



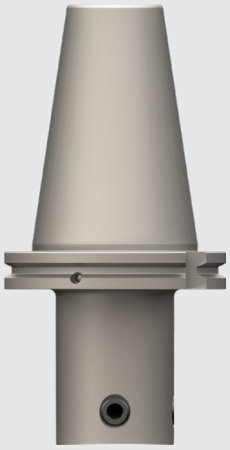
SWISS+TOOLS[®]

S w i s s
BORE
2403



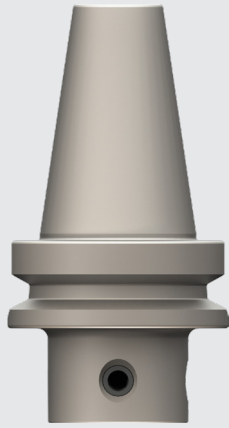
SCHAUBLIN

Grundmodule / Master shanks / Modules de base



DIN 69 871-AD/B

12-13



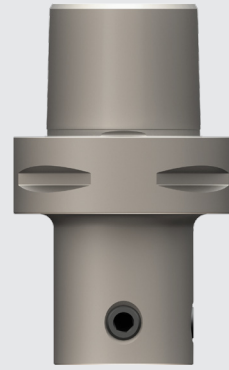
MAS BT JIS B 6339

13-14



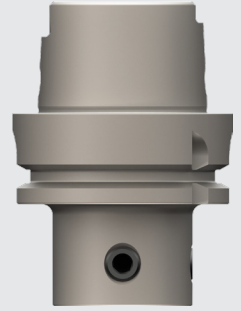
DIN 2080

14



ISO 26623-1 PSC

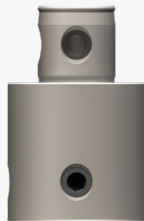
12



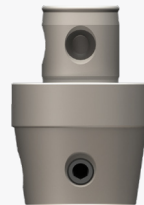
DIN 69 893 HSK

12

Zwischenmodule / Intermediate modules / Modules intermédiaires



17



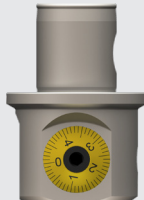
18

ø 0.3-19.1 mm



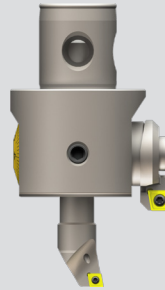
19-21

ø 3-88 mm



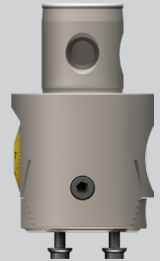
22-23

ø 3-152 mm



24-25

ø 3-320 mm



26



33



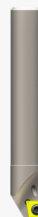
29



27



28



30



31-32

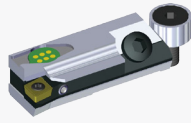


26





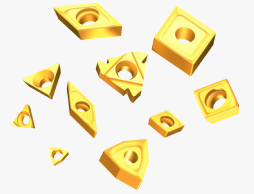
▣4



▣5



▣6-10



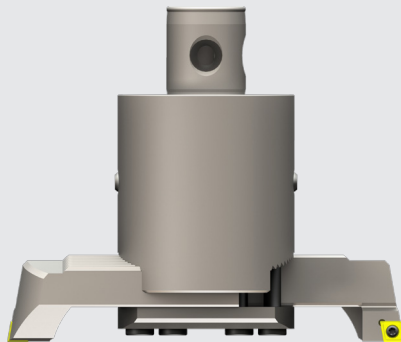
▣64-67

∅ 23-153 mm



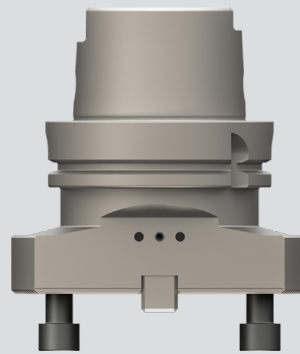
▣47-50

∅ 86-402 mm

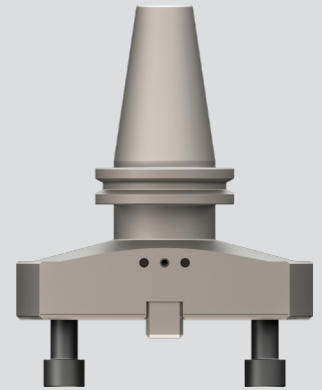


▣54

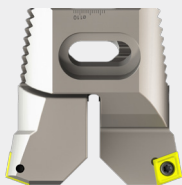
∅ 150-2205 mm



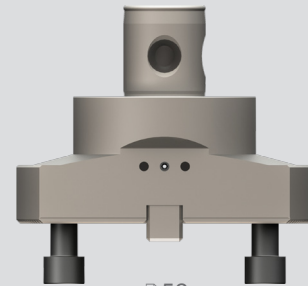
▣58



▣58



▣51-52



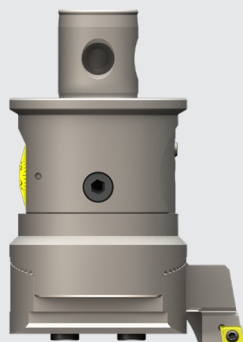
▣58

∅ 14.7-203 mm

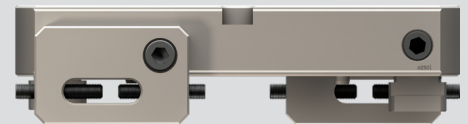


▣35-41

∅ 86-402 mm



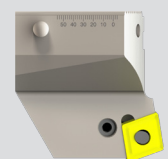
▣45-46



▣57-59



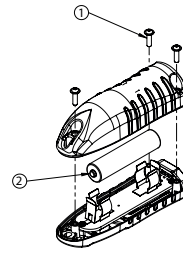
▣42-44



▣60



▣61



Bestell-Nr. /
Order number/
Code

309.028.024.077

①

②

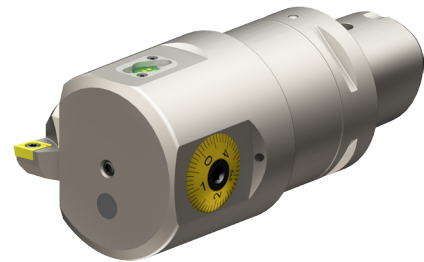
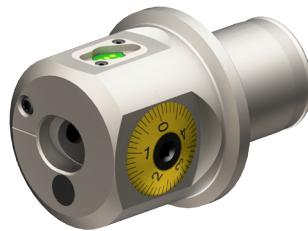
900.309.022.008

900.308.011.045

- ein Display für alle Feinbohrköpfe Ø 0.3 mm - 2205.0 mm
- Anzeige umkehrbar (Links-/ Rechtshänder)
- mm/inch umschaltbar
- Standard AAA Batterie zur Stromversorgung
- Display wird über Magnetkraft am Werkzeug gehalten
- Einstellgenauigkeit 0.001 mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar

- one display for all fine boring heads diameter 0.3 mm – 2205 mm
- display reversible (LH/RH)
- mm/inch switchable
- standard AAA battery required
- display unit will docked with magnetic forces at the tool
- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use

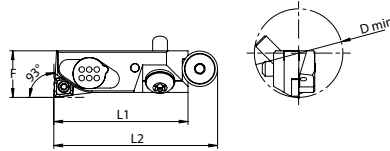
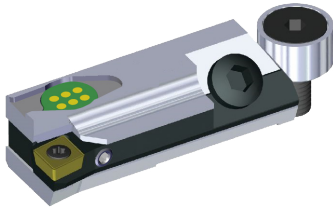
- un seul display pour toutes les têtes d'alésage fin Ø 0.3 mm - 2205.0 mm
- display réversible (gaucher/droitier)
- mm/pouce commutable
- Pile AAA standard pour l'alimentation
- Le display est maintenu sur l'outil par force magnétique
- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique



KKH
Feinbohr-Kurzklemmhalter
DIGITAL

fine boring module
DIGITAL

Module d'alésage fin à réglage
DIGITAL



Bestell-Nr. / Order number/ Code	F	D MIN	L1	L2	Wendepatte / Insert / Plaquette	kg
KKH.WCA.016.045	16	25	45	55	CC .. 06 02 ..	0.2

- Einfaches Handling
- Präzise Masskorrektur
- Direktes Weg-Messsystem
- Wartungsfrei

- Easy handling
- Precise adjustment
- No backlash
- Maintenance-free

- Manipulation facile
- Réglage précis
- Sans jeu
- Sans entretien

- Feinverstellung digitale Anzeige 0.001mm
- Radialer Verstellweg: min. 0,4 mm
- Axiale Längenverstellung: 1.5 mm über Keilelement
- Drehzahl: max.10.000 U/min
- Innenkühlung direkt auf die Werkzeugschneide

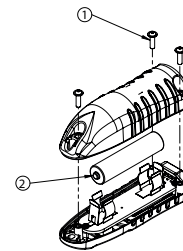
- Fine adjustment digital display 0.001mm
- Radial adjustment: min. 0.4 mm
- Axial length adjustment: 1.5 mm
- Speed: max.10.000 rpm
- Internal cooling directly on the tool cutting edge

- Affichage numérique du réglage fin 0.001mm
- Ajustement radial: min. 0.4 mm
- Ajustement longueur axiale : 1.5 mm
- Vitesse: max.10.000 rpm
- Arrosage interne directement sur l'arête de coupe de l'outil

GH1
Anzeigeeinheit
Feinbohr-Kurzklemmhalter

Display unit
fine boring module

Unité d'affichage
Module d'alésage fin à réglage



Bestell-Nr. / Order number/ Code	①	②
GH1.DA4.BGK.077	900.309.022.008	900.308.011.045

- ein Display für alle Feinbohrköpfe Ø 0.3 mm - 2205.0 mm
- Anzeige umkehrbar (Links-/ Rechtshänder)
- mm/inch umschaltbar
- Standard AAA Batterie zur Stromversorgung
- Display wird über Magnetkraft am Werkzeug gehalten
- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar

- one display for all fine boring heads diameter 0.3 mm – 2205 mm
- display reversible (LH/RH)
- mm/inch switchable
- standard AAA battery required
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- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use

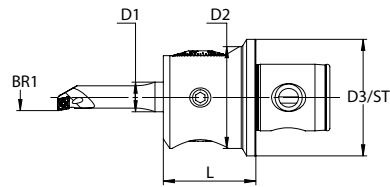
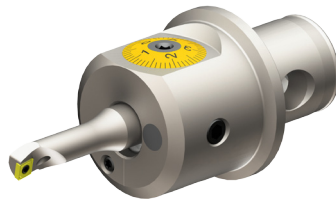
- un seul display pour toutes les têtes d'alésage fin Ø 0.3 mm - 2205.0 mm
- display réversible (gaucher/droitier)
- mm/pouce commutable
- Pile AAA standard pour l'alimentation
- Le display est maintenu sur l'outil par force magnétique
- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique

785

Feinbohr-Set Ø 9.75-30.1mm

Fine boring set Ø 9.75-30.1mm

Jeux d'outils Ø 9.75-30.1mm



Bestell-Nr. / Order number/ Code	D3/ST System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular								
785.050.010.030	ST5	55	3	88.1	45	16	1.1	204.050.025.045
785.064.010.030	ST6	55	3	88.1	45	16	1.1	204.064.025.045
DIN 69893 HSK 63 A								
785.163.010.030	HSK 63 A	55	3	88.1	95	16	1.7	208.806.055.095
DIN 69871 AD 40								
785.415.010.030	ISO 40	55	3	88.1	90	16	2.1	208.440.055.090
MAS BT 40								
785.412.010.030	BT40	55	3	88.1	90	16	2.2	208.540.055.090

bestehend aus / consisting on / comprenant

Ausdrehstäbe / Boring bars / Barres d'alésage	Ø9.75-15.1	254.010.006.075
	Ø14.75-20.1	254.015.006.090
	Ø19.75-25.1	254.020.006.105
	Ø24.75-30.1	254.025.006.115
Bedienschlüssel / Service keys / Clôs de service	SW5 / T7	
Kunststoffkoffer / Plastic case / Coffret		

789

DIGITAL

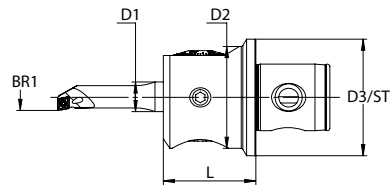
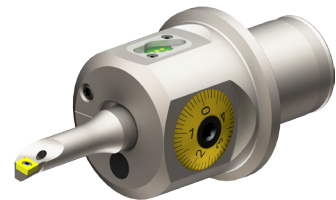
Feinbohr-Set Ø 9.75-30.1mm

DIGITAL

Fine boring set Ø 9.75-30.1mm

DIGITAL

Jeux d'outils Ø 9.75-30.1mm



Bestell-Nr. / Order number/ Code	D3/ST System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular								
789.050.010.030	ST5	55	3	88.1	45	16	1.1	206.050.025.045
789.064.010.030	ST6	55	3	88.1	45	16	1.1	206.064.025.045
DIN 69893 HSK 63 A								
789.163.010.030	HSK 63 A	55	3	88.1	95	16	1.7	209.806.055.095
DIN 69871 AD 40								
789.415.010.030	ISO 40	55	3	88.1	90	16	2.1	209.440.055.090
MAS BT 40								
789.412.010.030	BT40	55	3	88.1	90	16	2.2	209.540.055.090

bestehend aus / consisting on / comprenant

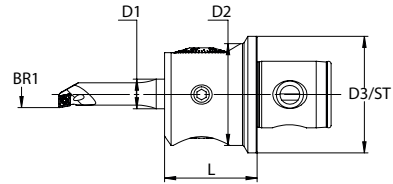
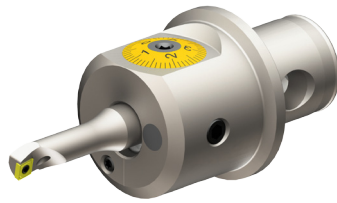
Ausdrehstäbe / Boring bars / Barres d'alésage	Ø9.75-15.1	254.010.006.075
	Ø14.75-20.1	254.015.006.090
	Ø19.75-25.1	254.020.006.105
	Ø24.75-30.1	254.025.006.115
Bedienschlüssel / Service keys / Clôs de service	SW5 / T7	
Kunststoffkoffer / Plastic case / Coffret		
Anzeigeeinheit / Display unit / Unité d'affichage	309.028.024.077	

786

Feinbohr-Set Ø 9.75-88.1mm

Fine boring set Ø 9.75-88.1mm

Jeux d'outils Ø 9.75-88.1mm



Bestell-Nr. / Order number / Code	D3/ST System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular								
786.050.010.088	ST5	55	3	88.1	45	16	1.1	204.050.025.045
786.064.010.088	ST6	55	3	88.1	45	16	1.1	204.064.025.045
DIN 69893 HSK 63 A								
786.063.010.088	HSK 63 A	55	3	88.1	95	16	1.7	208.806.055.095
DIN 69871 AD 40								
786.415.010.088	ISO 40	55	3	88.1	90	16	2.1	208.440.055.090
MAS BT 40								
786.412.010.088	BT40	55	3	88.1	90	16	2.2	208.540.055.090

bestehend aus / consisting on / comprenant

Ausdrehstäbe / Boring bars / Barres d'alésage	Ø9.75-15.1	254.010.006.075	Ø14.75-20.1	254.015.006.090
	Ø19.75-25.1	254.020.006.105	Ø24.75-30.1	254.025.006.115
Schaft / Shank / Corps d'acier	Ø29.75-48.1	256.030.048.115	Ø47.75-88.1	256.048.088.115
Wendeplattenhalter / Insert holder / Porte plaq.	Ø29.75-48.1	256.030.006.012	Ø47.75-88.1	256.048.006.014
Bedienschlüssel / Service keys / Clôs de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				

789

DIGITAL

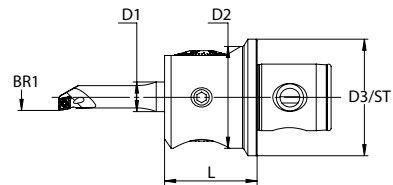
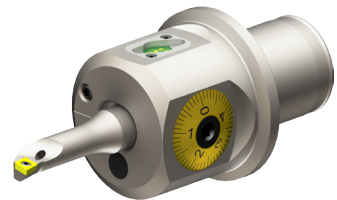
Feinbohr-Set Ø 9.75-88.1mm

DIGITAL

Fine boring set Ø 9.75-88.1mm

DIGITAL

Jeux d'outils Ø 9.75-88.1mm



Bestell-Nr. / Order number / Code	D3/ST System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular								
789.050.010.088	ST5	55	3	88.1	45	16	1.1	206.050.025.045
789.064.010.088	ST6	55	3	88.1	45	16	1.1	206.064.025.045
DIN 69893 HSK 63 A								
789.163.010.088	HSK 63 A	55	3	88.1	95	16	1.7	209.806.055.095
DIN 69871 AD 40								
789.415.010.088	ISO 40	55	3	88.1	90	16	2.1	209.440.055.090
MAS BT 40								
789.412.010.088	BT40	55	3	88.1	90	16	2.2	209.540.055.090

bestehend aus / consisting on / comprenant

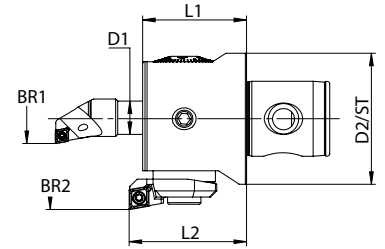
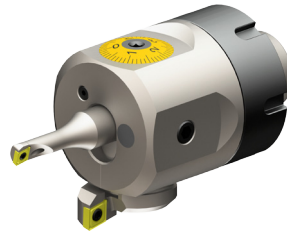
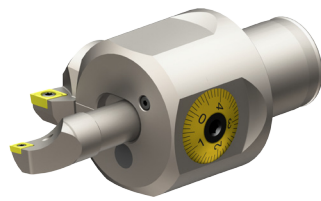
Ausdrehstäbe / Boring bars / Barres d'alésage	Ø9.75-15.1	254.010.006.075	Ø14.75-20.1	254.015.006.090
	Ø19.75-25.1	254.020.006.105	Ø24.75-30.1	254.025.006.115
Schaft / Shank / Corps d'acier	Ø29.75-48.1	256.030.048.115	Ø47.75-88.1	256.048.088.115
Wendeplattenhalter / Insert holder / Porte plaq.	Ø29.75-48.1	256.030.006.012	Ø47.75-88.1	256.048.006.014
Bedienschlüssel / Service keys / Clôs de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				
Anzeigeeinheit / Display unit / Unité d'affichage	309.028.024.077			

783

Feinbohr-Set Ø 9.75-101(152)mm

Fine boring set Ø 9.75-101(152)mm

Jeux d'outils Ø 9.75-101(152)mm



Bestell-Nr. / Order number/ Code	D2/ST	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular								
783.064.010.101	ST6	3 - 88.1	87.75 - 152.1	50	57	16	1.5	205.064.025.050
VARIO ER40								
783.001.010.101	63 /ER40	3 - 88.1	87.75 - 152.1	50	57	16	1.5	205.040.003.152

ECO LINE**bestehend aus / consisting on / comprenant**

Ausdrehstäbe / Boring bars / Barres d'alésage	ø9.75-20.1	254.010.006.075						
	ø19.75-30.1	254.020.006.105						
Schaft / Shank / Corps d'acier	ø29.75-48.1	256.030.048.115	ø47.75-88.1	256.048.088.115				
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	256.030.006.012	ø47.75-88.1	256.048.006.014				
	ø 87.75 - 101.1	314.726.001.009						
Kühlmitteleinsatz / Coolant plug		900.805.000.032						
Bedienschlüssel / Service keys / Clôs de service	SW2.5/4/5/8/T7/ T15							
Kunststoffkoffer / Plastic case / Coffret								

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DIGITAL

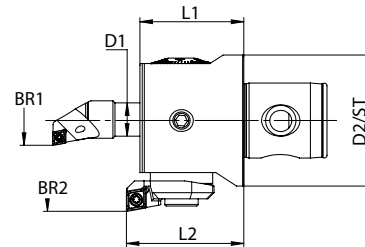
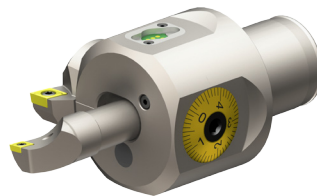
Feinbohr-Set Ø 9.75-101(152)mm

DIGITAL

Fine boring set Ø 9.75-101(152)mm

DIGITAL

Jeux d'outils Ø 9.75-101(152)mm



Bestell-Nr. / Order number/ Code	D2/ST	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular								
789.064.010.101	ST6	3 - 88.1	87.75 - 152.1	50	57	16	1.5	207.064.025.050

bestehend aus / consisting on / comprenant

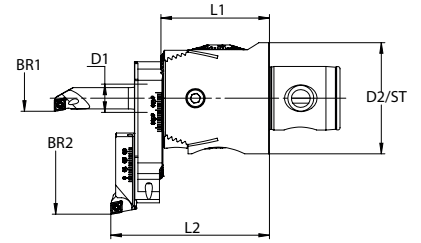
Ausdrehstäbe / Boring bars / Barres d'alésage	ø9.75-20.1	254.010.006.075						
	ø19.75-30.1	254.020.006.105						
Schaft / Shank / Corps d'acier	ø29.75-48.1	256.030.048.115	ø47.75-88.1	256.048.088.115				
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	256.030.006.012	ø47.75-88.1	256.048.006.014				
	ø 87.75 - 101.1	314.726.001.009						
Kühlmitteleinsatz / Coolant plug		900.805.000.032						
Bedienschlüssel / Service keys / Clôs de service	SW2.5/4/5/8/T7/ T15							
Kunststoffkoffer / Plastic case / Coffret								
Anzeigeeinheit / Display unit / Unité d'affichage							309.028.024.077	

788

Feinbohr-Set Ø 9.75-164(320)mm

Fine boring set Ø 9.75-164(320)mm

Jeux d'outils Ø 9.75-164(320)mm



Bestell-Nr. / Order number / Code	ST CSMS	D2	BR1 min.- max.	BR2 min.- max.	L1	L2	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST6 modular									
788.064.010.164	ST6	63	3 - 88.1	86 - 320	65	89	16	1.5	210.064.025.065
DIN 69893 HSK 63 A									
788.063.010.164	HSK 63 A	63	3 - 88.1	86 - 320	96	125	16	2.0	210.806.063.095
DIN 69871 AD 40									
788.415.010.164	ISO 40	63	3 - 88.1	86 - 320	91	120	16	2.2	210.440.063.090
MAS BT 40									
788.412.010.164	BT40	63	3 - 88.1	86 - 320	91	120	16	2.2	210.540.063.090

bestehend aus / consisting on / comprenant

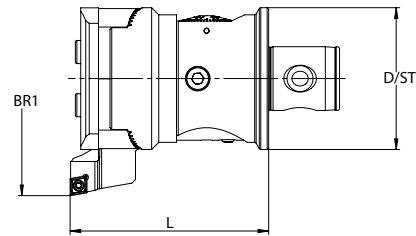
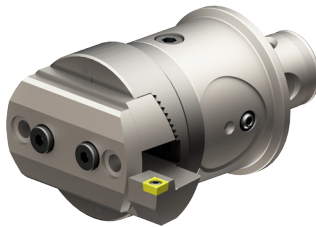
Ausdrehstäble / Boring bars / Barres d'alésage	ø9.75-15.1	254.010.006.075	ø14.75-20.1	254.015.006.090
	ø19.75-25.1	254.020.006.105	ø24.75-30.1	254.025.006.115
Schaft / Shank / Corps d'acier	ø29.75-48.1	256.030.048.115	ø47.75-88.1	256.048.088.115
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	256.030.006.012	ø47.75-88.1	256.048.006.014
Brücke / Bridge Traverse	ø80	212.086.164.080		
Bedienschlüssel / Service keys / Clés de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				

790

Feinbohr-Set Ø 86-302 mm

Fine boring set Ø 86-302 mm

Jeux d'outils Ø 86-302 mm



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	ST	L	D	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
ST modular							
790.064.086.302	86	402	ST6	112	80	2.8	344.064.086.112

bestehend aus / consisting on / comprenant

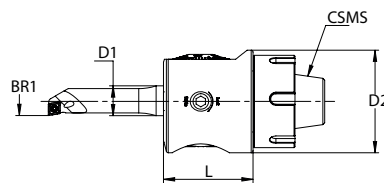
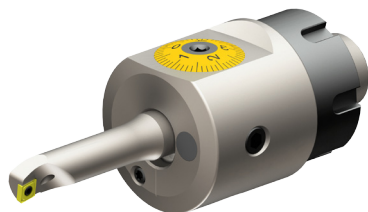
Wendeplattenhalter / Insert holder / Porte plaq.	ø86-138	900.354.086.009
	ø136-220	900.354.136.009
	ø188-302	900.354.188.009
Abstützung / Support block		900.354.020.086
		900.354.020.136
Druckplatte / Clamp plate		900.354.010.086
		900.354.010.136
Bedienschlüssel / Service keys / Clés de service	SW5 / T15	
Kunststoffkoffer / Plastic case / Coffret		

785

Feinbohr-Set Ø 9.75-30.1mm

Fine boring set Ø 9.75-30.1mm

Jeu d'outils Ø 9.75-30.1mm



Bestell-Nr. / Order number/ Code	CSMS	D2	BR1 min.	BR1 max.	L	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin	ECO LINE
SMART ER32									
785.032.010.030	ER32	55	3	88.1	60	16	1.0	211.032.055.060	

bestehend aus / consisting on / comprenant

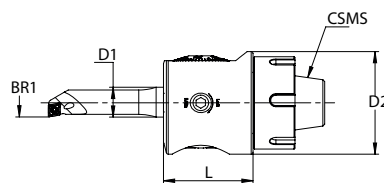
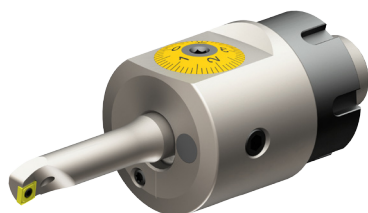
Ausdrehstähe / Boring bars / Barres d'alésage	ø9.75-15.1	254.010.006.075
	ø14.75-20.1	254.015.006.090
	ø19.75-25.1	254.020.006.105
	ø24.75-30.1	254.025.006.115
Bedienschlüssel / Service keys / Clös de service	SW5 / T7	
Kunststoffkoffer / Plastic case / Coffret		

785

Feinbohr-Set Ø 9.75-88.1mm

Fine boring set Ø 9.75-88.1mm

Jeu d'outils Ø 9.75-88.1mm



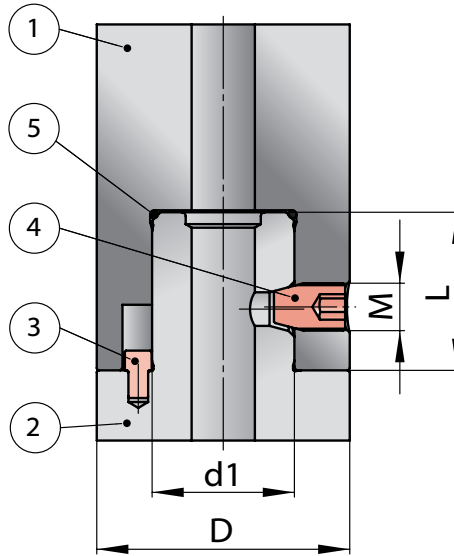
Bestell-Nr. / Order number/ Code	CSMS	D2	BR1 min.	BR1 max.	L	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin	ECO LINE
SMART ER32									
785.032.010.088	ER32	55	3	88.1	60	16	1.0	211.032.055.060	

bestehend aus / consisting on / comprenant

Ausdrehstähe / Boring bars / Barres d'alésage	ø9.75-15.1	254.010.006.075	ø14.75-20.1	254.015.006.090
	ø19.75-25.1	254.020.006.105	ø24.75-30.1	254.025.006.115
Schaft / Shank / Corps d'acier	ø29.75-48.1	256.030.048.115	ø47.75-88.1	256.048.088.115
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	256.030.006.012	ø47.75-88.1	256.048.006.014
Bedienschlüssel / Service keys / Clös de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				

Spannsystem ST

Durch die seitliche Spannschraube (4) wird der Zapfen (2) in die Aufnahme (1) gezogen. Dank grosser Auflageflächen und hoher Vorspannung wird eine sehr grosse Steifigkeit erzielt. Zwei Nocken (3) sichern die genaue Schneidenorientierung und dienen zusätzlich als Mitnehmer. Am Grund der Aufnahmebohrung ist zusätzlich ein O-Ring (5) eingelegt.



