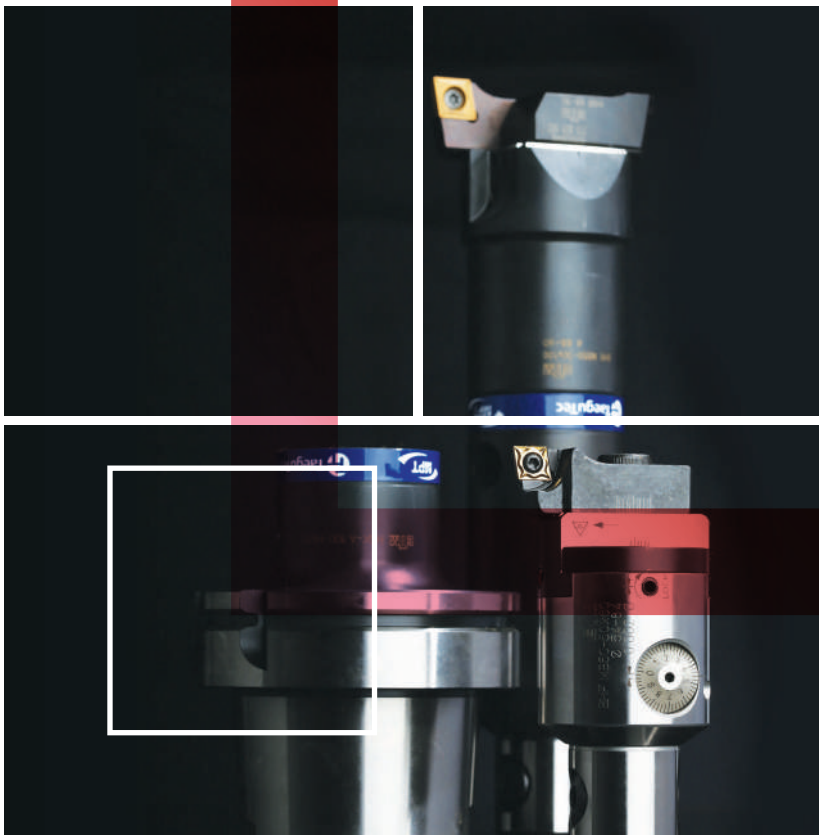
MPT

MODULAR PRECISION TOOLING



MPT

Modular Precision Tooling

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› Spare Parts Page


› Toolholders Page



› Slide Page



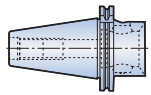
› Cutting Condition Page



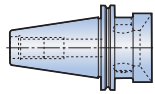
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Shanks

