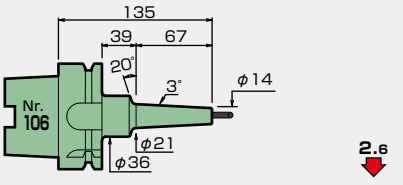
1.8

A100-SLFB6-170-M42



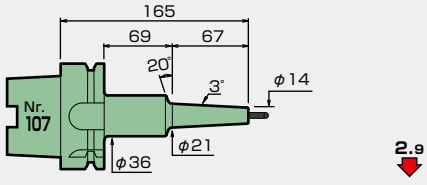
1.8

A100-SLFB6-135-M67



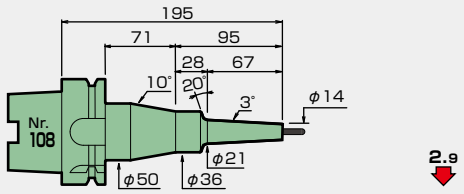
2.6

A100-SLFB6-165-M67



2.9

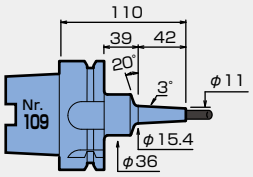
A100-SLFB6-195-M67



2.9

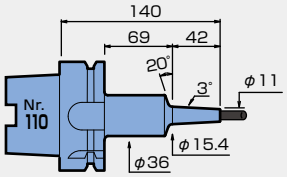
φ8 SLSA t=1.5

A100-SLSA8-110-M42



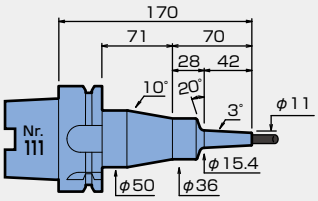
3.2

A100-SLSA8-140-M42



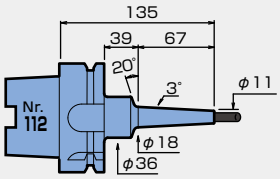
3.5

A100-SLSA8-170-M42



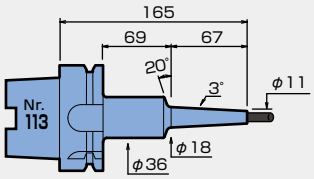
3.4

A100-SLSA8-135-M67



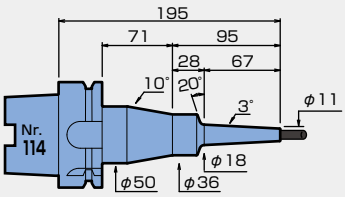
5.4

A100-SLSA8-165-M67



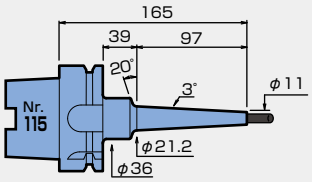
5.8

A100-SLSA8-195-M67



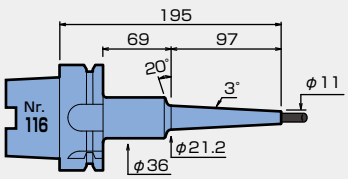
5.7

A100-SLSA8-165-M97



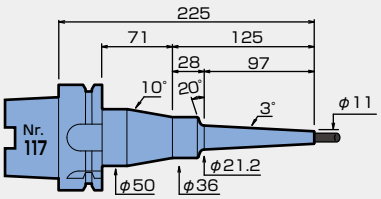
7.9

A100-SLSA8-195-M97



8.5

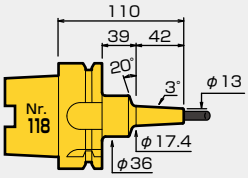
A100-SLSA8-225-M97



8.3

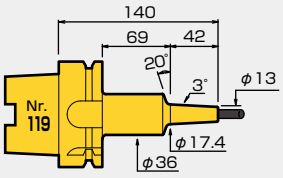
φ8 SLSB t=2.5

A100-SLSB8-110-M42



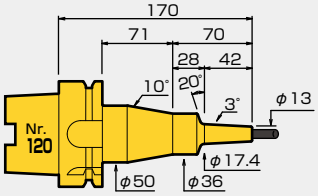
2.1

A100-SLSB8-140-M42



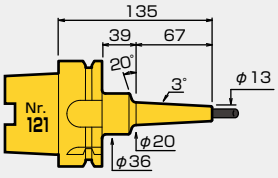
2.4

A100-SLSB8-170-M42



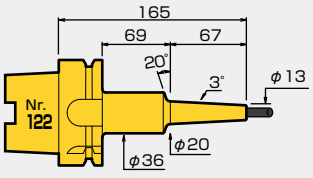
2.4

A100-SLSB8-135-M67



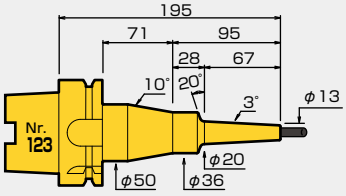
3.6

A100-SLSB8-165-M67



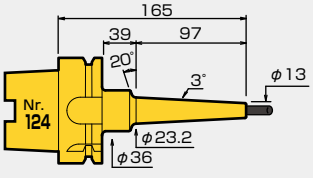
4.0

A100-SLSB8-195-M67



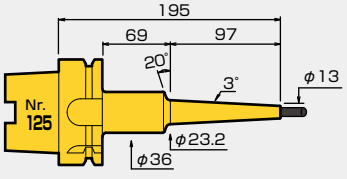
3.9

A100-SLSB8-165-M97



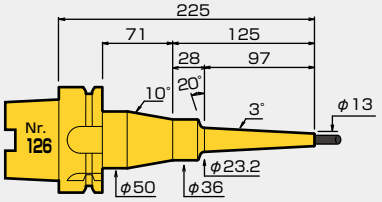
5.3

A100-SLSB8-195-M97



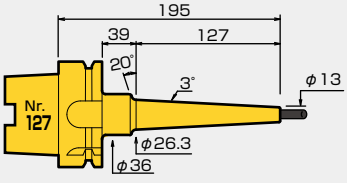
5.9

A100-SLSB8-225-M97



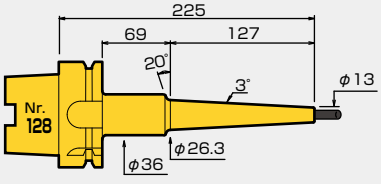
5.8

A100-SLSB8-195-M127



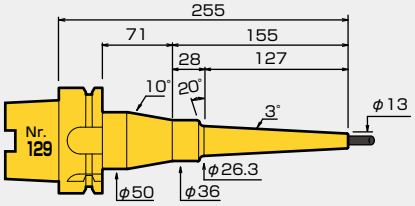
7.1

A100-SLSB8-225-M127



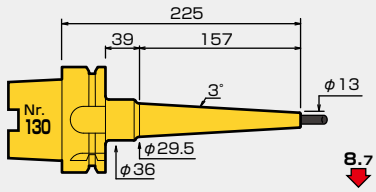
7.9

A100-SLSB8-255-M127

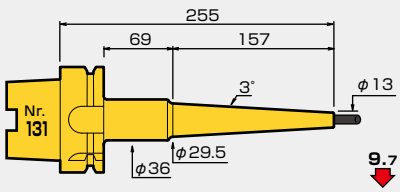


7.7

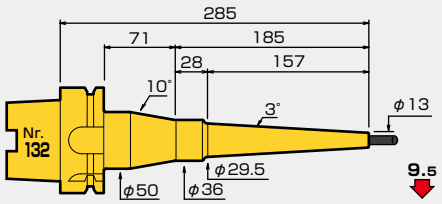
A100-SLSB8-225-M157



A100-SLSB8-255-M157

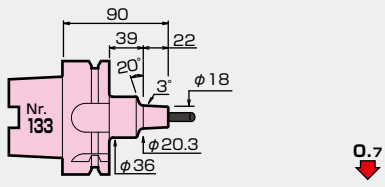


A100-SLSB8-285-M157

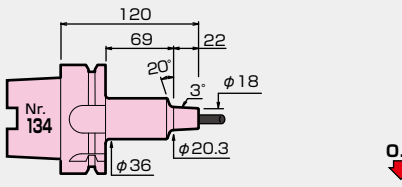


φ8 SLRB t=5

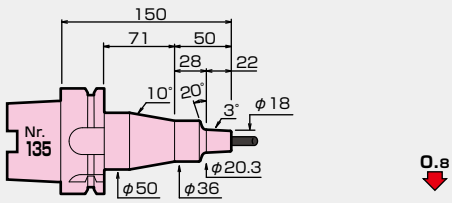
A100-SLRB8-90-M22



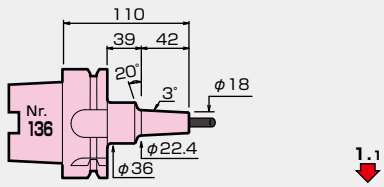
A100-SLRB8-120-M22



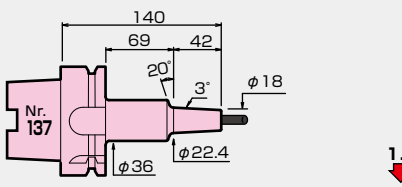
A100-SLRB8-150-M22



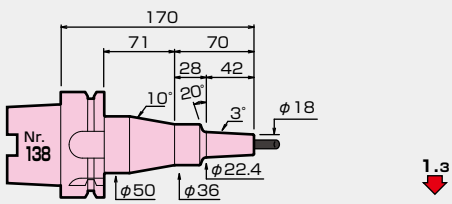
A100-SLRB8-110-M42



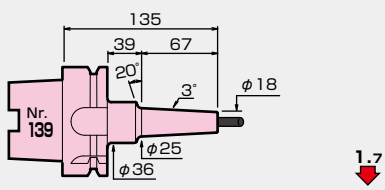
A100-SLRB8-140-M42



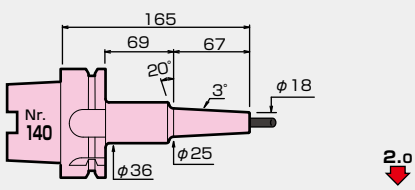
A100-SLRB8-170-M42



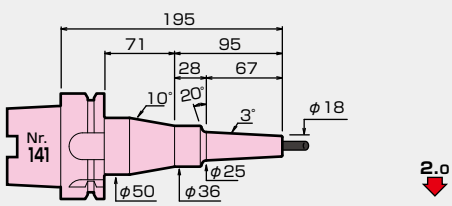
A100-SLRB8-135-M67



A100-SLRB8-165-M67

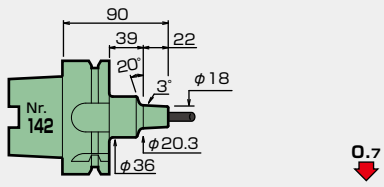


A100-SLRB8-195-M67

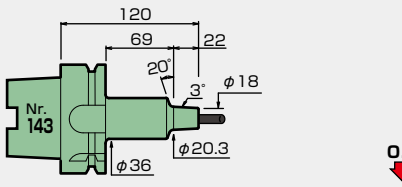


φ8 SLFB t=5

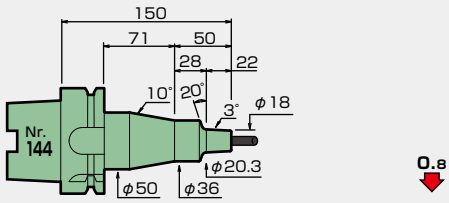
A100-SLFB8-90-M22



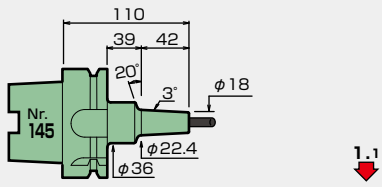
A100-SLFB8-120-M22



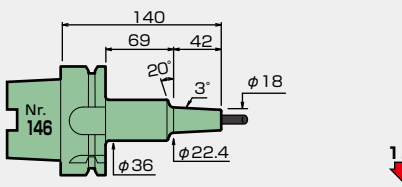
A100-SLFB8-150-M22



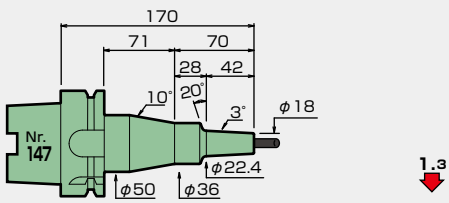
A100-SLFB8-110-M42



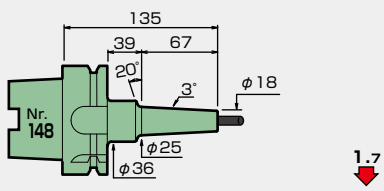
A100-SLFB8-140-M42



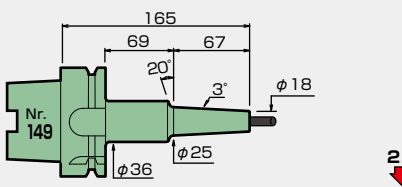
A100-SLFB8-170-M42



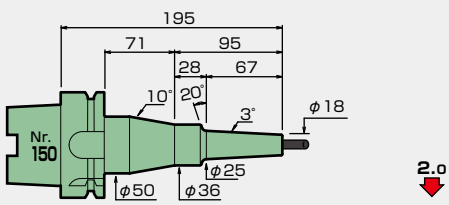
A100-SLFB8-135-M67



A100-SLFB8-165-M67

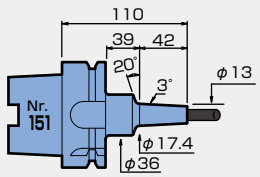


A100-SLFB8-195-M67



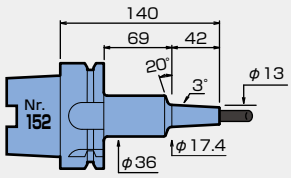
φ10 SLSA t=1.5

A100-SLSA10-110-M42



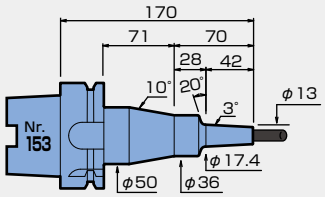
2.3

A100-SLSA10-140-M42



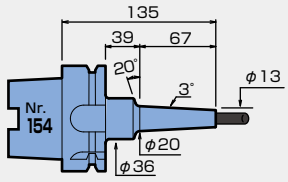
2.6

A100-SLSA10-170-M42



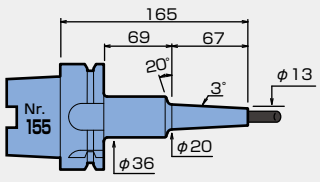
2.5

A100-SLSA10-135-M67



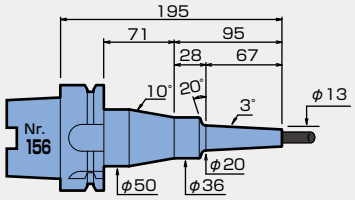
4.0

A100-SLSA10-165-M67



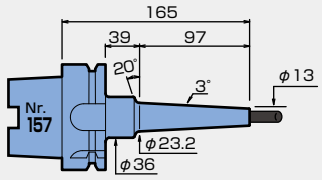
4.4

A100-SLSA10-195-M67



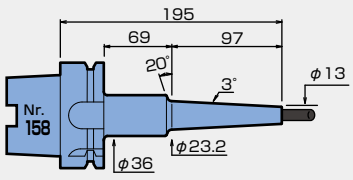
4.4

A100-SLSA10-165-M97



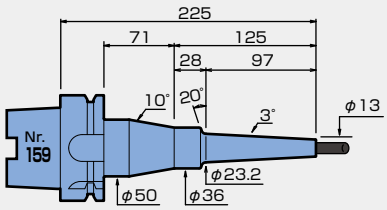
6.0

A100-SLSA10-195-M97



6.6

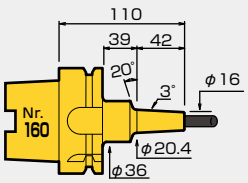
A100-SLSA10-225-M97



6.5

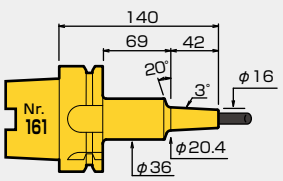
φ10 SLSB t=3

A100-SLSB10-110-M42



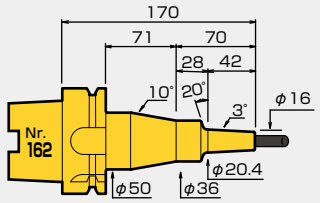
1.4

A100-SLSB10-140-M42



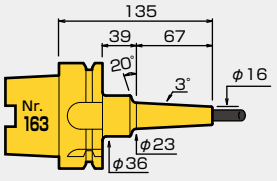
1.7

A100-SLSB10-170-M42



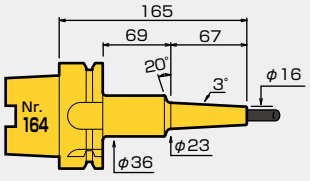
1.7

A100-SLSB10-135-M67



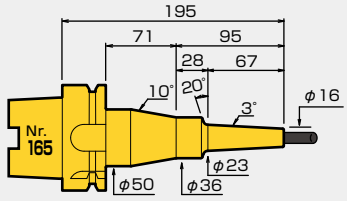
2.4

A100-SLSB10-165-M67



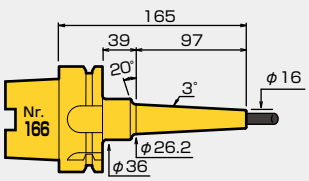
2.8

A100-SLSB10-195-M67



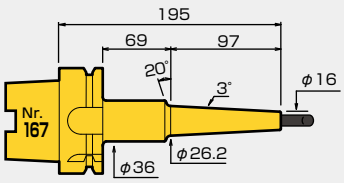
2.7

A100-SLSB10-165-M97



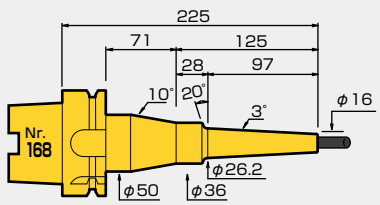
3.7

A100-SLSB10-195-M97



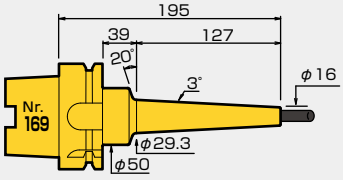
4.2

A100-SLSB10-225-M97



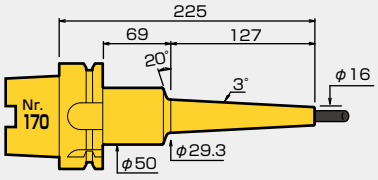
4.1

A100-SLSB10-195-M127



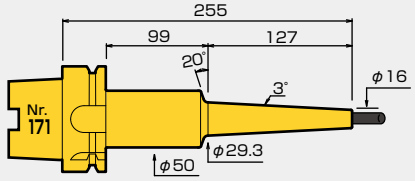
4.4

A100-SLSB10-225-M127



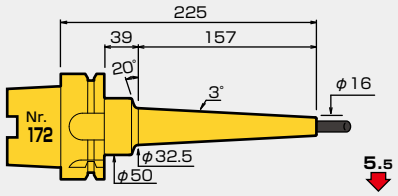
4.7

A100-SLSB10-255-M127



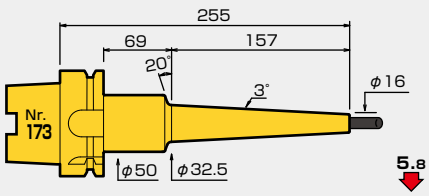
5.0

A100−SLSB10−225−M157



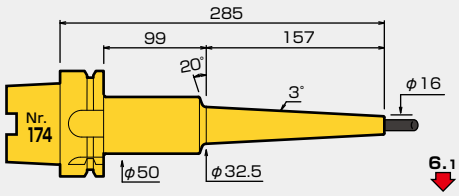
5.5

A100−SLSB10−255−M157



5.8

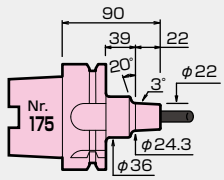
A100−SLSB10−285−M157



6.1

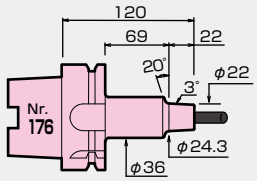
φ10 SLRB t=6

A100−SLRB10−90−M22



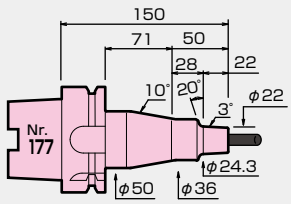
0.6

A100−SLRB10−120−M22



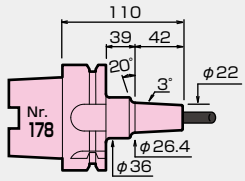
0.8

A100−SLRB10−150−M22



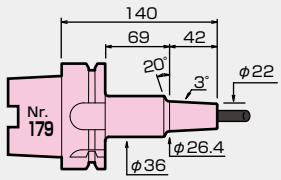
0.7

A100−SLRB10−110−M42



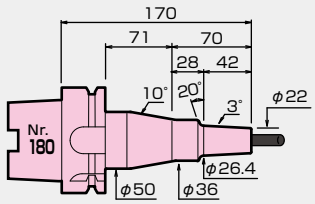
0.8

A100−SLRB10−140−M42



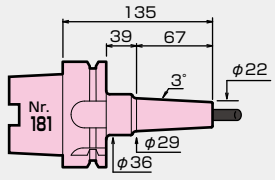
1.1

A100−SLRB10−170−M42



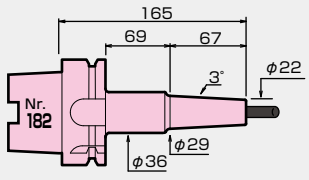
1.0

A100−SLRB10−135−M67



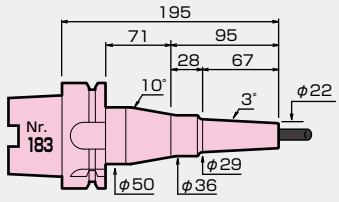
1.2

A100−SLRB10−165−M67



1.6

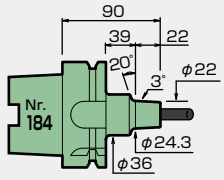
A100−SLRB10−195−M67



1.6

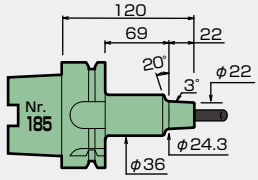
φ10 SLFB t=6

A100−SLFB10−90−M22



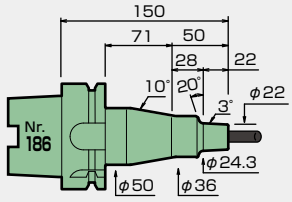
0.6

A100−SLFB10−120−M22



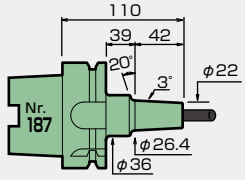
0.8

A100−SLFB10−150−M22



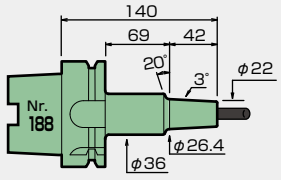
0.7

A100−SLFB10−110−M42



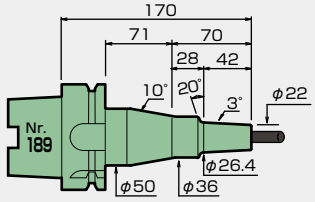
0.8

A100−SLFB10−140−M42



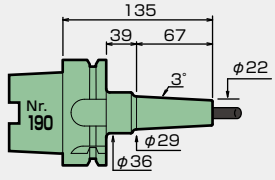
1.1

A100−SLFB10−170−M42



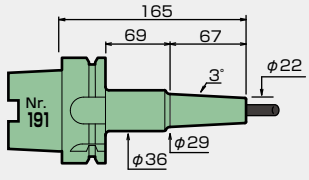
1.0

A100−SLFB10−135−M67



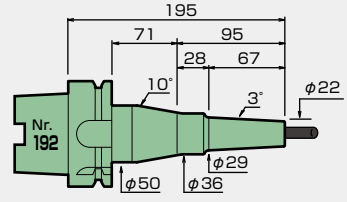
1.2

A100−SLFB10−165−M67



1.6

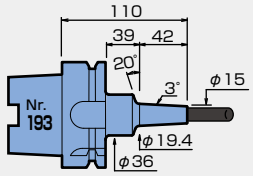
A100−SLFB10−195−M67



1.6

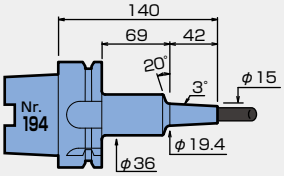
φ12 SLSA t=1.5

A100-SLSA12-110-M42



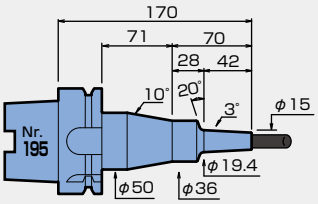
1.9

A100-SLSA12-140-M42



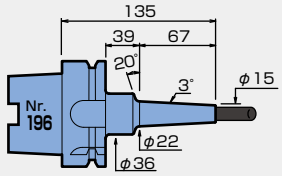
2.2

A100-SLSA12-170-M42



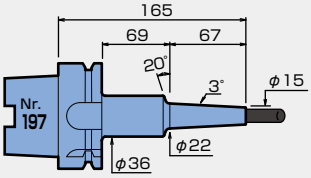
2.1

A100-SLSA12-135-M67



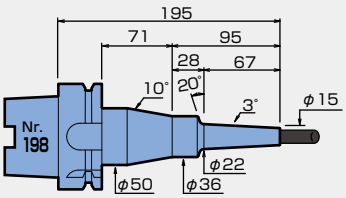
3.3

A100-SLSA12-165-M67



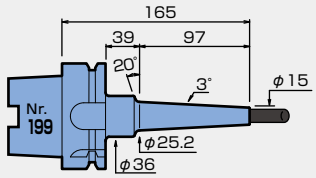
3.7

A100-SLSA12-195-M67



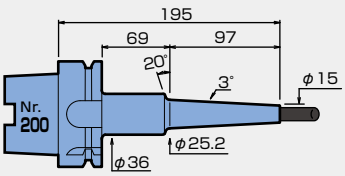
3.6

A100-SLSA12-165-M97



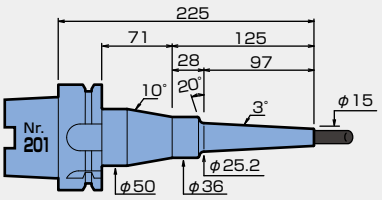
4.9

A100-SLSA12-195-M97



5.5

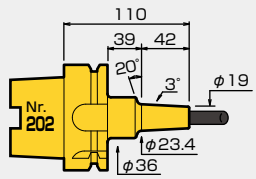
A100-SLSA12-225-M97



5.4

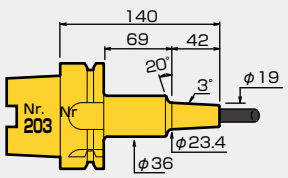
φ12 SLSB t=3.5

A100-SLSB12-110-M42



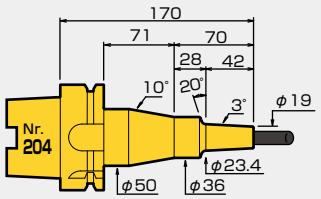
1.1

A100-SLSB12-140-M42



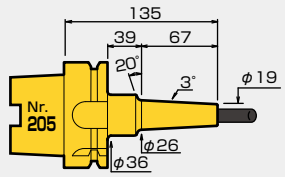
1.4

A100-SLSB12-170-M42



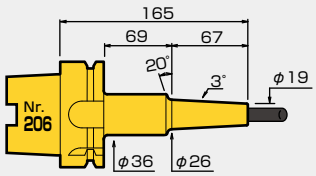
1.4

A100-SLSB12-135-M67



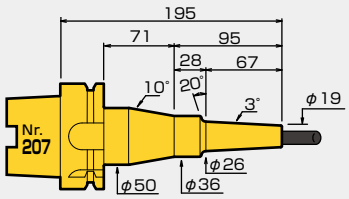
1.8

A100-SLSB12-165-M67



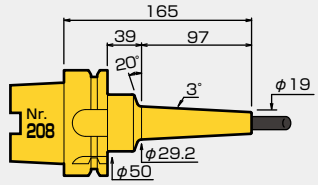
2.3

A100-SLSB12-195-M67



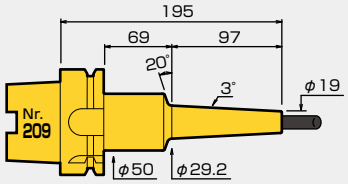
2.2

A100-SLSB12-165-M97



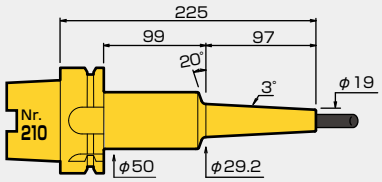
2.4

A100-SLSB12-195-M97



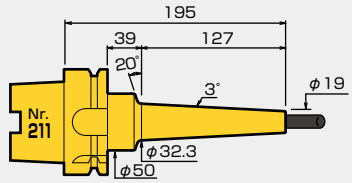
2.6

A100-SLSB12-225-M97



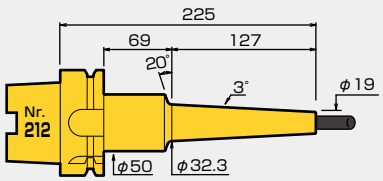
2.8

A100-SLSB12-195-M127



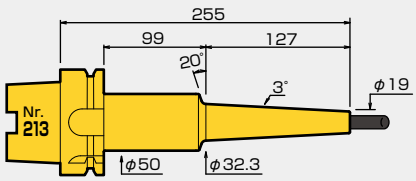
3.2

A100-SLSB12-225-M127



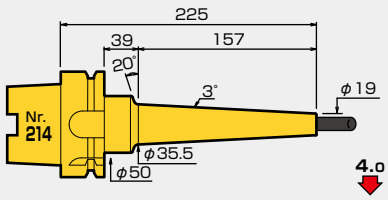
3.5

A100-SLSB12-255-M127

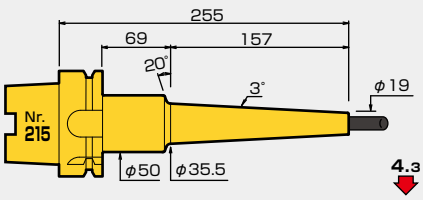


3.8

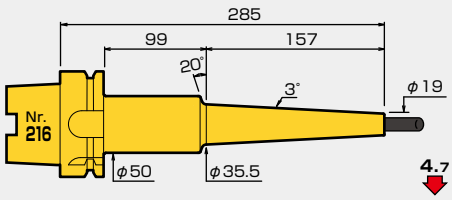
A100-SLSB12-225-M157



A100-SLSB12-255-M157

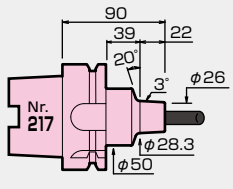


A100-SLSB12-285-M157

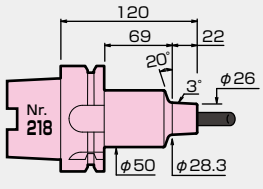


φ12 SLRB t=7

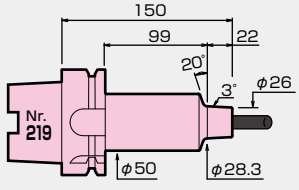
A100-SLRB12-90-M22



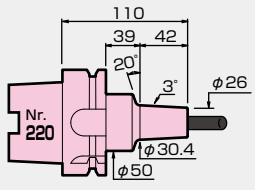
A100-SLRB12-120-M22



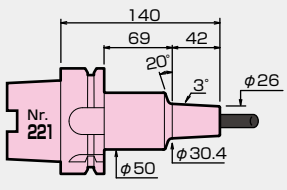
A100-SLRB12-150-M22



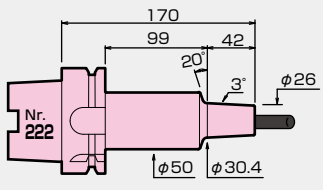
A100-SLRB12-110-M42



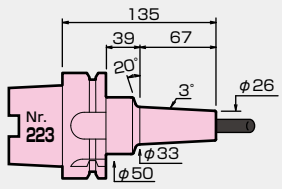
A100-SLRB12-140-M42



A100-SLRB12-170-M42



A100-SLRB12-135-M67



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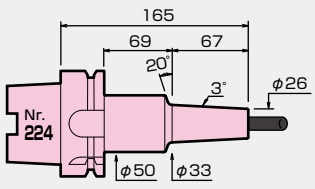

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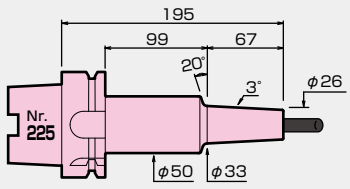
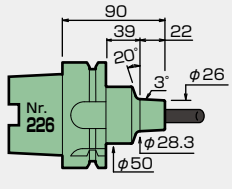
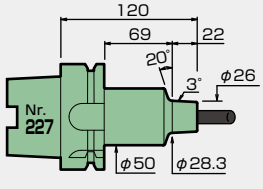


φ12 SLFB t=7

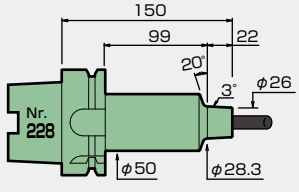
A100-SLFB12-90-M22



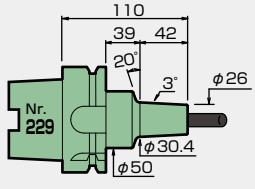
A100-SLFB12-120-M22



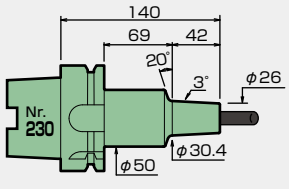
A100-SLFB12-150-M22



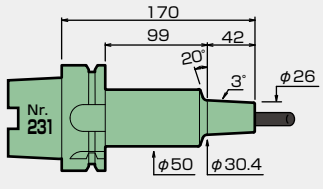
A100-SLFB12-110-M42



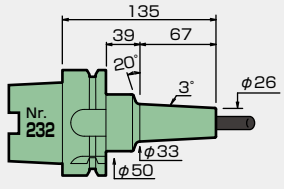
A100-SLFB12-140-M42



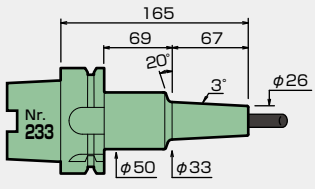
A100-SLFB12-170-M42



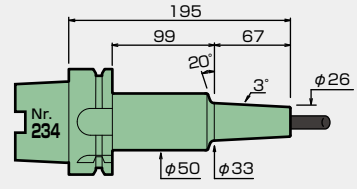
A100-SLFB12-135-M67



A100-SLFB12-165-M67

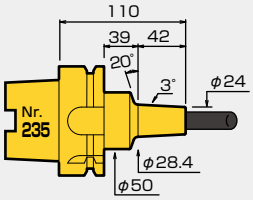


A100-SLFB12-195-M67



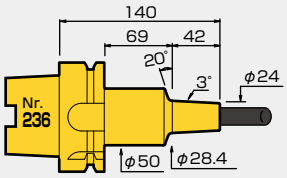
φ16 SLSB t=4

A100-SLSB16-110-M42



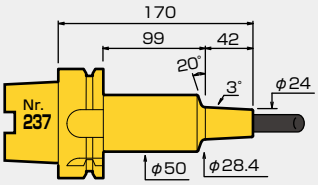
0.7

A100-SLSB16-140-M42



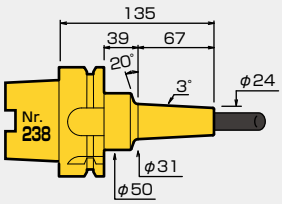
0.8

A100-SLSB16-170-M42



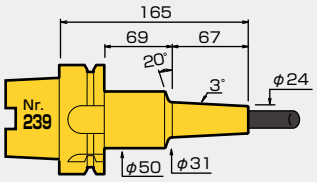
0.9

A100-SLSB16-135-M67



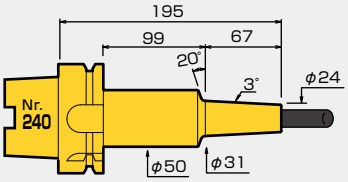
1.1

A100-SLSB16-165-M67



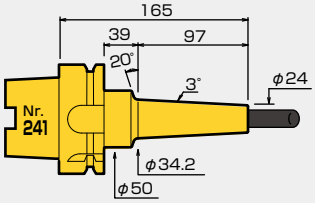
1.2

A100-SLSB16-195-M67



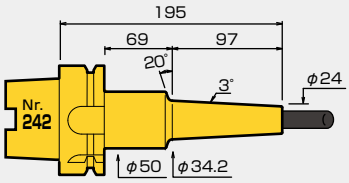
1.4

A100-SLSB16-165-M97



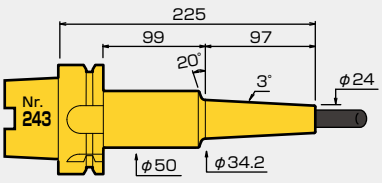
1.6

A100-SLSB16-195-M97



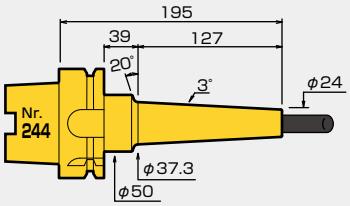
1.8

A100-SLSB16-225-M97



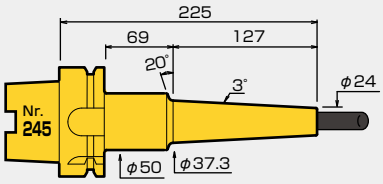
2.1

A100-SLSB16-195-M127



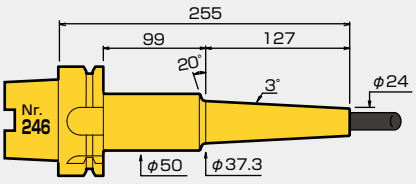
2.2

A100-SLSB16-225-M127



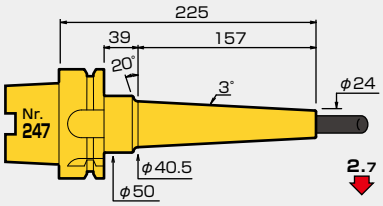
2.5

A100-SLSB16-255-M127



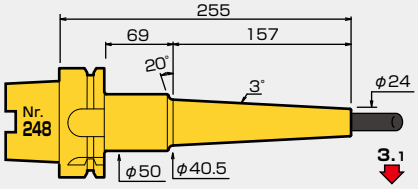
2.8

A100-SLSB16-225-M157



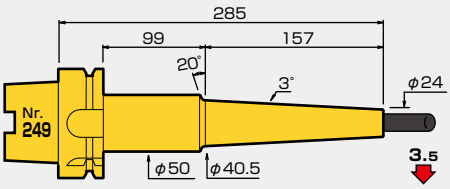
2.7

A100-SLSB16-255-M157



3.1

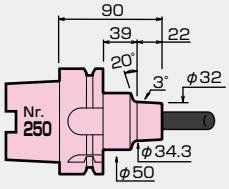
A100-SLSB16-285-M157



3.5

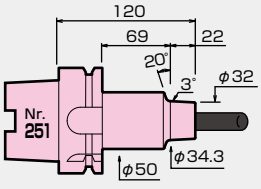
φ16 SLRB t=8

A100-SLRB16-90-M22



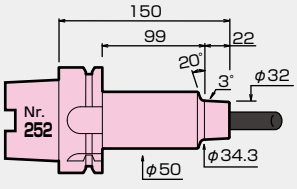
0.3

A100-SLRB16-120-M22



0.4

A100-SLRB16-150-M22



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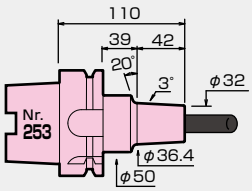
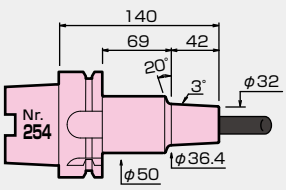
A100-SLRB16-110-M42