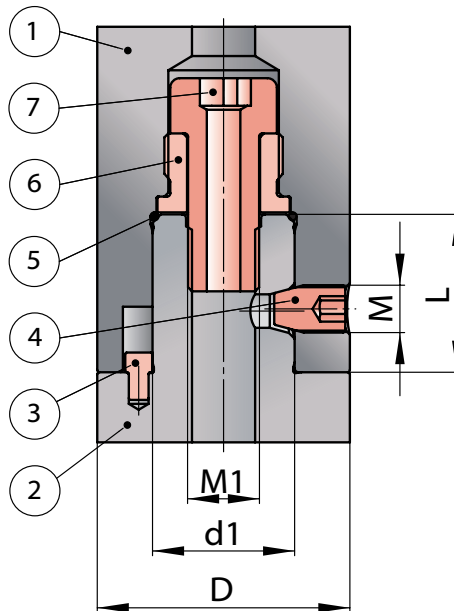
quick-change coupling system ST

The male pilot (2) will be clamped into the female receptacle (1) by using a radial clamping screw (4). A very high rigidity is achieved by a big contact surface and high prestress. Two drive lugs (3) ensure an accurate tip orientation and are used additionally for driving. On the female receptacle's base an O-ring (5) is fitted.

Spannsystem ST+

ST+ besitzt die gleichen Elemente wie ST, zusätzlich wird mittels einer Zugschraube (7) die Vorspannung massiv erhöht. Durch die extrem hohe Vorspannung wird die höchste Steifigkeit erreicht. Durch den Gewindingring (6) wird die Zugschraube (7) in der Aufnahme befestigt.

Weil die Zugschraube (7) nur unter extremen Zerspanungsbedingungen benötigt werden alle ST+-Komponenten ohne Zugschraube (7) und Gewindingring (6) ausgeliefert. Diese Bauteile müssen separat bestellt und durch den Kunden montiert werden.



quick-change coupling system ST+

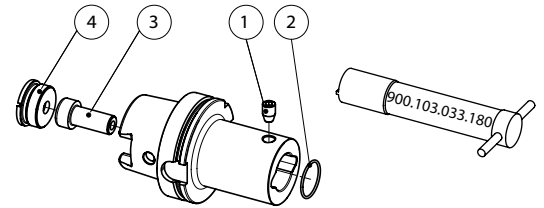
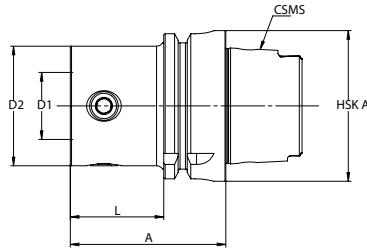
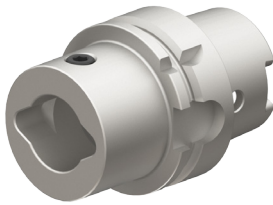
ST+ provides an additional feature for heavy machining applications. By using tension screw (7) a massive increase in prestress is achieved causing a maximum in rigidity. The tension screw (7) is fitted in female receptacle by a threaded ring (6).





Clamping of the system elements with the tension screw (7) is required only for extreme cutting conditions. Therefore the ST+-components are supplied without tension screw (7) and threaded ring (6). These parts must be ordered separately and assembled by the user.

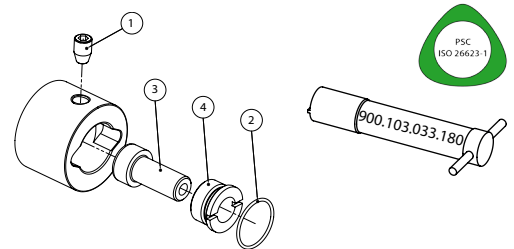
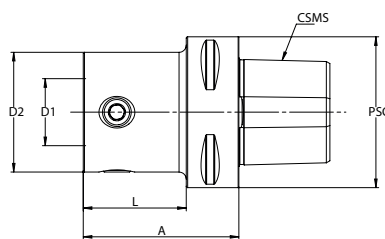
höchste Steifigkeit





highest rigidity

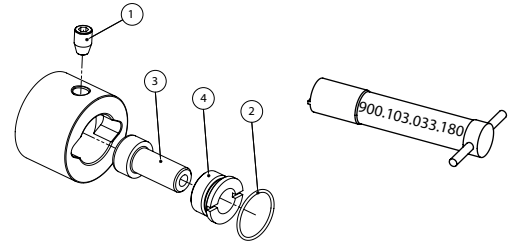
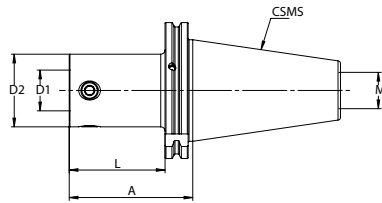
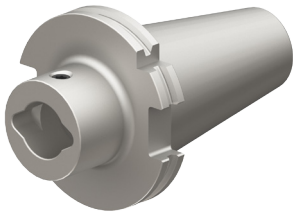
Dimensionen		Dimensions			④	
ST	D	D1	L	M	Anzugsdrehmoment / Torque	M1
ST1	20	11	13	M4x0.5	2.5Nm	
ST2	25	14	16	M5x0.5	3Nm	
ST3	32	18	20	M6x0.75	5Nm	
ST4	39	22	24	M8x0.75	10Nm	
ST5	50	28	30	M10x1	20Nm	
ST6/ST6+	64	36	40	M12x1	40Nm	M18x2
ST7+	90	46	50	M20x1.5	60Nm	M24x2



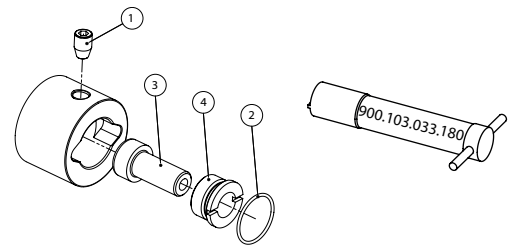
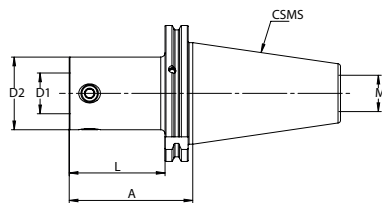
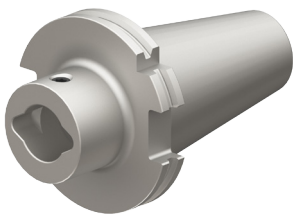
Bestell-Nr. / Order number/ Code	CSMS HSK A	ST	D2	D1	A	L	kg				
144.806.020.042	63	ST1	20	11	42	16	0.7	900.100.004.005 (2.5 Nm)	900.101.008.002		
144.806.025.042	63	ST2	25	14	42	16	0.7	900.100.005.006 (3 Nm)	900.101.011.002		
144.806.032.044	63	ST3	32	18	44	18	0.7	900.100.006.008 (5 Nm)	900.101.015.002		
144.806.039.048	63	ST4	39	22	48	22	0.8	900.100.008.011 (10 Nm)	900.101.019.002		
144.806.050.059	63	ST5	50	28	59	33	1.0	900.100.010.012 (20 Nm)	900.101.025.002		
144.806.064.070	63	ST6	64	36	70	44	1.2	900.100.012.018 (40 Nm)	900.101.032.002		
144.806.064.100	63	ST6+	64	36	100	74	1.8	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.104.030.014
144.810.020.055	100	ST1	20	11	55	26	2.1	900.100.004.005 (2.5 Nm)	900.101.008.002		
144.810.025.055	100	ST2	25	14	55	26	2.1	900.100.005.006 (3 Nm)	900.101.011.002		
144.810.032.057	100	ST3	32	18	57	28	2.1	900.100.006.008 (5 Nm)	900.101.015.002		
144.810.039.061	100	ST4	39	22	61	32	2.2	900.100.008.011 (10 Nm)	900.101.019.002		
144.810.050.072	100	ST5	50	28	72	43	2.5	900.100.010.012 (20 Nm)	900.101.025.002		
144.810.064.078	100	ST6	64	36	78	49	2.9	900.100.012.018 (40 Nm)	900.101.032.002		
144.810.064.108	100	ST6+	64	36	108	79	3.3	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.104.040.020
144.810.090.127	100	ST7+	90	46	127	98	5.7	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.104.040.020



Bestell-Nr. / Order number/ Code	CSMS PSC	ST	D2	D1	A	L	kg				
154.806.020.065	63	ST1	20	11	65	43	0.8	900.100.004.005 (2.5 Nm)	900.101.008.002		
154.806.025.065	63	ST2	25	14	65	43	0.9	900.100.005.006 (3 Nm)	900.101.011.002		
154.806.032.065	63	ST3	32	18	65	43	1.0	900.100.006.008 (5 Nm)	900.101.015.002		
154.806.039.058	63	ST4	39	22	58	36	1.0	900.100.008.011 (10 Nm)	900.101.019.002		
154.806.050.048	63	ST5	50	28	48	26	1.0	900.100.010.012 (20 Nm)	900.101.025.002		
154.806.064.059	63	ST6	64	36	59	37	1.3	900.100.012.018 (40 Nm)	900.101.032.002		
154.806.064.094	63	ST6+	64	36	94	72	2.0	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020



Bestell-Nr. / Order number / Code	CSMS ISO	ST	D2	D1	A	L	M	kg	1	2	3	4
114.430.050.050	30	ST5	50	28	50	30.9	M12	0.6	900.100.010.012 (20 Nm)	900.101.025.002		
114.440.020.035	40	ST1	20	11	35	15.9	M16	0.8	900.100.004.005 (2.5 Nm)	900.101.008.002		
114.440.025.040	40	ST2	25	14	40	20.9	M16	0.9	900.100.005.006 (3 Nm)	900.101.011.002		
114.440.032.040	40	ST3	32	18	40	20.9	M16	0.9	900.100.006.008 (5 Nm)	900.101.015.002		
114.440.039.043	40	ST4	39	22	43	23.9	M16	0.9	900.100.008.011 (10 Nm)	900.101.019.002		
114.440.050.043	40	ST5	50	28	43	23.9	M16	1.0	900.100.010.012 (20 Nm)	900.101.025.002		
114.440.064.059	40	ST6+	64	36	59	39.9	M16	1.3	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
114.450.020.045	50	ST1	20	11	45	25.9	M24	2.7	900.100.004.005 (2.5 Nm)	900.101.008.002		
114.450.025.050	50	ST2	25	14	50	30.9	M24	2.8	900.100.005.006 (3 Nm)	900.101.011.002		
114.450.032.050	50	ST3	32	18	50	30.9	M24	2.8	900.100.006.008 (5 Nm)	900.101.015.002		
114.450.039.053	50	ST4	39	22	53	33.9	M24	2.9	900.100.008.011 (10 Nm)	900.101.019.002		
114.450.050.053	50	ST5	50	28	53	33.9	M24	3.0	900.100.010.012 (20 Nm)	900.101.025.002		
114.450.064.069	50	ST6+	64	36	69	49.9	M24	3.5	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
114.450.090.085	50	ST7+	90	46	85	65.9	M24	4.8	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.103.040.020

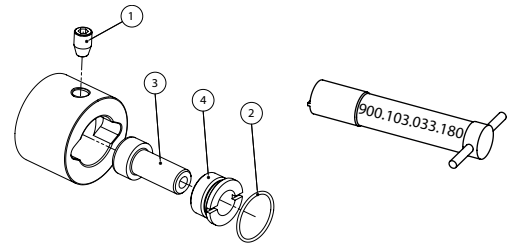
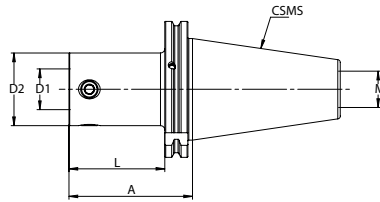
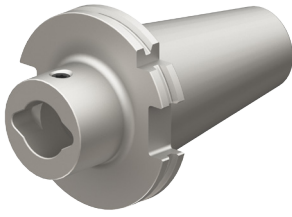


Bestell-Nr. / Order number / Code	CSMS ISO	ST	D2	D1	A	L	M	kg	1	2	3	4
124.440.020.035	40	ST1	20	11	35	15.9	M16	0.9	900.100.004.005 (2.5 Nm)	900.101.008.002		
124.440.025.040	40	ST2	25	14	40	20.9	M16	0.9	900.100.005.006 (3 Nm)	900.101.011.002		
124.440.032.040	40	ST3	32	18	40	20.9	M16	0.9	900.100.006.008 (5 Nm)	900.101.015.002		
124.440.039.043	40	ST4	39	22	43	23.9	M16	0.9	900.100.008.011 (10 Nm)	900.101.019.002		
124.440.050.043	40	ST5	50	28	43	23.9	M16	1.0	900.100.010.012 (20 Nm)	900.101.025.002		
124.440.064.059	40	ST6	64	36	59	39.9	M16	1.3	900.100.012.018 (40 Nm)	900.101.032.002		
124.450.020.045	50	ST1	20	11	45	25.9	M24	2.7	900.100.004.005 (2.5 Nm)	900.101.008.002		
124.450.025.050	50	ST2	25	14	50	30.9	M24	2.7	900.100.005.006 (3 Nm)	900.101.011.002		
124.450.032.050	50	ST3	32	18	50	30.9	M24	2.8	900.100.006.008 (5 Nm)	900.101.015.002		
124.450.039.053	50	ST4	39	22	53	33.9	M24	2.9	900.100.008.011 (10 Nm)	900.101.019.002		
124.450.050.053	50	ST5	50	28	53	33.9	M24	3.0	900.100.010.012 (20 Nm)	900.101.025.002		
124.450.064.069	50	ST6	64	36	69	49.9	M24	3.5	900.100.012.018 (40 Nm)	900.101.032.002		

SP
Aufnahmen DIN 69871 B
mit Plananlage

**Master shanks to DIN 69871 B
with face contact**

**Mandrin de base DIN 69871 B
à double contact**

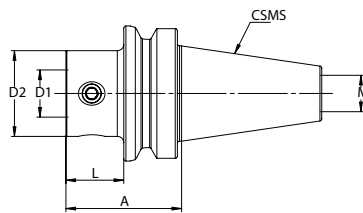
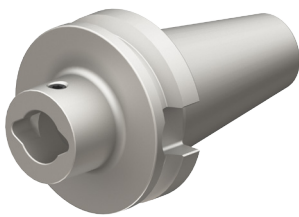


Bestell-Nr. / Order number/ Code	CSMS ISO	ST	D2	D1	A	L	M	kg	1	2	3	4
SP4.ST5.K01.043	40	ST5	50	28	41	25	M16	1.2	900.100.010.012 (20 Nm)	900.101.025.002		
SP4.ST6.K01.059	40	ST6	64	36	59	43	M16	1.1	900.100.012.018 (40 Nm)	900.101.032.002		
SP5.ST5.K01.053	50	ST5	50	28	51	35	M16	3.0	900.100.010.012 (20 Nm)	900.101.025.002		
SP5.ST6.K01.069	50	ST6	64	36	69	53	M16	3.3	900.100.012.018 (40 Nm)	900.101.032.002		
SP5.ST6.K01.100	50	ST6+	64	36	100	84	M24	4.0	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
SP5.ST7.K01.100	50	ST7+	90	46	100	84	M24	4.8	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.103.040.020

134.5xx
Aufnahmen MAS-BT AD

Master shanks to MAS-BT AD

Mandrin de base MAS-BT AD



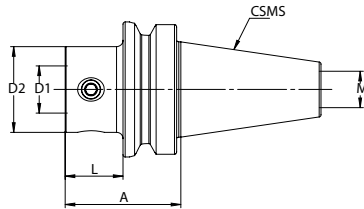
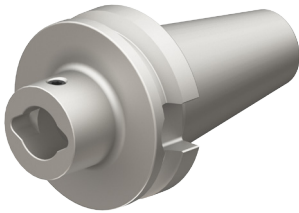
Bestell-Nr. / Order number/ Code	CSMS ISO	ST	D2	D1	A	L	M	kg	1	2	3	4
134.530.050.038	30	ST5	50	28	38	16	M12	0.5	900.100.010.012 (20 Nm)	900.101.025.002		
134.540.020.042	40	ST1	20	11	42	15	M16	1.0	900.100.004.005 (2.5 Nm)	900.101.008.002		
134.540.025.042	40	ST2	25	14	42	15	M16	1.0	900.100.005.006 (3 Nm)	900.101.011.002		
134.540.032.044	40	ST3	32	18	44	17	M16	1.0	900.100.006.008 (5 Nm)	900.101.015.002		
134.540.039.048	40	ST4	39	22	48	21	M16	1.1	900.100.008.011 (10 Nm)	900.101.019.002		
134.540.050.055	40	ST5	50	28	55	28	M16	1.2	900.100.010.012 (20 Nm)	900.101.025.002		
134.540.064.046	40	ST6+	64	36	46	19	M16	1.1	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
134.550.020.063	50	ST1	20	11	63	25	M24	3.7	900.100.004.005 (2.5 Nm)	900.101.008.002		
134.550.025.063	50	ST2	25	14	63	25	M24	3.7	900.100.005.006 (3 Nm)	900.101.011.002		
134.550.032.065	50	ST3	32	18	65	27	M24	3.8	900.100.006.008 (5 Nm)	900.101.015.002		
134.550.039.069	50	ST4	39	22	69	31	M24	3.8	900.100.008.011 (10 Nm)	900.101.019.002		
134.550.050.072	50	ST5	50	28	72	34	M24	3.9	900.100.010.012 (20 Nm)	900.101.025.002		
134.550.064.072	50	ST6+	64	36	72	34	M24	4.1	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
134.550.090.086	50	ST7+	90	46	86	48	M24	4.9	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.103.040.020

134.6xx

Aufnahmen MAS-BT B

Master shanks to MAS-BT B

Mandrin de base MAS-BT B



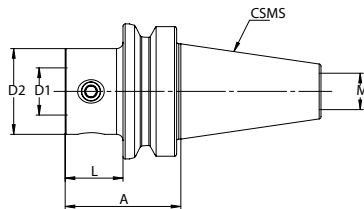
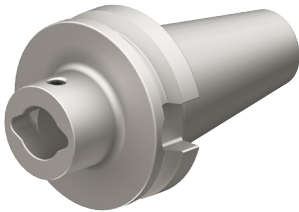
Bestell-Nr. / Order number / Code	CSMS ISO	ST	D2	D1	A	L	M	kg	 ①	 ②	 ③	 ④
134.640.020.042	40	ST1	20	11	42	15	M16	1.0	900.100.004.005 (2.5 Nm)	900.101.008.002		
134.640.025.042	40	ST2	25	14	42	15	M16	1.0	900.100.005.006 (3 Nm)	900.101.011.002		
134.640.032.044	40	ST3	32	18	44	17	M16	1.0	900.100.006.008 (5 Nm)	900.101.015.002		
134.640.039.048	40	ST4	39	22	48	21	M16	1.1	900.100.008.011 (10 Nm)	900.101.019.002		
134.640.050.055	40	ST5	50	28	55	28	M16	1.2	900.100.010.012 (20 Nm)	900.101.025.002		
134.640.064.046	40	ST6	64	36	46	19	M16	1.1	900.100.012.018 (40 Nm)	900.101.032.002		
134.650.020.063	50	ST1	20	11	63	25	M24	3.7	900.100.004.005 (2.5 Nm)	900.101.008.002		
134.650.025.063	50	ST2	25	14	63	25	M24	3.7	900.100.005.006 (3 Nm)	900.101.011.002		
134.650.032.065	50	ST3	32	18	65	27	M24	3.8	900.100.006.008 (5 Nm)	900.101.015.002		
134.650.039.069	50	ST4	39	22	69	31	M24	3.9	900.100.008.011 (10 Nm)	900.101.019.002		
134.650.050.072	50	ST5	50	28	72	34	M24	4.0	900.100.010.012 (20 Nm)	900.101.025.002		
134.650.064.072	50	ST6	64	36	72	34	M24	4.1	900.100.012.018 (40 Nm)	900.101.032.002		





BP

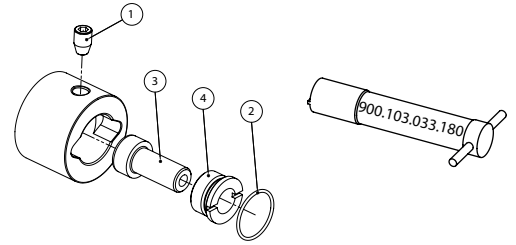
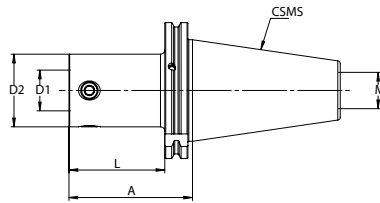
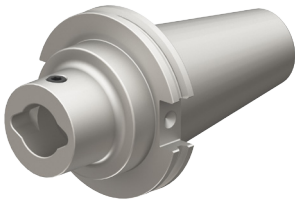
Aufnahmen MAS-BBT B mit Plananlage

Master shanks to MAS-BBT B with face contact

Mandrin de base MAS-BBT B à double contact



Bestell-Nr. / Order number / Code	CSMS ISO	ST	D2	D1	A	L	M	kg	 ①	 ②	 ③	 ④
BP4.ST5.K01.055	40	ST5	50	28	55	30	M16	1.2	900.100.010.012 (20 Nm)	900.101.025.002		
BP4.ST6.K01.046	40	ST6	64	36	46	21	M16	0.9	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
BP5.ST5.K01.072	50	ST5	50	28	72	37	M24	4.0	900.100.010.012 (20 Nm)	900.101.025.002		
BP5.ST6.K01.072	50	ST6	64	36	72	37	M24	4.0	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020



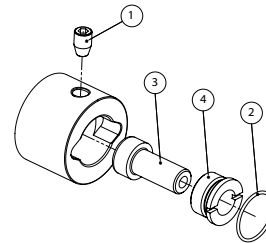
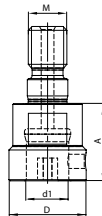
Bestell-Nr. / Order number/ Code	CSMS ISO	ST	D2	D1	A	L	UNC	kg	1	2	3	4
104.340.020.051	40	ST1	20	11	51	16	5/8"-11	1.1	900.100.004.005 (2.5 Nm)	900.101.008.002		
104.340.025.056	40	ST2	25	14	56	21	5/8"-11	1.1	900.100.005.006 (3 Nm)	900.101.011.002		
104.340.032.056	40	ST3	32	18	56	21	5/8"-11	1.1	900.100.006.008 (5 Nm)	900.101.015.002		
104.340.039.059	40	ST4	39	22	59	24	5/8"-11	1.2	900.100.008.011 (10 Nm)	900.101.019.002		
104.340.050.059	40	ST5	50	28	59	24	5/8"-11	1.2	900.100.010.012 (20 Nm)	900.101.025.002		
104.340.064.075	40	ST6+	64	36	75	40	5/8"-11	1.6	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
104.350.020.061	50	ST1	20	11	61	26	1"-8	3.2	900.100.004.005 (2.5 Nm)	900.101.008.002		
104.350.025.066	50	ST2	25	14	66	31	1"-8	3.2	900.100.005.006 (3 Nm)	900.101.011.002		
104.350.032.066	50	ST3	32	18	66	31	1"-8	3.3	900.100.006.008 (5 Nm)	900.101.015.002		
104.350.039.069	50	ST4	39	22	69	34	1"-8	3.3	900.100.008.011 (10 Nm)	900.101.019.002		
104.350.050.069	50	ST5	50	28	69	34	1"-8	3.4	900.100.010.012 (20 Nm)	900.101.025.002		
104.350.064.085	50	ST6+	64	36	85	50	1"-8	4.0	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020
104.350.090.085	50	ST7+	90	46	85	50	1"-8	4.6	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.103.040.020

PK

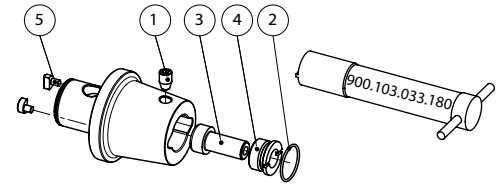
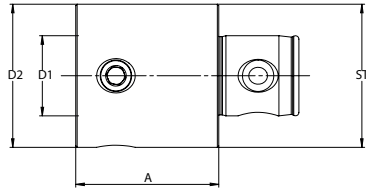
Adapter mit Gewinde

Thread adapter

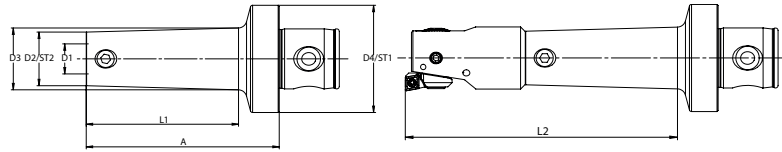
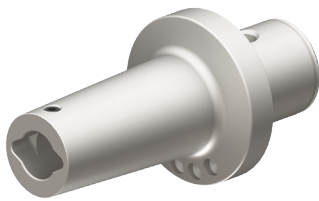
Adaptateur fileté




