



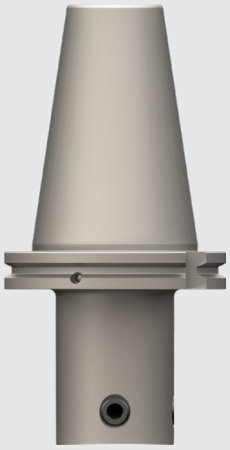
**SWISS**  **TOOLS**<sup>®</sup>

*S w i s s*  
**M B M**  
**2403**



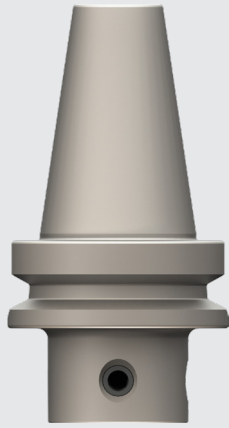
**SCHAUBLIN**

**Grundmodule / Master shanks / Modules de base**



**DIN 69 871-AD/B**

14+15



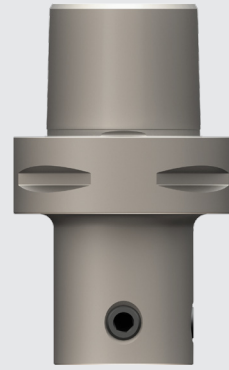
**MAS BT JIS B 6339**

16-17



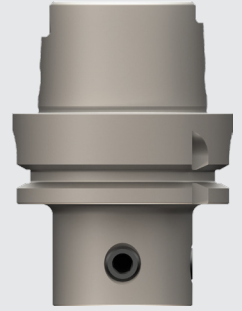
**DIN 2080**

1



**ISO 26623-1 PSC**

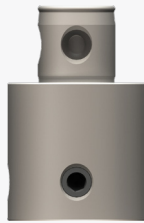
13



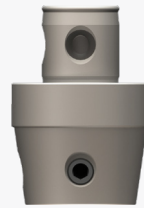
**DIN 69 893 HSK**

12

**Zwischenmodule / Intermediate modules / Modules intermédiaires**



18



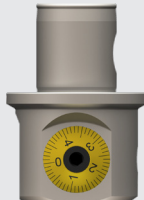
19

**ø 0.3-19.1 mm**



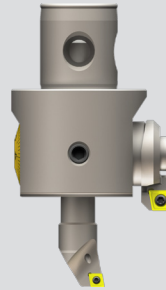
20-21

**ø 3-88 mm**



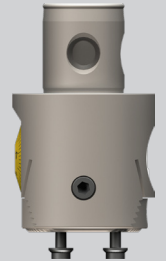
22-23

**ø 3-152 mm**



24-25

**ø 3-320 mm**



26



32



29



27



28



30



31

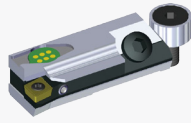


26





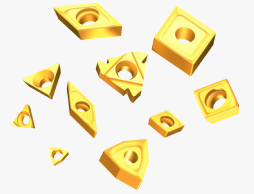
▣4



▣5



▣6-10



▣68-71

**∅ 23-153 mm**



▣46-49



▣50-51

**∅ 14.7-203 mm**

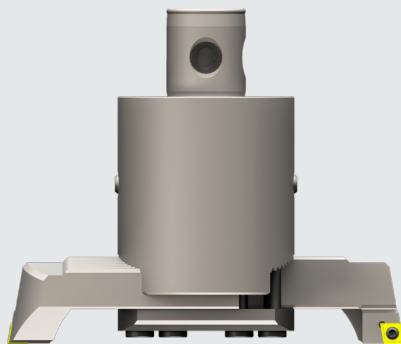


▣34-40



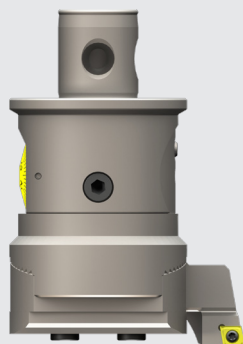
▣41-43

**∅ 86-402 mm**



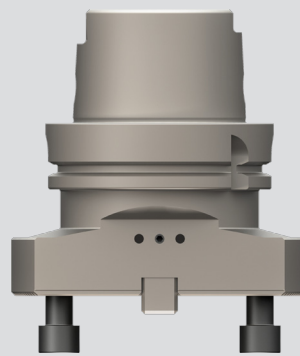
▣53

**∅ 86-402 mm**

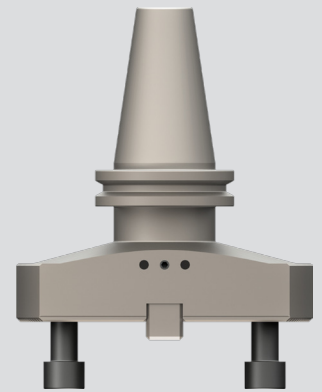


▣44-45

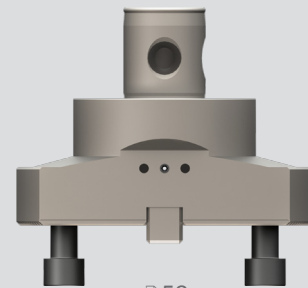
**∅ 150-2205 mm**



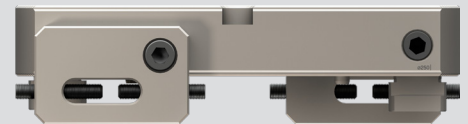
▣58



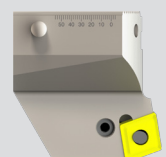
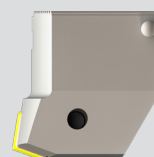
▣58



▣58



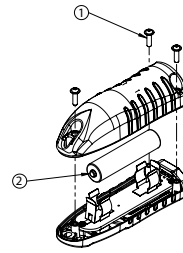
▣57+59



▣60



▣61



Bestell-Nr. /  
Order number/  
Code

266.028.077

①

②

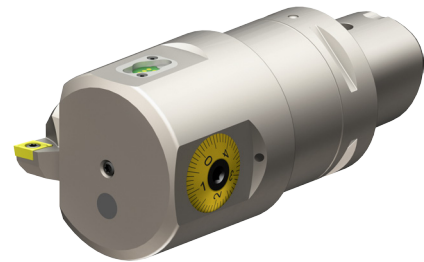
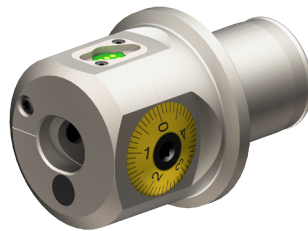
879.028.077

879.011.045

- 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

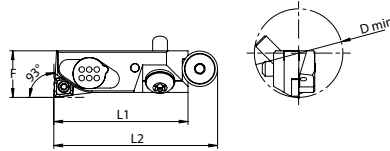
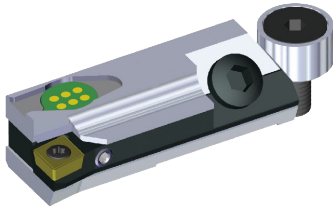
- un seul display pour toutes les têtes d'alésage fin Ø 0.3 mm - 2205.0 mm
- display réversible (gaucher/droitier)
- mm/pouce commutable
- Pile AAA standard pour l'alimentation
- Le display est maintenu sur l'outil par force magnétique
- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure 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 Keil-element
- Drehzahl: max.10.000 U/min
- Innenkühlung direkt auf die Werkzeugschneide

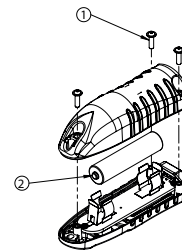
- Fine adjustment digital display 0.001mm
- Radial adjustment: min. 0.4 mm
- Axial length adjustment: 1.5 mm
- Speed: max.10.000 rpm
- Internal cooling directly on the tool cutting edge

- 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**

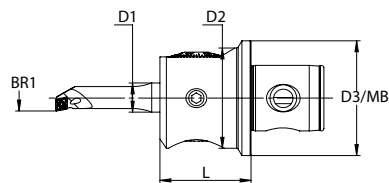
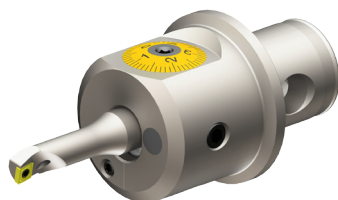


Bestell-Nr. / Order number/ Code	①	②
GH1.DA4.BGK.077	879.028.077	879.011.045

- 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
- 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



Bestell-Nr. / Order number/ Code	D3/MB System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>								
528.000.030	MB5	55	3	88.1	45	16	0.6	262.550.045
<b>DIN 69893 HSK 63 A</b>								
528.063.030	HSK 63 A	55	3	88.1	95	16	1.7	269.063.095
<b>DIN 69871 AD 40</b>								
528.415.030	ISO 40	55	3	88.1	90	16	2.1	269.415.090
<b>MAS BT 40</b>								
528.412.030	BT40	55	3	88.1	90	16	2.2	269.412.090

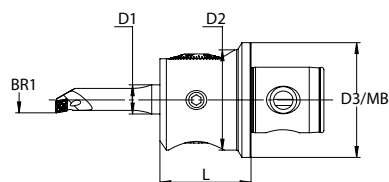
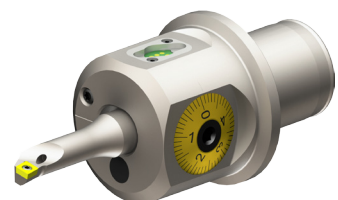
## bestehend aus / consisting on / comprenant

Ausdrehstähle / Boring bars / Barres d'alésage	ø9.75-15.1	272.010.006
	ø14.75-20.1	272.015.006
	ø19.75-25.1	272.020.006
	ø24.75-30.1	272.025.006

Bedienschlüssel / Service keys / Clés de service

SW5 / T7

Kunststoffkoffer / Plastic case / Coffret



Bestell-Nr. / Order number/ Code	D3/MB System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>								
521.000.030	MB5	55	3	88.1	45	16	0.6	266.550.045
<b>DIN 69893 HSK 63 A</b>								
521.063.030	HSK 63 A	55	3	88.1	95	16	1.7	266.063.095
<b>DIN 69871 AD 40</b>								
521.415.030	ISO 40	55	3	88.1	90	16	2.1	266.415.090
<b>MAS BT 40</b>								
521.412.030	BT40	55	3	88.1	90	16	2.2	266.412.090

## bestehend aus / consisting on / comprenant

Ausdrehstähle / Boring bars / Barres d'alésage	ø9.75-15.1	272.010.006
	ø14.75-20.1	272.015.006
	ø19.75-25.1	272.020.006
	ø24.75-30.1	272.025.006

Bedienschlüssel / Service keys / Clés de service

SW5 / T7

Kunststoffkoffer / Plastic case / Coffret

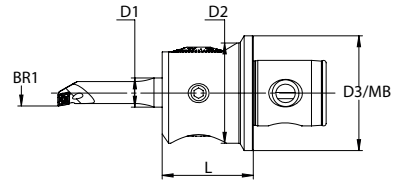
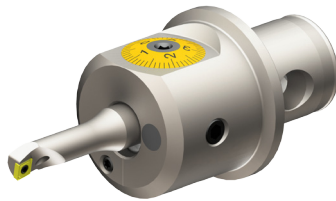
Anzeigeeinheit / Display unit / Unité d'affichage 266.028.077

527

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/MB System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>								
527.000.088	MB5	55	3	88.1	50	16	0.6	262.550.045
<b>DIN 69893 HSK 63 A</b>								
527.063.088	HSK 63 A	55	3	88.1	95	16	1.7	269.063.095
<b>DIN 69871 AD 40</b>								
527.415.088	ISO 40	55	3	88.1	90	16	2.1	269.415.090
<b>MAS BT 40</b>								
527.412.088	BT40	55	3	88.1	90	16	2.2	269.412.090

bestehend aus / consisting on / comprenant

Ausdrehstäbe / Boring bars / Barres d'alésage	Ø9.75-15.1	272.010.006	Ø14.75-20.1	272.015.006
	Ø19.75-25.1	272.020.006	Ø24.75-30.1	272.025.006
Schaft / Shank / Corps d'acier	Ø29.75-48.1	271.030.088	Ø47.75-88.1	271.048.088
Wendeplattenhalter / Insert holder / Porte plaq.	Ø29.75-48.1	253.030.006	Ø47.75-88.1	253.048.006
Bedienschlüssel / Service keys / Clés de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				

521

DIGITAL

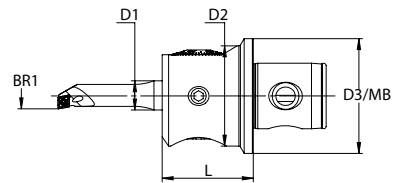
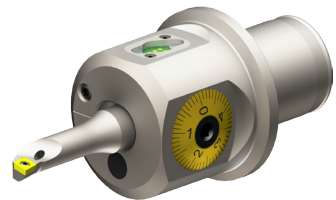
Feinbohr-Set Ø 9.75-88.1mm

DIGITAL

Fine boring set Ø 9.75-88.1mm

DIGITAL

Jeux d'outils Ø 9.75-88.1mm



Bestell-Nr. / Order number / Code	D3/MB System	D2	BR1 min.	BR1 max.	L (A)	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>								
521.000.088	MB5	55	3	88.1	50	16	0.6	266.550.045
<b>DIN 69893 HSK 63 A</b>								
521.063.088	HSK 63 A	55	3	88.1	95	16	1.7	266.063.095
<b>DIN 69871 AD 40</b>								
521.415.088	ISO 40	55	3	88.1	90	16	2.1	266.415.090
<b>MAS BT 40</b>								
521.412.088	BT40	55	3	88.1	90	16	2.2	266.412.090

bestehend aus / consisting on / comprenant

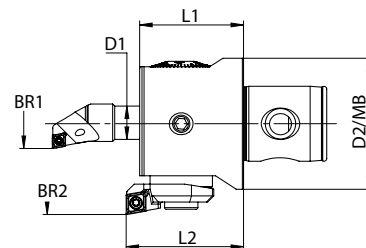
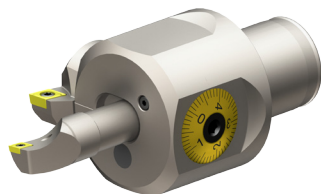
Ausdrehstäbe / Boring bars / Barres d'alésage	Ø9.75-15.1	272.010.006	Ø14.75-20.1	272.015.006
	Ø19.75-25.1	272.020.006	Ø24.75-30.1	272.025.006
Schaft / Shank / Corps d'acier	Ø29.75-48.1	271.030.088	Ø47.75-88.1	271.048.088
Wendeplattenhalter / Insert holder / Porte plaq.	Ø29.75-48.1	253.030.006	Ø47.75-88.1	253.048.006
Bedienschlüssel / Service keys / Clés de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				
Anzeigeeinheit / Display unit / Unité d'affichage	266.028.077			

525

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/MB	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>								
525.550.101	MB5	3 - 88.1	87.75 - 152.1	50	57	16	1.5	267.550.152
<b>VARIO ER40</b>								
525.001.101	63 /ER40	3 - 88.1	87.75 - 152.1	50	57	16	1.5	267.003.152

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

Ausdrehstäbe / Boring bars / Barres d'alésage	ø9.75-20.1	272.010.006					
	ø19.75-30.1	272.020.006					
Schaft / Shank / Corps d'acier	ø29.75-48.1	271.030.088	ø47.75-88.1	271.048.088			
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	253.030.006	ø47.75-88.1	253.048.006			
	ø 87.75 - 101.1	254.261.009					
Kühlmitteleinsatz / Coolant plug		918.000.032					
Bedienschlüssel / Service keys / Clôs de service	SW2.5/4/5/8/T7/ T15						
Kunststoffkoffer / Plastic case / Coffret							

521

**DIGITAL**

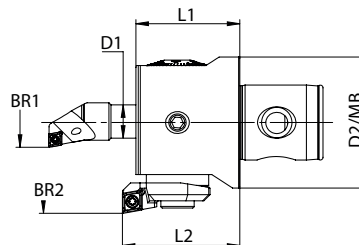
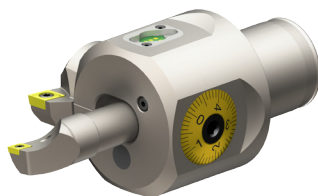
Feinbohr-Set Ø 9.75-101(152)mm

**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/MB	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>								
521.550.101	MB5	3 - 88.1	87.75 - 152.1	50	57	16	1.5	266.550.152

**bestehend aus / consisting on / comprenant**

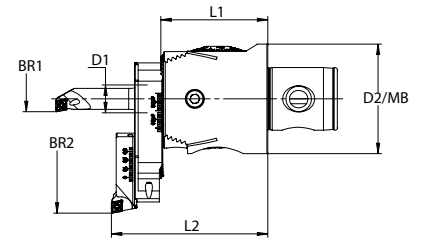
Ausdrehstäbe / Boring bars / Barres d'alésage	ø9.75-20.1	272.010.006					
	ø19.75-30.1	272.020.006					
Schaft / Shank / Corps d'acier	ø29.75-48.1	271.030.088	ø47.75-88.1	271.048.088			
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	253.030.006	ø47.75-88.1	253.048.006			
	ø 87.75 - 101.1	254.261.009					
Kühlmitteleinsatz / Coolant plug		918.000.032					
Bedienschlüssel / Service keys / Clôs de service	SW2.5/4/5/8/T7/ T15						
Kunststoffkoffer / Plastic case / Coffret							
Anzeigeeinheit / Display unit / Unité d'affichage							266.028.077

530

Feinbohr-Set Ø 9.75-164(320)mm

Fine boring set Ø 9.75-164(320)mm

Jeu d'outils Ø 9.75-164(320)mm



Bestell-Nr. / Order number / Code	MB CSMS	D2	BR1 min.- max.	BR2 min.- max.	L1	L2	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>									
530.000.164	MB5	63	3 - 88.1	86 - 320	66	96	16	1.2	261.550.065
<b>DIN 69893 HSK 63 A</b>									
530.063.164	HSK 63 A	63	3 - 88.1	86 - 320	96	125	16	2.0	261.063.095
<b>DIN 69871 AD 40</b>									
530.415.164	ISO 40	63	3 - 88.1	86 - 320	91	120	16	2.2	261.415.090
<b>MAS BT 40</b>									
530.412.164	BT40	63	3 - 88.1	86 - 320	91	120	16	2.2	261.412.090

**bestehend aus / consisting on / comprenant**

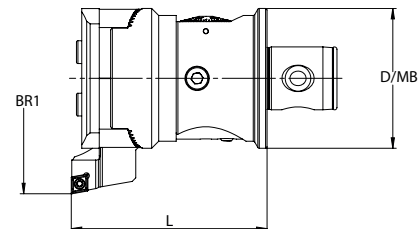
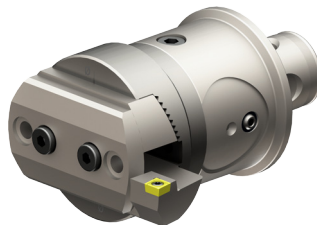
Ausdrehstähle / Boring bars / Barres d'alésage	ø9.75-15.1	272.010.006	ø14.75-20.1	272.015.006
	ø19.75-25.1	272.020.006	ø24.75-30.1	272.025.006
Schaft / Shank / Corps d'acier	ø29.75-48.1	271.030.088	ø47.75-88.1	271.048.088
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	253.030.006	ø47.75-88.1	253.048.006
Brücke / Bridge Traverse	ø80	886.086.164		
Bedien Schlüssel / Service keys / Clôs de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				

551

Feinbohr-Set Ø 86-302 mm

Fine boring set Ø 86-302 mm

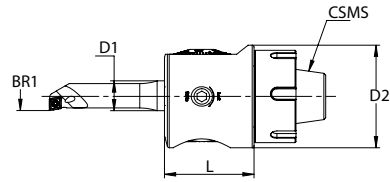
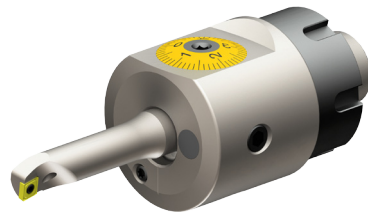
Jeu d'outils Ø 86-302 mm



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	MB	L	D	kg	Feinbohrkopf Fine boring head Tête d'alésage fin
<b>MBM modular</b>							
551.000.302	86	402	MB5	112	72	2.8	256.550.000

**bestehend aus / consisting on / comprenant**

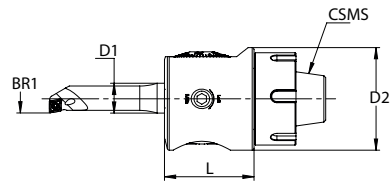
Wendeplattenhalter / Insert holder / Porte plaq.	ø86-138	190.550.109
	ø136-220	190.550.209
	ø188-302	190.550.309
Abstützung / Support block		885.190.109
		885.190.209
Druckplatte / Clamp plate		884190.109
		884190.209
Bedien Schlüssel / Service keys / Clôs de service	SW5 / T15	
Kunststoffkoffer / Plastic case / Coffret		



Bestell-Nr. / Order number/ Code	CSMS	D2	BR1 min.	BR1 max.	L	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin	<b>ECO LINE</b>
<b>SMART ER32</b>									
528.032.030	ER32	55	3	88.1	60	16	1.0	262.032.060	

**bestehend aus / consisting on / comprenant**

Ausdrehstähe / Boring bars / Barres d'alésage	ø9.75-15.1	272.010.006
	ø14.75-20.1	272.015.006
	ø19.75-25.1	272.020.006
	ø24.75-30.1	272.025.006
Bedienschlüssel / Service keys / Clôs de service	SW5 / T7	
Kunststoffkoffer / Plastic case / Coffret		

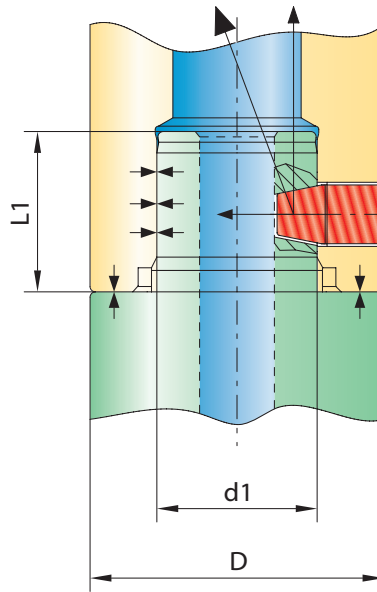


Bestell-Nr. / Order number/ Code	CSMS	D2	BR1 min.	BR1 max.	L	D1	kg	Feinbohrkopf Fine boring head Tête d'alésage fin	<b>ECO LINE</b>
<b>SMART ER32</b>									
528.032.088	ER32	55	3	88.1	60	16	1.0	262.032.060	

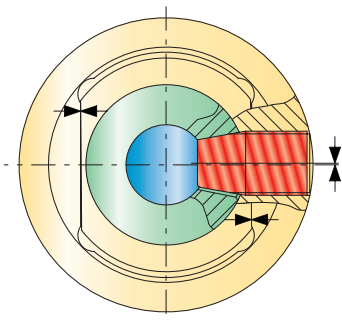
**bestehend aus / consisting on / comprenant**

Ausdrehstähe / Boring bars / Barres d'alésage	ø9.75-15.1	272.010.006	ø14.75-20.1	272.015.006
	ø19.75-25.1	272.020.006	ø24.75-30.1	272.025.006
Schaft / Shank / Corps d'acier	ø29.75-48.1	271.030.088	ø47.75-88.1	271.048.088
Wendeplattenhalter / Insert holder / Porte plaq.	ø29.75-48.1	253.030.006	ø47.75-88.1	253.048.006
Bedienschlüssel / Service keys / Clôs de service	SW4 / SW5 / T7			
Kunststoffkoffer / Plastic case / Coffret				

Grosse Steifigkeit dank hoher Vorspannkräfte und grosser Auflageflächen. Höchste Drehmomentübertragung ohne Beeinträchtigung der Austauschbarkeit. Bohrung für Kühlmitteldurchgang.