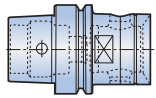
SKA
H6



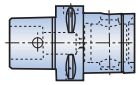
CATM
H7



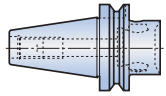
HSK
H8



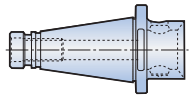
C MB
H9



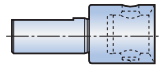
BT/BT-FC
H10-H11



ISOM/ISO
H12

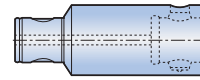


ST
H13-H15

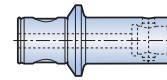


Extensions and reducers

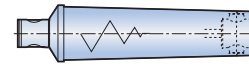
EX H16



RE H17

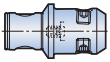


RE AVI H8

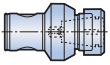


Toolholders

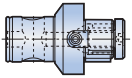
EMH H19



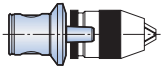
CC H20



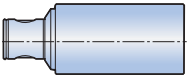
SMH H21



DC H22



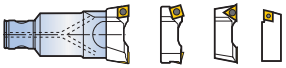
BLANK H22



Boring heads

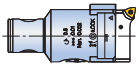
Rough boring heads

BHR H23

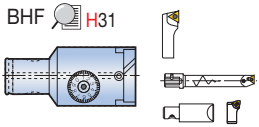


Fine boring heads

BHE H27

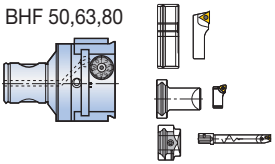


BHF H31



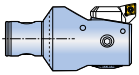
H37

BHF 50,63,80

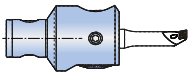


H45

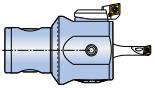
BSFD MB A-G



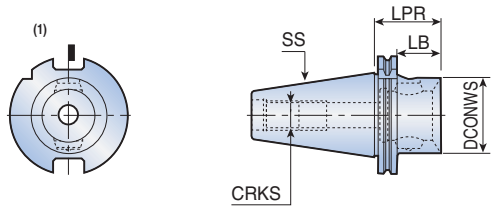
BSFD MB-H



BSFD-V MB-I



SK shank with MB connection



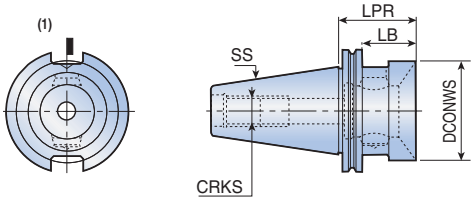
DIN 69871- AD / ISO 7388/1 MB

Designation	Dimension (mm)					CRKS	Kg
	SS	DCONWS	LPR	LB	BD		
SKA 30-MB50	30	MB50	60	41	-	M12	0.7
40-MB40	40	MB40	45	26	-	M16	0.9
40 MB40x120	40	MB40	120	101	44.50	M16	1.7
40-MB50	40	MB50	48	29	-	M16	1.2
40 MB50x120	40	MB50	120	101	-	M16	2.8
40-MB63	40	MB63	80	61	-	M16	1.6
50-MB50	50	MB50	48	29	-	M24	2.8
50 MB50x120	50	MB50	120	101	60.00	M24	4.0
50-MB63	50	MB63	56	37	-	M24	3.0
50 MB63x150	50	MB63	150	131	70.00	M24	2.8
50-MB80	50	MB80	62	43	-	M24	3.6
50 MB80x180	50	MB80	180	161	-	M24	7.9

▸ (1) Cutting edge position

CATM-MB

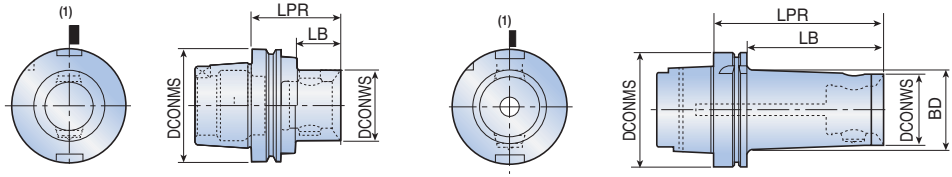
CAT shank with MB connection



Designation	Dimension (mm)				CRKS	Kg
	SS	DCONWS	LPR	LB		
CATM 40-MB50	40	MB50	66	47	M16	1.1
40-MB63	40	MB63	100	81	M16	1.9
50-MB50	50	MB50	48	29	M24	2.9
50-MB80	50	MB80	62	43	M24	3.2

▸ (1) Cutting edge position

HSK shank with MB connection



HSK DIN 69893 MB

Fig.1

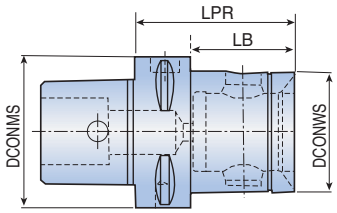
HSK DIN 69893-A MB

Fig.2

Designation	Dimension (mm)					Kg	Fig.
	DCONMS	DCONWS	LPR	LB	BD		
HSK A 50-MB50	50	MB50	66	40	-	0.6	1
63-MB40	63	MB40	60	34	-	1.0	1
63-MB40x120	63	MB40	120	94	46	1.6	2
63-MB50	63	MB50	66	40	-	0.9	1
63-MB50x120	63	MB50	120	94	-	1.1	2
63-MB63	63	MB63	75	49	-	1.1	1
80-MB50	80	MB50	70	44	-	1.5	1
80-MB63	80	MB63	80	54	-	1.8	1
80-MB80	80	MB80	86	60	-	2.1	1
100-MB50	100	MB50	72	43	-	2.0	1
100-MB50x120	100	MB50	120	91	60	4.9	2
100-MB63	100	MB63	82	53	-	2.7	1
100-MB63x150	100	MB63	150	121	70	4.7	2
100-MB80	100	MB80	88	59	-	3.0	1
100-MB80x180	100	MB80	180	151	-	7.3	2

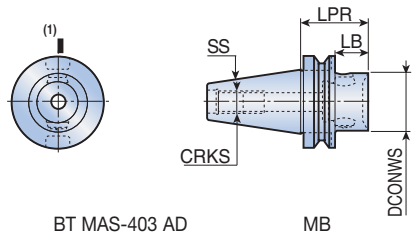
▸ (1) Cutting edge position

C-adapter shank with MB connection



Designation	Dimension (mm)				Kg
	DCONMS	DCONWS	LPR	LB	
C5 MB50x55	50	MB50	55	-	0.7
C6 MB50x67	63	MB50	67	45	1.1
MB63x77	63	MB63	77	-	1.8
C8 MB63x70	80	MB63	70	39	2.3