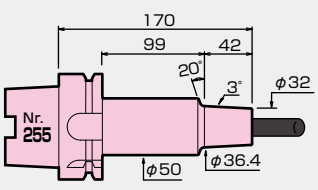
0.4

A100-SLRB16-140-M42



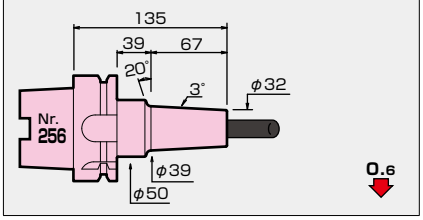
0.5

A100-SLRB16-170-M42

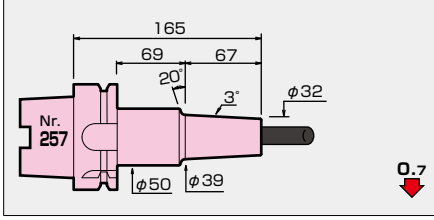


0.7

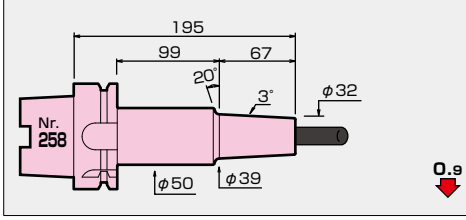
A100−SLRB16−135−M67



A100−SLRB16−165−M67

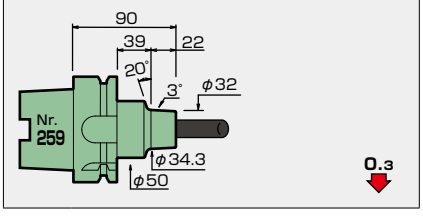


A100−SLRB16−195−M67

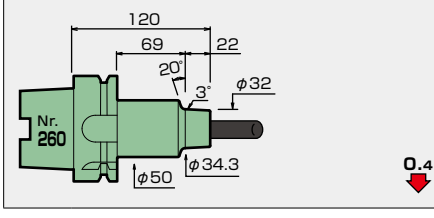


φ16 SLFB t=8

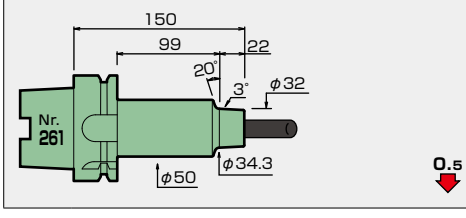
A100−SLFB16−90−M22



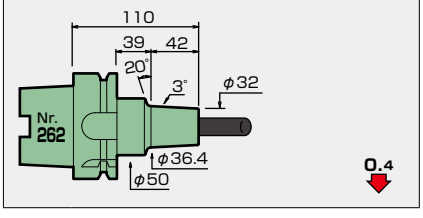
A100−SLFB16−120−M22



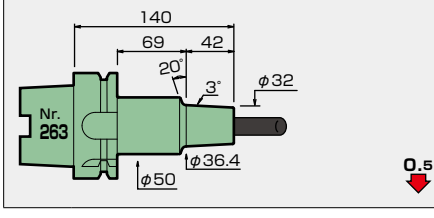
A100−SLFB16−150−M22



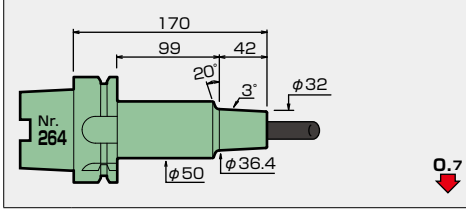
A100−SLFB16−110−M42



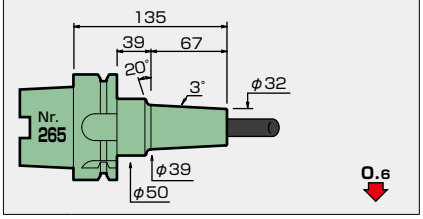
A100−SLFB16−140−M42



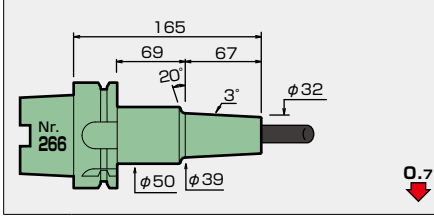
A100−SLFB16−170−M42



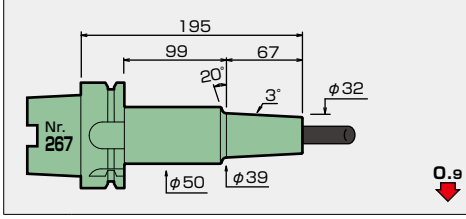
A100−SLFB16−135−M67



A100−SLFB16−165−M67

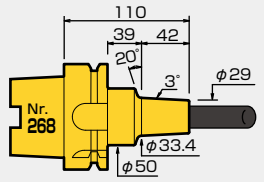


A100−SLFB16−195−M67



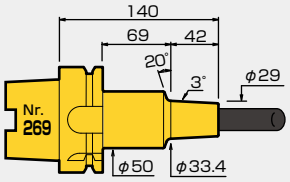
φ20 SLSB t=4.5

A100-SLSB20-110-M42



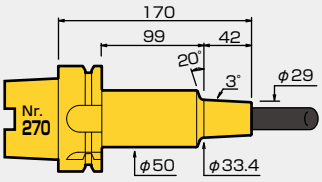
0.5

A100-SLSB20-140-M42



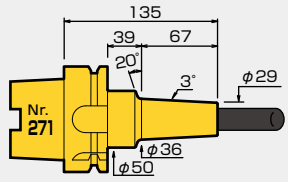
0.6

A100-SLSB20-170-M42



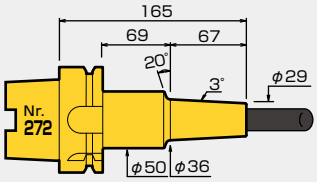
0.8

A100-SLSB20-135-M67



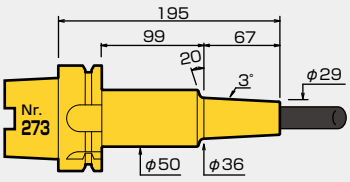
0.8

A100-SLSB20-165-M67



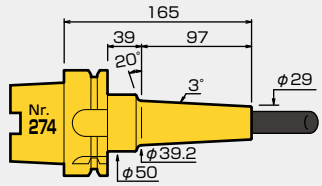
1.0

A100-SLSB20-195-M67



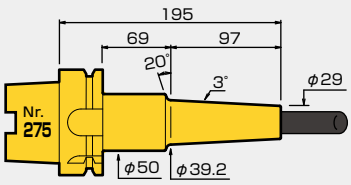
1.2

A100-SLSB20-165-M97



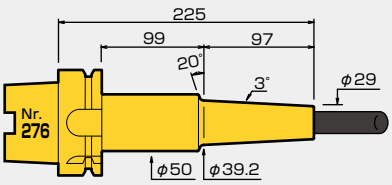
1.2

A100-SLSB20-195-M97



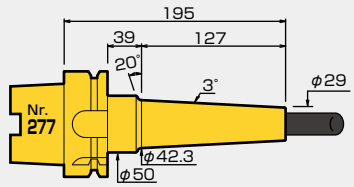
1.4

A100-SLSB20-225-M97



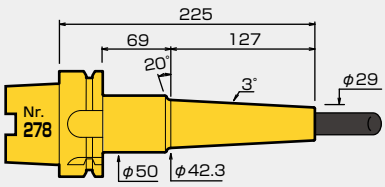
1.7

A100-SLSB20-195-M127



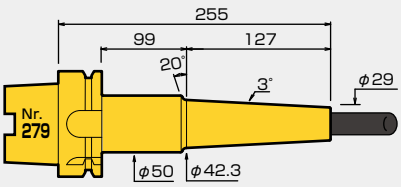
1.6

A100-SLSB20-225-M127



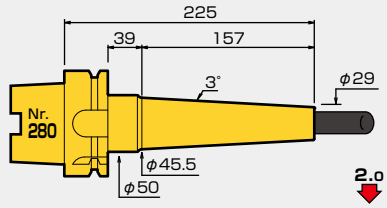
1.9

A100-SLSB20-255-M127



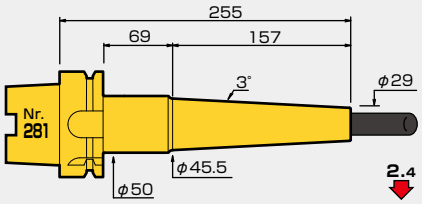
2.3

A100-SLSB20-225-M157



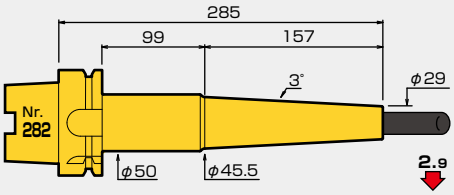
2.0

A100-SLSB20-255-M157



2.4

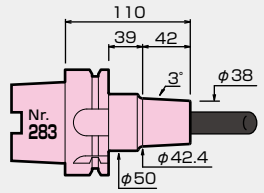
A100-SLSB20-285-M157



2.9

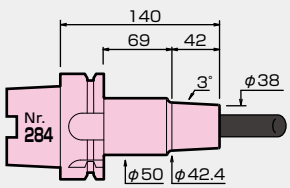
φ20 SLRB t=9

A100-SLRB20-110-M42



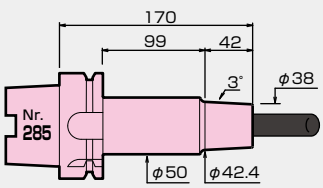
0.4

A100-SLRB20-140-M42



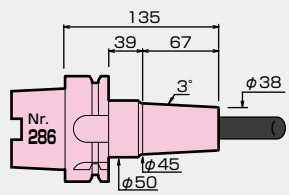
0.5

A100-SLRB20-170-M42



0.7

A100-SLRB20-135-M67



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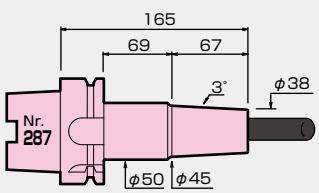
A100-SLRB20-165-M67



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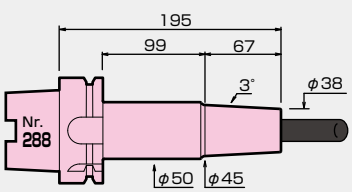
A100-SLRB20-195-M67



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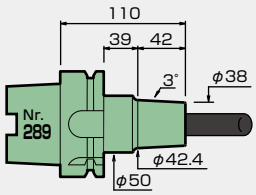
φ20 SLFB t=9

A100-SLFB20-110-M42



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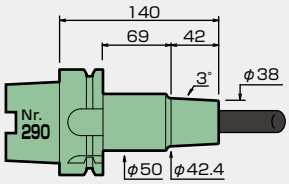
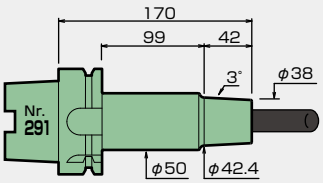
A100-SLFB20-140-M42



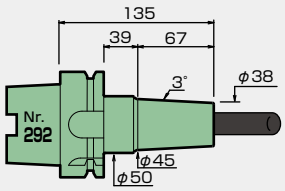
0.5

A100-SLFB20-170-M42



0.7

A100-SLFB20-135-M67



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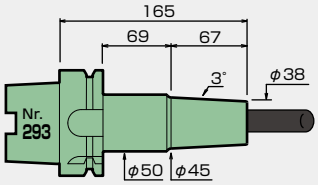
A100-SLFB20-165-M67



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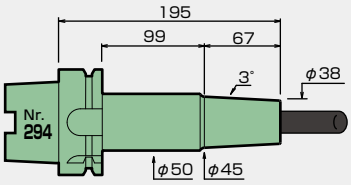
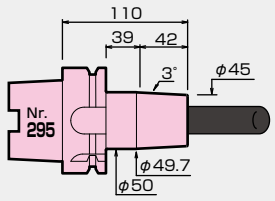
A100-SLFB20-195-M67



0.9

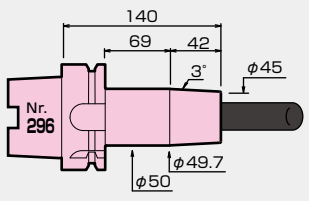
φ25 SLRB t=10

A100-SLRB25-110-M42



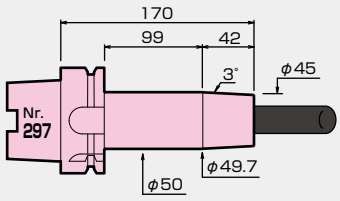
0.3

A100-SLRB25-140-M42



0.5

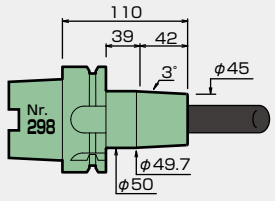
A100-SLRB25-170-M42



0.7

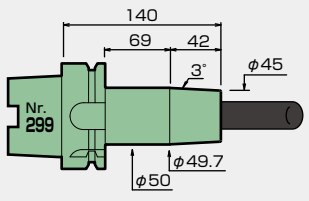
φ25 SLFB t=10

A100-SLFB25-110-M42



0.3

A100-SLFB25-140-M42



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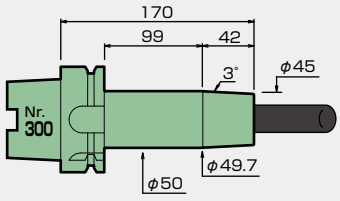
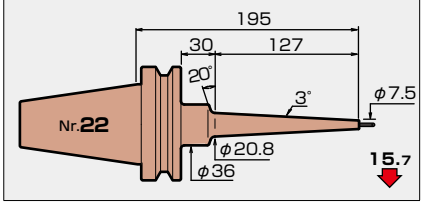
A100-SLFB25-170-M42

