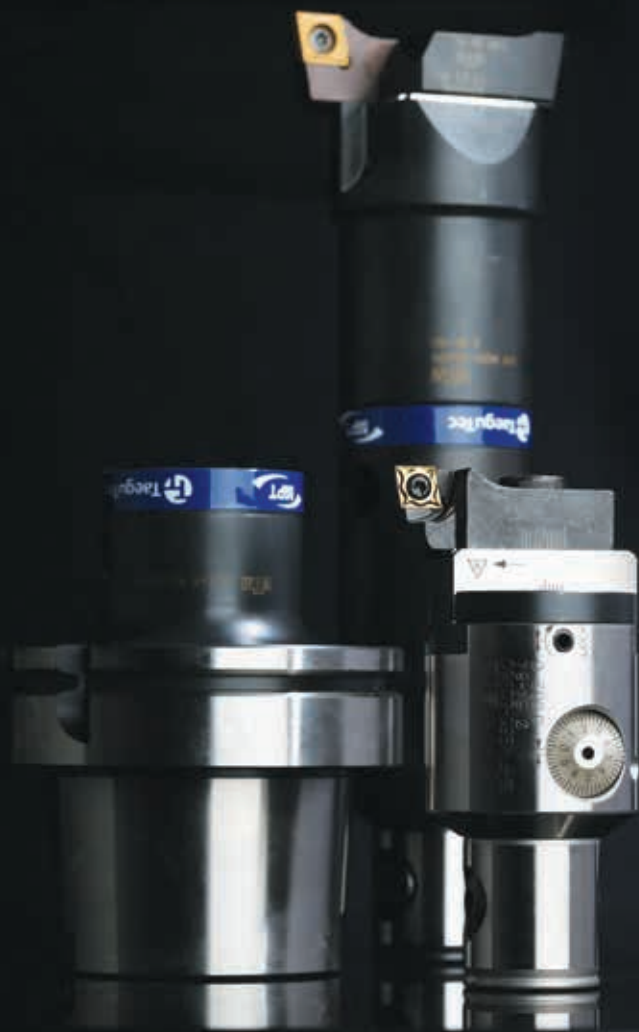


MPT

MODULAR PRECISION TOOLING



Modular Precision Tooling



Tool Selection Guide	H4
Shanks	H6
Extensions and Reducers	H18
Toolholders	H21
Rough Boring Heads	H29
Fine Boring Heads	H35

Guide to Icons



➤ Insert Page



➤ Spare Parts Page



➤ [Toolholders Page](#)



➤ Slide Page



➤ Cutting Condition Page

[illegible]

Tool Selection Guide

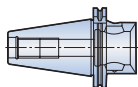
MPT system

Shanks

SKA



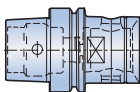
H6



HSK



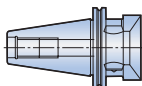
H8-H9



CATM



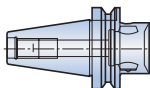
H7



BT/BT-FC



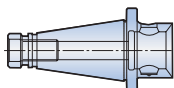
H11-H12



ISOM/ISO



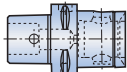
H13



C MB



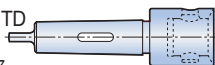
H10



MTT/MTD



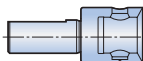
H17



ST



H14-H15

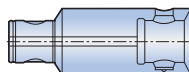


Extensions and reducers

EX



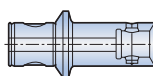
H18



RE



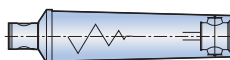
H19



RE AVI



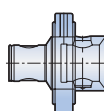
H20



CHR



H20

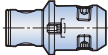


Tool Selection Guide

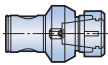
MPT system

Toolholders

EMH  H21



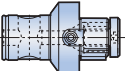
CC  H22



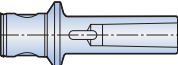
DC  H22



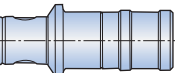
SMH  H23



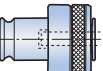
AMT  H26



TP  H24



TCC-DIN  H25



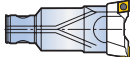
BLANK  H27



Boring heads

Rough boring heads

BHRw  H29



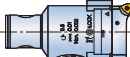




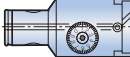


Fine boring heads

BHE  H35



BHF  H41

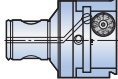








BHF 50,63,80  H42





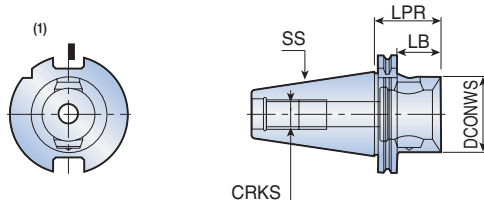








SK shank with MB connection



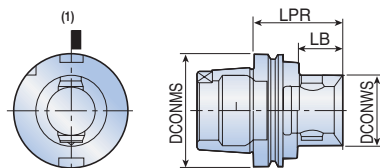
DIN 69871- AD / ISO 7388/1 MB

[illegible]

► ⁽¹⁾ Cutting edge position

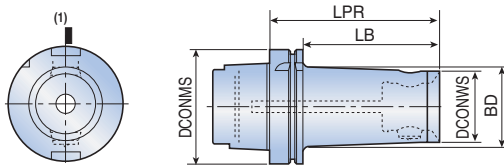
► ⁽¹⁾ Cutting edge position

HSK shank with MB connection



HSK DIN 69893 MB

Fig.1



HSK DIN 69893-A MB

Fig.2

[illegible]

► ⁽¹⁾ Cutting edge position

Shanks

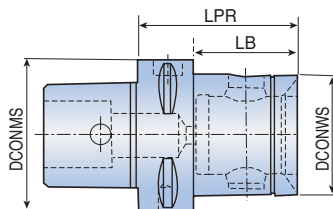
MB

MB

Fig.2

► ⁽¹⁾ Cutting edge position

C-adapter shank with MB connection

[illegible]

► ⁽¹⁾ Cutting edge position

BT-FC shanks with MB connection

DIN6357

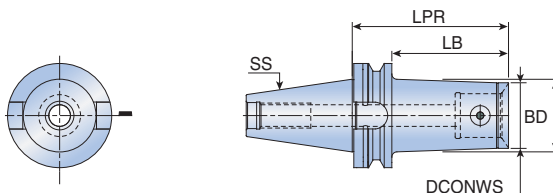
[illegible]

Figure 1 shows the dimensional drawing of a 1/2" NPT x 1/2" NPT Tee. The drawing includes a top view and a side view. The top view is a circle with a central hole. The side view shows a tee shape with dimensions: LPR (Length of Port Run), LB (Length of Body), DCONWS (Diameter of Conical Nozzle), SS (Shoulder), and CRKS (Crack).

[illegible]

Straight shanks with MB connection

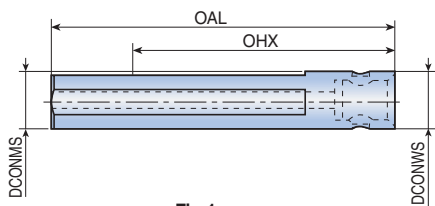


Fig.1

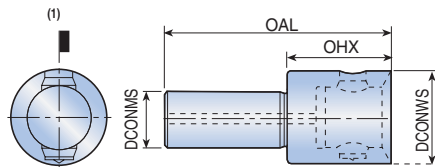


Fig.2

[illegible]

► ⁽¹⁾ Cutting edge position

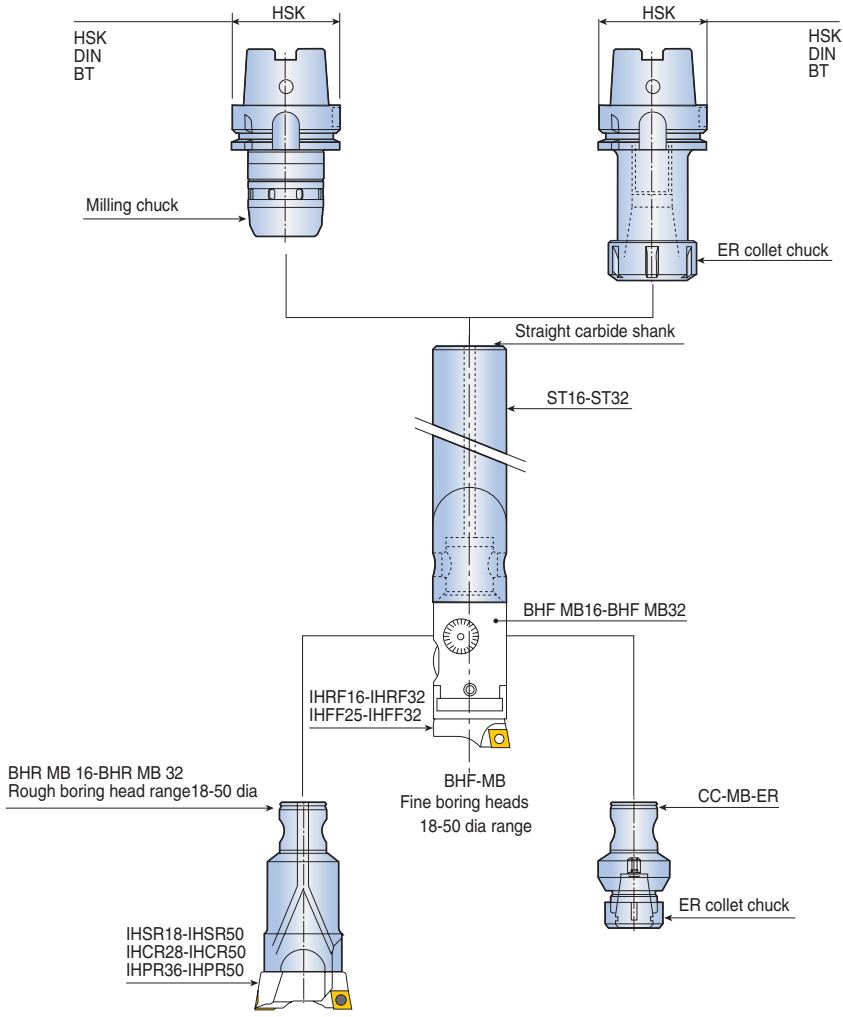
Technical drawing of a shaft assembly. The drawing shows a shaft with a blue cylindrical section and a white section with a keyway. Dimensions are indicated as follows:

- $LF(assembly)$: Total length of the assembly.
- L_{max} : Maximum length of the shaft.
- OAL : Overall length of the shaft.
- $DCONWS$: Diameter of the shaft at the end.
- $DCONMS$: Diameter of the shaft at the other end.

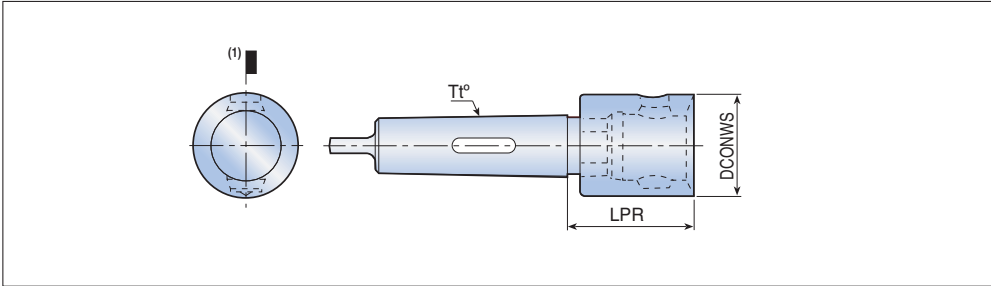


ST-MB straight carbide shank with MB connection assembly options

ST16-ST32 MB16-MB32
Diameter range: 18-50 mm



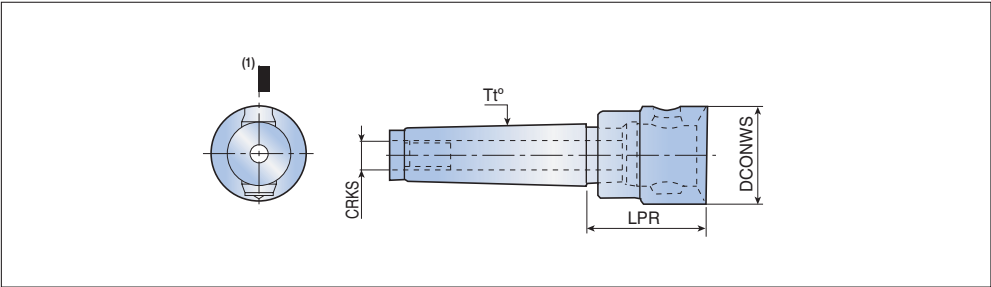
Morse taper shanks with MB connection



Designation	Dimension (mm)			 Kg
	Tt°	DCONWS	LPR	
MTT 5- MB63	MT5	MB63	65	2.1

► ⁽¹⁾Cutting edge position

Morse taper shanks with MB connection



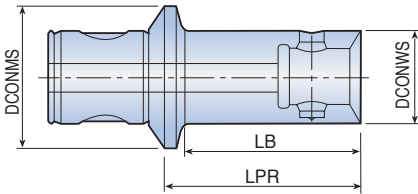
Designation	Dimension (mm)			CRKS	 Kg
	Tt°	DCONWS	LPR		
MTD 4-MB50	MT4	MB50	63	M16	0.9
MB50 SIP	MT4	MB50	63	M14	1.0

► ⁽¹⁾Cutting edge position

Technical drawing of a cylindrical component, likely a lens or filter, showing its profile and dimensions. The drawing includes a central longitudinal section with a dashed line indicating the axis of symmetry. The overall length is labeled LPR, and the diameter of the main body is labeled DCONWS. The component features a central threaded section and a flange at one end.