Maximum rigidity due to high preloading forces and large bearing surfaces. Maximum torque transmission without loss of interchangeability or ease of maintenance. Bored for spindle coolant supply.

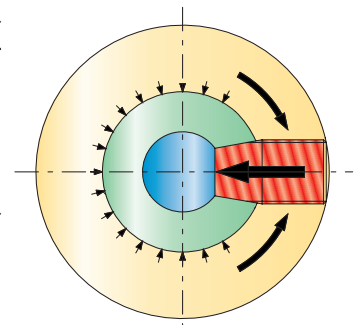


Symmetrisch angeordnete Mitnahmeflächen gewährleisten die konzentrische Übertragung von hohen Drehmomenten.

Symmetrical distribution of the torque forces through uniformly arranged driving surfaces.

Vibrationsarm, da das ohnehin kleine Passungsspiel mit dem Spannen der Verbindung aufgehoben wird.

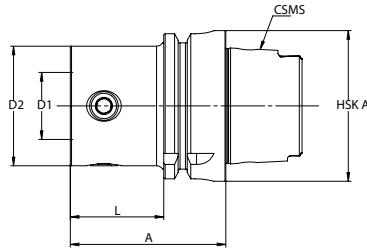
Minimal operating vibrations since the small fitting play is eliminated through the locking forces.




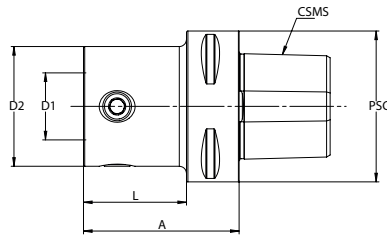
Dimensionen


Dimensions

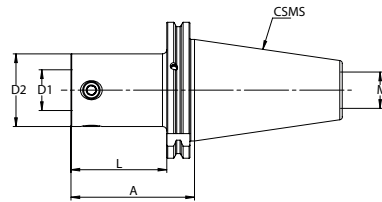
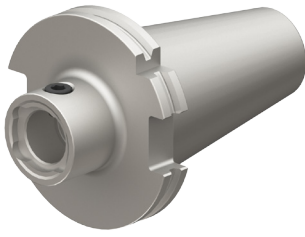
System ø D	d1	L	M	SW / AF	Anzugsdrehmoment / Torque
20 MB1	11	11	M5x0.5	2.5	2.5Nm
25 MB2	14	14	M6x0.75	3	4.5Nm
32 MB3	18	18	M8x1	4	10Nm
42 MB4	24	24	M12x1	6	25Nm
55 MB5	30	30	M12x1	6	30Nm
72 MB7	40	40	M16x1.5	8	40Nm
94 MB8	50	50	M20x1.5	10	60Nm




Bestell-Nr. / Order number / Code	CSMS HSK A	MB	D2	D1	A	L	kg	
102.032.251	32	MB2	25	14	35	15	0.2	800.000.250 (4.5 Nm)
102.032.321	32	MB3	32	18	50	30	0.2	800.000.320 (10 Nm)
102.040.421	40	MB4	42	24	55	35	0.4	800.000.420 (25 Nm)
102.050.551	50	MB5	55	30	66	40	0.8	800.000.550 (30 Nm)
102.063.201	63	MB1	20	11	50	24	0.7	800.000.200 (2.5 Nm)
102.063.251	63	MB2	25	14	50	24	0.7	800.000.250 (4.5 Nm)
102.063.321	63	MB3	32	18	50	24	0.7	800.000.320 (10 Nm)
102.063.421	63	MB4	42	24	50	24	0.8	800.000.420 (25 Nm)
102.063.551	63	MB5	55	30	66	40	1.1	800.000.550 (30 Nm)
102.063.552	63	MB5	55	30	100	74	1.8	800.000.550 (30 Nm)
102.063.721	63	MB7	72	40	76	50	1.5	800.000.720 (40 Nm)
102.063.941	63	MB9	94	50	105	79	3.2	800.000.940 (60 Nm)
102.080.321	80	MB3	32	18	51	25	1.2	800.000.320 (10 Nm)
102.080.421	80	MB4	42	24	56	30	1.3	800.000.420 (25 Nm)
102.080.551	80	MB5	55	30	66	40	1.6	800.000.550 (30 Nm)
102.080.721	80	MB7	72	40	76	50	2.1	800.000.720 (40 Nm)
102.080.941	80	MB9	94	50	82	56	2.8	800.000.940 (60 Nm)
102.100.321	100	MB3	32	18	51	22	2.1	800.000.320 (10 Nm)
HA0.MB3.040.133	100	MB3	40	18	133	104	3.3	800.000.320 (10 Nm)
HA0.MB3.040.148	100	MB3	40	18	148	119	3.4	800.000.320 (10 Nm)
102.100.421	100	MB4	42	24	56	27	2.2	800.000.420 (25 Nm)
102.100.551	100	MB5	55	30	66	37	2.5	800.000.550 (30 Nm)
102.100.721	100	MB7	72	40	76	47	3.0	800.000.720 (40 Nm)
102.100.941	100	MB9	94	80	86	57	4.0	800.000.940 (60 Nm)



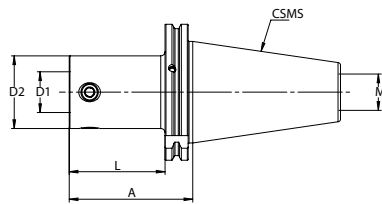
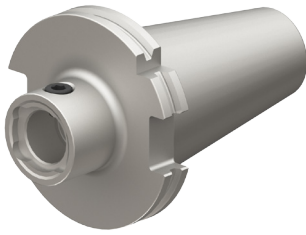
Bestell-Nr./ Order number/ Code	CSMS PSC	MB	D2	D1	A	L	kg	
102.163.201	63	MB1	20	11	50	28	0.8	800.000.200 (2.5 Nm)
102.163.251	63	MB2	25	14	50	28	0.8	800.000.250 (4.5 Nm)
102.163.321	63	MB3	32	18	50	28	0.9	800.000.320 (10 Nm)
102.163.421	63	MB4	42	24	50	28	0.9	800.000.420 (25 Nm)
102.163.551	63	MB5	55	30	60	38	1.3	800.000.550 (30 Nm)
102.163.721	63	MB7	72	40	60	-	1.5	800.000.720 (40 Nm)
102.163.941	63	MB9	94	50	90	-	3.4	800.000.940 (60 Nm)




Bestell-Nr. / Order number/ Code	CSMS ISO	MB	D2	D1	A	L	M	kg	
102.315.201	30	MB1	20	11	39.1	20	M12	0.4	800.000.200 (2.5 Nm)
102.315.251	30	MB2	25	14	39.1	20	M12	0.5	800.000.250 (4.5 Nm)
102.315.321	30	MB3	32	18	39.1	20	M12	0.5	800.000.320 (10 Nm)
102.315.421	30	MB4	42	24	39.1	20	M12	0.5	800.000.420 (25 Nm)
102.315.551	30	MB5	55	30	39.1*	20	M12	0.6	800.000.550 (30 Nm)
102.415.201	40	MB1	20	11	34.1	15	M16	0.9	800.000.200 (2.5 Nm)
102.415.202	40	MB1	20	11	59.1	40	M16	0.9	800.000.200 (2.5 Nm)
102.415.251	40	MB2	25	14	44.1	25	M16	0.9	800.000.250 (4.5 Nm)
102.415.252	40	MB2	25	14	74.1	55	M16	1.0	800.000.250 (4.5 Nm)
102.415.321	40	MB3	32	18	44.1	25	M16	0.9	800.000.320 (10 Nm)
102.415.322	40	MB3	32	18	84.1	65	M16	1.1	800.000.320 (10 Nm)
102.415.421	40	MB4	42	24	49.1	30	M16	1.0	800.000.420 (25 Nm)
102.415.422	40	MB4	42	24	99.1	80	M16	1.6	800.000.420 (25 Nm)
102.415.551	40	MB5	55	30	59.1	40	M16	1.3	800.000.550 (30 Nm)
102.415.552	40	MB5	55	30	119.1	100	M16	2.4	800.000.550 (30 Nm)
102.415.721	40	MB7	72	40	79.1	60	M16	2.0	800.000.720 (40 Nm)
102.415.941	40	MB9	94	50	79.1*	60	M16	3.3	800.000.940 (60 Nm)
102.515.201	50	MB1	20	11	34.1	15	M24	2.8	800.000.200 (2.5 Nm)
102.515.202	50	MB1	20	11	59.1	40	M24	2.8	800.000.200 (2.5 Nm)
102.515.251	50	MB2	25	14	44.1	25	M24	2.8	800.000.250 (4.5 Nm)
102.515.252	50	MB2	25	14	74.1	55	M24	2.9	800.000.250 (4.5 Nm)
102.515.321	50	MB3	32	18	44.1	25	M24	2.8	800.000.320 (10 Nm)
102.515.322	50	MB3	32	18	84.1	65	M24	3.0	800.000.320 (10 Nm)
102.515.421	50	MB4	42	24	49.1	30	M24	2.9	800.000.420 (25 Nm)
102.515.422	50	MB4	42	24	99.1	80	M24	3.5	800.000.420 (25 Nm)
102.515.551	50	MB5	55	30	59.1	40	M24	3.1	800.000.550 (30 Nm)
102.515.552	50	MB5	55	30	119.1	100	M24	4.3	800.000.550 (30 Nm)
102.515.721	50	MB7	72	40	79.1	60	M24	3.5	800.000.720 (40 Nm)
102.515.722	50	MB7	72	40	139.1	120	M24	5.9	800.000.720 (40 Nm)
102.515.941	50	MB9	94	50	79.1	60	M24	4.4	800.000.940 (60 Nm)
102.515.942	50	MB9	94	50	169.1	150	M24	9.2	800.000.940 (60 Nm)

\* Entspricht nicht DIN 69871, keine Freistellung nach dem Bund

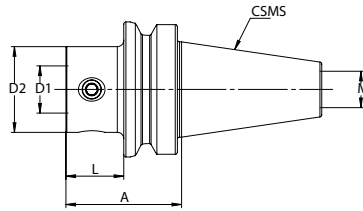
\* Not according to DIN 69871, without groove




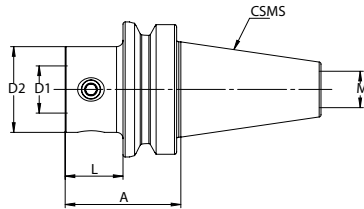
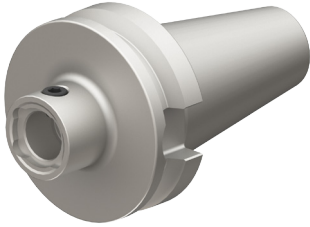
Bestell-Nr. / Order number/ Code	CSMS ISO	MB	D2	D1	A	L	M	kg	
102.325.201	30	MB1	20	11	39.1	20	M12	0.4	800.000.200 (2.5 Nm)
102.325.251	30	MB2	25	14	39.1	20	M12	0.5	800.000.250 (4.5 Nm)
102.325.321	30	MB3	32	18	39.1	20	M12	0.5	800.000.320 (10 Nm)
102.325.421	30	MB4	42	24	39.1	20	M12	0.5	800.000.420 (25 Nm)
102.325.551	30	MB5	55	30	39.1*	20	M12	0.6	800.000.550 (30 Nm)
102.425.201	40	MB1	20	11	34.1	15	M16	0.9	800.000.200 (2.5 Nm)
102.425.202	40	MB1	20	11	59.1	40	M16	0.9	800.000.200 (2.5 Nm)
102.425.251	40	MB2	25	14	44.1	25	M16	0.9	800.000.250 (4.5 Nm)
102.425.252	40	MB2	25	14	74.1	55	M16	1.0	800.000.250 (4.5 Nm)
102.425.321	40	MB3	32	18	44.1	25	M16	0.9	800.000.320 (10 Nm)
102.425.322	40	MB3	32	18	84.1	65	M16	1.1	800.000.320 (10 Nm)
102.425.421	40	MB4	42	24	49.1	30	M16	1.0	800.000.420 (25 Nm)
102.425.422	40	MB4	42	24	99.1	80	M16	1.6	800.000.420 (25 Nm)
102.425.551	40	MB5	55	30	59.1	40	M16	1.3	800.000.550 (30 Nm)
102.425.552	40	MB5	55	30	119.1	100	M16	2.4	800.000.550 (30 Nm)
102.425.721	40	MB7	72	40	79.1	60	M16	2.0	800.000.720 (40 Nm)
102.425.941	40	MB9	94	50	79.1*	60	M16	3.3	800.000.940 (60 Nm)
102.525.201	50	MB1	20	11	34.1	15	M24	2.8	800.000.200 (2.5 Nm)
102.525.202	50	MB1	20	11	59.1	40	M24	2.8	800.000.200 (2.5 Nm)
102.525.251	50	MB2	25	14	44.1	25	M24	2.8	800.000.250 (4.5 Nm)
102.525.252	50	MB2	25	14	74.1	55	M24	2.9	800.000.250 (4.5 Nm)
102.525.321	50	MB3	32	18	44.1	25	M24	2.8	800.000.320 (10 Nm)
102.525.322	50	MB3	32	18	84.1	65	M24	3.0	800.000.320 (10 Nm)
102.525.421	50	MB4	42	24	49.1	30	M24	2.9	800.000.420 (25 Nm)
102.525.422	50	MB4	42	24	99.1	80	M24	3.5	800.000.420 (25 Nm)
102.525.551	50	MB5	55	30	59.1	40	M24	3.1	800.000.550 (30 Nm)
102.525.552	50	MB5	55	30	119.1	100	M24	4.3	800.000.550 (30 Nm)
102.525.721	50	MB7	72	40	79.1	60	M24	3.5	800.000.720 (40 Nm)
102.525.722	50	MB7	72	40	139.1	120	M24	5.9	800.000.720 (40 Nm)
102.525.941	50	MB9	94	50	79.1	60	M24	4.4	800.000.940 (60 Nm)
102.525.942	50	MB9	94	50	169.1	150	M24	9.2	800.000.940 (60 Nm)


\* Entspricht nicht DIN 69871, keine Freistellung nach dem Bund

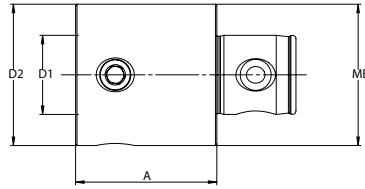
\* Not according to DIN 69871, without groove




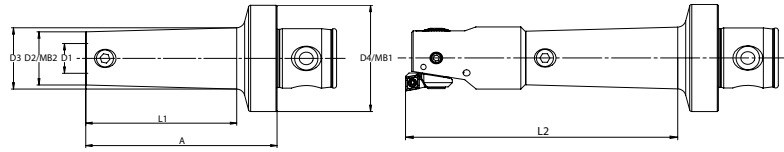
Bestell-Nr. / Order number / Code	CSMS ISO	MB	D2	D1	A	L	M	kg	
102.312.201	30	MB1	20	11	42	20	M12	0.4	800.000.200 (2.5 Nm)
102.312.251	30	MB2	25	14	42	20	M12	0.4	800.000.250 (4.5 Nm)
102.312.321	30	MB3	32	18	42	20	M12	0.5	800.000.320 (10 Nm)
102.312.421	30	MB4	42	24	42	20	M12	0.5	800.000.420 (25 Nm)
102.312.551	30	MB5	55	30	42	20	M12	0.5	800.000.550 (30 Nm)
102.412.201	40	MB1	20	11	42	15	M16	1.0	800.000.200 (2.5 Nm)
102.412.202	40	MB1	20	11	67	40	M16	1.0	800.000.200 (2.5 Nm)
102.412.251	40	MB2	25	14	52	25	M16	1.0	800.000.250 (4.5 Nm)
102.412.252	40	MB2	25	14	82	55	M16	1.1	800.000.250 (4.5 Nm)
102.412.321	40	MB3	32	18	52	25	M16	1.1	800.000.320 (10 Nm)
102.412.322	40	MB3	32	18	92	65	M16	1.3	800.000.320 (10 Nm)
102.412.421	40	MB4	42	24	57	30	M16	1.2	800.000.420 (25 Nm)
102.412.422	40	MB4	42	24	107	80	M16	1.7	800.000.420 (25 Nm)
102.412.551	40	MB5	55	30	67	40	M16	1.5	800.000.550 (30 Nm)
102.412.552	40	MB5	55	30	127	100	M16	2.6	800.000.550 (30 Nm)
102.412.721	40	MB7	72	40	87	60	M16	2.4	800.000.720 (40 Nm)
102.412.941	40	MB9	94	50	87	60	M16	3.2	800.000.940 (60 Nm)
102.512.201	50	MB1	20	11	53	15	M24	3.7	800.000.200 (2.5 Nm)
102.512.202	50	MB1	20	11	78	40	M24	3.7	800.000.200 (2.5 Nm)
102.512.251	50	MB2	25	14	63	25	M24	3.7	800.000.250 (4.5 Nm)
102.512.252	50	MB2	25	14	93	55	M24	3.8	800.000.250 (4.5 Nm)
102.512.321	50	MB3	32	18	63	25	M24	3.8	800.000.320 (10 Nm)
102.512.322	50	MB3	32	18	103	65	M24	4.0	800.000.320 (10 Nm)
102.512.421	50	MB4	42	24	68	30	M24	3.9	800.000.420 (25 Nm)
102.512.422	50	MB4	42	24	118	80	M24	4.4	800.000.420 (25 Nm)
102.512.551	50	MB5	55	30	78	40	M24	4.2	800.000.550 (30 Nm)
102.512.552	50	MB5	55	30	138	100	M24	5.3	800.000.550 (30 Nm)
102.512.721	50	MB7	72	40	98	60	M24	5.1	800.000.720 (40 Nm)
102.512.722	50	MB7	72	40	158	120	M24	7.0	800.000.720 (40 Nm)
102.512.941	50	MB9	94	50	98	60	M24	6.0	800.000.940 (60 Nm)
102.512.942	50	MB9	94	50	188	150	M24	10.9	800.000.940 (60 Nm)




Bestell-Nr. / Order number / Code	CSMS BT	MB	D2	D1	A	L	M	kg	
102.400.201	40	MB1	20	11	26.6	15	M16	0.8	800.000.200 (2.5 Nm)
102.400.202	40	MB1	20	11	51.6	40	M16	0.9	800.000.200 (2.5 Nm)
102.400.251	40	MB2	25	14	36.6	25	M16	0.9	800.000.250 (12 Nm)
102.400.252	40	MB2	25	14	66.6	55	M16	0.9	800.000.250 (12 Nm)
102.400.321	40	MB3	32	18	36.6	25	M16	0.9	800.000.320 (12 Nm)
102.400.322	40	MB3	32	18	76.6	65	M16	1.1	800.000.320 (12 Nm)
102.400.421	40	MB4	42	24	41.6	30	M16	1.0	800.000.420 (22 Nm)
102.400.422	40	MB4	42	24	91.6	80	M16	1.5	800.000.420 (22 Nm)
102.400.551	40	MB5	55	30	51.6	40	M16	1.2	800.000.550 (25 Nm)
102.400.552	40	MB5	55	30	111.6	100	M16	2.3	800.000.550 (25 Nm)
102.400.721	40	MB7	72	40	71.6	60	M16	2.1	800.000.720 (60 Nm)
102.400.722	40	MB7	72	40	131.6	120	M16	4.0	800.000.720 (60 Nm)
102.500.201	50	MB1	20	11	30.2	15	M16	2.6	800.000.200 (2.5 Nm)
102.500.202	50	MB1	20	14	55.2	40	M24	2.6	800.000.200 (2.5 Nm)
102.500.251	50	MB2	25	14	40.2	25	M24	2.6	800.000.320 (12 Nm)
102.500.321	50	MB3	32	18	40.2	25	M24	2.7	800.000.320 (12 Nm)
102.500.421	50	MB4	42	24	45.2	30	M24	2.8	800.000.420 (22 Nm)
102.500.422	50	MB4	42	24	95.2	80	M24	3.3	800.000.420 (22 Nm)
102.500.551	50	MB5	55	30	55.2	40	M24	3.1	800.000.550 (25 Nm)
102.500.552	50	MB5	55	30	115.2	100	M24	4.2	800.000.550 (25 Nm)
102.500.721	50	MB7	72	40	75.2	60	M24	4.0	800.000.720 (60 Nm)
102.500.722	50	MB7	72	40	135.2	120	M24	5.9	800.000.720 (60 Nm)
102.500.942	50	MB9	94	50	165.2	150	M24	9.7	800.000.940 (60 Nm)



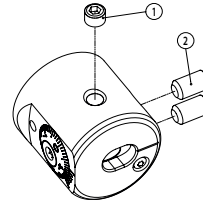
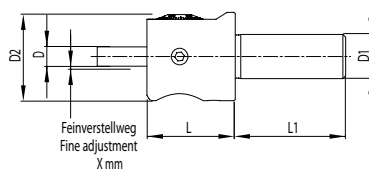
Bestell-Nr. / Order number/ Code	MB	D2	D1	A	kg	
132.200.001	MB1	20	11	25	0.1	800.000.200 (2.5 Nm)
132.200.002	MB1	20	11	35	0.1	800.000.200 (2.5 Nm)
132.250.001	MB2	25	14	30	0.1	800.000.250 (12 Nm)
132.250.002	MB2	25	14	45	0.2	800.000.250 (12 Nm)
132.320.001	MB3	32	18	40	0.2	800.000.320 (12 Nm)
132.320.002	MB3	32	18	60	0.3	800.000.320 (12 Nm)
132.420.001	MB4	42	24	50	0.5	800.000.420 (22 Nm)
132.420.002	MB4	42	24	80	0.8	800.000.420 (22 Nm)
132.550.001	MB5	55	30	70	1.2	800.000.550 (25 Nm)
132.550.002	MB5	55	30	105	1.9	800.000.550 (25 Nm)
132.720.001	MB7	72	40	75	2.3	800.000.720 (60 Nm)
132.720.002	MB7	72	40	135	4.2	800.000.720 (60 Nm)
132.940.001	MB9	94	50	100	5.3	800.000.940 (60 Nm)
132.940.002	MB9	94	50	180	9.6	800.000.940 (60 Nm)