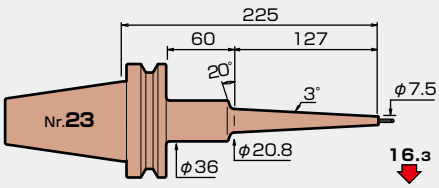


0.7

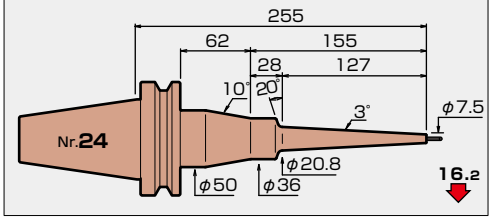
BT50−SLRA3−195−M127



BT50−SLRA3−225−M127

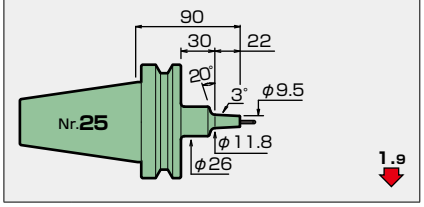


BT50−SLRA3−255−M127

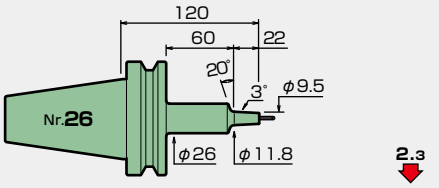


ϕ3 SLFB t=3.25

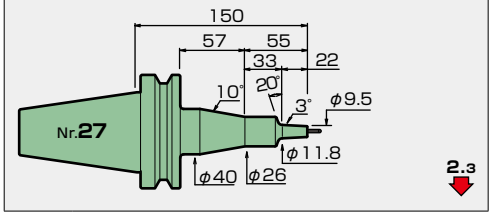
BT50−SLFB3−90−M22



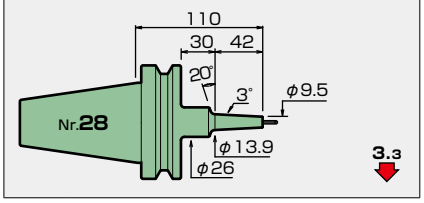
BT50−SLFB3−120−M22



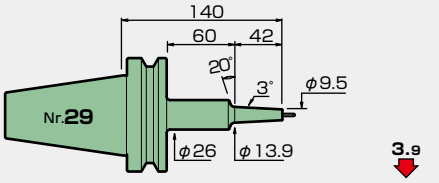
BT50−SLFB3−150−M22



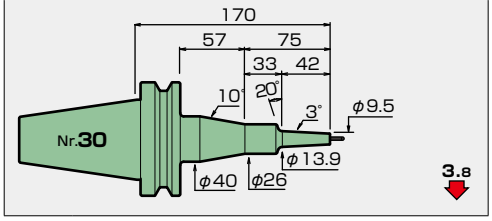
BT50−SLFB3−110−M42



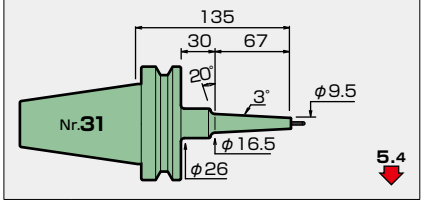
BT50−SLFB3−140−M42



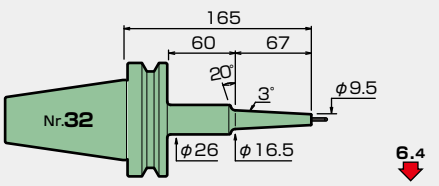
BT50−SLFB3−170−M42



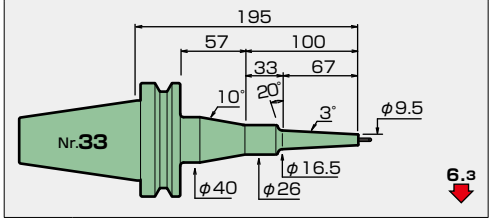
BT50−SLFB3−135−M67



BT50−SLFB3−165−M67

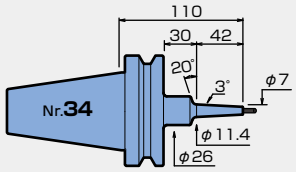


BT50−SLFB3−195−M67



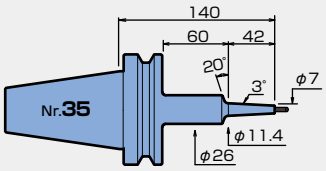
φ4 SLSA t=1.5

BT50-SLSA4-110-M42



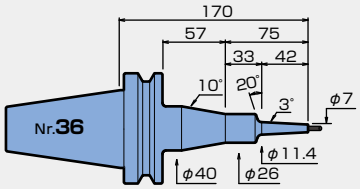
7.3

BT50-SLSA4-140-M42



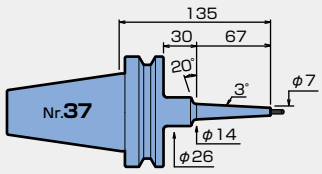
8.0

BT50-SLSA4-170-M42



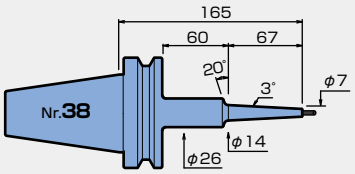
7.9

BT50-SLSA4-135-M67



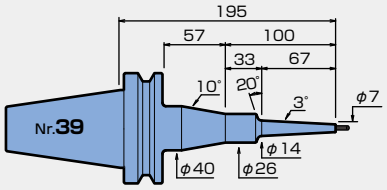
11.9

BT50-SLSA4-165-M67



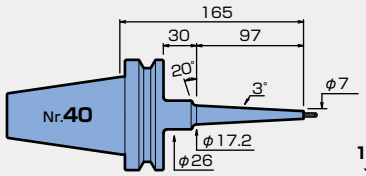
12.9

BT50-SLSA4-195-M67



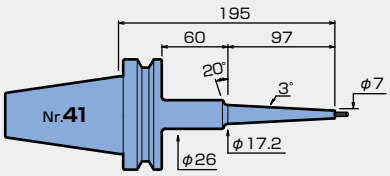
12.8

BT50-SLSA4-165-M97



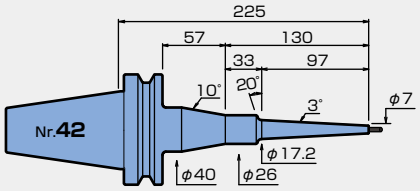
16.8

BT50-SLSA4-195-M97



18.4

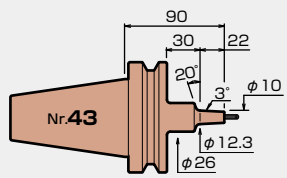
BT50-SLSA4-225-M97



18.1

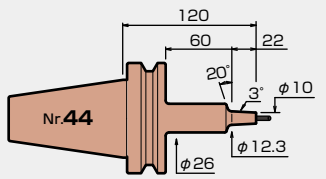
φ4 SLRA t=3

BT50-SLRA4-90-M22



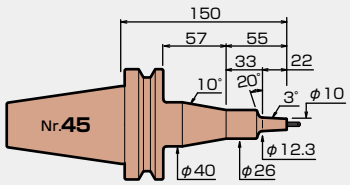
1.7

BT50-SLRA4-120-M22



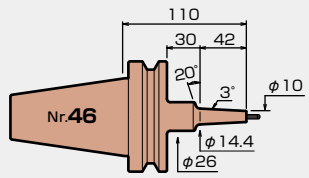
2.1

BT50-SLRA4-150-M22



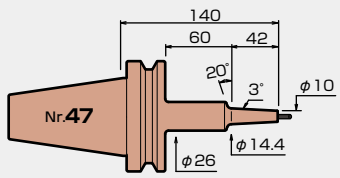
2.1

BT50-SLRA4-110-M42



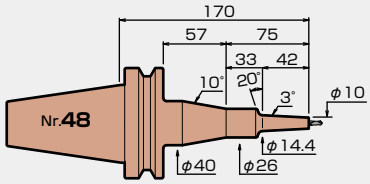
3.1

BT50-SLRA4-140-M42



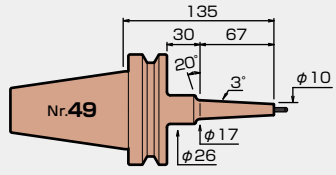
3.8

BT50-SLRA4-170-M42



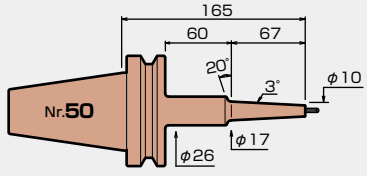
3.7

BT50-SLRA4-135-M67



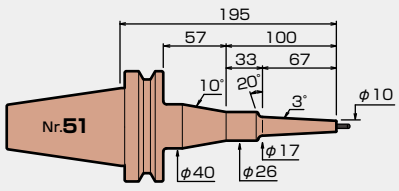
5.2

BT50-SLRA4-165-M67



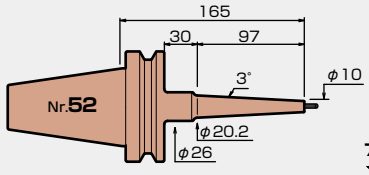
6.2

BT50-SLRA4-195-M67



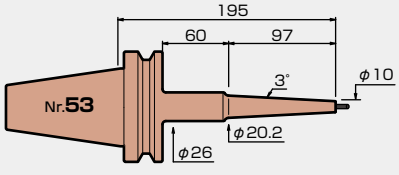
6.1

BT50-SLRA4-165-M97



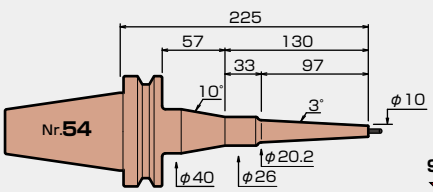
7.8

BT50-SLRA4-195-M97



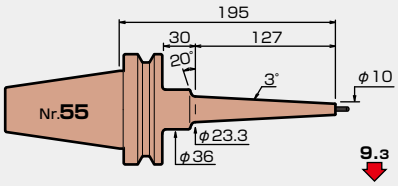
9.4

BT50-SLRA4-225-M97



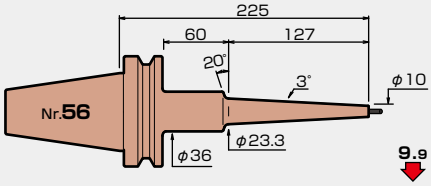
9.1

BT50−SLRA4−195−M127



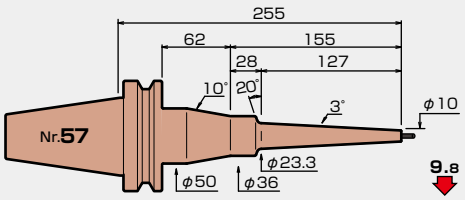
9.3

BT50−SLRA4−225−M127



9.9

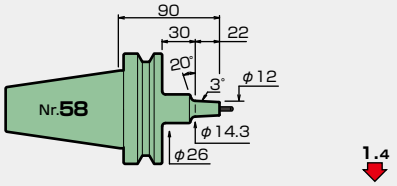
BT50−SLRA4−255−M127



9.8

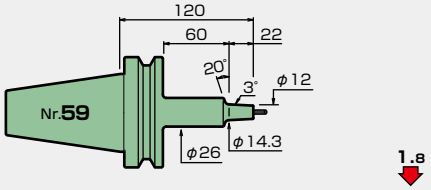
φ4 SLFB t=4

BT50−SLFB4−90−M22



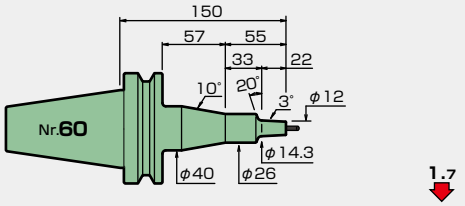
1.4

BT50−SLFB4−120−M22



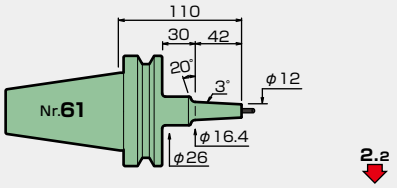
1.8

BT50−SLFB4−150−M22



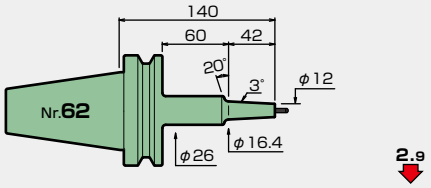
1.7

BT50−SLFB4−110−M42



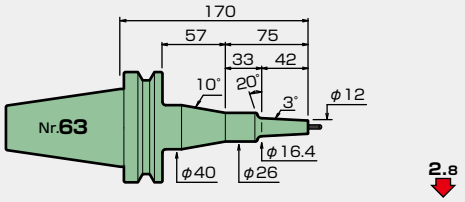
2.2

BT50−SLFB4−140−M42



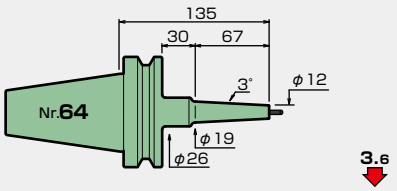
2.9

BT50−SLFB4−170−M42



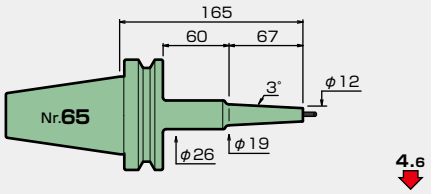
2.8

BT50−SLFB4−135−M67



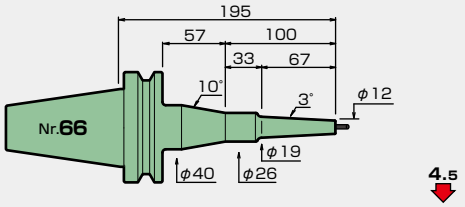
3.6

BT50−SLFB4−165−M67



4.6

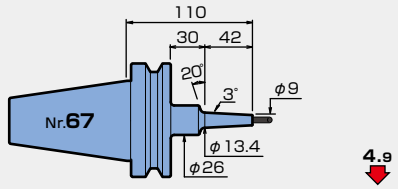
BT50−SLFB4−195−M67



4.5

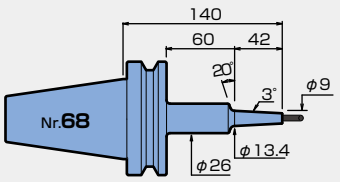
φ6 SLSA t=1.5

BT50-SLSA6-110-M42



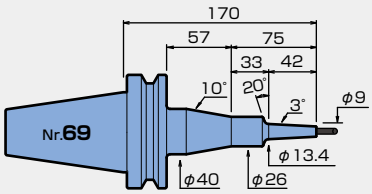
4.9

BT50-SLSA6-140-M42



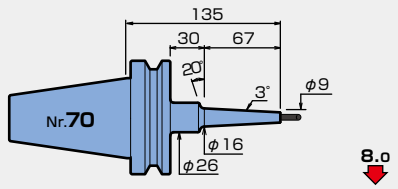
5.6

BT50-SLSA6-170-M42



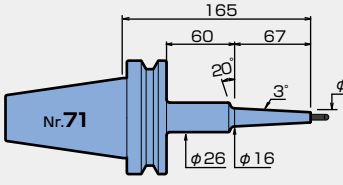
5.5

BT50-SLSA6-135-M67



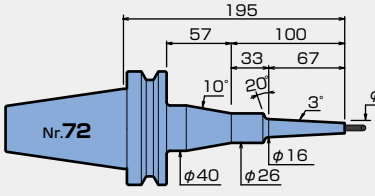
8.0

BT50-SLSA6-165-M67



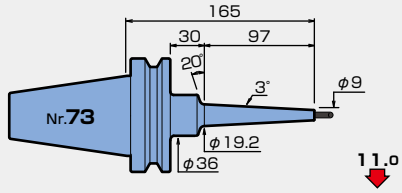
9.2

BT50-SLSA6-195-M67



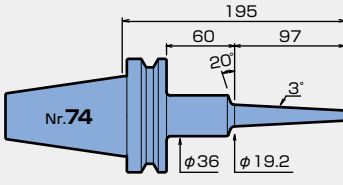
9.0

BT50-SLSA6-165-M97



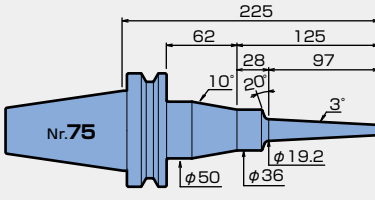
11.0

BT50-SLSA6-195-M97



11.4

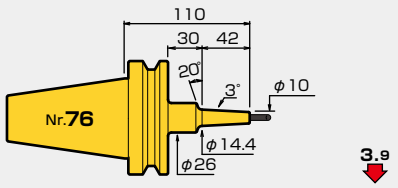
BT50-SLSA6-225-M97



11.4

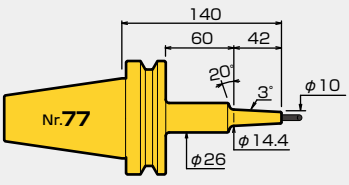
φ6 SLSB t=2

BT50-SLSB6-110-M42



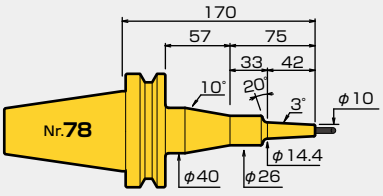
3.9

BT50-SLSB6-140-M42



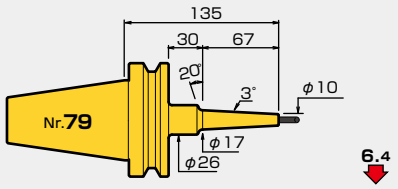
4.6

BT50-SLSB6-170-M42



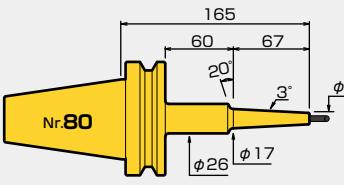
4.5

BT50-SLSB6-135-M67



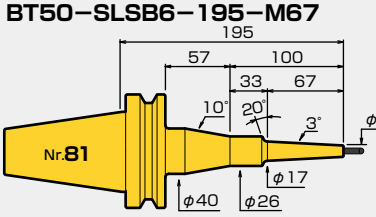
6.4

BT50-SLSB6-165-M67



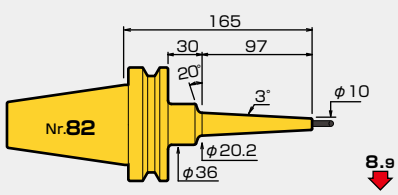
7.5

BT50-SLSB6-195-M67



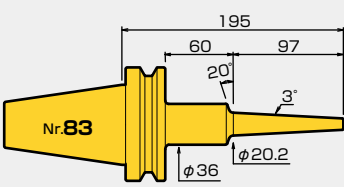
7.4

BT50-SLSB6-165-M97



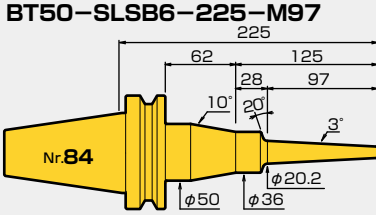
8.9

BT50-SLSB6-195-M97



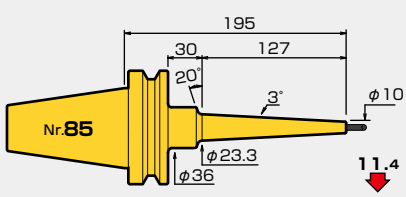
9.3

BT50-SLSB6-225-M97



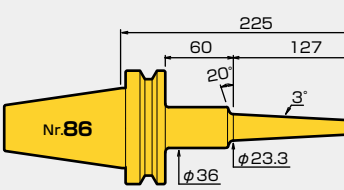
9.3

BT50-SLSB6-195-M127



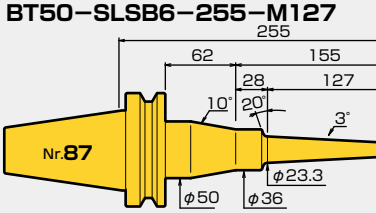
11.4

BT50-SLSB6-225-M127



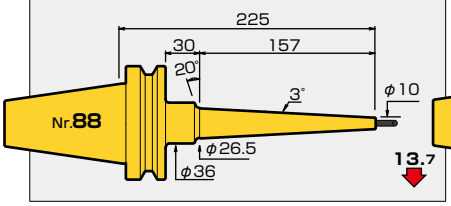
12.1

BT50-SLSB6-255-M127

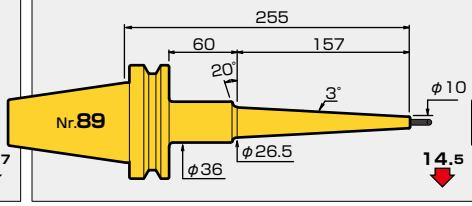


12.0

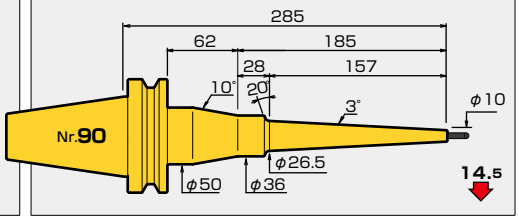
BT50−SLSB6−225−M157



BT50−SLSB6−255−M157

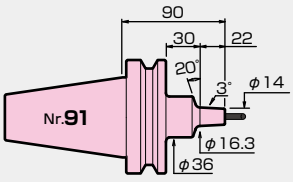


BT50−SLSB6−285−M157

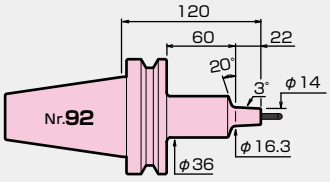


φ6 SLRB t=4

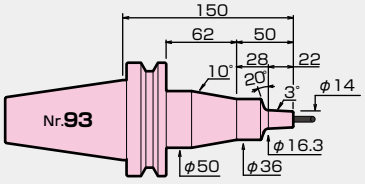
BT50−SLRB6−90−M22



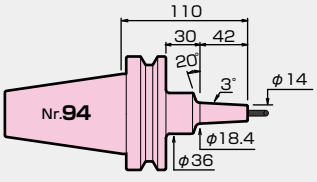
BT50−SLRB6−120−M22



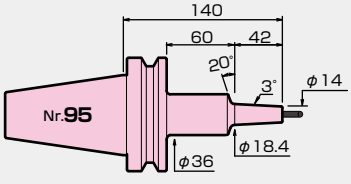
BT50−SLRB6−150−M22



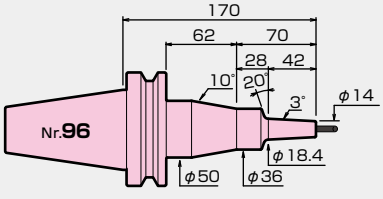
BT50−SLRB6−110−M42



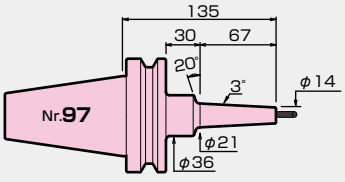
BT50−SLRB6−140−M42



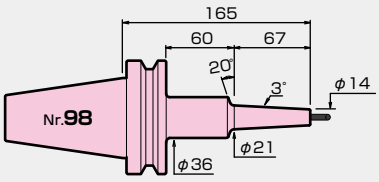
BT50−SLRB6−170−M42



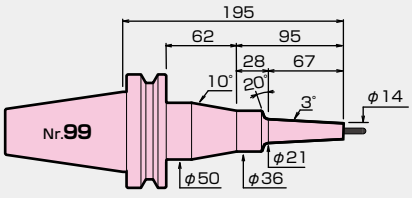
BT50−SLRB6−135−M67



BT50−SLRB6−165−M67

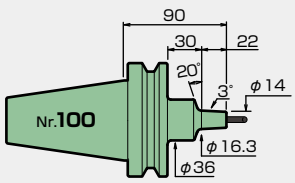


BT50−SLRB6−195−M67

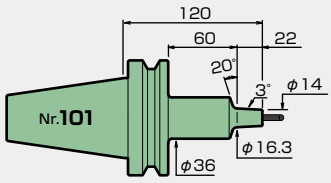


φ6 SLFB t=4

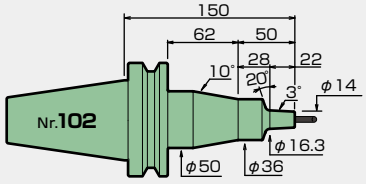
BT50−SLFB6−90−M22



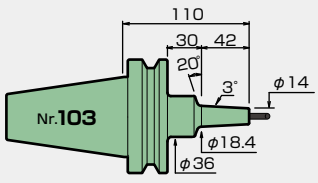
BT50−SLFB6−120−M22



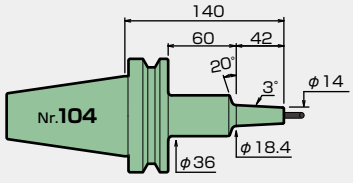
BT50−SLFB6−150−M22



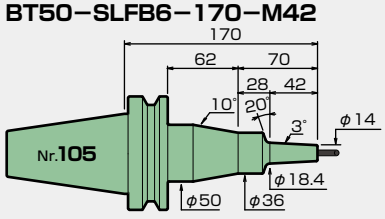
BT50−SLFB6−110−M42



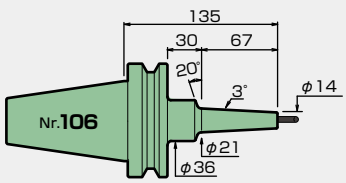
BT50−SLFB6−140−M42



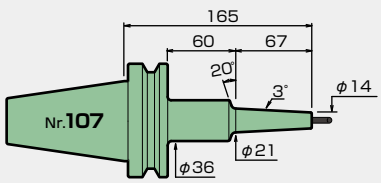
BT50−SLFB6−170−M42



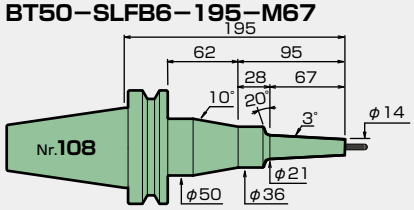
BT50−SLFB6−135−M67



BT50−SLFB6−165−M67

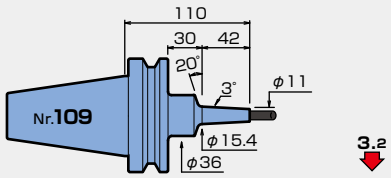


BT50−SLFB6−195−M67

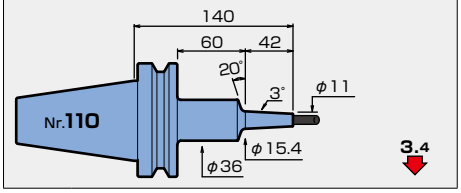


φ8 SLSA t=1.5

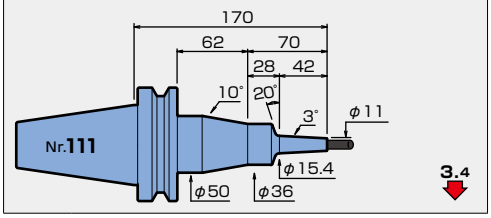
BT50−SLSA8−110−M42



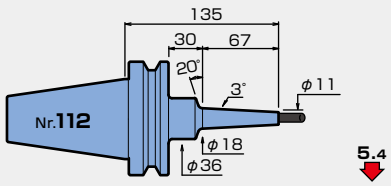
BT50−SLSA8−140−M42



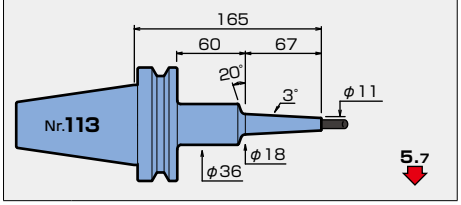
BT50−SLSA8−170−M42



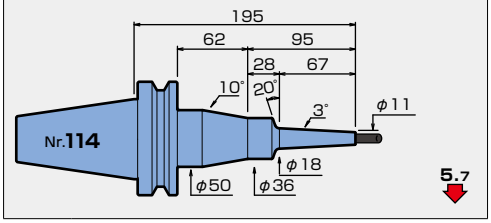
BT50−SLSA8−135−M67



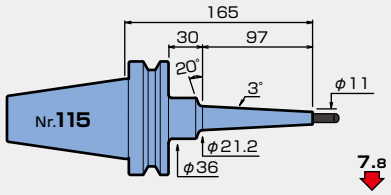
BT50−SLSA8−165−M67



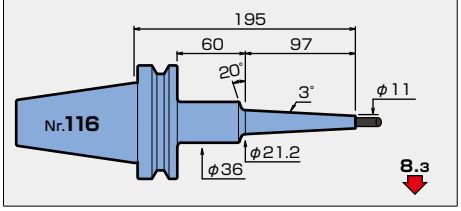
BT50−SLSA8−195−M67



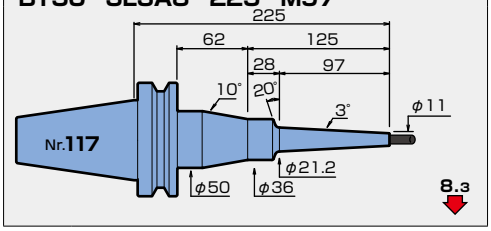
BT50−SLSA8−165−M97



BT50−SLSA8−195−M97

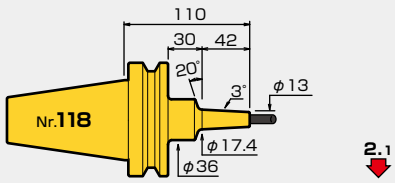


BT50−SLSA8−225−M97

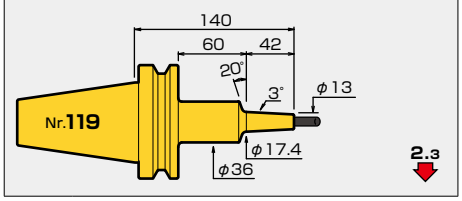


φ8 SLSB t=2.5

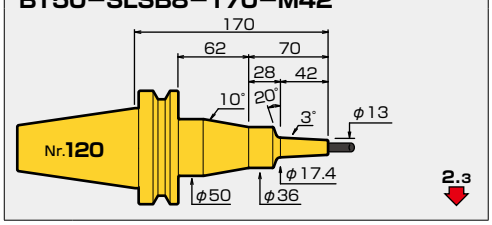
BT50−SLSB8−110−M42



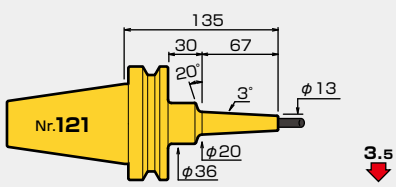
BT50−SLSB8−140−M42



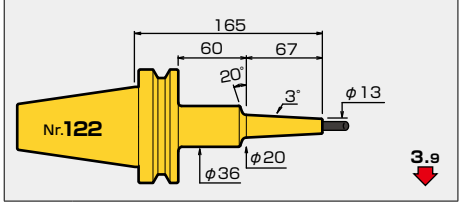
BT50−SLSB8−170−M42



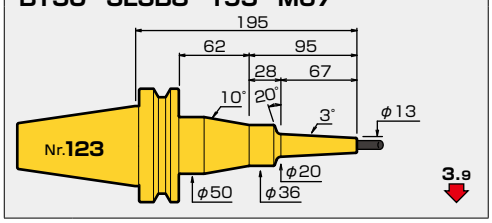
BT50−SLSB8−135−M67



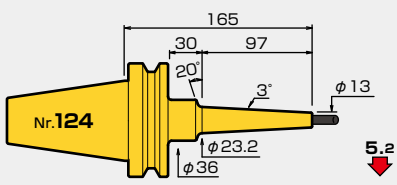
BT50−SLSB8−165−M67



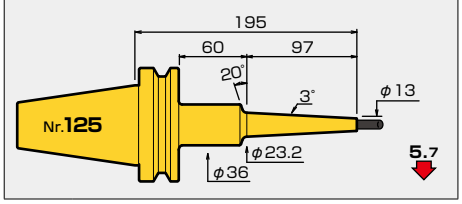
BT50−SLSB8−195−M67



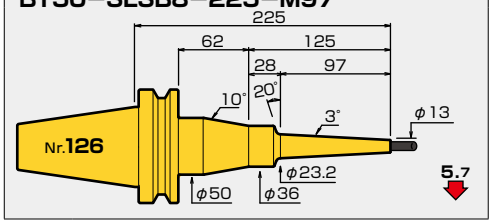
BT50−SLSB8−165−M97



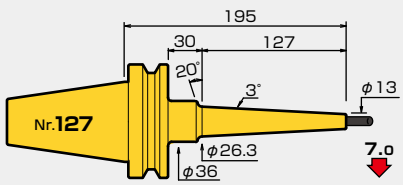
BT50−SLSB8−195−M97



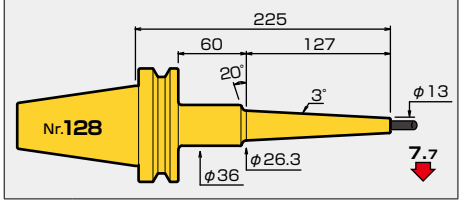
BT50−SLSB8−225−M97



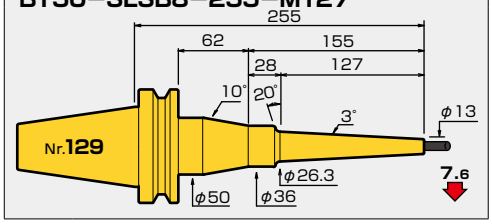
BT50−SLSB8−195−M127



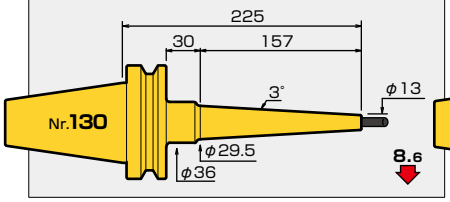
BT50−SLSB8−225−M127



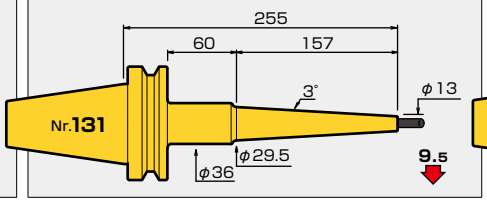
BT50−SLSB8−255−M127



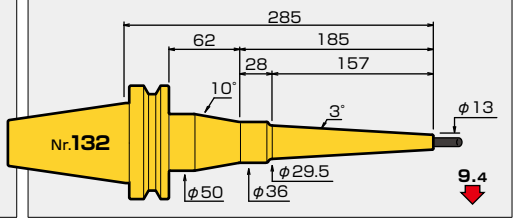
BT50-SLSB8-225-M157



BT50-SLSB8-255-M157

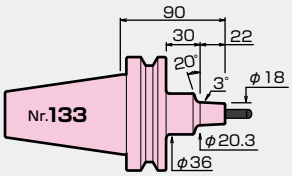


BT50-SLSB8-285-M157

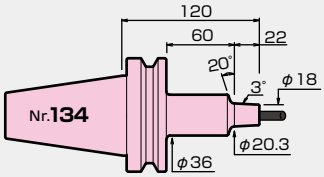


φ8 SLRB t=5

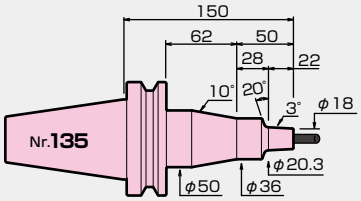
BT50-SLRB8-90-M22



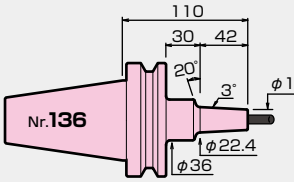
BT50-SLRB8-120-M22



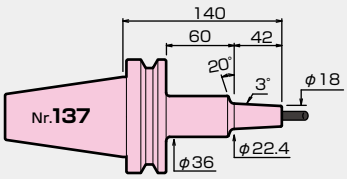
BT50-SLRB8-150-M22



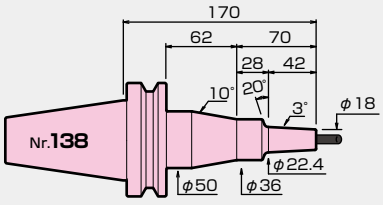
BT50-SLRB8-110-M42



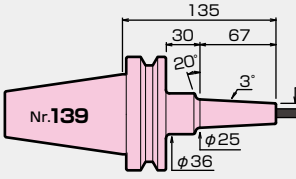
BT50-SLRB8-140-M42



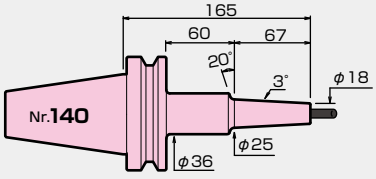
BT50-SLRB8-170-M42



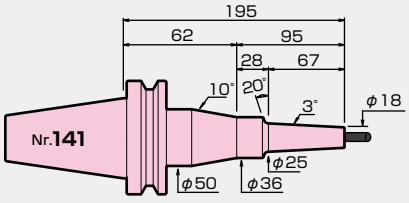
BT50-SLRB8-135-M67



BT50-SLRB8-165-M67

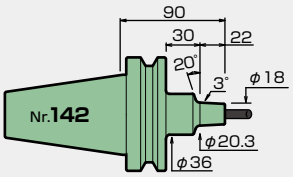


BT50-SLRB8-195-M67

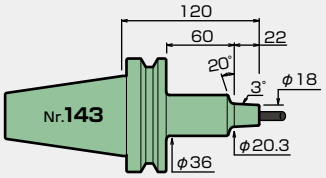


φ8 SLFB t=5

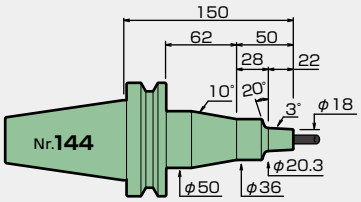
BT50-SLFB8-90-M22



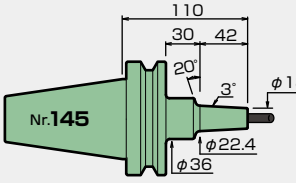
BT50-SLFB8-120-M22



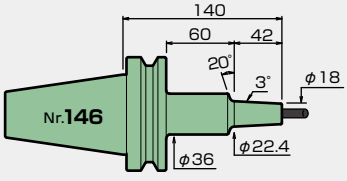
BT50-SLFB8-150-M22



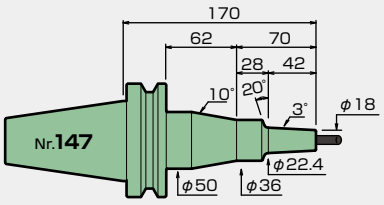
BT50-SLFB8-110-M42



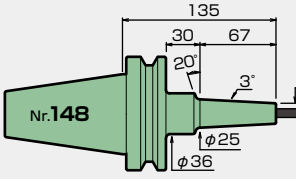
BT50-SLFB8-140-M42



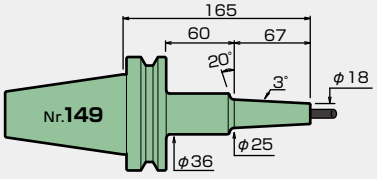
BT50-SLFB8-170-M42



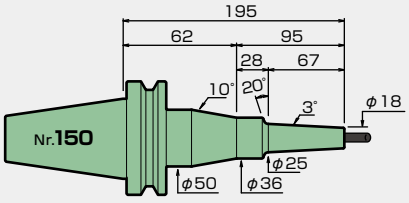
BT50-SLFB8-135-M67



BT50-SLFB8-165-M67

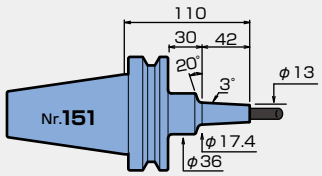


BT50-SLFB8-195-M67

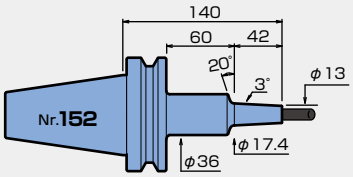


φ10 SLSA t=1.5

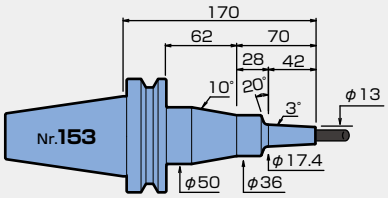
BT50−SLSA10−110−M42



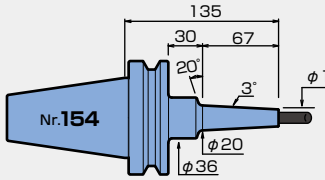
BT50−SLSA10−140−M42



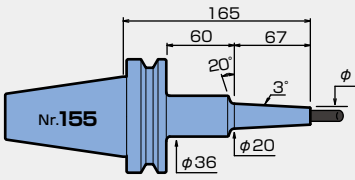
BT50−SLSA10−170−M42



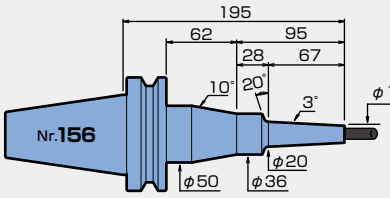
BT50−SLSA10−135−M67



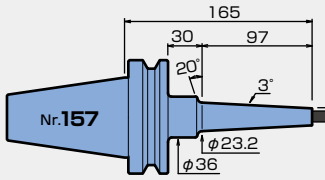
BT50−SLSA10−165−M67



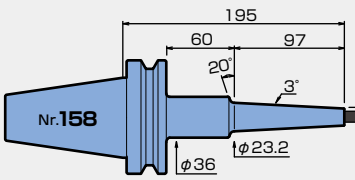
BT50−SLSA10−195−M67



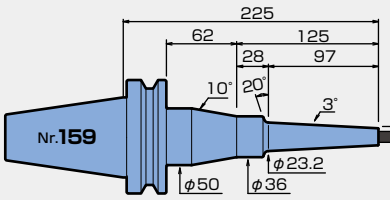
BT50−SLSA10−165−M97



BT50−SLSA10−195−M97

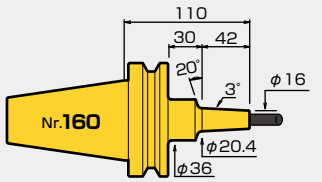


BT50−SLSA10−225−M97

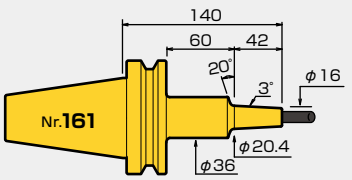


φ10 SLSB t=3

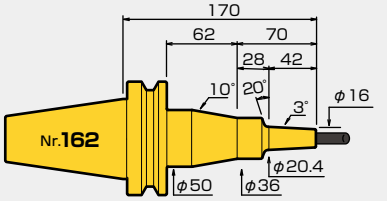
BT50−SLSB10−110−M42



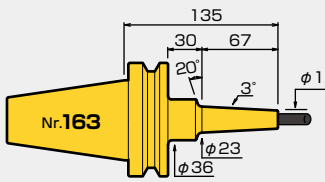
BT50−SLSB10−140−M42



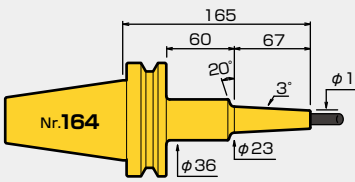
BT50−SLSB10−170−M42



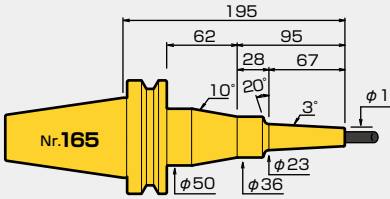
BT50−SLSB10−135−M67



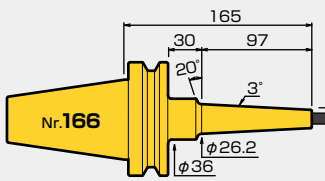
BT50−SLSB10−165−M67



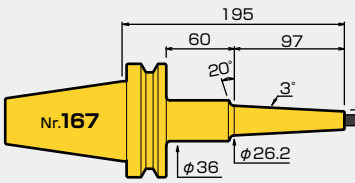
BT50−SLSB10−195−M67



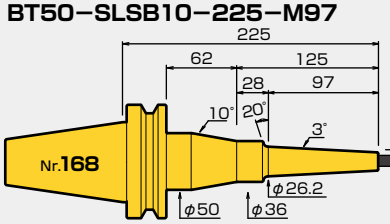
BT50−SLSB10−165−M97



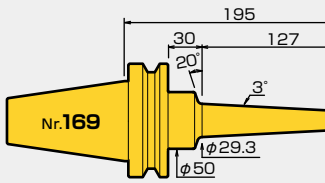
BT50−SLSB10−195−M97



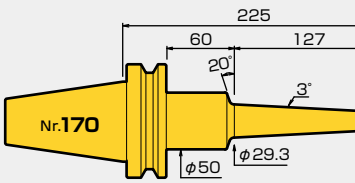
BT50−SLSB10−225−M97



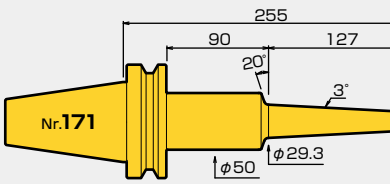
BT50−SLSB10−195−M127



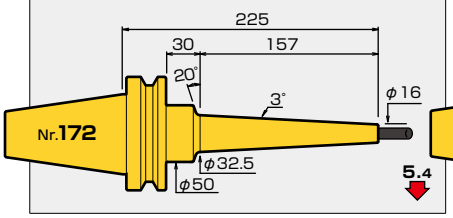
BT50−SLSB10−225−M127



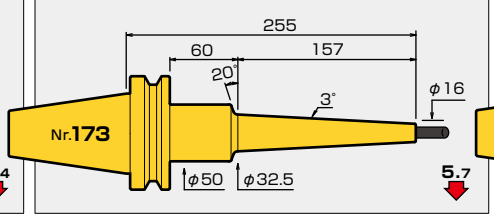
BT50−SLSB10−255−M127



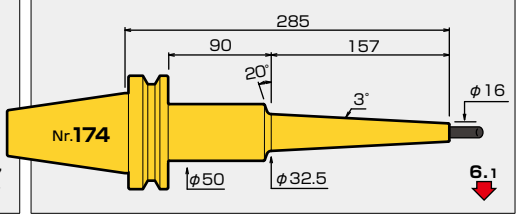
BT50−SLSB10−225−M157



BT50−SLSB10−255−M157

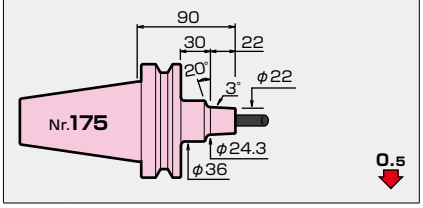


BT50−SLSB10−285−M157

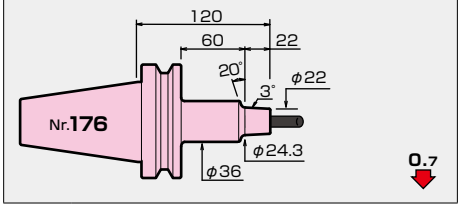


φ10 SLRB t=6

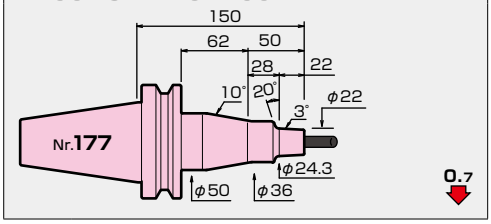
BT50−SLRB10−90−M22



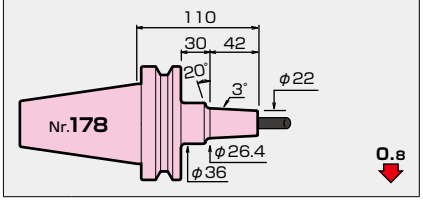
BT50−SLRB10−120−M22



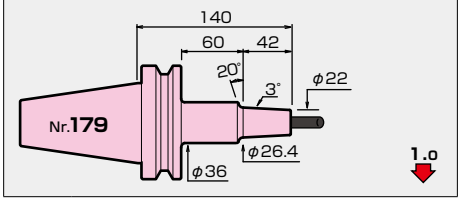
BT50−SLRB10−150−M22



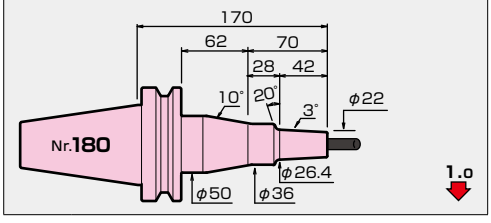
BT50−SLRB10−110−M42



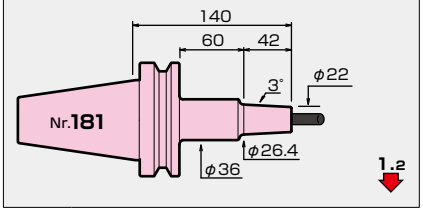
BT50−SLRB10−140−M42



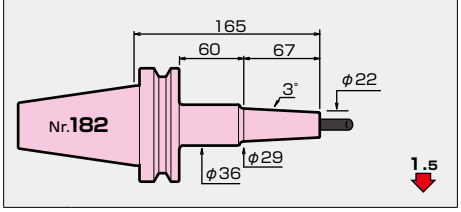
BT50−SLRB10−170−M42



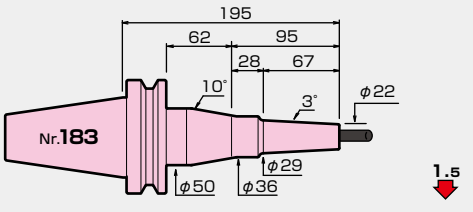
BT50−SLRB10−135−M67



BT50−SLRB10−165−M67

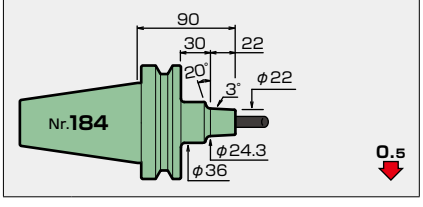


BT50−SLRB10−195−M67

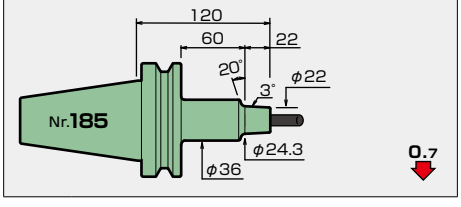


φ10 SLFB t=6

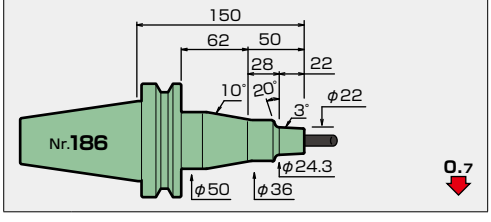
BT50−SLFB10−90−M22



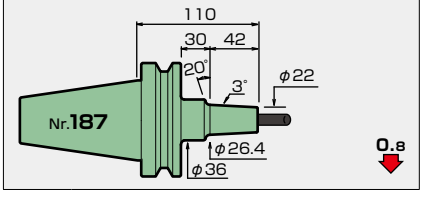
BT50−SLFB10−120−M22



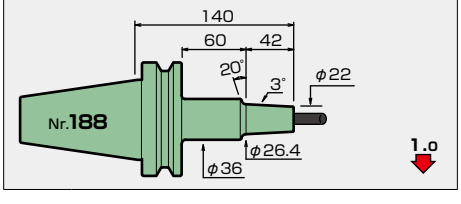
BT50−SLFB10−150−M22



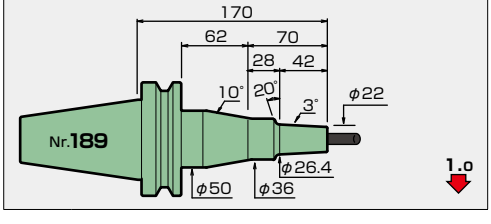
BT50−SLFB10−110−M42



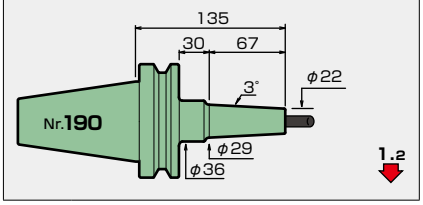
BT50−SLFB10−140−M42



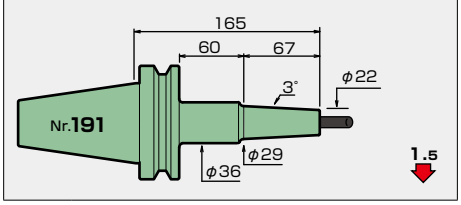
BT50−SLFB10−170−M42



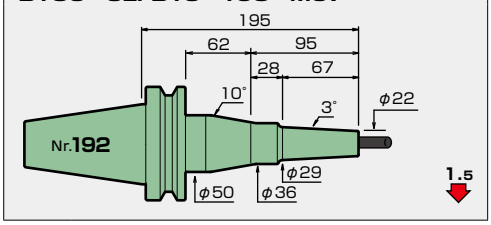
BT50−SLFB10−135−M67



BT50−SLFB10−165−M67

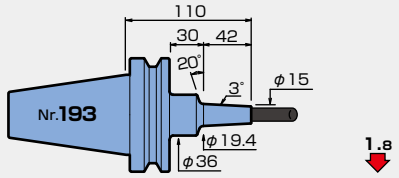


BT50−SLFB10−195−M67

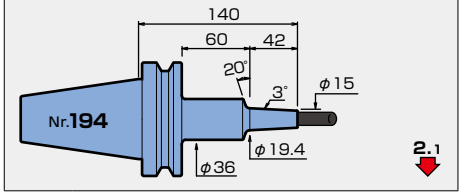


φ12 SLSA t=1.5

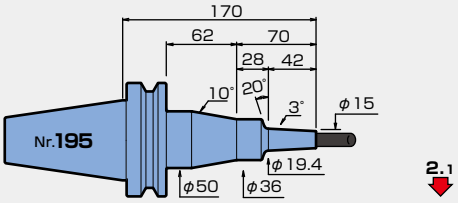
BT50−SLSA12−110−M42



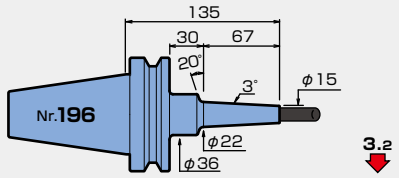
BT50−SLSA12−140−M42



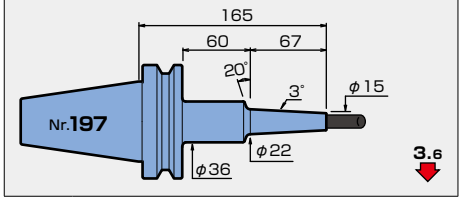
BT50−SLSA12−170−M42



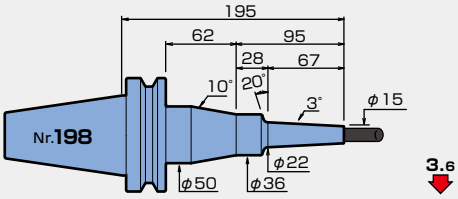
BT50−SLSA12−135−M67



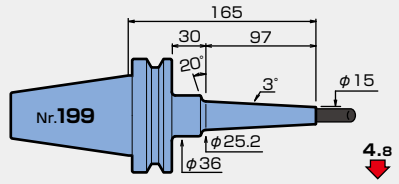
BT50−SLSA12−165−M67



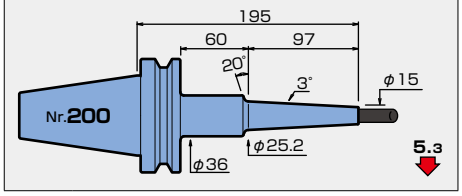
BT50−SLSA12−195−M67



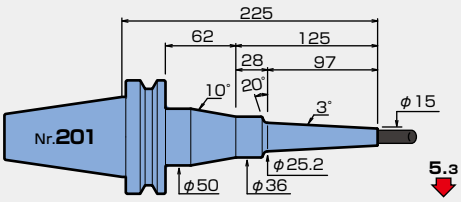
BT50−SLSA12−165−M97



BT50−SLSA12−195−M97

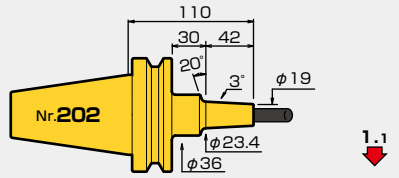


BT50−SLSA12−225−M97

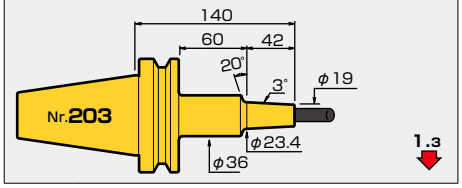


φ12 SLSB t=3.5

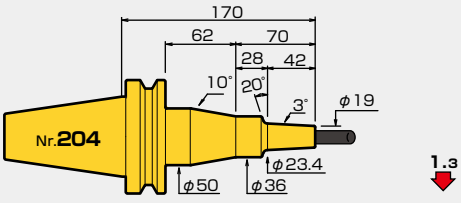
BT50−SLSB12−110−M42



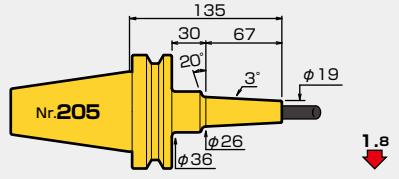
BT50−SLSB12−140−M42



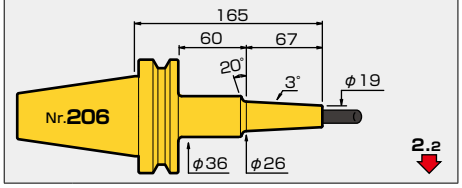
BT50−SLSB12−170−M42



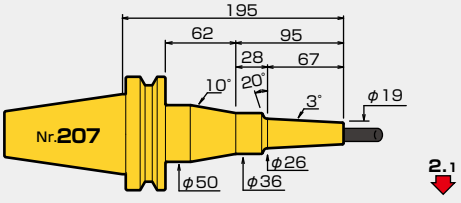
BT50−SLSB12−135−M67



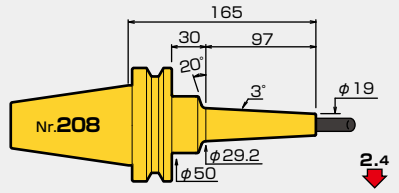
BT50−SLSB12−165−M67



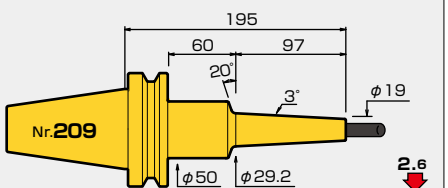
BT50−SLSB12−195−M67



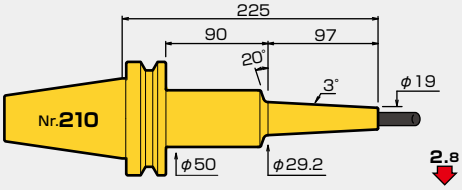
BT50−SLSB12−165−M97



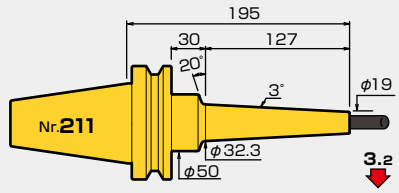
BT50−SLSB12−195−M97



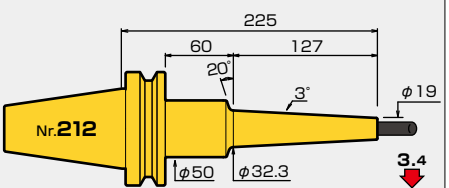
BT50−SLSB12−225−M97



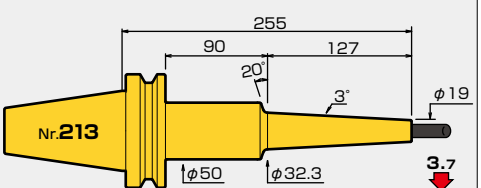
BT50−SLSB12−195−M127



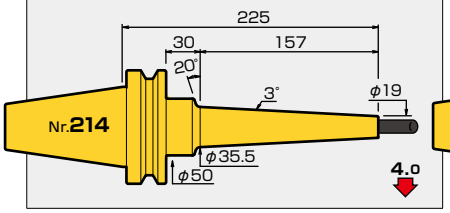
BT50−SLSB12−225−M127



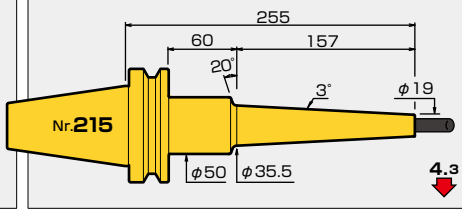
BT50−SLSB12−255−M127



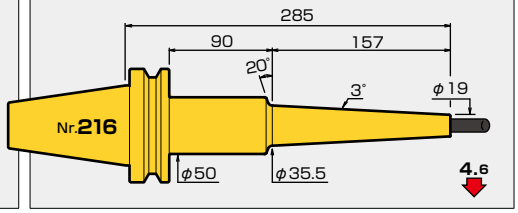
BT50−SLSB12−225−M157



BT50−SLSB12−255−M157

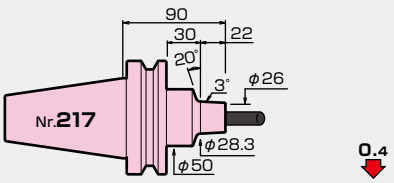


BT50−SLSB12−285−M157

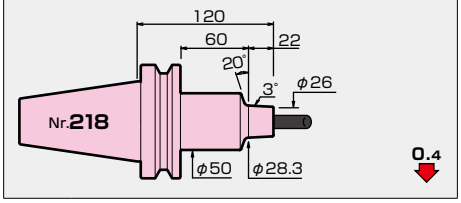


φ12 SLRB t=7

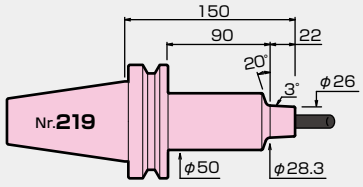
BT50−SLRB12−90−M22



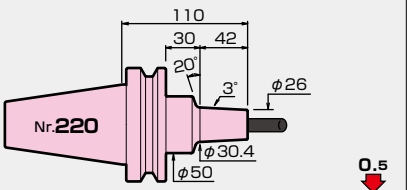
BT50−SLRB12−120−M22



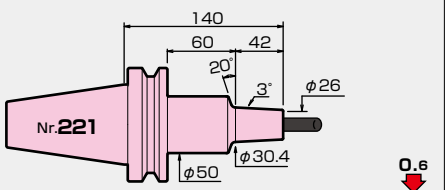
BT50−SLRB12−150−M22



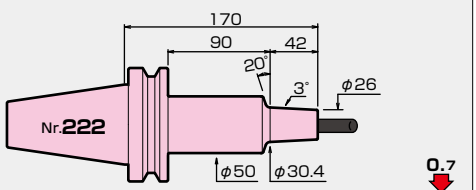
BT50−SLRB12−110−M42



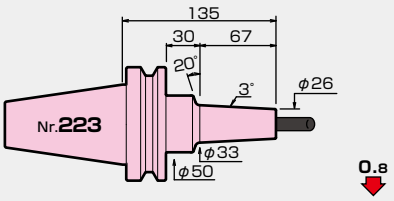
BT50−SLRB12−140−M42



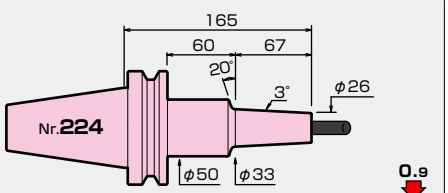
BT50−SLRB12−170−M42



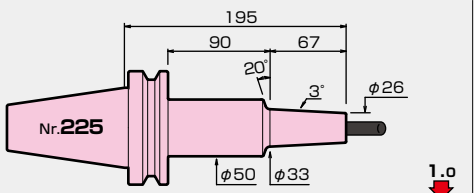
BT50−SLRB12−135−M67



BT50−SLRB12−165−M67

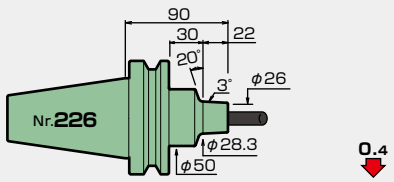


BT50−SLRB12−195−M67

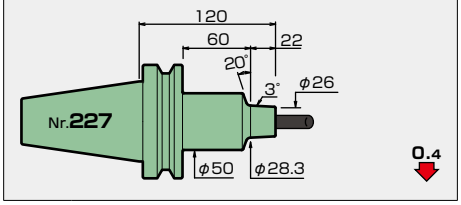


φ12 SLFB t=7

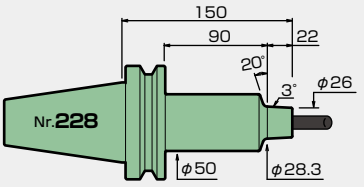
BT50−SLFB12−90−M22



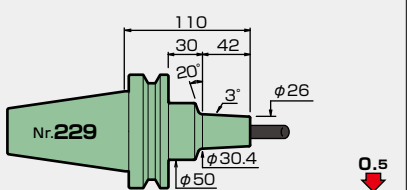
BT50−SLFB12−120−M22



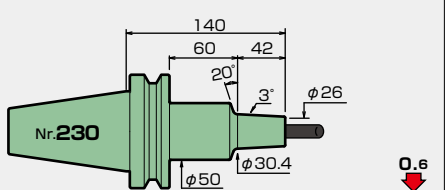
BT50−SLFB12−150−M22



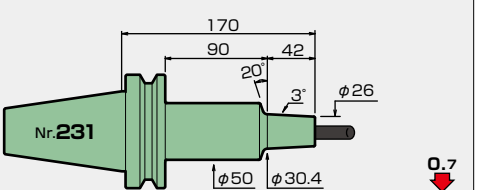
BT50−SLFB12−110−M42



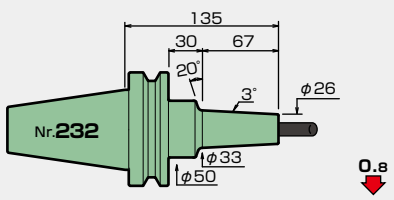
BT50−SLFB12−140−M42



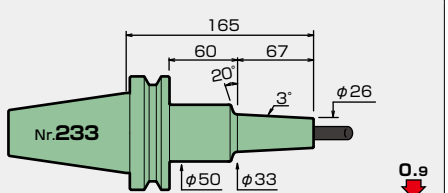
BT50−SLFB12−170−M42



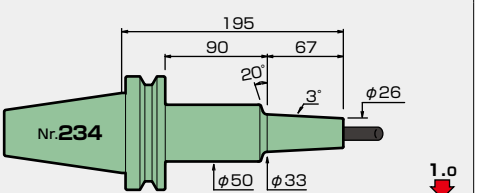
BT50−SLFB12−135−M67



BT50−SLFB12−165−M67

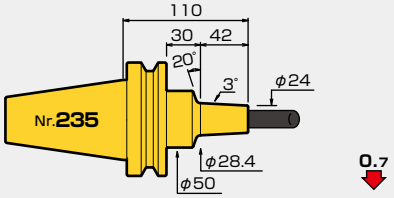


BT50−SLFB12−195−M67

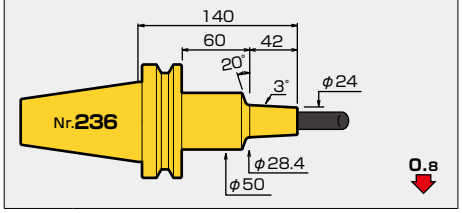


φ16 SLSB t=4

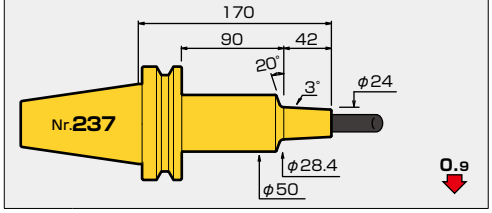
BT50-SLSB16-110-M42



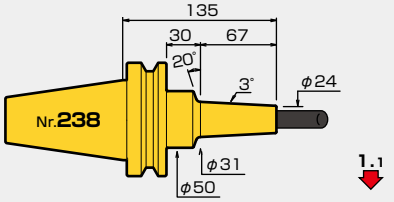
BT50-SLSB16-140-M42



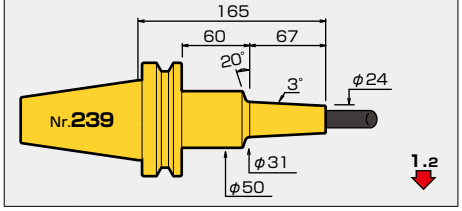
BT50-SLSB16-170-M42



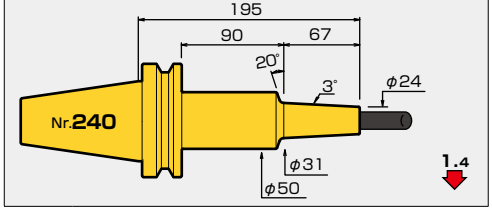
BT50-SLSB16-135-M67



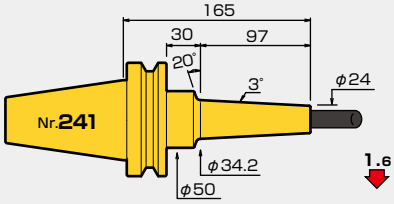
BT50-SLSB16-165-M67



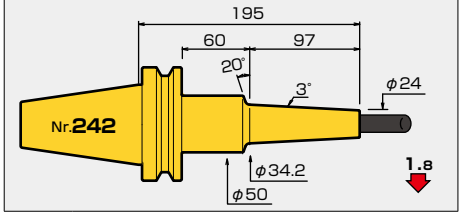
BT50-SLSB16-195-M67



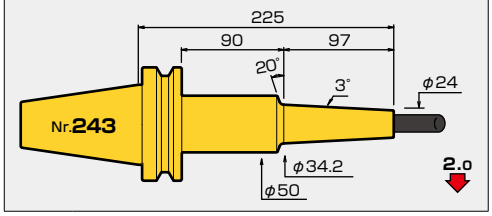
BT50-SLSB16-165-M97



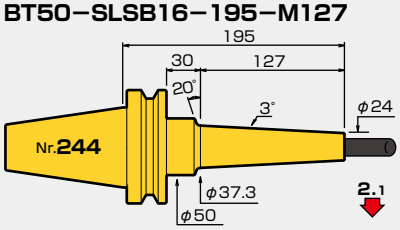
BT50-SLSB16-195-M97



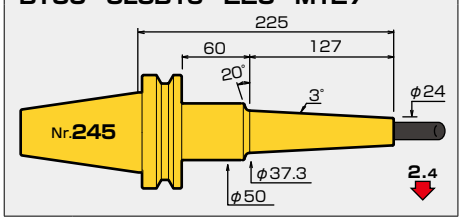
BT50-SLSB16-225-M97



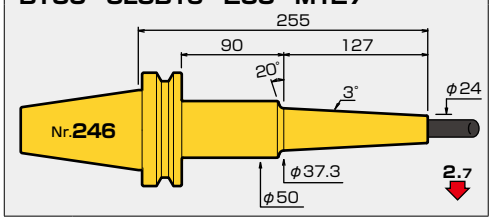
BT50-SLSB16-195-M127



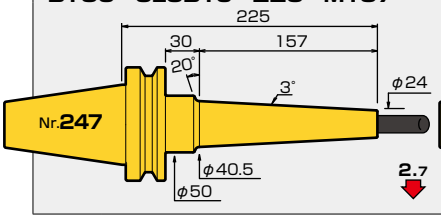
BT50-SLSB16-225-M127



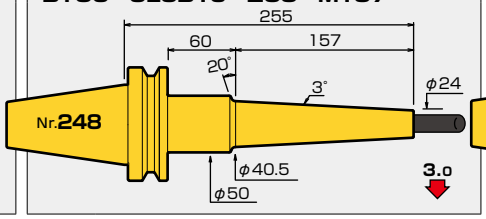
BT50-SLSB16-255-M127



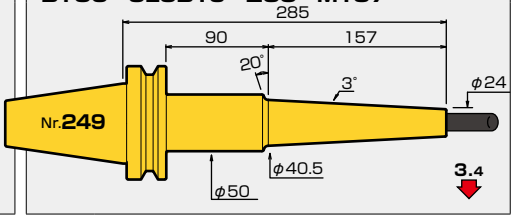
BT50-SLSB16-225-M157



BT50-SLSB16-255-M157

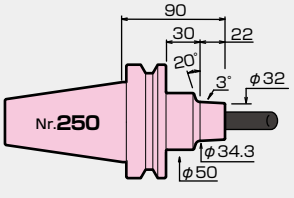


BT50-SLSB16-285-M157

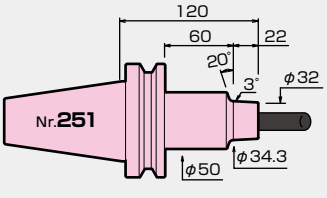


φ16 SLRB t=8

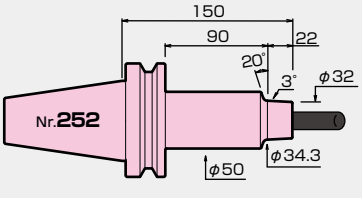
BT50-SLRB16-90-M22



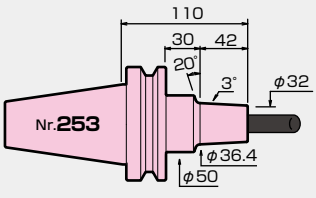
BT50-SLRB16-120-M22



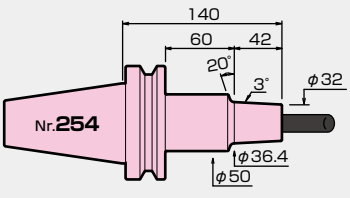
BT50-SLRB16-150-M22



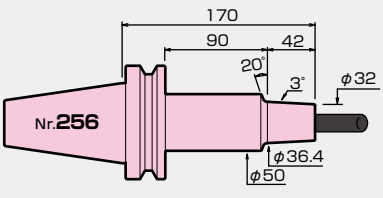
BT50-SLRB16-110-M42



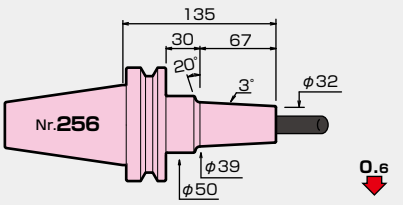
BT50-SLRB16-140-M42



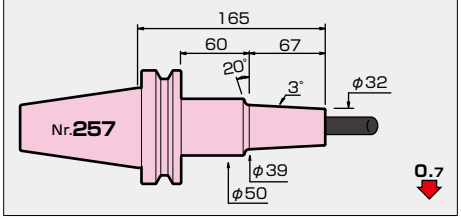
BT50-SLRB16-170-M42



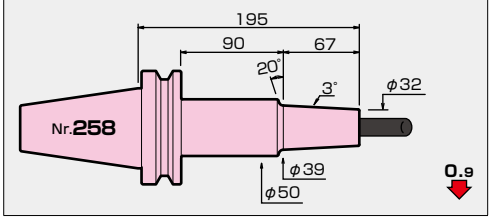
BT50−SLRB16−135−M67



BT50−SLRB16−165−M67

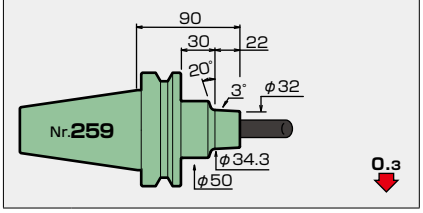


BT50−SLRB16−195−M67

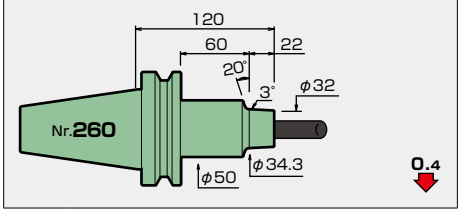


φ16 SLFB t=8

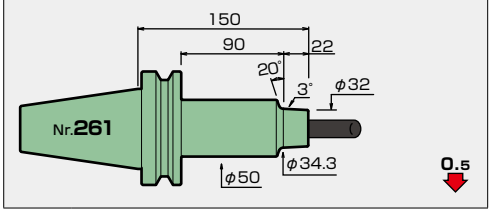
BT50−SLFB16−90−M22



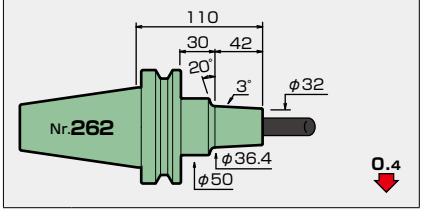
BT50−SLFB16−120−M22



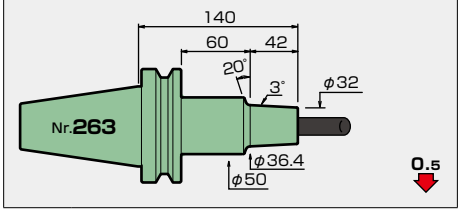
BT50−SLFB16−150−M22



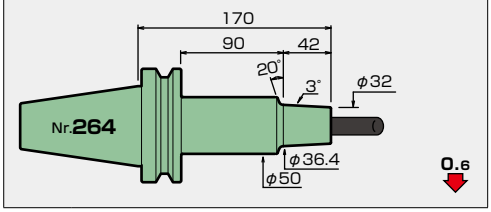
BT50−SLFB16−110−M42



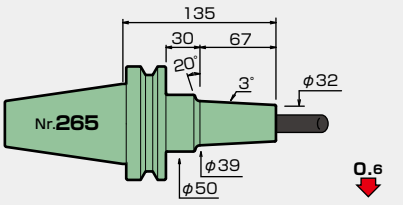
BT50−SLFB16−140−M42



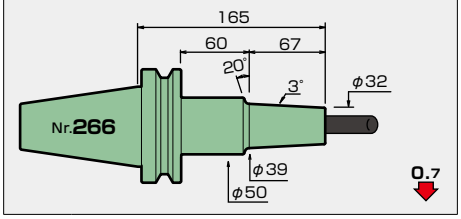
BT50−SLFB16−170−M42



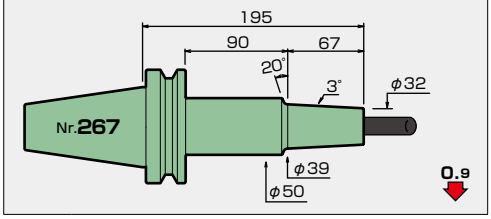
BT50−SLFB16−135−M67



BT50−SLFB16−165−M67

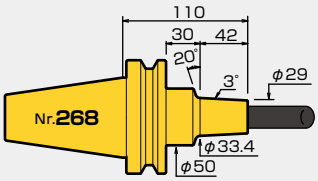


BT50−SLFB16−195−M67

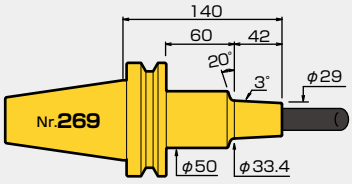


φ20 SLSB t=4.5

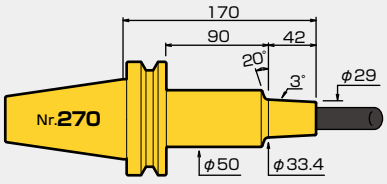
BT50−SLSB20−110−M42



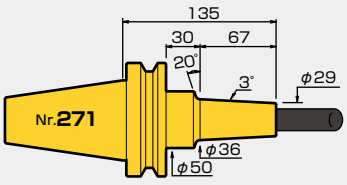
BT50−SLSB20−140−M42



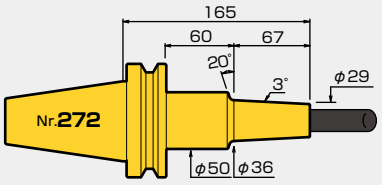
BT50−SLSB20−170−M42



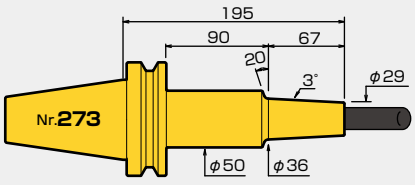
BT50−SLSB20−135−M67



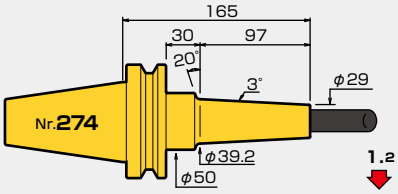
BT50−SLSB20−165−M67



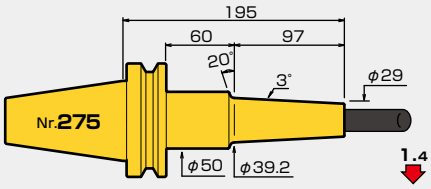
BT50−SLSB20−195−M67



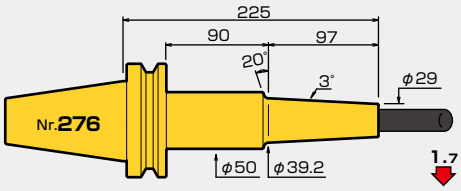
BT50−SLSB20−165−M97



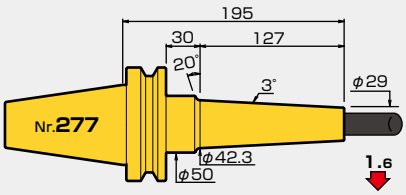
BT50−SLSB20−195−M97



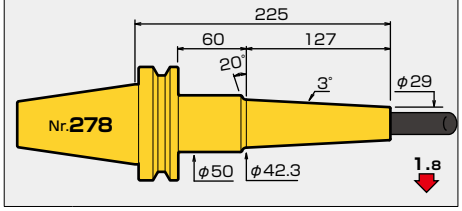
BT50−SLSB20−225−M97