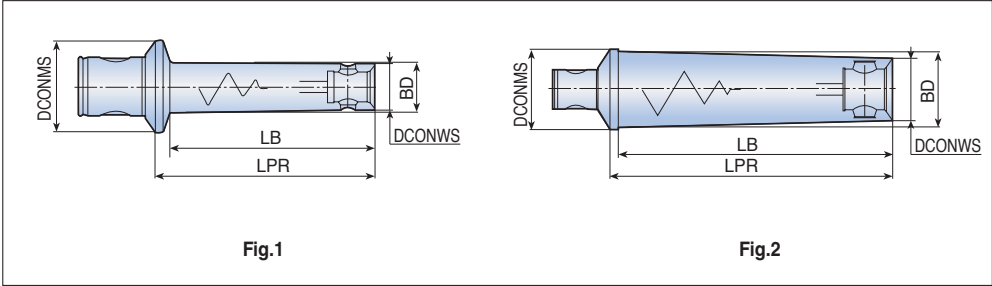
ADVANCECUTTING
TaequTec

Reducers with MB connection



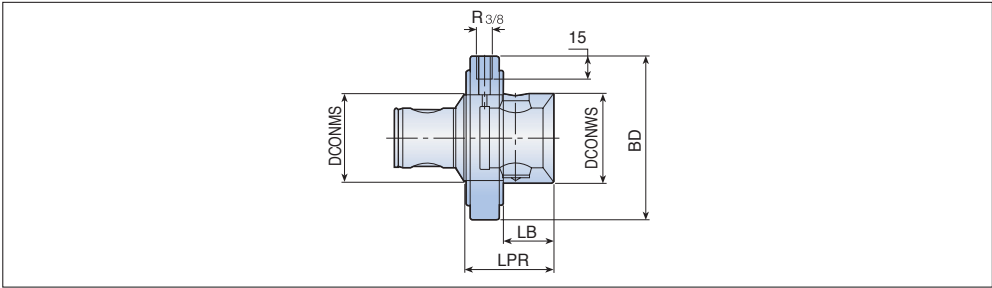
Designation		Dimension (mm)				 Kg
		DCONMS	DCONWS	LPR	LB	
RE	MB16-MB14x24	MB16	MB14	24	19.5	0.3
	MB20-MB14x19	MB20	MB14	19	13.5	0.4
	MB20-MB16x20	MB20	MB16	20	16	0.5
	MB25-MB14x19	MB25	MB14	19	13.5	0.6
	MB25-MB16x20	MB25	MB16	20	15	0.8
	MB25-MB20x25	MB25	MB20	25	20	0.9
	MB32-MB14x25	MB32	MB14	25	17	1.0
	MB32-MB16x24	MB32	MB16	24	18	1.3
	MB32-MB20x25	MB32	MB20	25	20	1.6
	MB32-MB25x28	MB32	MB25	28	23	2.1
	MB40-MB14x23	MB40	MB14	23	16	2.8
	MB40-MB16x24	MB40	MB16	24	17	3.5
	MB40-MB20x26	MB40	MB20	26	20	0.4
	MB40-MB25x28	MB40	MB25	28	22	0.5
	MB40-MB32x32	MB40	MB32	32	27	0.6
	MB50-MB14x23	MB50	MB14	23	14.5	0.8
	MB50-MB14x39	MB50	MB14	39	30.5	0.9
	MB50-MB16x24	MB50	MB16	24	15	1.0
	MB50-MB16x40	MB50	MB16	40	31	1.3
	MB50-MB16x74	MB50	MB16	74	65	1.6
	MB50-MB20x26	MB50	MB20	26	18	3.5
	MB50-MB20x70	MB50	MB20	70	62	0.4
	MB50-MB20x93	MB50	MB20	93	85	0.5
	MB50-MB25x28	MB50	MB25	28	21	0.6
	MB50-MB25x87	MB50	MB25	87	80	0.8
	MB50-MB25x117	MB50	MB25	117	110	3.5
	MB50-MB32x32	MB50	MB32	32	25	0.4
	MB50-MB32x87	MB50	MB32	87	80	0.5
	MB50-MB32x144	MB50	MB32	144	137	0.6
	MB50-MB40x36	MB50	MB40	36	30	0.8
	MB50-MB40x87	MB50	MB40	87	80	0.9
	MB50-MB40x176	MB50	MB40	176	170	1.0
	MB63-MB50x40	MB63	MB50	40	34	1.3
	MB80-MB50x45	MB80	MB50	45	36	1.6
	MB80-MB63x60	MB80	MB63	60	52	1.6
	MB110-MB80x70	MB110	MB80	70	52	6.0

Carbide core reducers with MB connection



Designation	Dimension (mm)					Kg	Fig.
	DCONMS	DCONWS	BD	LPR	LB		
RE MB50-MB16x74-AVI	MB50	MB16	17.5	74	65	0.4	1
MB50-MB20x93-AVI	MB50	MB20	21.5	93	85	0.5	1
MB50-MB25x117-AVI	MB50	MB25	27	117	110	0.8	1
MB50-MB32x144-AVI	MB50	MB32	35	144	138	1.4	1
MB50-MB40x176-AVI	MB50	MB40	47	176	170	2.5	1
MB63-MB50x220-AVI	MB63	MB50	60	220	214	5.6	1
MB80-MB63x280-AVI	MB80	MB63	77	280	272	10.6	2

Coolant extensions with MB connection



Designation	Dimension (mm)								Kg
	DCONMS	DCONWS	R	BD	LPR	LB	LS	RPM _{Max}	
CHR MB63	MB63	MB63	-	115	63	35	-	3500	5.0

- Important: Start coolant flow prior to rotating the spindle to avoid damage of the O rings.
- Use with stop block. (not included)

Weldon holder with MB connection

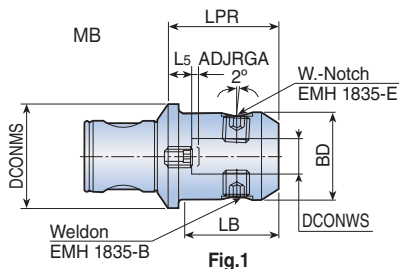


Fig.1

Weldon-DIN 1835 B/E

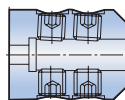
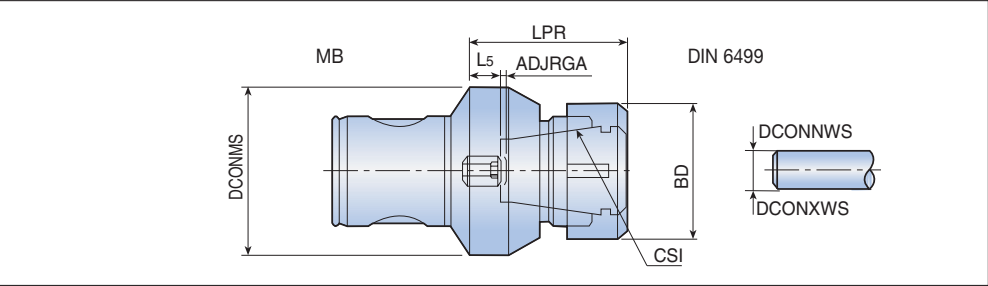


Fig.2

[illegible]

ER Collet chucks with MB connection

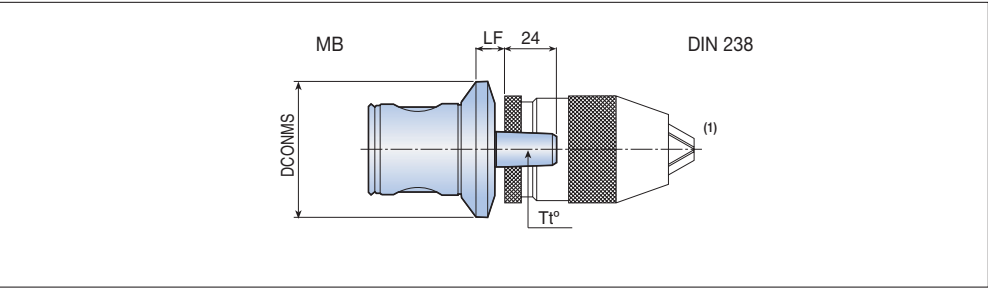


Designation	Dimension (mm)							Kg
	DCONMS	CSI	DCONNWS	DCONXWS	BD	LPR	ADJRGA	
CC MB16 ER11M	MB16	ER11	0.5	7.0	16	25	2.5	0.03
MB20 ER16M	MB20	ER16	0.5	10.0	22	32	1.0	0.06
MB25 ER20M	MB25	ER20	1.0	13.0	28	40	2.5	0.15
MB32 ER25M	MB32	ER25	1.0	16.0	35	42	1.5	0.25
MB40 ER25	MB40	ER25	1.0	16.0	42	45	5.0	0.25
MB50 ER25	MB50	ER25	1.0	16.0	42	48	7.0	0.70
MB50 ER32	MB50	ER32	2.0	20.0	50	59	7.0	1.00
MB63 ER32	MB63	ER32	2.0	20.0	50	59	12	1.30
MB63 ER40	MB63	ER40	3.0	26.0	63	64	12	1.50

DC MB

Toolholders

Drill chucks with MB connection

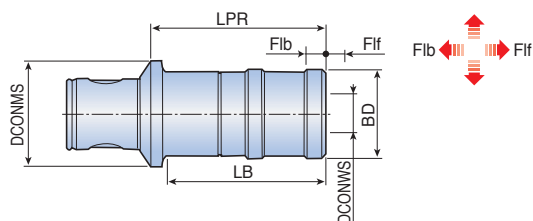


Designation	Dimension (mm)			Kg
	DCONMS	Tt°	LF	
DC MB50 B16	MB50	B16	10.0	0.4
MB63 B16	MB63	B16	13.5	0.8

Spare Parts ▶ ⁽¹⁾Without drill chuck



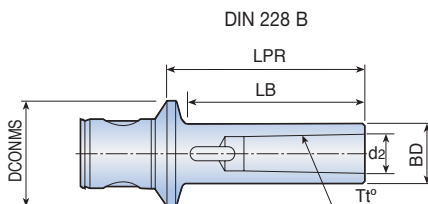
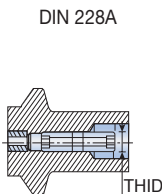
Tapping chucks with MB connection

[illegible]

Technical drawing of a shaft-hub assembly. The drawing shows a shaft (S) inserted into a hub. Key dimensions are labeled: LSCMS (Shaft length in the hub), LPR (Hub length), LSCWS (Shaft length in the wheel), DCONMS (Shaft diameter), DCONWS (Wheel diameter), BD (Bore diameter), and S (Shaft diameter).

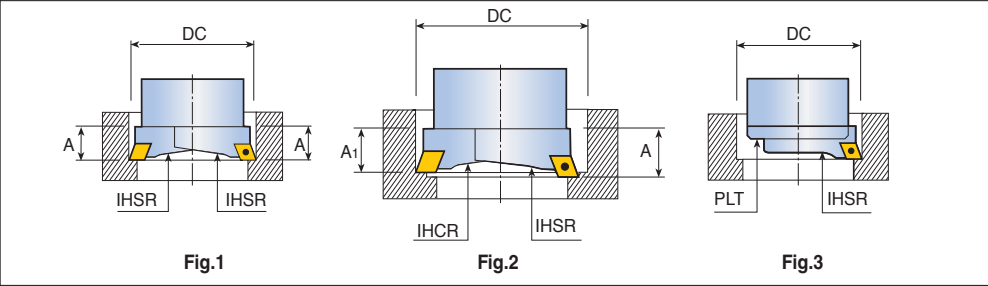
► ⁽¹⁾According to tap shank size ⁽²⁾Square size ⁽³⁾Tap size according to DIN371 ⁽⁴⁾Tap size according to DIN376/374

MB shanks for morse taper tang

[illegible]

Technical drawing of a shaft with the following dimensions and specifications:

- MB**: Material specification for the left section.
- 10**: Dimension of the left section.
- LB**: Dimension of the right section.
- Blanks**: Material specification for the right section.
- DCOMMS**: Dimension of the left section.
- BD**: Dimension of the right section.
- HRC 55-60**: Hardness specification for the left section.
- HRC 22-25**: Hardness specification for the right section.

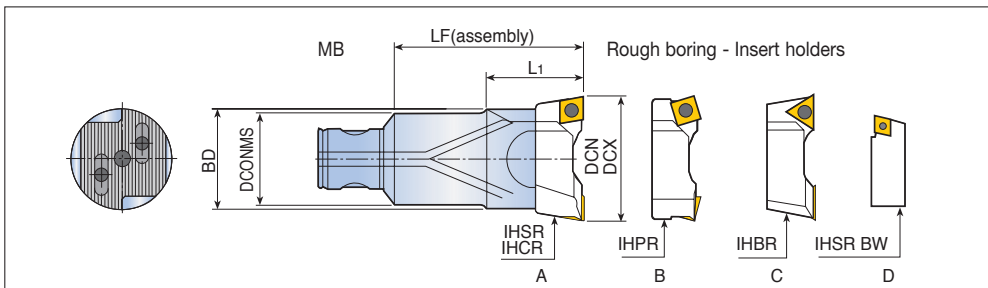


- ▶ When using the MPT system, it is strongly recommended that the user utilizes the tool pre-setting equipment provided to set the radial cutting edges. The boring bars that are equipped with two inserts holders are for rough machining and heavy stock removal.
- ▶ The bars are applicable to three types of machining scenarios:
 - When two IHSR insert holders are on the same plane, the two cutting edges are placed at identical radial distances for high feed rough machining(Fig. 1).
 - When each IHCR and IHSR insert is not set on the same plane, each of the two cutting edges is placed at a different radial distance for deep rough machining(Fig. 2).
 - If boring bars are set with a single insert holder it allows rough and finish machining with normal chip removal. In this situation, it is strongly recommended that a serrated surface protection plate (PLT) is used(Fig. 3).