Bestell-Nr. / Order number / Code	MB1	D4	MB2	D2	D3	A	L1	L2	kg	
122.250.201	MB2	25	MB1	20	20	30	15	54	0.1	800.000.200 (2.5 Nm)
122.320.201	MB3	32	MB1	20	20	30	15	54	0.1	800.000.200 (2.5 Nm)
122.320.251	MB3	32	MB2	25	25	40	25	74	0.2	800.000.250 (12 Nm)
122.420.201	MB4	42	MB1	20	20	35	15	54	0.3	800.000.200 (2.5 Nm)
122.420.251	MB4	42	MB2	25	25	40	25	74	0.3	800.000.250 (12 Nm)
122.420.321	MB4	42	MB3	32	32	45	25	89	0.4	800.000.320 (12 Nm)
122.550.201	MB5	55	MB1	20	20	40	15	54	0.6	800.000.200 (2.5 Nm)
124.550.206	MB5	55	MB1	20	23.8	95	80	116	0.7	800.000.200 (2.5 Nm)
124.550.208	MB5	55	MB1	20	23.8	135	120	156	0.8	800.000.200 (2.5 Nm)
122.550.251	MB5	55	MB2	25	25	50	25	74	0.7	800.000.250 (12 Nm)
124.550.256	MB5	55	MB2	25	30.8	115	100	146	0.9	800.000.250 (12 Nm)
124.550.258	MB5	55	MB2	25	30.8	165	150	196	1.1	800.000.250 (12 Nm)
122.550.321	MB5	55	MB3	32	32	50	25	89	0.7	800.000.320 (12 Nm)
124.550.326	MB5	55	MB3	32	39.8	142	127	188	1.4	800.000.320 (12 Nm)
124.550.328	MB5	55	MB3	32	39.8	206	191	252	1.8	800.000.320 (12 Nm)
122.550.421	MB5	55	MB4	42	42	55	30	119	0.8	800.000.420 (22 Nm)
124.550.426	MB5	55	MB4	42	49.8	177	162	248	2.4	800.000.420 (22 Nm)
124.550.428	MB5	55	MB4	42	49.8	261	246	332	3.4	800.000.420 (22 Nm)
122.720.251	MB7	72	MB2	25	25	55	25	74	1.4	800.000.250 (12 Nm)
122.720.321	MB7	72	MB3	32	32	55	25	89	1.5	800.000.320 (12 Nm)
122.720.421	MB7	72	MB4	42	42	60	30	119	1.6	800.000.420 (22 Nm)
122.720.551	MB7	72	MB5	55	55	60	30	144	1.7	800.000.550 (25 Nm)
122.940.321	MB9	94	MB3	32	32	60	25	89	2.8	800.000.320 (12 Nm)
122.940.421	MB9	94	MB4	42	42	65	30	119	2.9	800.000.420 (22 Nm)
122.940.551	MB9	94	MB5	55	55	65	30	144	3.0	800.000.550 (25 Nm)
122.940.721	MB9	94	MB7	72	72	80	45	144	3.6	800.000.720 (60 Nm)

• Länge L2 bezeichnet die maximale Ausdrehtiefe mit Zweischnieder- oder Feinbohrkopf

• length L2 stands for the maximal boring depth with twin cutter or fine boring head



Bestell-Nr. /  
Order number/  
Code

D

D1

D2

X

L

L1

kg

1

2

262.025.025

4

10

25

1.5

25

25

0.1

881.262.250

882.262.250

262.032.032

7

16

32

2.5

32

40

0.2

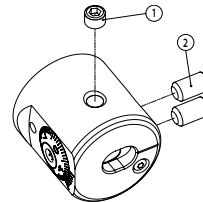
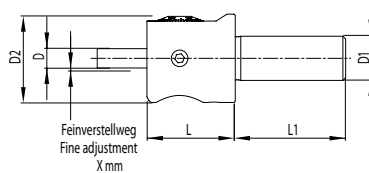
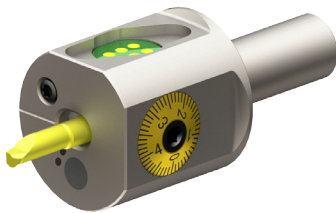
881.262.320

882.262.320

- 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



Bestell-Nr. /  
Order number/  
Code

D

D1

D2

X

L

L1

kg

1

2

263.025.025

4

10

25

1.5

25

25

0.1

881.262.250

882.262.250

263.032.032

7

16

32

2.5

32

40

0.2

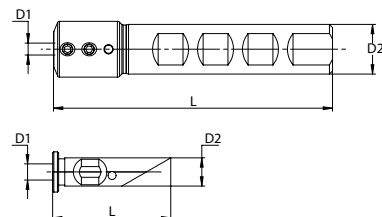
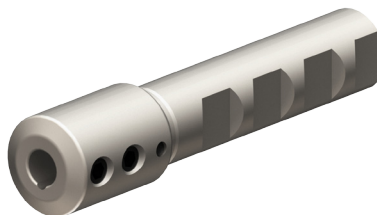
881.262.320

882.262.320

- 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 (266.028.077)

- 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 (266.028.077)

- 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 (266.028.077)



Bestell-Nr. /  
Order number/  
Code

D2

D1

L

kg

265.007.004

7

4

(30)

0.1

268.016.004

16

4

90

0.2

ISO4026-M4x6

268.016.007

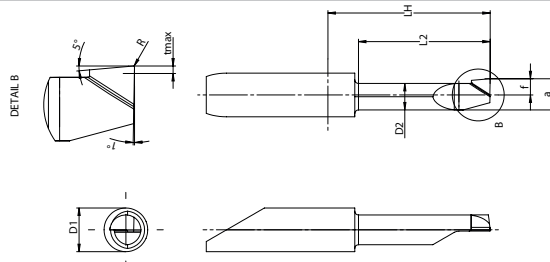
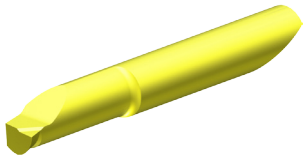
16

7

90

0.2

ISO4026-M6x6

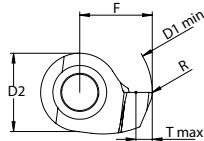
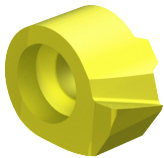


Bestell-Nr. / Order number/ Code	D1	L2	Ød min	Ød max	R	a	D2	f	LH	t max	kg
273.004.003	4.0	1.2	0.3	0.7	-	0.25	0.15	0.15	11.0	0.03	0.05
273.004.006	4.0	2.5	0.6	1.1	-	0.55	0.46	0.30	11.0	0.05	0.05
273.004.010	4.0	4.0	1.0	2.3	0.05	0.95	0.65	0.50	11.0	0.1	0.05
273.004.022	4.0	6.0	2.2	3.3	0.05	2.00	1.55	1.10	11.0	0.2	0.05
273.004.032	4.0	10.2	3.2	4.3	0.05	3.00	2.55	1.60	11.0	0.2	0.05
273.004.039	4.0	15.2	3.9	(7.1)	0.05	3.70	3.45	1.95	16.0	0.3	0.05
273.007.052	7.0	20.3	5.2	6.3	0.05	5.00	4.25	2.60	21.0	0.5	0.05
273.007.062	7.0	20.3	6.2	7.3	0.05	6.00	5.25	3.10	21.0	0.5	0.05
273.007.069	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

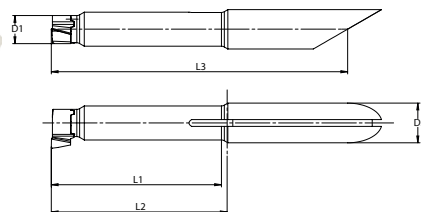
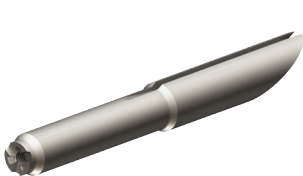



Bestell-Nr. / Order number/ Code	ØD1 min	ØD1 max	R	F	D2	tmax	Code	kg
277.007.069	6.9	8.1	0.2	3.45	4.8	1.0	D07	0.05
277.007.079	7.9	9.1	0.2	3.95	4.8	1.0	D07	0.05
277.007.089	8.9	10.1	0.2	4.45	4.8	1.0	D07	0.05
277.010.099	9.9	12.1	0.2	4.95	7	1.0	D10	0.05
277.010.119	11.9	14.1	0.2	5.95	7	1.0	D10	0.05
277.010.139	13.9	19.1	0.2	6.95	7	1.0	D10	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



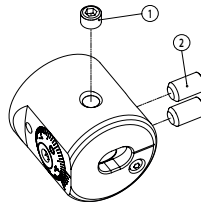
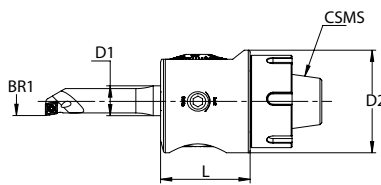
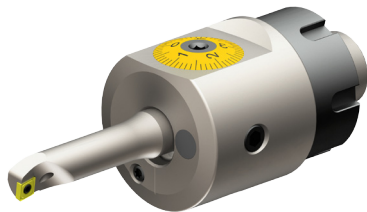
Bestell-Nr. / Order number/ Code	D2 h6	L1	D1	L3	L2	Torx	Code	kg	
276.007.007	7.0	30	4.8	56	31	T7	D07	0.1	M2x7.5 (1.0 Nm) (843.013.000)
276.007.010	7.0	35	7.0	61	36	T9	D10	0.1	M3x9.0 (3.0 Nm) (843.014.000)

## ECOLINE 262



### Ausdrehkopf ø 3-88.1

### Fine boring heads ø 3-88.1

### Tête d'alésage fin ø 3-88.1



**ECO LINE**

Bestell-Nr. / Order number/ Code	CSMS	D2	BR1 min.	BR1 max.	L	D1	kg		
<b>SMART ER32</b>									
262.032.060	ER32	55	3	88.1	60	16	1.0	881.262.551	882.262.551

- 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.

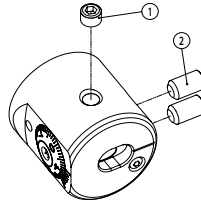
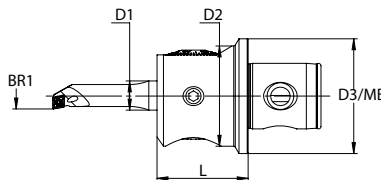
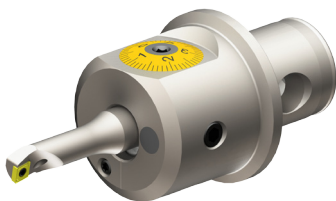
- connexion ER25 DIN 6499
- Passage libre des barres d'alésage à travers la tête
- Serrer l'outil dans un porte-pince



## B04/B08/KM

### 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	D3/MB System	D2	BR1 min.	BR1 max.	L (A)	D1	kg		
<b>MB modular ANALOG*</b>									
262.420.000	MB4	42	3	19.1	45	10	0.4	881.262.420	882.262.420
262.550.045	MB5	55	3	88.1	45	16	0.6	881.262.551	882.262.551
<b>DIN 69893 HSK 63 A</b>									
269.063.095	HSK 63 A	55	3	88.1	95	16	1.7	881.262.551	882.262.551
<b>DIN 69871 AD 40</b>									
269.415.090	ISO 40	55	3	88.1	90	16	2.1	881.262.551	882.262.551
<b>MAS BT 40</b>									
269.412.090	BT40	55	3	88.1	90	16	2.2	881.262.551	882.262.551
<b>KM / ISO 26622</b>									
KM4.A55.016.060	KM40	55	3	88.1	60	16	0.6	881.262.551	882.262.551
KM5.A55.016.070	KM50	55	3	88.1	70	16	1.1	881.262.551	882.262.551
<b>zyl. Schaft / zyl. Shank</b>									
U20.A55.K01.060	20	55	3	88.1	60	16	1.1	881.262.551	882.262.551
U25.A55.K01.060	25	55	3	88.1	60	16	1.1	881.262.551	882.262.551
W26.A55.016.060	25.4 (1.00")	55	3	88.1	60	16	1.1	881.262.551	882.262.551
W38.A55.016.060	38.1 (1.50")	55	3	88.1	60	16	1.4	881.262.551	882.262.551

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

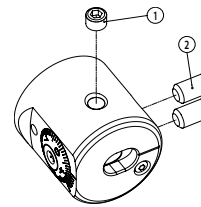
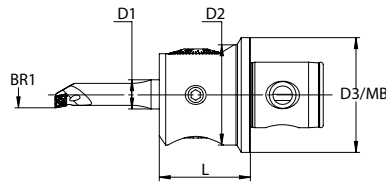
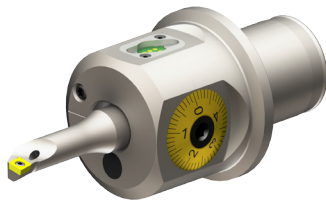
- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- \*boring bars go through head



- 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

266/PSC  
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		
<b>MB modular DIGITAL*</b>									
266.550.045	MB5	55	3	88.1	45	-	0.6	881.262.551	882.262.551
<b>DIN 69893 HSK 63 A</b>									
266.063.095	HSK 63 A	55	3	88.1	95	69	1.4	881.262.551	882.262.551
<b>DIN 69871 AD 40</b>									
266.415.090	ISO 40	55	3	88.1	90	70	1.9	881.262.551	882.262.551
<b>MAS BT 40</b>									
266.412.090	BT40	55	3	88.1	90	63	1.9	881.262.551	882.262.551
<b>PSC / ISO 26623 DIGITAL</b>									
PSC40-FBHO-DE-1665	PSC40	55	3	88.1	65	-	1.9	881.262.551	882.262.551
PSC50-FBHO-DE-1670	PSC50	55	3	88.1	70	-	1.9	881.262.551	882.262.551
PSC63-FBHO-DE-1690	PSC63	55	3	88.1	90	-	1.9	881.262.551	882.262.551
<b>KM / ISO 26622 DIGITAL</b>									
KM4.A55.016.060-D	KM40	55	3	88.1	60	16	0.6	881.262.551	882.262.551
KM5.A55.016.070-D	KM50	55	3	88.1	70	16	1.1	881.262.551	882.262.551

- 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 (266.028.077)

- 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 (266.028.077)

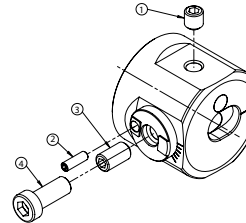
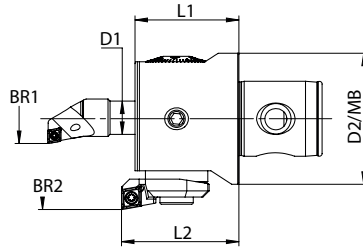
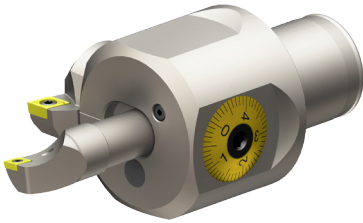
- Précision de réglage de 0,001 mm sur le diamètre
- système de mesure directe (sans jeu)
- pas de batterie ni de dispositif électronique d'évaluation installé dans l'outil
- fonctionnement très simple
- pour une utilisation numérique et analogique
- Avec arrosage interne
- \*Passage libre des barres d'alésage à travers la tête
- Unité d'affichage doit être commandé séparément (266.028.077)





## 267 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/MB	BR1 min. - max.	BR2 min. - max.	L1	L2	D1	kg				
267.550.152	MB5	3 - 88.1	87.75 - 152.1	50	57	16	1.5	881.267.012	881.267.014	881.267.018	880.267.025

- 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

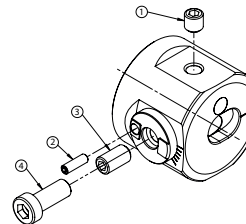
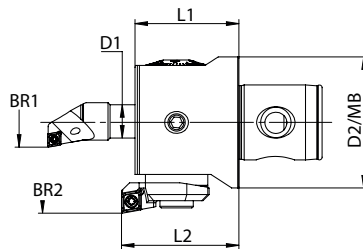
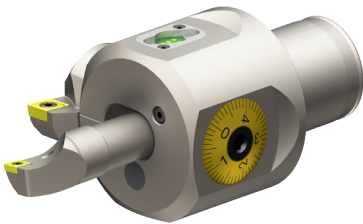
- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- Passage libre des barres d'alésage à travers la tête
- extensible de ø3 à ø152.1





## 266 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				
266.550.152	MB5	3 - 88.1	87.75 - 152.1	50	57	1.5	881.267.012	881.267.014	881.267.018	880.267.025

- 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 (266.028.077)

- 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 (266.028.077)

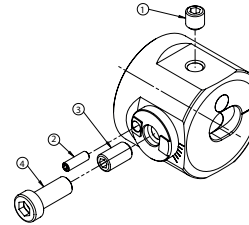
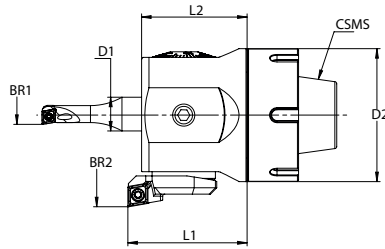
- pour barres d'alésage avec un diamètre de corps de 16mm
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,001mm
- Avec arrosage interne
- Passage libre des barres d'alésage à travers la tête
- extensible de ø3 à ø152.1
- Unité d'affichage doit être commandé séparément (266.028.077)





**ECOLINE B05 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				
<b>VARIO ER40</b>											
267.003.152	63 / ER40	3 - 88.1	87.75 - 152.1	51.1	57	16	1.5	881.267.012	881.267.014	881.267.018	880.267.025

- 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

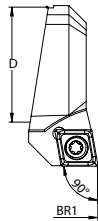
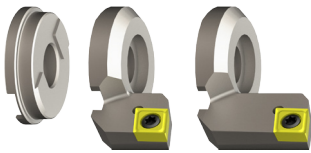
- connection ER32 DIN 6499
- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- boring bars go through head
- Clamp tool in a collet chuck.
- can be upgraded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



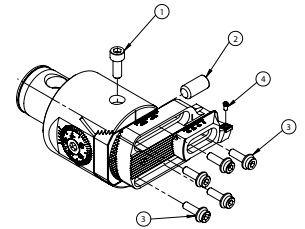
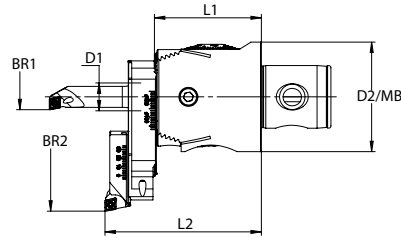
Bestell-Nr. / Order number / Code		BR1 min. - max.	kg	
Wendeplattenhalter / Insert holder / porte-plaquette				
254.261.009	CC.. 09 T3 ..	ø 87.75 - 101.1 (ø 114.1)*	0.1	843.009.000
254.262.009	CC.. 09 T3 ..	ø 105.75 - 119.0 (ø 132.0)*	0.1	843.009.000
254.263.009	CC.. 09 T3 ..	ø 125.75 - 139.0 (ø 152.0)*	0.1	843.009.000
Adapter		* mit Adapter * Adapter required * Espaceur requis		
889.000.006	f = 6.5mm	ø 114.0 / ø 132.0 / ø 152.0	0.1	




## 261 MULTI HEAD

### Ausdrehkopf ø 3-320

### Fine boring heads ø 3-320

### Tête d'alésage fin ø 3-320



Bestell-Nr. / Order number/ Code	MB CSMS	D2	BR1 min.- max.	BR2 min.- max.	L1	L2	D1	kg			
<b>MB6 modular*</b>											
261.550.065	MB5	63	3 - 88.1	86 - 320	66	96	16	1.0	881.261.016	881.261.020	883.261.016
<b>DIN 69893 HSK 63 A</b>											
261.063.095	HSK 63 A	63	3 - 88.1	86 - 320	96	125	16	2.0	881.261.016	881.261.020	883.261.016
<b>DIN 69871 AD 40</b>											
261.415.090	ISO 40	63	3 - 88.1	86 - 320	91	120	16	2.2	881.261.016	881.261.020	883.261.016
<b>MAS BT 40</b>											
261.412.090	BT40	63	3 - 88.1	86 - 320	91	120	16	2.2	881.261.016	881.261.020	883.261.016
<b>KM / ISO 26622</b>											
KM5.MH1.016.075	KM50TS	63	3 - 88.1	86 - 320	76	106	16	1.5	881.261.016	881.261.020	883.261.016

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

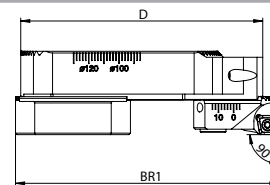
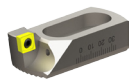
- for boring bars with a shank diameter of 16mm
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- \*boring bars go through head



- 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

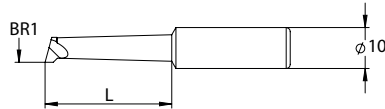
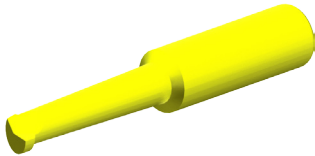


Bestell-Nr. / Order number/ Code	D	BR1 min.	BR1 max.	kg		
<b>Aluminium-Brücken / Aluminium bridges / Traverses d'aluminium</b>						
886.086.164	80	86	164	0.1	883.261.016	
886.162.320	158	162	320	0.2	883.261.016	
<b>Wendeplattenhalter / Insert holders / Porte-plaquettes</b>						
	Wendeplatte / Insert / Plaquette	ø A min.	ø A max.			
253.048.006	CC .. 06 02 ..	86	320	0.05	883.261.016	843.006.000
253.048.009	CC .. 09 T3 ..	86	320	0.05	883.261.016	843.009.000
<b>Gegengewicht / Counter weight / Contre-poids</b>						
886.038.045				0.1	883.261.016	

275  
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
275.003.010	3.0	8.0	20	K10	0.05
275.003.020	3.0	8.0	20	P20	0.05
275.004.010	4.0	9.0	23	K10	0.05
275.004.020	4.0	9.0	23	P20	0.05
275.005.010	5.0	10.0	25	K10	0.05
275.005.020	5.0	10.0	25	P20	0.05
275.006.010	6.0	11.0	28	K10	0.05
275.006.020	6.0	11.0	28	P20	0.05
275.007.010	7.0	12.0	31	K10	0.05
275.007.020	7.0	12.0	31	P20	0.05
275.009.010	9.0	14.0	34	K10	0.05
275.009.020	9.0	14.0	34	P20	0.05
275.010.010	10.0	15.0	37	K10	0.05
275.010.020	10.0	15.0	37	P20	0.05
275.012.010	12.0	17.0	40	K10	0.05
275.012.020	12.0	17.0	40	P20	0.05
275.014.010	14.0	19.0	43	K10	0.05
275.014.020	14.0	19.0	43	P20	0.05

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

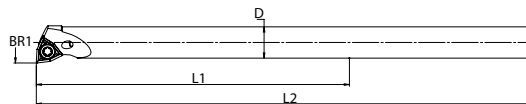
- carbide quality K10 for cast iron, aluminium etc.
- carbide quality P20 for steel, chrome nickel steel etc.