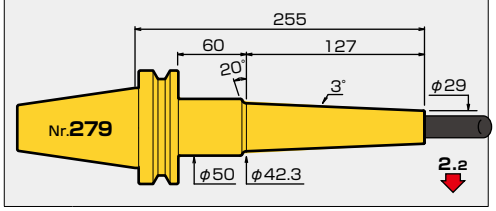
BT50−SLSB20−195−M127



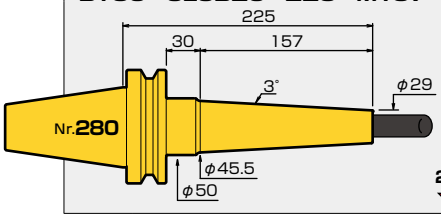
BT50−SLSB20−225−M127



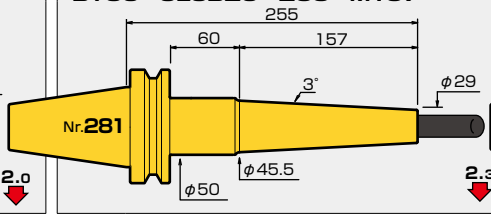
BT50−SLSB20−255−M127



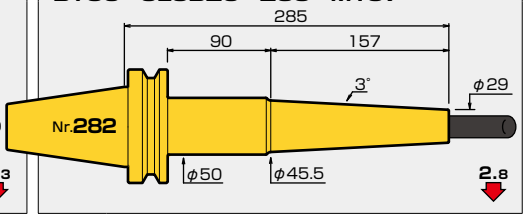
BT50−SLSB20−225−M157



BT50−SLSB20−255−M157

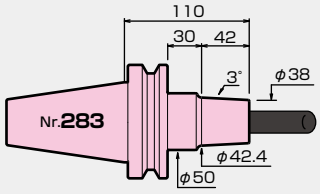


BT50−SLSB20−285−M157

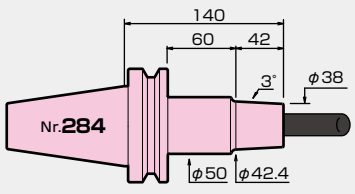


φ20 SLRB t=9

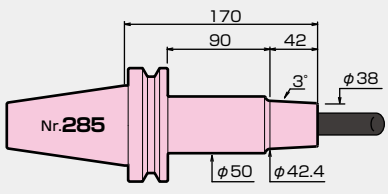
BT50−SLRB20−110−M42



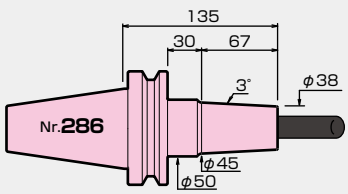
BT50−SLRB20−140−M42



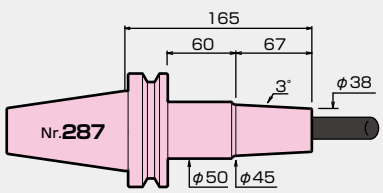
BT50−SLRB20−170−M42



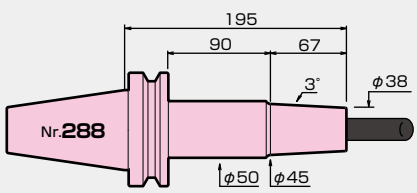
BT50−SLRB20−135−M67



BT50−SLRB20−165−M67

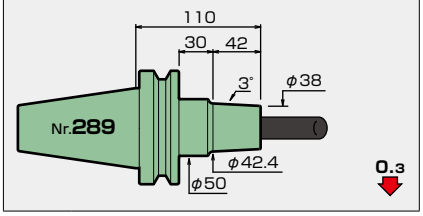


BT50−SLRB20−195−M67

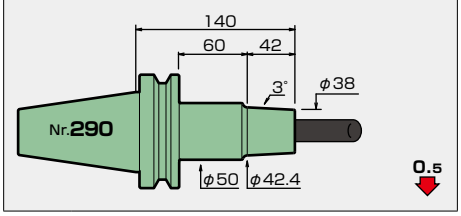


φ20 SLFB t=9

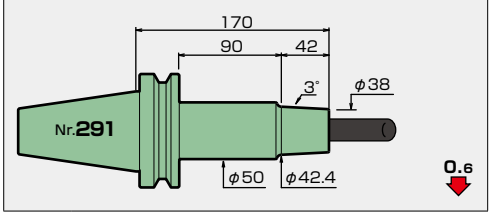
BT50−SLFB20−110−M42



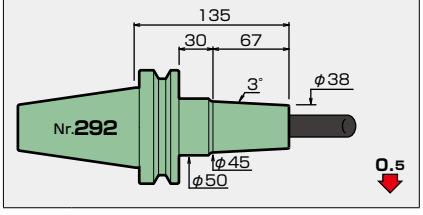
BT50−SLFB20−140−M42



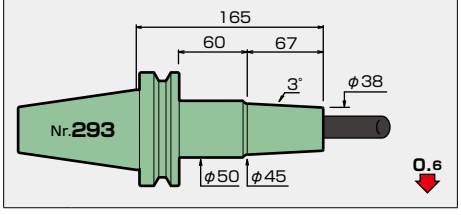
BT50−SLFB20−170−M42



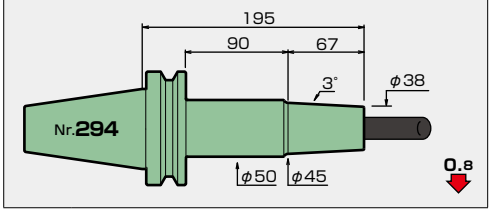
BT50−SLFB20−135−M67



BT50−SLFB20−165−M67

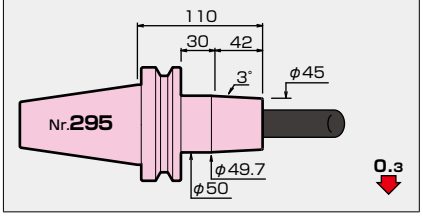


BT50−SLFB20−195−M67

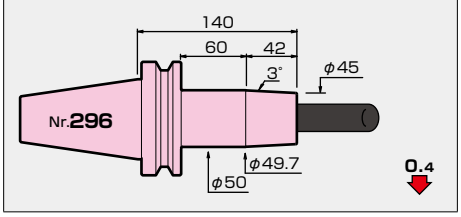


φ25 SLRB t=10

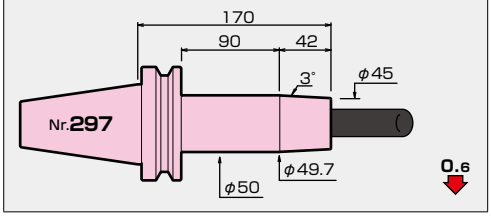
BT50−SLRB25−110−M42



BT50−SLRB25−140−M42

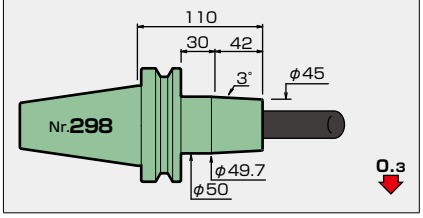


BT50−SLRB25−170−M42

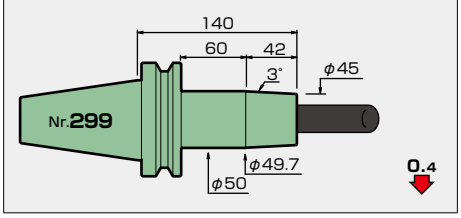


φ25 SLFB t=10

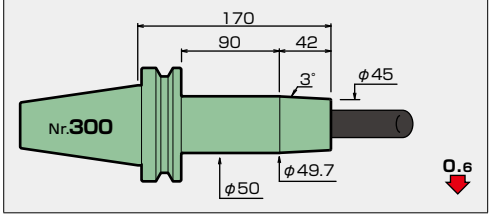
BT50−SLFB25−110−M42

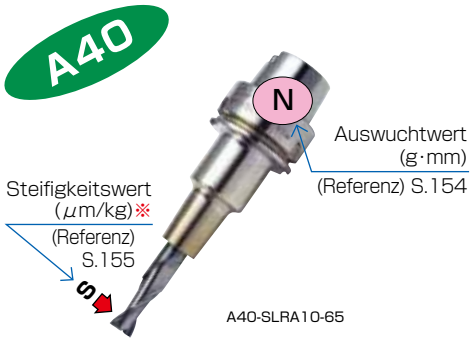


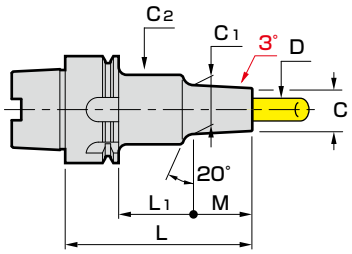
BT50−SLFB25−140−M42

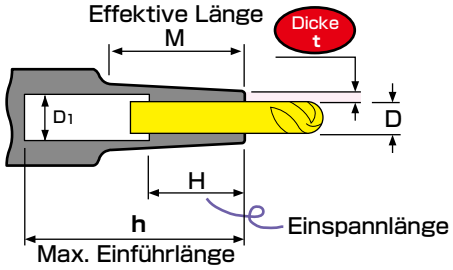


BT50−SLFB25−170−M42







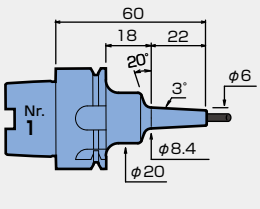


CODE	φD	φC	Dicke t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Maßstäbliches Modell
A40—SLSA 3—60	3	6	1.5	60	22	18	8.4	20	4	9	44	0.2	1.3	4.8	1
—80				80	42		10.5				64		1.4	9.5	2
A40—SLSA3.175—60	3.175	6.175	1.5	60	22	18	8.5	20	4	9	44	0.2	1.4	4.5	3
—80				80	42		10.6				64			9.0	4
A40—SLSA 4—60	4	7	1.5	60	22	18	9.4	20	5	12	44	0.2	1.4	3.8	5
—80				80	42		11.5				64			7.5	6
A40—SLSA 5—60	5	8	1.5	60	22	18	10.4	20	6	15	34	0.2	1.4	3.0	7
—80				80	42		12.5				54		1.5	6.1	8
A40—SLSA 6—60	6	9	1.5	60	22	18	11.4	20	6.6	18	40	0.2	1.4	2.4	9
—80				80	42		13.5		7		54		1.5	5.1	10
—SLRA 6—60		12	3	60	22		14.4	26	6.6		39	0.3	1.4	1.3	11
A40—SLSA 8—70	8	11	1.5	70	22	28	13.4	26	8.6	24	49	0.3	1.6	1.6	12
—90				90	42		15.5				64		1.8	3.5	13
—SLRA 8—60		14	3	60	22	18	16.4				39		1.5	1.0	14
A40—SLSA10—70	10	13	1.5	70	22	28	15.4	26	10.6	30	49	0.3	1.7	1.3	15
—90				90	42		17.5				64		1.9	2.6	16
—SLRA10—65		16	3	65	22	23	18.4				44		1.6	0.9	17
A40—SLRA12—65	12	20	4	65	22	23	22.4	30	12.6	30	44	0.3	1.7	0.7	18
A40—SLRA16—65	16	26	5	65	22	23	28.4	33.5	16.6	32	44	0.4	2.0	0.5	19
A40—SLRA20—70	20	32	6	70	50	—	33.5	—	20.6	38	49	0.4	2.4	0.6	20

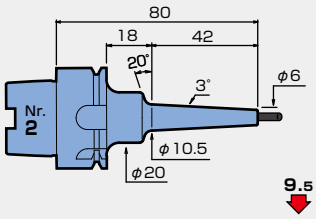
HSK-A40 Maßstäbliches Modell S=1:3

φ3

A40—SLSA3—60

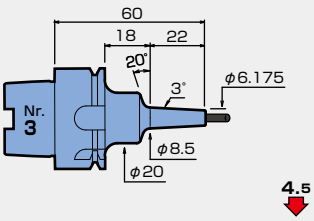


A40—SLSA3—80

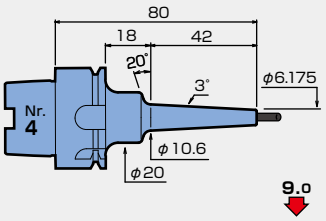


φ3.175

A40—SLSA3.175 —60

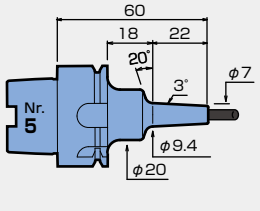


A40—SLSA3.175—80

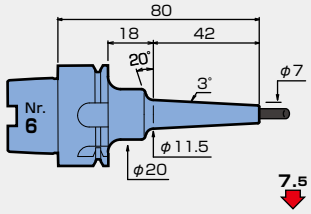


φ4

A40—SLSA4—60

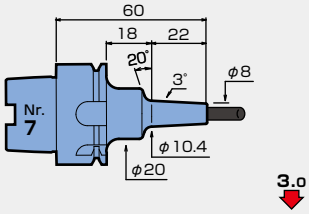


A40—SLSA4—80

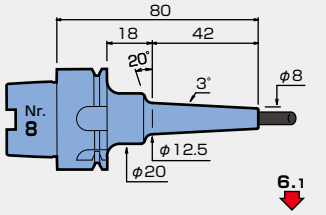


φ5

A40—SLSA5—60

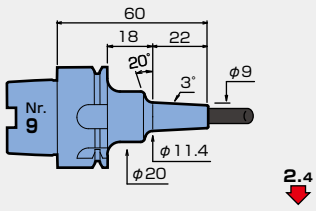


A40—SLSA5—80

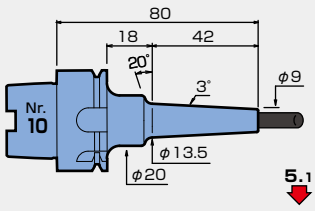


φ6

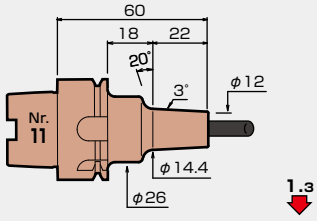
A40–SLSA6–60



A40–SLSA6–80

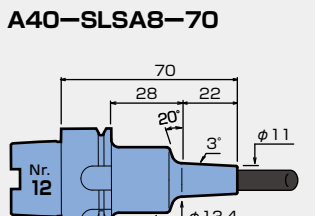


A40–SLRA6–60

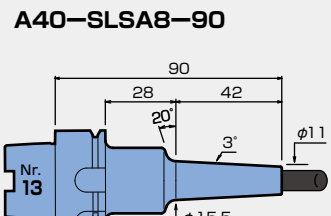


φ8

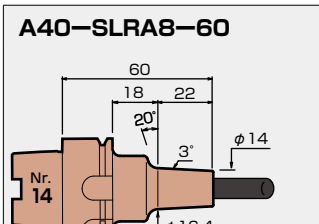
A40–SLSA8–70



A40–SLSA8–90

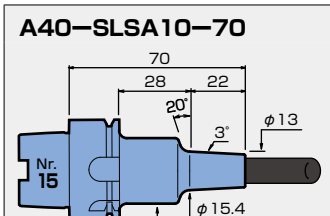


A40–SLRA8–60

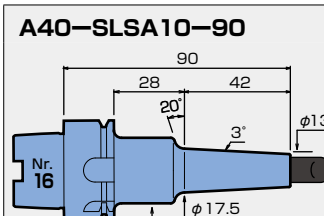


φ10

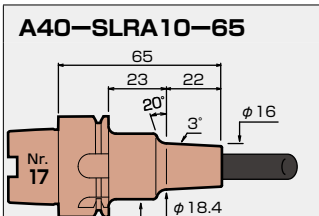
A40–SLSA10–70



A40–SLSA10–90

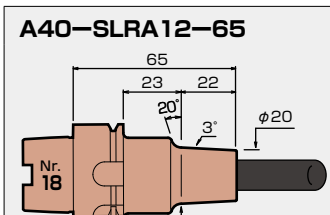


A40–SLRA10–65



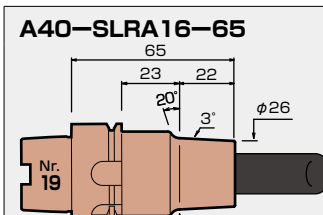
φ12

A40–SLRA12–65



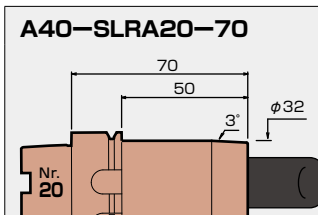
φ16

A40–SLRA16–65



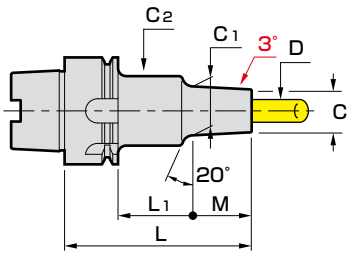
φ20

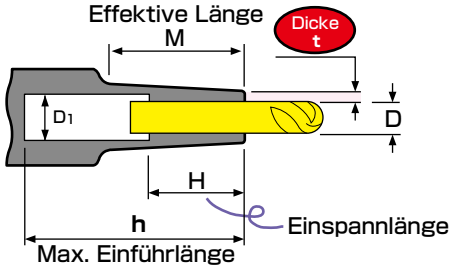
A40–SLRA20–70



BROTHER
TC-32B QT

MORI SEIKI
NX2000 DCG

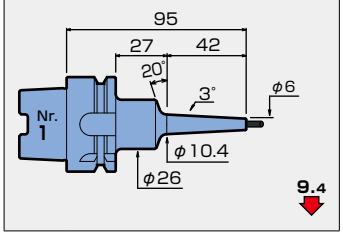




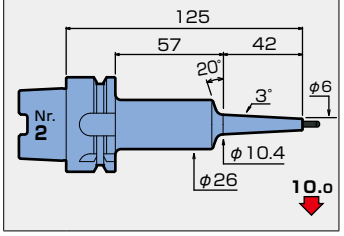
CODE	φD	φC	Dicke t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Maßstäbliches Modell
A50 —SLSA 3— 95—M42	3	6	1.5	95	42	27	10.4	26	4	9	69	0.5	5.8	9.4	1
—125—M42				125		57					100	0.6	6.5	10.0	2
—SLRA 3— 75—M22		7.5	2.25	75	22	27	9.8				49	0.5	6.2	2.8	3
— 95—M42				95	42		11.9				69		6.6	5.4	4
—125—M42				125		57					100	0.6	7.3	6.0	5
A50 —SLSA 4— 95—M42	4	7	1.5	95	42	27	11.4	26	5	12	69	0.5	7.0	7.3	6
—125—M42				125		57					100	0.6	7.7	8.0	7
—SLRA 4— 75—M22		10	3	75	22	27	12.3				49	0.5	6.3	1.7	8
— 95—M42				95	42		14.4				69		7.0	3.1	9
—125—M42				125		57					99	0.6	7.7	3.8	10
A50 —SLSA 6— 95—M42	6	9	1.5	95	42	27	13.4	26	7	18	69	0.5	7.3	4.9	11
—125—M42				125		57					100	0.6	8.0	5.6	12
—SLRB 6— 75—M22		14	4	75	22	27	16.3	36	8		49		7.2	1.0	13
— 95—M42				95	42		18.4				69		8.9	1.6	14
—125—M42				125		57					99	0.8	10.2	1.8	15
A50 —SLSA 8— 95—M42	8	11	1.5	95	42	27	15.4	36	9	24	69	0.6	9.3	3.2	16
—125—M42				125		57					98	0.9	11.8	3.5	17
—SLRB 8— 75—M22		18	5	75	22	27	20.3		10		49	0.6	7.9	0.7	18
— 95—M42				95	42		22.4				69	0.7	10.5	1.1	19
—125—M42				125		57					99	0.9	11.8	1.3	20
A50 —SLSA10— 95—M42	10	13	1.5	95	42	27	17.4	36	11	30	69	0.6	10.7	2.3	21
—125—M42				125		57					98	0.8	12.1	2.6	22
—SLRB10— 75—M22		22	6	75	22	27	24.3		12		49	0.6	8.3	0.6	23
— 95—M42				95	42		26.4				69	0.7	11.9	0.8	24
—125—M42				125		57					98	0.9	13.3	1.1	25
A50M—SLRB12— 75—M22	12	26	7	75	22	27	28.3	49	12.6	30	51	0.8	6.2	0.4	26
— 95—M42				95	42		30.4				71	0.9	6.3	0.6	27
—125—M42				125		57			14		96	1.2	22.9	0.7	28
A50M—SLRB16— 75—M22	16	32	8	75	22	27	34.3	49	16.6	32	51	0.8	6.3	0.3	29
—105—M22				105		57			18		76	1.1	19.0	0.4	30
A50M—SLRB20— 75—M22	20	38	9	75	22	27	40.3	49	20.6	40	51	0.8	6.4	0.3	31
—105—M22				105		57			22		76	1.2	15.1	0.4	32

φ3

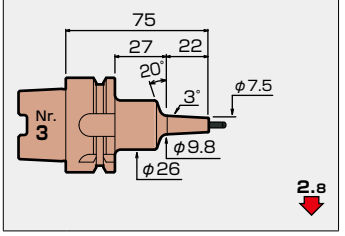
A50–SLSA3–95–M42



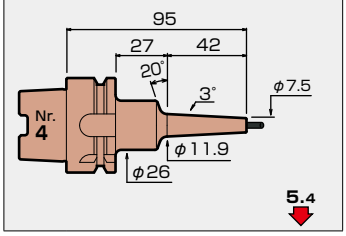
A50–SLSA3–125–M42



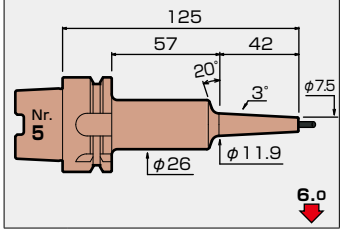
A50–SLRA3–75–M22



A50–SLRA3–95–M42

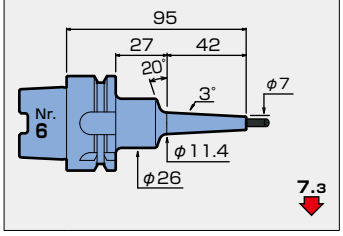


A50–SLRA3–125–M42

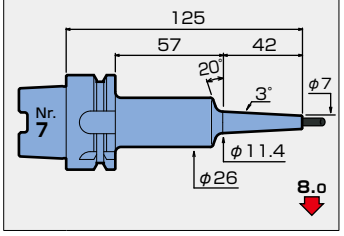


φ4

A50–SLSA4–95–M42



A50–SLSA4–125–M42



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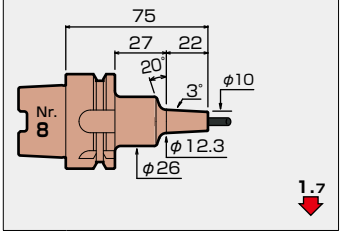

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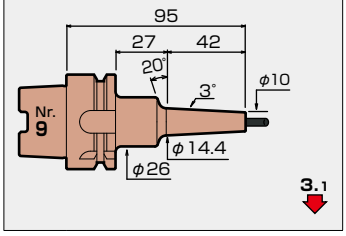

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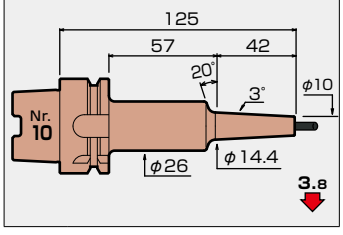
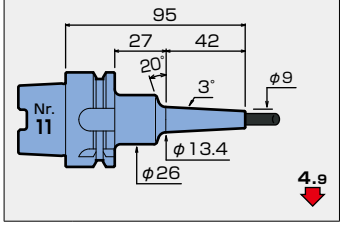


φ6

A50–SLSA6–95–M42



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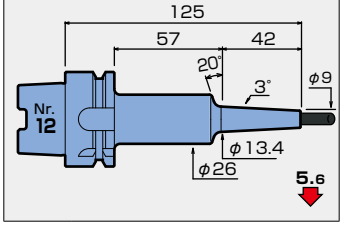

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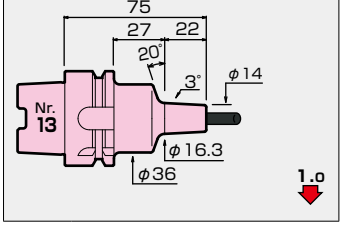

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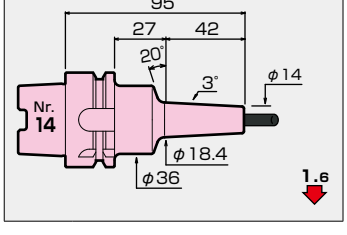

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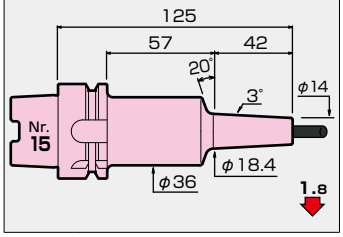
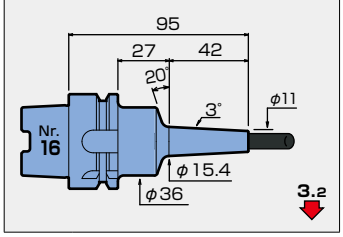


φ8

A50—SLSA8—95—M42



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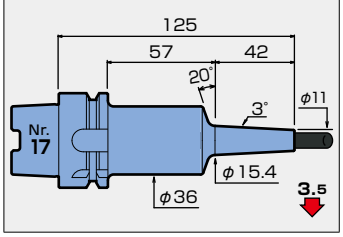

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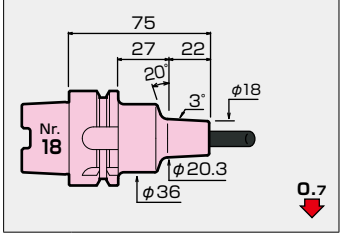
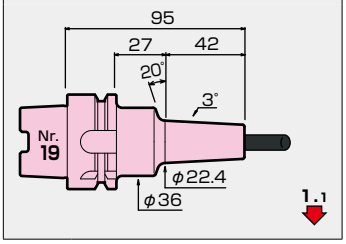


A50—SLRB8—95—M42



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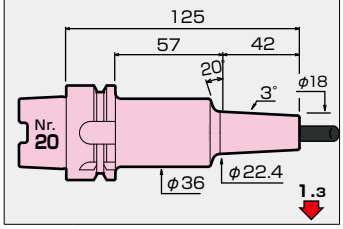
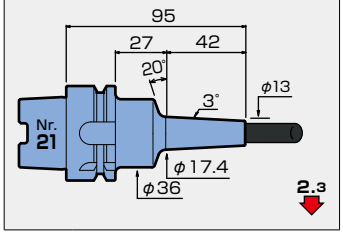


φ10

A50—SLSA10—95—M42



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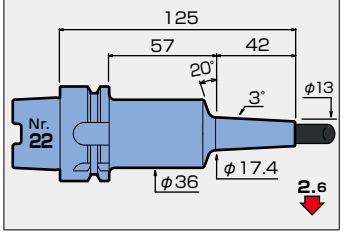
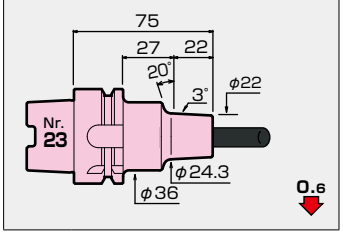


A50—SLRB10—75—M22



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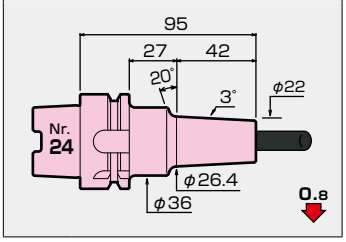
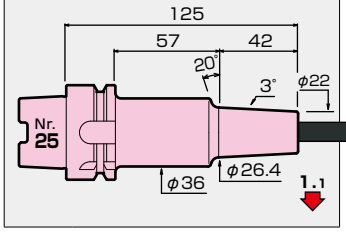
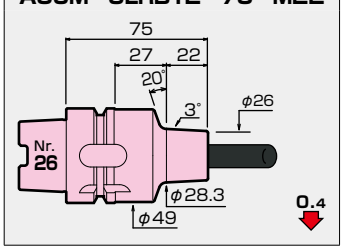


A50—SLRB10—125—M42

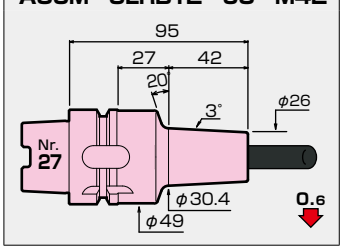


φ12

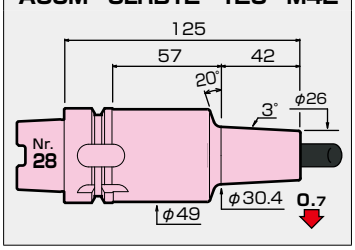
A50M—SLRB12—75—M22



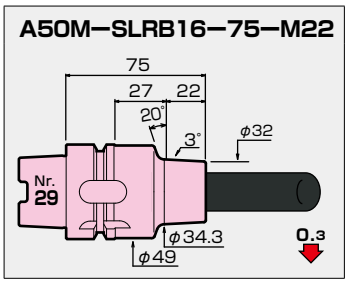
A50M—SLRB12—95—M42

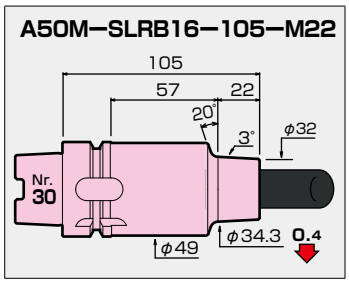


A50M—SLRB12—125—M42

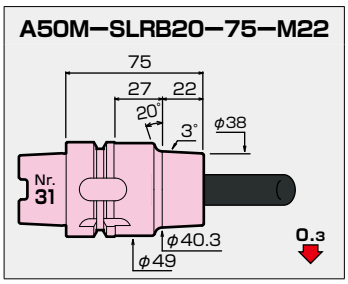


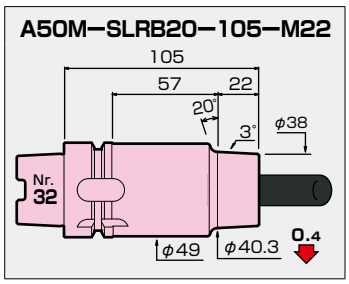
φ16

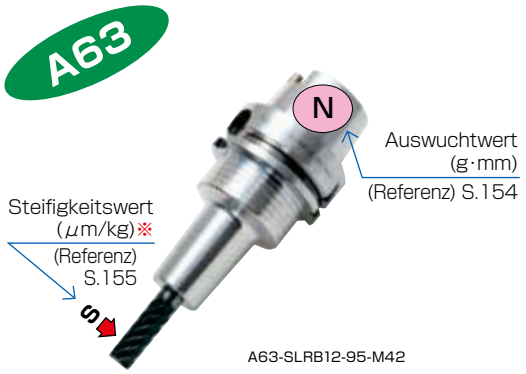

A50M–SLRB16–75–M22
75
27
22
20°
3°
φ32
Nr.
29
φ34.3
φ49
0.3


A50M–SLRB16–105–M22
105
57
22
20°
3°
φ32
Nr.
30
φ49
φ34.3
0.4

φ20


A50M–SLRB20–75–M22
75
27
22
20°
3°
φ38
Nr.
31
φ40.3
φ49
0.3


A50M–SLRB20–105–M22
105
57
22
20°
3°
φ38
Nr.
32
φ49
φ40.3
0.4



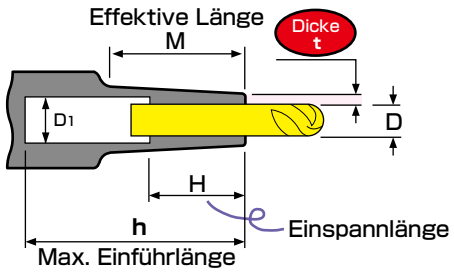


Abb.1

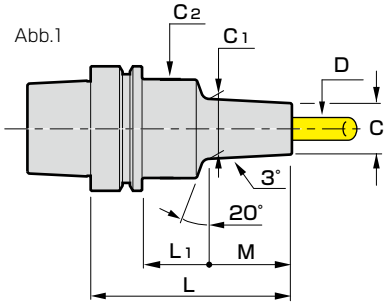
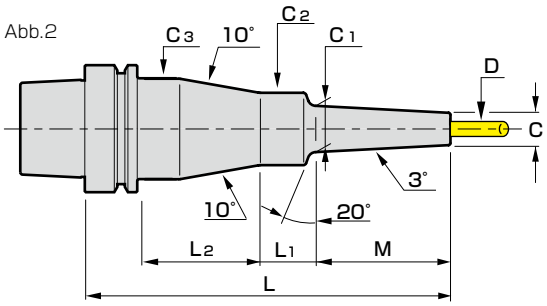


Abb.2



CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A63–SLSA 3– 95–M 42	1	3	6		95	42	27	—	10.4	26	—	4	9	70	0.7	8.1	9.3	1
–120–M 67					120	67			13					95	0.8	9.2	14.9	4
–125–M 42					125	42	57		10.4					100	0.9	8.2	9.6	2
–150–M 67					150	67			13					125		9.3	15.9	5
–M 97				1.5		97	27		16.2						0.8	10.5	20.7	7
–155–M 42	2				155	42	33	54	10.4		40			130	1.2	8.4	9.9	3
–180–M 67					180	67			13					155		9.6	15.8	6
–M 97	1					97	57	—	16.2		—				0.9	10.6	22.2	8
–210–M 97	2				210		33	54			40			185	1.2	10.8	22.1	9
–SLRA 3– 75–M 22	1	3	7.5		75	22	27	—	9.8	26	—	5	9	50	0.7	8.4	2.8	10
– 95–M 42					95	42			11.9					70	0.8	8.9	5.4	13
–105–M 22					105	22	57		9.8					80	0.9	8.6	3.2	11
–120–M 67					120	67	27		14.5					95	0.8	9.6	8.9	16
–125–M 42					125	42	57		11.9					100	0.9	9.0	6.0	14
–135–M 22	2				135	22	33	54	9.8		40			110	1.1	8.8	3.2	12
–150–M 67	1				150	67	57	—	14.5		—			125	0.9	9.8	9.8	17
–M 97				2.25		97	27		17.7						0.8	10.6	12.9	19
–155–M 42	2				155	42	33	54	11.9		40			130	1.2	9.2	6.0	15
–180–M 67					180	67			14.5					155		10.0	9.8	18
–M 97	1					97	57	—	17.7		—				0.9	10.8	14.4	20
–M127						127	27		20.8	36					1.0	12.6	15.7	22
–210–M 97	2				210	97	33	54	17.7	26	40			185	1.2	11.0	14.3	21
–M127	1					127	57	—	20.8	36	—					12.8	16.2	23
–240–M127	2				240		28	59			50			215	1.7	13.2	16.3	24
–SLFB 3– 75–M 22	1	3	9.5		75	22	27	—	11.8	26	—	5	9	50	0.7	8.1	1.9	25
– 95–M 42					95	42			13.9					70	0.8	8.5	3.3	28
–105–M 22					105	22	57		11.8					80	0.9	8.2	2.3	26
–120–M 67					120	67	27		16.5					95	0.8	9.7	5.3	31
–125–M 42				3.25	125	42	57		13.9					100	0.9	8.7	3.8	29
–135–M 22	2				135	22	33	54	11.8		40			110	1.2	8.5	2.3	27
–150–M 67	1				150	67	57	—	16.5		—			125	0.9	9.8	6.3	32
–155–M 42	2				155	42	33	54	13.9		40			130	1.2	8.9	3.8	30
–180–M 67					180	67			16.5					155		10.0	6.3	33

A63

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A63−SLSA 4− 95−M 42	1	4	7		95	42	27	—	11.4	26	—	5	12	70	0.8	9.2	7.3	34
−120−M 67					120	67			14					95			11.9	37
−125−M 42					125	42	57		11.4					100	0.9	9.4	7.9	35
−150−M 67					150	67			14					125			12.8	38
−M 97				1.5		97	27		17.2						0.8	10.6	16.7	40
−155−M 42	2				155	42	33	54	11.4		40			130	1.2	9.6	7.9	36
−180−M 67					180	67			14					155			12.8	39
−M 97	1					97	57	—	17.2		—				0.9	10.8	18.2	41
−210−M 97	2				210		33	54			40			185	1.2	11.0	18.1	42
−SLRA 4− 75−M 22	1	4	10		75	22	27	—	12.3	26	—	6	12	50	0.7	8.6	1.7	43
− 95−M 42					95	42			14.4					70	0.8	9.2	3.1	46
−105−M 22					105	22	57		12.3					80	0.9	8.7	2.1	44
−120−M 67					120	67	27		17					95	0.8	10.3	5.1	49
−125−M 42					125	42	57		14.4					100	0.9	9.3	3.7	47
−135−M 22	2				135	22	33	54	12.3		40			110	1.2	8.9	2.1	45
−150−M 67	1				150	67	57	—	17		—			125	0.9	10.4	6.1	50
−M 97				3		97	27		20.2							11.7	7.7	52
−155−M 42	2				155	42	33	54	14.4		40			130	1.2	9.6	3.7	48
−180−M 67					180	67			17					155		10.7	6.1	51
−M 97	1					97	57	—	20.2		—				1.0	11.8	9.2	53
−M127						127	27		23.3	36						14.8	9.3	55
−210−M 97	2				210	97	33	54	20.2	26	40			185	1.3	12.1	9.1	54
−M127	1					127	57	—	23.3	36	—				1.2	15.1	9.9	56
−240−M127	2				240		27	59			50			215	1.7	15.4		57
−SLFB 4− 75−M 22	1	4	12		75	22	27	—	14.3	26	—	6	12	50	0.8	8.4	1.3	58
− 95−M 42					95	42			16.4					70		9.0	2.2	61
−105−M 22					105	22	57		14.3					80	0.9	8.5	1.7	59
−120−M 67					120	67	27		19					95	0.8	10.3	3.5	64
−125−M 42				4	125	42	57		16.4					100	0.9	9.1	2.8	62
−135−M 22	2				135	22	37	54	14.3		40			110	1.2	8.7	1.7	60
−150−M 67	1				150	67	57	—	19		—			125	0.9	10.4	4.5	65
−155−M 42	2				155	42	33	54	16.4		40			130	1.2	9.4	2.8	63
−180−M 67					180	67			19					155		10.6	4.5	66
A63−SLSA 6− 95−M 42	1	6	9		95	42	27	—	13.4	26	—	7	18	70	0.8	9.5	4.8	67
−120−M 67					120	67			16					95		11.1	7.9	70
−125−M 42					125	42	57		13.4					100	0.9	9.7	5.5	68
−150−M 67					150	67			16					125		11.2	9.1	71
−M 97				1.5		97	27		19.2	36						13.4	11.0	73
−155−M 42	2				155	42	33	54	13.4	26	40			130	1.2	9.9	5.5	69
−180−M 67					180	67			16					155		11.5	9.0	72
−M 97	1					97	57	—	19.2	36	—				1.1	13.6	11.4	74
−210−M 97	2				210		28	59			50			185	1.6	14.0	11.5	75
−SLSB 6− 95−M 42	1	6	10		95	42	27	—	14.4	26	—	8	18	70	0.8	10.5	3.8	76
−120−M 67					120	67			17					95		12.6	6.3	79
−125−M 42					125	42	57		14.4					100	0.9	10.6	4.5	77
−150−M 67					150	67			17					125		12.7	7.4	80
−M 97						97	27		20.2	36						15.4	8.9	82
−155−M 42	2				155	42	34	54	14.4	26	40			130	1.2	10.9	4.5	78
−180−M 67					180	67			17					155		12.9	7.4	81
−M 97	1			2		97	57	—	20.2	36	—				1.1	15.7	9.3	83
−M127						127	27		23.3						1.0	17.9	11.4	85
−210−M 97	2				210	97	28	59	20.2		50			185	1.6	16.0	9.3	84
−M127	1					127	57	—	23.3		—				1.2	18.2	12.0	86
−M157						157	27		26.5						1.1	20.4	13.6	88
−240−M127	2				240	127	28	59	23.3		50			215	1.7	18.5	12.1	87
−M157	1					157	57	—	26.5		—				1.3	20.7	14.5	89
−270−M157	2				270		28	59			50			245	1.8	21.0		90

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A63–SLRB 6– 75–M 22	1	6	14		75	22	27	—	16.3	36	—	8	18	50	0.8	9.3	0.9	91
– 95–M 42					95	42			18.4					70	0.9	10.9	1.6	94
–105–M 22					105	22	57		16.3					80	1.0	9.5	1.1	92
–120–M 67					120	67	27		21					95	0.9	13.0	2.5	97
–125–M 42				4	125	42	57		18.4					100	1.1	11.2	1.8	95
–135–M 22	2				135	22	28	59	16.3		50			110	1.6	9.9	1.1	93
–150–M 67	1				150	67	57	—	21		—			125	1.1	13.2	2.8	98
–155–M 42	2				155	42	28	59	18.4		50			130	1.6	11.5	1.8	96
–180–M 67					180	67			21					155		13.6	2.9	99
–SLFB 6– 75–M 22	1	6	14		75	22	27	—	16.3	36	—	8	18	50	0.8	9.3	0.9	100
– 95–M 42					95	42			18.4					70	0.9	10.9	1.6	103
–105–M 22					105	22	57		16.3					80	1.0	9.5	1.1	101
–120–M 67					120	67	27		21					95	0.9	13.0	2.5	106
–125–M 42				4	125	42	57		18.4					100	1.1	11.2	1.8	104
–135–M 22	2				135	22	28	59	16.3		50			110	1.6	9.9	1.1	102
–150–M 67	1				150	67	57	—	21		—			125	1.1	13.2	2.8	107
–155–M 42	2				155	42	28	59	18.4		50			130	1.6	11.5	1.8	105
–180–M 67					180	67			21					155		13.6	2.9	108
A63–SLSA 8– 95–M 42	1	8	11		95	42	27	—	15.4	36	—	9	24	70	0.8	11.4	3.2	109
–120–M 67					120	67			18					95	0.9	14.0	5.4	112
–125–M 42					125	42	57		15.4					100	1.0	11.6	3.4	110
–150–M 67					150	67			18					125	1.1	14.2	5.7	113
–M 97				1.5		97	27		21.2						0.9	17.1	7.8	115
–155–M 42	2				155	42	28	59	15.4		50			130	1.5	12.0	3.4	111
–180–M 67					180	67			18					155	1.6	14.6	5.7	114
–M 97	1					97	57	—	21.2		—				1.1	17.4	8.3	116
–210–M 97	2				210		28	59			50			185	1.6	17.7		117
–SLSB 8– 95–M 42	1	8	13		95	42	27	—	17.4	36	—	10	24	70	0.8	12.5	2.1	118
–120–M 67					120	67			20					95	0.9	15.7	3.5	121
–125–M 42					125	42	57		17.4					100	1.1	12.7	2.3	119
–150–M 67					150	67			20					125		15.9	3.9	122
–M 97						97	27		23.2						1.0	19.5	5.2	124
–155–M 42	2				155	42	28	59	17.4		50			130	1.6	13.1	2.3	120
–180–M 67					180	67			20					155		16.3	3.9	123
–M 97	1			2.5		97	57	—	23.2		—				1.2	19.8	5.7	125
–180–M127						127	27		26.3						1.1	23.4	7.0	127
–210–M 97	2				210	97		59	23.2		50			185	1.7	20.2	5.7	126
–M127	1					127	57	—	26.3		—				1.3	23.7	7.7	128
–M157						157	27		29.5						1.2	27.3	8.5	130
–240–M127	2				240	127	28	59	26.3		50			215	1.8	24.0	7.7	129
–M157	1					157	57	—	29.5		—				1.4	27.5	9.4	131
–270–M157	2				270		28	59			50			245	1.9	27.9	9.5	132
–SLRB 8– 75–M 22	1	8	18		75	22	27	—	20.3	36	—	10	24	50	0.9	10.0	0.7	133
– 95–M 42					95	42			22.4					70		12.5	1.0	136
–105–M 22					105	22	57		20.3					80	1.1	10.2	0.8	134
–120–M 67					120	67	27		25					95	1.0	15.7	1.6	139
–125–M 42				5	125	42	57		22.4					100	1.1	12.8	1.2	137
–135–M 22	2				135	22	28	59	20.3		50			110	1.6	10.6	0.8	135
–150–M 67	1				150	67	57	—	25		—			125	1.2	16.0	1.9	140
–155–M 42	2				155	42	28	59	22.4		50			130	1.6	13.2	1.3	138
–180–M 67					180	67			25					155	1.7	16.4	2.0	141
–SLFB 8– 75–M 22	1	8	18		75	22	27	—	20.3	36	—	10	24	50	0.9	10.0	0.7	142
– 95–M 42					95	42			22.4					70		12.5	1.0	145
–105–M 22					105	22	57		20.3					80	1.1	10.2	0.8	143
–120–M 67					120	67	27		25					95	1.0	15.7	1.6	148
–125–M 42				5	125	42	57		22.4					100	1.1	12.8	1.2	146
–135–M 22	2				135	22	28	59	20.3		50			110	1.6	10.6	0.8	144
–150–M 67	1				150	67	57	—	25		—			125	1.2	16.0	1.9	149
–155–M 42	2				155	42	28	59	22.4		50			130	1.6	13.2	1.3	147
–180–M 67					180	67			25					155	1.7	16.4	2.0	150