BT shanks with MB connection



BT MAS-403 AD MB

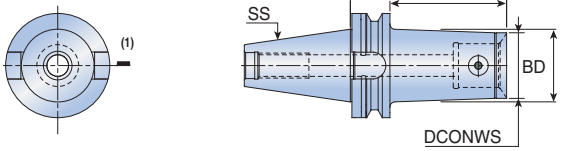
Designation	Dimension (mm)					CRKS	Kg
	SS	DCONWS	LPR	LB	BD		
BT- 30-MB32	30	MB32	32	10.6	-	M12	0.5
30-MB50	30	MB50	60	38.6	-	M12	0.7
40-MB40	40	MB40	45	18	-	M16	0.6
40-MB40x120	40	MB40	120	93	44.5	M16	0.9
40-MB50	40	MB50	48	21	-	M16	0.9
40-MB50x120	40	MB50	120	93	-	M16	1.9
40-MB63	40	MB63	66	39	-	M16	1.2
50-MB50	50	MB50	66	28	-	M24	3.5
50-MB50x120	50	MB50	120	82	60	M24	4.2
50-MB63	50	MB63	75	37	-	M24	3.7
50-MB63x150	50	MB63	150	112	70	M24	5.8
50-MB80	50	MB80	75	37	-	M24	4.0
50-MB80x180	50	MB80	180	142	-	M24	7.5
50-MB110x140	50	MB110	140	102	-	M24	6.8

▸ (1) Cutting edge position

BT-FC-MB

BT-FC shanks with MB connection

DIN6357



Designation		Dimension (mm)					CRKS	Kg
		SS	DCONWS	LPR	BD	LB		
BT40	**FC MB50**	40	50	48	-	21	M16	0.9
	FC MB50X120	40	50	120	-	93	M16	1.9
	FC MB63	40	63	66	-	-	M16	1.2
BT50	**FC MB50**	50	50	66	-	28	M24	3.3
	FC MB50X120	50	50	120	60	82	M24	4.2
	FC MB63	50	63	75	-	37	M24	3.7
	FC MB63X150	50	63	150	70	112	M24	5.8
	FC MB80	50	80	75	-	37	M24	4
	FC MB80X180	50	80	180	-	142	M24	7.5

▸ (1) Cutting edge position

ISO Taper shank with MB connection

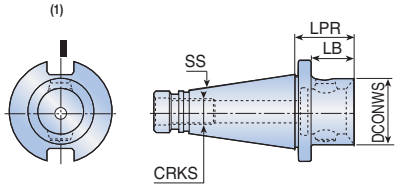


Fig.1

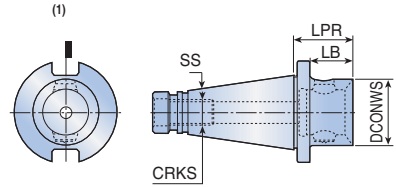


Fig.2

Designation		Dimension (mm)				CRKS	Kg	Fig.
		SS	DCONWS	LPR	LB			
ISOM	**30-MB50**	30	MB50	58	-	M12	0.6	1
	40-MB50	40	MB50	48	36	M16	0.9	1
	40-MB63	40	MB63	60	-	M16	1.2	1
	50-MB50	50	MB50	48	33	M24	2.6	1
	50-MB63	50	MB63	56	41	M24	2.7	1
	50-MB80	50	MB80	60	45	M24	3.2	1
ISO	**40-MB50**	40	MB50	48	36	UNC 5/8"-11	1.0	2
	40-MB63	40	MB63	60	-	UNC 5/8"-11	1.4	2
	50-MB50	50	MB50	48	33	UNC 1"-8	2.8	2
	50-MB63	50	MB63	56	41	UNC 1"-8	2.9	2
	50-MB80	50	MB80	60	45	UNC 1"-8	3.6	2

▸ (1) Cutting edge position

Straight shanks with MB connection

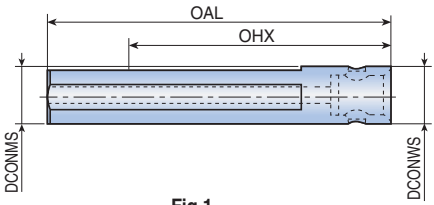


Fig.1

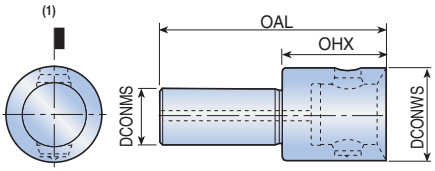
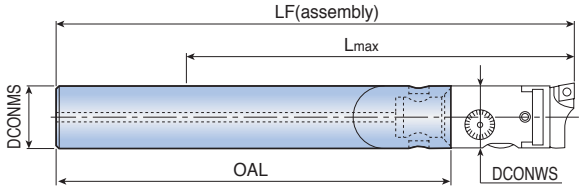


Fig.2

Designation	Dimension (mm)				Kg	Fig.
	DCONMS	DCONWS	OAL	OHX		
ST16-MB16	16	MB16	100	66	0.2	1
20-MB20	20	MB20	125	85	0.3	1
25-MB32	25	MB32	100	35	0.4	2
32-MB50	32	MB50	140	60	1.0	2