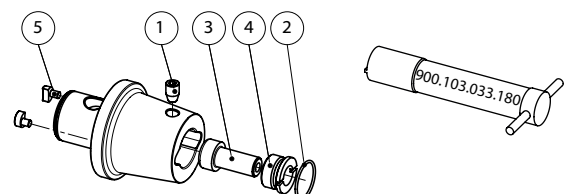
Bestell-Nr. / Order number/ Code	ST	D	D1	M	A	kg	1	2
PK4.ST1.K01.020	ST1	20	11	M10	20		900.100.004.005 (2.5 Nm)	900.101.008.002
PK5.ST2.K01.030	ST2	25	14	M12	30		900.100.005.006 (3 Nm)	900.101.011.002
PK6.ST3.K01.030	ST3	32	18	M16	30		900.100.006.008 (5 Nm)	900.101.015.002



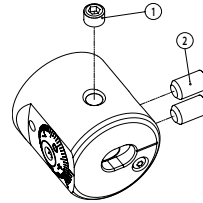
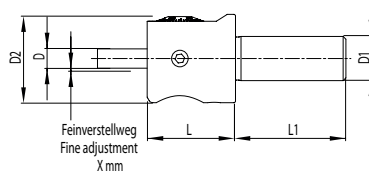
Bestell-Nr. / Order number / Code	ST	D2	D1	A	kg	①	②	③	④	⑤
164.020.020.020	ST1	20	11	20	0.0	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.020.000
164.020.020.030	ST1	20	11	30	0.1	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.020.000
164.025.025.030	ST2	25	14	30	0.1	900.100.005.006 (3 Nm)	900.101.011.002			900.102.025.000
164.025.025.045	ST2	25	14	45	0.2	900.100.005.006 (3 Nm)	900.101.011.002			900.102.025.000
164.032.032.030	ST3	32	18	30	0.2	900.100.006.008 (5 Nm)	900.101.015.002			900.102.032.000
164.032.032.045	ST3	32	18	45	0.3	900.100.006.008 (5 Nm)	900.101.015.002			900.102.032.000
164.039.039.040	ST4	39	22	40	0.3	900.100.008.011 (10 Nm)	900.101.019.002			900.102.039.000
164.039.039.060	ST4	39	22	60	0.5	900.100.008.011 (10 Nm)	900.101.019.002			900.102.039.000
164.050.050.060	ST5	50	28	60	0.9	900.100.010.012 (20 Nm)	900.101.025.002			900.102.050.000
164.050.050.090	ST5	50	28	90	1.3	900.100.010.012 (20 Nm)	900.101.025.002			900.102.050.000
164.064.064.060	ST6+	64	36	60	1.2	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020	900.102.064.000
164.064.064.100	ST6+	64	36	100	2.2	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020	900.102.064.000
164.090.090.100	ST7+	90	46	100	4.3	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.103.040.020	900.102.090.000
164.090.090.160	ST7+	90	46	160	7.1	900.100.020.029 (60 Nm)	900.101.043.002	900.102.024.045	900.103.040.020	900.102.090.000





Bestell-Nr. / Order number/ Code	ST	D	ST1	D1	D2	L	L1	L2	kg	 ①	②	③	④	⑤
184.025.020.036	ST2	25	ST1	20	23	36	25	60.5	0.1	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.025.000
184.032.020.040	ST3	32	ST1	20	23	40.5	28	63.5	0.2	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.032.000
184.032.025.034	ST3	32	ST2	25	29	34.5	20	60	0.2	900.100.005.006 (3 Nm)	900.101.011.002			900.102.032.000
184.039.020.057	ST4	39	ST1	20	23	57.5	42	77.5	0.3	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.039.000
184.039.025.051	ST4	39	ST2	25	29	51.5	37	77	0.3	900.100.005.006 (3 Nm)	900.101.011.002			900.102.039.000
184.039.032.047	ST4	39	ST3	32	38	47	35	82	0.4	900.100.006.008 (5 Nm)	900.101.015.002			900.102.039.000
184.050.020.057	ST5	50	ST1	20	23	57.5	38.5	74	0.4	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.050.000
184.050.025.051	ST5	50	ST2	25	29	51.5	33.5	73.5	0.5	900.100.005.006 (3 Nm)	900.101.011.002			900.102.050.000
184.050.032.047	ST5	50	ST3	32	38	47.0	30.5	77.5	0.5	900.100.006.008 (5 Nm)	900.101.015.002			900.102.050.000
184.050.039.040	ST5	50	ST4	39	48	40.0	25.5	82.5	0.5	900.100.008.011 (10 Nm)	900.101.019.002			900.102.050.000
184.064.020.066	ST6+	64	ST1	20	23	66.5	45.5	81	0.7	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.064.000
184.064.020.101	ST6+	64	ST1	20	23	101.5	80.5	116	0.8	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.064.000
184.064.020.119	ST6+	64	ST1	20	23	119.5	100.5	136	0.9	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.064.000
184.064.020.139	ST6+	64	ST1	20	23	139.5	120.5	156	0.9	900.100.004.005 (2.5 Nm)	900.101.008.002			900.102.064.000
184.064.025.060	ST6+	64	ST2	25	29	60.5	40.5	80.5	0.8	900.100.005.006 (3 Nm)	900.101.011.002			900.102.064.000
184.064.025.095	ST6+	64	ST2	25	29	95.5	75.5	115.5	0.9	900.100.005.006 (3 Nm)	900.101.011.002			900.102.064.000
184.064.025.135	ST6+	64	ST2	25	29	135.0	115	155	1.1	900.100.005.006 (3 Nm)	900.101.011.002			900.102.064.000
184.064.025.175	ST6+	64	ST2	25	29	175.0	155	195	1.3	900.100.005.006 (3 Nm)	900.101.011.002			900.102.064.000
184.064.032.056	ST6+	64	ST3	32	38	56.0	37.5	84.5	0.8	900.100.006.008 (5 Nm)	900.101.015.002			900.102.064.000
184.064.032.091	ST6+	64	ST3	32	38	91.0	72	119	1.1	900.100.006.008 (5 Nm)	900.101.015.002			900.102.064.000
184.064.032.158	ST6+	64	ST3	32	38	158.0	139	186	1.6	900.100.006.008 (5 Nm)	900.101.015.002			900.102.064.000
184.064.032.198	ST6+	64	ST3	32	38	198.0	179	226	1.9	900.100.006.008 (5 Nm)	900.101.015.002			900.102.064.000
184.064.039.049	ST6+	64	ST4	39	48	49.0	32	89	0.9	900.100.008.011 (10 Nm)	900.101.019.002			900.102.064.000
184.064.039.084	ST6+	64	ST4	39	48	84.0	66.5	123.5	1.3	900.100.008.011 (10 Nm)	900.101.019.002			900.102.064.000
184.064.039.129	ST6+	64	ST4	39	48	129.0	111.5	168.5	1.8	900.100.008.011 (10 Nm)	900.101.019.002			900.102.064.000
184.064.039.218	ST6+	64	ST4	39	48	218.0	200.5	257.5	2.7	900.100.008.011 (10 Nm)	900.101.019.002			900.102.064.000
184.064.050.039	ST6+	64	ST5	50	60	39.0	24	104	0.9	900.100.010.012 (20 Nm)	900.101.025.002			900.102.064.000
184.064.050.074	ST6+	64	ST5	50	60	74.0	58.5	138.5	1.5	900.100.010.012 (20 Nm)	900.101.025.002			900.102.064.000
184.064.050.119	ST6+	64	ST5	50	60	119.0	103.5	183.5	2.3	900.100.010.012 (20 Nm)	900.101.025.002			900.102.064.000
184.064.050.234	ST6+	64	ST5	50	60	234.0	218	298	4.4	900.100.010.012 (20 Nm)	900.101.025.002			900.102.064.000
184.090.064.076	ST7+	90	ST6+	64	75	76	60	160	2.5	900.100.012.018 (40 Nm)	900.101.032.002	900.102.018.040	900.103.030.020	900.102.090.000



204

Micro Ausdrehköpfe \varnothing 0.3-19.1Micro fine boring heads \varnothing 0.3-19.1Micro Tête d'alésage fin \varnothing 0.3-19.1

Bestell-Nr. / Order number/ Code	D	D1	D2	X	L	L1	kg		
204.010.025.025	4	10	25	1.5	25	25	0.1	900.204.005.004	900.204.004.008
204.016.032.032	7	16	32	2.5	32	40	0.2	900.204.006.005	900.204.006.010

- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.002mm über Nonius im Durchmesser
- mit Innenkühlung

- diametrical adjustment with maximal reduced reversal backlash
- 0.002mm diametrical adjustment by nonius
- with inner coolant supply

- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne

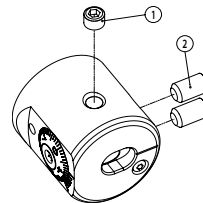
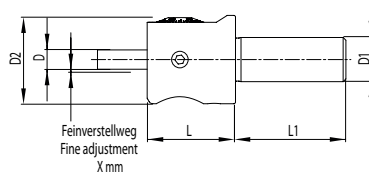
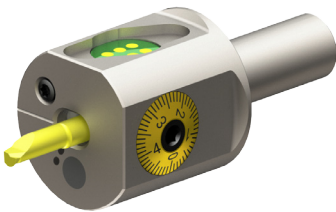
206



Micro Ausdrehköpfe \varnothing 0.3-19.1Micro fine boring heads \varnothing 0.3-19.1Micro Tête d'alésage fin \varnothing 0.3-19.1

DIGITAL

DIGITAL

DIGITAL



Bestell-Nr. / Order number/ Code	D	D1	D2	X	L	L1	kg		
206.010.025.025	4	10	25	1.5	25	25	0.1	900.204.005.004	900.204.004.008
206.016.032.032	7	16	32	2.5	32	40	0.2	900.204.006.005	900.204.006.010

- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)

- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (309.028.024.077)

- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Unité d'affichage doit être commandé séparément (309.028.024.077)


224

Reduktionshülsen

Reduction sleeves

Réduction



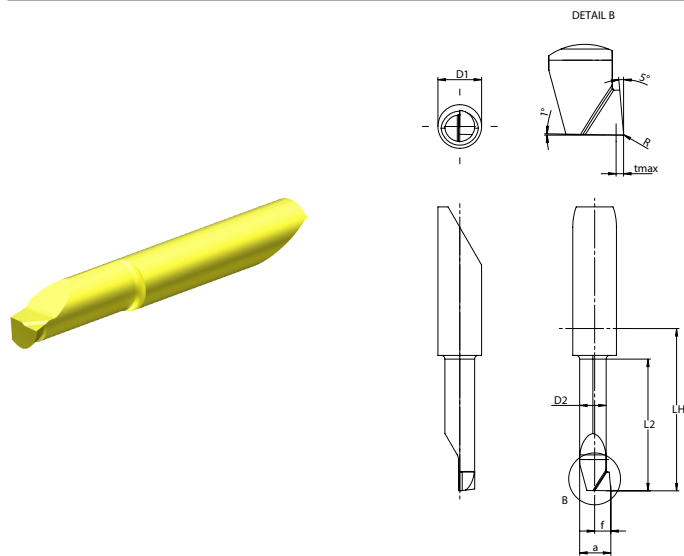
Bestell-Nr. / Order number/ Code	D2	D1	L	kg	
224.007.004.030	7	4	(30)	0.1	
224.016.004.090	16	4	90	0.2	ISO4026-M4x6
224.016.007.090	16	7	90	0.2	ISO4026-M6x6

255

Schneideinsätze

Boring bars

Barres d'alésage



Bestell-Nr. / Order number/ Code	D1	L2	Ød min	Ød max	R	a	D2	f	LH	t max	kg
255.004.003.013	4.0	1.2	0.3	0.7	-	0.25	0.15	0.15	11.0	0.03	0.05
255.004.006.013	4.0	2.5	0.6	1.1	-	0.55	0.46	0.30	11.0	0.05	0.05
255.004.010.013	4.0	4.0	1.0	2.3	0.05	0.95	0.65	0.50	11.0	0.1	0.05
255.004.022.013	4.0	6.0	2.2	3.3	0.05	2.00	1.55	1.10	11.0	0.2	0.05
255.004.032.013	4.0	10.2	3.2	4.3	0.05	3.00	2.55	1.60	11.0	0.2	0.05
255.004.039.018	4.0	15.2	3.9	(7.1)	0.05	3.70	3.45	1.95	16.0	0.3	0.05
255.007.052.023	7.0	20.3	5.2	6.3	0.05	5.00	4.25	2.60	21.0	0.5	0.05
255.007.062.023	7.0	20.3	6.2	7.3	0.05	6.00	5.25	3.10	21.0	0.5	0.05
255.007.069.028	7.0	25.4	6.9	(12.1)	0.20	6.70	6.25	3.45	26.0	0.5	0.05

• Schnittwerte (Start) f 0.02 mm/U

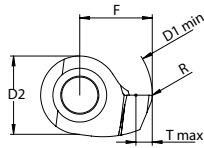
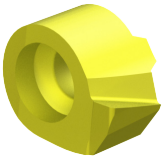
• Cutting parameters (Start) f 0.02 mm/rev

• Valeurs de coupe (départ) f 0,02 mm/tr

283
Schneidplatten

inserts

Inserts



Bestell-Nr. / Order number / Code	ØD1 min	ØD1 max	R	F	D2	tmax	Code	kg
283.007.069.004	6.9	8.1	0.2	3.45	4.8	1.0	407	0.05
283.007.079.004	7.9	9.1	0.2	3.95	4.8	1.0	407	0.05
283.007.089.004	8.9	10.1	0.2	4.45	4.8	1.0	407	0.05
283.010.099.004	9.9	12.1	0.2	4.95	7	1.0	410	0.05
283.010.119.004	11.9	14.1	0.2	5.95	7	1.0	410	0.05
283.010.139.004	13.9	19.1	0.2	6.95	7	1.0	410	0.05

• Schnittwerte (Start) f 0.02 mm/U

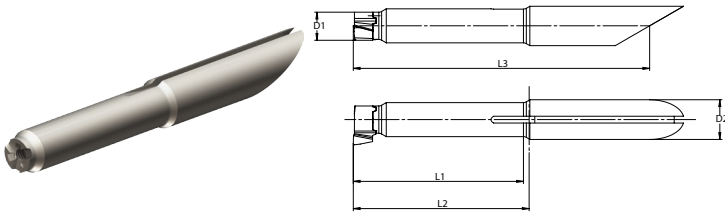
• Cutting parameters (Start) f 0.02 mm/rev


• Valeurs de coupe (départ) f 0,02 mm/tr

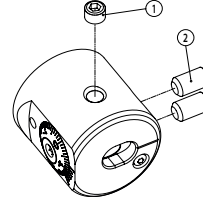
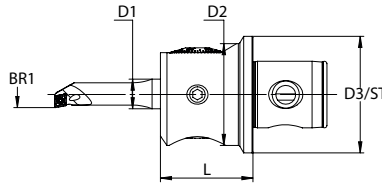
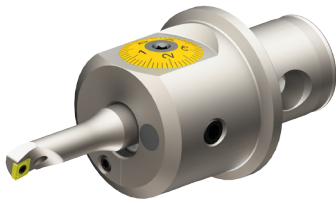
282
Adapter
für Schneidplatten



Adapter
for inserts

Adaptateur
pour inserts



Bestell-Nr. / Order number / Code	D2 h6	L1	D1	L3	L2	Torx	Code	kg	
282.007.007.033	7.0	30	4.8	56	31	T7	407	0.1	M2x7.5 (1.0 Nm) (900.254.020.007)
282.007.010.038	7.0	35	7.0	61	36	T9	410	0.1	M3x9.0 (3.0 Nm) (900.254.030.009)



Bestell-Nr. / Order number/ Code	D3/ST System	D2	BR1 min.	BR1 max.	L (A)	D1	kg		
ST modular ANALOG*									
204.050.025.045	ST5	55	3	88.1	45	16	1.1	900.204.010.008	900.204.010.016
204.064.025.045	ST6	55	3	88.1	45	16	1.1	900.204.010.008	900.204.010.016
DIN 69893 HSK 63 A									
208.806.055.095	HSK 63 A	55	3	88.1	95	16	1.7	900.204.010.008	900.204.010.016
DIN 69871 AD 40									
208.440.055.090	ISO 40	55	3	88.1	90	16	2.1	900.204.010.008	900.204.010.016
MAS BT 40									
208.540.055.090	BT40	55	3	88.1	90	16	2.2	900.204.010.008	900.204.010.016
KM / ISO 26622									
KM4.A55.016.060	KM40	55	3	88.1	60	16	0.6	900.204.010.008	900.204.010.016
KM5.A55.016.070	KM50	55	3	88.1	70	16	1.1	900.204.010.008	900.204.010.016
zyl. Schaft / zyl. Shank									
U20.A55.K01.060	20	55	3	88.1	60	16	1.1	900.204.010.008	900.204.010.016
U25.A55.K01.060	25	55	3	88.1	60	16	1.1	900.204.010.008	900.204.010.016
W26.A55.016.060	25.4 (1.00")	55	3	88.1	60	16	1.1	900.204.010.008	900.204.010.016
W38.A55.016.060	38.1 (1.50")	55	3	88.1	60	16	1.4	900.204.010.008	900.204.010.016

- für Ausdrehstähle mit Schaftdurchmesser 16mm
- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- * Ausdrehstähle durchschiebbar

- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- * boring bars go through head

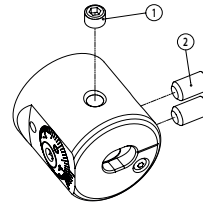
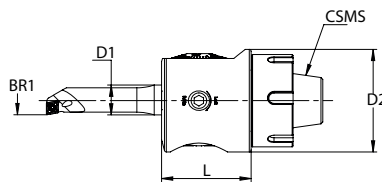
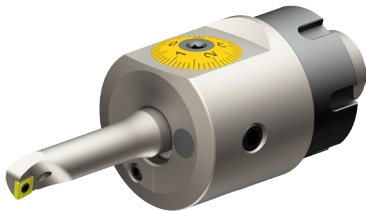
- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- * Passage libre des barres d'alésage à travers la tête



ECOLINE 211

Ausdrehkopf ø 3-88.1

Fine boring heads ø 3-88.1

Tête d'alésage fin ø 3-88.1



Bestell-Nr. / Order number/ Code	CSMS	D2	BR1 min.	BR1 max.	L	D1	kg		
SMART ER32									
211.032.055.060	ER32	55	3	88.1	60	16	1.0	900.204.010.008	900.204.010.016

- Schnittstelle ER32 DIN6499
- Ausdrehstähle durchschiebbar
- Werkzeug in einem Spannzangenfutter spannen.

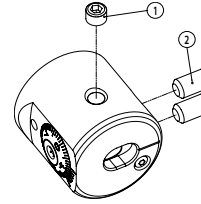
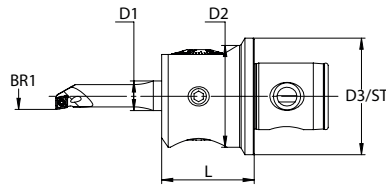
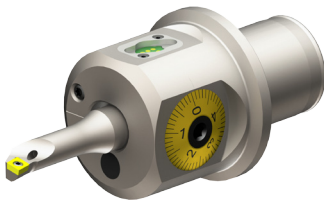
- connection ER32 DIN 6499
- boring bars go through head
- Clamp tool in a collet chuck.



- connexion ER25 DIN 6499
- Passage libre des barres d'alésage à travers la tête
- Serrer l'outil dans un porte-pince

206/209/PSC/KM
Ausdrehkopf ø 3-88.1
DIGITAL

Fine boring heads ø 3-88.1
DIGITAL

Tête d'alésage fin ø 3-88.1
DIGITAL



Bestell-Nr. / Order number/ Code	System	D1	ø A min.	ø A max.	L (A)	L1	kg		
ST modular DIGITAL*									
206.050.025.045	ST5	55	3	88.1	45	-	1.0	900.204.010.008	900.204.010.016
206.064.025.045	ST6	55	3	88.1	45	-	1.0	900.204.010.008	900.204.010.016
DIN 69893 HSK 63 A									
209.806.055.095	HSK 63 A	55	3	88.1	95	69	1.4	900.204.010.008	900.204.010.016
DIN 69871 AD 40									
209.440.055.090	ISO 40	55	3	88.1	90	70	1.9	900.204.010.008	900.204.010.016
MAS BT 40									
209.540.055.090	BT40	55	3	88.1	90	63	1.9	900.204.010.008	900.204.010.016
PSC / ISO 26623 DIGITAL									
PSC40-FBHO-DE-1665	PSC40	55	3	88.1	65	-	1.9	900.204.010.008	900.204.010.016
PSC50-FBHO-DE-1670	PSC50	55	3	88.1	70	-	1.9	900.204.010.008	900.204.010.016
PSC63-FBHO-DE-1690	PSC63	55	3	88.1	90	-	1.9	900.204.010.008	900.204.010.016
KM / ISO 26622 DIGITAL									
KM4.A55.016.060-D	KM40	55	3	88.1	60	16	0.6	900.204.010.008	900.204.010.016
KM5.A55.016.070-D	KM50	55	3	88.1	70	16	1.1	900.204.010.008	900.204.010.016

- für Ausdrehstähle mit Schaftdurchmesser 16mm
- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- mit Innenkühlung
- * Ausdrehstähle durchschiebbar
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)

- for boring bars with a shank diameter of 16mm
- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- with inner coolant supply
- * boring bars go through head
- Display unit must be ordered separately (309.028.024.077)

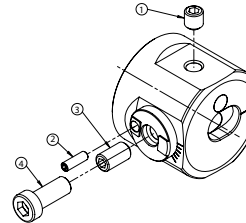
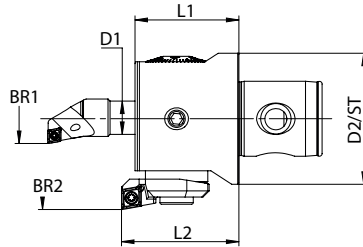
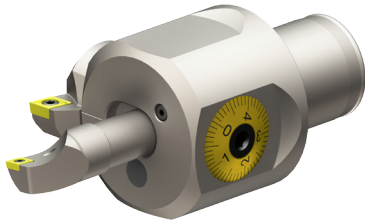
- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Avec arrosage interne
- * Passage libre des barres d'alésage à travers la tête
- Unité d'affichage doit être commandé séparément (309.028.024.077)





205 VARIO HEAD

Ausdrehkopf ø 3-152.1

Fine boring heads ø 3-152.1

Tête d'alésage fin ø 3-152.1



Bestell-Nr. / Order number/ Code	D2/ST	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg				
205.064.025.050	ST6	3 - 88.1	87.75 - 152.1	50	57	16	1.2	900.204.010.010	900.205.003.014	900.205.010.018	900.205.010.025

- für Ausdrehstähle mit Schaftdurchmesser 16mm
- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- Ausdrehstähle durchschiebbar
- erweiterbar von ø3 bis ø152.1

- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- boring bars go through head
- can be upgraded from ø3 up to ø152.1

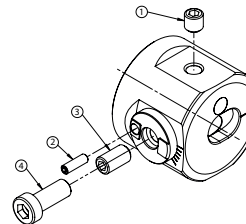
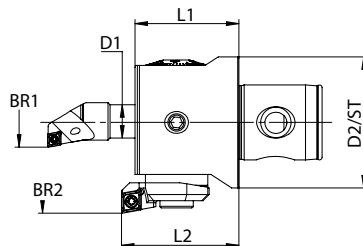
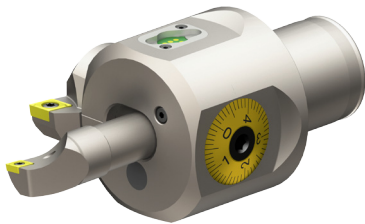
- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- Passage libre des barres d'alésage à travers la tête
- extensible de ø3 à ø152.1





207 VARIO HEAD

Ausdrehkopf ø 3-152.1 DIGITAL

Fine boring heads ø 3-152.1 DIGITAL

Tête d'alésage fin ø 3-152.1 DIGITAL



Bestell-Nr. / Order number/ Code	System	Ø A min. - max.	Ø A1 min. - max.	L1	L2	kg				
207.064.025.050	ST6	3 - 88.1	87.75 - 152.1	50	57	1.2	900.204.010.010	900.205.003.014	900.205.010.018	900.205.010.025

- für Ausdrehstähle mit Schaftdurchmesser 16mm
- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.001mm im Durchmesser
- mit Innenkühlung
- Ausdrehstähle durchschiebbar
- erweiterbar von ø3 bis ø152.1
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)

- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.001mm diametrical adjustment
- with inner coolant supply
- boring bars go through head
- can be upgraded from ø3 up to ø152.1
- Display unit must be ordered separately (309.028.024.077)

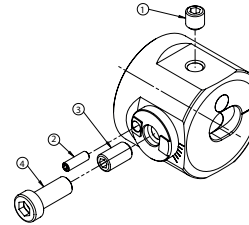
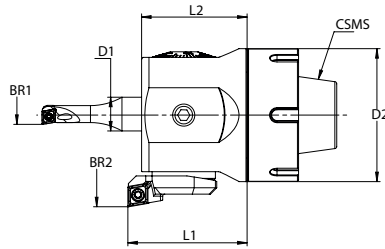
- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,001mm
- Avec arrosage interne
- Passage libre des barres d'alésage à travers la tête
- extensible de ø3 à ø152.1
- Unité d'affichage doit être commandé séparément (309.028.024.077)





ECOLINE 205 VARIO HEAD
Ausdrehkopf ø 3-152.1

Fine boring heads ø 3-152.1

Tête d'alésage fin ø 3-152.1

ECO LINE



Bestell-Nr. / Order number / Code	D2 / CSMS	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg				
VARIO ER40											
205.040.003.152	63 / ER40	3 - 88.1	87.75 - 152.1	51.1	57	16	1.5	900.204.010.010	900.205.003.014	900.205.010.018	900.205.010.025

- Schnittstelle ER40 DIN6499
- für Ausdrehstäbe mit Schaftdurchmesser 16mm
- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- Ausdrehstäbe durchschiebbar
- Werkzeug in einem Spannzangenfutter spannen.
- erweiterbar von ø3 bis ø152.1

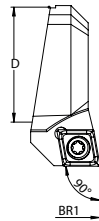
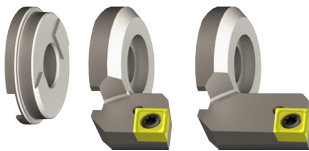
- connection ER32 DIN 6499
- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- boring bars go through head
- Clamp tool in a collet chuck.
- can be upgraded from ø3 up to ø152.1


- connexion ER25 DIN 6499
- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- Passage libre des barres d'alésage à travers la tête
- Serrer l'outil dans un porte-pince
- extensible de Ø3 à Ø152.1