Rough boring head diameter range

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	150	200	300	400	600	700	800
BHR MB 16-16x34				18-22																	
20-20x40				22-28																	
25-25x50					28-38																
32-32x63						35.5-50															
40-40x80							50-68														
50-50x100								68-90													
50-63x80										90-120											
63-63x125											90-120										
80-80x140														120-200							

Rough boring heads 18-200mm range with MB connection

[illegible]

H58-H68

H30.H31

H69-H75

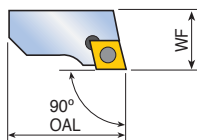


Fig.1

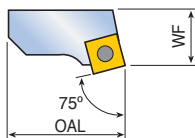


Fig.2

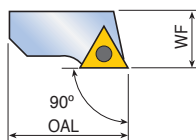
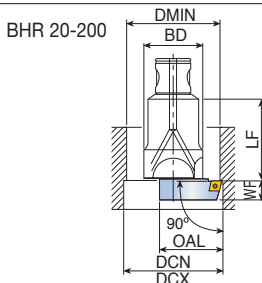


Fig.3

[illegible]

Back face for BHR and rough boring heads

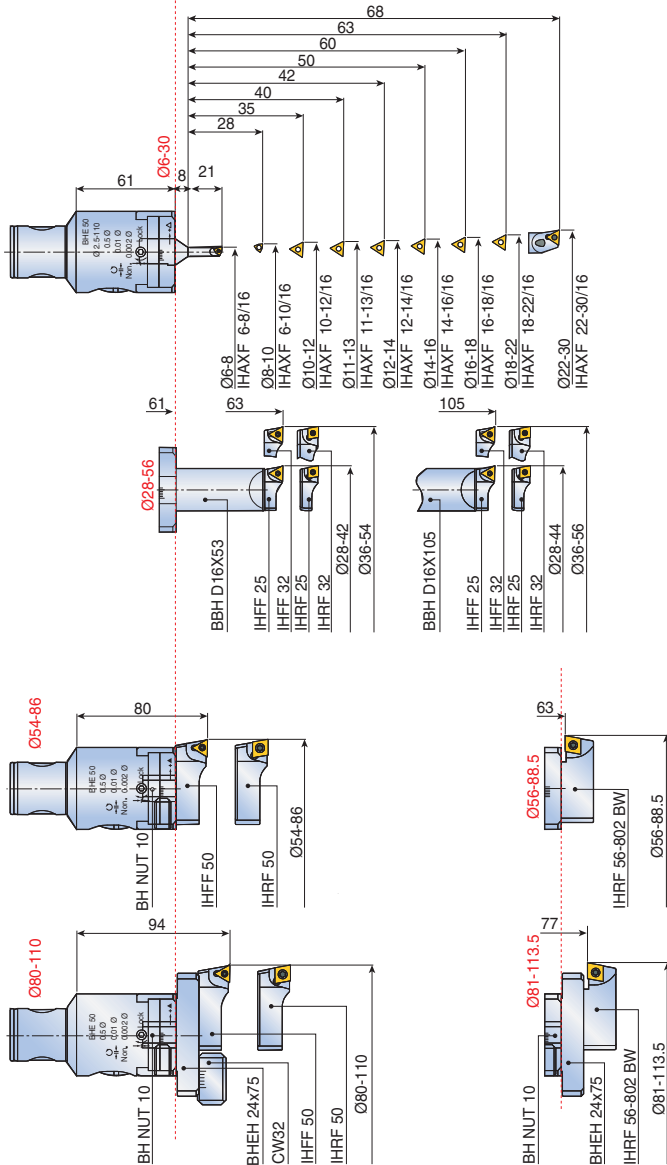
[illegible]

- ▶ DCX= Size of the boring head being used
- ▶ DMIN= (min bore diameter)= $(DCN+BD+1)/2$

Fine boring head range: 10 μ m direct diametric adjustment and 2 μ m with the vernier scale

BHE MB50-50x80
Ø6-113.5

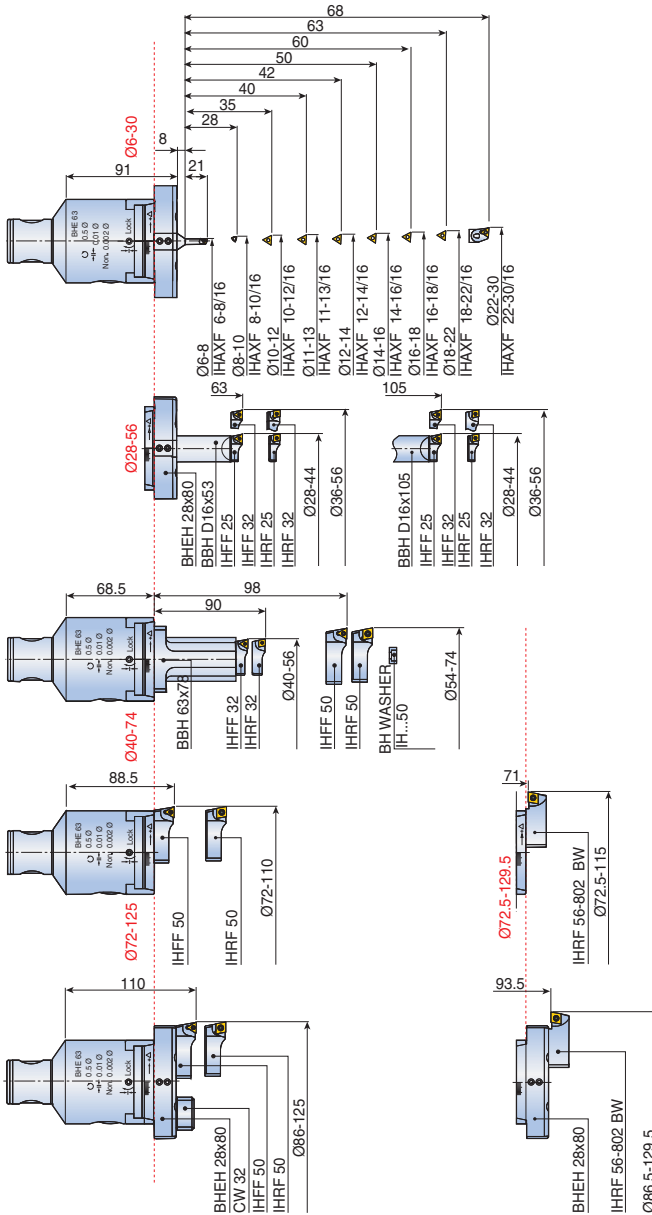
10 μ m
2 μ m



Fine boring head range: 10µm direct diametric adjustment and 2µm with the vernier scale

BHE MB63-63x89
ø6-129.5

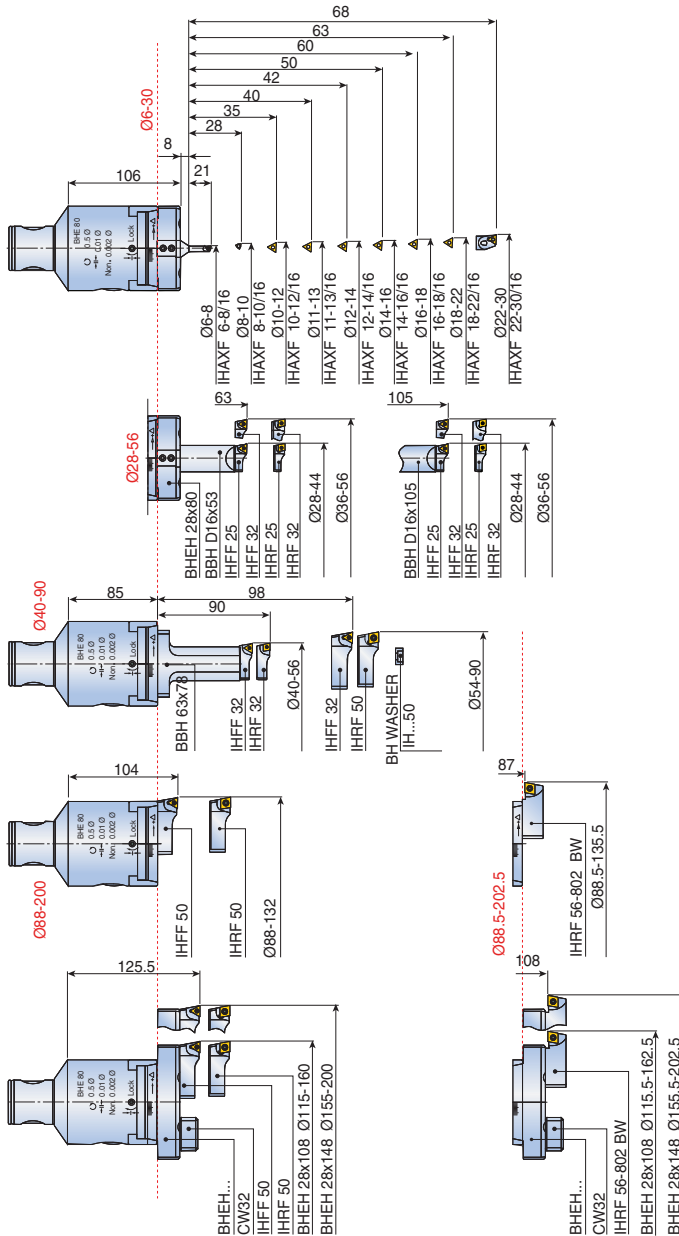
10μm
2μm



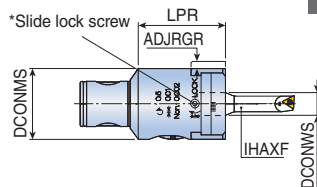
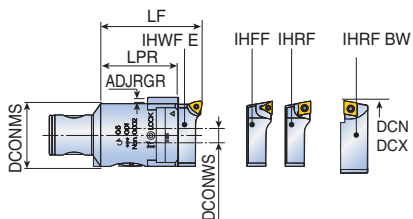
Fine boring head range: 10µm direct diametric adjustment and 2µm with the vernier scale

BHE MB80-80x104
ø6-202.5

10μm
2μm



10µm direct diametric adjustment and 2µm with the vernier scale



BHE MB50-50x80

[illegible]

BHF fine boring heads

These intricate boring heads enable fine radial adjustments as small as 0.002mm whilst accomplishing high precision machining to the strictest of tolerances with a superb surface finish.



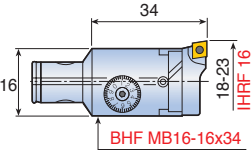
2µm

Fine boring head diameter range

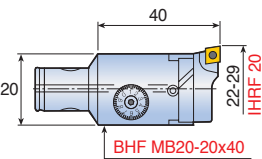
	0	10	20	30	40	50	60	70	80	90	100	110	120	130	150	180	280	400	600	700	800
BHF MB 16-16x34 RV				18-23																	
20-20x40 RV				22-29																	
25-25x50					28-38																
32-32x63						36-50															
40-40x80							48-63														
50-50x60													2.5-108								
50-63x87														2.5-125							
50-80x94															2.5-160						
63-63x87														2.5-125							
80-80x94																2.5-160					
80-125x114																		36-500			

BHF MB16-MB40
Diameter range: 18-63

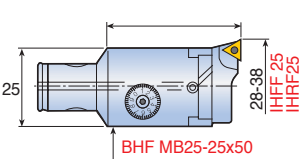
BHF MB16-16x34 RV
18-23



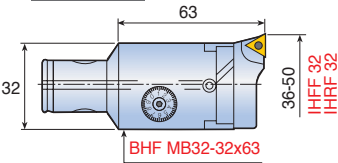
BHF MB20-20x40 RV
22-29



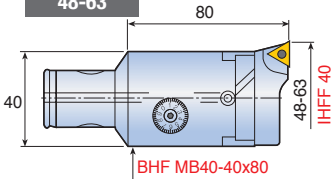
BHF MB25-25x50
28-38



BHF MB32-32x63
36-50



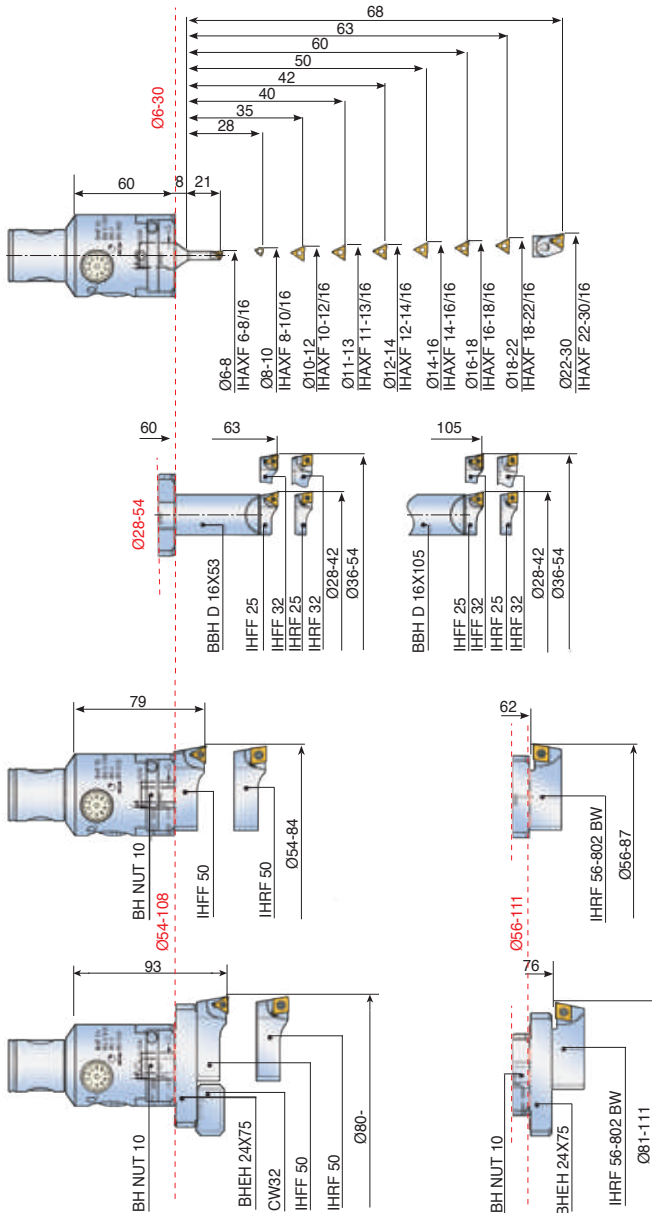
BHF MB40-40x80
48-63



Fine boring head range: 2µm direct diametric adjustment

BHF MB50-50x60
Diameter range: 6-111

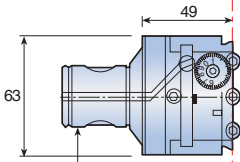
2µm



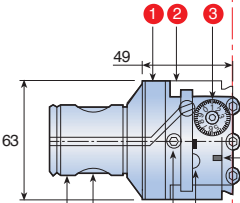
Fine boring head range: 2µm direct diametric adjustment

2µm

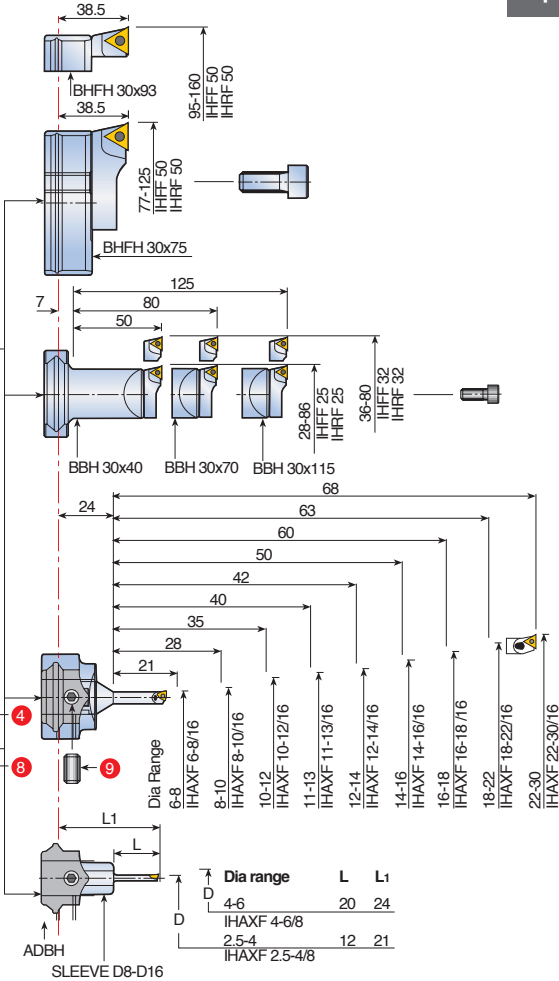
BHF MB50-63x87
BHF MB63-63x87
Diameter range: 2.5-160