▸ (1) Cutting edge position

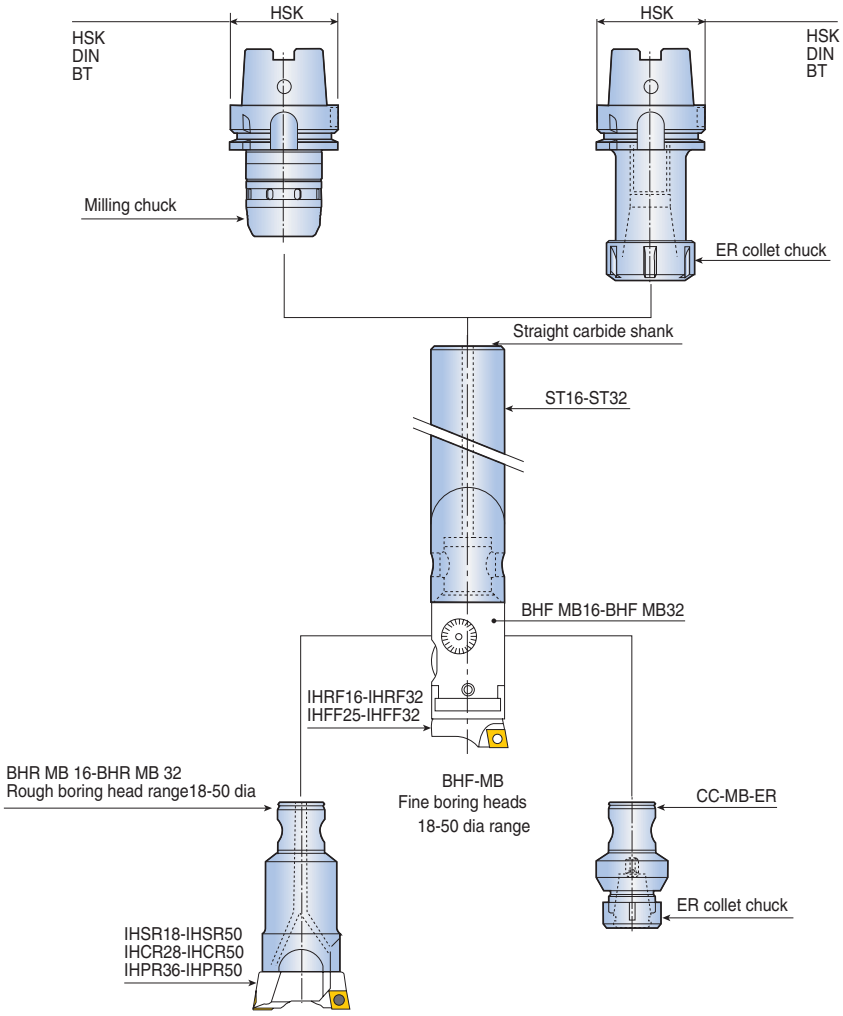
Straight carbide shanks with MB connection



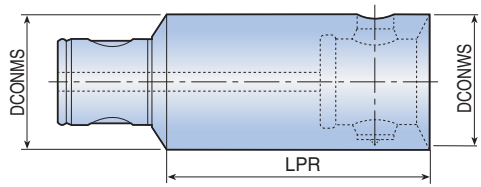
Designation		Dimension (mm)					Kg
		DCONMS	DCONWS	OAL	LF	Lmax	
ST16	**MB16x110E**	16	MB16	110	144	100	0.3
	MB16x140E	16	MB16	140	174	125	0.4
	MB16x170E	16	MB16	170	204	160	0.5
ST20	**MB20x135E**	20	MB20	135	175	125	0.6
	MB20x170E	20	MB20	170	210	160	0.8
	MB20x210E	20	MB20	210	250	200	0.9
ST25	**MB25x160E**	25	MB25	160	210	160	1.0
	MB25x205E	25	MB25	205	255	200	1.3
	MB25x255E	25	MB25	255	305	250	1.6
ST32	**MB32x195E**	32	MB32	195	258	200	2.1
	MB32x250E	32	MB32	250	313	250	2.8
	MB32x315E	32	MB32	315	378	320	3.5