Zubehör

Accessory part

pièce accessoire



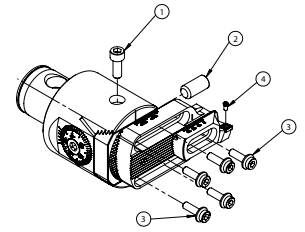
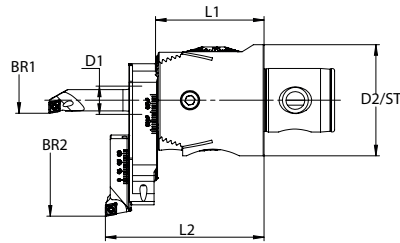
Bestell-Nr. / Order number / Code		BR1 min. - max.	kg	
Wendepplattenhalter / Insert holder / porte-plaquette				
314.726.001.009	CC.. 09 T3 ..	ø 87.75 - 101.1 (ø 114.1)*	0.1	900.254.040.009
314.726.002.009	CC.. 09 T3 ..	ø 105.75 - 119.0 (ø 132.0)*	0.1	900.254.040.009
314.726.003.009	CC.. 09 T3 ..	ø 125.75 - 139.0 (ø 152.0)*	0.1	900.254.040.009
Adapter		* mit Adapter * Adapter required * Espaceur requis		
900.803.001.006	f = 6.5mm	ø 114.0 / ø 132.0 / ø 152.0	0.1	




210 MULTI HEAD

Ausdrehkopf ø 3-320

Fine boring heads ø 3-320

Tête d'alésage fin ø 3-320



Bestell-Nr. / Order number/ Code	ST CSMS	D2	BR1 min.- max.	BR2 min.- max.	L1	L2	D1	kg			
ST6 modular*											
210.064.025.065	ST6	63	3 - 88.1	86 - 320	65	95	16	1.0	900.210.006.016	900.210.010.020	900.256.005.016
DIN 69893 HSK 63 A											
210.806.063.095	HSK 63 A	63	3 - 88.1	86 - 320	96	125	16	2.0	900.210.006.016	900.210.010.020	900.256.005.016
DIN 69871 AD 40											
210.440.063.090	ISO 40	63	3 - 88.1	86 - 320	91	120	16	2.2	900.210.006.016	900.210.010.020	900.256.005.016
MAS BT 40											
210.540.063.090	BT40	63	3 - 88.1	86 - 320	91	120	16	2.2	900.210.006.016	900.210.010.020	900.256.005.016
KM / ISO 26622											
KM5.MH1.016.075	KM50TS	63	3 - 88.1	86 - 320	76	106	16	1.5	900.210.006.016	900.210.010.020	900.256.005.016

- für Ausdrehstähle mit Schaftdurchmesser 16mm
- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- * Ausdrehstähle durchschiebbar

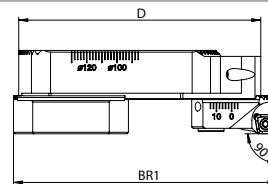
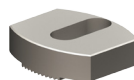
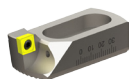
- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- * boring bars go through head



- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- * Passage libre des barres d'alésage à travers la tête

Zubehör

Accessory part

pièce accessoire

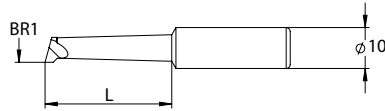
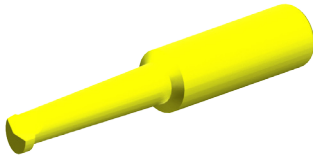


Bestell-Nr. / Order number/ Code	D	BR1 min.	BR1 max.	kg		
Aluminium-Brücken / Aluminium bridges / Traverses d'aluminium						
212.086.164.080	80	86	164	0.1	900.256.005.016	
212.162.320.158	158	162	320	0.2	900.256.005.016	
Wendeplattenhalter / Insert holders / Porte-plaquettes	Wendeplatte / Insert / Plaquette	ø A min.	ø A max.			
256.048.006.014	CC . . 06 02 . .	86	320	0.05	900.256.005.016	900.254.025.006
256.048.009.014	CC . . 09 T3 . .	86	320	0.05	900.256.005.016	900.254.040.009
Gegengewicht / Counter weight / Contre-poids						
212.038.045.012				0.1	900.256.005.016	

264
Ausdrehstähle
mit Hartmetallschneide

Boring bars
with carbide tips

Barres d'alésage avec
arête de coupe en carbure



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	L	HM Sorte / Carbide quality / Qualité du carbure	kg
264.003.010.020	3.0	8.0	20	K10	0.05
264.003.020.020	3.0	8.0	20	P20	0.05
264.004.010.023	4.0	9.0	23	K10	0.05
264.004.020.023	4.0	9.0	23	P20	0.05
264.005.010.025	5.0	10.0	25	K10	0.05
264.005.020.025	5.0	10.0	25	P20	0.05
264.006.010.028	6.0	11.0	28	K10	0.05
264.006.020.028	6.0	11.0	28	P20	0.05
264.007.010.031	7.0	12.0	31	K10	0.05
264.007.020.031	7.0	12.0	31	P20	0.05
264.009.010.034	9.0	14.0	34	K10	0.05
264.009.020.034	9.0	14.0	34	P20	0.05
264.010.010.037	10.0	15.0	37	K10	0.05
264.010.020.037	10.0	15.0	37	P20	0.05
264.012.010.040	12.0	17.0	40	K10	0.05
264.012.020.040	12.0	17.0	40	P20	0.05
264.014.010.043	14.0	19.0	43	K10	0.05
264.014.020.043	14.0	19.0	43	P20	0.05

- Hartmetall Sorte K10 für Guss, Aluminium usw.
- Hartmetall Sorte P20 für Stahl, Chromnickelstahl usw.

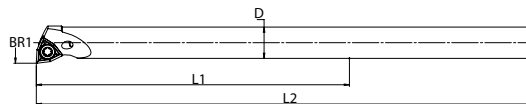
- carbide quality K10 for cast iron, aluminium etc.
- carbide quality P20 for steel, chrome nickel steel etc.


- qualité du carbure K10 pour la fonte, l'aluminium, etc.
- qualité du carbure P20 pour l'acier, l'acier nickel-chrome, etc.

274
Ausdrehstähle
mit Hartmetallschneide

Boring bars
with carbide tips

Barres d'alésage avec
arête de coupe en carbure

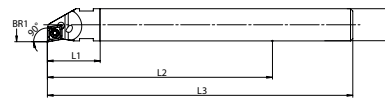
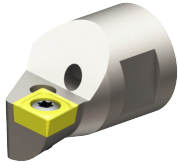



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L	L1	Wendeplatte / Insert / Plaquette	kg	
274.006.002.080	5.8	11.2	5	50	85	WC..02 01 ..	0.1	900.254.020.004
274.008.002.100	7.8	13.2	6	60	95	WC..02 01 ..	0.1	900.254.020.004
274.010.006.120	9.8	15.0	8	80	120	CC..06 02 ..	0.1	900.254.025.005
274.014.006.140	13.8	19.0	10	100	140	CC..06 02 ..	0.1	900.254.025.006
274.018.009.170	17.8	23.0	12	120	170	CC..09 T3 ..	0.3	900.254.040.009
274.022.009.210	21.8	27.0	16	160	210	CC..09 T3 ..	0.5	900.254.040.009

- Länge L bezeichnet die maximale Ausdrehlänge

- length L stands for the maximal boring depth

- Longueur L désigne la profondeur maximum d'alésage

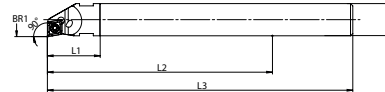


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L2 max.	L1	Wendeplatte / Insert / Plaquette	für Schaft / for shank / pour arbre	kg	
294.009.006.018	8.75	14.1	8	56	18	CC..06 02..	284.008.005.073	0,05	900.254.025.005
294.010.006.018	9.75	15.1	9	63	18	CC..06 02..	284.009.005.080	0,05	900.254.025.005
294.011.006.023	10.75	16.1	10	70	23	CC..06 02..	284.010.006.082	0,05	900.254.025.005
294.012.006.023	11.75	17.1	11	77	23	CC..06 02..	284.011.006.089	0,05	900.254.025.005
294.013.006.023	12.75	18.1	12	84	23	CC..06 02..	284.012.006.096	0,05	900.254.025.006
294.014.006.023	13.75	19.1	13	91	23	CC..06 02..	284.013.006.103	0,05	900.254.025.006
294.015.006.023	14.75	20.1	14	98	23	CC..06 02..	284.014.006.110	0,05	900.254.025.006
294.016.006.023	15.75	21.1	14	98	23	CC..06 02..	284.014.006.110	0,05	900.254.025.006
294.017.006.027	16.75	22.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.018.006.027	17.75	23.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.020.006.027	19.75	25.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.022.006.027	21.75	27.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.025.006.027	24.75	30.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.028.006.027	27.75	33.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.032.006.027	31.75	37.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006
294.035.006.027	34.75	40.1	16	112	27	CC..06 02..	284.016.010.120	0,05	900.254.025.006

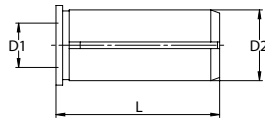
- zum Ausdrehen von langen Bohrungen
- sehr gute Dämpfungseigenschaften durch Hartmetallschaft
- mit Innenkühlung

- to machine long holes
- high end absorbability by solid carbide shank
- with inner coolant supply

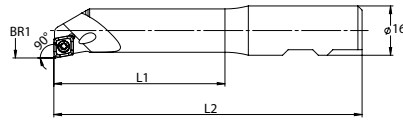
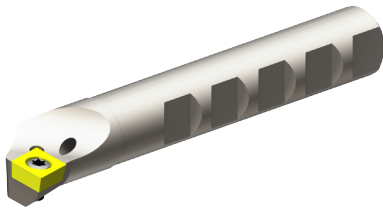
- pour l'alésage de longs trous
- très bonnes propriétés d'amortissement grâce au corps en carbure
- avec arrosage interne




Bestell-Nr. / Order number/ Code	D	L3	M	für Kopf / for head / pour la tête	kg
284.008.005.073	8	91	M5	294.009.006.018	0,1
284.009.005.080	9	98	M5	294.010.006.018	0,1
284.010.006.082	10	105	M6	294.011.006.023	0,1
284.011.006.089	11	112	M6	294.012.006.023	0,1
284.012.006.096	12	119	M6	294.013.006.023	0,1
284.013.006.103	13	126	M6	294.014.006.023	0,2
284.014.006.110	14	133	M6	294.015/016.006.023	0,2
284.016.010.120	16	147	M10	294.017/018/020/022/025//028/032/035.006.027	0,3



Bestell-Nr. / Order number / Code	D2	D1	L	kg
224.016.004.037	16	4	37	0.1
224.016.005.037	16	5	37	0.1
224.016.006.037	16	6	37	0.1
224.016.008.037	16	8	37	0.1
224.016.009.037	16	9	37	0.1
224.016.010.037	16	10	37	0.1
224.016.011.037	16	11	37	0.1
224.016.012.037	16	12	37	0.1
224.016.013.037	16	13	37	0.1
224.016.014.037	16	14	37	0.1

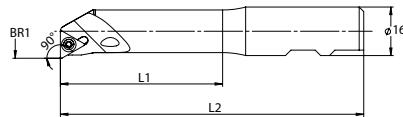
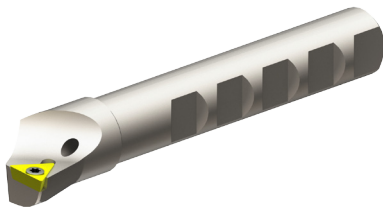



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	L1 max.	L2	Wendeplatte / Insert / Plaquette	kg	
254.010.006.075	9.75	15.1	30	75	CC..06 02..	0.1	900.254.025.006
254.012.006.080	11.75	17.1	37	80	CC..06 02..	0.1	900.254.025.006
254.014.006.085	13.75	19.1	43	85	CC..06 02..	0.1	900.254.025.006
254.015.006.090	14.75	20.1	51	90	CC..06 02..	0.1	900.254.025.006
254.016.006.095	15.75	21.1	57	95	CC..06 02..	0.1	900.254.025.006
254.018.006.100	17.75	23.1	67	100	CC..06 02..	0.1	900.254.025.006
254.020.006.105	19.75	25.1	72	105	CC..06 02..	0.2	900.254.025.006
254.020.009.105	19.75	25.1	72	105	CC..09 T3..	0.2	900.254.040.009
254.022.009.110	21.75	27.1	77	110	CC..09 T3..	0.2	900.254.040.009
254.025.006.115	24.75	30.1	82	115	CC..06 02..	0.2	900.254.025.006
254.025.009.115	24.75	30.1	82	115	CC..09 T3..	0.2	900.254.040.009

• mit Innenkühlung

• with inner coolant supply

• avec arrosage interne



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	L1 max.	L2	Wendeplatte / Insert / Plaquette	kg	
253.010.T06.075	9.75	15.1	30	75	TB..06 01..	0.1	900.254.025.006
253.012.T06.080	11.75	17.1	37	80	TB..06 01..	0.1	900.254.025.006
253.014.T09.085	13.75	19.1	43	85	TP..09 02..	0.1	900.254.040.009
253.015.T09.090	14.75	20.1	51	90	TP..09 02..	0.1	900.254.040.009
253.016.T09.095	15.75	21.1	57	95	TP..09 02..	0.1	900.254.040.009
253.018.T09.100	17.75	23.1	67	100	TP..09 02..	0.1	900.254.040.009
253.020.T11.105	19.75	25.1	72	105	TP..11 03..	0.2	900.254.040.009
253.025.T11.115	24.75	30.1	82	115	TP..11 03..	0.2	900.254.040.009

• mit Innenkühlung

• with inner coolant supply

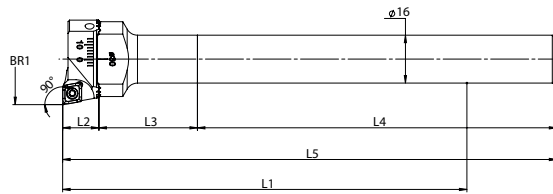
• avec arrosage interne

284

Hartmetallschaft

Solid carbide shank

Corps en carbure



Bestell-Nr. / Order number/ Code	D	L4	M	für Kopf / for head / pour la tête	kg
284.016.010.120	16	120	M10	256.030.048.033 256.048.088.031	0.3

- sehr gute Dämpfungseigenschaften
- mit Innenkühlung

- high end absorbability
- with inner coolant supply

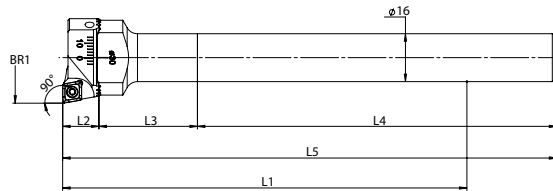
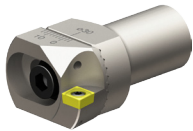
- très bonnes propriétés d'amortissement
- avec arrosage interne


256

Kopf

Head

Tête



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	L1	L5	L3	für Wendeplattenhalter / for insert holder / pour porte-inserts	kg	
256.030.048.033	29.75	48.1	135	165	33	256.030.006.012	0.1	900.256.005.016
256.048.088.031	47.75	88.1	135	165	31	256.048.xxx.014	0.1	900.256.005.016

- mit Innenkühlung

- with inner coolant supply

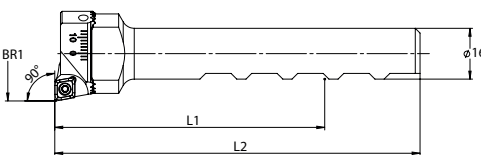
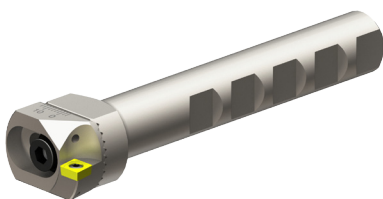
- avec arrosage interne


256

Stahlschaft

Steel shanks

Corps d'acier

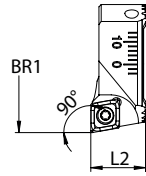
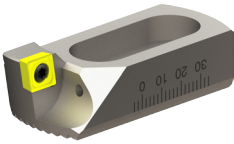



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	L1	L2	für Wendeplattenhalter / for insert holder / pour porte-inserts	kg	
256.030.048.115	29.75	48.1	85	115	256.030.006.012	0.1	900.256.005.016
256.048.088.115	47.75	88.1	85	115	256.048.xxx.014	0.1	900.256.005.016

- mit Innenkühlung

- with inner coolant supply

- avec arrosage interne



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	L2	Wendeplatte / Insert / Plaquette	kg	
256.030.006.012	29.75	48.1	12	CC .. 06 02 ..	0.05	900.254.025.006
256.048.006.014	47.75	88.1	14	CC .. 06 02 ..	0.05	900.254.025.006
256.048.009.014	47.75	88.1	14	CC .. 09 T3 ..	0.05	900.254.040.009

- mit Innenkühlung
- Schäfte und Wendeplattenhalter müssen separat bestellt werden

- with inner coolant supply
- shanks and insert holder must be ordered separately

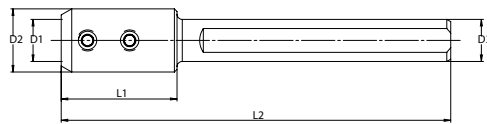
- avec arrosage interne
- Corps et porte-plaquettes doivent être commandés séparément


234

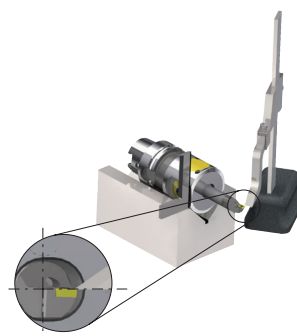
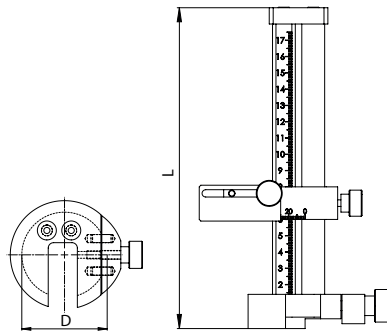
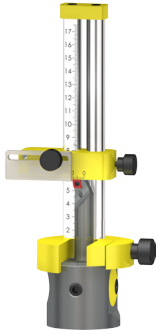
Ausdrehstahl-Verlängerungen

Boring bar extensions

Extensions de barres d'alésage



Bestell-Nr. / Order number/ Code	D3	D1	D2	L2	L1	kg	
234.016.010.128	16	10	16	128	–	0.2	900.234.006.003
234.016.016.148	16	16	24	148	44	0.2	900.234.008.005



Bestell-Nr. / Order number/ Code	L	L1	für Ausdrehkopf / for fine boring head / pour têtes d'alésage fin	kg
200.055.055.197	55	197	204 / 208	0.9
200.063.063.197	63	197	206	0.9
200.163.063.207	63	207	310	0.9

- Orientierung der Werkzeugschneide
- Einstellung der Auskräglänge der Bohrstange
- Grobeinstellung des Ausdrehdurchmessers

- alignment of the cutting edge
- adjustment of the boring bar projection length
- coarse diameter adjustment

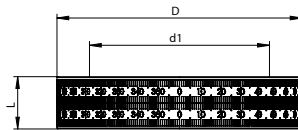
- alignement de l'arête de coupe
- réglage de la longueur de projection de la barre d'alésage
- réglage grossier du diamètre


B16

Universal-Auswuchtringe

Universal balancing rings

Anneaux d'équilibrage universels

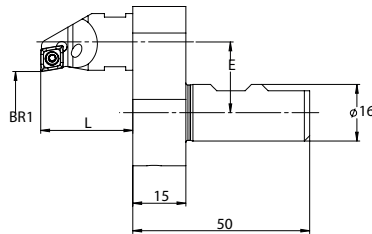
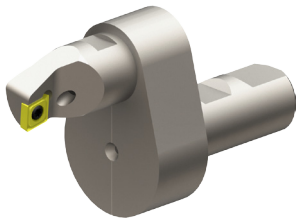



Bestell-Nr. / Order number/ Code	D	D1	L	kg	
216.050.070.016	70	50	16	0.2	900.216.004.008
216.055.075.016	75	55	16	0.2	900.216.004.008
216.063.084.016	84	63	16	0.2	900.216.004.008
216.064.084.016	84	64	16	0.2	900.216.004.008

- zum Auswuchten verstellbarer Werkzeuge, z.B. Ausdrehköpfe der Serien 204 - 206
- für die Ausdrehköpfe der Serie 204 und 206 (mit den Ausdrehstäben der Serie 254, 274, 284, 294) sind Einstelltabellen verfügbar, womit die Unwucht über 90% reduziert wird

- to balance adjustable tools, e.g. fine boring heads from series 204-206
- balancing charts for fine boring heads from serie 204 and 206 (with boring bars from serie 254, 274, 284, 294) are available in order to reduce unbalance by 90%

- pour l'équilibrage des outils réglables, par exemple les têtes d'alésage de la série 204 - 206
- pour les têtes d'alésage des séries 204 et 206 (avec les barres d'alésage des séries 254, 274, 284, 294) des tables de réglage sont disponibles, qui réduisent le balourd de plus de 90%.

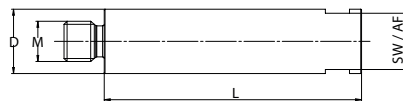


Bestell-Nr. / Order number/ Code	für Kopf / for head / pour la tête	BR1 min.	BR1 max.	E	L	Wendeplatte / Insert / Plaque	kg	
285.020.010.050	294.035.006.027	5.3	10.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.032.006.027	8.3	13.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.028.006.027	12.3	17.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.025.006.027	15.3	20.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.022.006.027	18.3	23.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.020.006.027	20.3	25.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.018.006.027	22.3	27.6	20	27	CC..06 02..	0.2	900.285.010.016
285.020.010.050	294.017.006.027	23.3	28.6	20	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.035.006.027	25.3	30.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.032.006.027	28.3	33.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.028.006.027	32.3	37.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.025.006.027	35.3	40.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.022.006.027	38.3	43.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.020.006.027	40.3	45.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.018.006.027	42.3	47.6	30	27	CC..06 02..	0.2	900.285.010.016
285.030.010.050	294.017.006.027	43.3	48.6	30	27	CC..06 02..	0.2	900.285.010.016

- für die Verwendung in Ausdrehköpfen der Serien 204 bis 210
- mit Innenkühlung die maximale Überdrehlänge L kann mit der Verlängerung 286.016.016.032 oder 286.016.016.064 verlängert werden
- Überdrehhalter und Kopf müssen separat bestellt werden
- Achtung: Linkslauf

- for use in fine boring heads from series 204 to 210
- with inner coolant supply
- the maximal turning length L can be increased by extension 286.016.016.032 or 286.016.016.064
- pin turning adapter and head must be ordered separately
- Caution: anticlockwise rotation

- pour utilisation dans les têtes d'alésage fin des séries 204 à 210
- La longueur maximale de tournage L peut être augmentée par l'extension 286.016.016.032 ou 286.016.016.064
- Support de tournage et tête doivent être commandés séparément
- Attention : rotation dans le sens contraire des aiguilles d'une montre

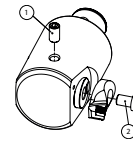
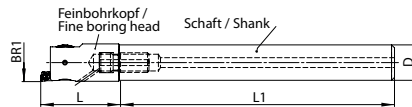




Bestell-Nr. / Order number/ Code	D	L	M	SW / AF	kg
286.016.016.032	16	32	M10	14	0.05
286.016.016.064	16	64	M10	14	0.1

- zur Verlängerung von den Schäften und Überdrehhaltern
- mit Innenkühlung
- aus gehärtetem Stahl

- to extend shanks and pin turning adapters
- with inner coolant supply
- made of hardened steel

- pour prolonger les corps et supports de tournage
- avec arrosage interne
- en acier trempé



Bestell-Nr. / Order number / Code	D	BR1 min.	BR1 max.	L	für Wendeplattenhalter / for insert holder / pour porte-inserts	Wendeplatte / Insert / Plaqueette	kg		
300.014.015.040	14	14.7	17.1	40	302.005.017.002	WC . . 02 01 . .	0.1	900.881.280.140	900.882.280.140
300.016.017.040	16	16.7	20.1	40	302.005.017.002	WC . . 02 01 . .	0.1	900.881.280.160	900.882.280.160
300.019.020.040	18	19.7	24.1	40	302.005.017.002	WC . . 02 01 . .	0.1	900.881.280.180	900.288.280.180

- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.002mm über Nonius im Durchmesser
- mit Innenkühlung
- Feinbohrkopf, Schaft und Wendeplattenhalter müssen separat bestellt werden

- diametrical adjustment with maximal reduced reversal backlash
- 0.002mm diametrical adjustment by nonius
- with inner coolant supply
- **fine boring head, shank and insert holder must be ordered separately**

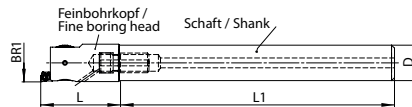
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- avec arrosage interne
- **Corps et porte-plaquettes doivent être commandés séparément**

284

Hartmetallschaft

Solid carbide shank

Corps en carbure



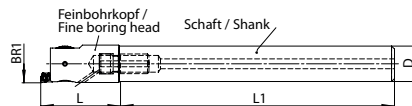
Bestell-Nr. / Order number / Code	D	L1	M	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg
284.014.006.110	14	110	M6	300.014.015.040	0.2
284.016.010.120	16	120	M10	300.016.017.040	0.3
284.018.010.100	18	100	M10	300.019.020.040	0.4
284.018.010.140	18	140	M10	300.019.020.040	0.5

282

Stahlschaft

Steel shank

Corps d'acier



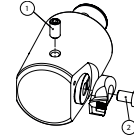
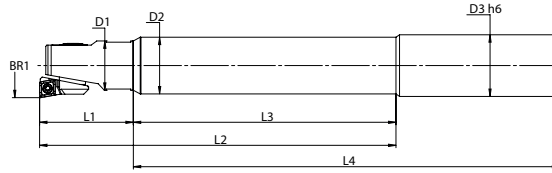
Bestell-Nr. / Order number / Code	D	L1	M	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg
282.014.006.060	14	60	M6	300.014.015.040	0.1
282.016.010.070	16	70	M10	300.016.017.040	0.1
282.018.010.080	18	80	M10	300.019.020.040	0.2



300/301

Feinbohrköpfe zum Einschrauben

Fine boring heads with thread connection

Têtes d'alésage fin avec connexion filetée



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1	L1	für Wendeplattenhalter / for insert holder / pour porte-inserts	kg			
300/301.020.024.041	23.9 29.9	31.1 37.1	22.5	41	314.011.024.006 314.011.030.006	0.1	900.304.004.003	900.314.004.006	900.254.025.006
300/301.025.031.045	30.9 37.9	40.1 47.1	29	45	314.013.031.006 314.013.038.006	0.1	900.304.005.004	900.314.005.008	900.254.025.006
300/301.032.040.051	39.9 47.9	51.1 59.1	37	51	314.017.040.006 314.017.048.006	0.2	900.304.006.005	900.314.006.010	900.254.025.006

- Typ 300 (analog) Zustellgenauigkeit von 0.002mm über Nonius im Durchmesser
- Typ 301 (digital) Einstellgenauigkeit 0.001mm im Durchmesser direktes Wegmeßsystem (kein Umkehrspiel)
- mit Innenkühlung
- Feinbohrkopf, Schaft und Wendeplattenhalter müssen separat bestellt werden