BHF MB50-63x87



BHF MB63-63x87

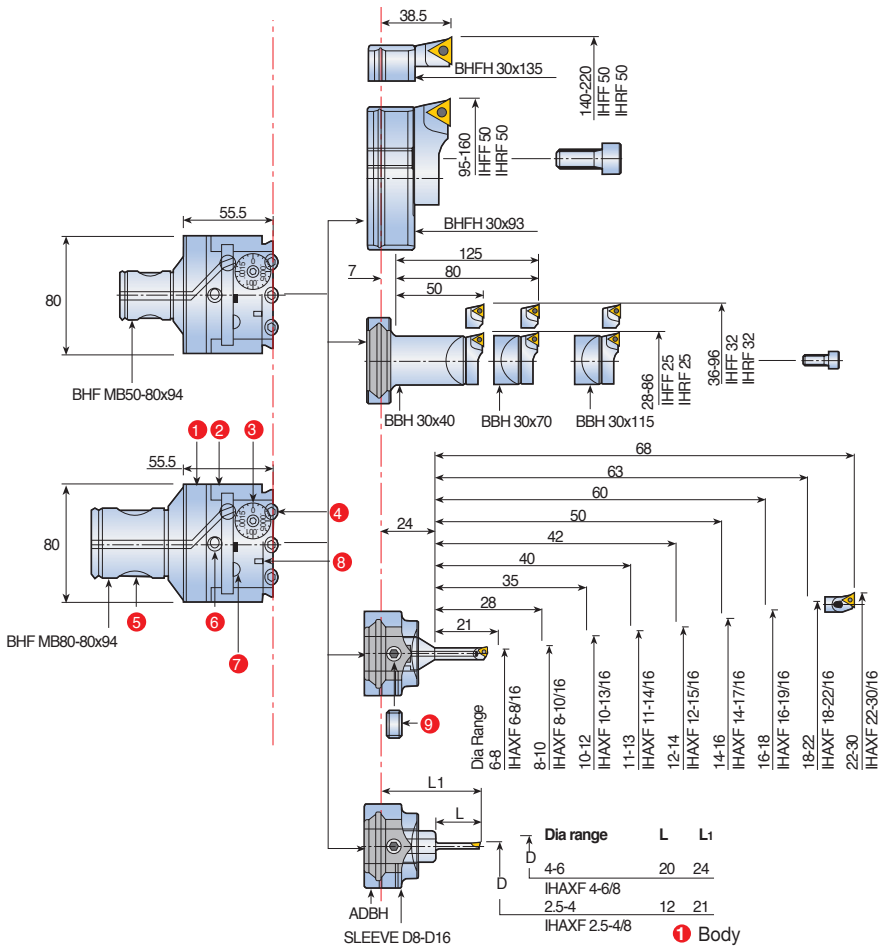


- ① Body
- ② Tool slide
- ③ Graduated dial
- ④ Toolholder locking screw
- ⑤ Expanding pin
- ⑥ Slide locking screw
- ⑦ Coolant nozzle
- ⑧ Oiling nipple
- ⑨ Toolholder locking screw

Fine boring head range: 2µm direct diametric adjustment

BHF MB50-80x94
BHF MB80-80x94
Diameter range: 2.5-220

2µm

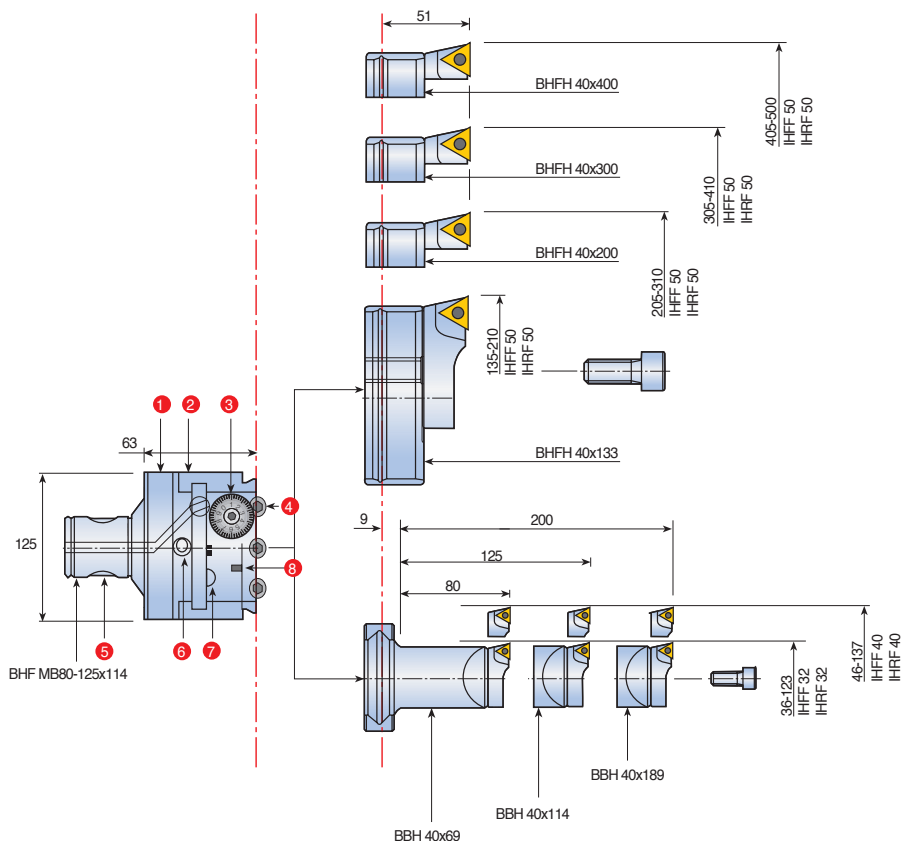


- ① Body
- ② Tool slide
- ③ Graduated dial
- ④ Toolholder locking screw
- ⑤ Expanding pin
- ⑥ Slide locking screw
- ⑦ Coolant nozzle
- ⑧ Oiling nipple
- ⑨ Toolholder locking screw

Fine boring head range: 2µm direct diametric adjustment

BHF MB80-125x114
Diameter range: 36-500

2µm



- 1 Body
- 2 Tool slide
- 3 Graduated dial
- 4 Toolholder locking screw
- 5 Expanding pin
- 6 Slide locking screw
- 7 Coolant nozzle
- 8 Oiling nipple

BHF MB: Fine boring heads

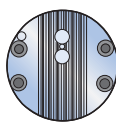


Fig.1

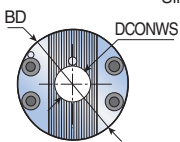
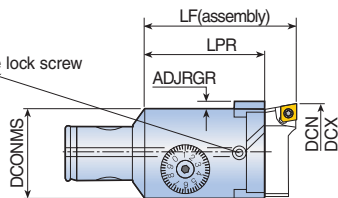


Fig.2



2μm

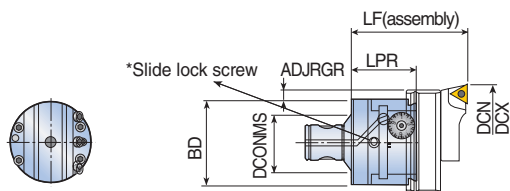
[illegible]

► Important: Loosen the *slide lock screw before making any slide adjustment

BHF MB50-MB80, Dia. 2.5-500

Fine Boring Heads

Fine boring heads



2μm

[illegible]

► Important: Loosen the *slide lock screw before making any slide adjustment.

8-16mm boring bar for 2.5-30mm fine boring heads

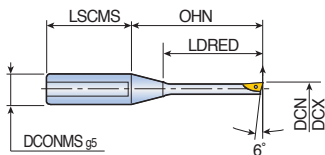


Fig.1

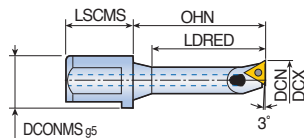


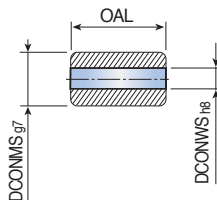
Fig.2

[illegible]

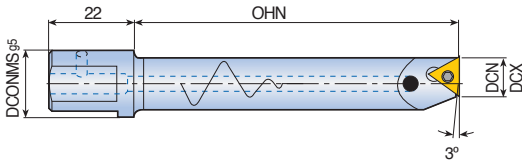
► ⁽¹⁾ Brazed tool

SLEEVE

Reducers for fine boring heads

[illegible]

Vibration dampening for fine boring bars – Heavy metal shank

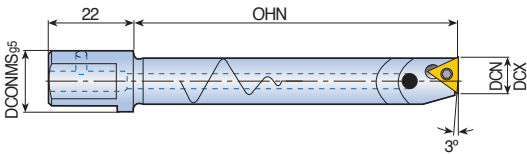


Designation	Dimension (mm)				Spare parts		
	DCN	DCX	OHN	DCONMS	Insert	Screw	Key
IHAXF 6-8-AVI	6	8	36	16	WCGT 0201..	SR 14-299	T 6
8-10-AVI	8	10	48	16	WCGT 0201..	SR 14-299	T 6
10-12-AVI	10	12	60	16	TPGX 0902..	SO 25061I	T 8
12-14-AVI	12	14	72	16	TPGX 0902..	SO 25061I	T 8
14-16-AVI	14	16	84	16	TPGX 0902..	SO 25061I	T 8
16-18-AVI	16	18	96	16	TPGX 0902..	SO 25061I	T 8

IHAXF-E

Fine Boring Bar

Vibration dampening for fine boring bars – Carbide shank



Designation	Dimension (mm)				Spare parts		
	DCN	DCX	OHN	DCONMS	Insert	Screw	Key
IHAXF 6-8-E	6	8	45	16	WCGT 0201..	SR 14-299	T 6
8-10-E	8	10	60	16	WCGT 0201..	SR 14-299	T 6
10-12-E	10	12	75	16	TPGX 0902..	SO 25061I	T 8
12-14-E	12	14	90	16	TPGX 0902..	SO 25061I	T 8
14-16-E	14	16	105	16	TPGX 0902..	SO 25061I	T 8
16-18-E	16	18	120	16	TPGX 0902..	SO 25061I	T 8



Insert holders for mounting on the MB fine boring heads

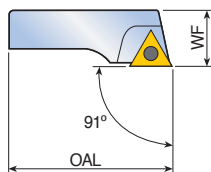


Fig.1

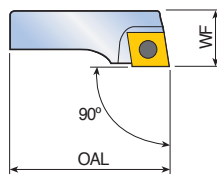
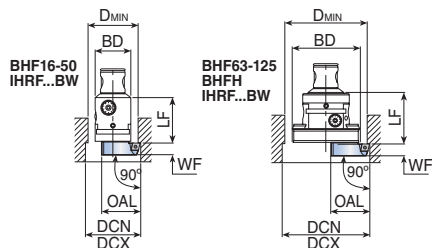


Fig.2

[illegible]

Back face for BHF fine boring holders

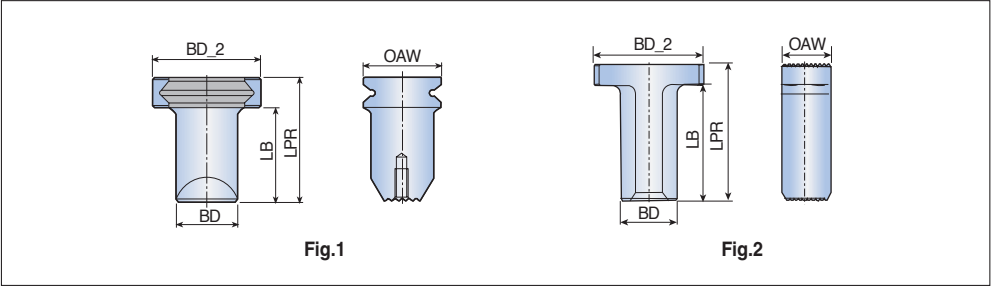
[illegible]

- ▶ BD= Size of the boring head being used.
- ▶ D_{MIN} = (min bore diameter)= $(DCN+BD+1)/2$

BBH

Fine Boring Insert Holders & Slides

Slide extensions for fine boring holders

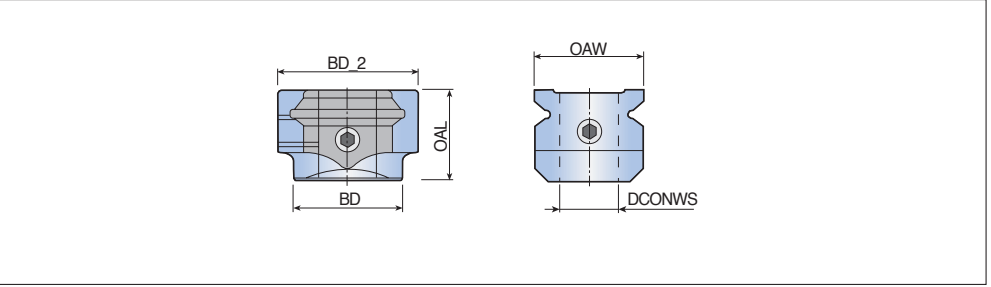


Designation	Dimension (mm)						Fig.
	BD	LB	LPR	BD_2	OAW		
BBH 30x40	25	40	52.5	43	30.5	0.3	1
30x70	25	70	82.5	43	30.5	0.4	1
30x115	27	115	127.5	43	30.5	0.7	1
40x69	32	69	86	56	40	0.7	1
40x114	32	114	131	56	40	1.0	1
40x189	38	189	206	56	40	2.0	1
63x78	32	66	78	63	28	0.7	2

ADBH

Fine Boring Insert Holders & Slides

Sleeve for fine boring holders



Designation	Dimension (mm)					
	BD	BD_2	OAL	OAW	DCONWS	
ADBH 30xD16	30	39	25	30.5	16	0.2

BHFH/BHEH

Fine Boring Insert Holders & Slides

Slide for BHF & BHE fine boring holders

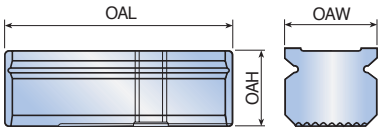


Fig.1

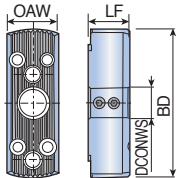


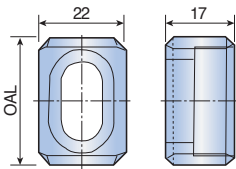
Fig.2

Designation	Dimension (mm)						 Kg	Fig.
	OAH	OAL	OAW	BD	LF	DCONWS		
BHFH 30x75	25	75	30.5	-	-	-	0.4	1
30x93	25	93	30.5	-	-	-	0.5	1
30x135	25	135	30.5	-	-	-	0.7	1
40x133	40	133	40	-	-	-	1.5	1
40x200	40	200	40	-	-	-	2.4	1
40x300	40	300	40	-	-	-	3.5	1
40x400	40	400	40	-	-	-	4.6	1
BHEH 24x75	-	-	24	75	14.5	-	0.2	2
28x80	-	-	28	80	22.5	16	0.3	2
28x108	-	-	28	108	22.5	-	0.5	2
28x148	-	-	28	148	22.5	-	0.6	2