A63

A63

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A63−SLSA10− 95−M 42	1	10	13		95	42	27	—	17.4	36	—	11	30	68	0.8	12.8	2.3	151
−120−M 67					120	67			20					93	0.9	16.6	4.0	154
−125−M 42					125	42	57		17.4					98	1.0	13.0	2.5	152
−150−M 67					150	67			20					123	1.1	16.9	4.3	155
−M 97				1.5		97	27		23.2						1.0	21.3	5.9	157
−155−M 42	2				155	42	28	59	17.4		50			128	1.6	13.4	2.5	153
−180−M 67					180	67			20					153		17.3	4.4	156
−M 97	1					97	57	—	23.2		—				1.2	21.6	6.4	158
−210−M 97	2				210		28	59			50			183	1.7	21.9	6.5	159
−SLSB10− 95−M 42	1	10	16		95	42	27	—	20.4	36	—	12	30	68	0.9	13.9	1.4	160
−120−M 67					120	67			23					93		18.5	2.4	163
−125−M 42					125	42	57		20.4					98	1.1	14.2	1.6	161
−150−M 67					150	67			23					123		18.8	2.7	164
−M 97						97	27		26.2						1.0	24.0	3.5	166
−155−M 42	2				155	42	28	59	20.4		50			128	1.6	14.6	1.7	162
−180−M 67					180	67			23					153		19.2	2.7	165
−M 97	1			3		97	57	—	26.2		—				1.2	24.3	4.1	167
−M127						127	27		29.3	50					1.3	30.2	4.4	169
−210−M 97	2				210	97	28	59	26.2	36	50			180	1.7	24.7	4.1	168
−M127	1					127	57	—	29.3	50	—				1.6	31.0	4.4	170
−M157						157	27		32.5						1.4	35.7	5.5	172
−240−M127					240	127	87		29.3					215	2.0	31.8	4.9	171
−M157						157	57		32.5						1.8	36.5	5.8	173
−270−M157					270		87							245	2.1	37.4	6.1	174
−SLRB10− 75−M 22	1	10	22		75	22	27	—	24.3	36	—	12	30	48	0.9	10.3	0.5	175
− 95−M 42					95	42			26.4					68		14.0	0.8	178
−105−M 22					105	22	57		24.3					78	1.1	10.6	0.7	176
−120−M 67					120	67	27		29					93	1.0	18.6	1.2	181
−125−M 42				6	125	42	57		26.4					98	1.2	14.2	1.0	179
−135−M 22	2				135	22	28	59	24.3		50			108	1.6	10.9	0.7	177
−150−M 67	1				150	67	57	—	29		—			123	1.3	18.9	1.5	182
−155−M 42	2				155	42	28	59	26.4		50			128	1.7	14.6	1.0	180
−180−M 67					180	67			29					153	1.8	19.2	1.6	183
−SLFB10− 75−M 22	1	10	22		75	22	27	—	24.3	36	—	12	30	48	0.9	10.3	0.5	184
− 95−M 42					95	42			26.4					68		14.0	0.8	187
−105−M 22					105	22	57		24.3					78	1.1	10.6	0.7	185
−120−M 67					120	67	27		29					93	1.0	18.6	1.2	190
−125−M 42				6	125	42	57		26.4					98	1.2	14.2	1.0	188
−135−M 22	2				135	22	28	59	24.3		50			108	1.6	10.9	0.7	186
−150−M 67	1				150	67	57	—	29		—			123	1.3	18.9	1.5	191
−155−M 42	2				155	42	28	59	26.4		50			128	1.7	14.6	1.0	189
−180−M 67					180	67			29					153	1.8	19.2	1.6	192
A63−SLSA12− 95−M 42	1	12	15		95	42	27	—	19.4	36	—	13	30	68	0.8	15.2	1.8	193
−120−M 67					120	67			22					93	0.9	20.6	3.2	196
−125−M 42					125	42	57		19.4					98	1.0	15.4	2.1	194
−150−M 67					150	67			22					123	1.1	20.8	3.6	197
−M 97				1.5		97	27		25.2							27.5	4.8	199
−155−M 42	2				155	42	28	59	19.4		50			128	1.6	15.8	2.1	195
−180−M 67					180	67			22					153		21.2	3.6	198
−M 97	1					97	57	—	25.2		—				1.3	27.8	5.3	200
−210−M 97	2				210		28	59			50			183	1.8	28.2		201

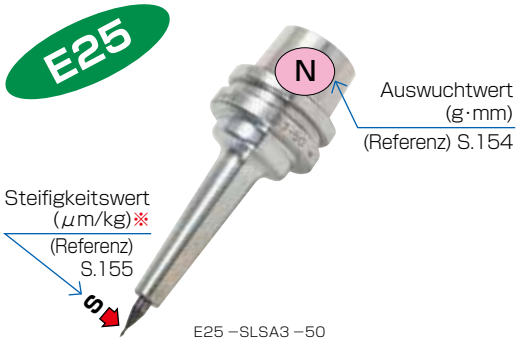
A63

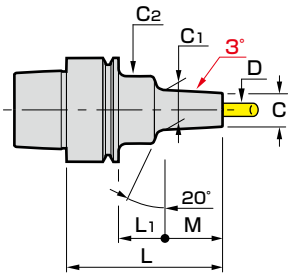
CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A63–SLSB12– 95–M 42	1	12	19		95	42	27	—	23.4	36	—	14	30	68	0.9	16.5	1.1	202
–120–M 67					120	67			26					93	1.0	22.8	1.8	205
–125–M 42					125	42	57		23.4					98	1.1	16.8	1.3	203
–150–M 67					150	67			26					123	1.2	23.1	2.1	206
–M 97						97	27		29.2	50						30.9	2.4	208
–155–M 42	2				155	42	28	59	23.4	36	50			128	1.6	17.2	1.4	204
–180–M 67					180	67			26					153	1.7	23.4	2.2	207
–M 97	1			3.5		97	57	—	29.2	50	—			150	1.6	31.7	2.6	209
–M127						127	27		32.3					153	1.4	38.5	3.2	211
–210–M 97					210	97	87		29.2					180	1.9	32.6	2.8	210
–M127						127	57		32.3						1.7	39.3	3.5	212
–M157						157	27		35.5					183	1.6	46.0	4.0	214
–240–M127					240	127	87		32.3					215	2.1	40.1	3.8	213
–M157						157	57		35.5						1.9	46.8	4.3	215
–270–M157					270		87							245	2.2	47.7	4.7	216
–SLRB12– 75–M 22	1	12	26		75	22	27	—	28.3	50	—	14	30	48	1.0	14.5	0.4	217
– 95–M 42					95	42			30.4					68	1.1	17.2	0.5	220
–105–M 22					105	22	57		28.3					75	1.4	15.3		218
–120–M 67					120	67	27		33					93	1.2	23.5	0.8	223
–125–M 42				7	125	42	57		30.4					95	1.5	18.0	0.6	221
–135–M 22					135	22	87		28.3					105	1.7	16.2		219
–150–M 67					150	67	57		33					120		24.3	0.9	224
–155–M 42					155	42	87		30.4					125	1.8	18.9	0.8	222
–180–M 67					180	67			33					150	1.9	25.2	1.1	225
–SLFB12– 75–M 22	1	12	26		75	22	27	—	28.3	50	—	14	30	48	1.0	14.5	0.4	226
– 95–M 42					95	42			30.4					68	1.1	17.2	0.5	229
–105–M 22					105	22	57		28.3					75	1.4	15.3		227
–120–M 67					120	67	27		33					93	1.2	23.5	0.8	232
–125–M 42				7	125	42	57		30.4					95	1.5	18.0	0.6	230
–135–M 22					135	22	87		28.3					105	1.7	16.2		228
–150–M 67					150	67	57		33					120	1.6	24.3	0.9	233
–155–M 42					155	42	87		30.4					125	1.8	18.9	0.8	231
–180–M 67					180	67			33					150	1.9	25.2	1.1	234
A63–SLSB16– 95–M 42	1	16	24		95	42	27	—	28.4	50	—	18	32	68	1.1	22.7	0.7	235
–120–M 67					120	67			31					93	1.2	33.0	1.1	238
–125–M 42					125	42	57		28.4					95	1.4	23.5	0.8	236
–150–M 67					150	67			31					120	1.5	33.8	1.2	239
–M 97						97	27		34.2					123	1.3	45.5	1.6	241
–155–M 42					155	42	87		28.4					130	1.7	24.4	0.9	237
–180–M 67					180	67			31					155	1.8	34.7	1.4	240
–M 97				4		97	57		34.2						1.6	46.3	1.8	242
–M127						127	27		37.3					153	1.5	57.9	2.2	244
–210–M 97					210	97	87		34.2					185	2.0	47.1	2.1	243
–M127						127	57		37.3						1.8	58.7	2.4	245
–M157						157	27		40.5					183	1.7	70.3	2.7	247
–240–M127					240	127	87		37.3					215	2.2	59.5	2.8	246
–M157						157	57		40.5						2.1	71.1	3.1	248
–270–M157					270		87							245	2.4	72.0	3.5	249
–SLRB16– 75–M 22	1	16	32		75	22	27	—	34.3	50	—	18	32	48	1.1	14.5	0.3	250
– 95–M 42					95	42			36.4					68	1.2	22.8	0.4	253
–105–M 22					105	22	57		34.3					75	1.4	15.3		251
–120–M 67					120	67	27		39					93		33.2	0.6	256
–125–M 42				8	125	42	57		36.4					95	1.6	23.6	0.5	254
–135–M 22					135	22	87		34.3					105	1.7	16.2		252
–150–M 67					150	67	57		39					120		34.0	0.7	257
–155–M 42					155	42	87		36.4					125	1.9	24.5		255
–180–M 67					180	67			39					150	2.1	34.9	0.9	258

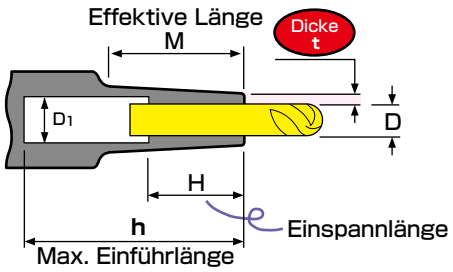
A63

CODE	Abb.	φD	φC	Dicke t	L	M	L_1	L_2	$φC_1$	$φC_2$	$φC_3$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
A63–SLFB16– 75–M 22	1	16	32	8	75	22	27	—	34.3	50	—	18	32	48	1.1	14.5	0.3	259
– 95–M 42					95	42			36.4					68	1.2	22.8	0.4	262
–105–M 22					105	22	57		34.3					75	1.4	15.3		260
–120–M 67					120	67	27		39					93		33.2	0.6	265
–125–M 42					125	42	57		36.4					95	1.6	23.6	0.5	263
–135–M 22					135	22	87		34.3					105	1.7	16.2		261
–150–M 67					150	67	57		39					120		34.0	0.7	266
–155–M 42					155	42	87		36.4					125	1.9	24.5		264
–180–M 67					180	67			39					150	2.1	34.9	0.9	267
A63–SLSB20– 95–M 42	1	20	29	4.5	95	42	27	—	33.4	50	—	22	40	68	1.1	25.4	0.5	268
–120–M 67					120	67			36					93	1.2	40.8	0.8	271
–125–M 42					125	42	57		33.4					95	1.4	26.2	0.6	269
–150–M 67					150	67			36					120	1.6	41.6	1.0	272
–M 97						97	27		39.2					123	1.4	59.3	1.2	274
–155–M 42					155	42	87		33.4					130	1.8	27.1	0.8	270
–180–M 67					180	67			36					155	1.9	42.5	1.2	273
–M 97						97	57		39.2						1.7	60.1	1.4	275
–M127						127	27		42.3					153	1.6	79.1	1.6	277
–210–M 97					210	97	87		39.2					185	2.1	61.0	1.7	276
–M127						127	57		42.3						2.0	79.9	1.9	278
–M157						157	27		45.5					183	1.9	97.6	2.0	280
–240–M127					240	127	87		42.3					215	2.3	80.7	2.3	279
–M157						157	57		45.5						2.2	98.4	2.4	281
–270–M157					270		87							245	2.6	99.3	2.8	282
–SLRB20– 95–M 42	1	20	38	9	95	42	27	—	42.4	50	—	22	40	68	1.3	25.6	0.4	283
–120–M 67					120	67			45					93	1.5	41.0	0.5	286
–125–M 42					125	42	57		42.4					95	1.6	26.4		284
–150–M 67					150	67			45					120	1.9	41.8	0.7	287
–155–M 42					155	42	87		42.4					125	2.0	27.2	0.6	285
–180–M 67					180	67			45					150	2.2	42.7	0.9	288
–SLFB20– 95–M 42	1	20	38	9	95	42	27	—	42.4	50	—	22	40	68	1.3	25.6	0.4	289
–120–M 67					120	67			45					93	1.5	41.0	0.5	292
–125–M 42					125	42	57		42.4					95	1.6	26.4		290
–150–M 67					150	67			45					120	1.9	41.8	0.7	293
–155–M 42					155	42	87		42.4					125	2.0	27.2	0.6	291
–180–M 67					180	67			45					150	2.2	42.7	0.9	294
A63–SLRB25– 95–M 42	1	25	45	10	95	42	27	—	49.7	50	—	26	45	68	1.4	28.7	0.3	295
–125–M 42					125		57							95	1.7	29.5	0.5	296
–155–M 42					155		87							125	2.0	30.4	0.7	297
–SLFB25– 95–M 42	1	25	45	10	95	42	27	—	49.7	50	—	26	45	68	1.4	28.7	0.3	298
–125–M 42					125		57							95	1.7	29.5	0.5	299
–155–M 42					155		87							125	2.0	30.4	0.7	300

HSK-E25 Codetabelle





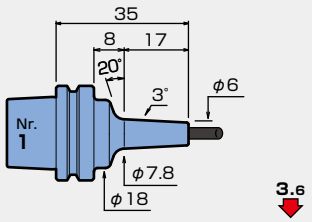


CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
E25–SLSA3–35	3	6	1.5	35	17	8	7.8	18	4	9	29	0.06	0.37	3.6	1
–50				50	32		9.4				44		0.39	7.0	2
–SLRA3–35		7.5	2.25	35	17		9.3				29		0.37	2.3	3
E25–SLSA3.175–35	3.175	6.175	1.5	35	17	8	8	18	4	9	29	0.06	0.37	3.5	4
–50				50	32		9.6				44		0.39	6.6	5
E25–SLSA4–35	4	7	1.5	35	17	8	8.8	18	4.3	12	29	0.06	0.38	2.8	6
–50				50	32		10.4				44		0.4	5.3	7
–SLRA4–35		10	3	35	17		11.8				29		0.38	1.4	8
E25–SLSA5–35	5	8	1.5	35	17	8	9.8	18	5.6	15	26	0.06	0.38	2.2	9
E25–SLSA6–35	6	9	1.5	35	17	8	10.8	18	6.6	18	26	0.05	0.38	1.8	10
–50				50	32		12.4				39	0.07	0.43	3.6	11
–SLRA6–35		12	3	35	17		13.8				26		0.39	1.1	12

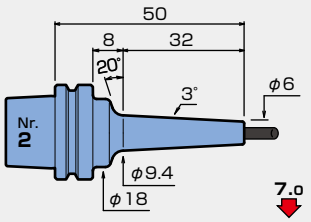
HSK-E25 Maßstäbliches Modell S=1:2

φ3

E25–SLSA3–35



E25–SLSA3–50



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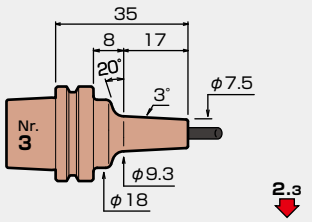
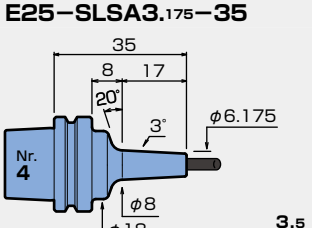


φ3.175

E25–SLSA3.175–35



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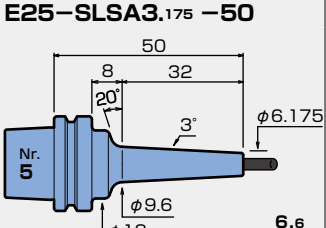

SODICK HIGHTECH
MC430L

ROKU-ROKU
MEGA Ⅲ / NANO-21

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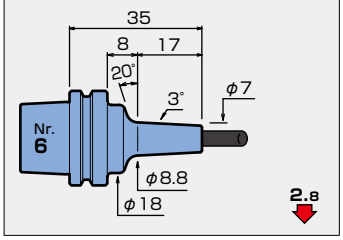
φ4

E25–SLSA4–35



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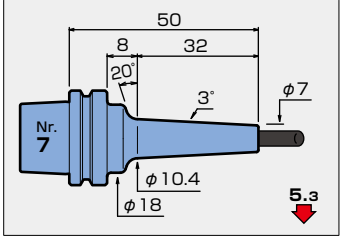

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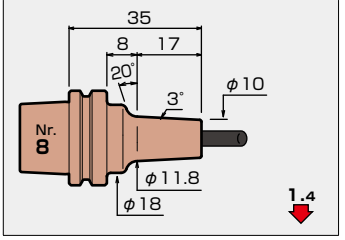
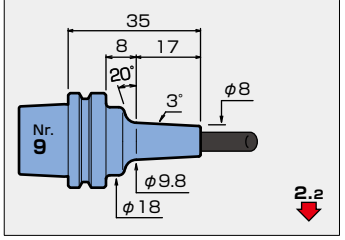


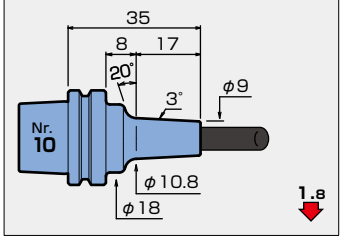
φ5

E25–SLSA5–35

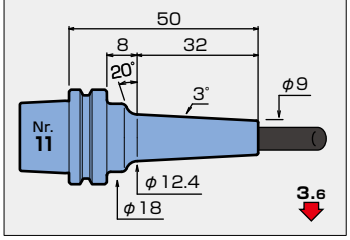


φ6

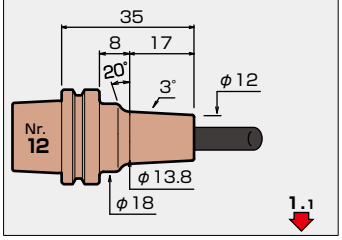
E25–SLSA6–35



E25–SLSA6–50



E25–SLRA6–35



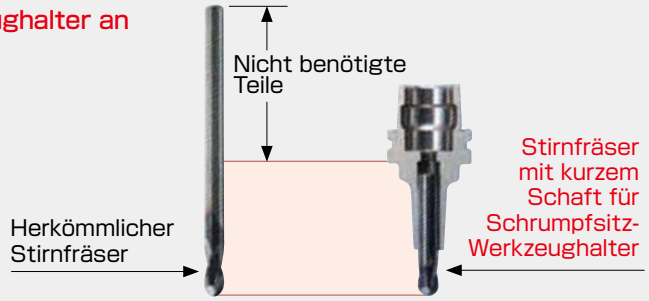
Kurzer Schaftfräser für Schrumpfsitz-Werkzeughalter

Aufgrund ihrer engen Einführtoleranz sind bei Haltern für kleine, ultraschnelle Bearbeitungszentren, wie z.B. HSK-E25 und E32 keine längeren Zerspanungswerkzeuge erforderlich, die bei herkömmlichen Haltern nötig waren.

Wir bieten kurze Schaftfräser für Schrumpfsitz-Werkzeughalter an

Kurzschaft → Minimierung des Werkzeugüberhangs

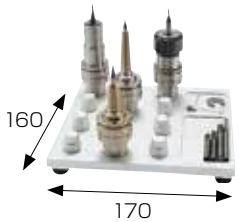
Kurze Werkzeugspannut → Erhöhung der Steifigkeit



Haltergestell

Für platzsparende Lagerung von Haltern. Ablage (zu Kühlungszwecken) von noch warmen Werkzeugen nach der Entnahme. Kann gemeinsam mit E32 verwendet werden.

CODE	Max. Anzahl	
SDT–01	12	E25,E32



Messinstrumentehalter

Beim Zentrieren des Werkstücks benutzen. Spannzange (C10 —6P) und Zentrierstange (ST6 —CEB102) sind ebenfalls erforderlich (separat). Vorgabewerte für das Festziehen von Muttern von Hand.

CODE
E25–CEH10–37

■ **Achtung** • Nicht zum Fräsen und Bohren verwenden.

Reinigungssäbchen

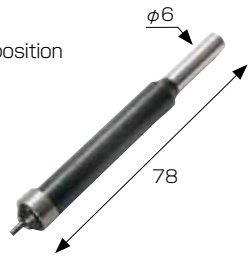
Zum Säubern des Maschinenspindelkegels verwenden. Leder-Reserve. (1 Satz Leder zum Auswechseln ist beigefügt.)

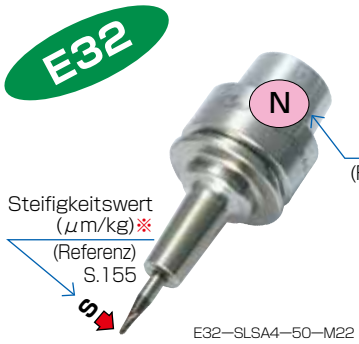
CODE
SCT–E25

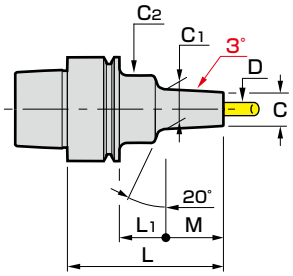
Zentrierstange

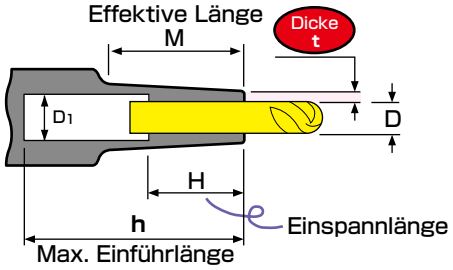
Eine Stange zur Bestimmung der Bezugsposition des zu bearbeitenden Teils.

CODE
ST6–CEB102





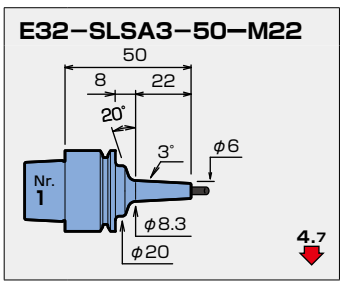


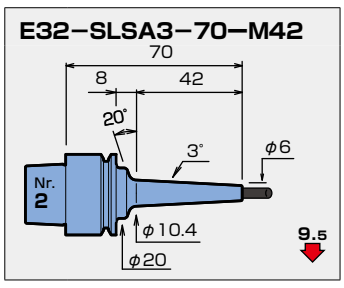


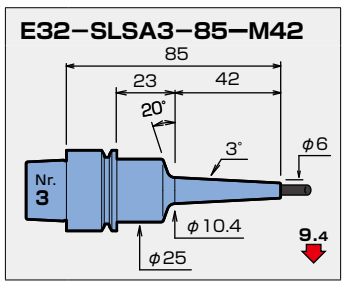
CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h			S	Maßstäbliches Modell
E32−SLSA 3−50−M22	3	6	1.5	50	22	8	8.3	20	4	9	42	0.1	0.4	4.7	1
−70−M42				70	42		10.4				62	0.2		9.5	2
−85−M42				85		23		25			69		0.8	9.4	3
−SLRA 3−50−M22		7.5	2.25	50	22	8	9.8	20			42	0.1	0.4	2.8	4
−70−M42				70	42		11.9				62	0.2		5.3	5
−85−M42				85		23		25			69		0.8	5.5	6
E32−SLSA3.175−50−M22	3.175	6.175	1.5	50	22	8	8.5	20	4	9	42	0.1	0.4	4.4	7
E32−SLSA 4−50−M22	4	7	1.5	50	22	8	9.3	20	5	12	35	0.1	0.4	3.6	8
−70−M42				70	42		11.4				54	0.2		7.3	9
−85−M42				85		23		25			69		0.8	7.4	10
−SLRA 4−50−M22		10	3	50	22	8	12.3	20			35		0.4	1.7	11
−70−M42				70	42		14.4				54		0.5	3.1	12
−85−M42				85		23		25			69		0.9	3.2	13
E32−SLSA 6−70−M42	6	9	1.5	70	42	8	13.4	20	7	18	54	0.2	0.5	4.8	14
−SLRA 6−50−M22		12	3	50	22		14.3	26	6.6		39			1.2	15
−70−M42				70	42		16.4		7		54			2.4	16
−85−M42				85		23		25			69		0.9	2.5	17
E32−SLRA 8−50−M22	8	14	3	50	22	8	16.3	26	8.6	24	39	0.2	0.5	1.0	18
−85−M42				85	42	23	18.4	25	9		69		0.9	2.1	19
E32−SLRA10−55−M22	10	16	3	55	22	13	18.3	26	10.6	30	44	0.2	0.6	0.9	20
E32−SLRA12−55−M22	12	20	4	55	22	13	22.3	26	12.6	30	44	0.2	0.7	0.7	21
E32−SLRA16−55−M35	16	26	5	55	35	—	—	—	16.6	32	44	0.2	0.6	0.7	22

HSK-E32 Maßstäbliches Modell S=1:3

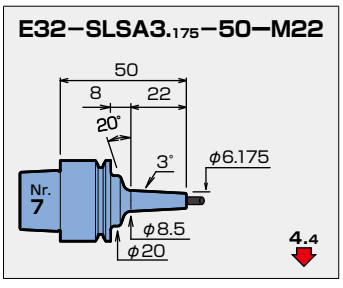
φ3

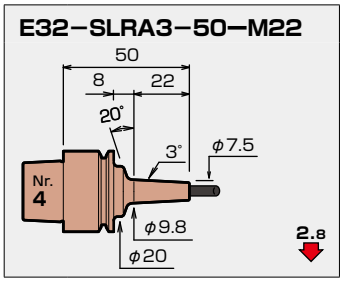


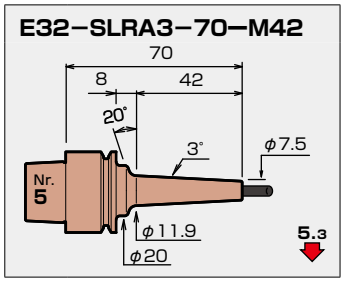


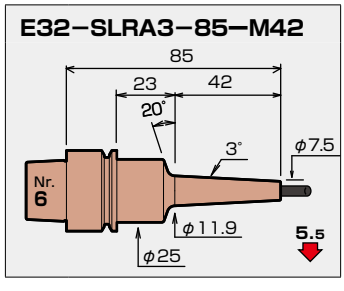


φ3.175



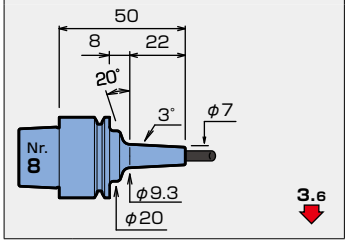




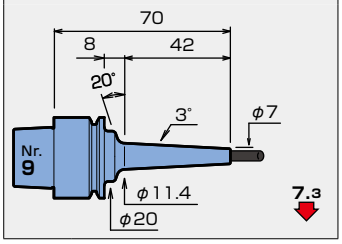


φ4

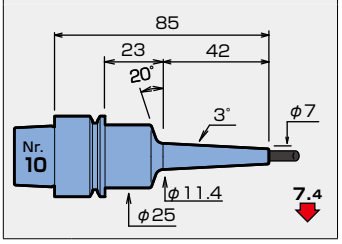
E32–SLSA4–50–M22



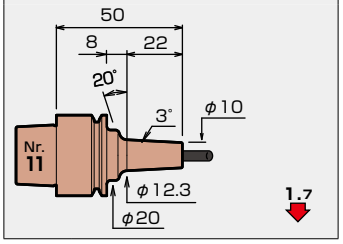
E32–SLSA4–70–M42



E32–SLSA4–85–M42



E32–SLRA4–50–M22



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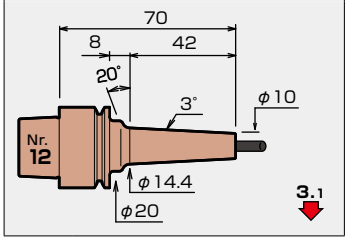

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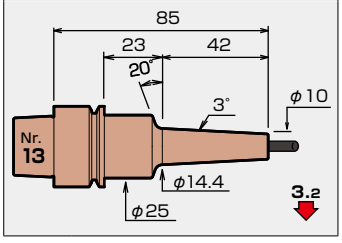
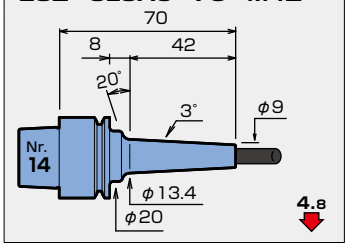
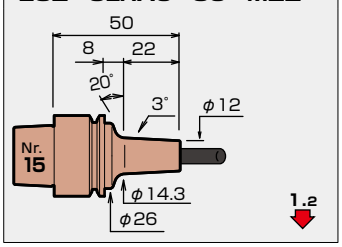


φ6

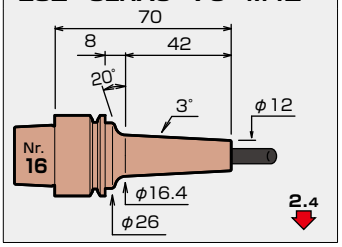
E32–SLSA6–70–M42



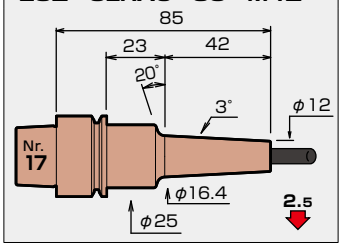
E32–SLRA6–50–M22



E32–SLRA6–70–M42

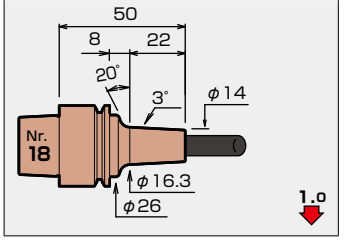


E32–SLRA6–85–M42

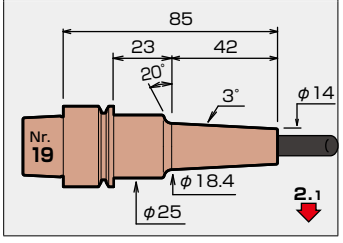


φ8

E32–SLRA8–50–M22

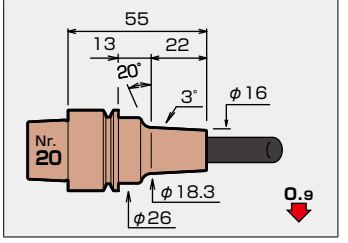


E32–SLRA8–85–M42



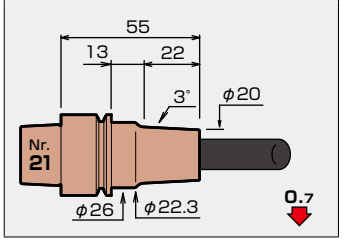
φ10

E32–SLRA10–55–M22



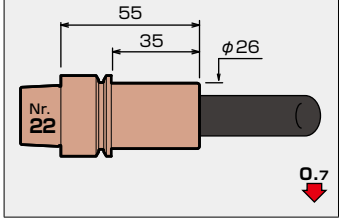
φ12

E32–SLRA12–55–M22



φ16

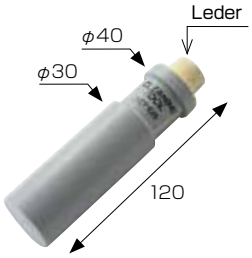
E32–SLRA16–55–M35



Reinigungssäbchen

Zum Säubern des Maschinenspindelkegels verwenden. Leder-Reserve. (1 Satz Leder zum Auswechseln ist beigefügt.)

CODE
SCT–E32



MAKINO
V22 / V33

SODICK HIGHTECH
MC430L / MC650L / HS150L

MORI SEIKI
NVD1500DCG

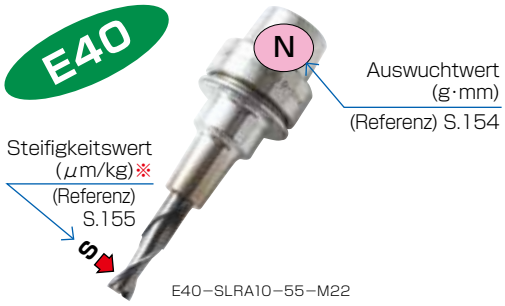
MITSUI SEIKI
VL30

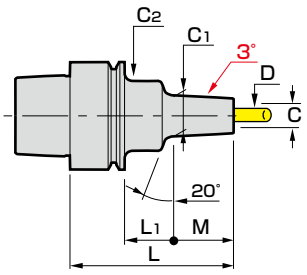
OKK
VD300

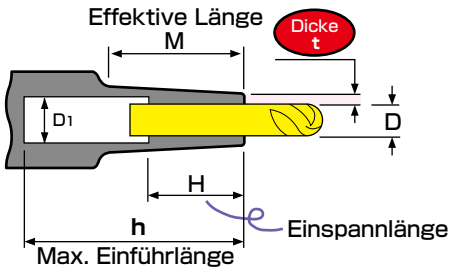
NIPPEI TOYAMA
Zμ3500

OPS-INGERSOLL
OPS600

ROEDERS GMBH
RHP600



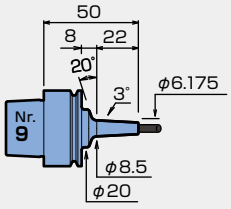




CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
E40–SLSA 3– 50–M22	3	6	1.5	50	22	8	8.3	20	4	9	42	0.2	0.7	4.6	1
– 70–M42				70	42		10.4				62			9.4	2
– 85–M42				85		23		25			69	0.3	1.1	9.3	3
–110–M67				110	67		13				94		2.2	15.0	4
–SLRA 3– 50–M22		7.5	2.25	50	22	8	9.8	20			42	0.2	0.7	2.8	5
– 70–M42				70	42		11.9				62			5.3	6
– 85–M42				85		23		25			69	0.3	1.1	5.4	7
–110–M67				110	67		14.5				94			9.0	8
E40–SLSA3.175– 50–M22	3.175	6.175	1.5	50	22	8	8.5	20	4	9	42	0.2	0.7	4.4	9
E40–SLSA 4– 50–M22	4	7	1.5	50	22	8	9.3	20	5	12	42	0.2	0.7	3.6	10
– 70–M42				70	42		11.4				62			7.2	11
– 85–M42				85		23		25			74	0.3	1.1	7.3	12
–110–M67				110	67		14				99		1.2	11.9	13
–SLRA 4– 50–M22		10	3	50	22	8	12.3	20			42	0.2	0.7	1.6	14
– 70–M42				70	42		14.4				62	0.3		3.0	15
– 85–M42				85		23		25			69		1.1	3.1	16
–110–M67				110	67		17				94		1.2	5.2	17
E40–SLSA 6– 50–M22	6	9	1.5	50	22	8	11.3	20	6.6	18	39	0.2	0.7	2.2	18
– 70–M42				70	42		13.4		7		54			4.7	19
– 85–M42				85		23		25			69	0.3	1.1	4.9	20
–110–M67				110	67		16				94		1.2	8.0	21
–SLRA 6– 50–M22		12	3	50	22	8	14.3	26	6.6		39	0.2	0.7	1.2	22
– 70–M42				70	42		16.4				54	0.3	0.8	2.3	23
– 85–M42				85		23		25	7		69		1.2	2.5	24
–110–M67				110	67		19				94	0.4		4.1	25
E40–SLSA 8– 60–M22	8	11	1.5	60	22	18	13.3	26	8.6	24	49	0.3	1.0	1.5	26
– 80–M42				80	42		15.4				64			3.3	27
–100–M42				100		38		25	9		84		1.5	3.8	28
–SLRA 8– 50–M22		14	3	50	22	8	16.3	26	8.6		39	0.2	0.7	0.9	29
– 85–M42				85	42	23	18.4	25	9		69	0.3	1.2	2.1	30
–100–M42				100		38					84	0.4	1.5	2.4	31
E40–SLSA10– 60–M22	10	13	1.5	60	22	18	15.3	26	10.6	30	49	0.3	1.0	1.2	32
– 80–M42				80	42		17.4				64		1.1	2.4	33
–100–M42				100		38		25	11		89		1.5	3.1	34
–SLRA10– 55–M22		16	3	55	22	13	18.3	26	10.6		44		0.9	0.8	35
– 85–M42				85	42	23	20.4	25	11		64		1.2	1.7	36
–100–M42				100		38						0.4	1.6	2.2	37
E40–SLRA12– 55–M22	12	20	4	55	22	13	22.3	30	12.6	30	44	0.3	1.0	0.6	38
– 85–M42				85	42	23	24.4	32	13		74	0.4	1.6	1.1	39
E40–SLRA16– 55–M22	16	26	5	55	22	13	28.3	34	16.6	32	44	0.3	1.2	0.4	40
E40–SLRA20– 60–M40	20	32	6	60	40	–	34	–	20.6	38	49	0.4	1.6	0.4	41