- Type 300 (analog) 0.002mm diametrical adjustment by nonius
- Type 301 (digital) 0.001 accuracy in diameter
- direct measurement system (no backlash)
- with inner coolant supply
- fine boring head, shank and insert holder must be ordered separately

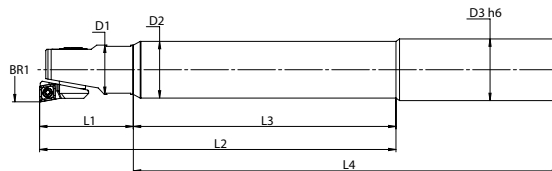
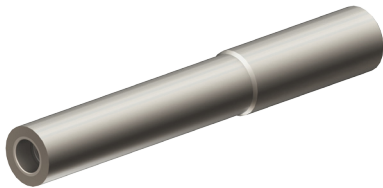
- Type 300 (analog) 0.002mm diametrical adjustment by nonius
- Type 301 (digital) 0.001 accuracy in diameter
- direct measurement system (no backlash)
- avec arrosage interne
- Corps et porte-plaquettes doivent être commandés séparément

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Vollhartmetallschäfte

solid carbide shanks

Corps en carbure



Bestell-Nr. / Order number/ Code	D3	D2	L2 max	L1+L4	L4	L3	M	für Einschraubkopf / for screwable head / pour tête vissable	kg
284.025.023.170	25	23	146	211	170	105	M12	300/400.020.024.041	0.7
284.025.023.220	25	23	196	261	220	155	M12	300/400.020.024.041	1.2
284.025.023.265	25	23	241	306	265	200	M12	300/400.020.024.041	1.5
284.032.029.220	32	29	200	265	220	155	M16	300/400.025.031.045	2.0
284.032.029.260	32	29	240	305	260	195	M16	300/400.025.031.045	2.3
284.032.029.310	32	29	290	355	310	245	M16	300/400.025.031.045	2.8
284.032.032.217	32	32	203	268	217	152	M16	300/400.032.040.051	2.3
284.032.032.287	32	32	273	338	287	222	M16	300/400.032.040.051	3.0
284.032.032.357	32	32	343	408	357	292	M16	300/400.032.040.051	3.8

- Produktivitätsgewinn dank der unterdrückten Schwingungen können die Schnittdaten beträchtlich erhöht werden
- Verbesserte Oberflächengüte
- Verbesserte Prozesssicherheit
- Verbesserte Spanabfuhr
- Reduzierte Kosten pro Bauteil
- Für Bohrungstiefen bis 12xD

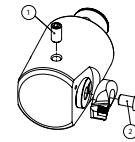
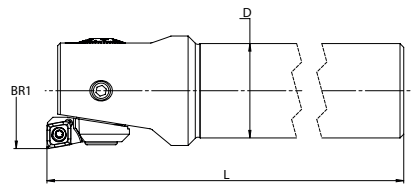
- productivity improvement: thanks to reduced vibrations, the cutting conditions can be improved remarkable
- better surface quality
- improved process stability
- better chip evacuation
- reduced cost per part
- for boring length up to 12xD

- Amélioration de la productivité : grâce à la réduction des vibrations, les conditions de coupe peuvent être améliorées de façon remarquable.
- Meilleure qualité de surface
- Meilleure stabilité du processus
- Meilleure évacuation des copeaux
- Réduction du coût par pièce
- pour longueur d'alésage jusqu'à 12xD



ECO LINE Uxx_F
Feinbohrköpfe Ø23.9-47.1

Fine boring heads Ø23.9-47.1

Têtes d'alésage fin Ø23.9-47.1



ECO LINE

Bestell-Nr. / Order number / Code	D	BR1 min.	BR1 max.	L	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaque	kg		
U20_F20.K21.150	20	23.9 29.9	31.1 37.1	150	314.011.024.006* 314.011.030.006	CC.. 06 02 ..	0.3	900.304.004.003	900.314.004.006
U25_F25.K21.170	25	30.9 37.9	40.1 47.1	170	314.013.031.006* 314.013.038.006	CC.. 06 02 ..	0.6	900.304.005.004	900.314.005.008
W19.F20.024.150	19.1 (0.75")	23.9 29.9	31.1 37.1	150	314.011.024.006 314.011.030.006	CC.. 06 02 ..	0.3	900.304.004.003	900.314.004.006
W26.F25.031.170	25.4 (1.00")	30.9 37.9	40.1 47.1	170	314.013.031.006 314.013.038.006	CC.. 06 02 ..	0.6	900.304.005.004	900.314.005.008

- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- Werkzeug in einem Spannzangenfutter spannen.
- *inklusive Wendeplattenhalter

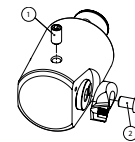
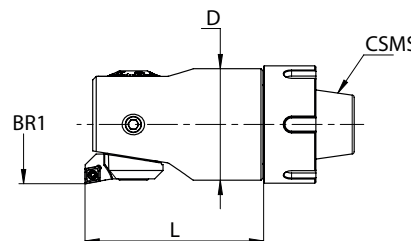
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- Clamp tool in a collet chuck.
- *insert holder included

- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- Serrer l'outil dans un porte-pince.
- *Porte-plaque inclus



ECO LINE Exx_F
Feinbohrköpfe Ø39.9-105.1

Fine boring heads Ø39.9-105.1

Têtes d'alésage fin Ø39.9-105.1



ECO LINE

Bestell-Nr. / Order number / Code	D / CSMS	BR1 min.	BR1 max.	L	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaque	kg		
E25_F32.K21.065	37 / ER25	39.9 47.9	51.1 59.1	65	314.017.040.006* 314.017.048.006	CC.. 06 02 ..	0.6	900.304.006.005	900.314.006.010
E32_F42.K21.075	47 / ER32	50.9 64.9	67.1 81.1	75	314.022.051.006* 314.022.065.006	CC.. 06 02 ..	1.1	900.304.008.006	900.314.008.012
E40_F55.K21.085	59 / ER40	66.9 66.9 84.9	87.1 87.1 105.1	85	314.030.067.009* 314.030.067.006 314.030.085.006/9	CC.. 09 T3 .. CC.. 06 02 ..	2.0	900.304.010.010	900.314.010.016

- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- Werkzeug in einem Spannzangenfutter spannen.
- *inklusive Wendeplattenhalter

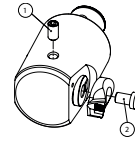
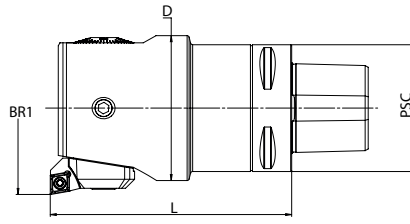
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- Clamp tool in a collet chuck.
- *insert holder included



- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- Serrer l'outil dans un porte-pince.
- *Porte-plaque inclus

PSC FBHS (ISO 26623)
Feinbohrköpfe Ø23.9-203.1
DIGITAL

Fine boring heads Ø23.9-203.1
DIGITAL

Têtes d'alésage fin Ø23.9-203.1
DIGITAL

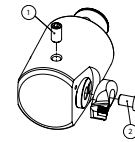
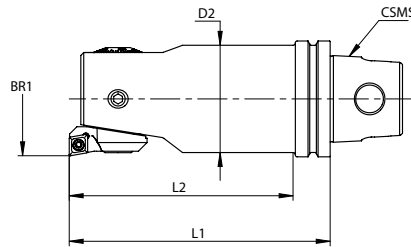
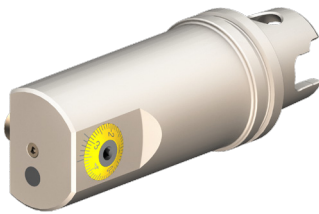




Bestell-Nr. / Order number/ Code	PSC	BR1 min.	BR1 max.	L	D	Wendeplattenhalter / insert holder / porte-inserts	kg		
PSC32-FBHS-DE-24	PSC 32 / 22.5	23.9 29.9	31.1 37.1	80	22.5	314.011.024.006 314.011.030.006	0.3	900.304.004.003	900.314.004.006
PSC32-FBHS-DE-31	PSC 32 / 29	30.9 37.9	40.1 47.1	90	29	314.013.031.006 314.013.038.006	0.4	900.304.005.004	900.314.005.008
PSC40-FBHS-DE-40	PSC 40 / 37	39.9 47.9	51.1 59.1	90	37	314.017.040.006 314.017.048.006	0.6	900.304.006.005	900.314.006.010
PSC50-FBHS-DE-51	PSC 50 / 47	50.9 64.9	67.1 81.1	90	47	314.022.051.006 314.022.065.006	1.1	900.304.008.006	900.314.008.012
PSC50-FBHS-DE-67	PSC 50 / 59	66.9 84.9	87.1 105.1	100	59	314.030.067.009 314.030.067.006 314.030.085.006/9	1.7	900.304.010.010	900.314.010.016
PSC63-FBHS-DE-87	PSC 63 / 72	86.9 104.9	116.1 134.1	120	72	314.030.067.009 314.030.067.006 314.030.085.006/9	3.4	900.304.010.018	900.314.010.016
PSC63-FBHS-DE-116	PSC 63 / 94	115.9 133.9 153.9 165.9*	153.1 171.1 191.1 203.1*	150	94	314.030.067.009 314.030.067.006 314.030.085.006/9 314.726.003.009	4.8	900.304.010.030	900.314.010.016

- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)
- Wendeplattenhalter müssen separat bestellt werden
- * Hinweis: Dieser Ausdrehbereich wird erreicht mit dem Wendeplattenhalter 314.726.003.009 in Kombination mit dem Distanzstück 900.803.001.006

- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (309.028.024.077)
- insert holder must be ordered separately
- * Note: For this diameter range the insert holder 314.726.003.009 and the adapter 900.803.001.006 is required

- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Unité d'affichage doit être commandé séparément (309.028.024.077)
- porte-plaquettes doivent être commandés séparément
- * Remarque : Pour obtenir cette plage de diamètres, le porte-plaquette 314.726.003.009 et l'adaptateur 900.803.001.006 sont nécessaires

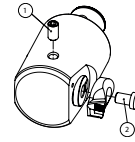
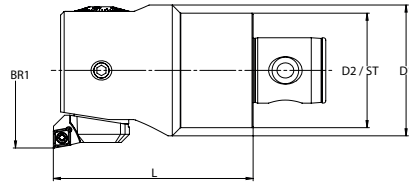
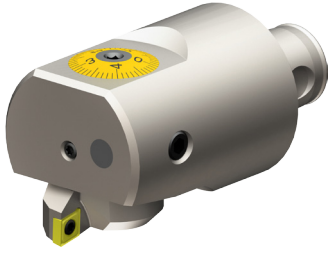




Bestell-Nr. / Order number / Code	CSMS	BR1 min.	BR1 max.	L1	L2	D2	Wendeplattenhalter / insert holder / porte-inserts	kg		
KM3.F20.024.090	KM32	23.9 29.9	31.1 37.1	90	76	22.5	314.011.024.006 314.011.030.006	0.2	900.304.004.003	900.314.004.006
KM3.F25.031.100	KM32	30.9 37.9	40.1 47.1	100	86	29	314.013.031.006 314.013.038.006	0.3	900.304.005.004	900.314.005.008
KM4.F32.040.090	KM40	39.9 47.9	51.1 59.1	90	74	37	314.017.040.006 314.017.048.006	0.5	900.304.006.005	900.314.006.010
KM5.F42.051.090	KM50	50.9 64.9	67.1 81.1	90	70	47	314.022.051.006 314.022.065.006	0.6	900.304.008.006	900.314.008.012
KM5.F55.067.100	KM50	66.9 66.9 84.9	87.1 87.1 105.1	100	100	59	314.030.067.009 314.030.067.006 314.030.085.006/9	1.8	900.304.010.010	900.314.010.016
KM5.F72.087.120	KM50	86.9 86.9 104.9	116.1 116.1 134.1	120	120	72	314.030.067.009 314.030.067.006 314.030.085.006/9	2.9	900.304.010.018	900.314.010.016
KM6.F72.087.120	KM63	86.9 86.9 104.9	116.1 116.1 134.1	120	120	72	314.030.067.009 314.030.067.006 314.030.085.006/9	3.1	900.304.010.018	900.314.010.016
KM6.F94.116.150	KM63	115.9 115.9 133.9 153.9 165.9*	153.1 153.1 171.1 191.1 203.1*	150	150	94	314.030.067.009 314.030.067.006 314.030.085.006/9 314.726.003.009	4.8	900.304.010.030	900.314.010.016

- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden
- * Hinweis: Dieser Ausdrehbereich wird erreicht mit dem Wendeplattenhalter 314.726.003.009 in Kombination mit dem Distanzstück 900.803.001.006

- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- insert holder must be ordered separately
- * Note: For this diameter range the insert holder 314.726.003.009 and the adapter 900.803.001.006 is required

- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément
- * Remarque : Pour obtenir cette plage de diamètres, le porte-plaquette 314.726.003.009 et l'adaptateur 900.803.001.006 sont nécessaires



Bestell-Nr. / Order number / Code	ST	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg		
304.020.024.035	ST1	23.9 29.9	31.1 37.1	35.5	22.5	314.011.024.006 314.011.030.006	0.1	900.304.004.003	900.314.004.006
304.025.031.040	ST2	30.9 37.9	40.1 47.1	40	29	314.013.031.006 314.013.038.006	0.1	900.304.005.004	900.314.005.008
304.032.040.047	ST3	39.9 47.9	51.1 59.1	47	37	314.017.040.006 314.017.048.006	0.3	900.304.006.005	900.314.006.010
304.039.051.057	ST4	50.9 64.9	67.1 81.1	57	47	314.022.051.006 314.022.065.006	0.6	900.304.008.006	900.314.008.012
304.050.067.080	ST5	66.9 84.9	87.1 105.1	80	59	314.030.067.009 314.030.067.006 314.030.085.006/9	1.3	900.304.010.010	900.314.010.016
304.064.087.100	ST6+	86.9 104.9	116.1 134.1	100	72	314.030.067.009 314.030.067.006 314.030.085.006/9	3.1	900.304.010.018	900.314.010.016
304.090.116.130	ST7+	115.9 133.9 153.9 165.9*	153.1 171.1 191.1 203.1*	130	94	314.030.067.009 314.030.067.006 314.030.085.006/9 314.726.003.009	7.1	900.304.010.030	900.314.010.016

- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm resp. über Nonius 0.002mm im Durchmesser
- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden
- * Hinweis: Dieser Ausdrehbereich wird erreicht mit dem Wendeplattenhalter 314.726.003.009 in Kombination mit dem Distanzstück 900.803.001.006

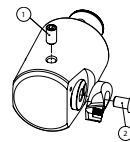
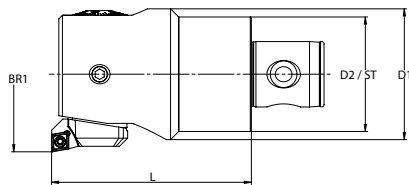
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- insert holder must be ordered separately
- * Note: For this diameter range the insert holder 314.726.003.009 and the adapter 900.803.001.006 is required



- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément
- * Remarque : Pour obtenir cette plage de diamètres, le porte-plaquette 314.726.003.009 et l'adaptateur 900.803.001.006 sont nécessaires

305
Feinbohrköpfe Ø23.9-203.1
DIGITAL

Fine boring heads Ø23.9-203.1
DIGITAL

Têtes d'alésage fin Ø23.9-203.1
DIGITAL

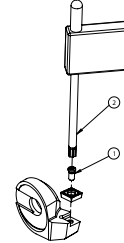
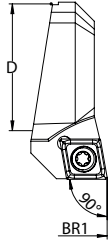
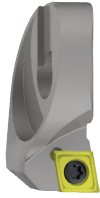




Bestell-Nr. / Order number/ Code	st	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg		
305.020.024.035	ST1	23.9 29.9	31.1 37.1	35.5	22.5	314.011.024.006 314.011.030.006	0.1	900.304.004.003	900.314.004.006
305.025.031.040	ST2	30.9 37.9	40.1 47.1	40	29	314.013.031.006 314.013.038.006	0.1	900.304.005.004	900.314.005.008
305.032.040.047	ST3	39.9 47.9	51.1 59.1	47	37	314.017.040.006 314.017.048.006	0.3	900.304.006.005	900.314.006.010
305.039.051.057	ST4	50.9 64.9	67.1 81.1	57	47	314.022.051.006 314.022.065.006	0.6	900.304.008.006	900.314.008.012
305.050.067.080	ST5	66.9 84.9	87.1 105.1	80	59	314.030.067.009 314.030.067.006 314.030.085.006/9	1.3	900.304.010.010	900.314.010.016
305.064.087.100	ST6+	86.9 104.9	116.1 134.1	100	72	314.030.067.009 314.030.067.006 314.030.085.006/9	3.1	900.304.010.018	900.314.010.016
305.090.116.130	ST7+	115.9 133.9 153.9 165.9*	153.1 171.1 191.1 203.1*	130	94	314.030.067.009 314.030.067.006 314.030.085.006/9 314.726.003.009	7.1	900.304.010.030	900.314.010.016

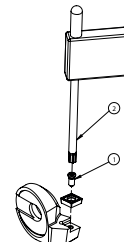
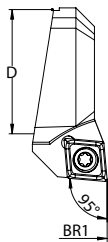
- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)
- Wendeplattenhalter müssen separat bestellt werden
- * Hinweis: Dieser Ausdrehbereich wird erreicht mit dem Wendeplattenhalter 314.726.003.009 in Kombination mit dem Distanzstück 900.803.001.006



- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (309.028.024.077)
- insert holder must be ordered separately
- * Note: For this diameter range the insert holder 314.726.003.009 and the adapter 900.803.001.006 is required

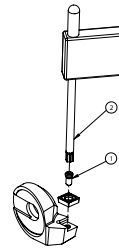
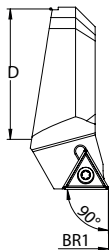
- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Unité d'affichage doit être commandé séparément (309.028.024.077)
- porte-plaquettes doivent être commandés séparément
- * Remarque : Pour obtenir cette plage de diamètres, le porte-plaquette 314.726.003.009 et l'adaptateur 900.803.001.006 sont nécessaires





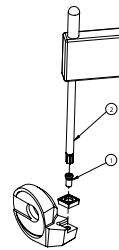
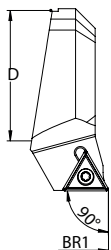
Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
314.011.024.006	23.9	31.1	11	CC .. 06 02 ..	304/305.020.024.035	0.05	900.254.025.006	900.254.007.000
314.011.030.006	29.9	37.1	11	CC .. 06 02 ..	304/305.020.024.035	0.05	900.254.025.006	900.254.007.000
314.013.031.006	30.9	40.1	13	CC .. 06 02 ..	304/305.025.031.040	0.05	900.254.025.006	900.254.007.000
314.013.038.006	37.9	47.1	13	CC .. 06 02 ..	304/305.025.031.040	0.05	900.254.025.006	900.254.007.000
314.017.040.006	39.9	51.1	17	CC .. 06 02 ..	304/305.032.040.047	0.05	900.254.025.006	900.254.007.000
314.017.048.006	47.9	59.1	17	CC .. 06 02 ..	304/305.032.040.047	0.05	900.254.025.006	900.254.007.000
314.022.051.006	50.9	67.1	22	CC .. 06 02 ..	304/305.039.051.057	0.05	900.254.025.006	900.254.007.000
314.022.065.006	64.9	81.1	22	CC .. 06 02 ..	304/305.039.051.057	0.05	900.254.025.006	900.254.007.000
314.030.067.006	66.9	87.1	30	CC .. 06 02 ..	304/305.050.067.080	0.1	900.254.025.006	900.254.007.000
314.030.067.009	66.9	87.1	30	CC .. 09 T3 ..	304/305.050.067.080	0.1	900.254.040.009	900.254.009.000
314.030.085.006	84.9	105.1	30	CC .. 06 02 ..	304/305.050.067.080	0.1	900.254.025.006	900.254.007.000
314.030.085.009	84.9	105.1	30	CC .. 09 T3 ..	304/305.050.067.080	0.1	900.254.040.009	900.254.009.000
314.030.067.006	86.9	116.1	30	CC .. 06 02 ..	304/305.064.087.100	0.1	900.254.025.006	900.254.007.000
314.030.067.009	86.9	116.1	30	CC .. 09 T3 ..	304/305.064.087.100	0.1	900.254.040.009	900.254.009.000
314.030.085.006	104.9	134.1	30	CC .. 06 02 ..	304/305.064.087.100	0.1	900.254.025.006	900.254.007.000
314.030.085.009	104.9	134.1	30	CC .. 09 T3 ..	304/305.064.087.100	0.1	900.254.040.009	900.254.009.000
314.030.067.006	115.9	153.1	30	CC .. 06 02 ..	304/305.090.116.130	0.1	900.254.025.006	900.254.007.000
314.030.067.009	115.9	153.1	30	CC .. 09 T3 ..	304/305.090.116.130	0.1	900.254.040.009	900.254.009.000
314.030.085.006	133.9	171.1	30	CC .. 06 02 ..	304/305.090.116.130	0.1	900.254.025.006	900.254.007.000
314.030.085.009	133.9	171.1	30	CC .. 09 T3 ..	304/305.090.116.130	0.1	900.254.040.009	900.254.009.000
314.726.003.009	153.9	191.1	30	CC .. 09 T3 ..	304/305.090.116.130	0.1	900.254.040.009	900.254.009.000



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
315.011.024.006	23.9	31.1	11	CC .. 06 02 ..	304/305.020.024.035	0.05	900.254.025.006	900.254.007.000
315.013.031.006	30.9	40.1	13	CC .. 06 02 ..	304/305.025.031.040	0.05	900.254.025.006	900.254.007.000
315.017.040.006	39.9	51.1	17	CC .. 06 02 ..	304/305.032.040.047	0.05	900.254.025.006	900.254.007.000
315.022.051.006	50.9	67.1	22	CC .. 06 02 ..	304/305.039.051.057	0.05	900.254.025.006	900.254.007.000
315.030.067.009	66.9	87.1	30	CC .. 09 T3 ..	304/305.050.067.080	0.1	900.254.040.009	900.254.009.000
315.030.067.009	86.9	116.1	30	CC .. 09 T3 ..	304/305.064.087.100	0.1	900.254.040.009	900.254.009.000
315.030.067.009	115.9	153.1	30	CC .. 09 T3 ..	304/305.090.116.130	0.1	900.254.040.009	900.254.009.000

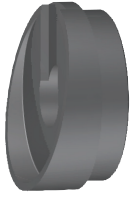


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
317.011.024.T07	23.9	31.1	11	TP .. 07 01 ..	304/305.020.024.035	0.05	WTL.ER2.001.004	900.254.007.000
317.011.030.T07	29.9	37.1	11	TP .. 07 01 ..	304/305.020.024.035	0.05	WTL.ER2.001.004	900.254.007.000
317.013.031.T07	30.9	40.1	13	TP .. 07 01 ..	304/305.025.031.040	0.05	WTL.ER2.001.004	900.254.007.000
317.013.038.T07	37.9	47.1	13	TP .. 07 01 ..	304/305.025.031.040	0.05	WTL.ER2.001.004	900.254.007.000
317.017.040.T07	39.9	51.1	17	TP .. 07 01 ..	304/305.032.040.047	0.05	WTL.ER2.001.004	900.254.007.000
317.017.048.T07	47.9	59.1	17	TP .. 07 01 ..	304/305.032.040.047	0.05	WTL.ER2.001.004	900.254.007.000
317.022.051.T07	50.9	67.1	22	TP .. 07 01 ..	304/305.039.051.057	0.05	WTL.ER2.001.004	900.254.007.000
317.022.065.T07	64.9	81.1	22	TP .. 07 01 ..	304/305.039.051.057	0.05	WTL.ER2.001.004	900.254.007.000
317.030.067.T11	66.9	87.1	30	TP .. 11 02 ..	304/305.050.067.080	0.1	WTM.ER2.001.005	900.254.007.000
317.030.085.T11	84.9	105.1	30	TP .. 11 02 ..	304/305.050.067.080	0.1	WTM.ER2.001.005	900.254.007.000
317.030.067.T11	86.9	116.1	30	TP .. 11 02 ..	304/305.064.087.100	0.1	WTM.ER2.001.005	900.254.007.000
317.030.085.T11	104.9	134.1	30	TP .. 11 02 ..	304/305.064.087.100	0.1	WTM.ER2.001.005	900.254.007.000
317.030.067.T11	115.9	153.1	30	TP .. 11 02 ..	304/305.090.116.130	0.1	WTM.ER2.001.005	900.254.007.000
317.030.085.T11	133.9	171.1	30	TP .. 11 02 ..	304/305.090.116.130	0.1	WTM.ER2.001.005	900.254.007.000
317.726.003.T11	153.9	191.1	30	TP .. 11 02 ..	304/305.090.116.130	0.1	WTM.ER2.001.005	900.254.007.000

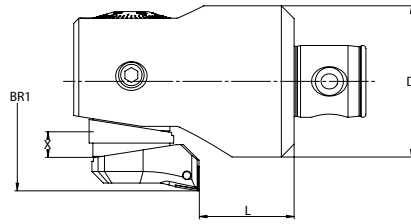


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
316.011.024.T06	23.9	31.1	11	TB .. 06 01 ..	304/305.020.024.035	0.05	WWA.ER2.001.004	WWA.ER1.001.000
316.013.031.T09	30.9	40.1	13	TP .. 09 02 ..	304/305.025.031.040	0.05	WCA.ER2.001.006	900.254.007.000
316.017.040.T09	39.9	51.1	17	TP .. 09 02 ..	304/305.032.040.047	0.05	WCA.ER2.001.006	900.254.007.000
316.022.051.T11	50.9	67.1	22	TP .. 11 03 ..	304/305.039.051.057	0.05	WCA.ER2.001.006	900.254.007.000
316.030.067.T11	66.9	87.1	30	TP .. 11 03 ..	304/305.050.067.080	0.1	WCA.ER2.001.006	900.254.007.000
316.030.085.T11	84.9	105.1	30	TP .. 11 03 ..	304/305.050.067.080	0.1	WCA.ER2.001.006	900.254.007.000
316.030.067.T11	86.9	116.1	30	TP .. 11 03 ..	304/305.064.087.100	0.1	WCA.ER2.001.006	900.254.007.000
316.030.085.T11	104.9	134.1	30	TP .. 11 03 ..	304/305.064.087.100	0.1	WCA.ER2.001.006	900.254.007.000
316.030.067.T11	115.9	153.1	30	TP .. 11 03 ..	304/305.090.116.130	0.1	WCA.ER2.001.006	900.254.007.000
316.030.085.T11	133.9	171.1	30	TP .. 11 03 ..	304/305.090.116.130	0.1	WCA.ER2.001.006	900.254.007.000