- 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



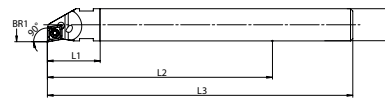
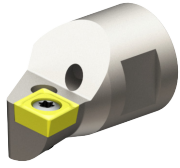
Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L	L1	Wendeplatte / Insert / Plaquette	kg	
274.006.002	5.8	11.2	5	50	85	WC..02 01 ..	0.1	843.005.000
274.008.002	7.8	13.2	6	60	95	WC..02 01 ..	0.1	843.005.000
274.010.006	9.8	15.0	8	80	120	CC..06 02 ..	0.1	842.006.000
274.014.006	13.8	19.0	10	100	140	CC..06 02 ..	0.1	843.006.000
274.018.009	17.8	23.0	12	120	170	CC..09 T3 ..	0.3	843.009.000
274.022.009	21.8	27.0	16	160	210	CC..09 T3 ..	0.5	843.009.000


- Länge L bezeichnet die maximale Ausdrehlänge

- length L stands for the maximal boring depth

- Longueur L désigne la profondeur maximum d'alésage

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Hartmetall Ausdrehstähle  
mit SchraubverbindungSolid carbide boring bars  
with thread connectionBarres d'alésage en  
carbure avec raccord à vis

Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L2 max.	L1	Wendeplatte / Insert / Plaquette	für Schaft / for shank / pour arbre	kg	
278.087.005	8.75	14.1	8	56	18	CC..06 02 ..	276.008.005	0.05	842.006.000
278.097.005	9.75	15.1	9	63	18	CC..06 02 ..	276.009.005	0.05	842.006.000
278.107.006	10.75	16.1	10	70	23	CC..06 02 ..	276.010.006	0.05	842.006.000
278.117.006	11.75	17.1	11	77	23	CC..06 02 ..	276.011.006	0.05	842.006.000
278.127.006	12.75	18.1	12	84	23	CC..06 02 ..	276.012.006	0.05	843.006.000
278.137.006	13.75	19.1	13	91	23	CC..06 02 ..	276.013.006	0.05	843.006.000
278.147.006	14.75	20.1	14	98	23	CC..06 02 ..	276.014.006	0.05	843.006.000
278.157.006	15.75	21.1	14	98	23	CC..06 02 ..	276.014.006	0.05	843.006.000
278.167.006	16.75	22.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.177.006	17.75	23.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.197.006	19.75	25.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.217.006	21.75	27.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.247.006	24.75	30.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.277.006	27.75	33.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.317.006	31.75	37.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000
278.347.006	34.75	40.1	16	112	27	CC..06 02 ..	276.016.010	0.05	843.006.000

- 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

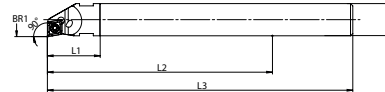
- pour l'alésage de longs trous
- très bonnes propriétés d'amortissement grâce au corps en carbure
- avec arrosage interne

276

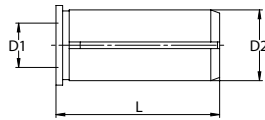
Hartmetallschaft

Solid carbide shank

Corps en carbure

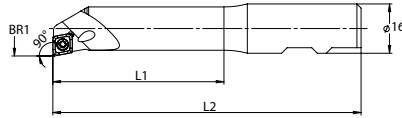
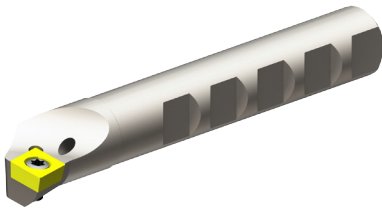



Bestell-Nr. / Order number/ Code	D	L3	M	für Kopf / for head / pour la tête	kg
276.008.005	8	91	M5	278.087.005	0.1
276.009.005	9	98	M5	278.097.005	0.1
276.010.006	10	105	M6	278.107.006	0.1
276.011.006	11	112	M6	278.117.006	0.1
276.012.006	12	119	M6	278.127.006	0.1
276.013.006	13	126	M6	278.137.006	0.2
276.014.006	14	133	M6	278.147.006 / 278.157.006	0.2
276.016.010	16	147	M10	278.167/177/197/217/247/277/317/347/ .006	0.3



Bestell-Nr. / Order number / Code	D2	D1	L	kg
265.010.004	10	4	29.5	0.1
265.010.005	10	5	29.5	0.1
265.010.006	10	6	29.5	0.1
265.010.008	10	8	29.5	0.1
265.016.004	16	4	37	0.1
265.016.005	16	5	37	0.1
265.016.006	16	6	37	0.1
265.016.008	16	8	37	0.1
265.016.009	16	9	37	0.1
265.016.010	16	10	37	0.1
265.016.011	16	11	37	0.1
265.016.012	16	12	37	0.1
265.016.013	16	13	37	0.1
265.016.014	16	14	37	0.1

272

Ausdrehstähle  $\varnothing 9.75-30.1$ Boring bars  $\varnothing 9.75-30.1$ Barres d'alésage  $\varnothing 9.75-30.1$ 

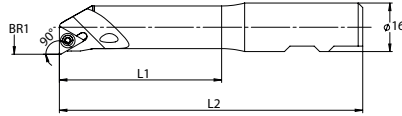
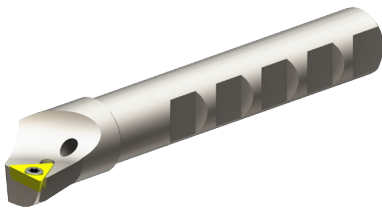
Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	L1 max.	L2	Wendeplatte / Insert / Plaquette	kg	
272.010.006	9.75	15.1	30	75	CC..06 02..	0.1	843.006.000
272.012.006	11.75	17.1	37	80	CC..06 02..	0.1	843.006.000
272.014.006	13.75	19.1	43	85	CC..06 02..	0.1	843.006.000
272.015.006	14.75	20.1	51	90	CC..06 02..	0.1	843.006.000
272.016.006	15.75	21.1	57	95	CC..06 02..	0.1	843.006.000
272.018.006	17.75	23.1	67	100	CC..06 02..	0.1	843.006.000
272.020.006	19.75	25.1	72	105	CC..06 02..	0.2	843.006.000
272.020.009	19.75	25.1	72	105	CC..09 T3..	0.2	843.009.000
272.022.009	21.75	27.1	77	110	CC..09 T3..	0.2	843.009.000
272.025.006	24.75	30.1	82	115	CC..06 02..	0.2	843.006.000
272.025.009	24.75	30.1	82	115	CC..09 T3..	0.2	843.009.000


• mit Innenkühlung

• with inner coolant supply

• avec arrosage interne

273

Ausdrehstähle  $\varnothing 9.75-30.1$ Boring bars  $\varnothing 9.75-30.1$ Barres d'alésage  $\varnothing 9.75-30.1$ 

Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	L1 max.	L2	Wendeplatte / Insert / Plaquette	kg	
273.010.T06	9.75	15.1	30	75	TB..06 01..	0.1	843.006.000
273.012.T06	11.75	17.1	37	80	TB..06 01..	0.1	843.006.000
273.014.T09	13.75	19.1	43	85	TP..09 02..	0.1	843.009.000
273.015.T09	14.75	20.1	51	90	TP..09 02..	0.1	843.009.000
273.016.T09	15.75	21.1	57	95	TP..09 02..	0.1	843.009.000
273.018.T09	17.75	23.1	67	100	TP..09 02..	0.1	843.009.000
273.020.T11	19.75	25.1	72	105	TP..11 03..	0.2	843.009.000
273.025.T11	24.75	30.1	82	115	TP..11 03..	0.2	843.009.000

• mit Innenkühlung

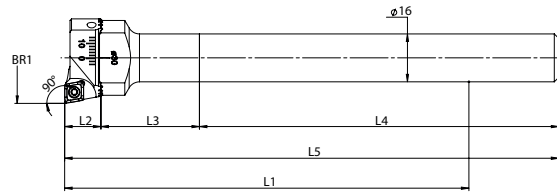
• with inner coolant supply

• avec arrosage interne

**276**  
Hartmetallschaft

Solid carbide shank

Corps en carbure



Bestell-Nr. / Order number / Code	D	L4	M	für Kopf / for head / pour la tête	kg
276.016.010	16	120	M10	271.130.033 271.148.031	0.3

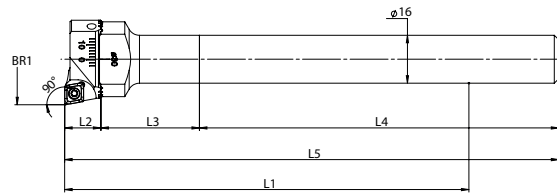
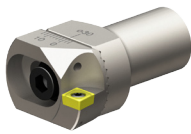
- sehr gute Dämpfungseigenschaften
- mit Innenkühlung
- high end absorbability
- with inner coolant supply
- très bonnes propriétés d'amortissement
- avec arrosage interne


**271**

Kopf

Head

Tête



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	L1	L5	L3	für Wendeplattenhalter / for insert holder / pour porte-inserts	kg	
271.130.033	29.75	48.1	135	165	33	253.030.006	0.1	883.261.016
271.148.031	47.75	88.1	135	165	31	253.048.xxx	0.1	883.261.016

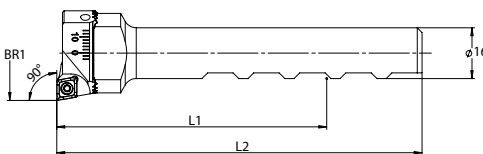
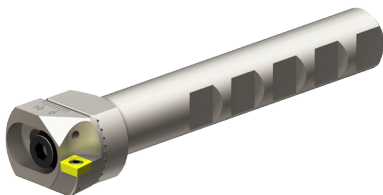
- mit Innenkühlung
- with inner coolant supply
- avec arrosage interne


**271**

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	
271.030.048	29.75	48.1	85	115	253.030.006	0.1	883.261.016
271.048.088	47.75	88.1	85	115	253.048.xxx	0.1	883.261.016

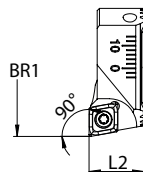
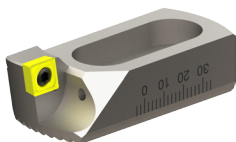
- mit Innenkühlung
- with inner coolant supply
- avec arrosage interne


**253**

Wendeplattenhalter

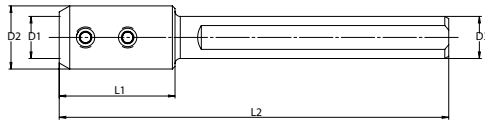
Insert holders


Porte -plaquettes

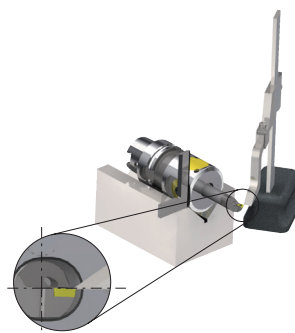
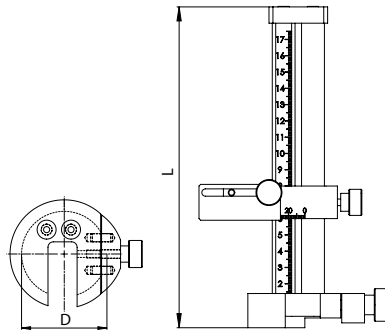
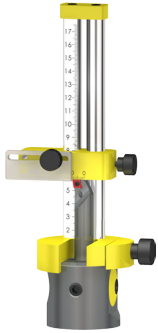


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	L2	Wendeplatte / Insert / Plaquette	kg	
253.030.006	29.75	48.1	12	CC .. 06 02 ..	0.05	843.006.000
253.048.006	47.75	88.1	14	CC .. 06 02 ..	0.05	843.006.000
253.048.009	47.75	88.1	14	CC .. 09 T3 ..	0.05	843.009.000

- 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



Bestell-Nr. / Order number/ Code	D3	D1	D2	L2	L1	kg	
268.016.010	16	10	16	128	–	0.2	855.268.006
268.016.016	16	16	24	148	44	0.2	855.268.008

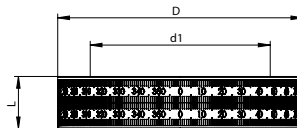



Bestell-Nr. / Order number/ Code	L	L1	für Ausdrehkopf / for fine boring head / pour têtes d'alésage fin	kg
260.055.197	55	197	262/266/269	0.9
260.163.207	63	207	261	0.9

- Orientierung der Werkzeugschneide
- Einstellung der Ausraglänge 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

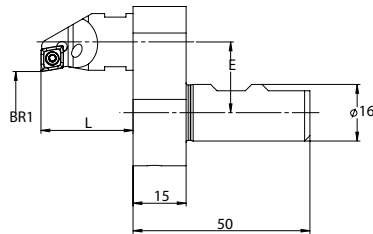
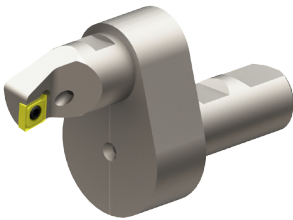



Bestell-Nr. / Order number/ Code	D	d1	L	kg	
264.550.100	75	55	16	0.2	857.550.000
264.630.100	84	63	16	0.2	857.550.000

- zum Auswuchten verstellbarer Werkzeuge,

- to balance adjustable tools

- pour l'équilibrage des outils réglables



Bestell-Nr. / Order number / Code	für Kopf / for head / pour la tête	BR1 min.	BR1 max.	E	L	Wendeplatte / Insert / Plaquette	kg	
279.020.010	278.347.006	5.3	10.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.317.006	8.3	13.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.277.006	12.3	17.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.247.006	15.3	20.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.217.006	18.3	23.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.197.006	20.3	25.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.177.006	22.3	27.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.020.010	278.167.006	23.3	28.6	20	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.347.006	25.3	30.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.317.006	28.3	33.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.277.006	32.3	37.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.247.006	35.3	40.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.217.006	38.3	43.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.197.006	40.3	45.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.177.006	42.3	47.6	30	27	CC .. 06 02 ..	0.2	814.279.001
279.030.010	278.167.006	43.3	48.6	30	27	CC .. 06 02 ..	0.2	814.279.001

- für die Verwendung in Ausdrehköpfen der Serien B04 bis B10
- mit Innenkühlung die maximale Überdrehlänge L kann mit der Verlängerung B86.016.016.032 oder B86.016.016.064 verlängert werden
- Überdrehhalter und Kopf müssen separat bestellt werden
- Achtung: Linkslauf

- for use in fine boring heads from series B04 to B10
- with inner coolant supply the maximal turning length L can be increased by extension B86.016.016.032 or B86.016.016.064
- pin turning adapter and head must be ordered separately
- Caution: anticlockwise rotation

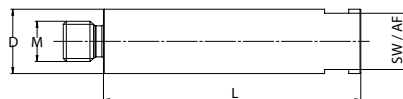
- pour utilisation dans les têtes d'alésage fin des séries B04 à B10
- La longueur maximale de tournage L peut être augmentée par l'extension B86.016.016.032 ou B86.016.016.064
- Support de tournage et tête doivent être commandés séparément
- Attention : rotation dans le sens contraire des aiguilles d'une montre

## 286

## Schaft-Verlängerungen

## Shank extensions

## Extensions de barres d'alésage

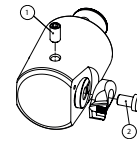
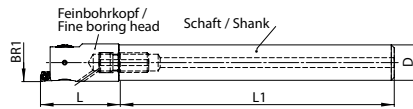




Bestell-Nr. / Order number / Code	D	L	M	SW / AF	kg
286.016.032	16	32	M10	14	0.05
286.016.064	16	64	M10	14	0.1

- 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

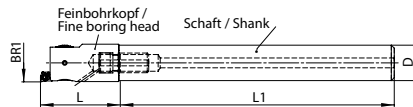


Bestell-Nr. / Order number/ Code	D	BR1 min.	BR1 max.	L	für Wendeplattenhalter / for insert holder / pour porte-inserts	Wendeplatte / Insert / Plaquette	kg		
280.140.000	14	14.7	17.1	40	282.005.002	WC .. 02 01 ..	0.1	881.280.140	882.280.140
280.160.000	16	16.7	20.1	40	282.005.002	WC .. 02 01 ..	0.1	881.280.160	882.280.160
280.190.000	18	19.7	24.1	40	282.005.002	WC .. 02 01 ..	0.1	881.280.190	882.280.190

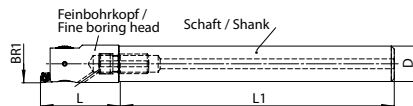
- Durchmessereinstellung mit geringstem Umkehrspiel
- Zustellgenauigkeit von 0.002mm über Nonius im Durchmesser
- mit Innenkühlung
- Feinbohrkopf, Schaft und Wendeplattenhalter müssen separat bestellt werden

- 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



Bestell-Nr. / Order number/ Code	D	L1	M	für Feinbohrkopf / for fine boring head / pour Têtes d'alsage fin	kg
276.014.006	14	110	M6	280.140.000	0.2
276.016.010	16	120	M10	280.160.000	0.3
276.018.010	18	100	M10	280.190.000	0.4
276.018.110	18	140	M10	280.190.000	0.5



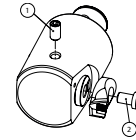
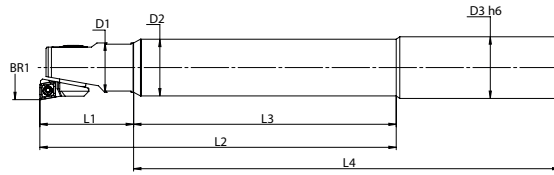
Bestell-Nr. / Order number/ Code	D	L1	M	für Feinbohrkopf / for fine boring head / pour Têtes d'alsage fin	kg
288.014.060	14	60	M6	280.140.000	0.1
288.016.070	16	70	M10	280.160.000	0.1
288.018.080	18	80	M10	280.190.000	0.2




## 280/281

### Feinbohrköpfe zum Einschrauben

### Fine boring heads with thread connection

### Têtes d'alésage fin avec connexion fileté



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D1	L1	für Wendeplattenhalter / for insert holder / pour porte-inserts	kg			
280/281.020.041	23.9 29.9	31.1 37.1	22.5	41	254.200.006 254.201.006	0.1	881.252.200	880.252.200	843.006.000
280/281.025.045	30.9 37.9	40.1 47.1	29	45	254.250.006 254.251.006	0.1	881.252.250	880.252.250	843.006.000
280/281.032.051	39.9 47.9	51.1 59.1	37	51	254.320.006 254.321.006	0.2	881.252.320	880.252.320	843.006.000

- Typ 280 (analog) Zustellgenauigkeit von 0.002mm über Nonius im Durchmesser
- Typ 281 (digital) Einstellgenauigkeit 0.001mm im Durchmesser direktes Wegmeßsystem (kein Umkehrspiel)
- mit Innenkühlung
- Feinbohrkopf, Schaft und Wendeplattenhalter müssen separat bestellt werden

- Type 280 (analog) 0.002mm diametrical adjustment by nonius
- Type 281 (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**

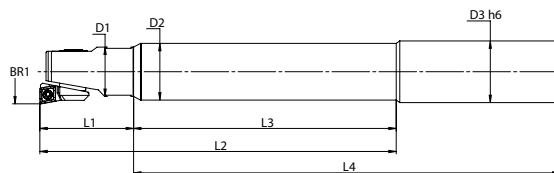
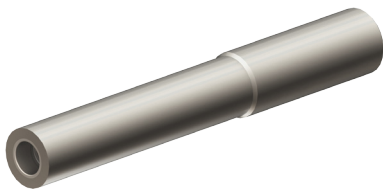
- Type 280 (analog) 0.002mm diametrical adjustment by nonius
- Type 281 (digital) 0.001 accuracy in diameter
- direct measurement system (no backlash)
- avec arrosage interne
- **Corps et porte-plaquettes doivent être commandés séparément**

## 276

### 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
276.025.170	25	23	146	211	170	105	M12	280/140.020.041	0.7
276.025.220	25	23	196	261	220	155	M12	280/140.020.041	1.2
276.025.265	25	23	241	306	265	200	M12	280/140.020.041	1.5
276.032.220	32	29	200	265	220	155	M16	280/140.025.045	2.0
276.032.260	32	29	240	305	260	195	M16	280/140.025.045	2.3
276.032.310	32	29	290	355	310	245	M16	280/140.025.045	2.8
276.032.217	32	32	203	268	217	152	M16	280/140.032.051	2.3
276.032.287	32	32	273	338	287	222	M16	280/140.032.051	3.0
276.032.357	32	32	343	408	357	292	M16	280/140.032.051	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

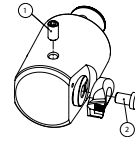
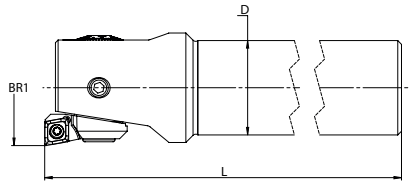
- Amélioration de la productivité : grâce à la réduction des vibrations, les conditions de coupe peuvent être améliorées de façon remarquable.
- Meilleure qualité de surface
- Meilleure stabilité du processus
- Meilleure évacuation des copeaux
- Réduction du coût par pièce
- pour longueur d'alésage jusqu'à 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 / Plaquette	kg		
U20_F20.K21.150	20	23.9 29.9	31.1 37.1	150	254.200.006* 254.201.006	CC.. 06 02 ..	0.3	881.252.200	880.252.200
U25_F25.K21.170	25	30.9 37.9	40.1 47.1	170	254.250.006* 254.251.006	CC.. 06 02 ..	0.6	881.252.250	880.252.250
W19.F20.024.150	19.1 (0.75")	23.9 29.9	31.1 37.1	150	254.200.006 254.201.006	CC.. 06 02 ..	0.3	881.252.200	880.252.200
W26.F25.031.170	25.4 (1.00")	30.9 37.9	40.1 47.1	170	254.250.006 254.251.006	CC.. 06 02 ..	0.6	881.252.250	880.252.250

- 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

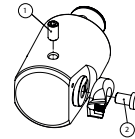
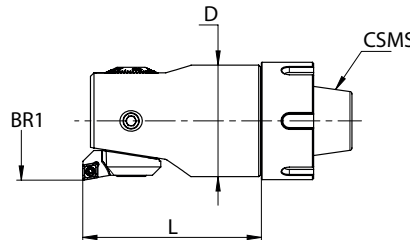
- réglage du diamètre avec un jeu réduit au minimum
- Réglage diamétral de 0,01mm resp. 0,002mm par vernier
- Avec arrosage interne
- Serrer l'outil dans un porte-pince.
- \*Porte-plaquette inclus

## 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 / Plaquette	kg		
E25_F32.K21.065	37 / ER25	39.9 47.9	51.1 59.1	65	254.320.006* 254.321.006	CC.. 06 02 ..	0.6	881.252.320	880.252.320
E32_F42.K21.075	47 / ER32	50.9 64.9	67.1 81.1	75	254.420.006* 254.421.006	CC.. 06 02 ..	1.1	881.252.420	880.252.420
E40_F55.K21.085	59 / ER40	66.9 66.9 84.9	87.1 87.1 105.1	85	254.550.009* 254.550.006 254.551.006/9	CC.. 09 T3 .. CC.. 06 02 ..	2.0	881.252.550	880.252.550

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

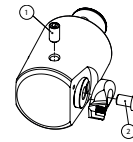
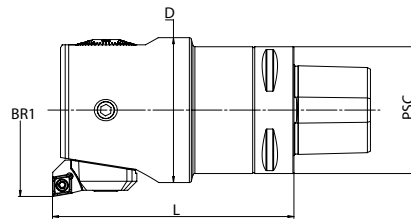
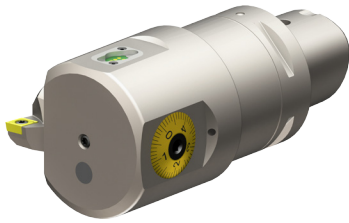
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- Clamp tool in a collet chuck.
- \*insert holder included



- 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-plaquette 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**

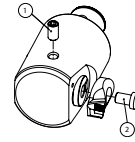
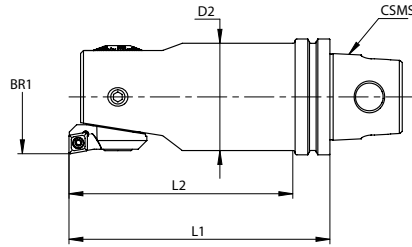
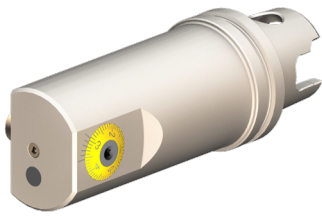