ST-MB straight carbide shank with MB connection assembly options

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

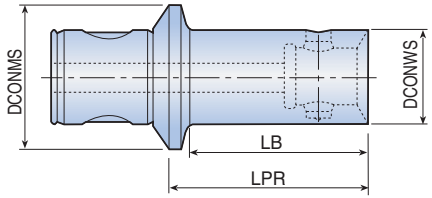


Extensions with MB connection



Designation	Dimension (mm)			Kg
	DCONMS	DCONWS	LPR	
EX 16x25-MB16	MB16	MB16	25	0.4
20x32-MB20	MB20	MB20	32	0.7
25x25-MB25	MB25	MB25	25	0.9
25x40-MB25	MB25	MB25	40	0.2
32x32-MB32	MB32	MB32	32	0.2
32x50-MB32	MB32	MB32	50	0.3
40x40-MB40	MB40	MB40	40	0.4
40x63-MB40	MB40	MB40	63	0.6
50x50-MB50	MB50	MB50	50	0.7
50x80-MB50	MB50	MB50	80	1.1
50x100-MB50	MB50	MB50	100	1.5
63x63-MB63	MB63	MB63	63	1.4
63x100-MB63	MB63	MB63	100	2.2
63x125-MB63	MB63	MB63	125	2.9
80x80-MB80	MB80	MB80	80	3.0
80x125-MB80	MB80	MB80	125	4.6
80x160-MB80	MB80	MB80	160	6.1

Reducers with MB connection



Designation		Dimension (mm)				Kg
		DCONMS	DCONWS	LPR	LB	
RE	**MB20-MB16x20**	MB20	MB16	20	16	0.5
	MB25-MB16x20	MB25	MB16	20	15	0.8
	MB25-MB20x25	MB25	MB20	25	20	0.9
	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-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-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

Carbide core reducers with MB connection

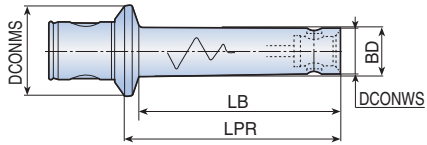


Fig.1

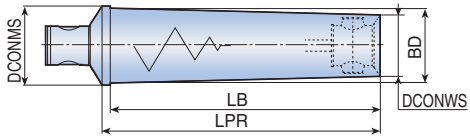


Fig.2

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

Weldon holder with MB connection

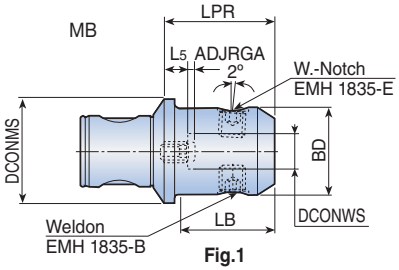


Fig.1

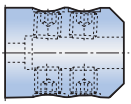


Fig.2

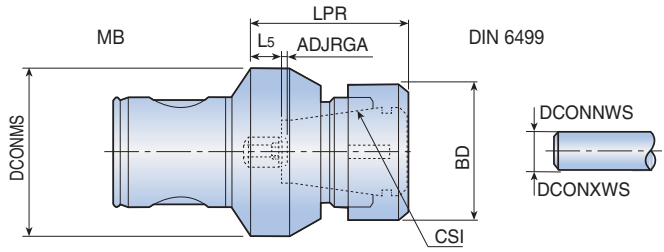
Designation		Dimension (mm)							Kg	Fig.
		DCONMS	DCONWS	BD	LPR	LB	L5	ADJRGA		
EMH	**MB50-6**	MB50	6	25	44	32.5	7	2	0.5	1
	MB50-8	MB50	8	28	44	33	7	2	0.5	1
	MB50-10	MB50	10	35	52	42	11	3	0.7	1
	MB50-12	MB50	12	42	57	48	11	3	0.8	1
	MB50-14	MB50	14	42	57	48	11	3	0.8	1
	MB50-16	MB50	16	48	67	61	17	4	1.1	1
	MB50-20	MB50	20	51	67	-	16	4	1.1	1
	MB50-25	MB50	25	63	80	-	22	4	1.2	2
	MB63-16	MB63	16	48	64	53	14	4	1.4	1
	MB63-20	MB63	20	52	66	56	14	4	1.5	1
	MB63-25	MB63	25	64	74	-	16	4	2.1	2
	MB63-32	MB63	32	72	76	-	14	4	2.5	2
	MB80-40	MB80	40	80	83	-	12	4	3.2	2

Spare Parts

Designation	Preset Screw	Lock Screw
		
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/MB63-16	BH EMH PRST M12X16B	BH EMH M14X15.5
MB50/MB63-20	BH EMH PRST M12X16B	BH EMH M16X15.5
MB50/MB63-25	BH EMH PRST M16X16B	BH EMH M18X19.5
MB63-32	BH EMH PRST M16X16B	BH EMH M20X19.5
MB80-40	-	BH EMH M20X19.5

CC MB-ER

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
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

Spare Parts

Designation	Press Screw	ER Nut	ER Wrench
			
CC MB16-ER11M	CC MB16 SCREW	NUT ER11 MINI	WRENCH ER11 MINI
MB20-ER16M	CC MB20 SCREW	NUT ER16 MINI	WRENCH ER16 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