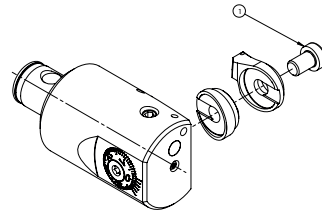
Umkehradapter für Rückwärtsbearbeitung



Reversal adapter for reverse machining



Adaptateur pour alésé en sens opposé

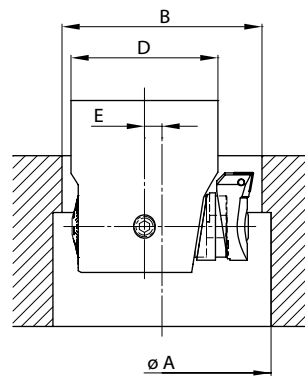


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L	X	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	
324.011.065.008	37	44	22.5	8.5	6.5	304/305.020.024.035	0.05	900.324.004.012
324.011.080.008	40	51	22.5	8.5	8.0	304/305.020.024.035	0.05	900.324.004.013
324.013.065.007	44	53	29	7.6	6.5	304/305.025.031.040	0.05	900.324.005.014
324.013.100.007	51	60	29	7.6	10.0	304/305.025.031.040	0.05	900.324.005.016
324.017.065.013	53	64	37	13.3	6.5	304/305.032.040.047	0.05	900.324.006.015
324.017.100.013	60	71	37	13.3	10.0	304/305.032.040.047	0.05	900.324.006.020
324.022.065.016	64	80	47	16.2	6.5	304/305.039.051.057	0.05	900.324.008.020
324.022.120.016	75	91	47	16.2	12.0	304/305.039.051.057	0.05	900.324.008.025
324.030.100.027	87	107	59	27.0	10.0	304/305.050.067.080	0.05	900.324.010.030
324.030.100.027	107	136	72	47.0	10.0	304/305.064.087.100	0.05	900.324.010.030
324.030.100.027	136	173	90	77.0	10.0	304/305.090.116.130	0.05	900.324.010.030

- für die Verwendung in Feinbohrköpfen der Serie 304 und 305
- damit können die Wendeplattenhalter der Serie 314 und 315 rückwärts montiert werden
- Befestigungsschrauben werden mitgeliefert
- **Achtung: Linkslauf**

- for use in fine boring heads from serie 304 and 305
- the insert holders from serie 314 and 315 will be fitted backwards on the adapter
- fastening screws will be delivered with adapters
- **Caution: counterclockwise rotation**

- Les porte-plaquettes des series 314 et 315 seront montés en sens opposé sur l'adaptateur
- Des vis de fixation seront livrées avec les adaptateurs
- **Attention : rotation dans le sens contraire des aiguilles d'une montre**



- Minstdurchmesser der Eintrittsbohrung
 $B = \frac{D+A}{2} + 1^*$

- Mindestversatz zum Einfahren

$$E = \frac{A-B}{2} + 0.5^*$$

*Sicherheitsabstand

- minimum entry bore diameter

$$B = \frac{D+A}{2} + 1^*$$

- minimum off centre to enter into the bore

$$E = \frac{A-B}{2} + 0.5^*$$

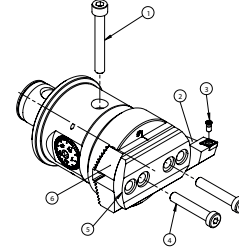
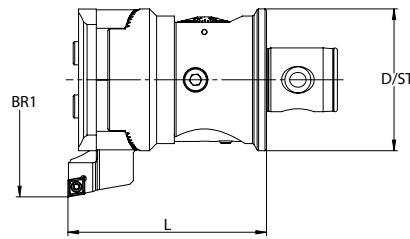
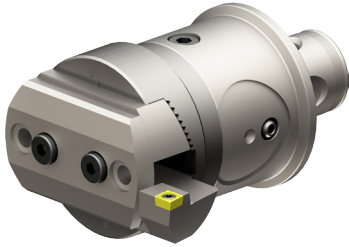
*safety distance

- diamètre minimal de l'alésage d'entrée
 $B = \frac{D+A}{2} + 1^*$

- décentrage minimum pour entrer dans l'alésage

$$E = \frac{A-B}{2} + 0.5^*$$

*Distance de sécurité

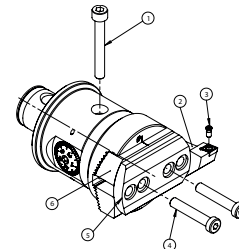
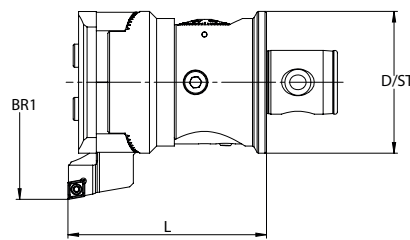
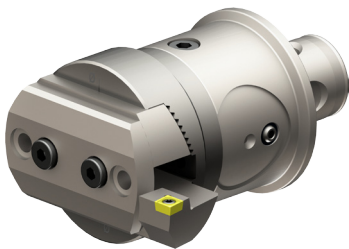


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	ST	L	D	kg	①	④
344.064.086.112	86	402	ST6+	112	80	2.8	900.344.008.065	900.344.008.044

- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm im Durchmesser
- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden

- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment
- with inner coolant supply
- insert holder must be ordered separately

- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm
- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	ST	L	D	kg	①	④
345.064.086.112	86	402	ST6+	112	80	2.8	900.344.008.065	900.344.008.044

- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)
- Wendeplattenhalter müssen separat bestellt werden

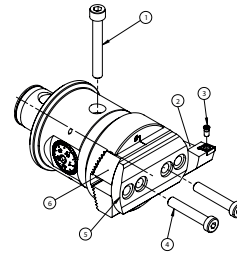
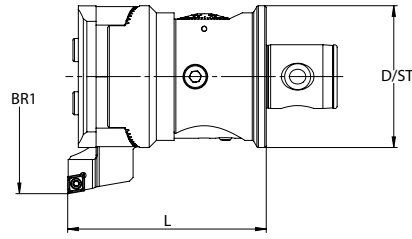
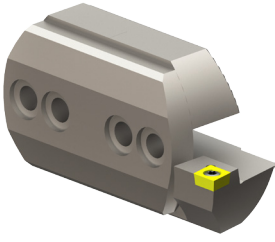
- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (309.028.024.077)

- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Unité d'affichage doit être commandé séparément (309.028.024.077)
- porte-plaquettes doivent être commandés séparément

Wendeplattenhalter inkl.
Druckplatte und Abstützung

Insert holders incl.
clamp plate and support block

Porte-plaquettes incl.
plaque de serrage et support

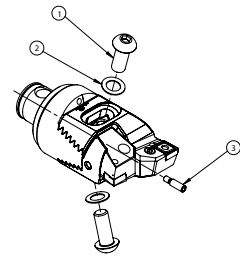
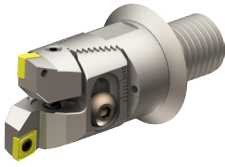


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	Wendeplatte / Insert / Plaquette	kg	②	③	⑤	⑥
354.086.138.009	86	138	CC .. 09 T3 ..	0,5	900.354.086.009	900.254.040.009	900.345.010.086	900.345.020.086
354.086.138.012	86	138	CC .. 12 04 ..	0,5	900.354.086.012	900.254.050.010	900.345.010.086	900.345.020.086
354.136.220.009	136	220	CC .. 09 T3 ..	0,9	900.354.136.009	900.254.040.009	900.345.010.136	900.345.020.136
354.136.220.012	136	220	CC .. 12 04 ..	0,9	900.354.136.012	900.254.050.010	900.345.010.136	900.345.020.136
354.188.302.009	188	302	CC .. 09 T3 ..	1,0	900.354.188.009	900.254.040.009	900.345.010.136	900.345.020.136
354.242.402.009	242	402	CC .. 09 T3 ..	1,3	900.354.242.009	900.254.040.009	900.345.010.136	900.345.020.136

Zweischneiderköpfe zum Einschrauben

Twin cutter heads with thread connection

Tête à double tranchant avec connexion fileté



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D1	L1	für Wendepplattenhalter / for insert holder / pour porte-inserts	kg	①	②	③
400.020.024.041	23.5	31.1	20	41	414.020.024.006 424.020.024.006 434.020.024.006 437.020.024.006	0.1	900.404.004.008	900.405.004.000	900.406.030.012
400.025.031.045	29.5	40.1	25	45	414.025.031.006 424.025.031.006 434.025.031.006 437.025.031.006	0.1	900.404.005.012	900.405.005.000	900.406.030.012
400.032.040.051	39.5	51.1	32	51	414.032.040.009 424.032.040.009 434.032.040.009 437.032.040.009	0.2	900.404.006.016	900.405.006.000	900.406.030.012

- mit Innenkühlung
- Zweischneiderköpfe, Schaft und Wendepplattenhalter müssen separat bestellt werden

- with inner coolant supply
- twin cutter heads, shank and insert holder must be ordered separately

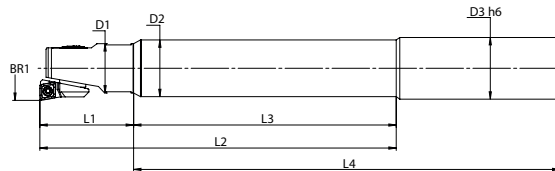
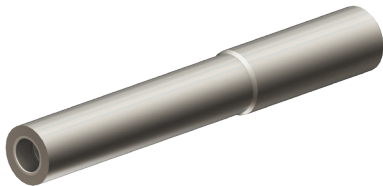
- avec arrosage interne
- Corps et porte-plaquettes doivent être commandés séparément

284

Vollhartmetallschäfte

solid carbide shanks

Corps en carbure



Bestell-Nr. / Order number / Code	D3	D2	L2 max	L1+L4	L4	L3	M	für Einschraubkopf / for screwable head / pour tête vissable	kg
284.025.023.170	25	23	146	211	170	105	M12	300/400.020.024.041	0.7
284.025.023.220	25	23	196	261	220	155	M12	300/400.020.024.041	1.2
284.025.023.265	25	23	241	306	265	200	M12	300/400.020.024.041	1.5
284.032.029.220	32	29	200	265	220	155	M16	300/400.025.031.045	2.0
284.032.029.260	32	29	240	305	260	195	M16	300/400.025.031.045	2.3
284.032.029.310	32	29	290	355	310	245	M16	300/400.025.031.045	2.8
284.032.032.217	32	32	203	268	217	152	M16	300/400.032.040.051	2.3
284.032.032.287	32	32	273	338	287	222	M16	300/400.032.040.051	3.0
284.032.032.357	32	32	343	408	357	292	M16	300/400.032.040.051	3.8

- Produktivitätsgewinn dank der unterdrückten Schwingungen können die Schnittdaten beträchtlich erhöht werden
- Verbesserte Oberflächengüte
- Verbesserte Prozesssicherheit
- Verbesserte Spanabfuhr
- Reduzierte Kosten pro Bauteil
- Für Bohrungstiefen bis 12xD

- productivity improvement: thanks to reduced vibrations, the cutting conditions can be improved remarkable
- better surface quality
- improved process stability
- better chip evacuation
- reduced cost per part
- for boring length up to 12xD

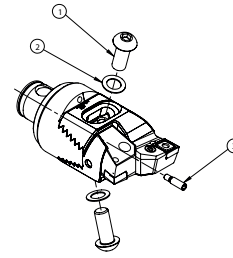
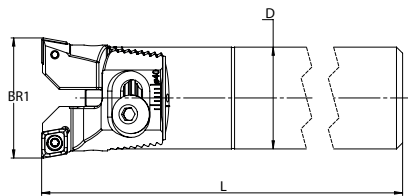
- Amélioration de la productivité : grâce à la réduction des vibrations, les conditions de coupe peuvent être améliorées de façon remarquable.
- Meilleure qualité de surface
- Meilleure stabilité du processus
- Meilleure évacuation des copeaux
- Réduction du coût par pièce
- pour longueur d'alésage jusqu'à 12xD

ECO LINE Uxx_Z

Zweischneiderköpfe Ø23.5-40.1

Twin cutter heads with Ø23.5-40.1

Tête à double tranchant Ø23.5-40.1



ECO LINE

Bestell-Nr. / Order number / Code	D	BR1 min.	BR1 max.	L	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg	①	②	③
U20_Z20.K23.150	20	23.5	31.1	150	414.020.024.006* 424.020.024.006 434.020.024.006 437.020.024.006	CC.. 06 02 ..	0.3	900.404.004.008	900.405.004.000	900.406.030.012
U25_Z25.K23.170	25	29.5	40.1	170	414.025.031.006* 424.025.031.006 434.025.031.006 437.025.031.006	CC.. 06 02 ..	0.6	900.404.005.012	900.405.005.000	900.406.030.012
W19_Z20.024.150	19.1 (0.75")	23.5	31.1	150	414.020.024.006 424.020.024.006 434.020.024.006 437.020.024.006	CC.. 06 02 ..	0.3	900.404.004.008	900.405.004.000	900.406.030.012
W26_Z25.030.170	25.4 (1.00")	29.5	40.1	170	414.025.031.006 424.025.031.006 434.025.031.006 437.025.031.006	CC.. 06 02 ..	0.6	900.404.005.012	900.405.005.000	900.406.030.012

- mit Innenkühlung
- Werkzeug in einem Spannzangenfutter spannen.
- *inklusive Wendeplattenhalter

- with inner coolant supply
- Clamp tool in a collet chuck.
- *insert holder included

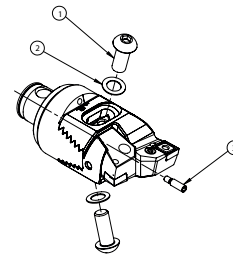
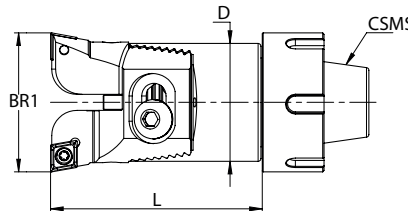
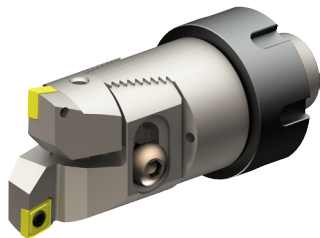
- Avec arrosage interne
- Serrer l'outil dans un porte-pince.
- *Porte-plaquette inclus

ECO LINE Exx_Z

Zweischneiderköpfe Ø39.9-87.1

Twin cutter heads with Ø39.9-87.1

Tête à double tranchant Ø39.9-87.1



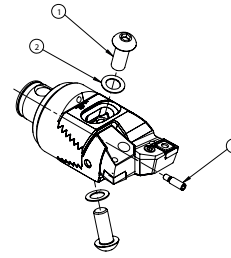
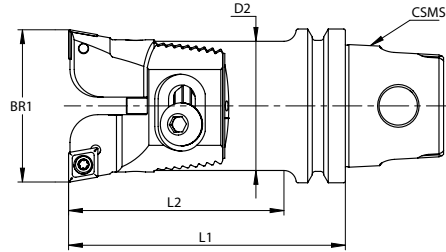
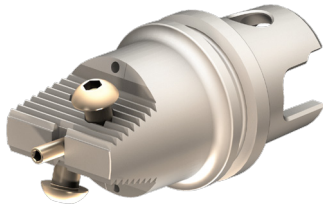
ECO LINE

Bestell-Nr. / Order number / Code	D / CSMS	BR1 min.	BR1 max.	L	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg	①	②	③
E25_Z32.K23.065	32 / ER25	39.5	50.1	65	414.032.040.009* 424.032.040.009 434.032.040.009 437.032.040.009	CC.. 09 T3 ..	0.5	900.404.006.016	900.405.006.000	900.406.030.012
E32_Z42.K23.075	42 / ER32	49.5	67.1	75	414.039.051.009* 424.039.051.009 434.039.051.009 437.039.051.009	CC.. 09 T3 ..	0.9	900.404.008.020	900.405.008.000	900.406.040.020
E40_Z55.K23.085	55 / ER40	65.5	87.1	85	414.050.067.012*/112 424.050.067.012/112 434.050.067.012 437.050.067.012	CC.. 12 04 ..	1.7	900.404.010.025	900.405.010.000	900.406.040.020

- mit Innenkühlung
- Werkzeug in einem Spannzangenfutter spannen.
- *inklusive Wendeplattenhalter

- with inner coolant supply
- Clamp tool in a collet chuck.
- *insert holder included

- Avec arrosage interne
- Serrer l'outil dans un porte-pince.
- *Porte-plaquette inclus

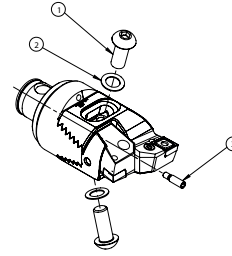
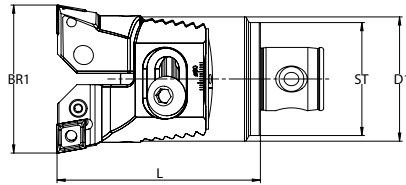
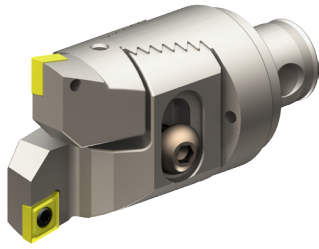


Bestell-Nr. / Order number / Code	ST	BR1 min.	BR1 max.	L1	L2	D2	Wendeplattenhalter / insert holder / porte-inserts	kg	①	②	③
KM3.Z20.024.090	KM32	23.5	31.1	90	76	20	414.020.024.006 424.020.024.006 434.020.024.006 437.020.024.006	0.2	900.404.004.008	900.405.004.000	900.406.030.012
KM3.Z25.030.100	KM32	29.5	40.1	100	86	25	414.025.031.006 424.025.031.006 434.025.031.006 437.025.031.006	0.3	900.404.005.012	900.405.005.000	900.406.030.012
KM4.Z32.040.090	KM40	39.5	51.1	90	74	32	414.032.040.009 424.032.040.009 434.032.040.009 437.032.040.009	0.5	900.404.006.016	900.405.006.000	900.406.030.012
KM5.Z42.050.090	KM50	49.5	67.1	90	70	42	414.039.051.009 424.039.051.009 434.039.051.009 437.039.051.009	0.7	900.404.008.020	900.405.008.000	900.406.040.020
KM5.Z55.066.100	KM50	65.5	87.5	100	100	55	414.050.067.012/112 424.050.067.012/112 434.050.067.012 437.050.067.012	1.8	900.404.010.025	900.405.010.000	900.406.040.020
KM5.Z72.087.120	KM50	86.5	116.1	120	120	72	414.064.087.012/116 424.064.087.012/116 434.064.087.012 437.064.087.012	2.0	900.404.012.025	900.405.012.000	900.406.040.020
KM6.Z72.087.120	KM63UT	86.5	116.1	120	120	72	414.064.087.012/116 424.064.087.012/116 434.064.087.012 437.064.087.012	2.1	900.404.012.025	900.405.012.000	900.406.040.020
KM6.Z94.115.150	KM63UT	114.5	153.1	150	150	94	414.090.115.012/116 424.090.115.116 434.090.115.012 437.090.115.012	2.5	900.404.016.035	900.405.016.000	900.406.040.020

- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden

- with inner coolant supply
- insert holder must be ordered separately

- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément

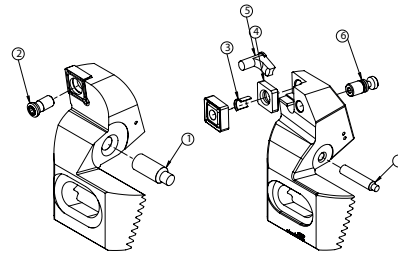
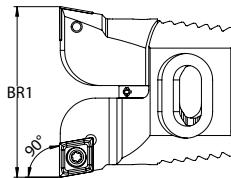


Bestell-Nr. / Order number / Code	ST	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg	①	②	③
404.020.024.035	ST1	23.5	31.1	35.5	20	414.020.024.006 424.020.024.006 434.020.024.006 437.020.024.006	0.1	900.404.004.008	900.405.004.000	900.406.030.012
404.025.031.040	ST2	29.5	40.1	40	25	414.025.031.006 424.025.031.006 434.025.031.006 437.025.031.006	0.1	900.404.005.012	900.405.005.000	900.406.030.012
404.032.040.047	ST3	39.5	51.1	47	32	414.032.040.009 424.032.040.009 434.032.040.009 437.032.040.009	0.1	900.404.006.016	900.405.006.000	900.406.030.012
404.039.051.057	ST4	49.5	67.1	57	42	414.039.051.009 424.039.051.009 434.039.051.009 437.039.051.009	0.2	900.404.008.020	900.405.008.000	900.406.040.020
404.050.067.080	ST5	65.5	87.5	80	55	414.050.067.012/112 424.050.067.012/112 434.050.067.012 437.050.067.012	0.6	900.404.010.025	900.405.010.000	900.406.040.020
404.064.087.100	ST6+	86.5	116.1	100	72	414.064.087.012/116 424.064.087.012/116 434.064.087.012 437.064.087.012	1.1	900.404.012.025	900.405.012.000	900.406.040.020
404.090.115.130	ST7+	114.5	153.1	140	94	414.090.115.012/116 424.090.115.116 434.090.115.012 437.090.115.012	2.3	900.404.016.035	900.405.016.000	900.406.040.020

- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden

- with inner coolant supply
- insert holder must be ordered separately

- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément

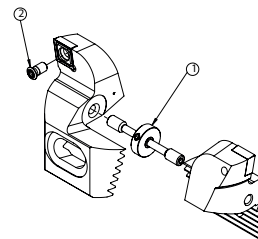
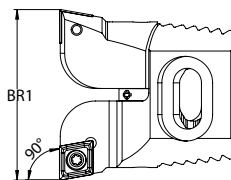
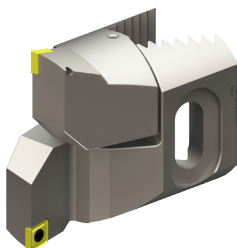


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥
414.020.024.006	23.5	31.1	20	CC ..06 02 ..	0.05	900.414.004.007	900.254.025.006				
414.025.031.006	29.5	40.1	25	CC ..06 02 ..	0.05	900.414.004.010	900.254.025.006				
414.032.040.009	39.5	51.1	32	CC ..09 T3 ..	0.1	900.414.004.013	900.254.040.009				
414.039.051.009	49.5	67.1	42	CC ..09 T3 ..	0.2	900.414.006.014	900.254.040.009				
414.050.067.012	65.5	87.5	55	CC ..12 04 ..	0.5	900.415.006.020	900.254.050.010				
414.050.067.112	65.5	87.5	55	CN ..12 04 ..	0.5	900.415.006.020	900.416.012.000	900.417.012.000	900.418.012.000	900.419.012.000	
414.064.087.012	86.5	116.1	72	CC ..12 04 ..	1.2	900.415.006.030	900.254.050.010				
414.064.087.116	86.5	116.1	72	CN ..16 06 ..	1.2	900.415.006.030	900.416.016.000	900.417.016.000	900.418.016.000	900.419.016.000	
414.090.115.012	114.5	153.1	94	CC ..12 04 ..	2.6	900.415.006.040	900.254.050.010				
414.090.115.116	114.5	153.1	94	CN ..16 06 ..	2.6	900.415.006.040	900.416.016.000	900.417.016.000	900.418.016.000	900.419.016.000	

- für die Verwendung in Zweischniderköpfen der Serie 404
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie 404
- insert holders will be supplied in pairs

- Pour utilisation dans tête à double tranchant de la série 404
- Porte-plaquettes seront livrés par paire



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②
434.020.024.006	23.5	31.1	20	CC ..06 02 ..	0.05	900.434.004.018	900.254.025.006
434.025.031.006	29.5	40.1	25	CC ..06 02 ..	0.05	900.434.004.023	900.254.025.006
434.032.040.009	39.5	51.1	32	CC ..09 T3 ..	0.1	900.434.004.030	900.254.040.009
434.039.051.009	49.5	67.1	42	CC ..09 T3 ..	0.2	900.434.006.040	900.254.040.009
434.050.067.012	65.5	87.5	55	CC ..12 04 ..	0.5	900.434.006.052	900.254.050.010
434.064.087.012	86.5	116.1	72	CC ..12 04 ..	1.2	900.434.006.068	900.254.050.010
434.090.115.012	114.5	153.1	94	CC ..12 04 ..	2.6	900.434.006.090	900.254.050.010

- für die Verwendung in Zweischniderköpfen der Serie 404
- mit der Synchrospindel können beide Wendeplattenhalter gleichzeitig symmetrisch eingestellt werden
- Wendeplattenhalter werden paarweise geliefert

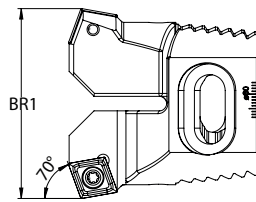
- for use in twin cutter boring heads from serie 404
- with synchro spindle both insert holders can be adjusted synchronously and symmetrically
- insert holders will be supplied in pairs

- Pour utilisation dans tête à double tranchant de la série 404
- avec la vis de réglage synchro, les deux porte-plaquettes peuvent être réglés de façon synchronisée et symétrique
- Porte-plaquettes seront livrés par paire

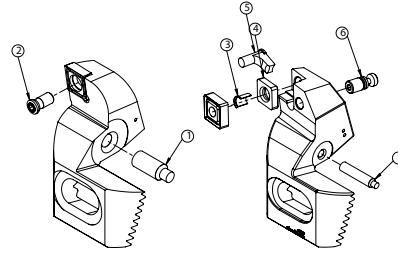
Wendeplattenhalter 70°



Insert holders 70°



Porte-inserts 70°

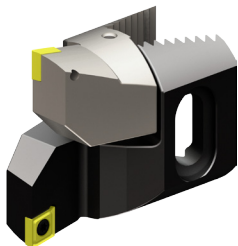
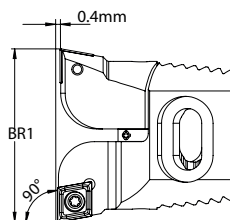
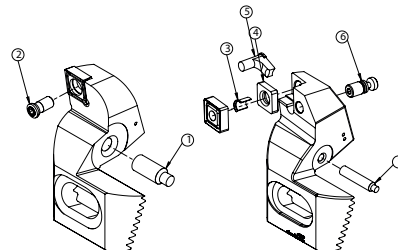