Bestell-Nr. / Order number/ Code	PSC	BR1 min.	BR1 max.	L	D	Wendeplattenhalter / insert holder / porte-inserts	kg		
PSC32-FBHS-DE-24	PSC 32 / 22.5	23.9 29.9	31.1 37.1	80	22.5	254.200.006 254.201.006	0.3	881.252.200	880.252.200
PSC32-FBHS-DE-31	PSC 32 / 29	30.9 37.9	40.1 47.1	90	29	254.250.006 254.251.006	0.4	881.252.250	880.252.250
PSC40-FBHS-DE-40	PSC 40 / 37	39.9 47.9	51.1 59.1	90	37	254.320.006 254.321.006	0.6	881.252.320	880.252.320
PSC50-FBHS-DE-51	PSC 50 / 47	50.9 64.9	67.1 81.1	90	47	254.420.006 254.421.006	1.1	881.252.420	880.252.420
PSC50-FBHS-DE-67	PSC 50 / 59	66.9 84.9	87.1 105.1	100	59	254.550.009 254.550.006 254.551.006/9	1.7	881.252.550	880.252.550
PSC63-FBHS-DE-87	PSC 63 / 72	86.9 104.9	116.1 134.1	120	72	254.550.009 254.550.006 254.551.006/9	3.4	881.252.720	880.252.550
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	254.550.009 254.550.006 254.551.006/9 254.263.009	4.8	881.252.940	880.252.550

- 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 (266.028.077)
- Wendeplattenhalter müssen separat bestellt werden
- \* Hinweis: Dieser Ausdrehbereich wird erreicht mit dem Wendeplattenhalter 254.263.009 in Kombination mit dem Distanzstück 889.000.006

- 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 (266.028.077)
- insert holder must be ordered separately
- \* Note: For this diameter range the insert holder 254.263.009 and the adapter 889.000.006 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 (266.028.077)
- porte-plaquettes doivent être commandés séparément
- \* Remarque : Pour obtenir cette plage de diamètres, le porte-plaquette 254.263.009 et l'adaptateur 889.000.006 sont nécessaires

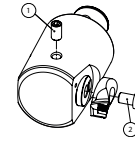
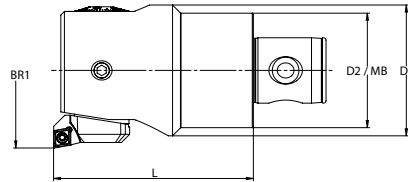




Bestell-Nr. / Order number/ Code	CSMS	BR1 min.	BR1 max.	L1	L2	D2	Wendeplattenhalter / insert holder / porte-inserts	kg		
KM3.F20.024.090	KM32	23.9 29.9	31.1 37.1	90	76	22.5	254.200.006 254.201.006	0.2	881.252.200	880.252.200
KM3.F25.031.100	KM32	30.9 37.9	40.1 47.1	100	86	29	254.250.006 254.251.006	0.3	881.252.250	880.252.250
KM4.F32.040.090	KM40	39.9 47.9	51.1 59.1	90	74	37	254.320.006 254.321.006	0.5	881.252.320	880.252.320
KM5.F42.051.090	KM50	50.9 64.9	67.1 81.1	90	70	47	254.420.006 254.421.006	0.6	881.252.420	880.252.420
KM5.F55.067.100	KM50	66.9 84.9	87.1 105.1	100	100	59	254.550.009 254.550.006 254.551.006/9	1.8	881.252.550	880.252.550
KM5.F72.087.120	KM50	86.9 104.9	116.1 134.1	120	120	72	254.550.009 254.550.006 254.551.006/9	2.9	881.252.720	880.252.550
KM6.F72.087.120	KM63	86.9 104.9	116.1 134.1	120	120	72	254.550.009 254.550.006 254.551.006/9	3.1	881.252.720	880.252.550
KM6.F94.116.150	KM63	115.9 133.9 153.9 165.9*	153.1 171.1 191.1 203.1*	150	150	94	254.550.009 254.550.006 254.551.006/9 254.263.009	4.8	881.252.940	880.252.550

- 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	MB	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg		
252.200.000	MB1	23.9 29.9	31.1 37.1	40	22.5	254.200.006 254.201.006	0.1	881.252.200	880.252.200
252.250.000	MB2	30.9 37.9	40.1 47.1	50	29	254.250.006 254.251.006	0.2	881.252.250	880.252.250
252.320.000	MB3	39.9 47.9	51.1 59.1	65	37	254.320.006 254.321.006	0.3	881.252.320	880.252.320
252.420.000	MB4	50.9 64.9	67.1 81.1	90	47	254.420.006 254.421.006	0.8	881.252.420	880.252.420
252.550.000	MB5	66.9 84.9	87.1 105.1	115	59	254.550.009 254.550.006 254.551.006/9	1.9	881.252.550	880.252.550
252.720.100	MB7	86.9 104.9	116.1 134.1	100	72	254.550.009 254.550.006 254.551.006/9	2.9	881.252.720	880.252.550
252.940.100	MB9	115.9 133.9 153.9 165.9*	153.1 171.1 191.1 203.1*	130	94	254.550.009 254.550.006 254.551.006/9 254.263.009	7.0	881.252.940	880.252.550

- 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 254.263.009 in Kombination mit dem Distanzstück 889.000.006

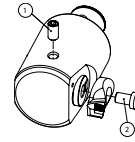
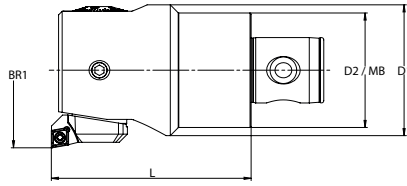
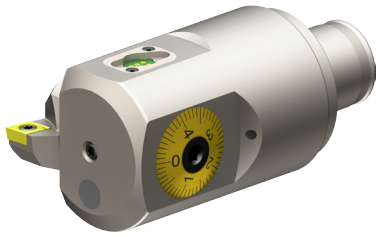
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment resp. 0.002mm by nonius
- with inner coolant supply
- insert holder must be ordered separately
- \* Note: For this diameter range the insert holder 254.263.009 and the adapter 889.000.006 is required



- 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 254.263.009 et l'adaptateur 889.000.006 sont nécessaires

251  
Feinbohrköpfe Ø23.9-203.1  
DIGITAL

Fine boring heads Ø23.9-203.1  
DIGITAL

Têtes d'alésage fin Ø23.9-203.1  
DIGITAL

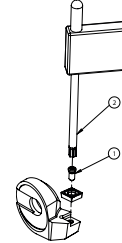
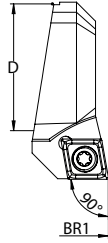
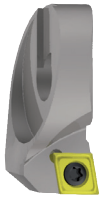




Bestell-Nr. / Order number/ Code	MB	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg		
251.200.000	MB1	23.9 29.9	31.1 37.1	40	22.5	254.200.006 254.201.006	0.1	881.252.200	880.252.200
251.250.000	MB2	30.9 37.9	40.1 47.1	50	29	254.250.006 254.251.006	0.2	881.252.250	880.252.250
251.320.000	MB3	39.9 47.9	51.1 59.1	65	37	254.320.006 254.321.006	0.3	881.252.320	880.252.320
251.420.000	MB4	50.9 64.9	67.1 81.1	90	47	254.420.006 254.421.006	0.8	881.252.420	880.252.420
251.550.000	MB5	66.9 66.9 84.9	87.1 87.1 105.1	115	59	254.550.009 254.550.006 254.551.006/9	1.9	881.252.550	880.252.550
251.720.100	MB7	86.9 86.9 104.9	116.1 116.1 134.1	100	72	254.550.009 254.550.006 254.551.006/9	2.9	881.252.720	880.252.550
251.940.100	MB9	115.9 115.9 133.9 153.9 165.9*	153.1 153.1 171.1 191.1 203.1*	130	94	254.550.009 254.550.006 254.551.006/9 254.263.009	7.0	881.252.940	880.252.550

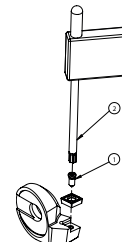
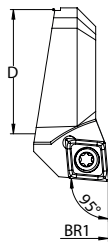
- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswerteelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (266.028.077)
- Wendeplattenhalter müssen separat bestellt werden
- \* Hinweis: Dieser Ausdrehbereich wird erreicht mit dem Wendeplattenhalter 254.263.009 in Kombination mit dem Distanzstück 889.000.006



- 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 (266.028.077)
- insert holder must be ordered separately
- \* Note: For this diameter range the insert holder 254.263.009 and the adapter 889.000.006 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 (266.028.077)
- porte-plaquettes doivent être commandés séparément
- \* Remarque : Pour obtenir cette plage de diamètres, le porte-plaquette 254.263.009 et l'adaptateur 889.000.006 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
254.200.006	23.9	31.1	11	CC .. 06 02 ..	251/252.200.000	0.05	843.006.000	842.006.000
254.201.006	29.9	37.1	11	CC .. 06 02 ..	251/252.200.000	0.05	843.006.000	842.006.000
254.250.006	30.9	40.1	13	CC .. 06 02 ..	251/252.250.000	0.05	843.006.000	842.006.000
254.251.006	37.9	47.1	13	CC .. 06 02 ..	251/252.250.000	0.05	843.006.000	842.006.000
254.320.006	39.9	51.1	17	CC .. 06 02 ..	251/252.320.000	0.05	843.006.000	842.006.000
254.321.006	47.9	59.1	17	CC .. 06 02 ..	251/252.320.000	0.05	843.006.000	842.006.000
254.420.006	50.9	67.1	22	CC .. 06 02 ..	251/252.420.000	0.05	843.006.000	842.006.000
254.421.006	64.9	81.1	22	CC .. 06 02 ..	251/252.420.000	0.05	843.006.000	842.006.000
254.550.006	66.9	87.1	30	CC .. 06 02 ..	251/252.550.000	0.1	843.006.000	842.006.000
254.550.009	66.9	87.1	30	CC .. 09 T3 ..	251/252.550.000	0.1	843.009.000	842.009.000
254.551.006	84.9	105.1	30	CC .. 06 02 ..	251/252.550.000	0.1	843.006.000	842.006.000
254.551.009	84.9	105.1	30	CC .. 09 T3 ..	251/252.550.000	0.1	843.009.000	842.009.000
254.550.006	86.9	116.1	30	CC .. 06 02 ..	251/252.720.100	0.1	843.006.000	842.006.000
254.550.009	86.9	116.1	30	CC .. 09 T3 ..	251/252.720.100	0.1	843.009.000	842.009.000
254.551.006	104.9	134.1	30	CC .. 06 02 ..	251/252.720.100	0.1	843.006.000	842.006.000
254.551.009	104.9	134.1	30	CC .. 09 T3 ..	251/252.720.100	0.1	843.009.000	842.009.000
254.550.006	115.9	153.1	30	CC .. 06 02 ..	251/252.940.100	0.1	843.006.000	842.006.000
254.550.009	115.9	153.1	30	CC .. 09 T3 ..	251/252.940.100	0.1	843.009.000	842.009.000
254.551.006	133.9	171.1	30	CC .. 06 02 ..	251/252.940.100	0.1	843.006.000	842.006.000
254.551.009	133.9	171.1	30	CC .. 09 T3 ..	251/252.940.100	0.1	843.009.000	842.009.000
254.263.009	153.9	191.1	30	CC .. 09 T3 ..	251/252.940.100	0.1	843.009.000	842.009.000

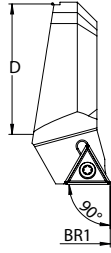


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
254.205.006	23.9	31.1	11	CC .. 06 02 ..	251/252.200.000	0.05	843.006.000	842.006.000
254.255.006	30.9	40.1	13	CC .. 06 02 ..	251/252.250.000	0.05	843.006.000	842.006.000
254.325.006	39.9	51.1	17	CC .. 06 02 ..	251/252.320.000	0.05	843.006.000	842.006.000
254.425.006	50.9	67.1	22	CC .. 06 02 ..	251/252.420.000	0.05	843.006.000	842.006.000
254.555.009	66.9	87.1	30	CC .. 09 T3 ..	251/252.550.000	0.1	843.009.000	842.009.000
254.555.009	86.9	116.1	30	CC .. 09 T3 ..	251/252.720.100	0.1	843.009.000	842.009.000
254.555.009	115.9	153.1	30	CC .. 09 T3 ..	251/252.940.100	0.1	843.009.000	842.009.000

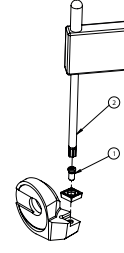
## Wendeplattenhalter 90°





## Insert holders 90°



## Porte-plaquettes 90°

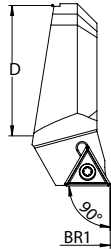


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
257.200.T07	23.9	31.1	11	TP .. 07 01 ..	251/252.200.000	0.05	WTL.ER2.001.004	842.006.000
257.201.T07	29.9	37.1	11	TP .. 07 01 ..	251/252.200.000	0.05	WTL.ER2.001.004	842.006.000
257.250.T07	30.9	40.1	13	TP .. 07 01 ..	251/252.250.000	0.05	WTL.ER2.001.004	842.006.000
257.251.T07	37.9	47.1	13	TP .. 07 01 ..	251/252.250.000	0.05	WTL.ER2.001.004	842.006.000
257.320.T07	39.9	51.1	17	TP .. 07 01 ..	251/252.320.000	0.05	WTL.ER2.001.004	842.006.000
257.321.T07	47.9	59.1	17	TP .. 07 01 ..	251/252.320.000	0.05	WTL.ER2.001.004	842.006.000
257.420.T07	50.9	67.1	22	TP .. 07 01 ..	251/252.420.000	0.05	WTL.ER2.001.004	842.006.000
257.421.T07	64.9	81.1	22	TP .. 07 01 ..	251/252.420.000	0.05	WTL.ER2.001.004	842.006.000
257.550.T11	86.9	116.1	30	TP .. 11 02 ..	251/252.720.100	0.1	WTM.ER2.001.005	842.006.000
257.551.T11	104.9	134.1	30	TP .. 11 02 ..	251/252.720.100	0.1	WTM.ER2.001.005	842.006.000
257.550.T11	115.9	153.1	30	TP .. 11 02 ..	251/252.940.100	0.1	WTM.ER2.001.005	842.006.000
257.551.T11	133.9	171.1	30	TP .. 11 02 ..	251/252.940.100	0.1	WTM.ER2.001.005	842.006.000
257.263.T11	153.9	191.1	30	TP .. 11 02 ..	251/252.940.100	0.1	WTM.ER2.001.005	842.006.000

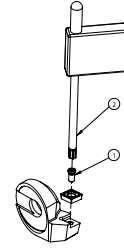
## Wendeplattenhalter 93°



## Insert holders 93°

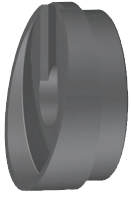


## Porte-plaquettes 93°

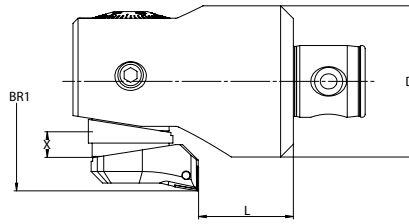


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	Wendeplatte / Insert / Plaquette	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	 1	 2
256.200.T06	23.9	31.1	11	TB .. 06 01 ..	251/252.200.000	0.05	WWA.ER2.001.004	WWA.ER1.001.000
256.250.T09	30.9	40.1	13	TP .. 09 02 ..	251/252.250.000	0.05	WCA.ER2.001.006	842.006.000
256.320.T09	39.9	51.1	17	TP .. 09 02 ..	251/252.320.000	0.05	WCA.ER2.001.006	842.006.000
256.420.T11	50.9	67.1	22	TP .. 11 03 ..	251/252.420.000	0.05	WCA.ER2.001.006	842.006.000
256.550.T11	66.9	87.1	30	TP .. 11 03 ..	251/252.550.000	0.1	WCA.ER2.001.006	842.006.000
256.551.T11	84.9	105.1	30	TP .. 11 03 ..	251/252.550.000	0.1	WCA.ER2.001.006	842.006.000
256.550.T11	86.9	116.1	30	TP .. 11 03 ..	251/252.720.100	0.1	WCA.ER2.001.006	842.006.000
256.551.T11	104.9	134.1	30	TP .. 11 03 ..	251/252.720.100	0.1	WCA.ER2.001.006	842.006.000
256.550.T11	115.9	153.1	30	TP .. 11 03 ..	251/252.940.100	0.1	WCA.ER2.001.006	842.006.000
256.551.T11	133.9	171.1	30	TP .. 11 03 ..	251/252.940.100	0.1	WCA.ER2.001.006	842.006.000

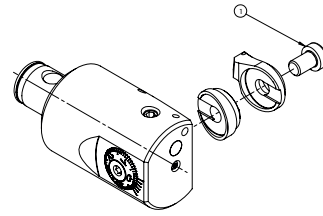
## Umkehradapter für Rückwärtsbearbeitung



## Reversal adapter for reverse machining



## Adaptateur pour alésage en sens opposé

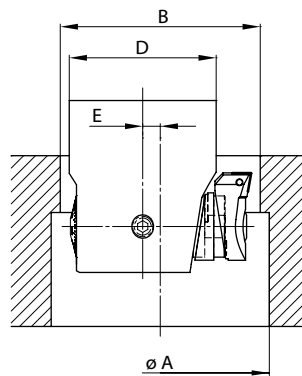


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D	L	X	für Feinbohrkopf / for fine boring head / pour Têtes d'alésage fin	kg	
255.200.001	37	44	22.5	8.5	6.5	251/252.200.000	0.05	880.252.201
255.200.002	40	51	22.5	8.5	8.0	251/252.200.000	0.05	880.252.202
255.250.001	44	53	29	7.6	6.5	251/252.250.000	0.05	880.252.251
255.250.002	51	60	29	7.6	10.0	251/252.250.000	0.05	880.252.252
255.320.001	53	64	37	13.3	6.5	251/252.320.000	0.05	880.252.321
255.320.002	60	71	37	13.3	10.0	251/252.320.000	0.05	880.252.421
255.420.001	64	80	47	16.2	6.5	251/252.420.000	0.05	880.252.422
255.420.002	75	91	47	16.2	12.0	251/252.420.000	0.05	880.252.551
255.550.000	87	107	59	27.0	10.0	251/252.550.000	0.05	880.252.551
255.550.000	107	136	72	47.0	10.0	251/252.720.100	0.05	880.252.551
255.550.000	136	173	90	77.0	10.0	251/252.940.100	0.05	880.252.551

- für die Verwendung in Feinbohrköpfen
- Befestigungsschrauben werden mitgeliefert
- **Achtung: Linkslauf**

- for use in fine boring heads
- fastening screws will be delivered with adapters
- **Caution: counterclockwise rotation**

- Les porte-plaquettes
- 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

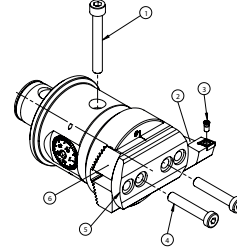
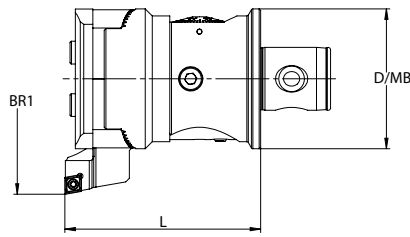
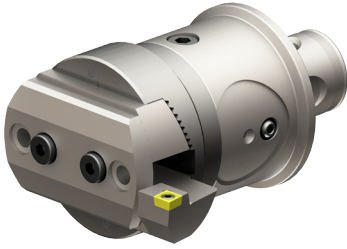
- diamètre minimal de l'alésage d'entrée

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

- décentrage minimum pour entrer dans l'alésage

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

\*Distance de sécurité



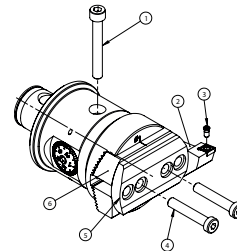
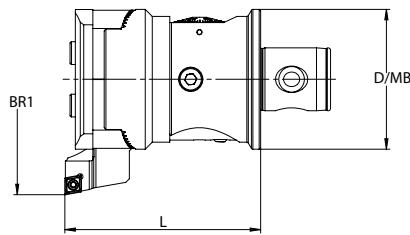
Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	MB	L	D	kg	①	④
256.550.000	86	402	MB5	112	72	2.8	850.256.550	850.144.550

- 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

XXX

Feinbohrköpfe ø86-402  
DIGITALFine boring heads ø86-402  
DIGITALTêtes d'alésage fin ø86-402  
DIGITAL

Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	MB	L	D	kg	①	④
xxx	86	402	MB5	112	80	2.8	850.256.550	850.144.550

- 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 (266.028.077)
- Wendeplattenhalter müssen separat bestellt werden

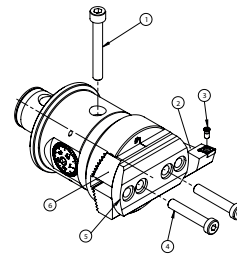
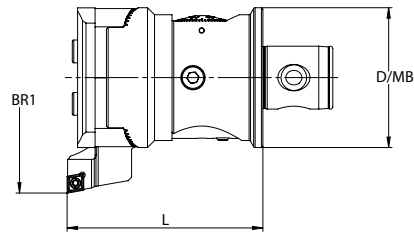
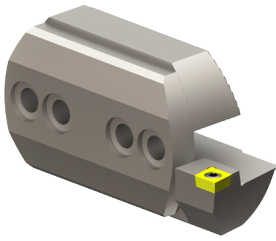
- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (266.028.077)

- 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 (266.028.077)
- 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

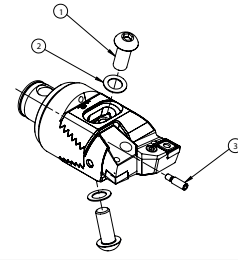
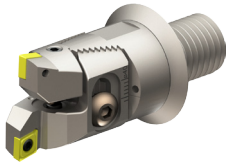


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	Wendeplatte / Insert / Plaquette	kg	②	③	⑤	⑥
258.550.109	86	138	CC .. 09 T3 ..	0,5	190.550.109	843.009.000	884.190.109	885.190.109
258.550.112	86	138	CC .. 12 04 ..	0,5	190.550.112	843.012.000	884.190.109	885.190.109
258.550.209	136	220	CC .. 09 T3 ..	0,9	190.550.209	843.009.000	884.190.209	885.190.209
258.550.212	136	220	CC .. 12 04 ..	0,9	190.550.212	843.012.000	884.190.209	885.190.209
258.550.309	188	302	CC .. 09 T3 ..	1,0	190.550.309	843.009.000	884.190.209	885.190.209
258.550.409	242	402	CC .. 09 T3 ..	1,3	190.550.409	843.009.000	884.190.209	885.190.209

## 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
140.020.041	23.5	31.1	20	41	162.200.006 182.200.006 166.200.006 167.200.006	0.1	841.142.200	841.142.200	841.342.200
140.025.045	29.5	40.1	25	45	162.250.006 182.250.006 166.250.006 167.250.006	0.1	841.142.250	841.142.250	841.342.200
140.032.051	39.5	51.1	32	51	162.320.009 182.320.009 166.320.009 167.320.009	0.2	841.142.320	841.142.320	841.342.200

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

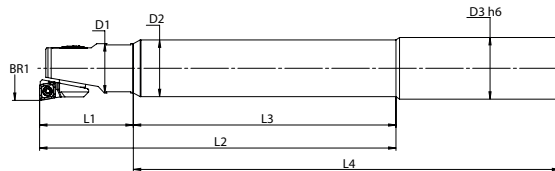
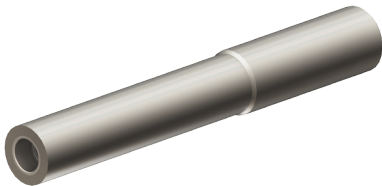
- with inner coolant supply
- twin cutter heads, shank and insert holder must be ordered separately