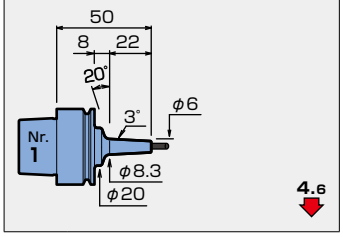
φ3.175

E40–SLSA3.175–50–M22



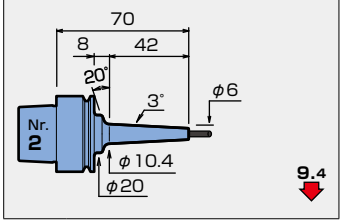
φ3

E40–SLSA3–50–M22



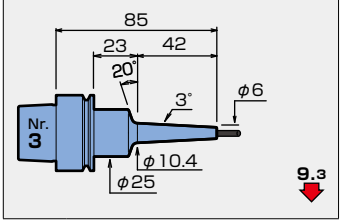
4.6

E40–SLSA3–70–M42



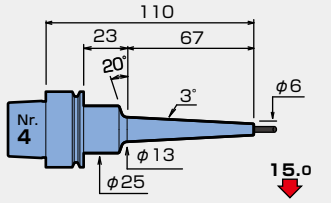
9.4

E40–SLSA3–85–M42



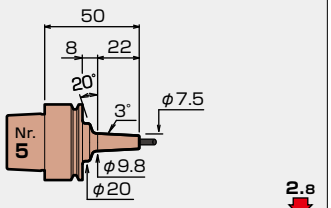
9.3

E40–SLSA3–110–M67



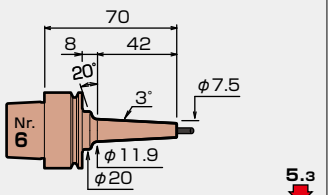
15.0

E40–SLRA3–50–M22



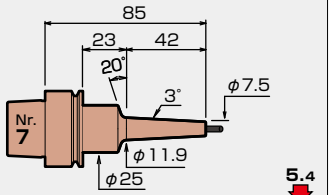
2.8

E40–SLRA3–70–M42



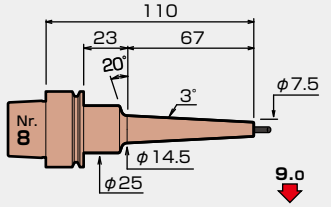
5.3

E40–SLRA3–85–M42



5.4

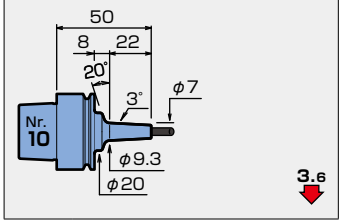
E40–SLRA3–110–M67



9.0

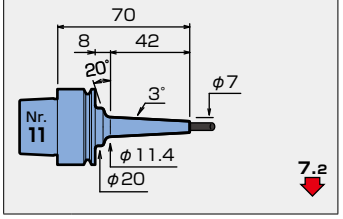
φ4

E40–SLSA4–50–M22



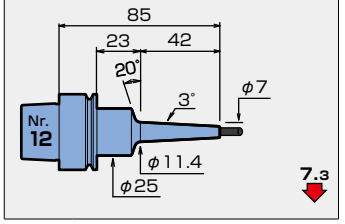
3.6

E40–SLSA4–70–M42



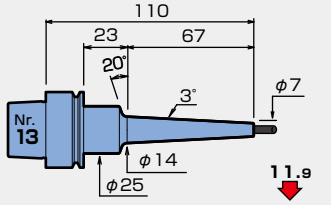
7.2

E40–SLSA4–85–M42



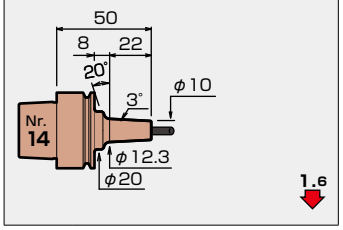
7.3

E40–SLSA4–110–M67



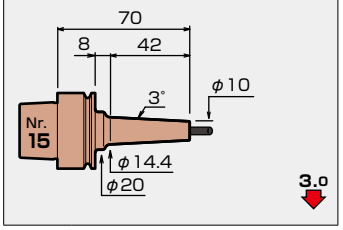
11.9

E40–SLRA4–50–M22



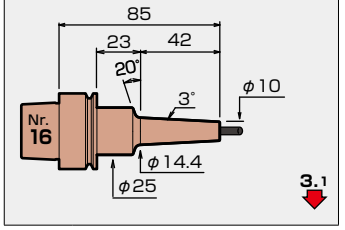
1.6

E40–SLRA4–70–M42



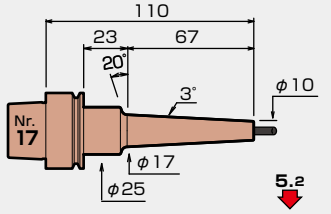
3.0

E40–SLRA4–85–M42



3.1

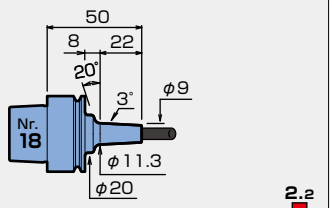
E40–SLRA4–110–M67



5.2

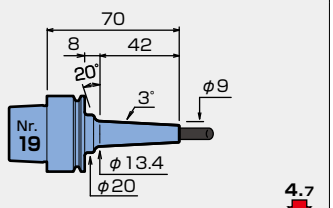
φ6

E40–SLSA6–50–M22



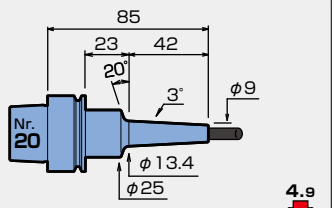
2.2

E40–SLSA6–70–M42



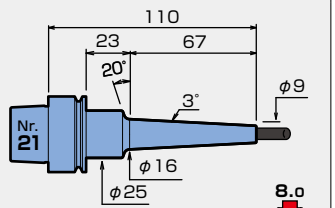
4.7

E40–SLSA6–85–M42



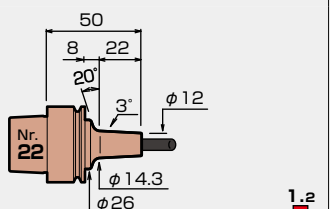
4.9

E40–SLSA6–110–M67



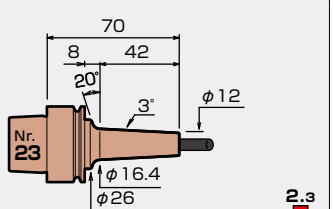
8.0

E40–SLRA6–50–M22



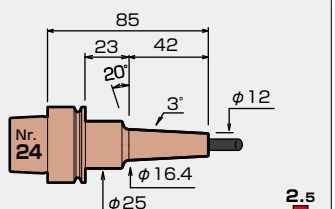
1.2

E40–SLRA6–70–M42



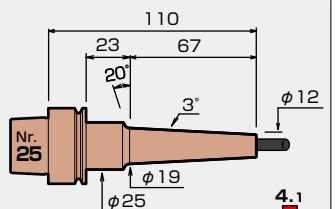
2.3

E40–SLRA6–85–M42



2.5

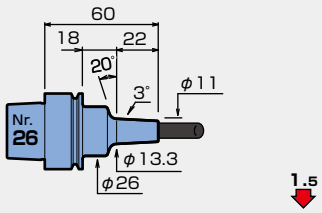
E40–SLRA6–110–M67



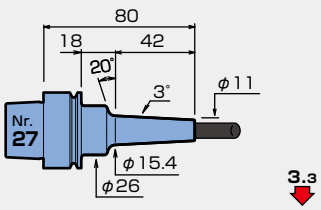
4.1

φ8

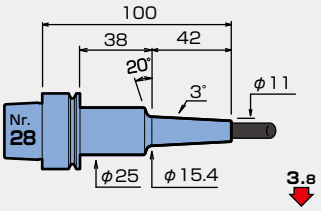
E40–SLSA8–60–M22



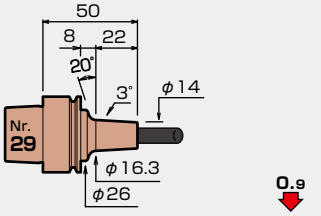
E40–SLSA8–80–M42



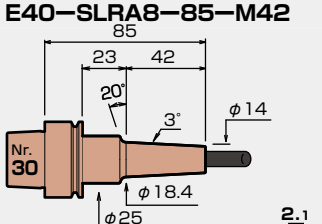
E40–SLSA8–100–M42



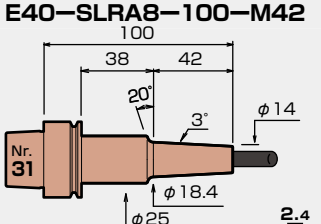
E40–SLRA8–50–M22



E40–SLRA8–85–M42

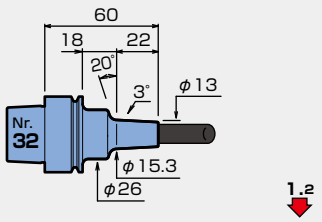


E40–SLRA8–100–M42

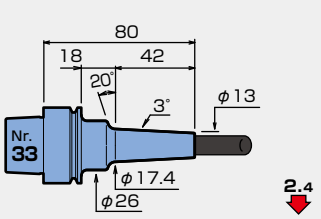


φ10

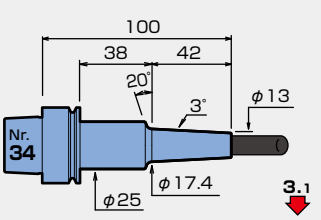
E40–SLSA10–60–M22



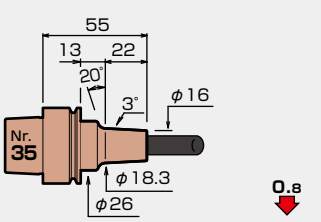
E40–SLSA10–80–M42



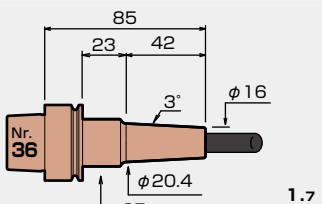
E40–SLSA10–100–M42



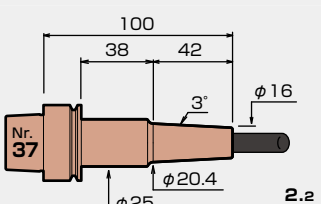
E40–SLRA10–55–M22



E40–SLRA10–85–M42

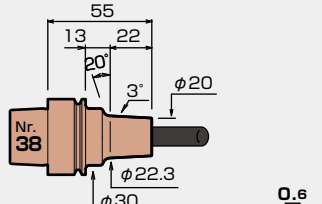


E40–SLRA10–100–M42

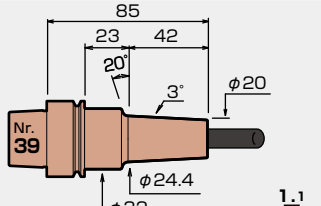


φ12

E40–SLRA12–55–M22

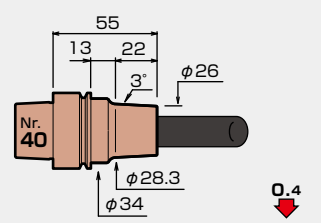


E40–SLRA12–85–M42



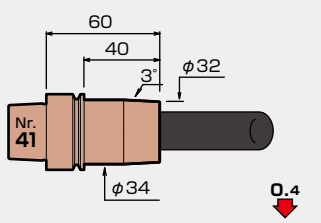
φ16

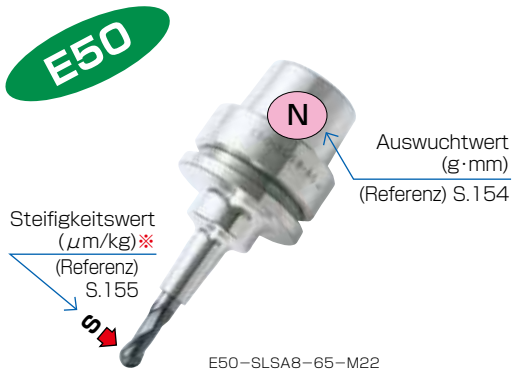
E40–SLRA16–55–M22

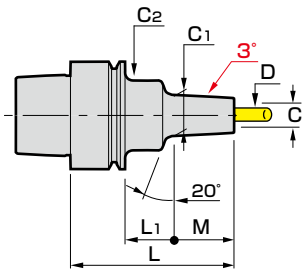


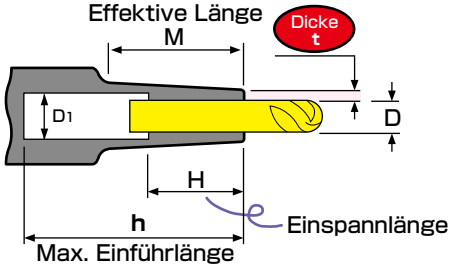
φ20

E40–SLRA20–60–M40









CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
E50−SLSA 3− 60−M 22	3	6	1.5	60	22	12	8.3	20	4	9	50	0.4	1.3	4.7	1
− 80−M 42				80	42		10.4				70	0.5		9.3	2
− 95−M 42				95		27		25			85		1.7	9.4	3
−SLRA 3− 75−M 22		7.5	2.25	75	22		9.8				65			2.8	4
− 95−M 42				95	42		11.9				85			5.4	5
−120−M 67				120	67		14.5				110		1.8	9.0	6
−150−M 97				150	97		17.7				132	0.6		13.1	7
−SLFB 3− 75−M 22		9.5	3.25	75	22		11.8				65	0.5		1.9	8
E50−SLSA 4− 60−M 22	4	7	1.5	60	22	12	9.3	20	5	12	50	0.4	1.3	3.6	9
− 80−M 42				80	42		11.4				70	0.5		7.3	10
− 95−M 42				95		27		25			85		1.8	7.4	11
−SLRA 4− 75−M 22		10	3	75	22		12.3				65		1.7	1.7	12
− 95−M 42				95	42		14.4				85		1.8	3.2	13
−120−M 67				120	67		17				110	0.6		5.2	14
−150−M 97				150	97		20.2	32			132	0.7	2.2	7.3	15
−SLFB 4− 75−M 22		12	4	75	22		14.3	25			62	0.5	1.9	1.4	16
E50−SLSA 6− 60−M 22	6	9	1.5	60	22	12	11.3	20	7	18	42	0.5	1.3	2.3	17
− 80−M 42				80	42		13.4				62			4.8	18
−120−M 67				120	67	27	16	25			102		1.8	8.1	19
−150−M 97				150	97		19.2	32			132	0.6	2.3	11.2	20
−SLSB 6− 95−M 42		10	2	95	42		14.4	25			77	0.5	1.8	3.9	21
−120−M 67				120	67		17				102	0.6		6.5	22
−150−M 97				150	97		20.2	32			132	0.7	2.3	8.6	23
−SLRA 6− 60−M 22		12	3	60	22	12	14.3	26	6.6		44	0.5	1.4	1.2	24
− 95−M 42				95	42	27	16.4	25	7		77		1.8	2.5	25
−120−M 67				120	67		19				102	0.6	1.9	4.2	26
−SLRB 6− 95−M 42		14	4	95	42		18.4	32			77		2.2	1.6	27
−SLFB 6− 75−M 22				75	22		16.3				57		2.1	1.0	28
E50−SLSA 8− 65−M 22	8	11	1.5	65	22	17	13.3	26	8.6	24	49	0.5	1.5	1.5	29
− 85−M 42				85	42		15.4				67		1.6	3.2	30
−120−M 67				120	67	27	18	32	9		102	0.6	2.3	5.9	31
−150−M 97				150	97		21.2				132	0.7	2.4	8.1	32
−SLSB 8− 95−M 42		13	2.5	95	42		17.4				77	0.6	2.2	2.2	33
−120−M 67				120	67		20				102		2.3	3.7	34
−150−M 97				150	97		23.2				132	0.7	2.4	5.3	35
−SLRA 8− 60−M 22		14	3	60	22	12	16.3	26	8.6		44	0.5	1.4	0.9	36
− 95−M 42				95	42	27	18.4	25	9		77		1.8	2.1	37
−SLRB 8− 95−M 42		18	5				22.4	32				0.6	2.2	1.1	38
−120−M 67				120	67		25				102	0.7	2.3	1.8	39
−SLFB 8− 75−M 22				75	22		20.3				57	0.6	2.2	0.7	40

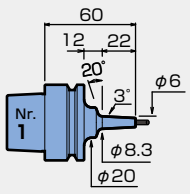
HSK-E50 Codetabelle S=1:5

CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
E50−SLSA10− 65−M 22	10	13	1.5	65	22	17	15.3	26	10.6	30	49	0.5	1.5	1.1	41
− 85−M 42				85	42		17.4				64		1.6	2.4	42
−120−M 67				120	67	27	20	32	11			0.6	2.3	4.4	43
−150−M 97				150	97		23.2					0.7	2.5	6.2	44
−SLSB10− 95−M 42		16	3	95	42		20.4					0.6	2.2	1.5	45
−120−M 67				120	67		23					0.7	2.4	2.5	46
−150−M 97				150	97		26.2						2.5	3.7	47
−SLRA10− 60−M 22				60	22	12	18.3	26	10.6		44	0.5	1.4	0.8	48
−SLRB10− 95−M 42		22	6	95	42	27	26.4	32	11		64	0.7	2.3	0.9	49
−120−M 67				120	67		29	42				0.8	3.2	1.1	50
−SLFB10− 75−M 22				75	22		24.3	32	16		60	0.6	2.2	0.6	51
E50−SLSA12− 65−M 22	12	15	1.5	65	22	17	17.3	26	12.6	30	49	0.5	1.6	0.9	52
− 85−M 42				85	42		19.4				64		1.7	1.9	53
−120−M 67				120	67	27	22	32	13			0.6	2.4	3.4	54
−SLSB12− 95−M 42		19	3.5	95	42		23.4						2.3	1.2	55
−120−M 67				120	67		26					0.7	2.5	1.9	56
−150−M 97				150	97		29.2	42				0.9	3.5	2.6	57
−SLRA12− 60−M 22		20	4	60	22	12	22.3	30	12.6		44	0.5	1.5	0.6	58
−SLRB12− 95−M 42		26	7	95	42	27	30.4	42	13		64	0.8	3.1		59
−120−M 67				120	67		33					0.9	3.3	0.9	60
−SLFB12− 75−M 22				75	22		28.3		21		60	0.7	3.0	0.4	61
E50−SLSB16− 95−M 42	16	24	4	95	42	27	28.4	42	17	32	81	0.7	3.2	0.8	62
−120−M 67				120	67		31					0.8	3.5	1.2	63
−SLRA16− 60−M 22		26	5	60	22	12	28.3	34	16.6		44	0.6	1.7	0.4	64
−SLRB16− 75−M 22		32	8	75		27	34.3	42	22.2		61	0.7	3.0		65
−SLFB16− 75−M 22											60				66
E50−SLSB20− 95−M 42	20	29	4.5	95	42	27	33.4	42	21	40	81	0.7	3.3	0.6	67
−SLRA20− 65−M 22		32	6	65	22	17	34.3	40	20.6	38	49	0.6	2.2	0.3	68

HSK-E50 Maßstäbliches Modell S=1:5

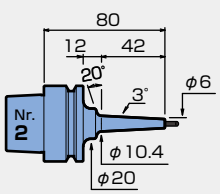
φ3

E50−SLSA3−60−M22



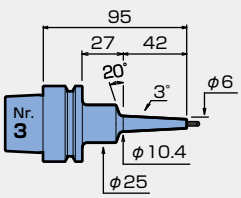
4.7

E50−SLSA3−80−M42



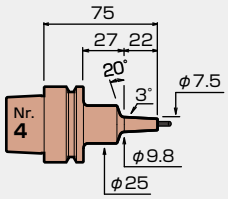
9.3

E50−SLSA3−95−M42



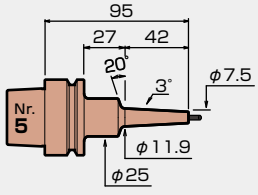
9.4

E50−SLRA3−75−M22



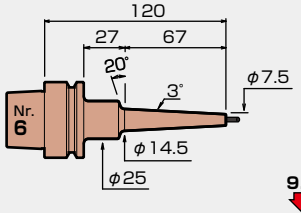
2.8

E50−SLRA3−95−M42



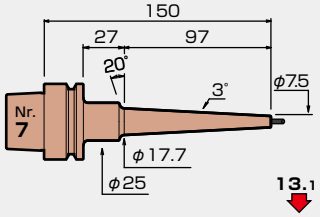
5.4

E50−SLRA3−120−M67



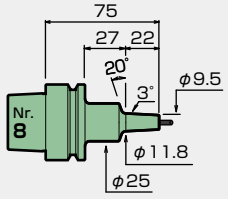
9.0

E50−SLRA3−150−M97



13.1

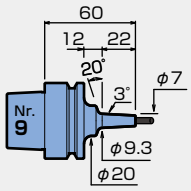
E50−SLFB3−75−M22



1.9

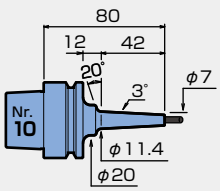
φ4

E50–SLSA4–60–M22



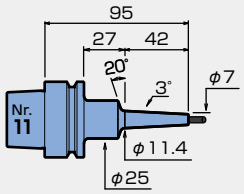
3.6

E50–SLSA4–80–M42



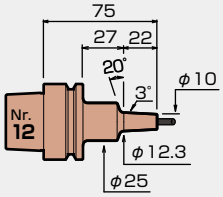
7.3

E50–SLSA4–95–M42



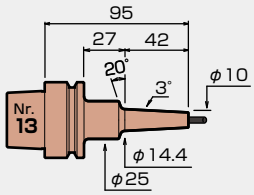
7.4

E50–SLRA4–75–M22



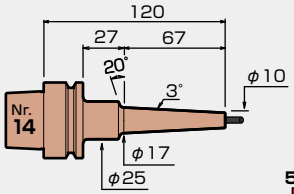
1.7

E50–SLRA4–95–M42



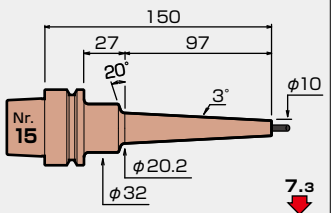
3.2

E50–SLRA4–120–M67



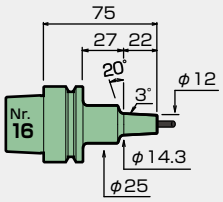
5.2

E50–SLRA4–150–M97



7.3

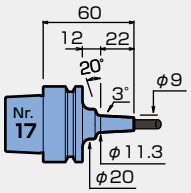
E50–SLFB4–75–M22



1.4

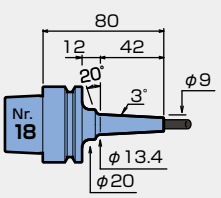
φ6

E50–SLSA6–60–M22



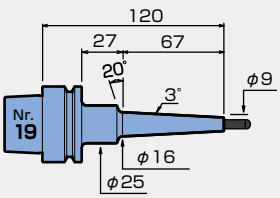
2.3

E50–SLSA6–80–M42



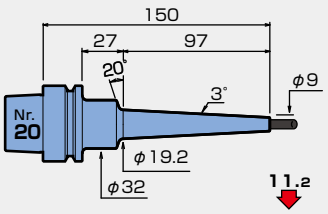
4.8

E50–SLSA6–120–M67



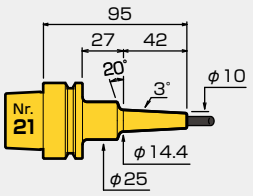
8.1

E50–SLSA6–150–M97



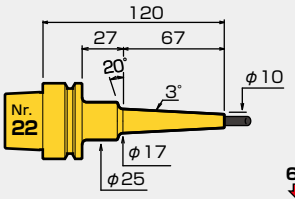
11.2

E50–SLSB6–95–M42



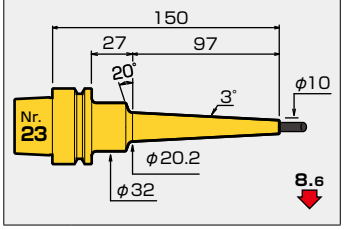
3.9

E50–SLSB6–120–M67



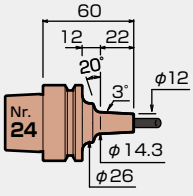
6.5

E50–SLSB6–150–M97



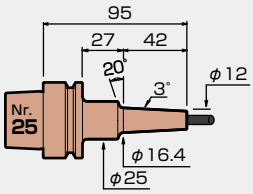
8.6

E50–SLRA6–60–M22



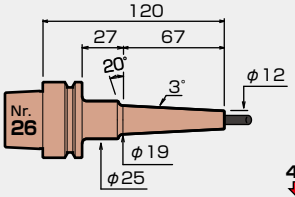
1.2

E50–SLRA6–95–M42



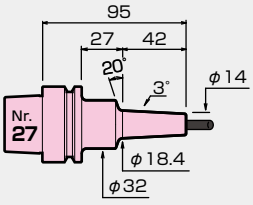
2.5

E50–SLRA6–120–M67



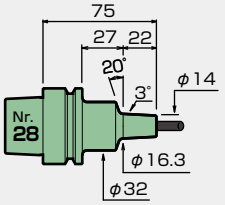
4.2

E50–SLRB6–95–M42



1.6

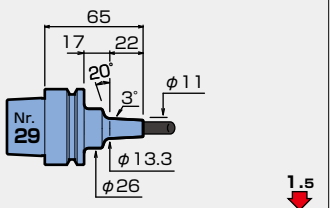
E50–SLFB6–75–M22



1.0

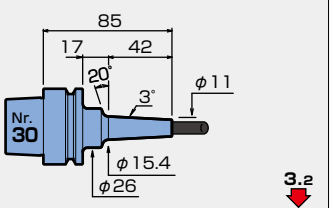
φ8

E50–SLSA8–65–M22



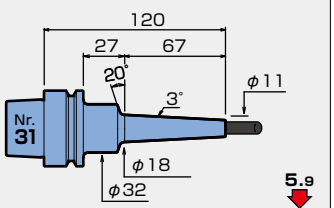
1.5

E50–SLSA8–85–M42



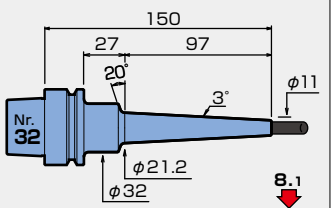
3.2

E50–SLSA8–120–M67



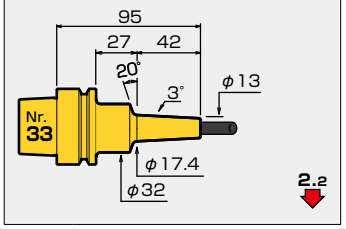
5.9

E50–SLSA8–150–M97



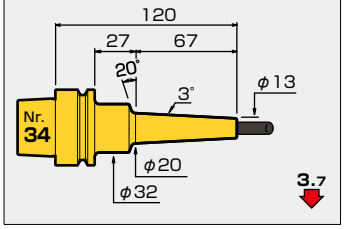
8.1

E50–SLSB8–95–M42



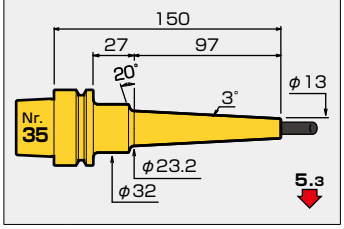
2.2

E50–SLSB8–120–M67



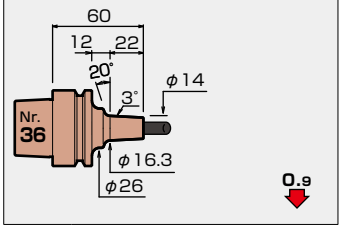
3.7

E50–SLSB8–150–M97



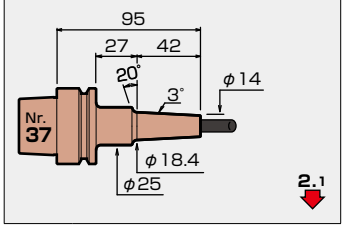
5.3

E50–SLRA8–60–M22



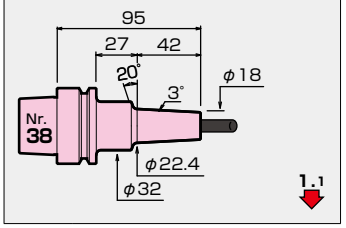
0.9

E50–SLRA8–95–M42



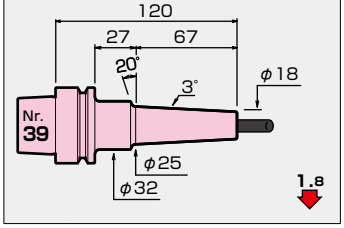
2.1

E50–SLRB8–95–M42



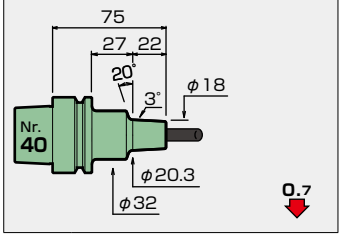
1.1

E50–SLRB8–120–M67



1.8

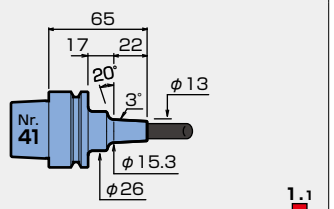
E50–SLFB8–75–M22



0.7

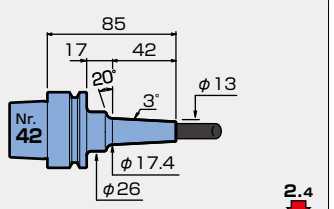
φ10

E50–SLSA10–65–M22



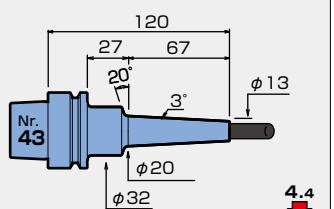
1.1

E50–SLSA10–85–M42



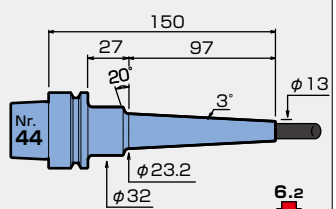
2.4

E50–SLSA10–120–M67



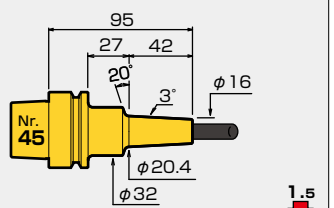
4.4

E50–SLSA10–150–M97



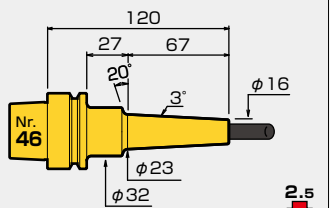
6.2

E50–SLSB10–95–M42



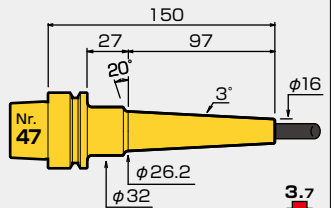
1.5

E50–SLSB10–120–M67



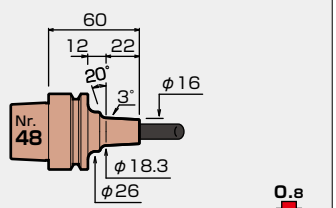
2.5

E50–SLSB10–150–M97



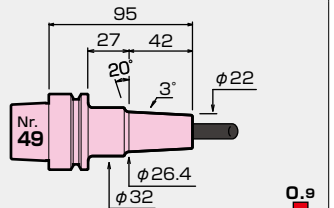
3.7

E50–SLRA10–60–M22



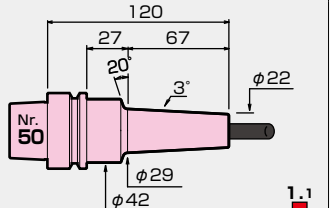
0.8

E50–SLRB10–95–M42



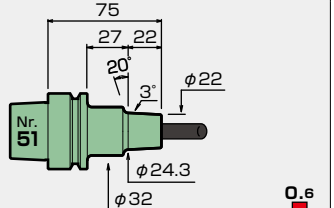
0.9

E50–SLRB10–120–M67



1.1

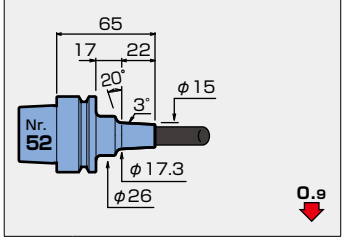
E50–SLFB10–75–M22



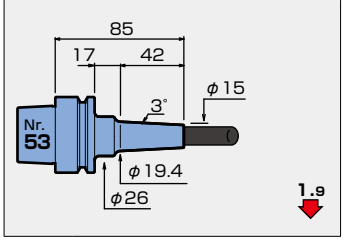
0.6

φ12

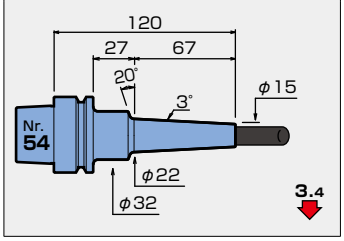
E50–SLSA12–65–M22



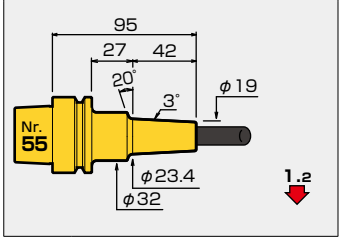
E50–SLSA12–85–M42



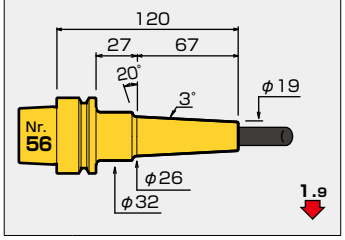
E50–SLSA12–120–M67



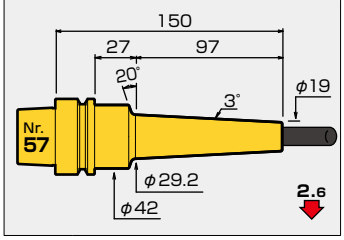
E50–SLSB12–95–M42



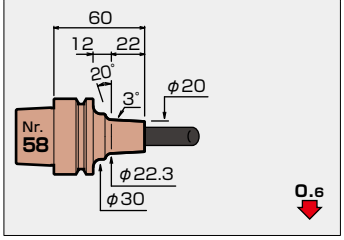
E50–SLSB12–120–M67



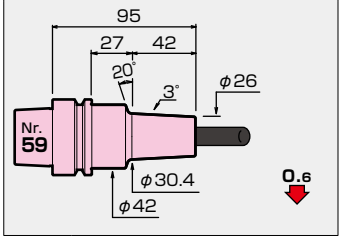
E50–SLSB12–150–M97



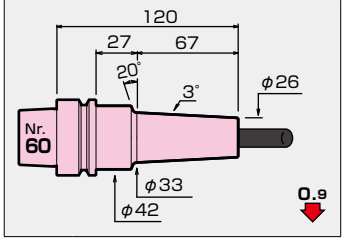
E50–SLRA12–60–M22



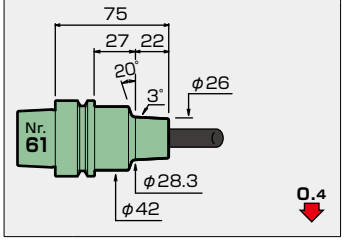
E50–SLRB12–95–M42



E50–SLRB12–120–M67

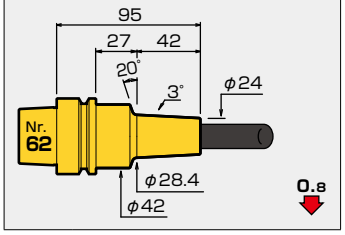


E50–SLFB12–75–M22

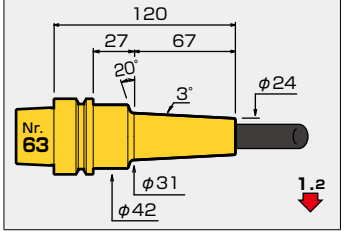


φ16

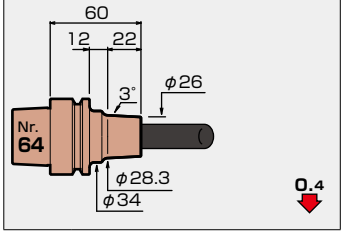
E50–SLSB16–95–M42



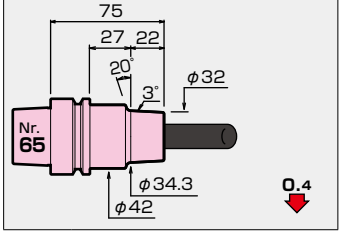
E50–SLSB16–120–M67



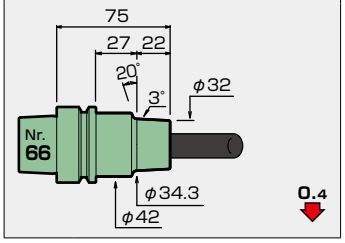
E50–SLRA16–60–M22



E50–SLRB16–75–M22

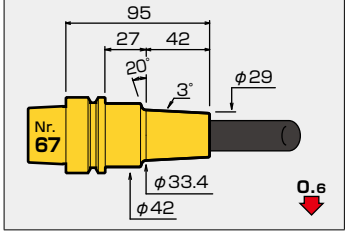


E50–SLFB16–75–M22

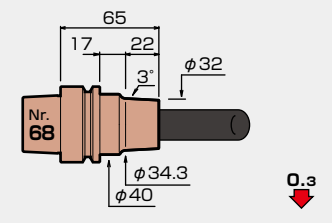


φ20

E50–SLSB20–95–M42



E50–SLRA20–65–M22



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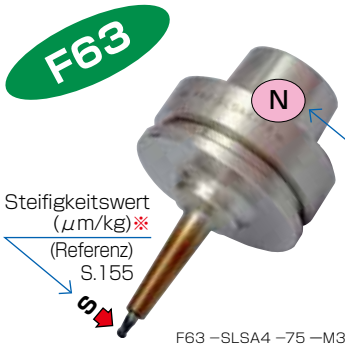
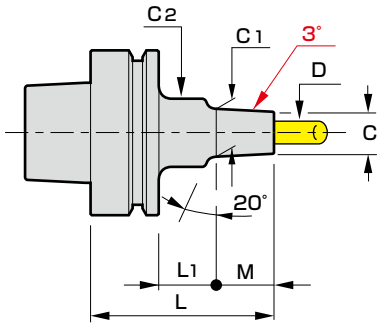
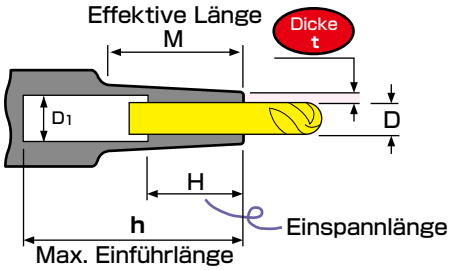




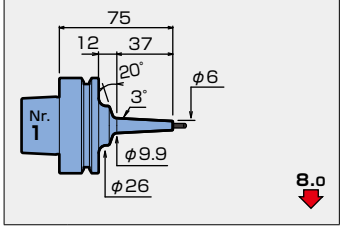


CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
F63–SLSA 3– 75–M37	3	6	1.5	75	37	12	9.9	26	4	9	58	0.7	1.5	8.0	1
– 95–M42				95	42	27	10.4	25			73		1.8	9.3	2
–SLRA 3– 70–M22		7.5	2.25	70	22	22	9.8	26			53		1.7	2.8	3
– 95–M42				95	42	27	11.9	25			73		1.9	5.4	4
–SLFB 3– 75–M22		9.5	3.25	75	22		11.8				53			1.9	5
– 95–M42				95	42		13.9				73	0.8	2.0	3.3	6
–120–M67				120	67		16.5				98			5.4	7
F63–SLSA 4– 75–M37	4	7	1.5	75	37	12	10.9	26	5	12	58	0.7	1.5	6.2	8
– 95–M42				95	42	27	11.4	25			73		1.9	7.3	9
–SLRA 4– 70–M22		10	3	70	22	22	12.3	26			53		1.7	1.7	10
– 95–M42				95	42	27	14.4	25			73	0.8	1.9	3.1	11
–SLFB 4– 75–M22		12	4	75	22		14.3				53	0.7	2.0	1.4	12
– 95–M42				95	42		16.4				73	0.8		2.2	13
–120–M67				120	67		19				98		2.1	3.6	14
F63–SLSA 6– 75–M37	6	9	1.5	75	37	12	12.9	26	7	18	58	0.7	1.5	4.0	15
– 95–M42				95	42	27	13.4	25			73		1.9	4.9	16
–SLSB 6– 95–M42		10	2				14.4							3.9	17
–SLRA 6– 70–M22		12	3	70	22	22	14.3	26			53		1.7	1.3	18
– 95–M42				95	42	27	16.4	25			73	0.8	1.9	2.5	19
–SLFB 6– 75–M22		14	4	75	22		16.3	32			53		2.2	1.0	20
F63–SLSA 8– 95–M42	8	11	1.5	95	42	27	15.4	25	9	24	73	0.7	1.9	3.5	21
–SLSB 8– 95–M42		13	2.5				17.4	32				0.8	2.3	2.2	22
–SLRA 8– 70–M22		14	3	70	22	22	16.3	26	8.6		53	0.7	1.8	1.0	23
– 95–M42				95	42	27	18.4	25	9		73	0.8	1.9	2.1	24
–SLFB 8– 75–M22		18	5	75	22		20.3	32			53		2.2	0.7	25
F63–SLSA10– 95–M42	10	13	1.5	95	42	27	17.4	25	11	30	73	0.8	2.0	2.7	26
–SLSB10– 95–M42		16	3				20.4	32					2.3	1.5	27
–SLRA10– 70–M22				70	22	22	18.3	26	10.6		53	0.7	1.8	0.9	28
–SLFB10– 75–M22		22	6	75		27	24.3	32	16			0.8	2.3	0.6	29
F63–SLSA12– 95–M42	12	15	1.5	95	42	27	19.4	32	13	30	64	0.8	2.3	1.9	30
–SLSB12– 95–M42		19	3.5				23.4				73		2.4	1.1	31
–SLRA12– 70–M22		20	4	70	22	22	22.3	30	12.6		53		2.0	0.6	32
–SLFB12– 75–M22		26	7	75		27	28.3	42	21			0.9	3.0	0.4	33
F63–SLFB16– 75–M22	16	32	8	75	22	27	34.3	42	22.2	32	53	1.0	3.1	0.3	34
F63–SLFB20– 75–M22	20	38	9	75	22	27	40.3	50	20.6	40	53	1.1	3.6	0.3	35
F63–SLFB25– 75–M22	25	45	10	75	22	27	47.3	50	25.6	45	53	1.1	3.7	0.2	36