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥
424.020.024.006	23.5	31.1	20	CC . .06 02 . .	0.05	900.414.004.007			900.254.025.006		
424.025.031.006	29.5	40.1	25	CC . .06 02 . .	0.05	900.414.004.010			900.254.025.006		
424.032.040.009	39.5	51.1	32	CC . .09 T3 . .	0.1	900.414.004.013			900.254.040.009		
424.039.051.009	49.5	67.1	42	CC . .09 T3 . .	0.2	900.414.006.014			900.254.040.009		
424.050.067.012	65.5	87.5	55	CC . .12 04 . .	0.5	900.415.006.020			900.254.050.010		
424.050.067.112	65.5	87.5	55	CN . .12 04 . .	0.5	900.415.006.020			900.416.012.000	900.417.012.000	900.418.012.000
424.064.087.012	86.5	116.1	72	CC . .12 04 . .	1.2	900.415.006.030			900.254.050.010		
424.064.087.116	86.5	116.1	72	CN . .16 06 . .	1.2	900.415.006.030			900.416.016.000	900.417.016.000	900.418.016.000
424.090.115.116	114.5	153.1	94	CN . .16 06 . .	2.6	900.415.006.030			900.416.016.000	900.417.016.000	900.418.016.000

- für die Verwendung in Zweisechneiderköpfen der Serie 404
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie 404
- insert holders will be supplied in pairs

- Pour utilisation dans tête à double tranchant de la série 404
- Porte-plaquettes seront livrés par paire

Wendeplattenhalter 90°
axial 0.4mm zurückgesetztInsert holders 90°
axial 0.4mm staggeredPorte-inserts 90°
0.4mm de décalage axial

Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥
437.020.024.006	23.5	31.1	20	CC . .06 02 . .	0.05	900.414.004.007			900.254.025.006		
437.025.031.006	29.5	40.1	25	CC . .06 02 . .	0.05	900.414.004.010			900.254.025.006		
437.032.040.009	39.5	51.1	32	CC . .09 T3 . .	0.1	900.414.004.013			900.254.040.009		
437.039.051.009	49.5	67.1	42	CC . .09 T3 . .	0.2	900.414.006.014			900.254.040.009		
437.050.067.012	65.5	87.5	55	CC . .12 04 . .	0.5	900.415.006.020			900.254.050.010		
437.064.087.012	86.5	116.1	72	CC . .12 04 . .	1.2	900.415.006.030			900.254.050.010		
437.090.115.012	114.5	153.1	94	CC . .12 04 . .	2.6	900.415.006.040			900.254.050.010		

- für die Verwendung in Zweisechneiderköpfen der Serie 404
- zur Schnittaufteilung bei grosser Spantiefe
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie 404
- for divided cut
- insert holders will be supplied in pairs

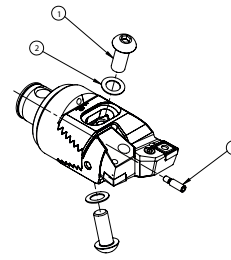
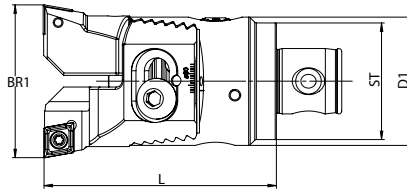
- Pour utilisation dans tête à double tranchant de la série 404
- pour coupe sur deux niveaux
- Porte-plaquettes seront livrés par paire

464

Schrupp-/ Schlicht
Zweischneiderkopf Ø29.5-116.1

Roughing-/Finishing
Twin cutter heads with Ø29.5-116.1

Dégrossissage-/Finition
Tête à double tranchant Ø29.5-116.1



Bestell-Nr. / Order number/ Code	ST	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg	①	②	③
464.025.031.055	ST2	29.5	40.1	55	25	474.025.031.006	0.1	900.404.005.012	900.405.005.000	900.406.030.012
464.032.040.065	ST3	39.5	51.1	65	32	474.032.040.009	0.3	900.404.006.016	900.405.006.000	900.406.030.012
464.039.051.082	ST4	49.5	67.1	82	42	474.039.051.009	0.4	900.404.008.020	900.405.008.000	900.406.040.020
464.050.067.100	ST5	65.5	87.5	100	55	474.050.067.012	0.8	900.404.010.025	900.405.010.000	900.406.040.020
464.064.087.125	ST6+	86.5	116.1	125	72	474.064.087.012	1.4	900.404.012.025	900.405.012.000	900.406.040.020

- Schruppen und Schlichten in einem Arbeitsgang
- Zustellgenauigkeit von 0.01mm im Durchmesser
- Schlichtschneide axial 0.4mm zurückgesetzt
- höchste Stabilität durch Kerbverzahnung
- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden

- Roughing and finishing in one step
- Setting accuracy 0.01mm in diameter
- Fine boring cutting edge axial 0.4mm staggered
- highest stability because of the tooth profile
- with inner coolant supply
- insert holder must be ordered separately

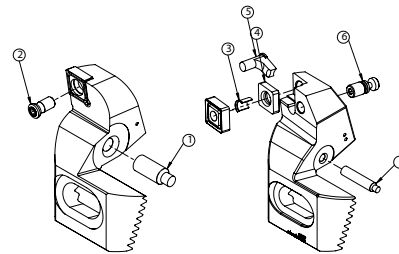
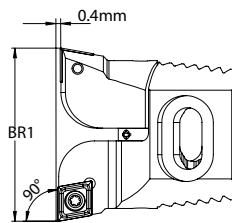
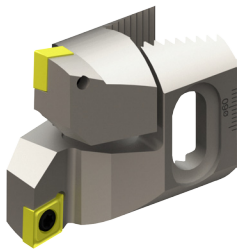
- Dégrossissage et finition en une étape
- Réglage diamétral de 0,01mm
- Arête de coupe décalé axialement de 0.4mm
- stabilité maximale grâce au profil moleté
- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément

474

Wendeplattenhalter 90°
Schrupp-/ Schlicht

Insert holders 90°
Roughing-/Finishing

Porte-inserts 90°
Dégrossissage-/Finition

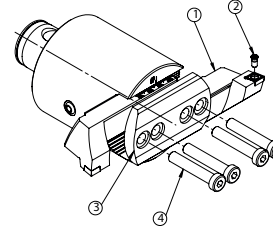
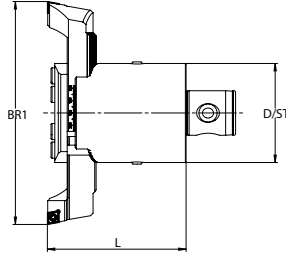
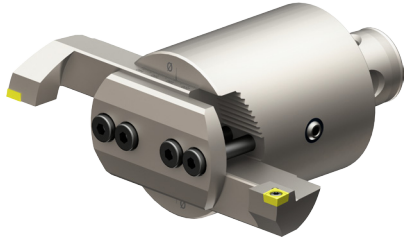


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥
474.025.031.006	29.5	40.1	25	CC ..06 02 ..	0.05	900.414.004.010	900.254.025.006				
474.032.040.009	39.5	51.1	32	CC ..09 T3 ..	0.1	900.414.004.013	900.254.040.009				
474.039.051.009	49.5	67.1	42	CC ..09 T3 ..	0.2	900.414.006.014	900.254.040.009				
474.050.067.012	65.5	87.5	55	CC ..12 04 ..	0.5	900.415.006.020	900.254.050.010				
474.064.087.012	86.5	116.1	72	CC ..12 04 ..	1.2	900.415.006.030	900.254.050.010				

- für die Verwendung in Zweischneiderköpfen der Serie 464
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie 464
- insert holders will be supplied in pairs

- Pour utilisation dans tête à double tranchant de la série 464
- Porte-plaquettes seront livrés par paire

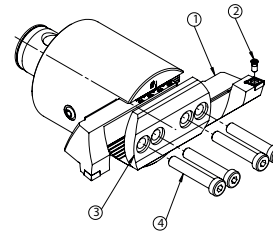
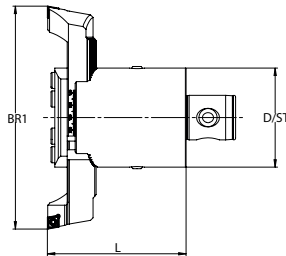
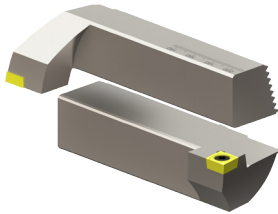


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	ST	L	D	kg	④
444.064.086.112	86	402	ST6+	112	80	3.3	900.344.008.044

- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden

- with inner coolant supply
- insert holder must be ordered separately

- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément

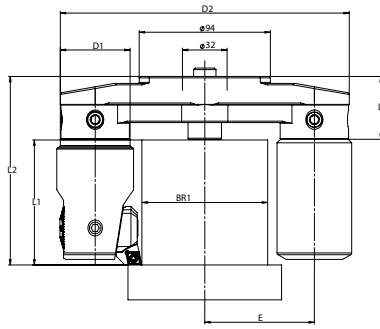
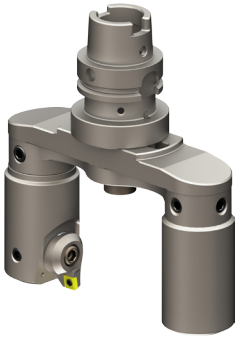


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	Wendeplatte / Insert / Plaquette	kg	①	②	③
454.086.138.009	86	138	CC .. 09 T3 ..	0,7	900.354.086.009	900.354.086.009	900.345.010.086
454.086.138.012	86	138	CC .. 12 04 ..	0,7	900.354.086.012	900.354.086.012	900.345.010.086
454.136.220.009	136	220	CC .. 09 T3 ..	1,1	900.354.136.009	900.354.136.009	900.345.010.136
454.136.220.012	136	220	CC .. 12 04 ..	1,1	900.354.136.012	900.354.136.012	900.345.010.136
454.188.302.009	188	302	CC .. 09 T3 ..	1,4	900.354.188.009	900.354.188.009	900.345.010.136
454.242.402.009	242	402	CC .. 09 T3 ..	1,9	900.354.242.009	900.354.242.009	900.345.010.136

- für die Verwendung in Zweischneiderköpfen der Serie D44
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie D44
- insert holders will be supplied in pairs

- Pour utilisation dans tête à double tranchant de la série D44
- Porte-plaquettes seront livrés par paire

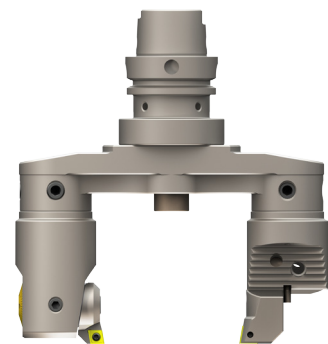
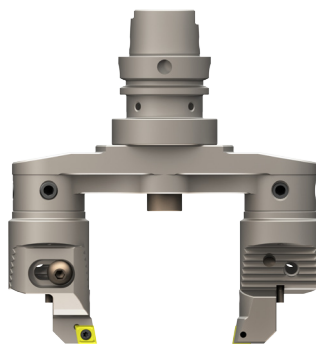
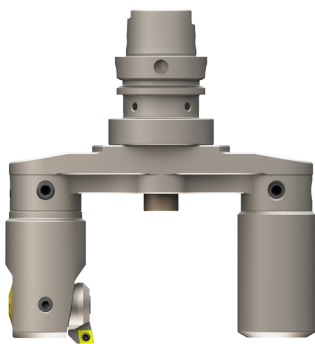


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	41	E	D2	L3	L1	L2	kg	Feinbohrkopf / Boring head/ Têtes d'alésage fin	Schruppkopf / Roughing head/ Tête à double tranchant
561.032.032.099	15.9	27.1	32	33.5	99	40	46.5 (76.5)	86.5 (116.5)		304.032.040.047	404.032.040.047
561.032.032.110	26.9	38.1	32	39.0	110	40	46.5 (76.5)	86.5 (116.5)		304.032.040.047	404.032.040.047
561.039.032.145	37.9	54.1	39	52.5	145	40	56.5 (96.5)	96.5 (136.5)		304.039.051.057	404.039.051.057
561.039.032.161	53.9	70.1	39	60.5	161	40	56.5 (96.5)	96.5 (136.5)		304.039.051.057	404.039.051.057
561.050.032.207	69.9	90.1	50	78.5	207	45	79.5 (139.5)	124.5 (184.5)		304.050.067.080	404.050.067.080
561.050.032.227	89.9	110.1	50	88.5	227	45	79.5 (139.5)	124.5 (184.5)		304.050.067.080	404.050.067.080

- Einfache, kostengünstige Ausführung
- Brücke wird auf einen Fräsdorn Ø32 gespannt
- Modular aufgebaut und verlängerbar für grosse Zapfenlängen
- mit innerer Kühlmittelzuführung
- Gegengewicht und Spannschraube im Lieferumfang enthalten. Feinbohrkopf oder Zweischneiderkopf muss separat bestellt werden

- simple and cost effective solution
- bridge is assembled on a milling arbor Ø32
- modular construction, extendable for long work pieces
- with inner coolant supply
- Counter weight and clamping screw included. Fine boring head or twin cutter must be ordered separately.

- solution simple et rentable
- la traverse est assemblée sur un mandrin porte-fraise Ø32
- construction modulaire, extensible pour les longues pièces à usiner
- Avec arrosage interne



- **Achtung:** Spindel linksdrehend
Vc max. 450 m/min

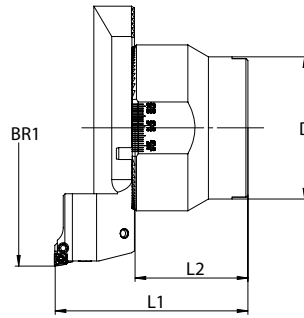
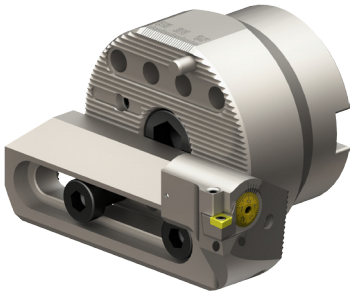
- **Attention:** Counter clockwise spindle rotation
Vc max. 450 m/min

- **Attention:** Rotation de la broche dans le sens inverse des aiguilles d'une montre
Vc max. 450 m/min

ECO LINE Dxx_F
Feinbohrbrückenwerkzeuge
Ø85.5-650.1

Fine boring brigdes tools
Ø85.5-650.1

Traverses d'alésage fin
Ø85.5-650.1



ECO LINE

Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L1	L2	Feinbohraufsatz / Fine bore adapter/ Têtes d'alésage fin	Wendeplatte / Insert / Plaquette	kg
D32_F01.085.098	85.5	140.1	78 / D32	98	50	F01_WCA.B11.050	CC.. 06 02 ..	2.3
D32_F02.139.098	139.5	220.1	78 / D32	98	50	F02_WCA.B11.050	CC.. 06 02 ..	2.5
D32_F02.219.098	219.5	310.1	78 / D32	98	50	F02_WCA.B11.050	CC.. 06 02 ..	3.3
D40_F02.309.108	309.5	395.1	88 / D40	108	50	F02_WCA.B11.050	CC.. 06 02 ..	4.4
D40_F02.394.108	394.5	480.1	88 / D40	108	50	F02_WCA.B11.050	CC.. 06 02 ..	5.0
D60_F02.479.118	479.5	565.1	128 / D60	118	50	F02_WCA.B11.050	CC.. 06 02 ..	10.0
D60_F02.564.118	564.5	650.1	128 / D60	118	50	F02_WCA.B11.050	CC.. 06 02 ..	11.9

- DurchmesserEinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm im Durchmesser
- mit Innenkühlung
- Werkzeug in einer Fräsdorn- oder Messerkopfaufnahme spannen.
- **inklusive Feinbohraufsatz (F01/F02)**

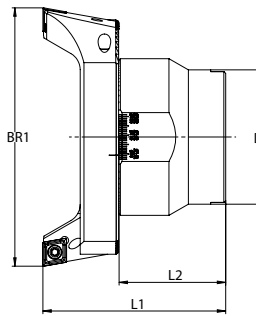
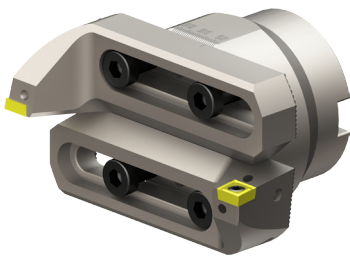
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment
- with inner coolant supply
- Clamp tool in a shell mill holder.
- **Fine boring adapter included (F01/F02)**

- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm
- Avec arrosage interne
- Serrer l'outil dans un porte-fraise
- **Adaptateur pour alésage fin inclus (F01/F02)**

ECO LINE Dxx_Z
Zwischneiderbrückenwerk-
Ø85.5-650.1

Twin cutter brigde tools
Ø85.5-650.1

Traverses à double tranchant
Ø85.5-650.1



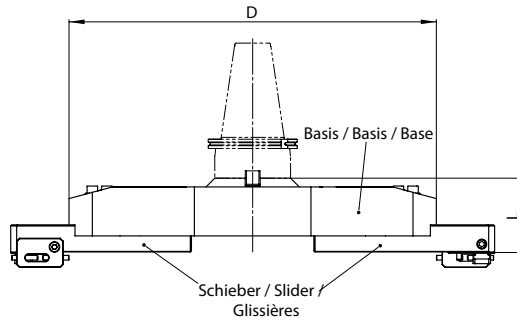
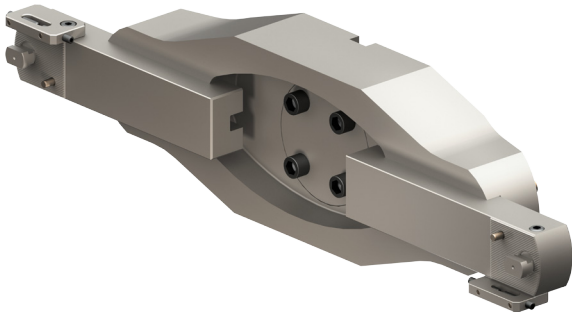
ECO LINE

Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L1	L2	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg
D32_Z01.085.098	85.5	140.1	78 / D32	98	50	Z01_WCC.B11.050	CC.. 12 04 ..	2.5
D32_Z02.139.098	139.5	220.1	78 / D32	98	50	Z02_WCC.B11.050	CC.. 12 04 ..	2.7
D32_Z02.219.098	219.5	310.1	78 / D32	98	50	Z02_WCC.B11.050	CC.. 12 04 ..	3.4
D40_Z02.309.108	309.5	395.1	88 / D40	108	50	Z02_WCC.B11.050	CC.. 12 04 ..	4.8
D40_Z02.394.108	394.5	480.1	88 / D40	108	50	Z02_WCC.B11.050	CC.. 12 04 ..	5.4
D60_Z02.479.118	479.5	565.1	128 / D60	118	50	Z02_WCC.B11.050	CC.. 12 04 ..	10.4
D60_Z02.564.118	564.5	650.1	128 / D60	118	50	Z02_WCC.B11.050	CC.. 12 04 ..	12.3

- mit Innenkühlung
- Werkzeug in einer Fräsdorn- oder Messerkopfaufnahme spannen.
- **inklusive Wendeplattenhalter (Z01/Z02)**

- with inner coolant supply
- Clamp tool in a shell mill holder.
- **Insert holder are included (Z01/ZF02)**

- Avec arrosage interne
- Serrer l'outil dans un porte-fraise
- **Porte inserts inclus (Z01/ Z02)**



Bestell-Nr. Basis/ Order number Basis/ Code Base	BR1 min.	BR1 max.	D	L	kg	Bestell-Nr. Schieber/ Order number Slider/ Code Glissières	kg
562.060.063.080	650	1105	630	128	16.3	564.000.310.048	13.7
562.060.108.080	1100	1655	1080	128	27.3	564.000.360.048	15.7
562.060.163.080	1650	2205	1630	128	42.2	564.000.360.048	15.7

- für die Verwendung auf Aufnahmedorn ø60 / ø129 DIN 6357
- Basis aus Aluminium
- fragen Sie uns an für optimierte Komplettlösungen
- Schieber müssen separat bestellt werden und werden paarweise geliefert

- for use on holding arbor ø60 / ø129
- basis made of aluminium
- please get in touch with us for customized solutions
- sliders must be ordered separately and will be supplied in pairs

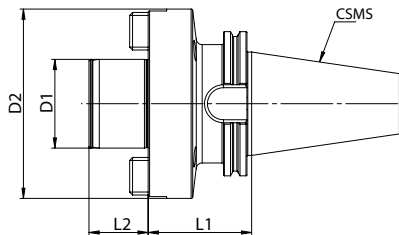
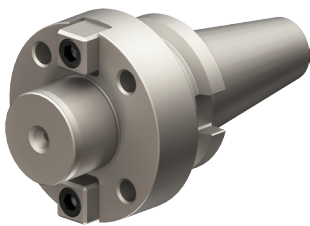
- pour utilisation sur le mandrin de base ø60 / ø129 DIN 6357
- base en aluminium
- veuillez nous contacter pour des solutions personnalisées
- Glissières doivent être commandés séparément et sont livrés par paire

558

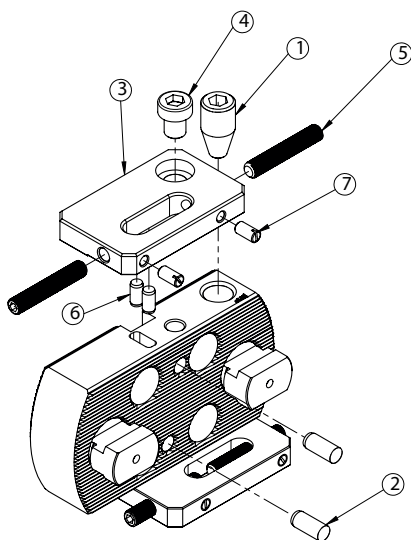
Aufnahmedorn für
Verlängerungskonsolen ø650-2205

Holding arbor for
Extension bridges ø650-2205

Mandrin de base pour
Extensions de traverses ø650-2205



Bestell-Nr. / Order number/ Code	CSMS	D1	L1	L2	D	kg
558.450.060.070	SK 50	60	70	40	128	7.5
558.550.060.080	BT 50	60	80	40	128	8.1
558.810.060.070	HSK-A 100	60	70	40	128	6.2



1	2	3	4	5	6	7
900.560.016.030	900.560.008.028	900.560.080.012	900.560.110.018	900.560.008.045	900.560.006.014	900.560.006.012

504 / 514 / 534 / 544 / 554 / KM

Aufnahmen mit Konsole

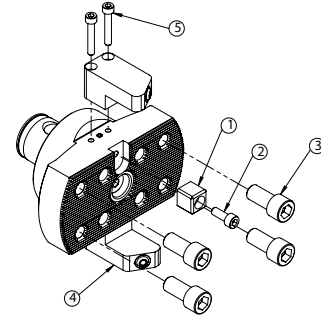
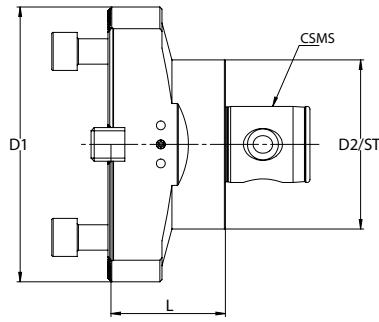
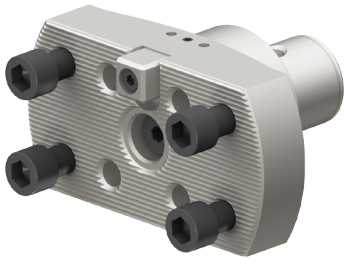
Ø150-655

Master shanks with bridge adapter

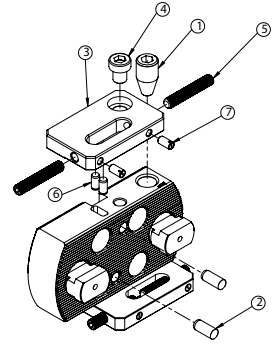
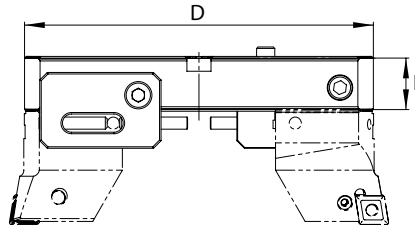
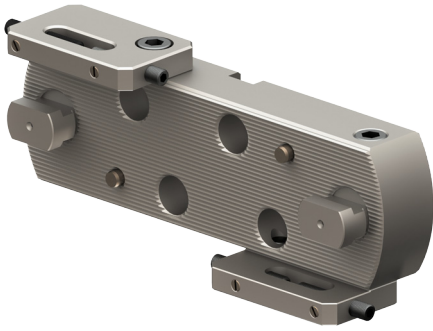
Ø150-655

base avec adaptateur de traverses

Ø150-655



Bestell-Nr. / Order number / Code	CSMS / ST	D1	L	D2	kg	①	②	③	④	⑤
504.340.130.069	CAT 40	130	69.1		3.3	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
504.350.130.069	CAT 50	130	69.1		5.6	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
514.440.130.069	ISO 40	130	69.1		3.3	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
514.450.130.069	ISO 50	130	69.1		5.6	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
534.540.130.077	BT 40	130	77		3.4	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
534.550.130.088	BT 50	130	88		6.5	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
544.806.130.075	HSK A63	130	77		2.8	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
544.810.130.075	HSK A100	130	88		4.4	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
554.064.130.055	ST6+	130	55	64	2.6	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
554.090.130.055	ST7+	130	55	90	3.4	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
V44.KM6.130.065	KM63	130	65		2.8	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025
V44.KM8.130.070	KM80	130	70		3.9	900.514.016.016	900.515.006.015	900.516.012.025	900.500.028.015	900.500.005.025



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	L	kg
560.130.130.030	150	205	130	30	1.9
560.130.180.030	200	255	180	30	2.8
560.130.230.035	250	305	230	35	4.0
560.130.280.035	300	355	280	35	5.1
560.130.330.040	350	405	330	40	6.9
560.130.380.040	400	455	380	40	8.0
560.130.430.040	450	505	430	40	9.2
560.130.480.040	500	555	480	40	10.2
560.130.530.050	550	605	530	50	13.9
560.130.580.050	600	655	580	50	15.3

• für die Verwendung zu 504/514/534/544/554

• for use with 504/514/534/544/554

• Pour utilisation 504/514/534/544/54

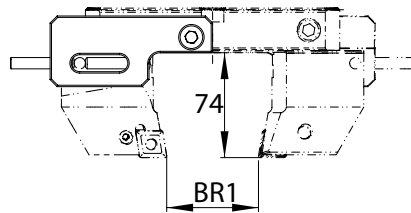
①	②	③	④	⑤	⑥	⑦
900.560.016.030	900.560.008.028	900.560.080.012	900.560.110.018	900.560.008.045	900.560.006.014	900.560.006.012

900

Einstellplatte zum Überdrehen

Adjustment plate for pin turning

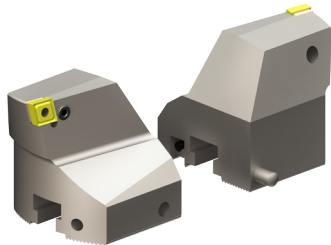
Plaque de réglage pour adaptateur pour le tournage