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

## 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
276.025.170	25	23	146	211	170	105	M12	140.020.041	0.7
276.025.220	25	23	196	261	220	155	M12	140.020.041	1.2
276.025.265	25	23	241	306	265	200	M12	140.020.041	1.5
276.032.220	32	29	200	265	220	155	M16	140.025.045	2.0
276.032.260	32	29	240	305	260	195	M16	140.025.045	2.3
276.032.310	32	29	290	355	310	245	M16	140.025.045	2.8
276.032.217	32	32	203	268	217	152	M16	140.032.051	2.3
276.032.287	32	32	273	338	287	222	M16	140.032.051	3.0
276.032.357	32	32	343	408	357	292	M16	140.032.051	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

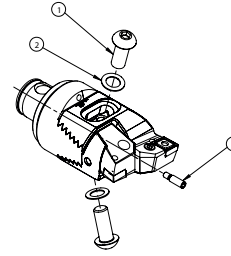
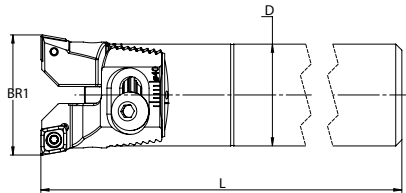
- Amélioration de la productivité : grâce à la réduction des vibrations, les conditions de coupe peuvent être améliorées de façon remarquable.
- Meilleure qualité de surface
- Meilleure stabilité du processus
- Meilleure évacuation des copeaux
- Réduction du coût par pièce
- pour longueur d'alésage jusqu'à 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	162.200.006* 182.200.006 166.200.006 167.200.006	CC.. 06 02 ..	0.3	841.142.200	841.142.200	841.342.200
U25_Z25.K23.170	25	29.5	40.1	170	162.250.006* 182.250.006 166.250.006 167.250.006	CC.. 06 02 ..	0.6	841.142.250	841.142.250	841.342.200
W19.Z20.024.150	19.1 (0.75")	23.5	31.1	150	162.200.006 182.200.006 166.200.006 167.200.006	CC.. 06 02 ..	0.3	841.142.200	841.142.200	841.342.200
W26.Z25.030.170	25.4 (1.00")	29.5	40.1	170	162.250.006 182.250.006 166.250.006 167.250.006	CC.. 06 02 ..	0.6	841.142.250	841.142.250	841.342.200

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

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

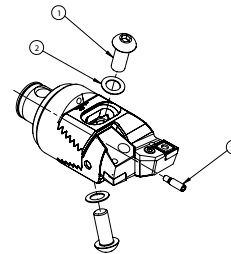
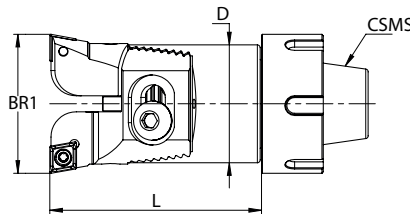
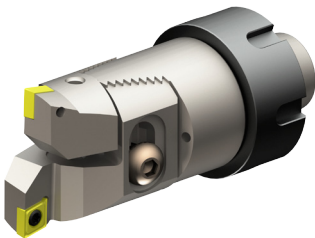
- Avec arrosage interne
- Serrer l'outil dans un porte-pince.
- \*Porte-plaquette inclus

## 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



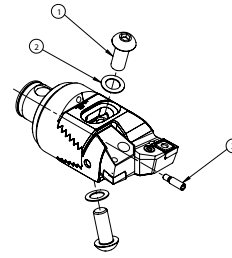
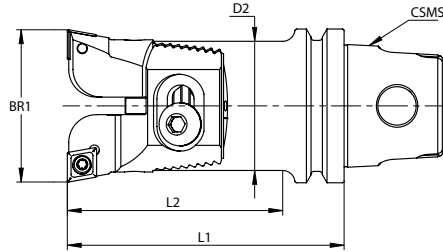
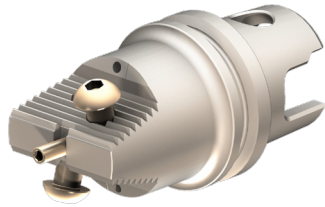
**ECO LINE**

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	162.320.009* 182.320.009 166.320.009 167.320.009	CC.. 09 T3 ..	0.5	841.142.320	841.142.320	841.342.200
E32_Z42.K23.075	42 / ER32	49.5	67.1	75	162.420.009* 182.420.009 166.420.009 167.420.009	CC.. 09 T3 ..	0.9	841.142.420	841.142.420	841.342.420
E40_Z55.K23.085	55 / ER40	65.5	87.1	85	162.550.012*/112 182.550.012/112 166.550.012 167.550.012	CC.. 12 04 ..	1.7	841.142.550	841.142.550	841.342.420

- 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

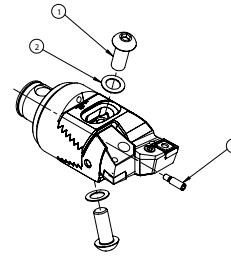
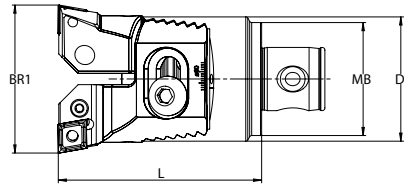
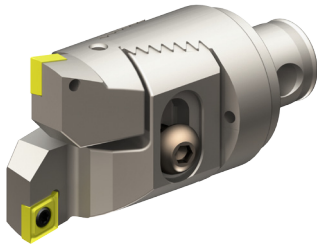


Bestell-Nr. / Order number / Code	ST	BR1 min.	BR1 max.	L1	L2	D2	Wendeplattenhalter / insert holder / porte-inserts	kg	①	②	③
KM3.Z20.024.090	KM32	23.5	31.1	90	76	20	162.200.006 182.200.006 166.200.006 167.200.006	0.1	841.142.200	841.142.200	841.342.200
KM3.Z25.030.100	KM32	29.5	40.1	100	86	25	162.250.006 182.250.006 166.250.006 167.250.006	0.1	841.142.250	841.142.250	841.342.200
KM4.Z32.040.090	KM40	39.5	51.1	90	74	32	162.320.009 182.320.009 166.320.009 167.320.009	0.3	841.142.320	841.142.320	841.342.200
KM5.Z42.050.090	KM50	49.5	67.1	90	70	42	162.420.009 182.420.009 166.420.009 167.420.009	0.4	841.142.420	841.142.420	841.342.420
KM5.Z55.066.100	KM50	65.5	87.5	100	100	55	162.550.012/112 182.550.012/112 166.550.012 167.550.012	0.8	841.142.550	841.142.550	841.342.420
KM5.Z72.087.120	KM50	86.5	116.1	120	120	72	162.720.016/112 182.720.016/112 166.720.012 167.720.012	1.4	841.142.720	841.142.720	841.342.420
KM6.Z72.087.120	KM63UT	86.5	116.1	120	120	72	162.720.016/112 182.720.016/112 166.720.012 167.720.012	1.4	841.142.720	841.142.720	841.342.420
KM6.Z94.115.150	KM63UT	114.5	153.1	150	150	94	162.940.016/112 182.940.016 166.940.012 167.940.012	2.6	841.142.940	841.142.940	841.342.420

- 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

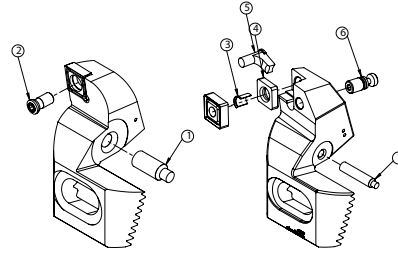
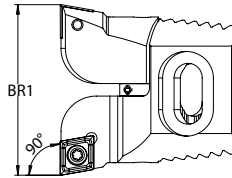


Bestell-Nr. / Order number / Code	MB	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg	①	②	③
142.200.000	MB1	23.5	31.1	40	20	162.200.006 182.200.006 166.200.006 167.200.006	0.1	841.142.200	841.142.200	841.342.200
142.250.000	MB2	29.5	40.1	50	25	162.250.006 182.250.006 166.250.006 167.250.006	0.1	841.142.250	841.142.250	841.342.200
142.320.000	MB3	39.5	51.1	65	32	162.320.009 182.320.009 166.320.009 167.320.009	0.2	841.142.320	841.142.320	841.342.200
142.420.000	MB4	49.5	67.1	90	42	162.420.009 182.420.009 166.420.009 167.420.009	0.6	841.142.420	841.142.420	841.342.420
142.550.000	MB5	65.5	87.5	115	55	162.550.012/112 182.550.012/112 166.550.012 167.550.012	1.2	841.142.550	841.142.550	841.342.420
142.720.100	MB7	86.5	116.1	100	72	162.720.016/112 182.720.016/112 166.720.012 167.720.012	1.2	841.142.720	841.142.720	841.342.420
142.940.100	MB9	114.5	153.1	130	94	162.940.016/112 182.940.016 166.940.012 167.940.012	2.7	841.142.940	841.142.940	841.342.420

- 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

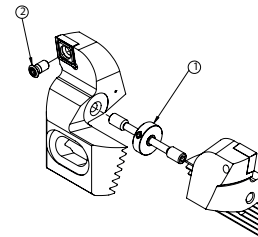
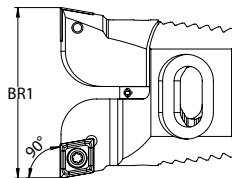
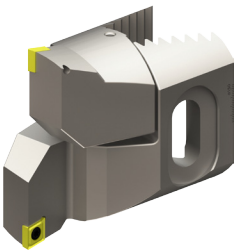


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥
162.200.006	23.5	31.1	20	CC . .06 02 . .	0.05	848.200.407	843.006.000				
162.250.006	29.5	40.1	25	CC . .06 02 . .	0.05	848.250.409	843.006.000				
162.320.009	39.5	51.1	32	CC . .09 T3 . .	0.1	848.320.413	843.009.000				
162.420.009	49.5	67.1	42	CC . .09 T3 . .	0.2	848.420.614	843.009.000				
162.550.112	65.5	87.5	55	CC . .12 04 . .	0.5	848.550.620	843.012.000				
162.550.012	65.5	87.5	55	CN . .12 04 . .	0.5	848.550.620	844.012.000	845.012.000	846.012.000	847.012.000	
162.720.112	86.5	116.1	72	CC . .12 04 . .	1.2	848.720.000	843.012.000				
162.720.016	86.5	116.1	72	CN . .16 06 . .	1.2	848.720.000	844.016.000	845.016.000	846.016.000	847.016.000	
162.940.112	114.5	153.1	94	CC . .12 04 . .	2.6	848.940.000	843.012.000				
162.940.016	114.5	153.1	94	CN . .16 06 . .	2.6	848.940.000	844.016.000	845.016.000	846.016.000	847.016.000	

- für die Verwendung in Zweischniderköpfen
- Wendeplattenhalter werden paarweise geliefert

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

- Pour utilisation dans tête à double tranchant
- Porte-plaquettes seront livrés par paire



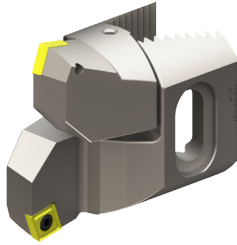
Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②
166.200.006	23.5	31.1	20	CC . .06 02 . .	0.05	848.200.005	843.006.000
166.250.006	29.5	40.1	25	CC . .06 02 . .	0.05	848.250.005	843.006.000
166.320.009	39.5	51.1	32	CC . .09 T3 . .	0.1	848.320.005	843.009.000
166.420.009	49.5	67.1	42	CC . .09 T3 . .	0.2	848.420.005	843.009.000
166.550.012	65.5	87.5	55	CC . .12 04 . .	0.5	848.550.005	843.012.000
166.720.012	86.5	116.1	72	CC . .12 04 . .	1.2	848.720.005	843.012.000
166.940.012	114.5	153.1	94	CC . .12 04 . .	2.6	848.940.005	843.012.000

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

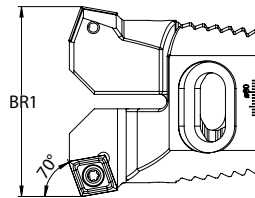
- for use in twin cutter boring heads
- with synchro spindle both insert holders can be adjusted synchronously and symmetrically
- insert holders will be supplied in pairs

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

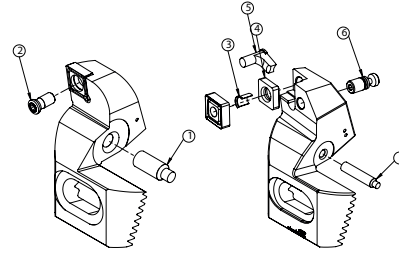
## Wendeplattenhalter 70°



## Insert holders 70°



## Porte-inserts 70°

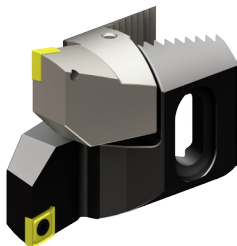
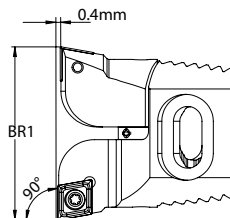
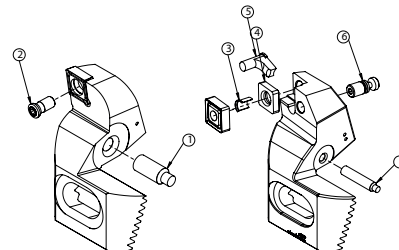


Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D1 Kopf / D1 head / D1 Tête	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥	
182.200.006	23.5	31.1	20	CC ..06 02 ..	0.05	848.200.407			843.006.000			
182.250.006	29.5	40.1	25	CC ..06 02 ..	0.05	848.250.409			843.006.000			
182.320.009	39.5	51.1	32	CC ..09 T3 ..	0.1	848.320.413			843.009.000			
182.420.009	49.5	67.1	42	CC ..09 T3 ..	0.2	848.420.614			843.009.000			
182.550.112	65.5	87.5	55	CC ..12 04 ..	0.5	848.550.620			843.012.000			
182.550.012	65.5	87.5	55	CN ..12 04 ..	0.5	848.550.620			844.012.000	845.012.000	846.012.000	847.012.000
182.720.112	86.5	116.1	72	CC ..12 04 ..	1.2	848.720.000			843.012.000			
182.720.016	86.5	116.1	72	CN ..16 06 ..	1.2	848.720.000			844.016.000	845.016.000	846.016.000	847.016.000
182.940.016	114.5	153.1	94	CN ..16 06 ..	2.6	848.940.000			844.016.000	845.016.000	846.016.000	847.016.000

- für die Verwendung in Zweischniderköpfen
- Wendeplattenhalter werden paarweise geliefert

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

- Pour utilisation dans tête à double tranchant
- Porte-plaquettes seront livrés par paire

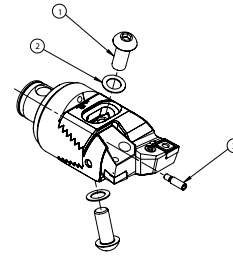
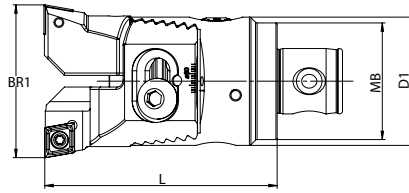
Wendeplattenhalter 90°  
axial 0.4mm zurückgesetztInsert holders 90°  
axial 0.4mm staggeredPorte-inserts 90°  
0.4mm de décalage axial

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
167.200.006	23.5	31.1	20	CC ..06 02 ..	0.05	848.200.407			843.006.000		
167.250.006	29.5	40.1	25	CC ..06 02 ..	0.05	848.250.409			843.006.000		
167.320.009	39.5	51.1	32	CC ..09 T3 ..	0.1	848.320.413			843.009.000		
167.420.009	49.5	67.1	42	CC ..09 T3 ..	0.2	848.420.614			843.009.000		
167.550.012	65.5	87.5	55	CC ..12 04 ..	0.5	848.550.620			843.012.000		
167.720.012	86.5	116.1	72	CC ..12 04 ..	1.2	848.720.000			843.012.000		
167.940.012	114.5	153.1	94	CC ..12 04 ..	2.6	848.940.000			843.012.000		

- für die Verwendung in Zweischniderköpfen
- zur Schnittaufteilung bei grosser Spantiefe
- Wendeplattenhalter werden paarweise geliefert

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

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

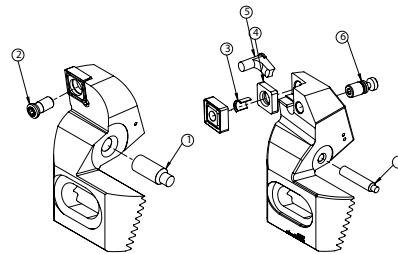
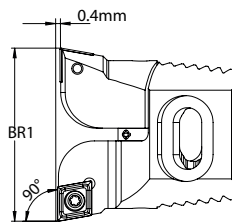
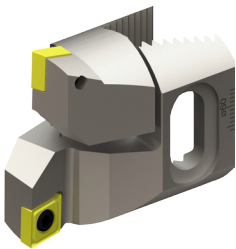


Bestell-Nr. / Order number/ Code	MB	BR1 min.	BR1 max.	L	D1	Wendeplattenhalter / insert holder / porte-inserts	kg	①	②	③
145.250.000	MB2	29.5	40.1	55	25	168.250.006	0.1	841.142.250	841.142.250	841.342.200
145.320.000	MB3	39.5	51.1	65	32	168.320.009	0.3	841.142.320--	841.142.320	841.342.200
145.420.000	MB4	49.5	67.1	90	42	168.420.009	0.4	841.142.420	841.142.420	841.342.420
145.550.000	MB5	65.5	87.5	115	55	168.550.012	0.8	841.142.550	841.142.550	841.342.420
145.720.000	MB7	86.5	116.1	125	72	168.720.012	1.4	841.142.720	841.142.720	841.342.420

- 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



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
168.250.006	29.5	40.1	25	CC . .06 02 . .	0.05	848.250.409			843.006.000		
168.320.009	39.5	51.1	32	CC . .09 T3 . .	0.1	848.320.413			843.009.000		
168.420.009	49.5	67.1	42	CC . .09 T3 . .	0.2	848.420.614			843.009.000		
168.550.012	65.5	87.5	55	CC . .12 04 . .	0.5	848.550.620			843.012.000		
168.720.012	86.5	116.1	72	CC . .12 04 . .	1.2	848.720.000			843.012.000		

- für die Verwendung in Zweischneiderköpfen der Serie 145
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie 145
- insert holders will be supplied in pairs

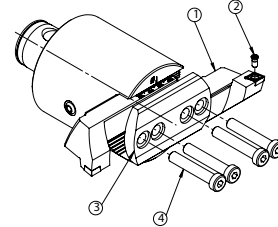
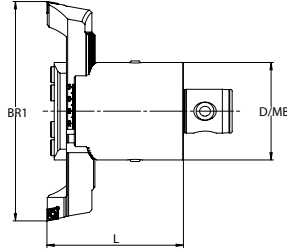
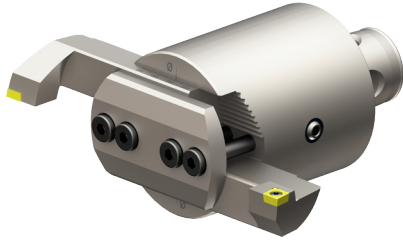
- Pour utilisation dans tête à double tranchant de la série 145
- Porte-plaquettes seront livrés par paire

146

Zweischneiderkopf ø86-402

Twin cutter boring head ø86-402

Tête à double tranchant ø86-402



Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	MB	L	D	kg	④
146.550.000	86	402	MB5	112	80	3.3	850.144.550

- mit Innenkühlung
- Wendeplattenhalter müssen separat bestellt werden

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

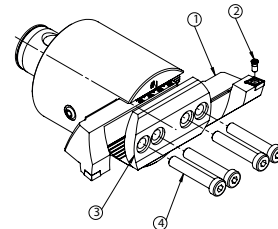
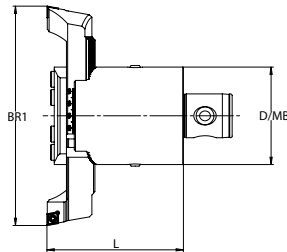
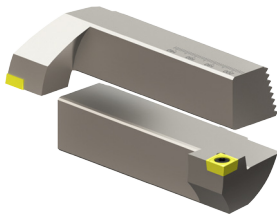
- Avec arrosage interne
- porte-plaquettes doivent être commandés séparément

148

Wendeplattenhalter inkl. Druckplatte

Insert holders incl. clamp plate

Porte-plaquettes incl. plaque de serrage

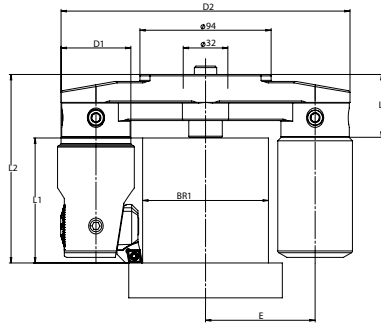
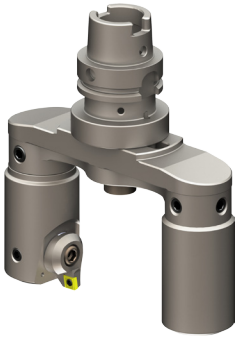


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	Wendeplatte / Insert / Plaquette	kg	①	②	③
148.550.109	86	138	CC .. 09 T3 ..	0.7	190.550.109	843.009.000	884.190.109
148.550.112	86	138	CC .. 12 04 ..	0.7	190.550.112	843.012.000	884.190.109
148.550.209	136	220	CC .. 09 T3 ..	1.1	190.550.209	843.009.000	884.190.209
148.550.212	136	220	CC .. 12 04 ..	1.1	190.550.212	843.012.000	884.190.209
148.550.309	188	302	CC .. 09 T3 ..	1.4	190.550.309	843.009.000	884.190.209
148.550.409	242	402	CC .. 09 T3 ..	1.9	190.550.409	843.009.000	884.190.209

- für die Verwendung in Zweischneiderköpfen der Serie 146
- Wendeplattenhalter werden paarweise geliefert

- for use in twin cutter boring heads from serie 146
- insert holders will be supplied in pairs

- Pour utilisation dans tête à double tranchant de la série 146
- Porte-plaquettes seront livrés par paire

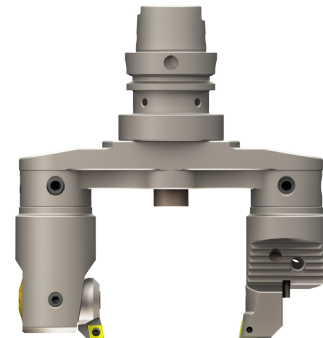
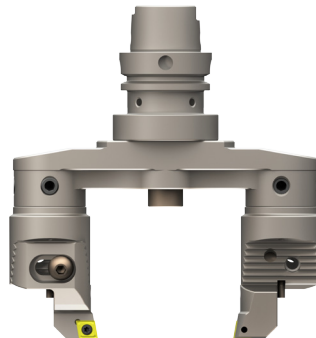
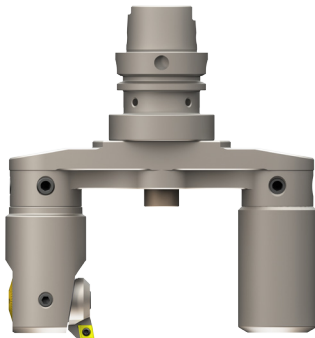