MAKINO
V33
MORI SEIKI
NV4000 DCG

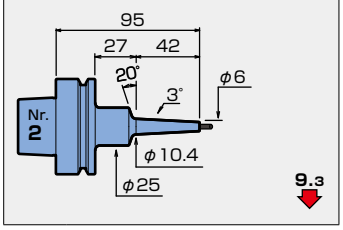
φ3

F63-SLSA3-75-M37



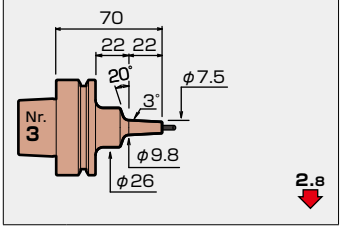
8.0

F63-SLSA3-95-M42



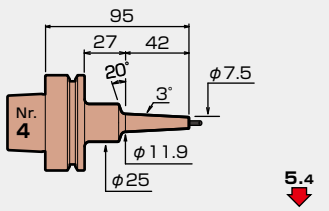
9.3

F63-SLRA3-70-M22



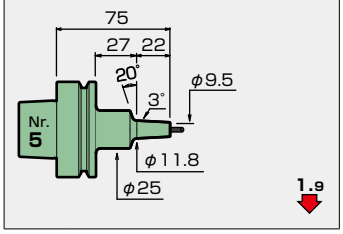
2.8

F63-SLRA3-95-M42



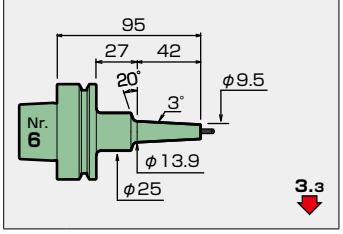
5.4

F63-SLFB3-75-M22



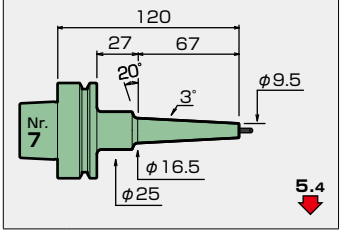
1.9

F63-SLFB3-95-M42



3.3

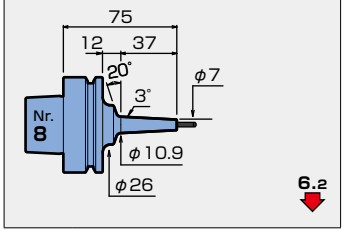
F63-SLFB3-120-M67



5.4

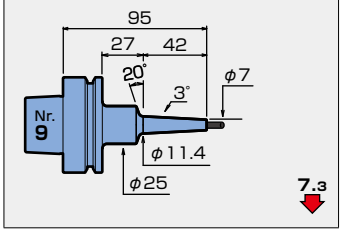
φ4

F63-SLSA4-75-M37



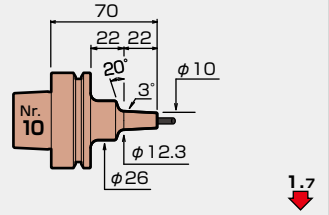
6.2

F63-SLSA4-95-M42



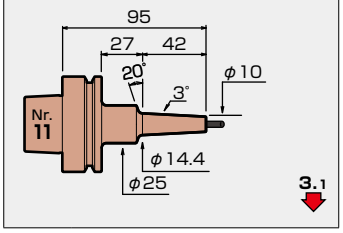
7.3

F63-SLRA4-70-M22



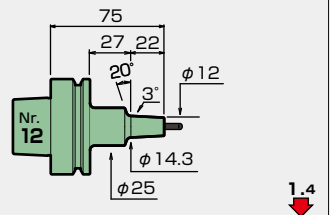
1.7

F63-SLRA4-95-M42



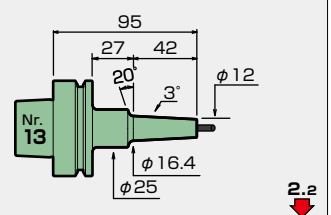
3.1

F63-SLFB4-75-M22



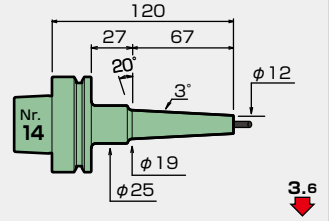
1.4

F63-SLFB4-95-M42



2.2

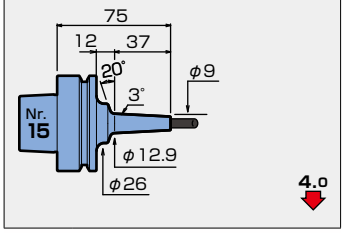
F63-SLFB4-120-M67



3.6

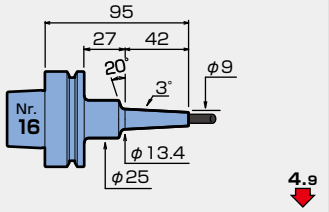
φ6

F63-SLSA6-75-M37



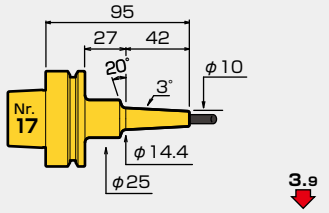
4.0

F63-SLSA6-95-M42



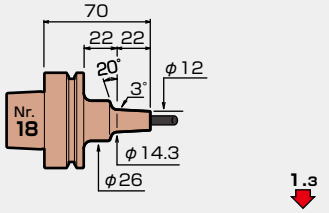
4.9

F63-SLSB6-95-M42



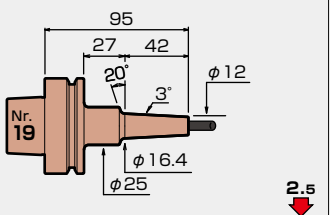
3.9

F63-SLRA6-70-M22



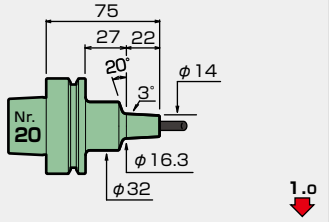
1.3

F63-SLRA6-95-M42



2.5

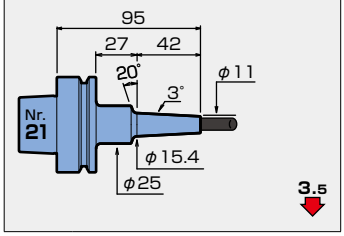
F63-SLFB6-75-M22



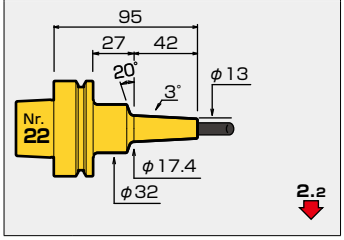
1.0

φ8

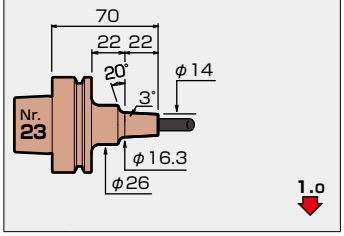
F63–SLSA8–95–M42



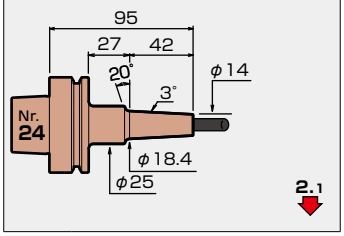
F63–SLSB8–95–M42



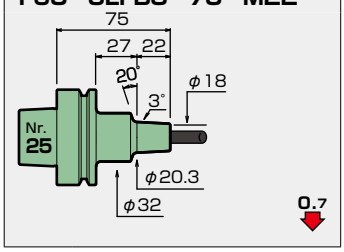
F63–SLRA8–70–M22



F63–SLRA8–95–M42

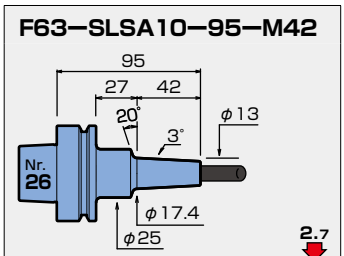


F63–SLFB8–75–M22

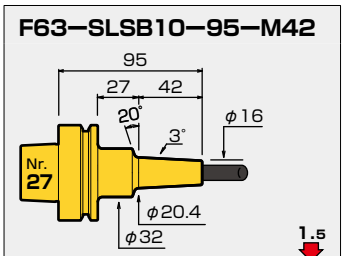


φ10

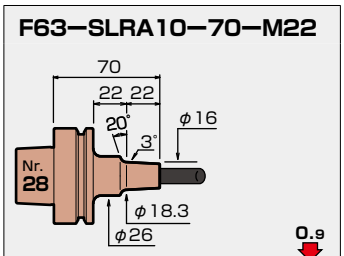
F63–SLSA10–95–M42



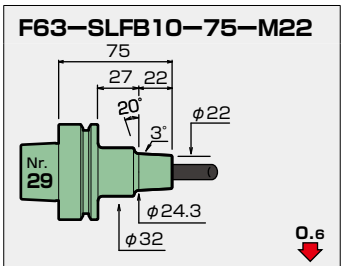
F63–SLSB10–95–M42



F63–SLRA10–70–M22

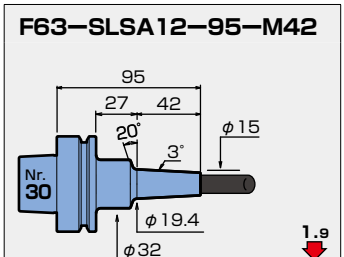


F63–SLFB10–75–M22

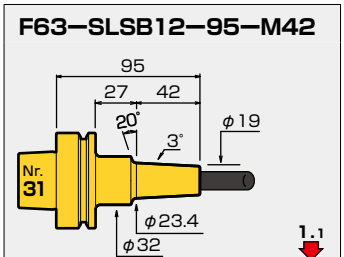


φ12

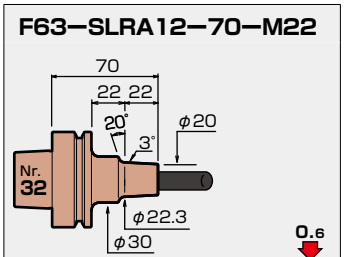
F63–SLSA12–95–M42



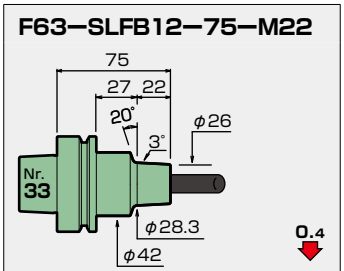
F63–SLSB12–95–M42



F63–SLRA12–70–M22

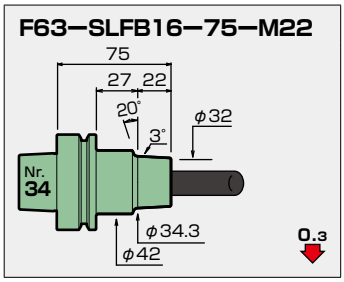


F63–SLFB12–75–M22



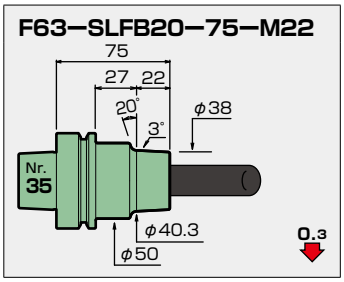
φ16

F63–SLFB16–75–M22



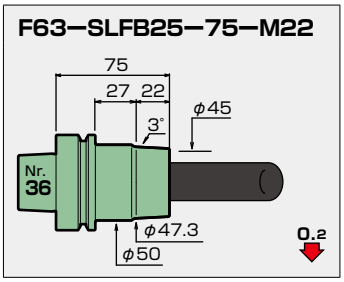
φ20

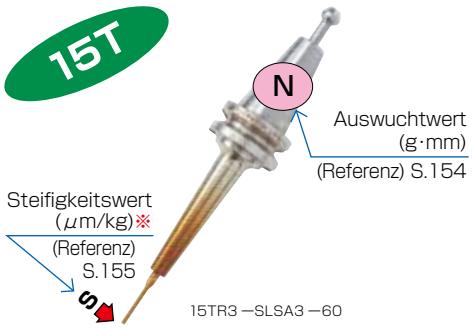
F63–SLFB20–75–M22

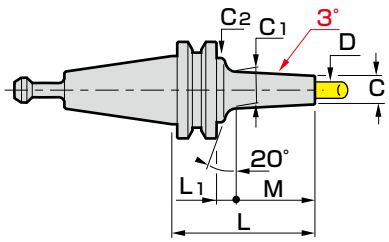


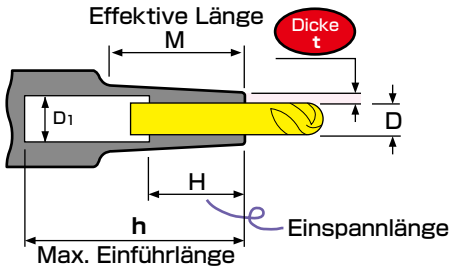
φ25

F63–SLFB25–75–M22







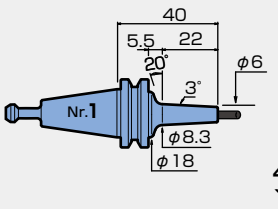


CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φC_2$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
15TR3—SLSA 3—40	3	6	1.5	40	22	5.5	8.3	18	4	9	46	0.1	0.3	4.7	1
—60				60	42		10.4				66			9.3	2
15TR3—SLSA3.175—40	3.175	6.175	1.5	40	22	5.5	8.5	18	4	9	46	0.1	0.3	4.4	3
—60				60	42		10.6				66			8.8	4
15TR3—SLSA 4—40	4	7	1.5	40	22	5.5	9.3	18	5	12	46	0.1	0.3	3.6	5
—60				60	42		11.4				66			7.3	6
15TR3—SLSA 5—40	5	8	1.5	40	22	5.5	10.3	18	6	15	46	0.1	0.3	2.9	7
—60				60	42		12.4				66			5.9	8
15TR3—SLSA 6—60	6	9	1.5	60	42	5.5	13.4	18	7	18	66	0.1	0.4	4.9	9
—SLRA 6—35		12	3	35	19.6	2.9	14.1	—	6.6		46		0.2	1.2	10
15TR3—SLRA 8—35	8	14	3	35	19.6	2.9	16.1	—	8.6	20	51	0.1	0.3	0.9	11
15TR3—SLRA10—35	10	16	3	35	19.6	2.9	18.1	—	10.6	20	51	0.1	0.4	0.8	12

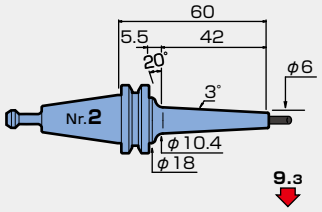
S=1:3 15T Maßstäbliches Modell

φ3

15TR3—SLSA3—40

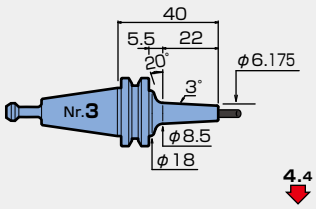


15TR3—SLSA3—60

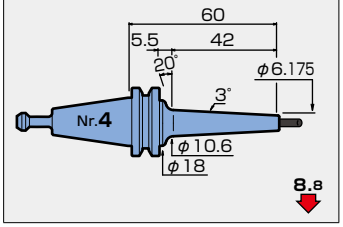


φ3.175

15TR3—SLSA3.175—40

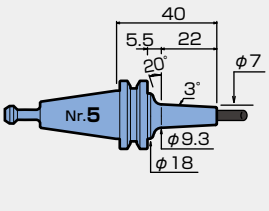


15TR3—SLSA3.175—60

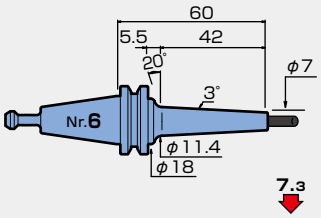


φ4

15TR3—SLSA4—40

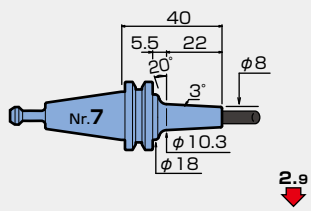


15TR3—SLSA4—60

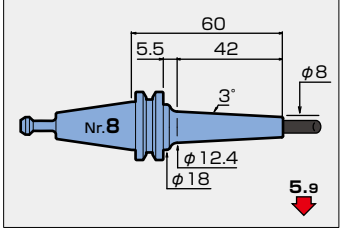


φ5

15TR3—SLSA5—40

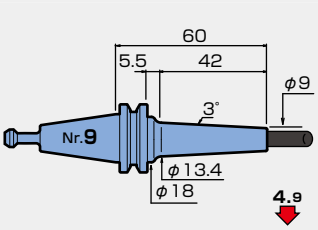


15TR3—SLSA5—60

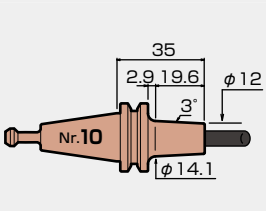


φ6

15TR3—SLSA6—60

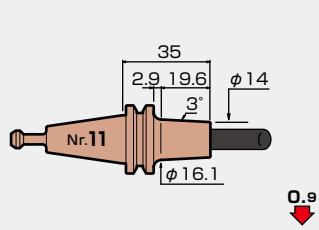


15TR3—SLRA6—35



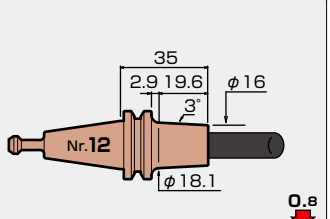
φ8

15TR3—SLRA8—35

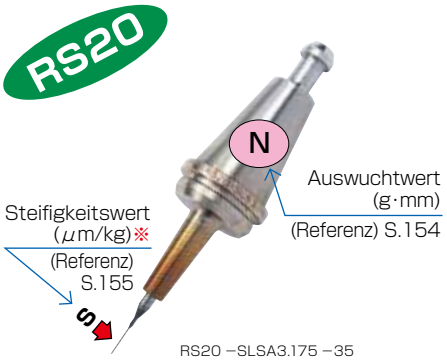


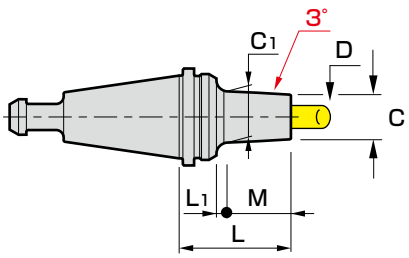
φ10

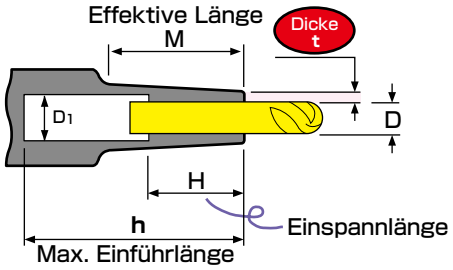
15TR3—SLRA10—35



RS20 CODETABELLE





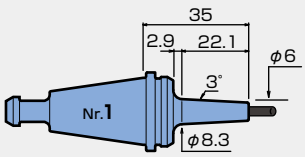


CODE	φD	φC	Dicke t	L	M	L_1	$φC_1$	$φD_1$	H	h	Kg	N	S	Maßstäbliches Modell
RS20−SLSA 3−35	3	6	1.5	35	22.1	2.9	8.3	4	9	46	0.1	0.2	5.2	1
RS20−SLSA $3._{175}$ −35	$3._{175}$	$6._{175}$	1.5	35	22.1	2.9	8.5	4	9	46	0.1	0.2	4.9	2
RS20−SLSA 4−35	4	7	1.5	35	22.1	2.9	9.3	5	12	46	0.1	0.2	4.0	3
RS20−SLSA 5−35	5	8	1.5	35	22.1	2.9	10.3	6	15	46	0.1	0.2	3.2	4
RS20−SLRA 6−30	6	12	3	30	17.1	2.9	13.8	6.4	18	46	0.1	0.2	1.1	5
RS20−SLRA 8−30	8	14	3	30	17.2	2.8	15.8	8.6	20	51	0.1	0.3	0.9	6
RS20−SLRA10−30	10	16	3	30	17.6	2.4	17.9	10.6	20	51	0.1	0.4	0.7	7

RS20 Maßstäbliches Modell S=1:2.5

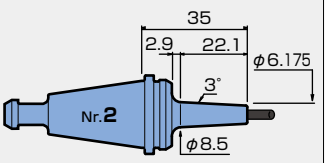
φ3

RS20−SLSA3−35



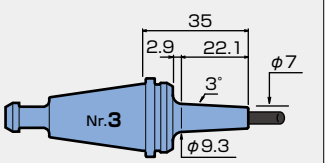
φ3.175

RS20−SLSA3.175−35



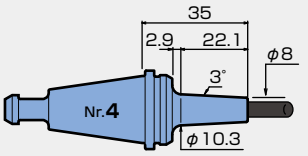
φ4

RS20−SLSA4−35



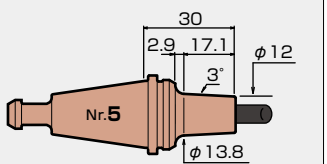
φ5

RS20−SLSA5−35



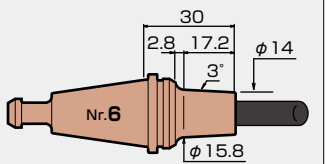
φ6

RS20−SLRA6−30



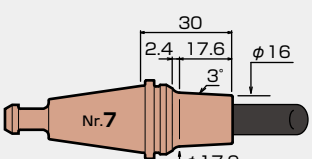
φ8

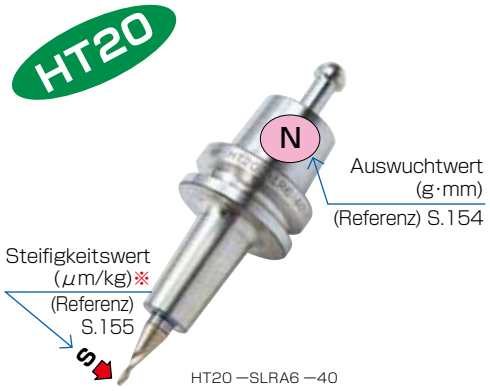
RS20−SLRA8−30

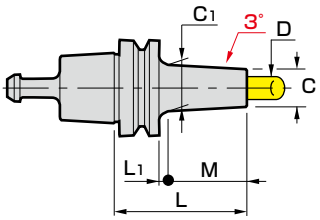


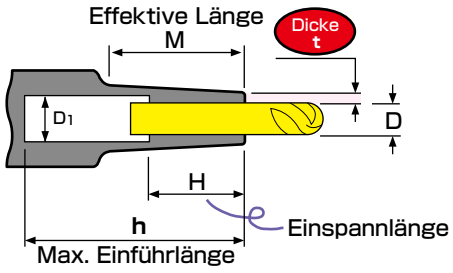
φ10

RS20−SLRA10−30







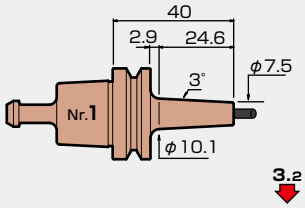


CODE	φD	φC	Dicke t	L	M	L_1	φC_1	φD_1	H	h	Kg	N	S	Maßstäbliches Modell
HT20—SLRA 3—40	3	7.5	2.25	40	24.6	2.9	10.1	3.6	9	14	0.1	0.2	3.2	1
HT20—SLRA 4—40	4	10	3	40	24.6	2.9	12.6	4.6	12	20	0.1	0.2	1.8	2
HT20—SLRA 6—40	6	12	3	40	24.6	2.9	14.6	6.6	18	46	0.1	0.3	1.4	3
HT20—SLRA 8—40	8	14	3	40	24.6	2.9	16.6	8.6	24	46	0.1	0.3	1.1	4
HT20—SLRA10—45	10	16	3	45	29.6	2.9	19.1	10.6	30	51	0.1	0.4	1.0	5

S=1:2.5 HT20 Maßstäbliches Modell

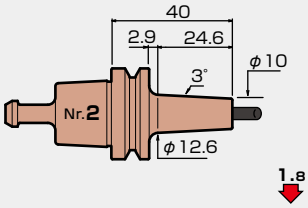
φ3

HT20—SLRA3—40



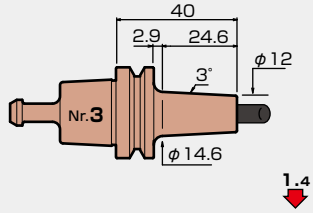
φ4

HT20—SLRA4—40



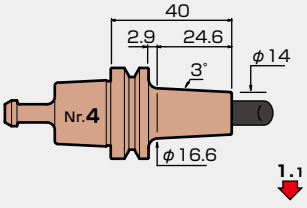
φ6

HT20—SLRA6—40



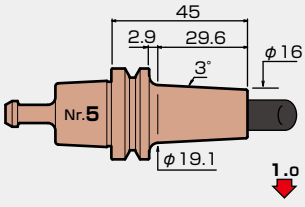
φ8

HT20—SLRA8—40

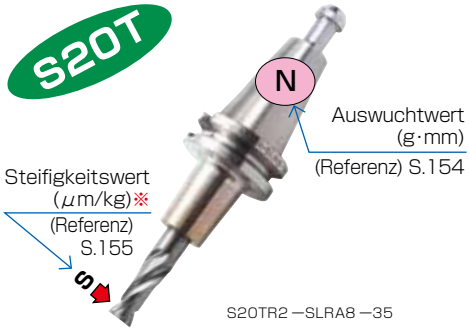


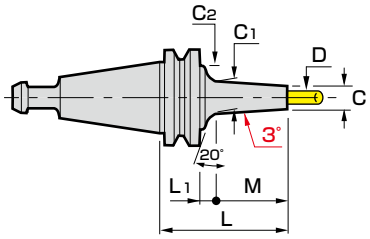
φ10

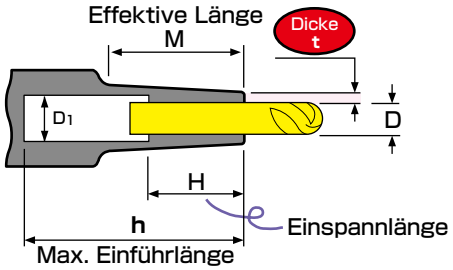
HT20—SLRA10—45



S20T CODETABELLE





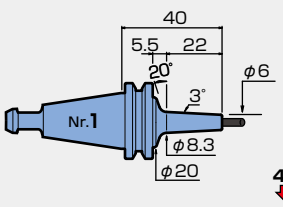


CODE	φD	φC	Dicke t	L	M	L1	φC1	φC2	φD1	H	h	Kg	N	S	Maßstäbliches Modell
S20TR2—SLSA 3—40	3	6	1.5	40	22	5.5	8.3	20	4	9	46	0.1	0.4	4.6	1
—60				60	42		10.4				66			9.2	2
S20TR2—SLSA3.175—40	3.175	6.175	1.5	40	22	5.5	8.5	20	4	9	46	0.1	0.4	4.4	3
—60				60	42		10.6				66			8.8	4
S20TR2—SLSA 4—40	4	7	1.5	40	22	5.5	9.3	20	5	12	46	0.1	0.4	3.6	5
—60				60	42		11.4				66			7.2	6
S20TR2—SLSA 5—40	5	8	1.5	40	22	5.5	10.3	20	6	15	46	0.1	0.4	2.8	7
—60				60	42		12.4				66		0.5	5.8	8
S20TR2—SLSA 6—60	6	9	1.5	60	42	5.5	13.4	20	7	18	66	0.1	0.5	4.7	9
—SLRA 6—35		12	3	35	19.6	2.9	14.1	—	6.4		46		0.3	1.1	10
S20TR2—SLRA 8—35	8	14	3	35	19.6	2.9	16.1	—	8.6	20	51	0.1	0.4	0.9	11
S20TR2—SLRA10—35	10	16	3	35	19.6	2.9	18.1	—	10.6	20	51	0.1	0.5	0.8	12
S20TR2—SLRA12—45	12	20	4	45	32.5	—	23.4	—	12.6	30	51	0.2	0.6	0.8	13

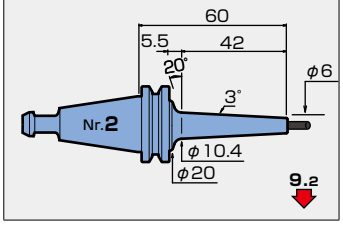
S20T Maßstäbliches Modell S=1:3

φ3

S20TR2—SLSA3—40

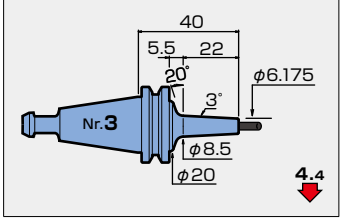


S20TR2—SLSA3—60

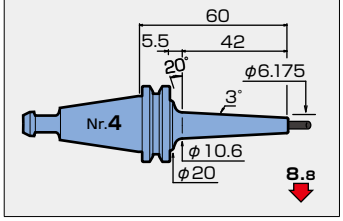


φ3.175

S20TR2—SLSA3.175—40

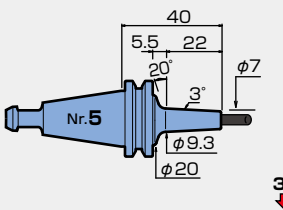


S20TR2—SLSA3.175—60

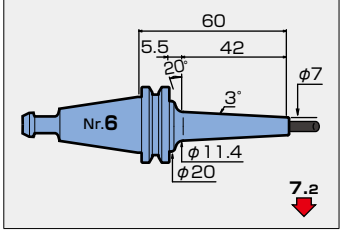


φ4

S20TR2—SLSA4—40

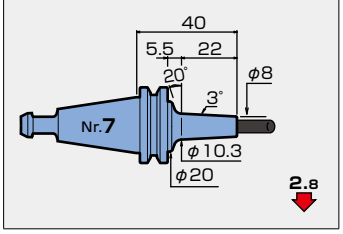


S20TR2—SLSA4—60

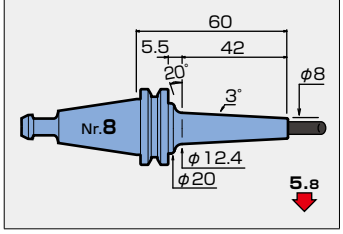


φ5

S20TR2—SLSA5—40

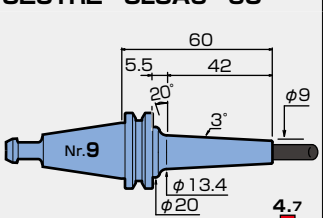


S20TR2—SLSA5—60

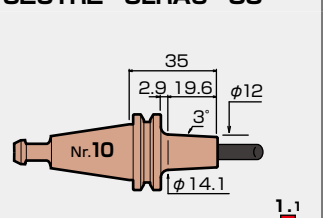


φ6

S20TR2—SLSA6—60

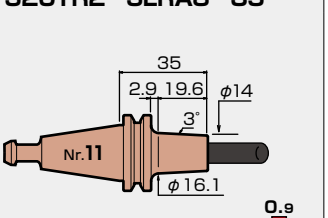


S20TR2—SLRA6—35



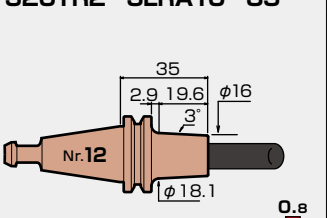
φ8

S20TR2—SLRA8—35



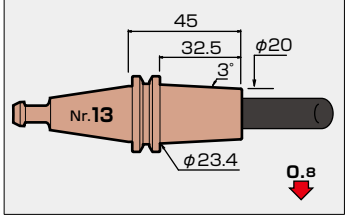
φ10

S20TR2—SLRA10—35



φ12

S20TR2–SLRA12–45



SUGINO
V9 / H7 / Xion- Ⅱ

Die Halter – außer Slimline

Stift • Spitzspannfutter (PPA)

E32–PPA3–65–M30

15T–PPA3–30–M12

Abb.1

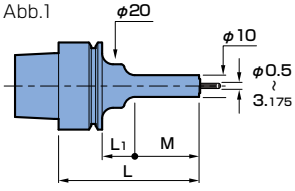
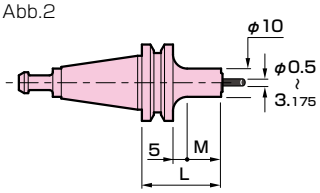
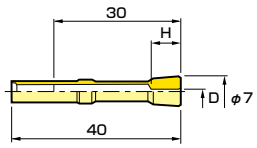


Abb.2



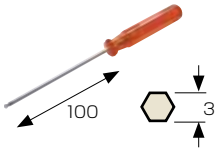
CODE	Abb.	L	M	L1	Kg
E32 –PPA3– 65–M30	1	65	30	15	0.2
E40 –PPA3– 65–M30					0.3
– 90–M45		90	45	25	
E50 –PPA3– 75–M30		75	30	19	0.5
– 90–M30		90		34	
– 90–M45			45	19	
F63M–PPA3– 75–M30		75	30		0.7
– 90–M30		90		34	
–M45			45	19	
–120–M60		120	60	34	
–M90			90	–	
15T –PPA3– 30–M12	2	30	12.5	–	0.1
– 45–M27		45	27.5		
S20T–PPA3– 30–M12		30	12.5		
– 45–M27		45	27.5		

P-Spannzange



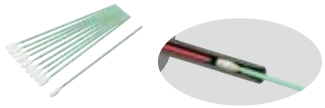
CODE		φD	H	Werkzeugein-führlänge
Präzisions-pannzange	Standard-spannzange			
P3–0.6–P	P3–0.6	0.5～0.6	6.9	6.9～30
–0.8–P	–0.8	0.6～0.8		
–1 –P	–1	0.8～1	7	7 ～30
–1.5–P	–1.5	1 ～1.5	7.2	7.2～30
–2 –P	–2	1.5～2	7.3	7.3～30
–2.5–P	–2.5	2 ～2.5	7.4	7.4～30
–3 –P	–3	2.5～3	7.6	7.6～30
–3.175–P	–3.175	2.7～3.175		

Schraubenschlüssel



CODE
DW–3

Reinigungssäbchen

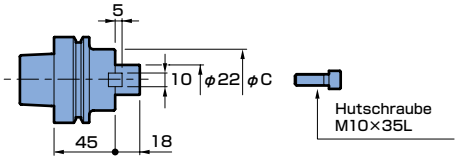


CODE	Anzahl
PCT01–10	10
–25	25

■Option •P-Spannzange •Schraubenschlüssel •Reinigungssäbchen

Stirnfräsdorn (FMC)

F63 –FMC22 –45

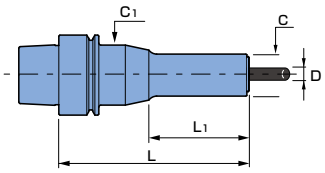


CODE	Werkzeugdur-chmesser	C	Kg
E50–FMC22–45	50 , 63	42	0.7
F63–FMC22–45		45	1.0

■Einspannlänge •Hutschraube •Anschlagkeil
■Hinweis •Je nach Werkzeugform ist die Hutschraube u.U. unterschiedlich ausgeführt.

DETa-1 Spannzangenhalter Typ B (DTB)

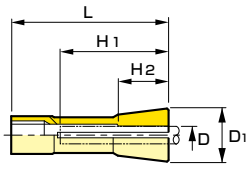
E32 –DTB7 –65K



CODE	φD	L	φC	L1	Kg
E32 –DTB 7– 65K (※)	1 ～ 7	65	21	33	0.2
E40 –DTB 7– 95		95		50	0.4
12–110	2.5～13	110	30	90	0.5
E50 –DTB 7–100	1 ～ 7	100	21	50	0.6
–DTB12–115	2.5～13	115	30	89	0.8
F63M–DTB 7–100	1 ～ 7	100	21	50	0.9
12–120	2.5～13	120	30	70	1.1

■Option •DETa-1 Spannzange •Schraubenschlüssel
■Achtung •※ =Einfahren der Spannzange in diesem Fall nicht möglich.
Der Spanndurchmesser gilt nur für den Referenzdurchmesser der Spannzange.

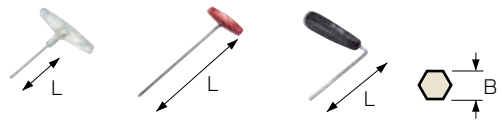
DETa-1 Spannzange



CODE Präzisions-pannzange	CODE Standard-spannzange	φD	Zusam-men-druck-barkeit	φD1	L	H1	H2
D 7– 1.5–P	D 7– 1.5	1 ～ 1.5	0.5	17	50	36	7
– 2 –P	– 2	1.5～ 2					10
– 2.5–P	– 2.5	2 ～ 2.5					12
– 3 –P	– 3	2.5～ 3					
– 4 –P	– 4	3 ～ 4	1				14
– 5 –P	– 5	4 ～ 5					16
– 6 –P	– 6	5 ～ 6					
– 7 –P	– 7	6 ～ 7					
D12– 4 –P	D12– 4	2.5～ 4	1.5	26	70	50	16
– 6 –P	– 6	4 ～ 6	2				20
– 8 –P	– 8	6 ～ 8					22
–10 –P	–10	8 ～10					
–12 –P	–12	10 ～12					
–13 –P	–13	11 ～13					

Schraubenschlüssel

Abb.1 Abb.2 Abb.3



CODE	HALTERCODE	Abb.	L	B
TW–4	E32 -DTB7	1	100	4
–5	E40 -DTB7/12 E50 -DTB7/12	2	153	5
W –135DR	F63M-DTB7/12	3	132.5	5

Spannzangenhalter (CTH/CTS)

E32 –CTH10 –55

E32 –CTS10 –50

Abb.1

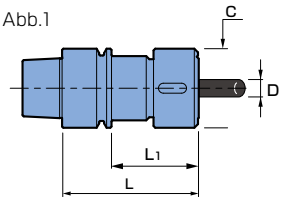
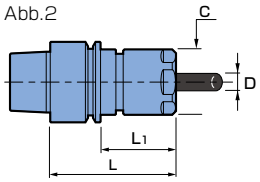


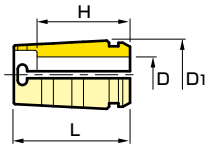
Abb.2



CODE	Abb.	φD	L	φC	L1	Kg
E32–CTH10–55	1	2.4～10	55	32	35	0.2
–CTS10–50 (※)	2		50	26	30	
E40–CTH10–55	1		55	32	35	0.4
E50–CTH10–60			60	36	34	0.7
–90			90		64	0.9
–CTH20–75		5.8～20	75	50	49	
F63–CTH10–60		2.4～10	60	36	34	0.9
–90			90		64	1.1
–CTH20–75		5.8～20	75	50	49	

■Option •Spannpatrone •Schraubenschlüssel
■Achtung •※ =Einfahren der Spannzange in diesem Fall nicht möglich.
Der Spanndurchmesser gilt nur für den Referenzdurchmesser der Spannzange.

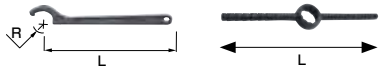
Spannpatrone



CODE Präzisions-pannzange	CODE Standard-spannzange	φD	L	φD1	H
C10–D–P	C10–D	2.6～ 5 (0.2㎜ Abstufung)	26	17.2	16
		5.2～ 5.8 (0.2㎜ Abstufung)			18
		6 ～10 (0.2㎜ Abstufung)			20
C20–D–P	C20–D	6 ～ 9.8 (0.2㎜ Abstufung)	50	29.5	29
		10 ～15.8 (0.2㎜ Abstufung)			33
		16 ～20 (0.2㎜ Abstufung)			40

Schraubenschlüssel

Abb.1 Abb.2



CODE	Abb.	HALTERCODE	L
FC–32	1	E32 - CTH10	120
–36		CTH10	208
–50		CTH20	281
RC–26	2	E32 - CTS10	240

SCHRUMPFHALTER
SLIMLINE

Zugehörige Produkte

SONSTIGE AUSRÜSTUNGEN

WERKZEUGEINRICHTSTATION

S.146

Arbeitstisch
6S-TISCH

Reinigungsvorrichtung
für Halter und Werkzeug
REINIGUNGSKASTEN

Abdeckung für Zerspanungswerkzeug
WERKZEUG-SCHUTZKAPPE, TCC-Typ

S.147

WERKZEUGEINRICHTSTÄNDER

S.148

WERKZEUGEINRICHTSTATION

Weitere Einzelheiten können dem Hauptkatalog entnommen werden. ------→

6S-TISCH

CODE
6SD – 01

Sortierung
Systematik
Schnelles Suchen und Finden
Sauberkeit
Selbstdisziplin
6S
5S + S Sicherheit

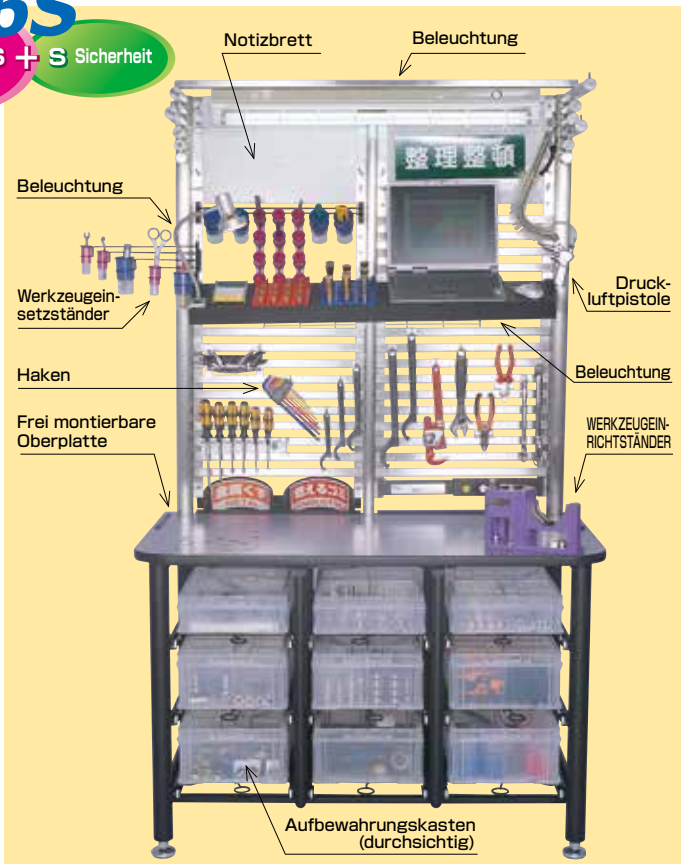
- Hilfreich bei der schnellen Umsetzung der “fünf S” für Ordnung in Ihrer Werkstatt.
- Ermöglicht schnelle Werkzeugeinstellungen.
- Leicht zu montierende, einfach konstruierte, kompakte, vorgefertigte Ausführung.

Rückseite
- Staubschutz
- Werkzeugkappenspender
- Aufhänger

Komplett ausbaubare Schublade

Frei montierbare und austauschbare Haken

Werkzeuge und Schraubstöcke können frei eingespannt/montiert werden.



REINIGUNGSKASTEN

CODE
CBX – 01

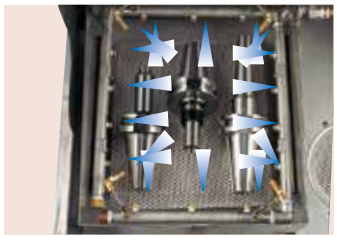
- Werkzeuge, Schneiden und Spannvorrichtungen können ohne Zerlegung abgewaschen werden.
- Kompakte Ausführung mit eingebautem Abfluss
- Keine Rohrleitungen erforderlich
- Sicheres Wasser-Reinigungssystem
- Mit einem Waschwassererwärmer für komfortable Arbeitsbedingungen auch im Winter!

Kompakter, eingebauter Abfluss

Waschdusche mit automatischer Abschaltfunktion

Handwäsche

Automatische Düsenwäsche an 18 Stellen



Werkzeughalter/Spannzange/Mutter/Zerspanungswerkzeuge gründlich waschen, um hohe Präzision zu sichern

※Abbildung inklusive optionaler Teile.

WERKZEUGSCHUTZKAPPE, TCC-Typ

Abdeckung für Zerspanungswerkzeug

Mit der transparenten Werkzeugkappe bleibt das Zerspanungswerkzeug sichtbar und ist geschützt gegen Abrutschen oder Bruch – Hohe Benutzerfreundlichkeit

Das Werkzeug ist sichtbar

φ5.4~60

Die Kappe kann auf die benötigte Gesamtlänge zugeschnitten werden.

Schützt das Bearbeitungswerkzeug und ist benutzerfreundlich.

Die Werkzeugkappe schützt den Anwender vor Verletzungen bei der Handhabung und sorgt gleichzeitig für Schutz gegen Schneidenbruch.

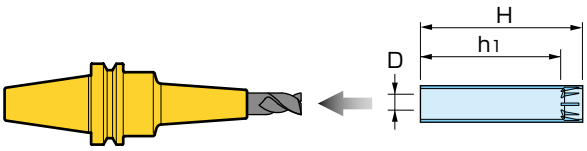
Kein Abrutschen

Schneidwerkzeugkasten

Werkzeugschutzkappe

TCC-Ausführung

CODE	φD	h1	H	Anzahl	Listenpreis
TCC0607– 50	5.4 ~ 6.7	35	40	50	¥ 1,600
–100				100	¥ 2,400
–500				500	¥ 9,500
TCC0709– 50	6.8 ~ 8.9	35	40	50	¥ 2,100
–100				100	¥ 3,200
–500				500	¥12,500
TCC0911– 50	8.9 ~ 10.9	65	70	50	¥ 2,650
–100				100	¥ 4,000
–500				500	¥16,000
TCC1113– 50	10.9 ~ 13.4	65	70	50	¥ 3,150
–100				100	¥ 4,800
–500				500	¥19,000
TCC1418– 25	13.8 ~ 17.8	100	110	25	¥ 2,400
– 50				50	¥ 3,200
–250				250	¥10,750
TCC1822– 25	17.8 ~ 22.4	100	110	25	¥ 3,000
– 50				50	¥ 4,000
–250				250	¥13,500
TCC2228– 25	22.3 ~ 28	135	150	25	¥ 3,750
– 50				50	¥ 5,000
–250				250	¥19,000
TCC2836– 10	28.0 ~ 36	130	150	10	¥ 2,000
– 20				20	¥ 2,700
– 50				50	¥ 5,100
–200				200	¥18,000
TCC3646– 10	36.2 ~ 47	165	190	10	¥ 2,600
– 20				20	¥ 3,400
– 50				50	¥ 6,500
–200				200	¥22,800
TCC4760– 10	46.0 ~ 60	160	190	10	¥ 3,300
– 20				20	¥ 4,400
– 50				50	¥ 8,400
–200				200	¥29,600



Satz mit mehreren Varianten

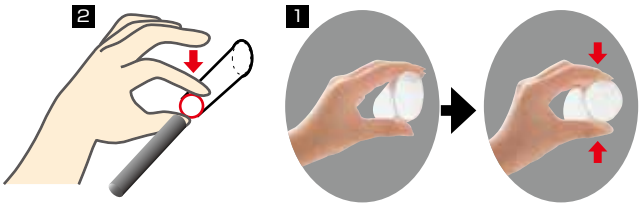
Jede Größe wird als Doppel-Satz geliefert.

CODE	Anzahl	Listenpreis
TCC–F	2 Stück pro Zerspanungswerkzeug, Übergröße für TCC0607 bis 4760 (insgesamt 20 Stück je Satz).	¥ 2,700

Anwendung

1 Die Öffnung der Werkzeugschutzkappe gerade halten und die Kappe so andrücken, dass ihre ovale Form rund wird.

2 Nachdem die Öffnung der Schutzkappe eine runde Form angenommen hat, die Kappe auf das Werkzeug oder den Meißel drücken.



TCA Typ –

Die TCA-Werkzeugschutzkappe wird an der Spitze des Werkzeughalters befestigt.

TCB Typ –

Diese Schutzkappe wird am Zerspanungswerkzeug befestigt.

Zu Einzelheiten siehe den Hauptkatalog • • •

WERKZEUGEINRICHTSTÄNDER

Die Einrichtzeiten können verkürzt werden.
Sie können nicht nur Zerspanungswerkzeuge einfach und schnell ohne Zuhilfenahme andere Vorrichtungen montieren, sondern auch Spannzangen festklemmen und Gewindestifte festziehen!

プチボール
Petit Ball40
BT40,DIN40

Freies senkrechtes oder waagerechtes Einstellen

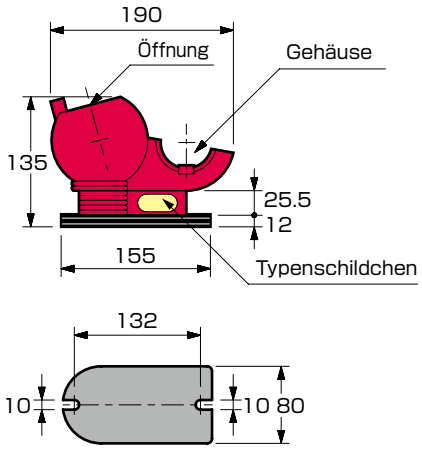
マイキューブ
MY CUBE50
BT50,DIN50

マイキューブ
MY CUBE100
HSK-A100

HF SERIE
BT30/HSK-A63/A40
A40S/E32/E50/F63

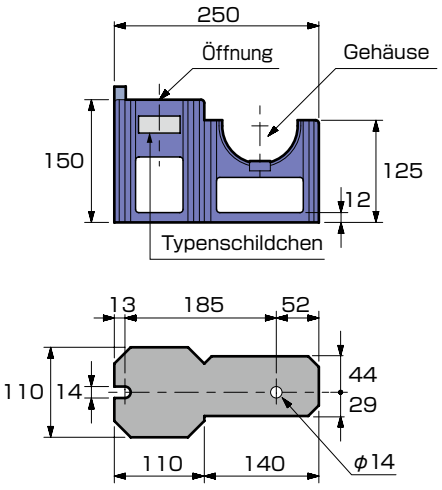
CODE	Schafttyp
PETIT BALL 40	BT40,DIN40

■Achtung •Befestigungsschrauben sind nicht beigefügt. Zum Anbringen 2xM8-Schrauben benutzen.

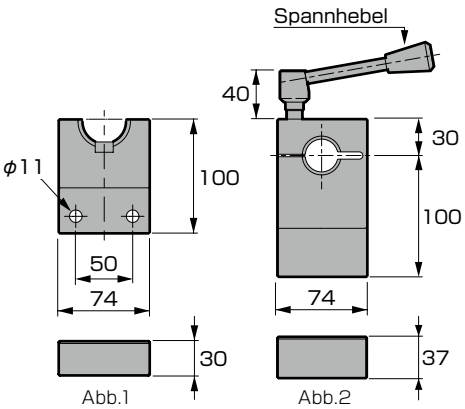


CODE	Schafttyp
MY CUBE 50	BT50,DIN50
MY CUBE 100	HSK −A100

■Achtung •Befestigungsschrauben sind nicht beigefügt. Zum Anbringen 2xM8-Schrauben benutzen.



CODE	Abb.	Schafttyp
HF − BT30	1	BT30
− A40		HSK −A40
− A50		−A50
− A63		−A63
− A40S		−A40S
− E32	2	−E32
− E40		−E40
− E50		−E50
− F63		−F63



Festklemmen der Slimline-Spannzange

Festziehen des Anzugsbolzens

Festziehen der Mutter

Festziehen der Mutter (Schraubstöcke können festgeklemmt werden)

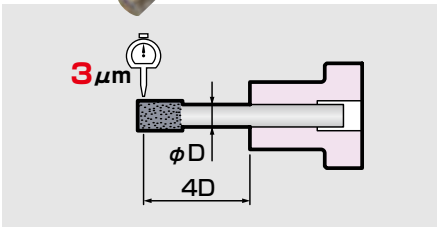
SCHRUMPFHALTER
SLIMLINE

REFERENZMATERIAL

Slimline für galvanisch beschichtete CBN-Schleifscheiben mit Hartmetallschäften

Die Aufspanngenauigkeit der Schleifscheiben hat großen Einfluss auf die Fertigbearbeitungsgenauigkeit (Rundheit, Rauheit etc.). Durch Einsatz einer Schrumpfschleifdorns wird die Genauigkeit weiter erhöht.