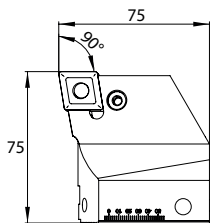
Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	Für Verlängerungskonsole / For extensions bridge / pour Extensions de traverses	kg
900.561.080.012	10	65	560.130.180.030	0.9
900.561.080.012	60	115	560.130.230.035	0.9
900.561.080.012	110	165	560.130.280.035	0.9
900.561.080.012	160	215	560.130.330.040	0.9
900.561.080.012	210	265	560.130.380.040	0.9
900.561.080.012	260	315	560.130.430.040	0.9
900.561.080.012	310	365	560.130.480.040	0.9
900.561.080.012	360	415	560.130.530.050	0.9
900.561.080.012	410	465	560.130.580.050	0.9

570

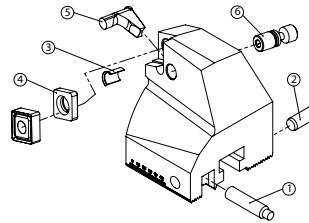
Wendeplattenhalter 90°




Insert holders 90°



Porte-plaquettes 90°



Bestell-Nr. / Order number/ Code	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥	
570.070.009.075	CC .. 09 T3 ..	3.2	900.570.008.035	900.570.008.024					900.254.040.009
570.070.012.075	CN .. 12 04 ..	3.2	900.570.008.035	900.570.008.024	900.416.012.000	900.417.012.000	900.418.012.000	900.419.012.000	
570.070.019.075	CN .. 19 06 ..	3.2	900.570.008.035	900.570.008.024	900.416.019.000	900.417.019.000	900.418.019.000	900.419.019.000	

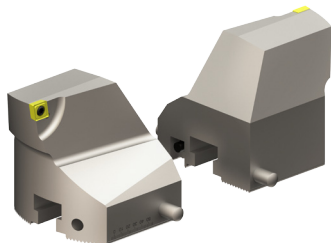
• Wendeplattenhalter werden paarweise geliefert

• insert holders will be supplied in pairs

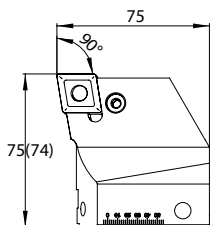
• Porte-plaquettes seront livrés par paire

575

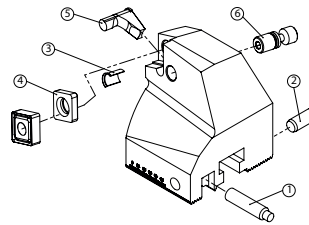
Wendeplattenhalter 90° axial 1.0mm zurückgesetzt




Insert holders 90° axial 1.0mm staggered



Porte-plaquettes 90° en retrait axial de 1,0 mm



Bestell-Nr. / Order number/ Code	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥	
575.070.009.074	CC .. 09 T3 ..	3.2	900.570.008.035	900.570.008.024					900.254.040.009
575.070.012.074	CN .. 12 04 ..	3.2	900.570.008.035	900.570.008.024	900.416.012.000	900.417.012.000	900.418.012.000	900.419.012.000	
575.070.019.074	CN .. 19 06 ..	3.2	900.570.008.035	900.570.008.024	900.416.019.000	900.417.019.000	900.418.019.000	900.419.019.000	

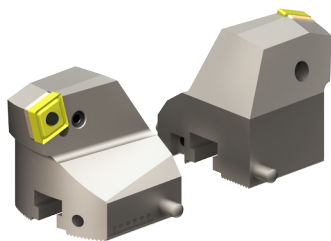
• Wendeplattenhalter werden paarweise geliefert

• insert holders will be supplied in pairs

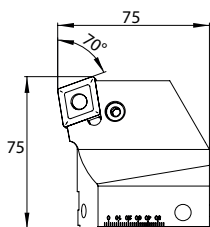
• Porte-plaquettes seront livrés par paire

580

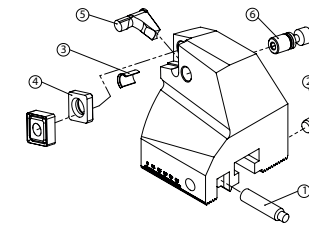
Wendeplattenhalter 70°




Insert holders 70°



Porte-plaquettes 70°



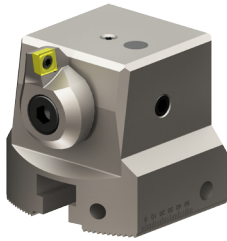
Bestell-Nr. / Order number/ Code	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥	
580.070.019.075	CN .. 19 06 ..	3.2	900.570.008.035	900.570.008.024	900.416.019.000	900.417.019.000	900.418.019.000	900.419.019.000	

• Wendeplattenhalter werden paarweise geliefert

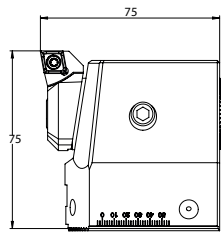
• insert holders will be supplied in pairs

• Porte-plaquettes seront livrés par paire

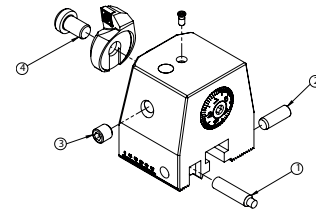
590
Feinbohrkopf



Fine boring head



Tête d'alésage fin



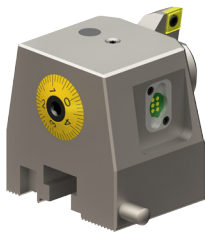
Bestell-Nr. / Order number/ Code	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	
590.070.030.075	314.030.067.006 314.030.067.009	CC .. 06 02 .. CC .. 09 T3 ..	2.1	900.570.008.035	900.570.008.024	900.590.010.020	900.314.010.016	900.254.025.006 900.254.040.009

- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.01mm im Durchmesser
- Wendeplattenhalter müssen separat bestellt werden

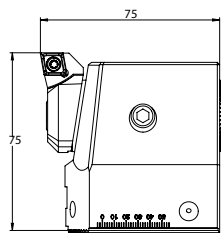
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment
- insert holder must be ordered separately

- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm
- porte-plaquettes doivent être commandés séparément

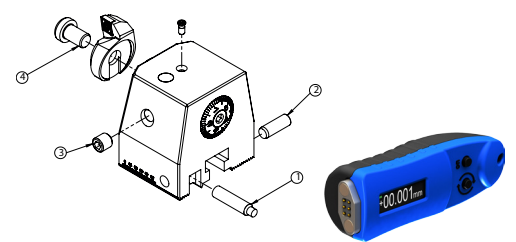
591
Feinbohrkopf
DIGITAL



Fine boring head
DIGITAL



Tête d'alésage fin
DIGITAL



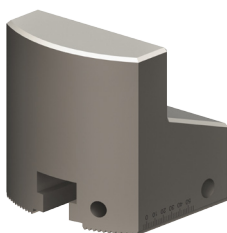
Bestell-Nr. / Order number/ Code	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	
591.070.030.075	314.030.067.006 314.030.067.009	CC .. 06 02 .. CC .. 09 T3 ..	2.1	900.570.008.035	900.570.008.024	900.590.010.020	900.314.010.016	900.254.025.006 900.254.040.009

- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (309.028.024.077)
- Wendeplattenhalter müssen separat bestellt werden

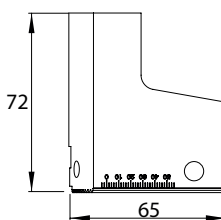
- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (309.028.024.077)

- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Unité d'affichage doit être commandé séparément (309.028.024.077)
- porte-plaquettes doivent être commandés séparément

594
Gegengewicht



Counterweight

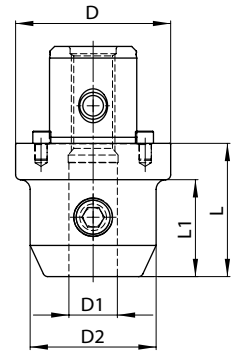


Contre-poids

Bestell-Nr. / Order number/ Code	kg
594.070.065.072	2.2



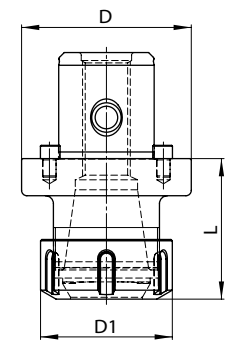
Bestell-Nr. / Order number	ST	D	D1	D2	L1	L
704.064.006.045	ST6+	64	6	25	30	45
704.064.008.045	ST6+	64	8	28	30	45
704.064.010.045	ST6+	64	10	35	30	45
704.064.012.050	ST6+	64	12	42	35	50
704.064.014.050	ST6+	64	14	44	35	50
704.064.016.050	ST6+	64	16	48	35	50
704.064.018.050	ST6+	64	18	50	35	50
704.064.020.055	ST6+	64	20	52	40	55
704.064.025.065	ST6+	64	25	64	50	65



Bestell-Nr. / Order number	ST	D	L	Spannzange / Collet	Spannbereich / Clamping range	41
724.025.016.035	ST2	25	35	ER 16	0.5-10	22
724.064.025.047	ST6+	64	47	ER 25	1 -16	42
724.064.032.053	ST6+	64	53	ER 32	1 -20	50
724.064.040.065	ST6+	64	65	ER 40	1 -26	63

- Spannmuttern sind im Lieferumfang enthalten
- Schlüssel und Spannzangen müssen separat bestellt werden (siehe Preisliste)

- collet chucks will be supplied with clamping nuts
- keys and collets must be ordered separately (see price list)

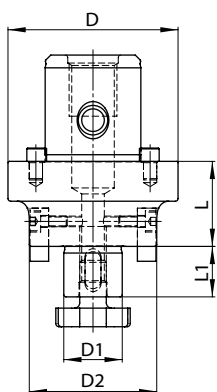


Ersatzteile / Zubehör

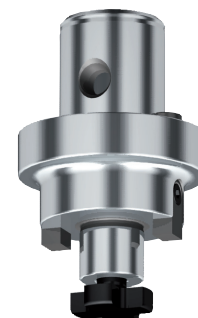
Spare parts / Accessories

704/724

Für Fräsespannfutter	Bestell-Nr. / Order number	Für Spannzangenfutter	Bestell-Nr. / Order number	Bestell-Nr. / Order number
For end mill adapter	Spannschraube / Clamping screw	For collet chuck adapter	Spannmutter / Clamping nut	Schlüssel / Key
704.064.006.045	900.704.006.010	724.025.016.035	900.724.016.001	900.724.016.010
704.064.008.045	900.704.008.010	724.064.025.047	900.724.025.001	900.724.025.010
704.064.010.045	900.704.010.012	724.064.032.053	900.724.032.001	900.724.032.010
704.064.012.050	900.704.012.016	724.064.040.065	900.724.040.001	900.724.040.010
704.064.014.050	900.704.012.016			
704.064.016.050	900.704.014.016			
704.064.018.050	900.704.014.016			
704.064.020.055	900.704.016.016			
704.064.025.065	900.704.018.020			

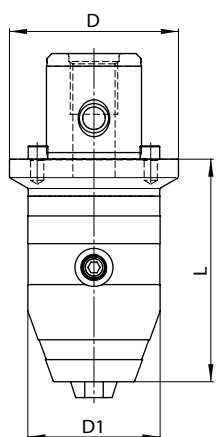


Bestell-Nr. / Order number	ST	D	D1	D2	L1	L
734.064.016.032	ST6+	64	16	39	17	32
734.064.022.032	ST6+	64	22	49	19	32
734.064.027.034	ST6+	64	27	58	21	34
734.064.032.038	ST6+	64	32	70	24	38
734.064.040.040	ST6+	64	40	80	27	40



NC-Bohrfutter

NC-Drillchucks



• mit Innenkühlung

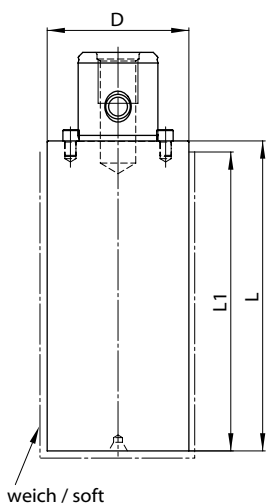
• with inner coolant supply

Bestell-Nr. / Order number	ST	D	D1	L	Spannbereich / Clamping range
744.064.013.084	ST6+	64	44	84	1 - 13
744.064.016.084	ST6+	64	49	88	2.5 - 16



Rohlinge

Blank adapters

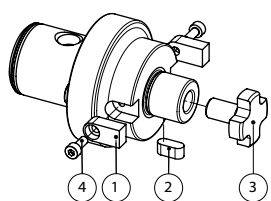


Bestell-Nr. / Order number	ST	D	L	L1
764.020.020.040	ST1	20	40	37
764.025.025.050	ST2	25	50	47
764.032.032.065	ST3	32	65	61
764.039.039.090	ST4	39	90	86
764.050.050.115	ST5	50	115	110
764.064.064.140	ST6+	64	140	135










Ersatzteile / Zubehör












Spare parts / Accessories



















Für Aufsteckfräs- dorn For milling arbor	Bestell-Nr. / Order number	Bestell-Nr. / Order number	Bestell-Nr. / Order number	Bestell-Nr. / Order number
	Mitnehmerkeil / Drive lug ^①	Passfeder / Splined key ^②	Fräseranzugsschraube / Clamping screw ^③	Schraube / Screw ^④
734.064.016.020	900.734.008.019	900.735.004.012	900.736.008.012	900.737.003.008
734.064.022.020	900.734.010.020	900.735.006.014	900.736.010.016	900.737.004.010
734.064.027.020	900.734.012.023	900.735.007.016	900.736.012.018	900.737.004.010
734.064.032.028	900.734.014.027	900.735.008.018	900.736.016.022	900.737.006.016
734.064.040.028	900.734.016.030	900.735.010.020	900.736.020.030	900.737.006.018

Bestell-Nummer	Wendeplatte	Schneidstoff	Technische Informationen	Materialien	v [m/min]	f [mm/Z]
Order number	Insert	Cutting mat.	Technical information	Materials	v [m/min]	f [mm/r]
Code	Plaquette	Matière de coupe	Informations techniques	Matières	v [m/min]	f [mm/r]
800.600.050.022	WCMT 020102	 CTU	 Cermet-Wendeplatte (Titan-Carbid / Titan-Nitrid) für Feinbohrarbeiten mit hoher Schnittgeschwindigkeit und gleichmässigem Aufmass.	Stahl Grauguss Aluminium	50–300 50–300 bis 800	0.04 bis 0.10
			Titanium carbide / titanium nitride (Cermet) for fine bore machining with high cutting speed and regular cutting depth.	Steel Cast Iron Aluminium	50–300 50–300 to 800	0.04 to 0.10
			Plaquette de Cermet (carbure de titane / nitrure de titane) pour travaux d'alésage fin avec haute vitesse de coupe et profondeur de coupe régulière.	Acier Fonte Aluminium	50–300 50–300 à 800	0.04 à 0.10
800.600.060.022	WCGT 020102	 HUP	 Unbeschichtete Hartmetall-Wendeplatte , allseitig geschliffen mit grossem Spanwinkel für Feinbohrarbeiten. Die Wendeplatte eignet sich insbesondere bei kleinem Aufmass und langen Bohrungen.	Stahl Stahl rostfrei Grauguss Aluminium	50–250 30–200 50–300 bis 800	0.04 bis 0.10
			Uncoated Carbide insert, ground all around with large rake angle for fine bore cutting. The insert is particularly good for small cutting depth in deep bores.	Steel Stainless steel Cast iron Aluminium	50–250 30–200 50–300 to 800	0.04 to 0.10
			Plaquette en carbure non revêtue, rectifiée sur tous les côtés avec un grand angle de coupe pour les travaux d'alésage fin. La plaquette est particulièrement adaptée aux petites profondeurs de coupe et aux longs alésages.	Acier Acier inox Fonte Aluminium	50–250 30–200 50–300 à 800	0.04 à 0.10
800.600.070.022	WCGT 020102	 SFH	 Mehrfach beschichtete superfeinstkorn Hartmetall-Wendeplatte zur Bearbeitung von harten und gehärteten Werkstoffen bis 62 HRC . Die Wendeplatte eignet sich hervorragend für Feinbohrarbeiten in gehärtetem Stahl als Alternative zum K-Schleifen.	Stahl weich	bis 300	0.04
800.600.070.024	WCGT 020104			Stahl HRC 45 Stahl HRC 50 Stahl HRC 55 Stahl HRC 60 Stahl HRC 62	80–250 80–200 50–150 30–100 20– 60	bis 0.20
			Repeat coated extremely fine grain carbide insert for machining of hard and hardened steels up to 62 HRC . Very suitable for fine boring of precision bores in hardened steel as an alternative to Jig-grinding.	Steel soft Steel HRC 45 Steel HRC 50 Steel HRC 55 Steel HRC 60 Steel HRC 62	bis 300 80–250 80–200 50–150 30–100 20– 60	0.04 to 0.20
			Plaquette en carbure à grains super fins multicouches pour l'usinage de matériaux durs et trempés jusqu'à 62 HRC . Cette plaquette convient parfaitement aux travaux d'alésage fin dans l'acier trempé, comme alternative à la réctification par coordonnée.	Acier soft Acier HRC 45 Acier HRC 50 Acier HRC 55 Acier HRC 60 Acier HRC 62	à 300 80–250 80–200 50–150 30–100 20– 60	0.04 à 0.20

HIT
HRC+

Bestell-Nummer	Wendeplatte	Schneidstoff	Technische Informationen	Materialen	v [m/min]	f [mm/Z]
Order number	Insert	Cutting mat.	Technical information	Materials	v [m/min]	f [mm/r]
Code	Plaquette	Matière de coupe	Informations techniques	Matières	v [m/min]	f [mm/r]
800.600.200.062	CCMT 060202	 CTU	 <p>Cermet-Wendeplatte (Titan-Carbid / Titan-Nitrid) für niedrige bis hohe Schnittgeschwindigkeiten beim Schlichten mit gleichbleibendem Aufmass. Auch für leichte Schrupparbeiten einsetzbar. Bester Widerstand gegen Verschleiss und Schneidekantendeformation. Geeignet für Feinbohrarbeiten mit normalem Aufmass von 0.25 mm im Durchmesser.</p> <p>Titanium carbide / titanium nitride (Cermet) for finishing with low to high cutting speeds with regular cutting depth. Also for light roughing. High resistance to wear and tip deformation. Suitable for fine boring with normal cutting depths from 0.25 mm in bored diameter.</p>	Stahl	50–300	0.08
800.600.200.064	CCMT 060204			Stahl rostfrei	30–250	bis
800.600.200.092	CCMT 09T302			Grauguss	50–300	0.15
800.600.200.094	CCMT 09T304			Aluminium	bis 800	
800.600.200.098	CCMT 09T308			Buntmetall	bis 500	
800.600.200.128	CCMT 120408					
			Acier	50–300	0.08	
			Acier inox	30–250	à	
			Fonte	50–300	0.15	
			Aluminium	à 800		
			Alliage de cuivre	à 500		
800.600.850.062	CCGT 060202L	 ICH	 <p>Hochwiderstandsfähig gegen Brüche durch die besondere Zusammensetzung des Basismaterial plus der speziellen TiCN-Beschichtung. Sehr hohe mechanische Stabilität und Verschleissbeständigkeit. Sehr gut geeignet für unterbrochenen Schnitt.</p> <p>Excellent toughness and wear resistance due to the special composition of the base material plus the special TiCN coating. Very suitable for interrupted cuts</p>	Stahl weich	bis 300	0.04
800.600.850.064	CCGT 060204L			Stahl HRC 45	80–250	bis
800.600.850.094	CCGT 09T304L			Stahl HRC 50	80–200	0.20
				Stahl HRC 55	50–150	
			Stahl rostfrei	30–200		
			Grauguss	50–300		
			Acier soft	bis 300	0.04	
			Steel HRC 45	80–250	to	
			Steel HRC 50	80–200	0.20	
			Steel HRC 55	50–150		
			Stainless steel	30–200		
			Cast iron	50–300		
			Acier soft	à 300	0.04	
			Acier HRC 45	80–250	à	
			Acier HRC 50	80–200	0.20	
			Acier HRC 55	50–150		
			Acier inox	30–200		
			Fonte	50–300		

Bestell-Nummer	Wendeplatte	Schneidstoff	Technische Informationen	Materialien	v [m/min]	f [mm/Z]
Order number	Insert	Cutting mat.	Technical information	Materials	v [m/min]	f [mm/r]
Code	Plaquette	Matière de coupe	Informations techniques	Matières	v [m/min]	f [mm/r]
800.600.300.062	CCGT 060202L ○	CTG 	Allseitig geschliffene, hochpositive Cermet-Wendeplatte (Titan-Carbid / Titan-Nitrid), für alle Feinbohrarbeiten. Die Wendeplatte eignet sich insbesondere bei kleinem Aufmass und langen Bohrungen. Durch den grossen Spanwinkel sind die Druck- und Schnittkräfte sehr gering.	Stahl Stahl rostfrei Grauguss Aluminium Buntmetall	50–300 30–250 50–250 bis 800 bis 500	0.06 bis 0.12
800.600.300.064	CCGT 060204L ○					
800.600.300.092	CCGT 09T302L ○					
800.600.300.094	CCGT 09T304L ○					
HIT			All ground, Cermet insert with highly positive rake angle for all fine bore machining. Very suitable for deep bores with small cutting depth. Low cutting and pressing forces due to large rake angle.	Steel Stainless steel Cast iron Aluminium Copper alloys	50–300 30–250 50–250 to 800 to 500	0.06 to 0.12
			Plaquette en cermet (carbure de titane/nitride de titane) entièrement rectifiée et avec une géométrie hautement positive de coupe, pour tous les travaux d'alésage fin. La plaquette est particulièrement adaptée aux petites profondeurs d'alésage et aux longs alésages. En raison du grand angle de coupe, la pression et les forces de coupe sont très faibles.	Acier Acier inox Fonte Aluminium Alliage de cuivre	50–300 30–250 50–250 à 800 à 500	0.06 à 0.12
800.600.800.062	CCGT 060202L ○	SFH 	Mehrfach beschichtete superfeinstkorn Hartmetall-Wendeplatte zur Bearbeitung von harten und gehärteten Werkstoffen bis 62 HRC . Die Wendeplatte eignet sich hervorragend für Feinbohrarbeiten in gehärtetem Stahl als Alternative zum K-Schleifen.	Stahl weich Stahl HRC 45 Stahl HRC 50 Stahl HRC 55 Stahl HRC 60 Stahl HRC 62	bis 300 80–250 80–200 50–150 30–100 20– 60	0.04 bis 0.20
800.600.800.064	CCGT 060204L ○					
800.600.800.092	CCGT 09T302L ○					
800.600.800.094	CCGT 09T304L ○					
HIT HRC+			Repeat coated extremely fine grain carbide insert for machining of hard and hardened steels up to 62 HRC . Very suitable for fine boring of precision bores in hardened steel as an alternative to Jig-grinding.	Steel soft Steel HRC 45 Steel HRC 50 Steel HRC 55 Steel HRC 60 Steel HRC 62	bis 300 80–250 80–200 50–150 30–100 20– 60	0.04 to 0.20
			Plaquette en carbure à grains super fins multicouches pour l'usinage de matériaux durs et trempés jusqu'à 62 HRC . Cette plaquette convient parfaitement aux travaux d'alésage fin dans l'acier trempé, comme alternative à la réctification par coordonnée.	Acier soft Acier HRC 45 Acier HRC 50 Acier HRC 55 Acier HRC 60 Acier HRC 62	à 300 80–250 80–200 50–150 30–100 20– 60	0.04 à 0.20

Bestell-Nummer	Wendeplatte	Schneidstoff	Technische Informationen	Materialen	v [m/min]	f [mm/Z]
Order number	Insert	Cutting mat.	Technical information	Materials	v [m/min]	f [mm/r]
Code	Plaquette	Matière de coupe	Informations techniques	Matières	v [m/min]	f [mm/r]
800.600.400.064	CCMT 060204	 HBH	<p>Mehrfach beschichtete Hartmetall-Wendeplatte mit hoher Verschleissfestigkeit und grossem Widerstand gegen plastische Verformung. Generell geeignet für die Stahlbearbeitung mit mittleren bis hohen Schnittgeschwindigkeiten.</p> <p>Repeat coated carbide insert with high wear and plastic deformation resistance. Generally used for machining of ferrous steels with middle to high cutting speeds.</p>	Stahl	20–280	0.10
800.600.400.094	CCMT 09T304			Stahl rostfrei	30–250	bis
800.600.400.098	CCMT 09T308			Grauguss	50–250	0.40
800.600.401.128	CCMT 1204.08			Sphäroguss	50–180	bis 800
800.600.400.128	CNMG 120408			Aluminium	bis 800	bis 500
800.600.400.168	CNMG 160608			Buntmetall	bis 500	
800.600.400.169	CNMG 160612					
800.600.400.198	CNMG 190612					
800.600.400.199	CNMG 190616					
				Steel	20–280	0.10
				Stainless steel	30–250	to
				Cast iron	50–250	0.40
				Spheroidal cast iron	50–180	
				Aluminium	to 800	
				Copper alloys	to 500	
			<p>Plaquette en carbure multicouche avec une grande résistance à l'usure et à la déformation plastique. Généralement utilisée pour l'usinage de l'acier avec des vitesses de coupe de moyennes à élevées.</p>	Acier	20–280	0.10
				Acier inox	30–250	à
				Fonte	50–250	0.40
				Fonte sphéroïdale	50–180	
				Aluminium	à 800	
				Alliage de cuivre	à 500	
800.600.500.128	CNMM 120408	 HBZ	<p>Mehrfach beschichtete Hartmetall-Wendeplatte mit höchster Zähigkeit und Stabilität der Schneidekante. Geeignet für Stahlbearbeitung durch die positive Schneidegeometrie auch bei unterbrochenem Schnitt.</p> <p>Repeat coated carbide insert, very tough with high stability cutting edge. Suitable for machining of ferrous steels also with interrupted cut due to its positive cutting geometry.</p>	Stahl	50–300	0.10
800.600.500.168	CNMM 160608			Stahl rostfrei	30–250	bis
800.600.500.169	CNMM 160612			Grauguss	50–300	0.60
800.600.500.198	CNMM 190612			Sphäroguss	50–200	bis 800
800.600.500.199	CNMM 190616			Aluminium	bis 800	bis 500
				Buntmetall	bis 500	
				Steel	50–300	0.10
				Stainless steel	30–250	to
				Cast iron	50–300	0.60
				Spheroidal cast iron	50–200	
				Aluminium	to 800	
				Copper alloys	to 500	
			<p>Plaquette en carbure multicouche avec une ténacité et une stabilité maximales de l'arête de coupe. Convient à l'usinage de l'acier grâce à la géométrie positive de coupe, aussi en cas de coupe interrompue.</p>	Acier	50–300	0.10
				Acier inox	30–250	à
				Fonte	50–300	0.60
				Fonte sphéroïdale	50–200	
				Aluminium	à 800	
				Alliage de cuivre	à 500	



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