SMH MB

Shell mill holders with MB connection

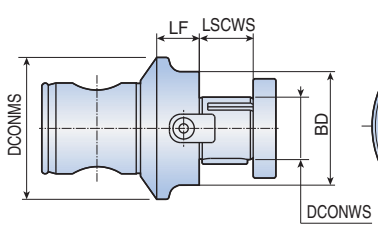


Fig.1

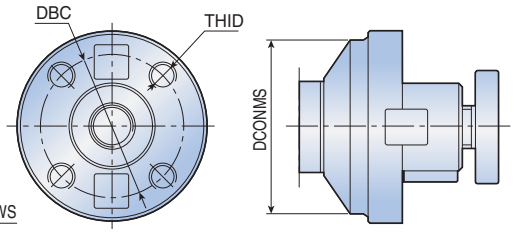


Fig.2

Designation		Dimension (mm)								Kg
		DCONMS	DCONWS	BD	DBC	THID	LF	LSCWS	Fig.	
SMH	**MB40-16**	40	16	32	-	-	15	17	1	0.32
	MB40-22	40	22	40	-	-	13	19	1	0.38
	MB50-16	50	16	32	-	-	15	17	1	0.48
	MB50-22	50	22	40	-	-	15	19	1	0.55
	MB50-27	50	27	50	-	-	15	21	1	0.66
	MB50-32	50	32	60	-	-	15	24	1	0.79
	MB63-22	63	22	60	-	-	15	19	1	1.01
	MB63-27	63	27	60	-	-	15	21	1	1.09
	MB63-32	63	32	70	-	-	15	24	1	1.24
	MB80-32	80	32	88	-	-	24	24	1	2.09
	MB80-40	80	40	88	66.7	M12	24	27	2	2.25
	MB80-50	80	50	90	-	-	24	30	2	2.58
	MB80-60[1]	80	60	128.5	101.6	M16	31.5	40	2	4.19

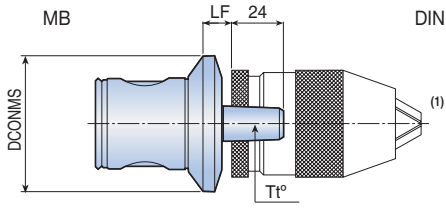
▸ [1]Shell locking screw not supplied

Spare Parts

Designation		Clamp Screw	Dog Drive	Key	Key Screw
					
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

DC MB

Drill chucks with MB connection

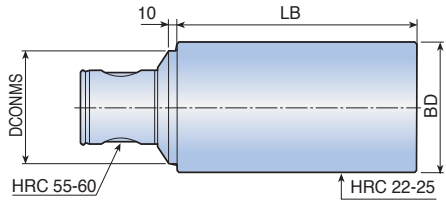


Designation	Dimension (mm)			Kg
	DCONMS	Tt°	LF	
DC **MB50 B16**	MB50	B16	10.0	0.4
MB63 B16	MB63	B16	13.5	0.8

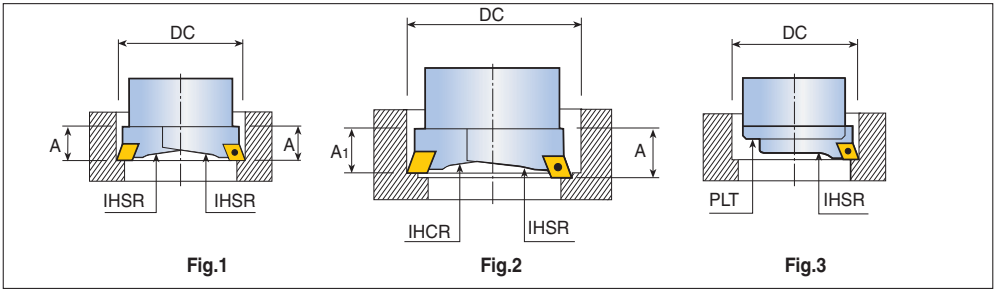
▸ (1)Without drill chuck

BLANK MB

Blanks with MB connection



Designation	Dimension (mm)			Kg
	DCONMS	BD	LB	
BLANK **MB50-63x160**	MB50	63	160	4.4
MB63-80x200	MB63	80	200	8.8
MB80-100x250	MB80	100	250	16.6
MB110-130x250	MB110	130	250	18.0



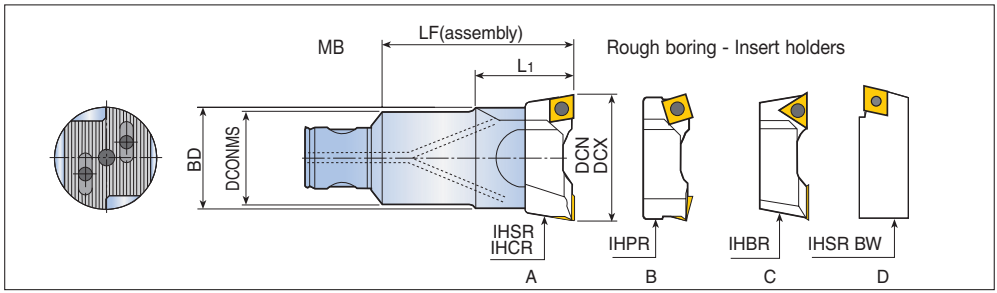
- When using the MPT system, it is strongly recommended that the user utilizes the tool pre-setting equipment provided to set the radial cutting edges. The boring bars that are equipped with two inserts holders are for rough machining and heavy stock removal.
- The bars are applicable to three types of machining scenarious:

- 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
40-40x75	50-68
50-50x90	68-90
50-63x105	90-120
63-63x105	90-120
80-80x115	120-200

Rough boring heads 18-200mm range with MB connection



Designation	Dimension (mm)						Insert holders					Kg
	DCONMS	DCN	DCX	BD	LF	L1	Insert holders	A	B	C	D	
BHR **MB16-16x34**	MB16	18	22	16	34	-	IH...18-22	●			●	0.06
MB20-20x40	MB20	22	28	20	40	-	IH...22-28	●			●	0.10
MB25-25x50	MB25	28	38	26	50	-	IH...28-38	●			●	0.18
MB32-32x63	MB32	36	50	34	63	-	IH...36-50	●	●		●	0.36
MB40-40x75	MB40	50	68	45	75	-	IH...50-68	●	●		●	0.70
MB50-50x90	MB50	68	90	65	90	50	IH...68-90	●	●		●	1.49
MB50-63x105	MB50	90	120	85	105	60	IH...90-120	●	●	●	●	1.54
MB63-63x105	MB63	90	120	85	105	63	IH...90-120	●	●	●	●	3.08
MB80-80x115	MB80	120	200	110	115	75	IH...120-800	●	●	●	●	5.38

Spare Parts H60-H67
Cutting Condition H68-H74
H25-H26

Insert holders

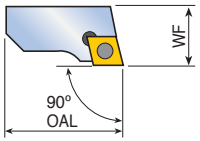


Fig.1

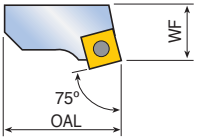


Fig.2

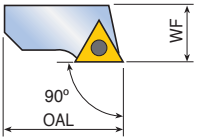
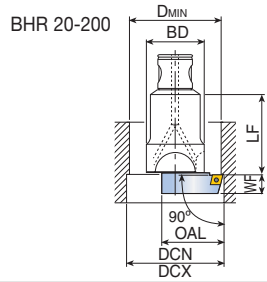


Fig.3

Designation		Dimension (mm)				Spare parts			Fig.
		DCN	DCX	WF	OAL	Insert	Insert screw	Torx key	
IHSR	**18-22**	18	22	8.0	15.0	CCMT 0602...	SR 14-548	T 7	1
	22-28	22	28	9.5	19.0	CCMT 0602...	SR 14-548	T 7	1
	28-38	28	38	12.5	23.0	CCMT 0602...	SR 14-548	T 7	1
	36-50	36	50	15.0	32.0	CCMT 0602...	SR 14-548	T 7	1
	50-68	50	68	19.0	40.0	CCMT 09T3...	SR 16-236	T 15	1
	50-68-12	50	68	19.0	40.0	CCMT 1204..	SR 16-212	T 20	1
	68-90	68	90	22.0	54.0	CCMT 1204..	SR 16-212	T 20	1
	90-120	90	120	27.0	70.5	CCMT 1204...	SR 16-212	T 20	1
	120-160	120	160	32.0	94.5	CCMT 1204..	SR 16-212	T 20	1
	160-800	160	800	32.0	130.0	CCMT 1204..	SR 16-212	T 20	1
IHCR	**28-38**	28	38	12.3	23.0	CCMT 0602..	SR 14-548	T 7	1
	36-50	36	50	14.8	32.0	CCMT 0602...	SR 14-548	T 7	1
	36-50-09	36	50	14.8	32.0	CCMT 09T3..	SR 16-236	T 15	1
	50-68	50	68	18.7	40.0	CCMT 09T3..	SR 16-236	T 15	1
	50-68-12	50	68	18.7	40.0	CCMT 1204..	SR 16-212	T 20	1
	68-90	68	90	21.7	54.0	CCMT 1204..	SR 16-212	T 20	1
	90-120	90	120	26.7	70.5	CCMT 1204..	SR 16-212	T 20	1
	120-160	120	160	31.7	94.5	CCMT 1204..	SR 16-212	T 20	1
	160-800	160	800	31.7	130.0	CCMT 1204..	SR 16-212	T 20	1
IHPR	**36-50**	36	50	15	32.0	SCMT 09T3..	SR 16-236	T 15	2
	50-68	50	68	19	40.0	SCMT 09T3...	SR 16-236	T 15	2
	68-90	68	90	22	54.0	SCMT 1204..	SR 16-212	T 20	2
	90-120	90	120	27	70.5	SCMT 1204..	SR 16-212	T 20	2
	120-160	120	160	32	94.5	SCMT 1204..	SR 16-212	T 20	2
	160-800	160	800	32	130.0	SCMT 1204..	SR 16-212	T 20	2
IHBR	**90-120**	90	120	27	70.5	TCMT 2205..	SR 16-212	T 20	3
	120-160	120	160	32	94.5	TCMT 2205..	SR 16-212	T 20	3
	160-800	160	800	32	130.0	TCMT 2205..	SR 16-212	T 20	3