■Achtung ●Beachten Sie, dass der Ausschlag der Schleifscheibe in hohem Maße von der Exaktheit der Befestigung der Schrumpfschleifdorns an der Schleifscheibenspindel beeinflusst wird.



Vergleichswerte

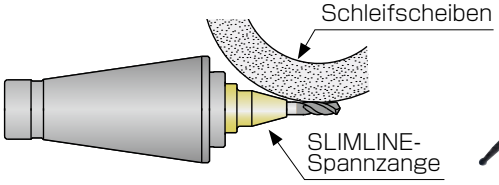
Messungen	Schrumpfsitz	Spannzangen
Rundheit	0.3 μm	0.6μm
Rauheit Ry	1.38μm	2.7μm

Schnittbedingung

Werkstoff	: SUJ 2
Bearbeitungsdurchmesser	: φ5
Schleifscheibentyp	: ABE06 Körnung Nr. 140, hergestellt von FSK
Außendurchmesser der Schleifscheibe x Schaftdurchmesser	: φ3.5×φ3
Werkstückdrehzahl	: 1,000min^{-1}
Spindeldrehzahl	: 94,000min^{-1}
Schnittgeschwindigkeit	: 1,033min^{-1}
Vorschub	: 1,500mm
Schnittvorschub	: 0.01m/min
Ausfunken	: 60sek.
Zugabe bei jedem Bearbeitungsschritt	: 0.005mm

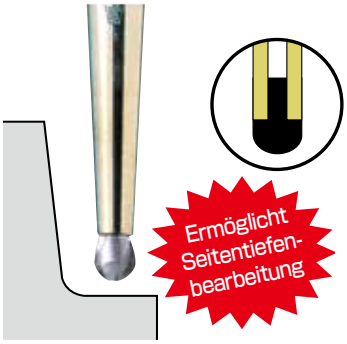
Verwendung eines Schrumpfhalters (für das Werkzeugschleifen)

Hervorragende Zugänglichkeit der Schleifscheibe ermöglicht perfektes Werkzeugschleifen. Hochpräzise Aufspannung mit größter Stabilität und Sicherheit steigert die Werkzeugschleifgenauigkeit. Die Genauigkeit der Zerspanungswerkzeuge wird erheblich verbessert, wenn Slimline für Nachschärfzwecke eingesetzt wird.



Hartmetall-Schaftfräser für Schrumpf-Werkzeughalter

GX3000 Hartmetall-Schaftfräser für Schrumpf-Werkzeughalter



Zugänglichkeit
Hohe Kosteneffizienz

※ GX3000 ist ein OSG-Produkt.

Normale Maßtoleranz von Passungen (JIS B 0401)

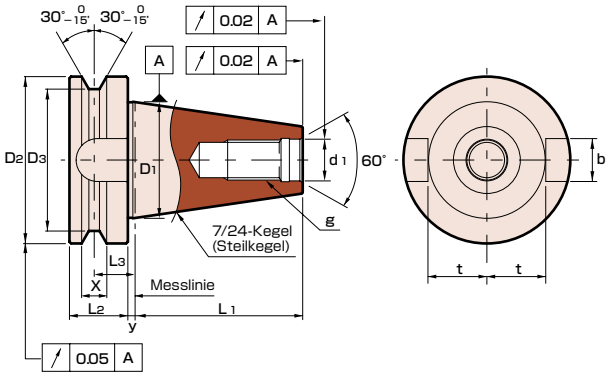
Maßklasse (mm)		Die Toleranz des Bohrungsmaßes (μm)						Die Toleranz des Schaftmaßes (μm)					
Mehr als ...	Weniger als	H4	H5	H6	H7	H8	H9	h4	h5	h6	h7	h8	h9
–	3	+3 0	+4 0	+6 0	+10 0	+14 0	+25 0	0 -3	0 -4	0 -6	0 -10	0 -14	0 -25
3	6	+4 0	+5 0	+8 0	+12 0	+18 0	+30 0	0 -4	0 -5	0 -8	0 -12	0 -18	0 -30
6	10	+4 0	+6 0	+9 0	+15 0	+22 0	+36 0	0 -4	0 -6	0 -9	0 -15	0 -22	0 -36
10	18	+5 0	+8 0	+11 0	+18 0	+27 0	+43 0	0 -5	0 -8	0 -11	0 -18	0 -27	0 -43
18	30	+6 0	+9 0	+13 0	+21 0	+33 0	+52 0	0 -6	0 -9	0 -13	0 -21	0 -33	0 -52
30	50	+7 0	+11 0	+16 0	+25 0	+39 0	+62 0	0 -7	0 -11	0 -16	0 -25	0 -39	0 -62

Technische Daten

Detailzeichnung des Schaftes

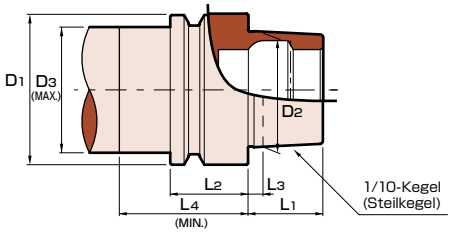
BT-Schaft (Auszüge aus 403 MAS)

CODE	D_1	L_1 (±0.2)	D_2 (h8)	D_3	d_1 (H8)	L_2	L_3 (±0.1)	y (±0.4)	X ($^{+0.1}_{0}$)	b (H12)	t ($^{0}_{-0.2}$)	g (H6)
BT30	31.75	48.4	46	38	12.5	20	13.6	2	8	16.1	16.3	M12
BT40	44.45	65.4	63	53	17	25	16.6		10		22.6	M16
BT50	69.85	101.8	100	85	25	35	23.2	3	15	25.7	35.4	M24



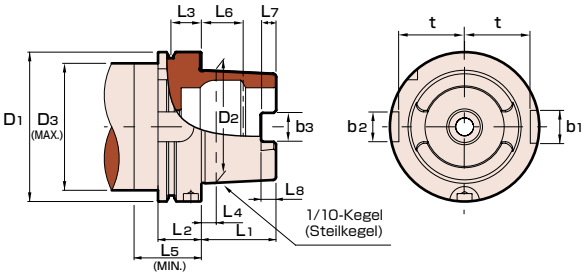
HSK-E/F-Schaft (DIN 69893-5)

CODE	ϕD_1	ϕD_2	ϕD_3	L_1	L_2	L_3	L_4	L_5
E25	25	19.006	20	13	10	2.5	20	7.21
E32	32	24.007	26	16	20	3.2	35	8.92
E40	40	30.007	34	20		4		11.42
E50	50	38.009	42	25	26	5	42	14.13
F63	63		52				43	



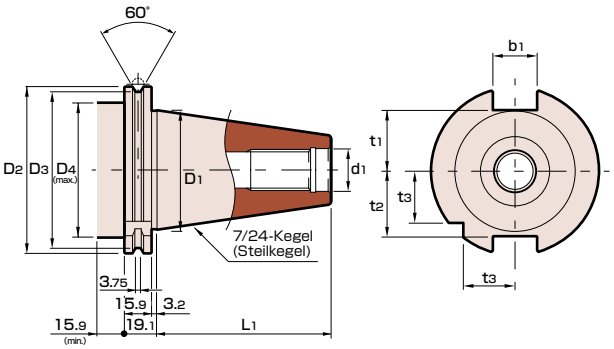
HSK-A-Schaft (DIN 69893)

CODE	ϕD_1	ϕD_2	ϕD_3	L_1	L_2	L_3	L_4	L_5	L_6	L_7	L_8	b_1	b_2	b_3	t
A 40	40	30.007	34	20	20	16	4	35	11.42	6	3.5	11	9	8.05	17
A 50	50	38.009	42	25	26	18	5	42	14.13	7.5	4.5	14	12	10.54	21
A 63	63	48.010	53	32			6.3		18.13	10	6	18	16	12.5	26.5
A100	100	75.013	88	50	29	20	10	45	28.56	15	10	22	20	20	44



DIN -Schaft (DIN69871-1)

CODE	ϕD_1	ϕD_2	ϕD_3	ϕD_4	L_1	L_3	b_1	d_1	t_1	t_2	t_3
DN40	44.45	63.55	56.25	50	68.4	3.75	16.1	17	22.8	25	18.5
DN50	69.85	97.5	91.25	80	101.75	6.495	25.7	25	35.5	37.7	30



Umrechnungstabelle für SI-Einheiten

Kraft

N	kgf
1	1.01972^{-1}
9.80665	1

Druck

Pa	kgf/cm²
1	1.0197×10^{-5}
9.80665×10^{4}	1

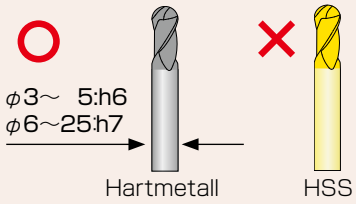
Beanspruchung

Pa	kgf/mm²
1	1.0197×10^{-7}
9.80665×10^{6}	1

⚠Gebrauchsanweisung

Verwendbare Werkzeuge

Bitte verwenden Sie Hartmetall Werkzeuge. Bei Werkzeugen aus HSS ist ein Lösen des Schrumpfsitzes nicht möglich. Bei Überschreitung von Werkzeugtoleranzen kann Bruch oder Rutschen verursacht werden.

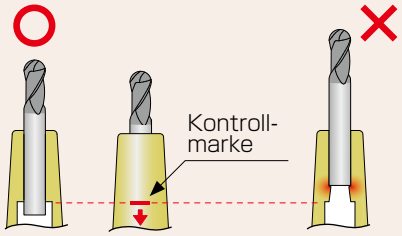


Vorsicht – Gefahr von Brandverletzungen!

Es müssen auf jeden Fall Schutzhandschuhe getragen werden, da das Metall während des Erwärmungsvorgangs relativ heiß wird.

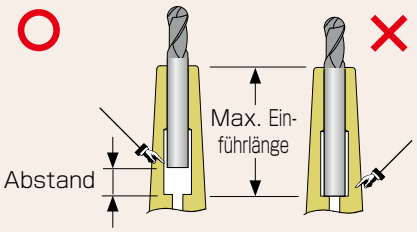
Kontrollmarke

Bei einer zu kurzen Einführlänge kann der Halter beim Einstecken des Werkzeugs beschädigt werden. Den Werkzeugschaft stets über die Kontrollmarke hinaus einführen.



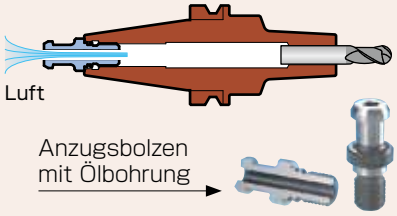
Max. Einführlänge

Wenn das Werkzeug ganz bis zum Anschlag des Halters eingeführt wird, kann dadurch die Genauigkeit beeinträchtigt werden. Bitte die maximale Einführlänge einhalten.



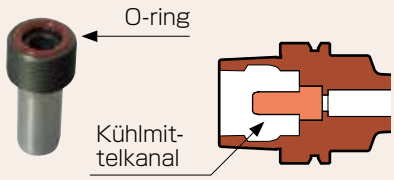
Anzugsbolzen mit Bohrung(BT,DIN)

Einen Anzugsbolzen mit Lochung verwenden oder den Anzugsbolzen entfernen und erwärmen. Der typische Anzugsbolzen ist nicht mit Entlüftungsöffnungen versehen, um zu verhindern, dass dort Werkzeuge eingeführt werden.



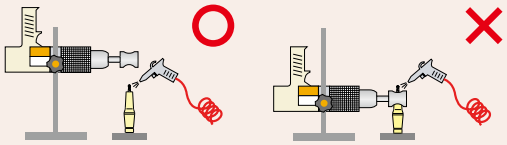
Kühlmittelkanal(HSK)

Den Kühlmittelkanal entfernen, bevor der Halter erwärmt wird; bei Erhitzung des Halters mit noch angebrachtem Kühlmittelkanal kann der O-Ring beschädigt werden.
Ein vor Ort herausnehmbarer Blindkanal ist erhältlich.



Luftkühlung von außen

Beim Abkühlen des HRB-02S oder HRB-01 mit Luftzuführung von außen darf die Luft nicht direkt auf das Schrumpf-Heizgerät geleitet werden. In diesem Fall schmilzt der Lüfter im Heizgerät. Dadurch wird ein Geräteausfall verursacht.



Vorsichtsmaßnahmen für die Abkühlung mit Wasser

Durch Wasserkühlung unmittelbar nach dem Aufschrumpfvorgang können aufgrund der großen Menge des sich dabei bildenden Wassedampfs Verbrennungen verursacht werden. Sicherstellen, dass das Schrumpfsitz-Heizgerät auf COOL eingestellt ist und den Halter vor dem Kühlen mit Wasser mindestens eine Minute lang an der Luft abkühlen lassen. Auf dem Halter zurückbleibende Feuchtigkeit kann zur Rostbildung und somit zur Beschädigung des Halters führen; daher stets darauf achten, dass sämtliche Feuchtigkeit und Nässe komplett entfernt wird.

Anpassung an spezielle Kundenbedürfnisse

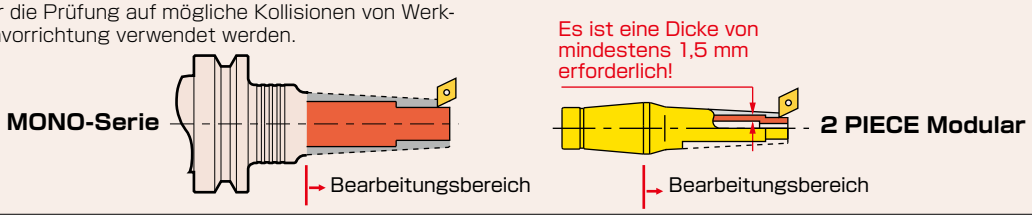
- ■Die Gesamtlänge nicht ändern, da eine Verkürzung der Haltelänge zu einer Verringerung der Spannkraft und der Genauigkeit führt.
- ■Sicherstellen, dass eine Dicke von mindestens 1,5 mm aufrechterhalten wird. Zur Bestimmung der Bearbeitungsmaße siehe die Maßtabelle für kundenspezifische Bearbeitung im Bedienungshandbuch.
- ■Zum bei der Anpassung an spezielle Kundenanforderungen zulässigen Bearbeitungsbereich siehe das Bedienungshandbuch.
- ■Der gerade Hartmetalldorn kann nicht an spezifische Kundenanforderungen angepasst werden.
- ■Bei der kundenspezifischen Anpassung von Flash-Haltern (CF/SLFB-Typ) muss mit größter Sorgfalt vorgegangen werden, insbesondere in Bezug auf die Kühlmittel-Durchgangsbohrungen.
- ■ Auf Anfrage liefern wir auch Maßzeichnungen mit CAD-Daten (DXF-Format), die bei der Erstellung von Zeichnungen für zusätzliche Bearbeitungen hilfreich sind. Diese Zeichnungen können auch als Grundlage für die Prüfung auf mögliche Kollisionen von Werkstück und Spannvorrichtung verwendet werden.

Informationen zur kundenspezifischen Bearbeitung (Drehen)

1. Leichte Bearbeitung mit geringer Schnitttiefe durchführen. (0,1 bis 0,2 mm)
2. Während des Bearbeitungsvorgangs wasserlösliches Kühlmittel zuführen und keinen Temperaturanstieg am bearbeiteten Werkstück zulassen.
3. Ein Werkzeug mit nichtrostender oder feststehender Schneide verwenden.
4. Die folgenden Bearbeitungsbedingungen werden empfohlen:

Schnittgeschwindigkeit	30 bis 50 m/min
Vorschubgeschwindigkeit	0,1 bis 0,2 mm/U
Schnitttiefe···	0,1 bis 0,2 mm

5. Nach der Anpassung auf spezielle Kundenbedürfnisse nimmt die Steifigkeit der Haupteinheit ab. Die Spannvorrichtung dann unter reduzierten Schnittbedingungen verwenden.

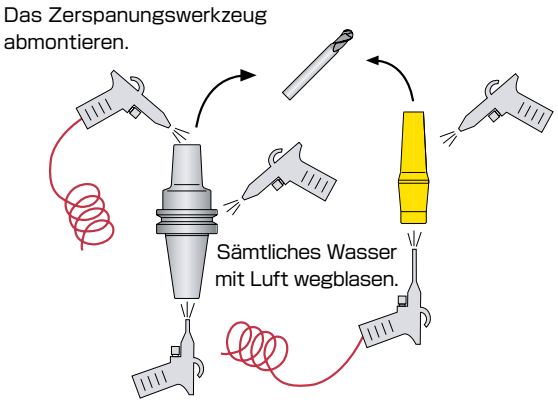


⚠Vorsichtsmaßnahmen zur Vermeidung von Rostbildung

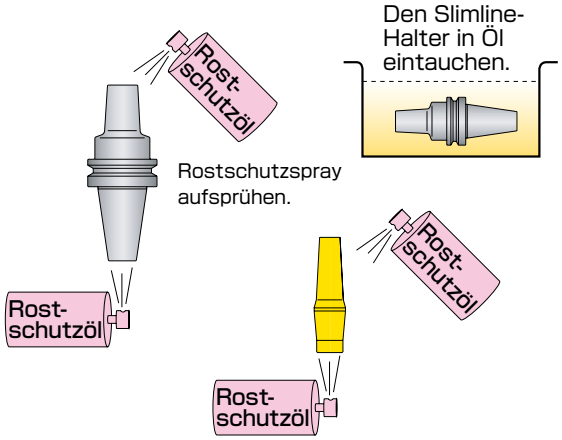
Was kann zur Vorbeugung gegen Rost getan werden?

・Eisen rostet, wenn Wasser und Luft (Sauerstoff) in seiner Nähe vorhanden sind. Rostbildung kann verhindert werden, wenn sämtliches Wasser durch entsprechende Rostschutzmaßnahmen entfernt bzw. wenn sichergestellt wird, dass das Metall der Luft (dem Sauerstoff) nicht unmittelbar ausgesetzt ist.

1. Säubern (Entfernen von Wasser)



2. Rostschutzmaßnahmen



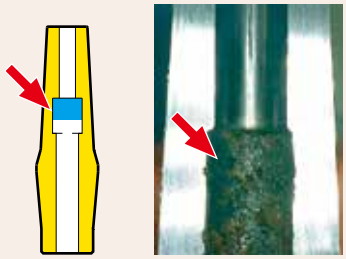
【Pflegemaßnahmen】

1. Nach dem Einsatz des Halters sämtliches Wasser mit Luft wegblasen. Ausreichend Luft einblasen, insbesondere bis zum Grund von tiefen Löchern, in kleine Bohrungen in Flush-Slimline-Haltern u.ä. Nach dem Säubern des Slimline-Halters mit Waschöl oder in einer Reinigungsvorrichtung ist das Einblasen von Luft hilfreich.
2. Den Slimline-Halter mit einem Schrumpfsitz-Heizgerät erwärmen und dann das Werkzeug entfernen.
3. Nach dem Säubern Rostschutzöl aufsprühen oder den Slimline-Halter in Rostschutzöl eintauchen.
4. Vor dem Aufschrumpfvorgang das auf den Slimline-Halter aufgetragene Rostschutzöl gründlich entfernen. Zum Entfernen des Öls ist ein Reinigungsspray oder -lösungsmittel hilfreich.

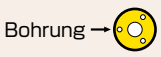
Warum bildet sich Rost?

・In der Luft enthaltene Feuchtigkeit kann am Slimline-Halter anhaften. Dieses Wasser reagiert mit dem Metall und es bildet sich Rost.
・Da der Slimline-Halter erhitzt wird, neigt das Öl auf seiner Oberfläche zur Verdampfung und dadurch kommt es eher zu Rostbildung.

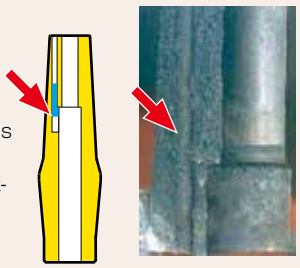
Insbesondere wenn Kühlmittel im System für Kühlmittelzufuhr durch die Spindelbohrung durch einen Halter oder eine Spannzange fließt, bleibt es tief im Inneren des Halters und führt Rostbildung herbei.



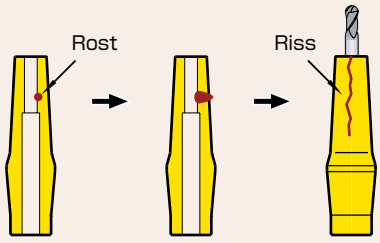
F-typ
【Ausführung für Spülkühlmittelzufuhr】



Bei den Slimline-Flush-Haltern muss mit besonderer Vorsicht vorgegangen werden, da hierbei das Kühlmittel stark dazu neigt, in den kleinen Bohrungen dieses Haltertyps zu verbleiben.



Was geschieht nach der Rostbildung?



・Rost, der sich an einer Metallfläche gebildet hat, frisst sich im Laufe der Zeit immer tiefer hinein.
・Soll ein Werkzeug in diesem Zustand aufgespannt werden, kann es nicht in Bohrungen eingeführt werden, da sonst die Beanspruchung, die von der Dehnpassung des Schrumpfsitzes herrührt, im korrodierten Bereich besonders groß ist. Hier kommt es dann mit höherer Wahrscheinlichkeit zu Rissen.
・Bei häufigem, kontinuierlichen Einsatz des Slimline-Halters unter diesen Bedingungen nimmt die Spannkraft ab, das Werkzeug verrutscht oder die Spanngenauigkeit verringert sich in einem solchen Maße, dass der Slimline-Halter nicht mehr verwendet werden kann.

MST ist ständig bestrebt, die Sicherheit und Qualität seiner Produkte zu verbessern. Lesen Sie die zusammen mit dem Produkt gelieferte Bedienungsanleitung auf jeden Fall gründlich durch, bevor Sie es benutzen. Damit stellen Sie sicher, dass es sicher und effizient eingesetzt wird. Befolgen Sie bitte insbesondere die in der Bedienungsanleitung enthaltenen Vorsichts- und Warnhinweise. Sollte es zu Problemen mit dem Produkt kommen, wird MST es immer reparieren, sofern dies möglich ist.

G-Klasse...Auswuchtwert

■ Verfügbar für Hochgeschwindigkeitsbearbeitungen — Konstruktion mit Vorauswuchtung

Bei der Hochpräzisionsbearbeitung mit hoher Geschwindigkeit rotiert die Spindel des Bearbeitungszentrums mit einer mehrfach höheren Drehzahl (20.000 min-1, 30,000 min-1, 50,000 min-1 oder höher) als bei konventioneller Bearbeitung und auch die Vorschubgeschwindigkeit ist wesentlich höher. Andersherum ausgedrückt müssen für die Hochgeschwindgkeitsbearbeitung geeignete Halter folgende Merkmale aufweisen:

① **Präzises Festhalten des Zerspanungwerkzeugs mit hoher Spannkraft während des gesamten Hochgeschwindigkeitsbearbeitungsvorgangs.**
② **Möglichst kompakte Bauweise (klein und kurz).**
③ **Hervorragende Auswuchtung auch für sehr schnelle Bearbeitungsvorgänge.**

Diese drei Punkte sind von großer Bedeutung.

Durch diese Methode wird ein vorher festgelegtes Gleichgewicht gewährleistet, ohne dass normalerweise vorzunehmende Korrekturmaßnahmen wie z.B. das Hinzufügen von Gegengewichten oder Materialabnahme am Halterkörper zum Ausgleichen der bei einem herkömmlichen Halter festgestellten Unwucht (für Betrieb mit niedriger Drehzahl) durch ein Auswuchtgerät vorgenommen werden müssen.

■ Auswuchtungswert

Für Halter für die Hochgeschwindigkeitsbearbeitung sind auch die Spalten “Auswuchtungswert” und “Haltergewicht” in der Maßtabelle vorgesehen.

CODE-TABELLE

Haltergewicht　Auswuchtwert

h	Kg	N	S	縮尺図
0	0.7	8.1	9.3	1
	0.8	9.2	14.9	4
		8.2	9.6	2

■ G-Klasse für Hochgeschweindigkeitsbearbeitung mit einem Bearbeitungszentrum

Wenn der Schwerpunkt der Maßnahmen nur auf den Halter gelegt wird (nur Erhöhung der G-Klasse des Halters), reicht dies nicht aus, um die Spindel eines Bearbeitungszentrums mit sehr hoher Drehzahl rotieren lassen zu können.
Grund dafür ist, dass das Gesamtgewicht der anderen Komponenten (Spindel, Zugmechanismus, Zerspanungswerkzeug) weit höher ist als das Haltergewicht (mindestens das 10-fache). Bei der Verbesserung der Auswuchtung eines sich drehenden Körpers ist es wichtig, alle seine Komponenten zu berücksichtigen.

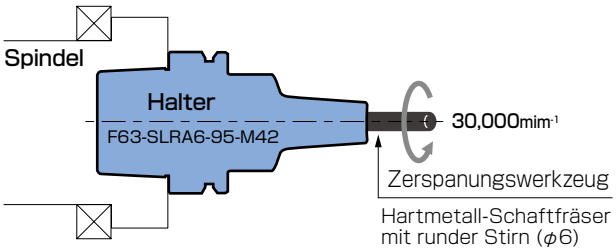
Der G-Klassen-Gesamtwert eines im Hochgeschwindigkeitsbetrieb rotierenden Körpers kann wie folgt ermittelt werden:

$$\text{G-Klasse} = \frac{(\text{Spindel} + \text{Halter} + \text{Zerspanungswerkzeug})\ \text{Auswuchtwert}(\text{g}\cdot\text{mm})}{(\text{Spindel} + \text{Halter} + \text{Zerspanungswerkzeug})\ \text{Gewicht}\ (\text{kg})} \times \frac{\text{Spindeldrehzahl}}{9{,}550}$$

[Beispiel]

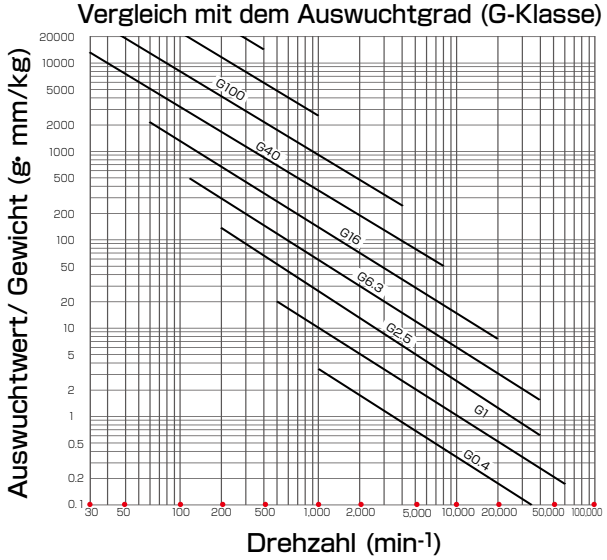
	Spindel	Halter	Zerspanungswerkzeug
Gewicht (kg)	10	0.8	0.02
Auswuchtwert (g • mm)	6	1.9	0.2

$$G = \frac{(6 + 1.9 + 0.2)}{(10 + 0.8 + 0.02)} \times \frac{30{,}000}{9{,}550} = 2.35$$



■ REFERENZMATERIAL

Unwucht im Hinblick auf zulässige Restunwucht im Vergleich mit dem Auswuchtgrad (G-Klasse)



Empfohlene unterschiedliche G-Klassen-Werte für einen sich drehenden Körper

G-Klasse	G	Rotationskörper
G40	~17	Kfz-Räder
G16	~16	Teile von Landwirtschaftsmaschinen Teile von Lastwagen
G 6.3	~6.3	Werkzeugmaschinen und Flugzeug-Gasturbinenrotoren nach der Montage allgemeiner Mechanikteile.
G 2.5	~2.5	Spindeln von Werkzeugmaschinen Gasturbinen Dampfturbinen
G 1	~1	Schleifscheibenspindel einer Schleifmaschine
G 0.4	~0.4	Schleifscheibenspindel einer Präzisionsschleifmaschine Gyroskop

Steifigkeit der Slimline-Serie

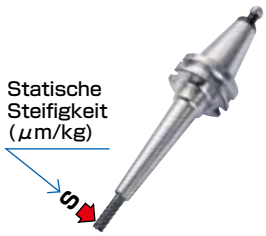
"Slimline" -Schrumpfsitzhalter haben eine schlanke Form und weisen große Effizienz auf, insbesondere bei Bearbeitungen auf engem Raum und bei Tieflochbearbeitungen, bei denen eine längere Werkzeugausladung erforderlich ist. Im Katalog sind "Steifigkeitswerte" angegeben – ein Kriterium, das bei der Auswahl von Schnittbedingungen und Haltern zur Anwendung kommt. Bitte nutzen Sie unsere Halter optimal – beachten Sie dazu die folgenden Daten und Werte.

■ Erzielen eines guten Steifigkeitswertes S (Durchbiegung)

Beispiel für den BT50-SLSA3-110-M42

○ Kontrollieren Sie den in der Codetabelle aufgeführten Steifigkeitswert S (Durchbiegung)
S
bzw. den Wert in der Maßstabspalte im Katalog.

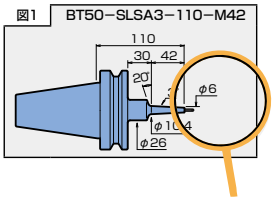
○Der Steifigkeitswert S gibt die Durchbiegung eines Halters mit darin montiertem Werkzeug an- bei einer Last von 1 kg, die horizontal auf die Schneidenkante wirkt (Strecke entspricht dem Dreifachen des Schneidendurchmessers).
In diesem Fall beträgt die Durchbiegung 9,4 μm.



CODE-TABELLE

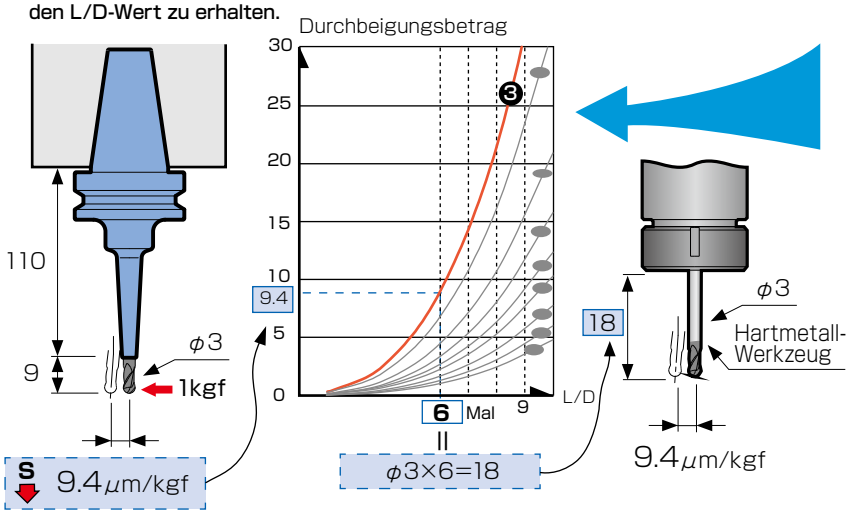
h	Kg	S	縮	図
165	3.6	9.4		
190	3.7			4
	3.8	4.4		2
				5

Maßstäbliches Modell

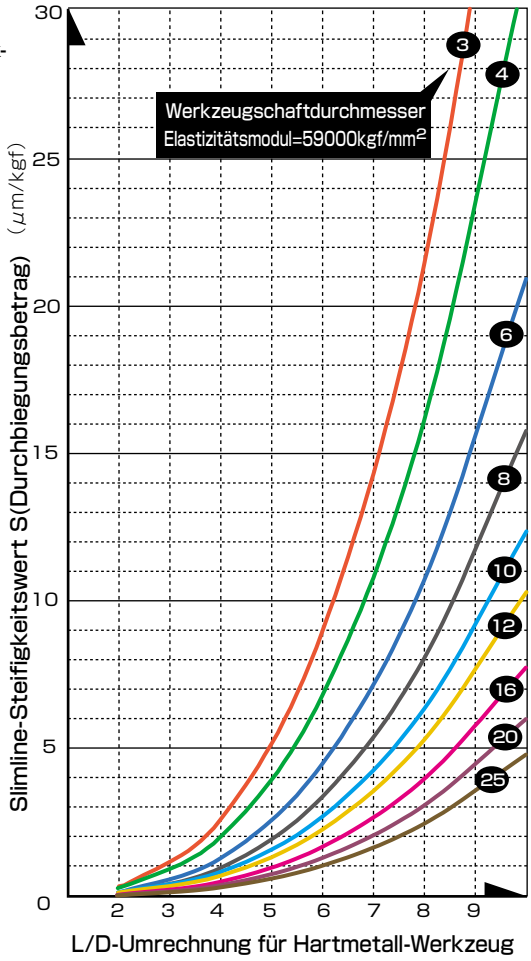


■ Umrechnung des Steifigkeitswerts S in die Überhanglänge des Hartmetall-Werkzeugs (L/D)

○ Die Durchbiegung beträgt 9,4 μm/kg. →Den entsprechenden Wert bei [Beziehung zwischen Durchbiegung und Überhang] (siehe Grafik rechts) ablesen, um den L/D-Wert zu erhalten.



【Beziehung zwischen Durchbiegung und Überhang】



∴ Mit anderen Worten: Dieser Halter besitzt die gleiche Steifigkeit, die man erhält, wenn ein Hartmetall-Zerspanungswerkzeug mit einem Durchmesser von 3 mm einen Überhang von 18 mm aufweist (L/D-Verhältnis = das 6-fache). Mit dem L/D-Verhältnis kann die Steifigkeit leichter bestimmt werden als über die Durchbiegung. Als Faustregel gilt, dass die Steifigkeit gerade ausreicht, wenn der L/D-Wert ≤ das 3-fache beträgt und den Normalwert aufweist, wenn der L/D-Wert ≤ das 6-fache beträgt. Bei einem höheren L/D-Wert als 6 müssen die Bearbeitungsbedingungen genauestens nachgeprüft werden.

Software zur Berechnung der statischen Steifigkeit für Slimline-Halter

2 PIECE modular
GERADER DORN
MONO-Serie
〉Alle Halter sind erfasst

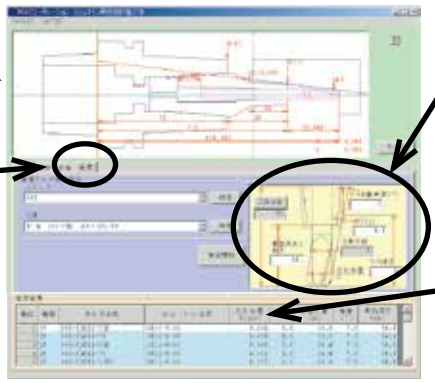
Jeder, der diese Software anfordert, erhält ein Exemplar

Mit der Steifigkeitsberechnungssoftware für Slimline-Halter verfügen Sie über eine einfache Methode zur Kontrolle des Steifigkeitwerts eines Slimline-Halters (mit montiertem Werkzeug) und zur Überprüfung auf mögliche Kollisionen mit Werkstücken.

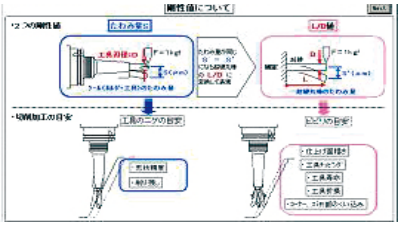
Anzeige der Hauptabmessungen

Der am besten geeignete Slimline-Halter mit der höchsten Steifigkeit für die jeweils zu bearbeitende Werkstückform wird vom Programm automatisch ausgewählt.

Die Halter werden sortiert nach höherer Kollisionsgefahr und abnehmender Steifigkeit aufgelistet.



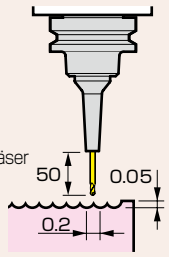
Geben Sie einen Wert für den Abstand (zwischen Werkstück und Werkzeug/Halter), einen Grenzwert für den Werkzeugüberhang (kürzeste Ausladung) und weitere Einricht-Festlegungen für die Werkstückform ein (Neigungswinkel, Tiefe).



BT40-SLK12-45 CF12-3-55

N : 20000 min⁻¹
F : 2000 mm
V : 25 m
f : 0.05 mm/Spannut

R0.2 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



SKD61(HRC50°)

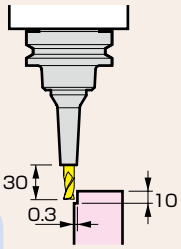
Die Erfahrungen der Kunden

Werkzeugstandzeit war fast doppelt so lang, weil die Spanngenauigkeit höher war. Die Oberflächengüte der Werkstücks konnte verbessert werden.

BT40-SLK12-45 CR12-6-55

N : 15000 min⁻¹
F : 2400 mm
V : 188 m
f : 0.04 mm/Spannut

φ6 Hartmetall-Stirnfräser 2 Spannuten



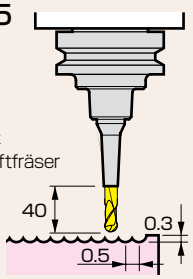
Bearbeitung von Sinterteilen

Werkzeugstandzeit war gegenüber einem Spannpatronenhalter fast doppelt so lang. Kratzer an der Bearbeitungsfläche beim Gegenlauffräsen sind im Gegensatz zu früher nicht mehr vorhanden, weil die Fräsersteifigkeit einfach höher ist – wegen des kleineren Überhangs bei Slimline-Haltern.

BT50-SLK12-75 CS12-10-55

N : 6000 min⁻¹
F : 6000 mm
V : 188 m
f : 0.5 mm/Spannut

R5 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



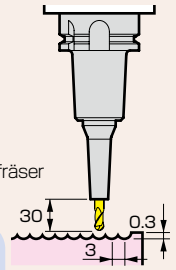
SKD11(HRC40°)

Wir haben eine ausreichende Oberflächengüte erreicht. Werkzeugstandzeit 3-mal länger als mit Patronenhaltern.

A63-SLK12-75 CF12-6-55

N : 16000 min⁻¹
F : 3200 mm
V : 301 m
f : 0.1 mm/Spannut

R3 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



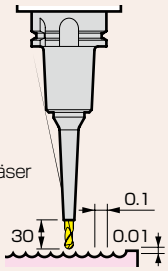
S55C(HRC28°)

Werkzeugstandzeit war etwa 3-mal so lang, weil die Spanngenauigkeit einfach hervorragend ist Slimline hat bei uns für hervorragende Oberflächengüte gesorgt, daher hatten wir einen geringeren Handpolieraufwand.

A63-SLK12-75 CS12-6-80

N : 20000 min⁻¹
F : 4000 mm
V : 377 m
f : 0.1 mm/Spannut

R3 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



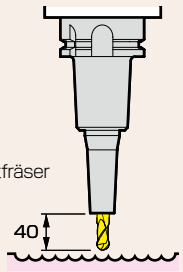
A7075

Keine langen Prüfungen auf mögliche Kollisionen nötig. Spindeldrehzahl und Vorschub konnten um das 1,5-fache erhöht werden. Werkzeugstandzeit war länger, wegen der hervorragenden Aufspanngenauigkeit.

A63-SLK12-75 CF12-10-55

N : 20000 min⁻¹
F : 6000 mm
V : 628 m
f : 0.15 mm/Spannut

R4 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



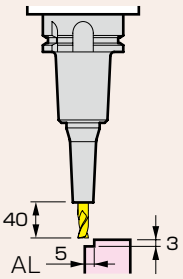
SKD11(HRC50°)

Slimline bietet gleichbleibend niedrige Unrundheit. Wir erzielten hohe Oberflächengüten, dank der vibrationsfreien Bearbeitung – wegen der hohen Steifigkeit bei Planvorschub. Die Werkzeugstandzeiten waren im Vergleich mit Patronenhaltern 1,5 - 2 Mal so lang.

A63-SLK12-75 CR12-10-55

N : 20000 min⁻¹
F : 6000 mm
V : 628 m
f : 0.15 mm/Spannut

φ10 Stirnfräser 2 Spannuten

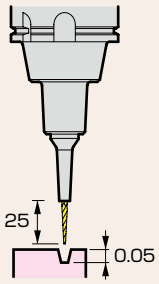


Mit Slimline ist der Geräuschpegel bei der Bearbeitung mit hoher Spindeldrehzahl niedriger. Langer Werkzeugüberstand ist nicht erforderlich, weil das kompakte Design von Slimline eine hervorragende Positionierung an die Bearbeitungsstelle ermöglicht – ohne Kollisionen mit Werkstückeinspannvorrichtungen.

A100-SLK12-105 CR12-4-55

N : 13000 min⁻¹
F : 700 mm
V : 61 m
f : 0.03 mm/Spannut

φ4 Hartmetall-Kegelstirnfräser (1°) 2 Spannuten



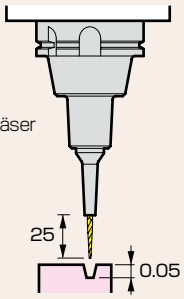
HPM7 (HRC32°)

Die Werkzeugstandzeit war doppelt so lang wie mit herkömmlichen Spannzangenhaltern, aufgrund der hohen Aufspannpräzision.

BT40-SLSA6-95-M42

N : 2000 min⁻¹
F : 100 mm
V : 38 m
f : 0.025 mm/Spannut

φ6 Hartmetall-Stirnfräser 2 Spannuten



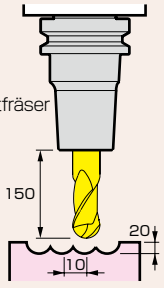
ADC12

Oberflächengüte und Spanngenauigkeit waren besser.

BT50-SLRB20-110-M42

N : 4500 min⁻¹
F : 4400 mm
V : 283 m
f : 0.489 mm/Spannut

R10 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



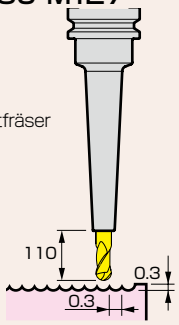
Kunststoff

Wir haben die Z-Vorschubgeschwindigkeit im Vergleich mit herkömmlichen Haltern verdoppelt. Trotzdem ist dieser Halter immer noch steif und stabil genug.

BT40-SLSB12-180-M127

N : 2500 min⁻¹
F : 500 mm
V : 94 m
f : 0.1 mm/Spannut

R6 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



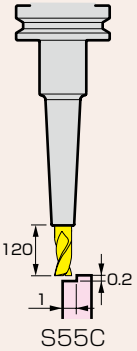
Gr

Während des Bearbeitungsprozesses waren die Vibrationen geringer und die Oberflächengüten höher.

BT50-SLSB16-225-M127

N : 5600 min⁻¹
F : 2000 mm
V : 281 m
f : 0.179 mm/Spannut

φ16 Hartmetall-Stirnfräser 2 Spannuten



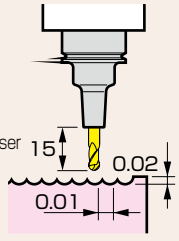
S55C

Die Spanngenauigkeit konnte stabilisiert werden. Oberflächengüte und Standzeiten konnten um das 2 - 3-fache verbessert werden.

E40-SLRA6-50

N : 20000 min⁻¹
F : 1500 mm
V : 377 m
f : 0.038 mm/Spannut

R3 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



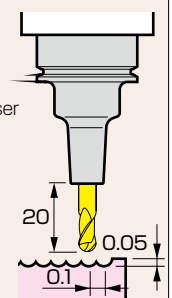
SKD11(HRC60°)

Mit herkömmlichen Haltern hatten wir nicht so hohe Oberflächengüten. Aber mit Slimline war die Oberflächengüte einfach Klasse.

F63-SLSA4-75-M22

N : 16000 min⁻¹
F : 1200 mm
V : 100 m
f : 0.038 mm/Spannut

R1 Hartmetall-Schaftfräser mit runder Stirn 2 Spannuten



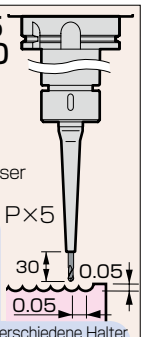
SKD61(HRC55°)

Aufgrund der sehr hohen Genauigkeit waren die Werkzeugstandzeiten länger.

A100—CTH25—195 ST25—SLSA6—320

N : 5000 min⁻¹
F : 150 mm
V : 94 m
f : 0.015 mm/Spannut

Hartmetallbeschichteter Fräser 2 Spannuten



Steifigkeit und Genauigkeit des Slimline-Systems konnten verbessert werden, so dass nur zwei Komponenten (Grundhalter und Spannzange) zum Aufspannen eines Bearbeitungswerkzeugs benötigt wurden, während wir bei konventionellen Systemen drei verschiedene Halter hintereinander brauchten. Die Bearbeitungszeit konnte von 360 auf 300 Minuten verkürzt werden.

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