CW32

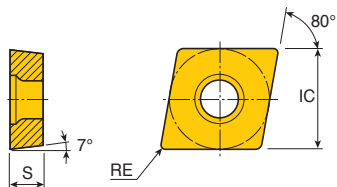
Fine Boring Insert Holders & Slides

Counter balancing weight



Designation	Dimension (mm)	 Kg
	OAL	
CW 32	31.5	0.5

Positive 7° clearance 80° rhombic inserts

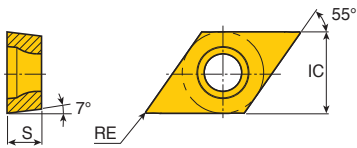


Size	Dimension (mm)		
	IC	S	RE
06	6.35	2.38	0.1-0.8
09	9.52	3.97	0.1-0.8
12	12.7	4.76	0.2-1.2

[illegible]

● : Standard items

Positive 7° clearance 55° rhombic inserts



Size	Dimension (mm)		
	IC	S	RE
07	6.35	2.38	0.4-0.8
11	9.52	3.97	0.4-1.2

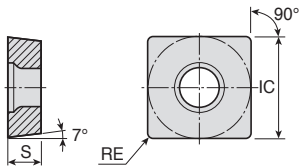
Insert	Designation	Cermet		CVD coated										PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P20	K10
	DCMT 070204 PC						●	●		●	●						●			
	070208 PC						●	●		●	●						●			
	11T304 PC					●	●	●		●	●						●			
	11T308 PC					●	●	●		●	●						●			
	11T312 PC						●	●		●	●						●			

● : Standard items

SCGT

Boring Inserts

Positive 7° clearance inserts for aluminum machining

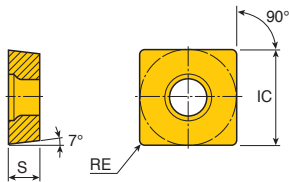


Size	Dimension (mm)			
	IC	S	RE	
09	9.52	3.97	0.8	
12	12.7	4.76	0.2-0.8	

Insert	Designation	Cermet		CVD coated										PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P20	K10
	SCGT 09T308 FL																		●	
	120402 FL																		●	
	120404 FL																		●	
	120408 FL																		●	

● : Standard items

Positive 7° clearance square inserts

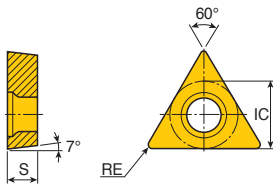


Size	Dimension (mm)		
	IC	S	RE
09	9.52	3.97	0.4-0.8
12	12.7	4.76	0.4-1.2

Insert	Designation	Cermet		CVD coated										PVD coated			Uncoated				
		PV3010	CT3000	TT7005	TT7015	TT7025	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	P20	K10	K20
	SCMT 09T304 FG							●				●					●	●			
	09T308 FG							●	●			●		●			●				
	SCMT 09T304 MT	●	●	●	●		●	●	●			●		●			●				
	09T308 MT		●	●	●	●		●	●	●		●	●	●	●		●	●			
	120404 MT		●	●	●			●	●				●								
	120408 MT		●		●	●			●	●		●	●	●			●	●			
	120412 MT			●	●		●		●	●							●				

● : Standard items

Positive 7° clearance triangular inserts

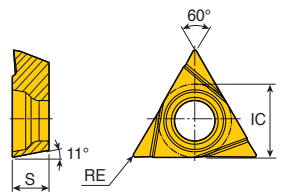


Size	Dimension (mm)		
	IC	S	RE
22	12.7	4.76	0.8

Insert	Designation	Cermet		CVD coated										PVD coated			Uncoated				
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P30	K10	K20
	TCMT 220508-19																		●		

● : Standard items

Positive 11° clearance triangular inserts

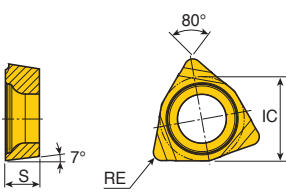


Size	Dimension (mm)		
	IC	S	RE
09	5.56	2.38	0.2-0.4
11	6.35	3.18	0.2-0.4

Insert	Designation	Cermet		CVD coated										PVD coated			Uncoated			
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	P20	P30	K10
 Left-hand	TPGX 090202 L	●																		
	090204 L	●																		●
	110302 L	●																		●
	110304 L	●																		●

● : Standard items

Positive 7° clearance 80° trigon inserts



Size	Dimension (mm)		
	IC	S	RE
02	3.97	1.59	0.2-0.4

Insert	Designation	Cermet		CVD coated										PVD coated			Uncoated			
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9030	TT9080	P20	K10
	WCGT 020102L																●			
	020104L																●			

● : Standard items

KIT BHE MB50-50 6-110

Kits

Boring kit BHE MB50-50 (ø6-110mm) with fine boring head

10µm
2µm

Ø6-30

Ø28-56

Ø54-86

Ø80-110

Ø92-110

8

21

28

40

60

68

63

61

19

80

94

94

Ø6-8
IHAXF 6-8/16
Ø8-12
IHAXF 8-10/16
Ø11-17
IHAXF 11-13/16
Ø16-23
IHAXF 16-18/16
Ø22-30
IHAXF 22-30/16

BBH D16x53
Ø28-44
IHFF 25
Ø36-56
IHFF 32

BH NUT10

Ø54-86
IHFF 50

BHEH 24x75
IHFF 50
Ø80-110

CW 32
BHEH 24x75
IHFF 50
Ø92-110

1 BHE MB50-50x80

1 IHFF 25

1 IHFF 32

1 IHFF 50

1 IHAXF 6-8/16

1 IHAXF 8-10/16

1 IHAXF 11-13/16

1 IHAXF 16-18/16

1 IHAXF 22-30/16

1 BBH D16x53

1 BHEH 24x75

1 BH NUT 10

1 CW 32

Designation	Dimension (mm)	
	SS	Boring range
KIT BHE MB50-50 6-110	MB50	6-110

► 10µm direct diametric adjustment and 2µm by a vernier scale

KIT BHE MB63-63 6-125

Kits

Boring kit BHE MB63-63 (ø6-125mm) with fine boring head

10µm
2µm

Ø6-30

Ø40-90

Ø88-132

Ø115-200

106

8

21

28

40

60

68

90

98

85

104

125.5

BHEH 28x80

Ø6-8
IHAXF 6-8/16
Ø8-10
IHAXF 8-10/16
Ø11-13
IHAXF 11-13/16
Ø16-18
IHAXF 16-18/16
Ø22-30
IHAXF 22-30/16

BBH 63x78
Ø40-56
Ø54-74
IHFF 32
IHFF 50

SFTP 50

Ø88-132

BHEH...
CW 32
SFTP 50
Ø115-160 BHEH 28x108
Ø155-200 BHEH 28x148

1 BHE MB63-63x89

1 IHFF 32

1 IHFF 50

1 IHFF 6-8/16

1 IHAXF 8-10/16

1 IHAXF 11-13/16

1 IHAXF 16-18/16

1 IHAXF 22-30/16

1 BBH 63x78

1 BHEH 28x80

1 BH WASHER IH..50

1 CW 32

Designation	Dimension (mm)	
	SS	Boring range
KIT BHE MB63-63 6-125	MB63	6-125

KIT BHE MB80-80 6-200

Kits

Boring kit BHE MB80-80 (ø6-200mm) with fine boring head

10µm
2µm

Ø6-30

BHEH 28x80
Ø6-8
IHAXF 6-8/16
Ø8-10
IHAXF 8-10/16
Ø11-13
IHAXF 11-13/16
Ø16-18
IHAXF 16-18/16
Ø22-30
IHAXF 22-30/16

Ø40-90

BBH 63x78
Ø40-56
IHFF 32
Ø54-74
IHFF 50

Ø88-132

SFTP 50
Ø88-132

Ø115-200

BHEH 28x108
SFTP 50
Ø115-160
Ø155-200
BHEH 28x148

1 BHE MB80-80x104
1 IHFF 32
1 BBH 63x78
1 IHFF 50
1 IHFF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 BH WASHER IH..50
1 CW 32

Designation	Dimension (mm)	
	SS	Boring range
KIT BHE MB80-80 6-200	MB80	6-200

KIT BHF MB50-80/80-80

Kits

Kit BHF MB50-80 / Kit BHF MB80-80 6-220mm diameter range

2µm

6-30

ADBH 30xD16
6-9
IHAXF 6-9
8-12
IHAXF 8-12
11-17
IHAXF 11-17
16-23
IHAXF 16-23
22-30
IHAXF 22-30

28-96

BBH 30x70
BBH 30x115
28-86
IHFF 25
IHRF 25
36-96
IHFF 32
IHRF 32

95-220

BHFH 30x93
95-160
IHFF 50
140-220
IHFF 50

1 BHF MB..-80x94
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 ADBH 30xD16
1 BBH 30x40
1 BBH 30x70
1 BBH 30x115
1 BHFH 30x93
1 BHFH 30x135
1 IHFF 25
1 IHFF 32
1 IHFF 50
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L
T-8/5
T-6/5

Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-80 6-220	MB50	6-220
MB80-80 6-220	MB80	6-220

KIT BHF MB50-50 6-108

Kits

6-108mm diameter range

2µm

Technical drawings of the KIT BHF MB50-50 6-108 kit showing three different boring bar configurations with dimensions and part numbers.

Image of the KIT BHF MB50-50 6-108 kit components in a blue carrying case.

1 BHF MB50-50x60
1 IHFF 25
1 IHFF 32
1 IHFF 50
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16

1 BBH D 16x53
1 BHEH 24x75
1 BH NUT 10
1 CW 32
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L

Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-50 6-108	MB50	6-108

KIT BHF MB50-63/MB63-63

Kits

6-125mm diameter range

2µm

Technical drawings of the KIT BHF MB50-63/MB63-63 kit showing three different boring bar configurations with dimensions and part numbers.

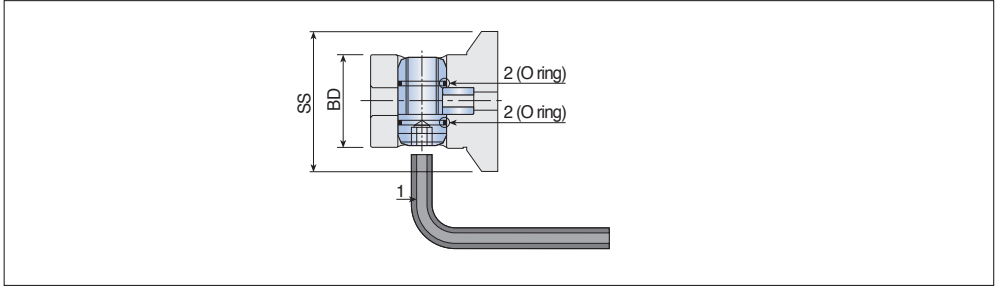
Image of the KIT BHF MB50-63/MB63-63 kit components in a blue carrying case.

1 BHF MB...-63x87
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 ADBH 30xD16
1 BBH 30x40
1 BBH 30x70

1 BHFH 30x75
1 BHFH 30x75
1 IHFF 25
1 IHFF 32
1 IHFF 50
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L
T-8/5
T-6/5

Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-63 6-125	MB50	6-125
MB63-63 6-125	MB63	6-125

MB system clamp set

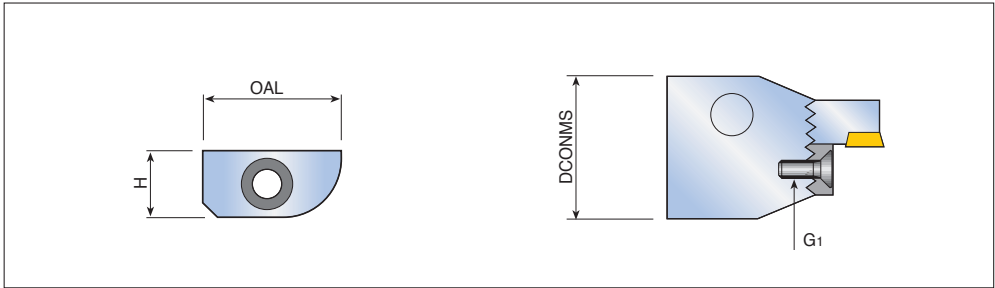


Designation	Dimension (mm)			
	SS	BD	1	2
BH MB 16 COUPLING SET	MB16	10	2.5	-
20 COUPLING SET	MB20	13	3	-
25 COUPLING SET	MB25	16	3	-
32 COUPLING SET	MB32	20	4	ORM 0100-10
40 COUPLING SET	MB40	25	5	ORM 0130-10
50 COUPLING SET	MB50	32	6	ORM 0140-10
63-80 COUPLING SET	MB63-80	42	8	OR 2075

PLT

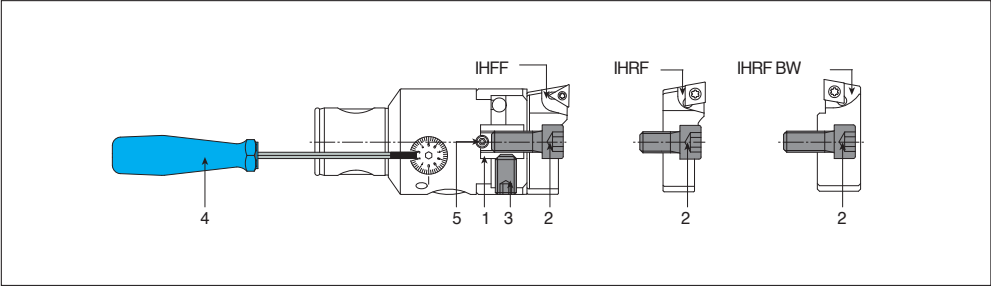
Spare Parts

Cover plate

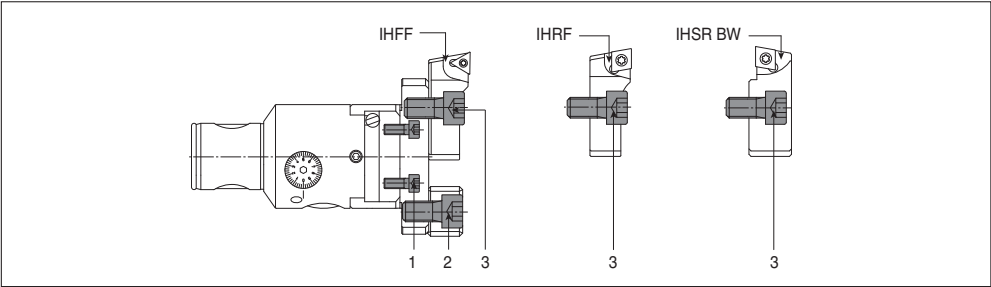


Designation	Dimension (mm)			
	DCONMS	H	OAL	G1
PLT 16	16	7	14	M 3x8
20	20	8.5	17	M 4x10
25	25	10.2	21	M 4x16
32	32	13.9	28	M 5x20
40	40	17.4	35	M 6x25
50	50	21.4	47.5	M 8x25
63	63	26.4	62	M 10x30
80	80	33.9	82.5	M 12x35

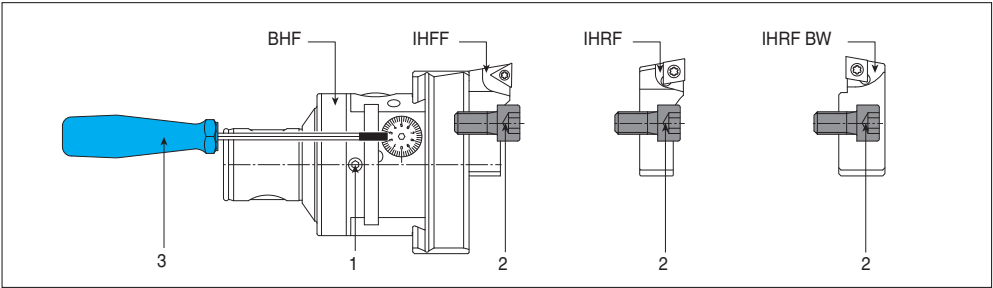
► Protects the serrated faces when a single toolholder is being used.