Bestell-Nr. / Order number/ Code	BR1 min.	BR1 max.	D1	E	D2	L3	L1	L2	kg	Feinbohrkopf / Boring head/ Têtes d'alésage fin	Schruppkopf / Roughing head/ Tête à double tranchant
222.320.099	15.9	27.1	32	33.5	99	40	65.0 (105.0)	105.0 (145.0)	1.0	252.320.000	142.320.000
222.320.110	26.9	38.1	32	39.0	110	40	65.0 (105.0)	105.0 (145.0)	1.3	252.320.000	142.320.000
222.420.145	37.9	54.1	42	52.5	145	40	90.0	130.0	1.6	252.420.000	142.420.000
222.420.161	53.9	70.1	42	60.5	161	40	90.0	130.0	1.8	252.420.000	142.420.000
222.550.207	69.9	90.1	55	78.5	207	45	115.0	160.0	2.2	252.550.000	142.550.000
222.550.227	89.9	110.1	55	88.5	227	45	115.0	160.0	2.4	252.550.000	142.550.000

- 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 Zweischnneiderkopf 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

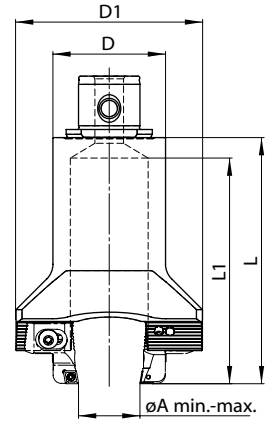
- **Attention:** Counter clockwise spindle rotation  
Vc max. 450 m/min

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



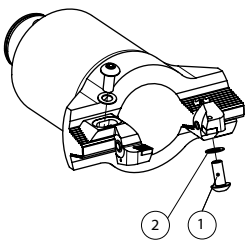
Bestell-Nr. / Order number	System ø D	D1	ø A min.	ø A max.	L	L1	Wendeplattenhalter / Insert holder
141.420.000	42	70	3.0	22.5	90	82	162.200.006 182.200.006
141.550.000	55	91	17.5	37.5	120	110	162.250.006 182.250.006
141.720.000	72	128	21.5	50.5	165	153	162.320.009 182.320.009
141.940.000	94	168	36.5	70.5	230	214	162.420.009 182.420.009

- Achtung: Linkslauf
- Wendeplattenhalter müssen separat bestellt werden
- Caution: counterclockwise rotation
- insert holders must be ordered separately



Ersatzteile / Zubehör

Spare parts / Accessories

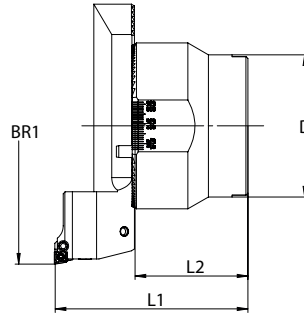
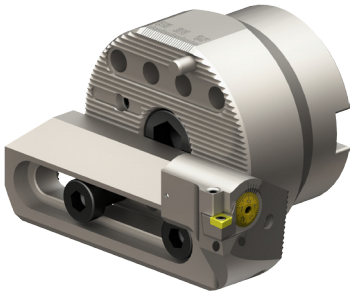


Für Zweischneider- überdrehkopf	Bestell-Nr. / Order number	Bestell-Nr. / Order number
For twin cutter pin turning head	Befestigungsschraube / Fastening screw ①	Federring / Spring washer ②
141.420.000	840.142.200	841.142.200
141.550.000	840.142.250	841.142.250
141.720.000	840.142.320	841.142.320
141.940.000	840.142.420	841.142.420

**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)**

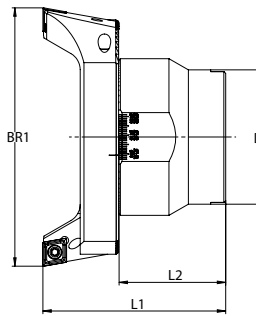
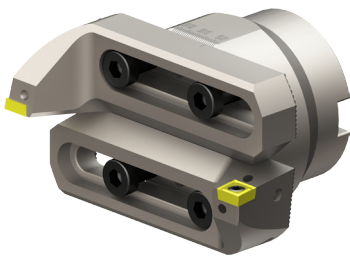
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment
- with inner coolant supply
- Clamp tool in a shell mill holder.
- **Fine boring adapter included (F01/F02)**

- 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**



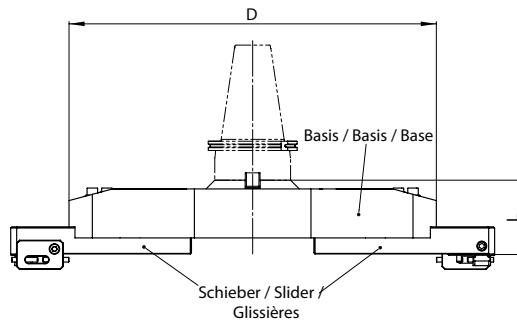
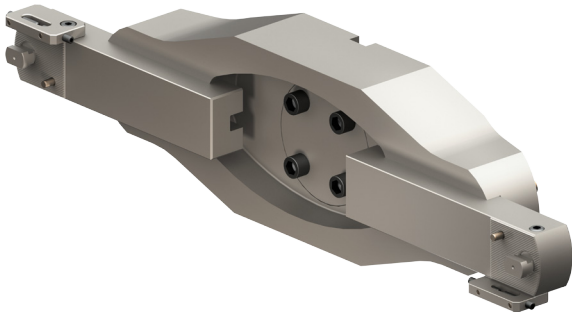
**ECO LINE**

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
223.060.063	650	1105	630	128	16.3	224.310.048	13.7
223.060.108	1100	1655	1080	128	27.3	224.360.048	15.7
223.060.163	1650	2205	1630	128	42.2	224.360.048	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

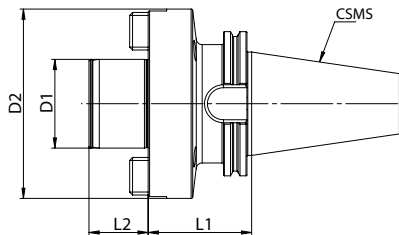
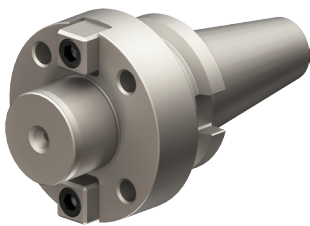
- pour utilisation sur le mandrin de base ø60 / ø129 DIN 6357
- base en aluminium
- veuillez nous contacter pour des solutions personnalisées
- Glissières doivent être commandés séparément et sont livrés par paire

214

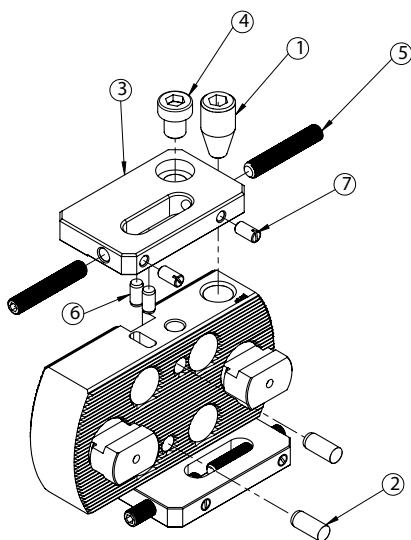
Aufnahmedorn für  
Verlängerungskonsolen ø650-2205

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
214.515.070	SK 50	60	70	40	128	7.5
214.512.080	BT 50	60	80	40	128	8.1
214.100.070	HSK-A 100	60	70	40	128	6.2



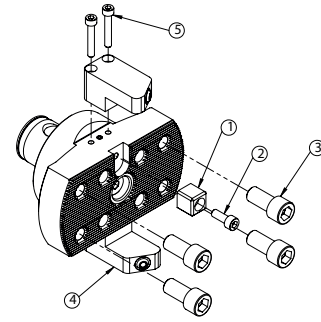
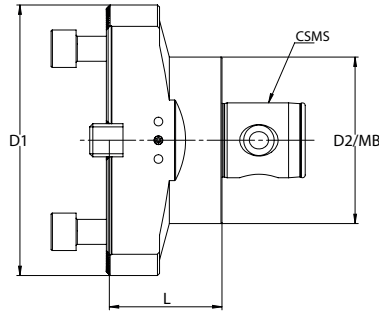
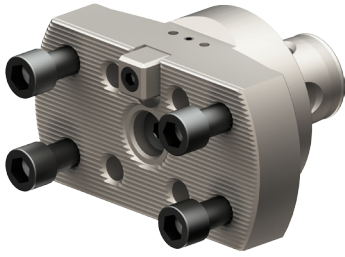
1	2	3	4	5	6	7
860.220.000	864.220.000	877.221.000	877.221.018	877.221.045	877.221.014	877.221.112

210 / E04 / KM

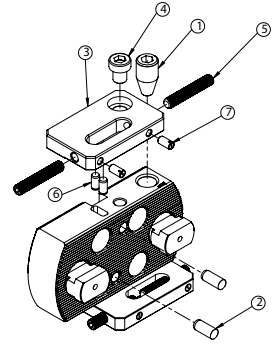
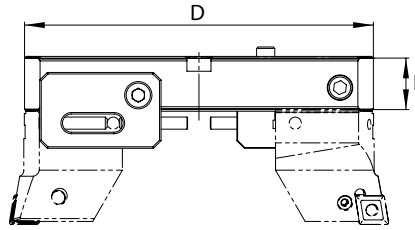
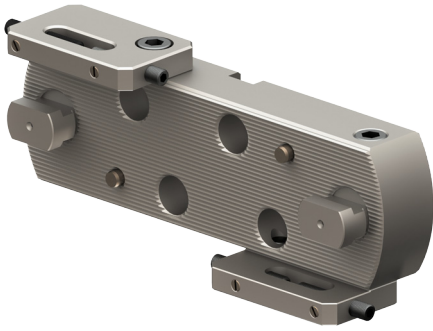
Aufnahmen mit Konsole  
Ø150-655

Master shanks with bridge adapter  
Ø150-655

base avec adaptateur de traverses  
Ø150-655



Bestell-Nr. / Order number / Code	CSMS / MB	D1	L	D2	kg	①	②	③	④	⑤
E04.340.130.069	CAT 40	130	69.1		3.3	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
E04.350.130.069	CAT 50	130	69.1		5.6	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
210.415.000	ISO 40	130	69.1		3.3	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
210.515.000	ISO 50	130	69.1		5.6	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
210.412.000	BT 40	130	77		3.4	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
210.512.000	BT 50	130	88		6.5	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
210.063.000	HSK A63	130	77		2.8	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
210.100.000	HSK A100	130	88		4.4	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
212.720.000	MB7	130	55	72	3.4	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
212.940.000	MB9	130	55	94	3.8	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
V44.KM6.130.065	KM63	130	65		2.8	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025
V44.KM8.130.070	KM80	130	70		3.9	810.212.362	811.210.212	812.210.212	920.028.015	920.029.025



Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	D	L	kg
221.130.000	150	205	130	30	1.9
221.180.000	200	255	180	30	2.8
221.230.000	250	305	230	35	4.0
221.280.000	300	355	280	35	5.1
221.330.000	350	405	330	40	6.9
221.380.000	400	455	380	40	8.0
221.430.000	450	505	430	40	9.2
221.480.000	500	555	480	40	10.2
221.530.000	550	605	530	50	13.9
221.580.000	600	655	580	50	15.3

• für die Verwendung zu 210 / E04 / V44

• for use with 210 / E04 / V44

• Pour utilisation 210 / E04 / V44

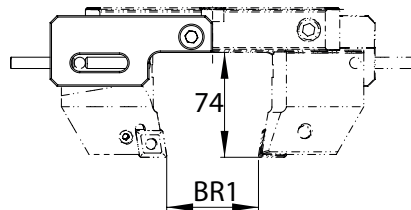
①	②	③	④	⑤	⑥	⑦
860.220.000	864.220.000	877.221.000	877.221.018	877.221.045	877.221.014	877.221.112

## 878

### Einstellplatte zum Überdrehen

### Adjustment plate for pin turning

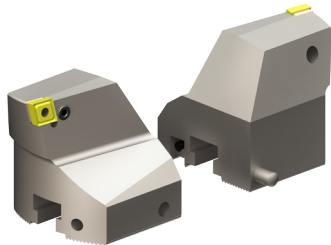
### Plaque de réglage pour adaptateur pour le tournage



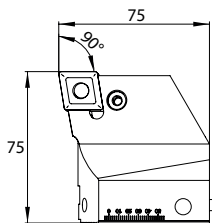
Bestell-Nr. / Order number / Code	BR1 min.	BR1 max.	Für Verlängerungskonsole / For extensions bridge / pour Extensions de traverses	kg
878.221.000	10	65	221.180.000	0.9
878.221.000	60	115	221.230.000	0.9
878.221.000	110	165	221.280.000	0.9
878.221.000	160	215	221.330.000	0.9
878.221.000	210	265	221.380.000	0.9
878.221.000	260	315	221.430.000	0.9
878.221.000	310	365	221.480.000	0.9
878.221.000	360	415	221.530.000	0.9
878.221.000	410	465	221.580.000	0.9

## 225

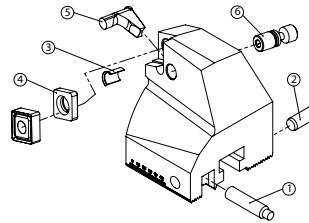
### Wendeplattenhalter 90°




### Insert holders 90°



### Porte-plaquettes 90°



Bestell-Nr. / Order number/ Code	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥	
225.000.009	CC .. 09 T3 ..	3,2	865.224.230	865.225.024					843.009.000
225.000.012	CN .. 12 04 ..	3,2	865.224.230	865.225.024	844.012.000	845.012.000	846.012.000	847.012.000	
225.000.019	CN .. 19 06 ..	3,2	865.224.230	865.225.024	844.019.000	845.019.000	846.019.000	847.019.000	

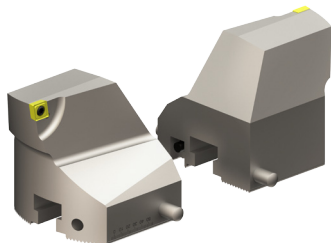
• Wendeplattenhalter werden paarweise geliefert

• insert holders will be supplied in pairs

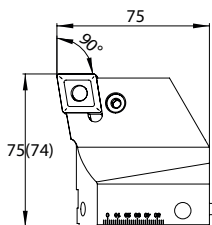
• Porte-plaquettes seront livrés par paire

## 227

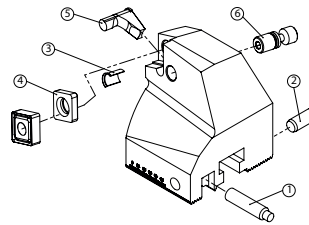
### Wendeplattenhalter 90° axial 1.0mm zurückgesetzt




### 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	
227.000.009	CC .. 09 T3 ..	3,2	865.224.230	865.225.024					843.009.000
227.000.012	CN .. 12 04 ..	3,2	865.224.230	865.225.024	844.012.000	845.012.000	846.012.000	847.012.000	
227.000.019	CN .. 19 06 ..	3,2	865.224.230	865.225.024	844.019.000	845.019.000	846.019.000	847.019.000	

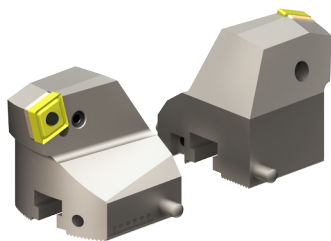
• Wendeplattenhalter werden paarweise geliefert

• insert holders will be supplied in pairs

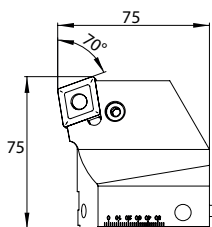
• Porte-plaquettes seront livrés par paire

## 229

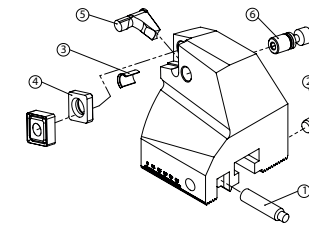
### Wendeplattenhalter 70°



### Insert holders 70°



### Porte-plaquettes 70°



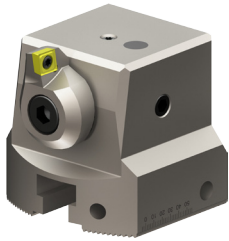
Bestell-Nr. / Order number/ Code	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	⑤	⑥	
229.000.019	CN .. 19 06 ..	3,2	865.224.230	865.225.024	844.019.000	845.019.000	846.019.000	847.019.000	

• Wendeplattenhalter werden paarweise geliefert

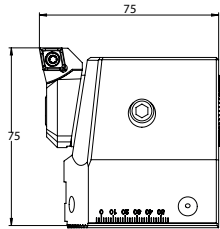
• insert holders will be supplied in pairs

• Porte-plaquettes seront livrés par paire

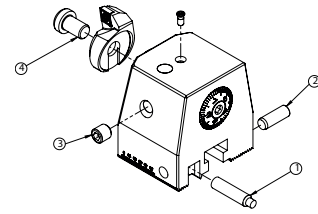
230  
Feinbohrkopf



Fine boring head



Tête d'alésage fin



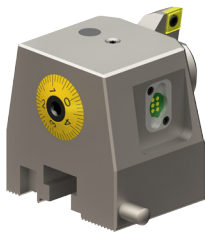
Bestell-Nr. / Order number/ Code	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	
230.000.000	254.550.006 254.550.009	CC .. 06 02 .. CC .. 09 T3 ..	2.1	865.224.230	865.225.024	881.230.000	880.252.550	843.006.000 843.009.000

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

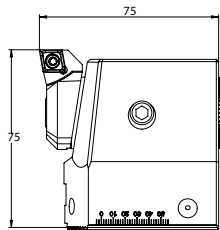
- diametrical adjustment with maximal reduced reversal backlash
- 0.01mm diametrical adjustment
- insert holder must be ordered separately

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

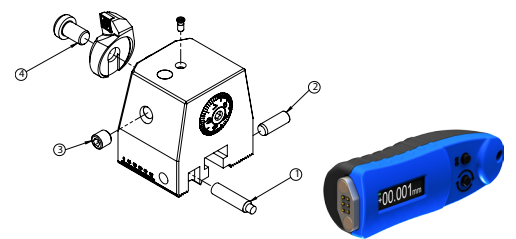
231  
Feinbohrkopf  
DIGITAL



Fine boring head  
DIGITAL



Tête d'alésage fin  
DIGITAL



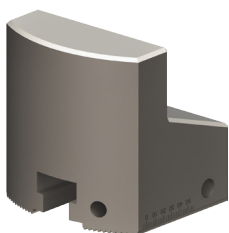
Bestell-Nr. / Order number/ Code	Wendeplattenhalter / insert holder / porte-inserts	Wendeplatte / Insert / Plaquette	kg	①	②	③	④	
231.000.000	254.550.006 254.550.009	CC .. 06 02 .. CC .. 09 T3 ..	2.1	865.224.230	865.225.024	881.230.000	880.252.550	843.006.000 843.009.000

- Einstellgenauigkeit 0.001mm im Durchmesser
- direktes Wegmeßsystem (kein Umkehrspiel)
- keine Batterie und Auswertelektronik im Werkzeug verbaut
- sehr einfache Bedienung
- digital und analog einsetzbar
- Anzeigeeinheit muss separat bestellt werden (266.028.077)
- Wendeplattenhalter müssen separat bestellt werden

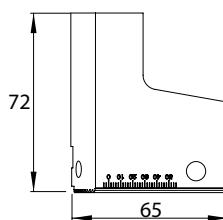
- 0.001 accuracy in diameter
- direct measurement system (no backlash)
- no battery and electronic evaluation unit inside the tool
- very easy operation
- for digital and analog use
- Display unit must be ordered separately (266.028.077)

- 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 (266.028.077)
- porte-plaquettes doivent être commandés séparément

232  
Gegengewicht



Counterweight

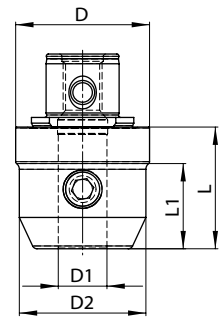


Contre-poids

Bestell-Nr. / Order number/ Code	kg
232.000.000	2.2

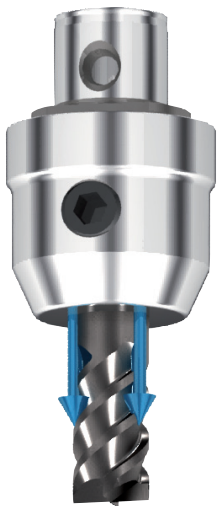


Bestell-Nr. / Order number	System ø D	D1	D2	L1	L
322.550.006	55	6	25	27	42
322.550.008	55	8	28	27	42
322.550.010	55	10	35	30	45
322.550.012	55	12	42	35	50
322.550.014	55	14	45	35	50
322.550.016	55	16	48	35	50
322.550.018	55	18	50	35	50
322.550.020	55	20	52	35	50
322.550.025	55	25	55	-	65
322.720.032	72	32	72	-	80
322.720.040	72	40	80	-	85

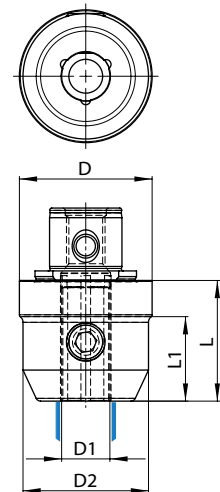


- Kühlmittelzufuhr entlang dem Werkzeugschaft für den Einsatz von Werkzeugen ohne Innenkühlung

- Spindle coolant is directed through three channels around the outside surface of the cutter, allowing use of milling cutters without inner coolant supply



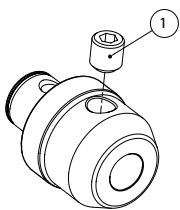
Bestell-Nr. / Order number	System ø D	D1	D2	L1	L
323.550.006	55	6	25	26	42
323.550.008	55	8	28	26	42
323.550.010	55	10	35	29	45
323.550.012	55	12	42	34	50
323.550.014	55	14	44	34	50
323.550.016	55	16	48	34	50
323.550.018	55	18	50	34	50
323.550.020	55	20	52	41	57
323.550.025	55	25	55	-	65



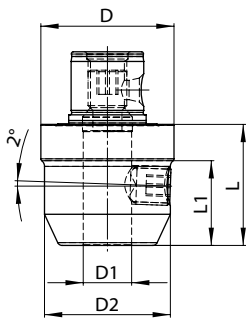
## Ersatzteile / Zubehör

## Spare parts / Accessories

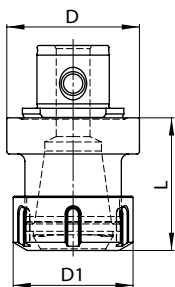
322/323/332



Für Fräterspannfutter For end mill adapter	Bestell-Nr. / Order number
	Spannschraube / Clamping screw
3xx.550.006	890.322.006
3xx.550.008	890.322.008
3xx.550.010	890.322.010
3xx.550.012	890.322.012
3xx.550.014	890.322.012
3xx.550.016	890.322.016
3xx.550.018	890.322.016
3xx.550.020	890.322.020
3xx.550.025	890.322.025
3xx.xxx.032	890.322.032
3xx.xxx.040	890.322.040