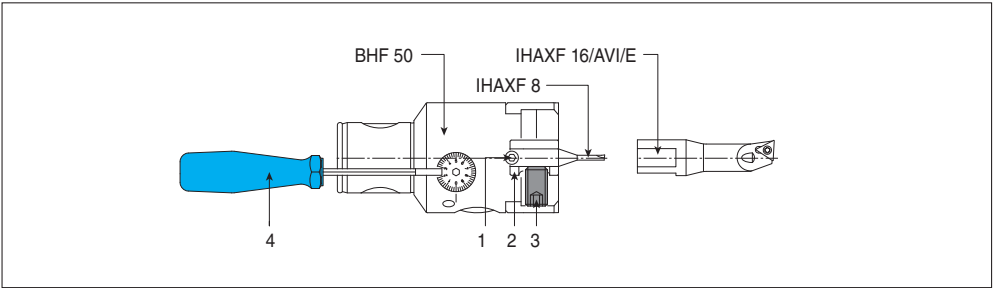
Designation	1	2	3	4	5
BHF...- 16...	-	SR M3x6 DIN 912	-	BH HW 1.5 HANDLE SR M3x4.5 DIN 913	
20...	-	SR M4x8 DIN 912	-	BH HW 1.5 HANDLE SR M3x4.5 DIN 913	
25...	-	SR M5x10 DIN 912	-	BH HW 2.0 HANDLE SR M4x4 DIN 913	
32...	-	SR M6x12 DIN 912	-	BH HW 2.0 HANDLE SR M4x5 DIN 913	
40...	-	SR M8x14 DIN 912	-	BH HW 2.5 HANDLE SR M5x6 DIN 913 SR	
50-60	BH NUT 10	SR M10x25 DIN 912	SR M10x16 DIN 913	BH HW 2.5 HANDLE SR M5x8 DIN 913	



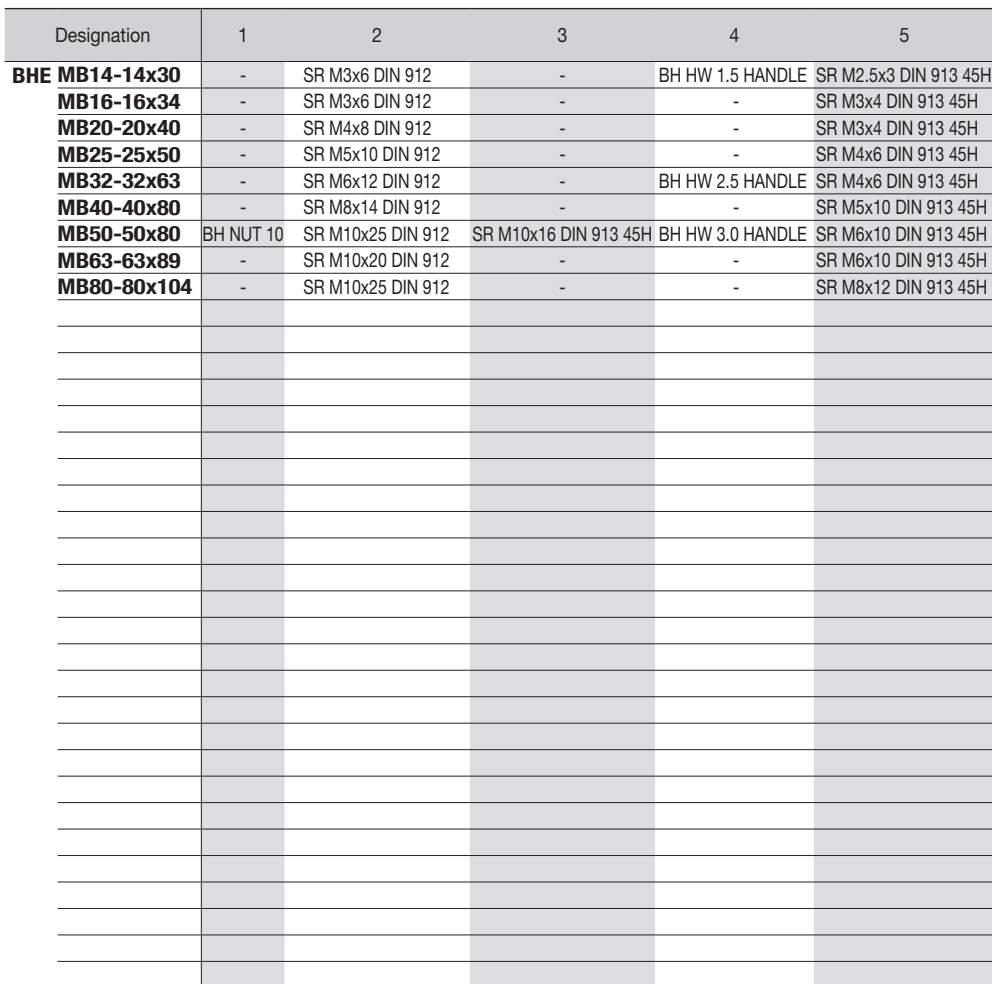
Designation	1	2	3
BHF...- 50...	SR M5x12 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912

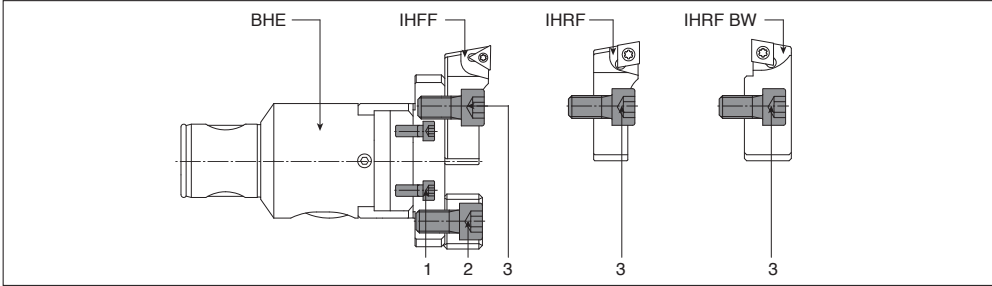


Designation	1	2	3
BHF...- 63...	SR M6x10 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE
80...	SR M6x14 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE
125...	SR M6x22 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE

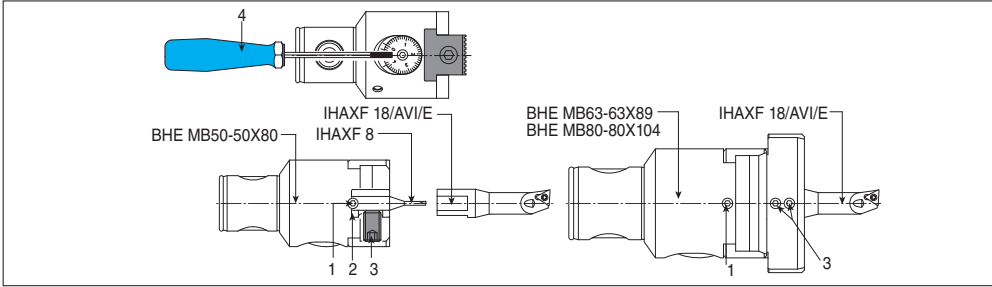


Designation	1	2	3	4
BHF...- 50...	SR M5x8 DIN 913	SLEEVE D8-D16	SR M10x10 DIN 913	BH HW 2.5 HANDLE

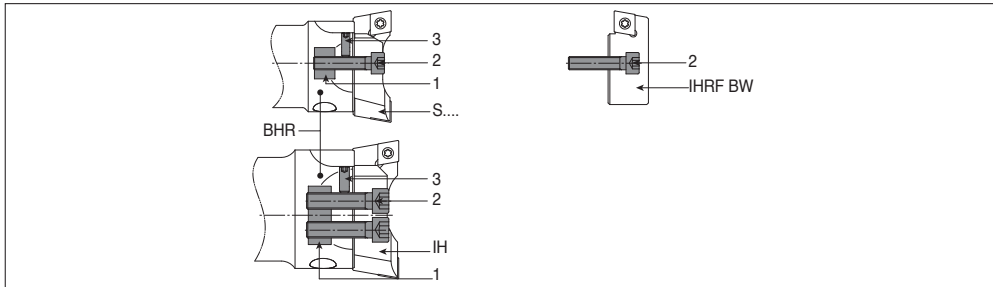


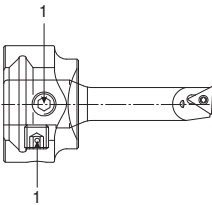


Designation	1	2	3
BHE MB50-50x80	SR M5x12 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912
MB63-63x89	SR M5x25 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912
MB80-80x104	SR M5x25 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912



Designation	1	2	3	4
BHE MB50-50x80	SR M6x8 DIN 913	SLEEVE D 8-D16	SR M10x10 DIN 913	BH HW 3.0 HANDLE
MB63-63x89	SR M6x8 DIN 913	-	SR M6x6 DIN 913	BH HW 3.0 HANDLE
MB80-80x104	SR M6x12 DIN 913	-	SR M6x6 DIN 913	BH HW 3.0 HANDLE

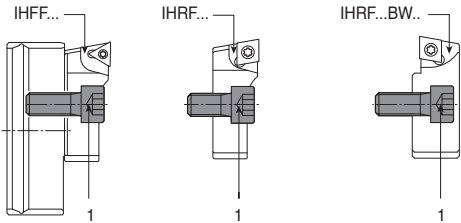
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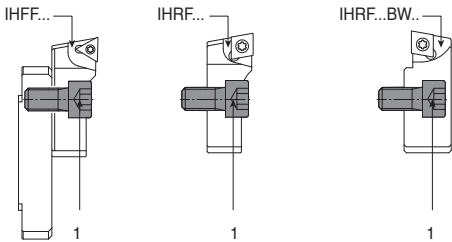
Designation	1
ADBH 30xD16	SR M8x8 DIN 915

BHFH

Spare Parts



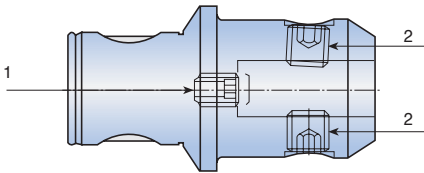
Designation	1
BHFH 30x75	SR M10x18 DIN 912
40x133	SR M10x18 DIN 912
30x93	SR M10x18 DIN 912
40x200	SR M10x25 DIN 912
30x135	SR M10x25 DIN 912
40x300	SR M10x25 DIN 912
40x400	SR M10x25 DIN 912



Designation	1
BHEH 24x75	SR M10x20 DIN 912
28x80	SR M10x25 DIN 912
28x108	SR M10x25 DIN 912
28x148	SR M10x25 DIN 912

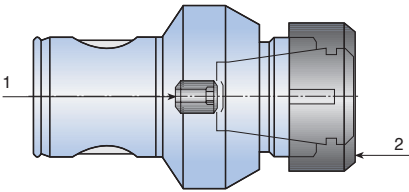
EMH MB

Screws for EMH



Designation	Screw #1	Screw # 2
EMH MB50-6	BH EMH PRST M8X8B	SR M6X10 DIN1835B
MB50-8	BH EMH PRST M8X8B	BH EMH M8X9.5
MB50-10	BH EMH PRST M8X10B	BH EMH M10X11.5
MB50-12	BH EMH PRST M8X10B	BH EMH M12X15.5
MB50-14	BH EMH PRST M8X10B	BH EMH M12X15.5
MB50-16	BH EMH PRST M12X16B	BH EMH M14X15.5
MB50-20	BH EMH PRST M12X16B	BH EMH M16X15.5
MB63-16	BH EMH PRST M12X16B	BH EMH M14X15.5
MB63-20	BH EMH PRST M12X16B	BH EMH M16X15.5
MB63-25	BH EMH PRST M16X16B	BH EMH M18X19.5
MB63-32	BH EMH PRST M16X16B	BH EMH M20X19.5

Components for CC

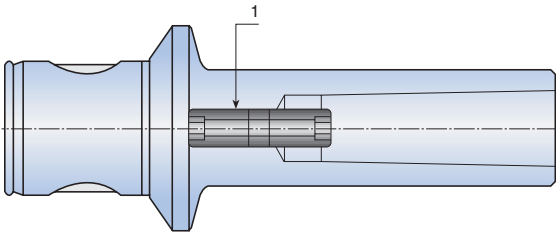


Designation	1	2	Wrench
CC MB16-ER11M	CC MB16 SCREW	NUT ER11 MINI	WRENCH ER11 MINI
MB20-ER16M	CC MB20 SCREW	NUT ER16 MINI	WRENCH ER16 MINI
MB25-ER20M	CC MB25 SCREW	NUT ER20 MINI	WRENCH ER20 MINI
MB32-ER25M	CC MB32 SCREW	NUT ER25 MINI	WRENCH ER25 MINI
MB40-ER25	CC MB40 SCREW	NUT ER25 TOP	WRENCH ER25
MB50-ER25	CC MB50 SCREW	NUT ER25 TOP	WRENCH ER25
MB50-ER32	CC MB50 SCREW	NUT ER32 TOP	WRENCH ER32
MB63-ER32	CC MB63 SCREW	NUT ER32 TOP	WRENCH ER32
MB63-ER40	CC MB63 SCREW	NUT ER40 TOP	WRENCH ER40

AMT MB-MT

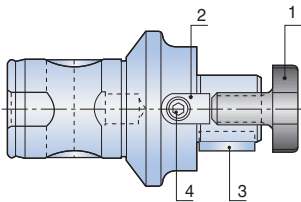
Spare Parts

Screw for shanks: Morse taper tang AMT



Designation	1
AMT MB50-MT2	AMT MT2-SCREW
MB50-MT3	AMT MT3-SCREW
MB63-MT3	AMT MT3-SCREW
MB63-MT4	AMT MT4-SCREW

Screw for shell mill holders SMH

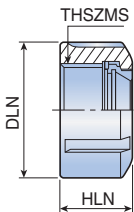


Designation	1	2	3	4
SMH MB40-22	M10 CLAMP SCREW SEM 22	BH DOG DRIVE SMH 22	KEY SMH 22	M4x10 SMH KEY SCREW
MB50-16	M 8 CLAMP SCREW SEM 16	BH DOG DRIVE SMH 16	KEY SMH 16	M3x 8 SMH KEY SCREW
MB50-22	M10 CLAMP SCREW SEM 22	BH DOG DRIVE SMH 22	KEY SMH 22	M4x10 SMH KEY SCREW
MB50-27	M12 CLAMP SCREW SEM 27	BH DOG DRIVE SMH 27	KEY SMH 27	M5x12 SMH KEY SCREW
MB50-32	M16 CLAMP SCREW SEM 32	BH DOG DRIVE SMH 32	KEY SMH 32	M6x16 SMH KEY SCREW
MB63-27	M12 CLAMP SCREW SEM 27	BH DOG DRIVE SMH 27	KEY SMH 27	M5x12 SMH KEY SCREW
MB63-32	M16 CLAMP SCREW SEM 32	BH DOG DRIVE SMH 32	KEY SMH 32	M6x16 SMH KEY SCREW
MB80-32	M16 CLAMP SCREW SEM 32	BH DOG DRIVE SMH 32	KEY SMH 32	M6x16 SMH KEY SCREW
MB80-40	M20 CLAMP SCREW SEM 40	BH D OG DRIVE SMH 40	KEY SMH 40	M6x18 SMH KEY SCREW

NUT ER TOP

ER - Top™ clamping nut

DIN 6499

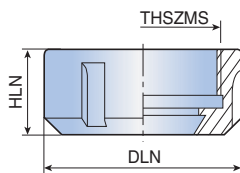


Designation	Dimension (mm)		
	DLN	HLN	THSZMS
NUT ER16 TOP	28	17	M22x1.5
ER20 TOP	34	19	M25x1.5
ER25 TOP	42	20	M32x1.5
ER32 TOP	50	22	M40x1.5
ER40 TOP	63	25	M50x1.5

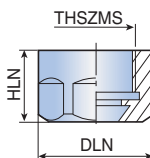
NUT ER-MINI/UM

Spare Parts

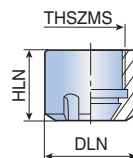
ER clamping nut



UM ER 25,32,40,50



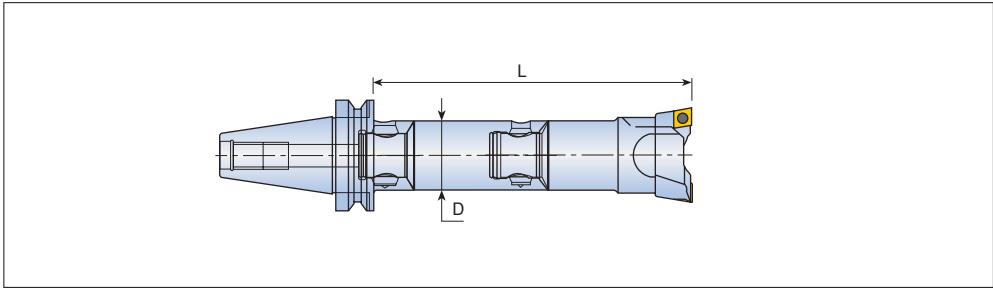
UM ER 16,20



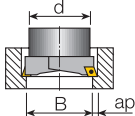
UM ER 11,16,20,25 MINI

Recommended Cutting Conditions

BHR rough boring heads



Cutting depth



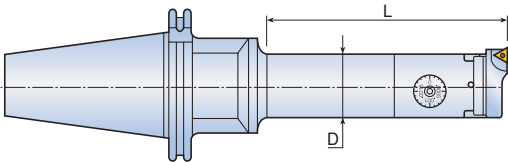
It's advisable to start with
 $B \text{ hole} \geq \text{boring bar diameter } d$

B Working range	ap (mm) Steel	ap (mm) Cast iron, Aluminum
18-20	1.5-2	2-2.5
28-50	2-3	2.5-3.5
50-68	3-4	3.5-5
68-200	4-5	5-7
200-500	5-6	6-8

► In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Fine boring heads



Stability ●●● – Good
●● – Normal
● – Poor

Material	L/D	Stability	Cutting speed (Vc=m/min)	Feed f=mm/rev		Cutting depth (ap)
				Insert radius		
				R=0.2	R=0.4	
Carbon steel HB≤200	L/D=2.5	***	200-300	0.05-0.08	0.08-0.10	
	L/D=4	**	160-250	0.05-0.08	0.08-0.10	
	L/D=6.3	*	70-100	0.05-0.08	-	
Carbon steel HB>200	L/D=2.5	***	160-250	0.05-0.08	0.08-0.10	
	L/D=4	**	150-200	0.05-0.08	0.08-0.10	
	L/D=6.3	*	70-100	0.05-0.08	-	
Stainless steel	L/D=2.5	***	150-200	0.05-0.08	0.08-0.10	
	L/D=4	**	120-180	0.08-0.10	0.08-0.10	
	L/D=6.3	*	70-80	0.05-0.08	0.08-0.10	
Alloyed steel HB 480-550	L/D=2.5	***	120-160	0.05-0.08	0.08-0.10	
	L/D=4	**	100-140	0.05-0.08	0.08-0.10	
	L/D=6.3	*	70-100	0.05-0.08	-	
Cast iron	L/D=2.5	***	120-160	0.05-0.08	0.08-0.10	
	L/D=4	**	100-140	0.05-0.08	0.08-0.10	
	L/D=6.3	*	70-100	0.05-0.08	-	
Aluminum	L/D=2.5	***	300-400	0.05-0.08	0.08-0.10	
	L/D=4	**	250-350	0.05-0.08	0.08-0.10	
	L/D=6.3	*	100-150	0.05-0.08	-	

Recommended Cutting Conditions

Stability ●●● – Good
 ●● – Normal
 ● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D18-28			Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.2	1.2-2.5	0.8-1.5	1.5-2.5	0.8-1.5	1.5-3.0
				R (Radius)	0.2	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
P	Carbon steel	HB<200	2.5 ●●●	Vc	150-180	120-150	160-200	140-170	160-200	140-180
				f	0.1-0.2	0.08-0.2	0.15-0.2	0.1-0.175	0.15-0.25	0.08-0.2
			4 ●●●	Vc	140-160	100-140	160-180	120-150	160-180	120-150
				f	0.1-0.18	0.08-0.15	0.1-0.12	0.08-0.1	0.1-0.12	0.08-0.1
			6.3 ●●●	Vc	60-80	40-60	60-90	50-60	70-90	50-70
				f	0.06-0.12	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.1	0.06-0.1
	Carbon steel	HB>200	2.5 ●●●	Vc	130-160	100-130	140-180	120-160	140-180	120-160
				f	0.08-0.15	0.08-0.12	0.08-0.2	0.06-0.12	0.08-0.25	0.08-0.18
			4 ●●●	Vc	110-140	80-110	100-140	80-120	100-140	80-120
				f	0.08-0.12	0.08-0.1	0.08-0.15	0.06-0.15	0.08-0.2	0.06-0.15
			6.3 ●●●	Vc	70-90	60-70	80-100	60-80	80-100	60-80
				f	0.08-0.1	0.06-0.08	0.06-0.1	0.06-0.08	0.08-0.15	0.06-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D68-120			Boring range D120-200		Boring range D200-500	
				ap (mm)	0.8-1.5	1.5-3.5	0.8-2.0	2.0-3.5	0.8-1.5	2.0-4.0
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
P	Carbon steel	HB<200	2.5 ●●●	Vc	160-220	150-180	180-250	160-200	220-280	200-220
				f	0.15-0.25	0.08-0.2	0.15-0.3	0.1-0.2	0.15-0.3	0.1-0.15
			4 ●●●	Vc	140-180	120-150	160-200	140-180	N.R.	N.R.
				f	0.08-0.2	0.08-0.15	0.1-0.2	0.08-0.15		
			6.3 ●●●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
				f	0.06-0.1	0.06-0.1				
	Carbon steel	HB>200	2.5 ●●●	Vc	140-180	120-160	150-170	100-140	100-140	80-120
				f	0.15-0.3	0.12-0.2	0.15-0.25	0.1-0.2	0.15-0.3	0.1-0.2
			4 ●●●	Vc	120-150	100-140	100-130	80-110	N.R.	N.R.
				f	0.1-0.2	0.1-0.18	0.08-0.2	0.08-0.12		
			6.3 ●●●	Vc	80-100	60-80	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.12	0.08-0.12				

- ▶ N.R. = Not recommended
- ▶ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●● – Good
 ●● – Normal
 ● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D18-28			Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.0	1.0-1.8	0.5-1.0	1.0-1.8	0.5-1.2	1.2-2.0
				R (Radius)	0.2	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
P	Alloyed steel	HB<200	2.5 ●●●	Vc	140-160	90-120	150-180	100-130	160-200	140-180
				f	0.08-0.18	0.08-0.15	0.08-0.2	0.08-0.18	0.1-0.25	0.1-0.15
			4 ●●	Vc	100-130	70-100	110-150	90-120	140-180	100-130
				f	0.08-0.15	0.06-0.12	0.08-0.18	0.08-0.15	0.8-0.18	0.08-0.12
			6.3 ●	Vc	80-100	60-90	80-100	70-90	100-140	80-120
				f	0.08-0.15	0.06-0.1	0.06-0.12	0.06-0.12	0.6-0.15	0.08-0.1
	Alloyed steel	HB>200	2.5 ●●●	Vc	130-150	120-140	130-150	120-140	140-170	120-150
				f	0.08-0.18	0.06-0.15	0.08-0.18	0.06-0.15	0.08-0.2	0.08-0.18
			4 ●●	Vc	100-130	100-120	100-130	100-120	120-150	100-120
				f	0.08-0.15	0.06-0.13	0.08-0.15	0.06-0.13	0.08-0.18	0.08-0.15
			6.3 ●	Vc	80-100	70-90	80-100	70-90	100-120	70-90
				f	0.08-0.12	0.06-0.11	0.08-0.12	0.06-0.11	0.08-0.12	0.06-0.11

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D68-120		Boring range D120-200		Boring range D200-500		
				ap (mm)	0.8	2.5	0.8-2.0	2.0-3.5	0.8-2.0	2.0-4.0
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
P	Alloyed steel	HB<200	2.5 ●●●	Vc	160-220	140-180	160-220	140-180	160-220	140-180
				f	0.1-0.3	0.1-0.25	0.1-0.3	0.1-0.25	0.1-0.35	0.1-0.3
			4 ●●	Vc	150-200	120-160	120-160	120-160	N.R.	N.R.
				f	0.1-0.2	0.08-0.18	0.1-0.2	0.08-0.18		
			6.3 ●	Vc	100-140	100-140	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.18	0.08-0.15				
	Alloyed steel	HB>200	2.5 ●●●	Vc	160-200	140-180	140-200	140-180	140-200	140-180
				f	0.1-0.3	0.01-0.25	0.01-0.35	0.01-0.3	0.01-0.35	0.01-0.3
			4 ●●	Vc	140-160	120-140	150-180	120-140	N.R.	N.R.
				f	0.08-0.2	0.08-0.15	0.08-0.12	0.08-0.12		
			6.3 ●	Vc	100-120	70-90	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.16	0.08-0.12				

► N.R. = Not recommended

► In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●● – Good
 ●● – Normal
 ● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D18-28			Boring range D28-50		Boring range D50-68					
				ap (mm)	0.5-1.0	1.0-1.8	0.5-1.0	1.0-1.8	0.5-1.2	1.2-2.0				
				R (Radius)	0.2	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8				
M	Stainless steel	Ferritic & martensitic	2.5 ●●●	Vc	100-150	110-130	120-160	100-150	120-160	110-160				
			4 ●●	f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.08-0.18				
			Stainless steel	Austenitic	6.3 ●	Vc	90-130	90-120	100-140	90-140	100-150	80-120		
					4 ●●	f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.08-0.12		
					Stainless steel cast	Ferritic & martensitic	6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
							4 ●●	f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.08-0.1
	Stainless steel cast	Austenitic					2.5 ●●●	Vc	110-130	100-130	120-150	110-140	110-160	100-150
							4 ●●	f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.06-0.12
			Stainless steel cast	Austenitic	6.3 ●	Vc	80-110	80-110	90-130	90-120	100-150	90-130		
					4 ●●	f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.06-0.1		
					Stainless steel cast	Austenitic	6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
							4 ●●	f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.06-0.1
	Stainless steel cast	Austenitic					2.5 ●●●	Vc	90-130	100-130	120-150	110-140	120-160	100-150
							4 ●●	f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.06-0.12
			Stainless steel cast	Austenitic			6.3 ●	Vc	70-110	80-110	90-130	90-120	100-150	90-130
							4 ●●	f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.06-0.1
					Stainless steel cast	Austenitic	6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
							4 ●●	f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.06-0.1
	Stainless steel cast	Austenitic					2.5 ●●●	Vc	80-120	70-110	100-150	90-140	110-150	100-150
							4 ●●	f	0.08-0.15	0.06-0.12	0.08-0.18	0.06-0.12	0.08-0.25	0.06-0.12
			Stainless steel cast	Austenitic			6.3 ●	Vc	70-100	70-100	80-130	70-120	90-140	90-130
							4 ●●	f	0.08-0.12	0.06-0.1	0.08-0.12	0.06-0.1	0.08-0.18	0.06-0.1
					Stainless steel cast	Austenitic	6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
							4 ●●	f	0.06-0.1	0.06-0.1	0.06-0.12	0.06-0.1	0.06-0.15	0.06-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D68-120			Boring range D120-200		Boring range D200-500					
				ap (mm)	0.8-1.8	1.8-2.5	0.8-2.0	2.0-3.0	0.8-2.0	2.0-3.5				
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.2-0.4				
M	Stainless steel	Ferritic & martensitic	2.5 ●●●	Vc	130-220	120-200	140-220	120-180	150-220	120-200				
			4 ●●	f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25				
			Stainless steel	Austenitic	6.3 ●	f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18	N.R.	N.R.		
					4 ●●	Vc	100-160	90-140	120-180	90-140	N.R.	N.R.		
					6.3 ●	Vc	70-100	50-70	N.R.	N.R.			N.R.	N.R.
					4 ●●	f	0.08-0.2	0.08-0.15			N.R.	N.R.		
	Stainless steel cast	Ferritic & martensitic			2.5 ●●●	Vc	120-200	100-160	120-200	100-160			120-200	100-180
					4 ●●	f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25		
			Stainless steel cast	Austenitic	6.3 ●	Vc	100-150	90-140	100-160	90-140	N.R.	N.R.		
					4 ●●	f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18	0.08-0.18	0.06-0.1		
					Stainless steel cast	Austenitic	6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
							4 ●●	f	0.08-0.2	0.08-0.15				
	Stainless steel cast	Austenitic					2.5 ●●●	Vc	130-200	120-180	140-200	120-160	140-200	120-180
							4 ●●	f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25
			Stainless steel cast	Austenitic			6.3 ●	Vc	110-150	90-150	100-160	90-140	N.R.	N.R.
							4 ●●	f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
					Stainless steel cast	Austenitic	6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
							4 ●●	f	0.08-0.2	0.08-0.15				
	Stainless steel cast	Austenitic					2.5 ●●●	Vc	130-180	120-180	120-200	100-160	120-200	100-180
							4 ●●	f	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.3	0.08-0.25
			Stainless steel cast	Austenitic			6.3 ●	Vc	100-140	90-140	100-160	90-140	N.R.	N.R.
							4 ●●	f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
					Stainless steel cast	Austenitic	6.3 ●	Vc	70-190	50-70	N.R.	N.R.	N.R.	N.R.
							4 ●●	f	0.08-0.2	0.08-0.15				