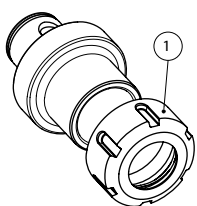
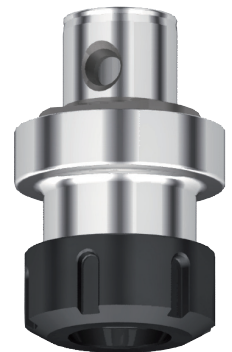
Bestell-Nr. / Order number	System ø D	D1	D2	L1	L
332.550.006	55	6	25	26	42
332.550.008	55	8	28	26	42
332.550.010	55	10	35	29	45
332.550.012	55	12	42	34	50
332.550.014	55	14	44	34	50
332.550.016	55	16	48	34	50
332.550.018	55	18	50	34	50
332.550.020	55	20	52	34	50
332.550.025	55	25	55	-	65
332.720.032	72	32	72	-	80
332.720.040	72	40	80	-	85



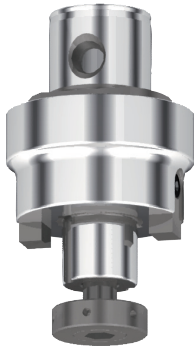
Bestell-Nr. / Order number	System ø D	D1	L	Spannzange / Collet	Spannbereich / Clamping range
342.250.016	25	22	35	ER 16	0.5-10
342.320.020	32	28	35	ER 20	1-13
342.550.025	55	42	50	ER 25	1-16
342.550.032	55	50	55	ER 32	2-20
342.550.040	55	63	62	ER 40	3-26
342.720.032	72	50	55	ER 32	2-20
342.720.040	72	63	62	ER 40	3-26

- 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)



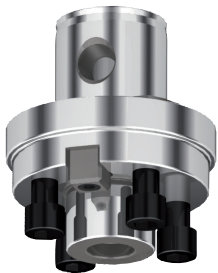
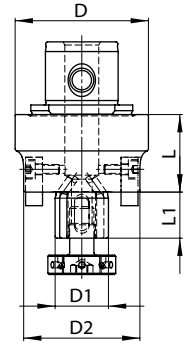
Für Fräterspannfutter For end mill adapter	Bestell-Nr. / Order number
	Spannmutter / Clamping nut
342.250.016	895.342.016
342.320.020	895.342.020
342.550.025	895.342.025
342.xxx.032	895.342.032
342.xxx.040	895.342.040



- mit Innenkühlung und Differenzialschraube

- with inner coolant supply and compensation screw

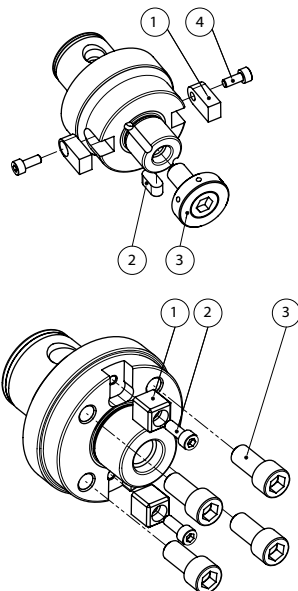
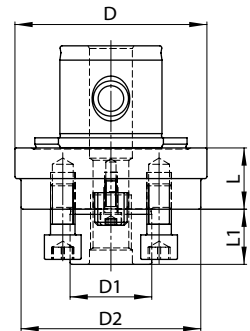
Bestell-Nr. / Order number	System ø D	D1	D2	L1	L
354.550.013	55	13	31	12	32
354.550.016	55	16	39	17	32
354.550.022	55	22	49	19	32
354.550.027	55	27	60	21	34
354.550.032	55	32	74	24	38
354.720.022	72	22	49	19	32
354.720.027	72	27	60	21	34
354.720.032	72	32	72	24	38
354.720.040	72	40	80	27	40



- mit Innenkühlung und Differenzialschraube

- with inner coolant supply and compensation screw

Bestell-Nr. / Order number	System ø D	D1	D2	L1	L
362.720.040	72	40	88	27	30
362.940.040	94	40	88	27	30

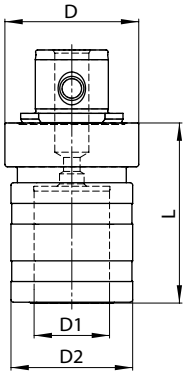


## Ersatzteile / Zubehör

## Spare parts / Accessories

354/362

Für Aufsteckfräsdorn For milling arbor	Bestell-Nr. / Order number	Bestell-Nr. / Order number	Bestell-Nr. / Order number	Bestell-Nr. / Order number
Mitnehmerkeil / Drive lug ①	900.352.013	Passfeder / Splined key ②	Fräseranzugsschraube / Clamping screw ③	Schraube / Screw ④
354.xxx.013	900.352.013	902.352.013	904.352.013	905.352.308
354.xxx.016	900.352.016	902.352.016	904.352.016	905.352.308
354.xxx.022	900.352.022	902.352.022	904.352.022	905.352.410
354.xxx.027	900.352.027	902.352.027	904.352.027	905.352.512
354.xxx.032	900.352.032	902.352.032	904.352.032	905.352.616
354.xxx.040	900.352.040	902.352.040	904.352.040	905.352.618
Für Messerkopf- aufnahme For adapters for milling heads	Bestell-Nr. / Order number	Bestell-Nr. / Order number	Bestell-Nr. / Order number	
Mitnehmerstein / Drive lug ①	810.212.362	Schraube / Screw ②	Schraube / Screw ③	
362.xxx.040	810.212.362	811.210.212	812.210.212	



- für Maschinen mit synchronisiertem Gewindeschneiden
- innere Kühlmittelzuführung
- System Bilz
- for machines only with synchronised thread cutting feed
- with inner coolant supply
- System Bilz

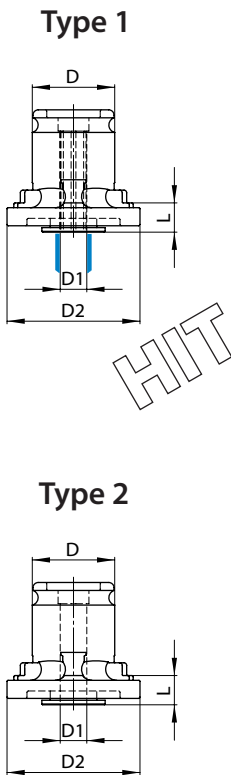
Bestell-Nr. / Order number	System ø D	L	Gewindegröße / Thread size	D1	D2
396.320.115	32	46	M 3 – M 14	19	32
396.550.115	55	52	M 3 – M 14	19	32
396.550.225	55	74	M 6 – M 24	31	50
396.720.340	72	99	M 14 – M 36	48	72



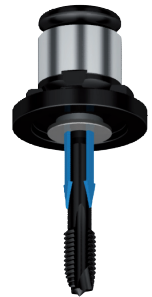
Schnellwechseleinsätze

Quick-change adapter

- für Gewindebohrer DIN 371/376
- for screw tap DIN 371/376

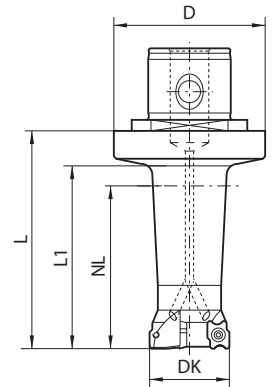


Type 1 Bestell-Nr. / Order number	Type 2 Bestell-Nr. / Order number	D ø / □	D1	D2	L
887.001.035	888.001.035	3.5 / 2.7	19	32	7
887.001.040	888.001.040	4.0 / 3.0	19	32	7
887.001.045	888.001.045	4.5 / 3.4	19	32	7
887.001.060	888.001.060	6.0 / 4.9	19	32	7
887.001.070	888.001.070	7.0 / 5.5	19	32	7
887.001.080	888.001.080	8.0 / 6.2	19	32	7
887.001.090	888.001.090	9.0 / 7.0	19	32	7
887.001.100	888.001.100	10.0 / 8.0	19	32	7
887.001.110	888.001.110	11.0 / 9.0	19	32	7
887.002.060	888.002.060	6.0 / 4.9	31	50	11
887.002.070	888.002.070	7.0 / 5.5	31	50	11
887.002.080	888.002.080	8.0 / 6.2	31	50	11
887.002.090	888.002.090	9.0 / 7.0	31	50	11
887.002.100	888.002.100	10.0 / 8.0	31	50	11
887.002.110	888.002.110	11.0 / 9.0	31	50	11
887.002.120	888.002.120	12.0 / 9.0	31	50	11
887.002.140	888.002.140	14.0 / 11.0	31	50	11
887.002.160	888.002.160	16.0 / 12.0	31	50	11
887.002.180	888.002.180	18.0 / 14.5	31	50	11





Bestell-Nr. / Order nr.	System ø D	L	L1	NL	DK	ø A min.	ø A max.	K	Z	G
772.550.015	55	42	30	26	14.0	16.0	26.0	SK	2	1
772.550.025	55	60	48	44	14.0	16.0	26.0	SK	2	2
772.550.035	55	76	64	60	14.0	16.0	26.0	HK	2	3
772.550.045	55	94	82	78	14.0	16.0	26.0	HK	2	4
772.550.115	55	46	34	30	15.6	19.6	30.0	SK	3	1
772.550.125	55	66	54	50	15.6	19.6	30.0	SK	3	2
772.550.135	55	85	73	69	15.6	19.6	30.0	HK	3	3
772.550.145	55	105	93	88	15.6	19.6	30.0	HK	3	4
772.550.155	55	125	113	108	15.6	19.6	30.0	HK	3	5
772.550.215	55	54	42	38	18.8	25.0	35.0	SK	3	1
772.550.225	55	78	66	63	18.8	25.0	35.0	SK	3	2
772.550.235	55	104	92	88	18.8	25.0	35.0	HK	3	3
772.550.245	55	128	116	113	18.8	25.0	35.0	HK	3	4
772.550.255	55	154	142	138	18.8	25.0	35.0	HK	3	5



• Einsetzbare Wendeplatten  
LCHT 06 03 00

ø A min. = Kleinster Bohrungs-  
durchmesser

ø A max. = Grösster Bohrungs-  
durchmesser ohne Vorboh-  
ren

NL = max. Bearbeitungstiefe

DK = Bohr-Fräser-Kopfdurchmesser

Z = Zähnezahl

K = Kern (SK = Stahlschaft,  
HK = Hartmetallkern)

G = Schaftlänge

• For use with Inserts LCHT 06 03 00

ø A min. = minimum boring  
diameter

ø A max. = maximum boring diame-  
ter without pre-boring



NL = maximum machining  
depth

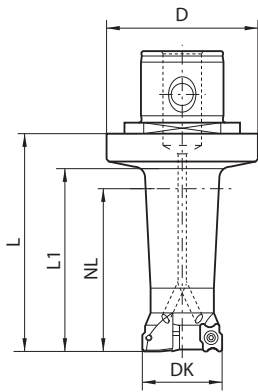
DK = Bore-Mill head diameter

Z = Number of teeth

K = Shaft type (SK = Steel  
shaft, HK = Shaft with car-  
bide insert)

G = Shaft type code

Bestell-Nummer	Wendeplatte	Schneidstoff	Technische Informationen	
Order number	Insert	Cutting mat.	Technical information	
600.820.006 600.820.009	LCHT 060300 LCHT 090400	FHF 	Mehrfach <b>beschichtete feinstkorn Hartmetall-Wendeplatte</b> zur Bearbeitung von allen Materialien bis HRc 42. Die Geometrie und die TiAlN-Beschichtung (Futura) ist optimal auf den Bohrfräser «Rambo» abgestimmt.	Bitte Zusatzkatalog mit Anwendungsempfehlungen verlangen! mbm_rambo.pdf
			Repeat <b>coated fine grain carbide</b> insert for machining of all materials up to 42 HRC. The TiAlN coating (Futura) and geometry of the insert is perfect for use in the «Rambo» Bore-Mill	For more information order the special leaflet! mbm_rambo.pdf
600.840.006 600.840.009	LCHT 060300 LCHT 090400	FHE 	Mehrfach <b>beschichtete feinstkorn Hartmetall-Wendeplatte</b> zur Bearbeitung von allen Materialien bis HRc 42. Die Geometrie und die TiAlN-Beschichtung (X.Treme) ist optimal auf den Bohrfräser «Rambo» abgestimmt.	Bitte Zusatzkatalog mit Anwendungsempfehlungen verlangen! mbm_rambo.pdf
			Repeat <b>coated fine grain carbide</b> insert for machining of all materials up to 42 HRC. The TiAlN coating (X.Treme) and geometry of the insert is perfect for use in the «Rambo» Bore-Mill	For more information order the special leaflet! mbm_rambo.pdf



Bestell-Nr. / Order nr	System ø D	L	L1	NL	DK	ø A min.	ø A max.	K	Z	G
772.550.315	55	62	50	45	23.0	30.0	46.0	SK	3	1
772.550.325	55	92	80	75	23.0	30.0	46.0	SK	3	2
772.550.335	55	122	110	105	23.0	30.0	46.0	HK	3	3
772.550.345	55	152	140	135	23.0	30.0	46.0	HK	3	4
772.550.355	55	182	170	165	23.0	30.0	46.0	HK	3	5
772.550.415	55	79	67	60	28.0	40.0	56.0	SK	3	1
772.550.425	55	116	104	100	28.0	40.0	56.0	SK	3	2
772.550.435	55	156	144	140	28.0	40.0	56.0	HK	3	3
772.550.445	55	196	184	180	28.0	40.0	56.0	HK	3	4
772.550.455	55	236	224	220	28.0	40.0	56.0	HK	3	5
772.550.510	55	56	44	40	33.0	50.0	66.0	SK	3	1
772.720.515	72	92	80	75	33.0	50.0	66.0	SK	3	2
772.720.525	72	142	130	125	33.0	50.0	66.0	SK	3	3
772.720.535	72	192	180	175	33.0	50.0	66.0	HK	3	4
772.550.610	55	66	54	50	38.0	60.0	76.0	SK	4	1
772.720.615	72	106	94	90	38.0	60.0	76.0	SK	4	2
772.720.625	72	166	154	150	38.0	60.0	76.0	SK	4	3
772.720.635	72	226	214	210	38.0	60.0	76.0	HK	4	4
772.550.710	55	76	64	60	44.0	72.0	88.0	SK	5	1
772.720.715	72	125	113	108	44.0	72.0	88.0	SK	5	2
772.720.720	72	160	148	144	44.0	72.0	88.0	SK	5	3
772.720.725	72	196	184	180	44.0	72.0	88.0	SK	5	4
772.550.810	55	86	74	70	50.0	84.0	100.0	SK	6	1
772.720.815	72	142	130	126	50.0	84.0	100.0	SK	6	2
772.720.820	72	184	172	168	50.0	84.0	100.0	SK	6	3
772.720.825	72	226	214	210	50.0	84.0	100.0	SK	6	4



- Einsetzbare Wendplatten  
LCHT 09 04 00

- ø A min. = Kleinster Bohrungsdurchmesser
- ø A max. = Grösster Bohrungsdurchmesser ohne Vorbohren
- NL = max. Bearbeitungstiefe
- DK = Bohr-Fräser-Kopfdurchmesser
- Z = Zähnezahl
- K = Kern (SK = Stahlschaft, HK = Hartmetallkern)
- G = Schaftlänge

- For use with Inserts LCHT 09 04 00








- ø A min. = minimum boring diameter
- ø A max. = maximum boring diameter without pre-boring
- NL = maximum machining depth
- DK = Bore-Mill head diameter
- Z = Number of teeth
- K = Shaft type (SK = Steel shaft, HK = Shaft with carbide insert)
- G = Shaft type code

## Ersatzteile / Zubehör












## Spare parts / Accessories



772















Für Bohr-Fräser	Bestell-Nr. / Order number	Bestell-Nr. / Order number
For Bore-Mill	Torx-Dreher / Torx driver	Torx-Schraube / Torx screw
772.550.015-255	842.106.000	843.006.000
772.550.315-772.720.825	842.108.000	843.030.000

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]
600.050.022	WCMT 020102	 CTU	 <b>Cermet-Wendeplatte</b> (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 ( <b>Cermet</b> ) 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
			<b>Plaquette de Cermet</b> (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
600.060.022	WCGT 020102	 HUP	 Unbeschichtete <b>Hartmetall-Wendeplatte</b> , 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
			<b>Plaquette en carbure</b> 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
600.070.022	WCGT 020102	 SFH	 Mehrfach <b>beschichtete superfeinstkorn Hartmetall-Wendeplatte</b> zur Bearbeitung von harten und gehärteten Werkstoffen <b>bis 62 HRC</b> . Die Wendeplatte eignet sich hervorragend für Feinbohrarbeiten in gehärtetem Stahl als Alternative zum K-Schleifen.	Stahl weich	bis 300	0.04
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 <b>coated extremely fine grain carbide</b> insert for machining of hard and hardened steels up <b>to 62 HRC</b> . 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
			<b>Plaquette en carbure à grains super fins</b> multicouches pour l'usinage de matériaux durs et trempés jusqu'à <b>62 HRC</b> . 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]
600.200.062	CCMT 060202	 CTU	 <b>Cermet-Wendeplatte</b> (Titan-Carbid / Titan-Nitrid) für niedrige bis hohe Schnittgeschwindigkeiten beim Schlichten mit gleichbleibendem Aufmass. Auch für leichte Schrupperarbeiten einsetzbar. Bester Widerstand gegen Verschleiss und Schneidekantendeformation. Geeignet für Feinbohrarbeiten mit normalem Aufmass von 0.25 mm im Durchmesser.	Stahl	50–300	0.08
600.200.064	CCMT 060204			Stahl rostfrei	30–250	bis
600.200.092	CCMT 09T302			Grauguss	50–300	0.15
600.200.094	CCMT 09T304			Aluminium	bis 800	
600.200.098	CCMT 09T308			Buntmetall	bis 500	
600.200.128	CCMT 120408					
			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.	Steel Stainless steel Cast iron Aluminium Copper alloys	50–300 30–250 50–300 to 800 to 500	0.08 to 0.15
			<b>Plaquette de Cermet</b> (carbure de titane / nitrure de titane) pour finition avec vitesse de coupe de basse à élevée avec profondeur de coupe normale. Également pour dégrossissage léger. Haute résistance à l'usure et la déformation des tranchants. Convient pour l'alésage fin avec des profondeurs de coupe normales à partir de 0,25 mm de diamètre d'alésage.	Acier Acier inox Fonte Aluminium Alliage de cuivre	50–300 30–250 50–300 à 800 à 500	0.08 à 0.15
600.850.062	CCGT 060202L	 ICH	 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.	Stahl weich	bis 300	0.04
600.850.064	CCGT 060204L			Stahl HRC 45	80–250	bis
600.850.094	CCGT 09T304L			Stahl HRC 50	80–200	0.20
			Stahl HRC 55	50–150		
			Stahl rostfrei	30–200		
			Grauguss	50–300		
			Excellent toughness and wear resistance due to the special composition of the base material plus the special TiCN coating. Very suitable for interrupted cuts	Steel soft Steel HRC 45 Steel HRC 50 Steel HRC 55 Stainless steel Cast iron	bis 300 80–250 80–200 50–150 30–200 50–300	0.04 to 0.20
			Haute résistance et tenacité à l'usure grâce à la composition spéciale de la matière de base et au revêtement spécial TiCN. Stabilité mécanique et résistance à l'usure très élevées. Très bien adapté à la coupe interrompue.	Acier soft Acier HRC 45 Acier HRC 50 Acier HRC 55 Acier inox Fonte	à 300 80–250 80–200 50–150 30–200 50–300	0.04 à 0.20

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]
600.300.062	CCGT 060202L ○	CTG 	Allseitig <b>geschliffene, hochpositive Cermet-Wendeplatte</b> (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
600.300.064	CCGT 060204L ○					
600.300.092	CCGT 09T302L ○					
600.300.094	CCGT 09T304L ○					
<b>HIT</b>			All ground, <b>Cermet</b> 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
600.800.062	CCGT 060202L ○	SFH 	Mehrfach <b>beschichtete superfeinstkorn Hartmetall-Wendeplatte</b> zur Bearbeitung von harten und gehärteten Werkstoffen <b>bis 62 HRC</b> . 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
600.800.064	CCGT 060204L ○					
600.800.092	CCGT 09T302L ○					
600.800.094	CCGT 09T304L ○					
<b>HIT HRC+</b>			Repeat <b>coated extremely fine grain carbide</b> insert for machining of hard and hardened steels up to <b>62 HRC</b> . 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
			<b>Plaquette en carbure à grains super fins</b> multicouches pour l'usinage de matériaux durs et trempés jusqu'à <b>62 HRC</b> . 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]
600.400.064	CCMT 060204	 HBH	<p>Mehrfach <b>beschichtete Hartmetall-Wendeplatte</b> mit hoher Verschleissfestigkeit und grossem Widerstand gegen plastische Verformung. Generell geeignet für die Stahlbearbeitung mit mittleren bis hohen Schnittgeschwindigkeiten.</p> <p>Repeat <b>coated carbide</b> 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
600.400.094	CCMT 09T304			Stahl rostfrei	30–250	bis
600.400.098	CCMT 09T308			Grauguss	50–250	0.40
600.401.128	CCMT 1204.08			Sphäroguss	50–180	
600.400.128	CNMG 120408			Aluminium	bis 800	
600.400.168	CNMG 160608			Buntmetall	bis 500	
600.400.169	CNMG 160612					
600.400.198	CNMG 190612					
600.400.199	CNMG 190616					
			<p>Plaque 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>	<p>Acier</p> <p>Acier inox</p> <p>Fonte</p> <p>Fonte sphéroïdale</p> <p>Aluminium</p> <p>Alliage de cuivre</p>	<p>20–280</p> <p>30–250</p> <p>50–250</p> <p>50–180</p> <p>à 800</p> <p>à 500</p>	<p>0.10</p> <p>à</p> <p>0.40</p>
600.500.128	CNMM 120408	 HBZ	<p>Mehrfach <b>beschichtete Hartmetall-Wendeplatte</b> mit höchster Zähigkeit und Stabilität der Schneidekante. Geeignet für Stahlbearbeitung durch die positive Schneidegeometrie auch bei unterbrochenem Schnitt.</p> <p>Repeat <b>coated carbide</b> 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
600.500.168	CNMM 160608			Stahl rostfrei	30–250	bis
600.500.169	CNMM 160612			Grauguss	50–300	0.60
600.500.198	CNMM 190612			Sphäroguss	50–200	
600.500.199	CNMM 190616			Aluminium	bis 800	
				Buntmetall	bis 500	
			<p>Plaque 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>	<p>Acier</p> <p>Acier inox</p> <p>Fonte</p> <p>Fonte sphéroïdale</p> <p>Aluminium</p> <p>Alliage de cuivre</p>	<p>50–300</p> <p>30–250</p> <p>50–300</p> <p>50–200</p> <p>à 800</p> <p>à 500</p>	<p>0.10</p> <p>à</p> <p>0.60</p>

The background of the page is a solid blue color. Overlaid on this is a white technical drawing of a mechanical assembly. The drawing consists of solid white lines for visible edges and dashed white lines for hidden internal features. A central horizontal ruler is drawn with markings every millimeter and numerical labels at 10, 20, 30, 40, 50, 60, and 70. The ruler is positioned horizontally across the middle of the drawing. The mechanical parts around it include various cylindrical and rectangular shapes, some with internal holes and threads, and a hexagonal feature on the left side. The overall style is clean and technical, typical of engineering drawings.

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