▶ N.R. = Not recommended

▶ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●● – Good
 ●● – Normal
 ● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D		Boring range D18-28		Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.0	1.0-1.8	0.5-1.0	1.0-1.8	0.5-1.2	1.2-2.0
				R (Radius)	0.2-0.4	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
K	Gray cast iron GG 10-25	HB<200	2.5 ●●●	Vc	120-160	100-140	120-180	110-150	120-180	110-150
				f	0.06-0.15	0.06-0.18	0.06-0.15	0.06-0.12	0.08-0.2	0.08-0.12
			4 ●●	Vc	100-140	80-120	100-150	80-120	100-150	80-120
				f	0.06-0.12	0.06-0.1	0.06-0.12	0.06-0.1	0.08-0.12	0.08-0.1
			6.3 ●	Vc	70-100	60-90	70-100	60-90	70-100	60-90
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.08-0.1	0.08-0.1
	Gray cast iron GG 25-40		2.5 ●●●	Vc	140-200	140-200	140-220	160-250	180-220	200-280
				f	0.06-0.15	0.06-0.18	0.06-0.15	0.06-0.18	0.08-0.2	0.1-0.25
			4 ●●	Vc	120-160	120-160	120-180	140-200	140-180	180-220
				f	0.06-0.12	0.06-0.14	0.06-0.12	0.06-0.14	0.08-0.12	0.08-0.2
			6.3 ●	Vc	70-100	60-90	70-100	60-90	60-100	60-120
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.08-0.1	0.08-0.1
	Cast iron GGG	Spheroidal & graphite	2.5 ●●●	Vc	120-180	120-180	120-200	140-220	180-220	180-240
				f	0.06-0.15	0.06-0.18	0.06-0.15	0.06-0.18	0.08-0.18	0.1-0.2
			4 ●●	Vc	120-160	120-160	120-180	140-200	140-200	160-220
				f	0.06-0.12	0.06-0.14	0.06-0.12	0.06-0.14	0.08-0.12	0.08-0.18
			6.3 ●	Vc	60-100	60-90	60-100	60-90	60-90	60-100
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.08-0.1	0.08-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D18-28			Boring range D28-50		Boring range D50-68	
				ap (mm)	0.8-1.8	1.8-2.5	0.8-2.0	2.0-3.0	0.8-2.0	2.0-3.5
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
K	Gray cast iron GG 10-25	HB<200	2.5 ●●●	Vc	120-200	110-150	150-250	180-280	150-250	180-280
				f	0.08-0.25	0.08-0.3	0.08-0.25	0.08-0.35	0.08-0.25	0.08-0.35
			4 ●●	Vc	100-150	80-120	120-170	120-170	N.R.	N.R.
				f	0.08-0.18	0.08-0.2	0.08-0.18	0.08-0.25		
			6.3 ●	Vc	70-100	60-90	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.15	0.08-0.12				
	Gray cast iron GG 25-40		2.5 ●●●	Vc	50-300	250-350	250-350	250-350	250-350	250-350
				f	0.12-0.35	0.12-0.35	0.15-0.3	0.15-0.4	0.15-0.3	0.15-0.4
			4 ●●	Vc	200-270	230-300	200-300	200-270	N.R.	N.R.
				f	0.1-0.25	0.12-0.3	0.15-0.3	0.15-0.35		
			6.3 ●	Vc	70-150	60-120	N.R.	N.R.	N.R.	N.R.
				f	0.1-0.15	0.12-0.25				
	Cast iron GGG	Spheroidal & graphite	2.5 ●●●	Vc	200-240	200-280	200-280	220-300	220-300	220-300
				f	0.12-0.3	0.12-0.3	0.15-0.3	0.15-0.35	0.15-0.3	0.15-0.35
			4 ●●	Vc	160-220	180-240	180-250	200-270	N.R.	N.R.
				f	0.1-0.2	0.12-0.25	0.15-0.25	0.15-0.35		
			6.3 ●	Vc	60-100	60-100	N.R.	N.R.	N.R.	N.R.
				f	0.1-0.15	0.12-0.2				

► N.R. = Not recommended

► In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Recommended Cutting Conditions

Stability ●●● – Good
●● – Normal
● – Poor

BHR rough boring cutting data

ap(mm), R(radius), Vc(m/min), f(mm/rev)

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D18-28			Boring range D28-50		Boring range D50-68	
				ap (mm)	0.5-1.5	1.5-2.5	0.5-1.5	1.5-2.5	0.5-2.0	1.2-3.0
				R (Radius)	0.2-0.4	0.4	0.2-0.4	0.4	0.2-0.4	0.4-0.8
N	Aluminum/ Cast	>12si	2.5 ●●●	Vc	200-300	240-350	200-300	240-350	200-300	240-350
				f	0.06-0.2	0.06-0.25	0.06-0.2	0.06-0.25	0.06-0.25	0.06-0.3
			4 ●●	Vc	150-220	150-220	150-220	150-220	150-220	150-220
				f	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2
			6.3 ●	Vc	60-100	60-100	60-100	60-100	60-100	60-100
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1
	Aluminum/ Cast	<12si	2.5 ●●●	Vc	180-250	220-280	180-250	220-280	180-250	220-280
				f	0.06-0.2	0.06-0.25	0.06-0.25	0.06-0.25	0.06-0.25	0.06-0.3
			4 ●●	Vc	120-220	120-220	120-220	120-220	120-220	120-220
				f	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.25
			6.3 ●	Vc	60-100	60-100	60-100	60-100	60-100	60-100
				f	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1	0.06-0.1

ISO	Workpiece material	Hardness HB	Overhang L/D	Boring range D68-120			Boring range D120-200		Boring range D200-500	
				ap (mm)	0.8-3.0	1.8-4.0	0.8-3.0	2.0-4.0	0.8-3.0	2.0-4.5
				R (Radius)	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8	0.2-0.4	0.4-0.8
N	Aluminum/ Cast	>12si	2.5 ●●●	Vc	200-300	240-350	200-300	240-350	200-300	240-350
				f	0.06-0.25	0.06-0.3	0.06-0.25	0.06-0.4	0.06-0.25	0.06-0.4
			4 ●●	Vc	150-220	150-220	150-220	150-220	N.R.	N.R.
				f	0.06-0.2	0.06-0.2	0.06-0.2	0.06-0.2		
			6.3 ●	Vc	60-100	60-100	N.R.	N.R.	N.R.	N.R.
				f	0.06-0.1	0.06-0.1				
	Aluminum/ Cast	<12si	2.5 ●●●	Vc	180-250	220-280	180-250	220-280	180-250	220-280
				f	0.06-0.25	0.06-0.3	0.06-0.3	0.06-0.4	0.06-0.3	0.06-0.4
			4 ●●	Vc	120-220	120-220	120-220	120-220	N.R.	N.R.
				f	0.06-0.2	0.06-0.25	0.06-0.2	0.06-0.25		
			6.3 ●	Vc	60-100	60-100	N.R.	N.R.	N.R.	N.R.
				f	0.06-0.1	0.06-0.1				

- ▶ N.R. = Not recommended
- ▶ In case of a single or a stepped boring cutter configuration, only half the feed should be applied

Technical Data

► Fine boring head BHF 16-50 and BHE operating instructions

■ Assembly

- When mounting the BHF boring head, the expanding pin should be kept tightly inside the cylindrical body
- Insert the BHF into the shank
- Tighten the pin ② by turning clockwise

The recommended tightening torque guidelines are as follows:

Recommended Torque	(N·m)
BHF MB16 - 16 x 34	2.0 - 2.5
BHF MB20 - 20 x 40	4.0 - 4.5
BHF MB25 - 25 x 50	6.5 - 7.5
BHF MB32 - 32 x 63	7.0 - 8.0
BHF MB40 - 40 x 80	16.0 - 18.0
BHF MB50 - 50 x 60	30.0 - 35.0

- Insert screw ⑤ until it completely enters the recess in the sleeve nut or boring bar

■ Disassembly

- Loosen the pin ② by turning counter-clockwise

■ Positioning

- Loosen the screw ④ before making any slide adjustment
- By turning the graduated dial ③ counterclockwise, set the tool slide ⑦ allowance for a 4mm adjustment
- Lock the tool slide by means of screw ④, to the desired position
- Lock the screw ④
- When making any slide adjustment, firstly loosen the screw ④

■ Maintenance

Weekly:

- Lubricate through the oiling nipple ⑧ with ISO UN G220 oil

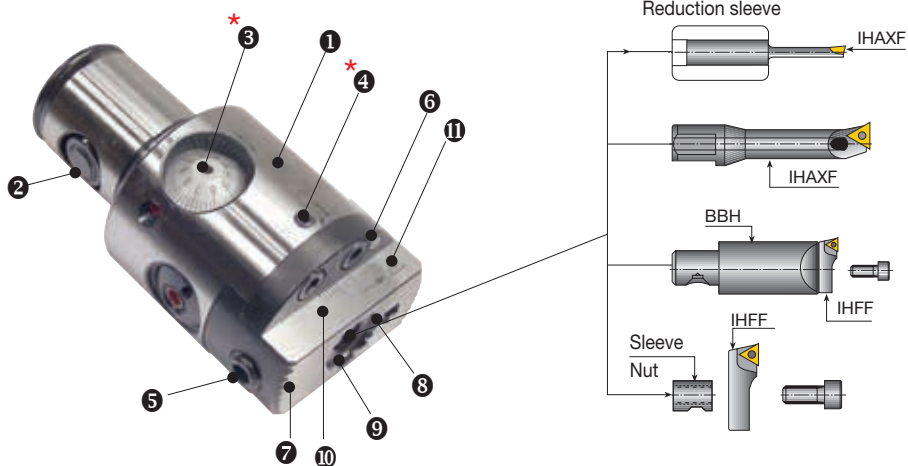
Periodically:

- Clean the conical cylindrical surface and then lubricate
- Grease the expanding pin ② with an anti-friction lubricant
- Clean and lubricate the tool slide guideway

■ Important note:

- Toolholder should be firmly affixed to the slide at all times

* Due to back-lash phenomenon, if you pass the required value, turn the dial ③ in the reverse direction at least one rotation and then re-adjust in the original direction



- | | | | |
|--------------------|----------------------------|-------------------|--|
| ① Body | * ④ Slide locking screw | ⑦ Slide holder | ⑩ Slide adjusting range
Do not exceed the range marks!! |
| ② Expanding pin | ⑤ Toolholder locking screw | ⑧ Oiling nipple | |
| * ③ Graduated dial | ⑥ Coolant nozzle | ⑨ Tool bore .63H7 | ⑪ Cutting edge position mark |

Technical Data

► Fine boring head BHF 63-125 operating instructions

■ Assembly

- When mounting the BHF boring head, the expanding pin should be kept tightly inside the cylindrical body
- Insert the BHF into the shank
- Tighten the pin ② by turning clockwise

The recommended tightening torque guidelines are as follows:

Recommended Torque	(N·m)
BHF MB50 - 63 x 87	30 - 35
BHF MB50 - 80 x 94	30 - 35
BHF MB63 - 63 x 87	80 - 90
BHF MB80 - 80 x 94	80 - 90
BHF MB80 - 125 x 94	80 - 90
BHF MB50 - 50 x 60	30 - 35

- Insert screw ⑤ until it completely enters the recess in the sleeve nut or boring bar

■ Disassembly

- Loosen the pin ② by turning counter-clockwise

■ Positioning

- Loosen the screw ④ before making any slide adjustment
- By turning the graduated dial ③ counterclockwise, set the tool slide ⑦ allowance for a 4mm adjustment
- Lock the tool slide by means of screw ④, to the desired position
- Lock the screw ④
- When making any slide adjustment, firstly loosen the screw ④

■ Maintenance

Weekly:

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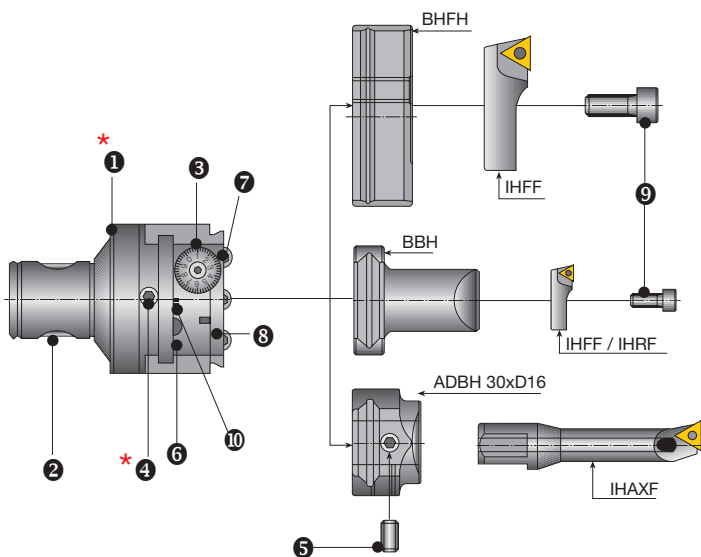
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|------------------|----------------------------|-----------------|---------------------------------|
| * 1 Body | * 4 Slide locking screw | 7 Slide holder | 9 Toolholder locking screws |
| 2 Expanding pin | 5 Toolholder locking screw | 8 Oiling nipple | 10 Slide adjusting range |
| 3 Graduated dial | 6 Coolant nozzle | | Do not exceed the range marks!! |