H54-H57

Back face for BHR and rough boring heads



Designation	Dimension (mm)							Spare parts		
	SS	DCN	DCX	BD	LF	WF	OAL	Insert	Insert screw	Torx key
IHSR 20-24 BW	BHR MB16-16	20	24	16	27.5	8.0	16.0	CCMT 0602..	SR 14-548	T 7
23.5-30 BW	BHR MB20-20	23.5	30	20	32.5	9.5	19.5	CCMT 0602..	SR 14-548	T 7
29.5-40 BW	BHR MB25-20	29.5	40	25	39.0	12.0	24.0	CCMT 0602..	SR 14-548	T 7
39-52 BW	BHR MB32-32	39	52	32	50.0	14.0	32.0	CCMT 09T3..	SR 16-236	T 15
51-70 BW	BHR MB40-40	51	70	40	63.5	17.5	42.0	CCMT 1204..	SR 16-212	T 20
69-92 BW	BHR MB50-50	69	92	55	80.5	21.0	57.0	CCMT 1204..	SR 16-212	T 20
91-122 BW	BHR MB63-63	91	122	72	100.5	25.0	76.0	CCMT 1204..	SR 16-212	T 20
121-162 BW	BHR MB80-80	121	162	95	110.5	28.0	101.0	CCMT 1204..	SR 16-212	T 20
161-802 BW	BHR MB80-80	161	200	95	110.5	28.0	122.0	CCMT 1204..	SR 16-212	T 20

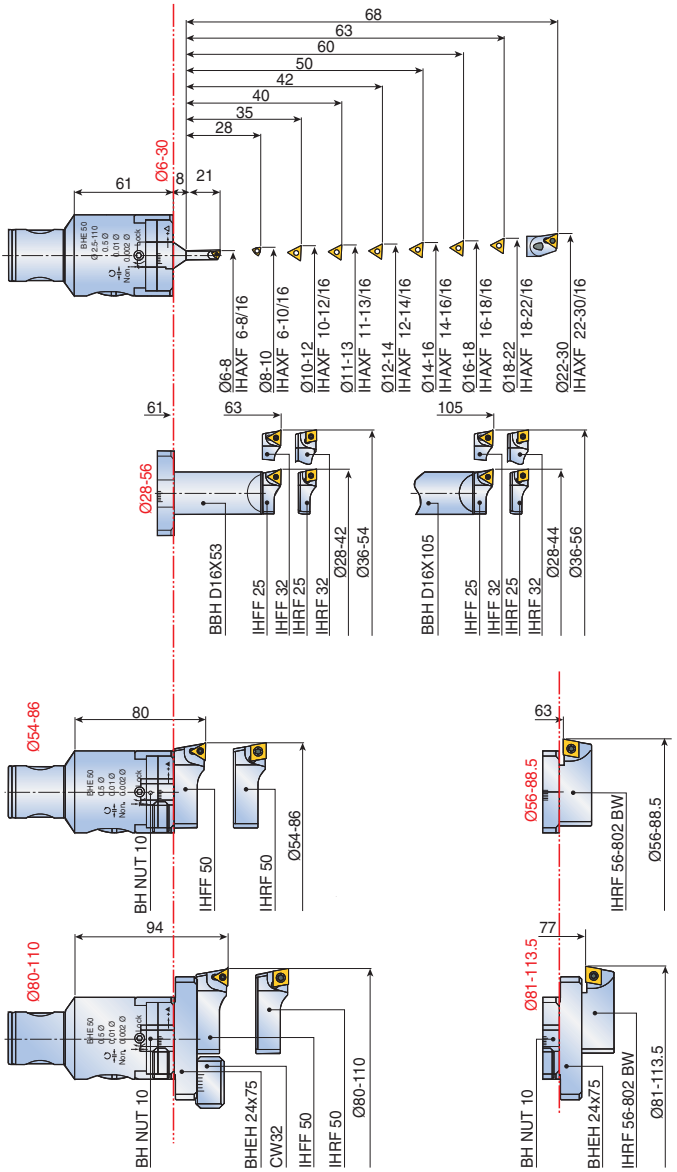
H54-H57

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

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

BHE MB50-50x80
ø6-113.5

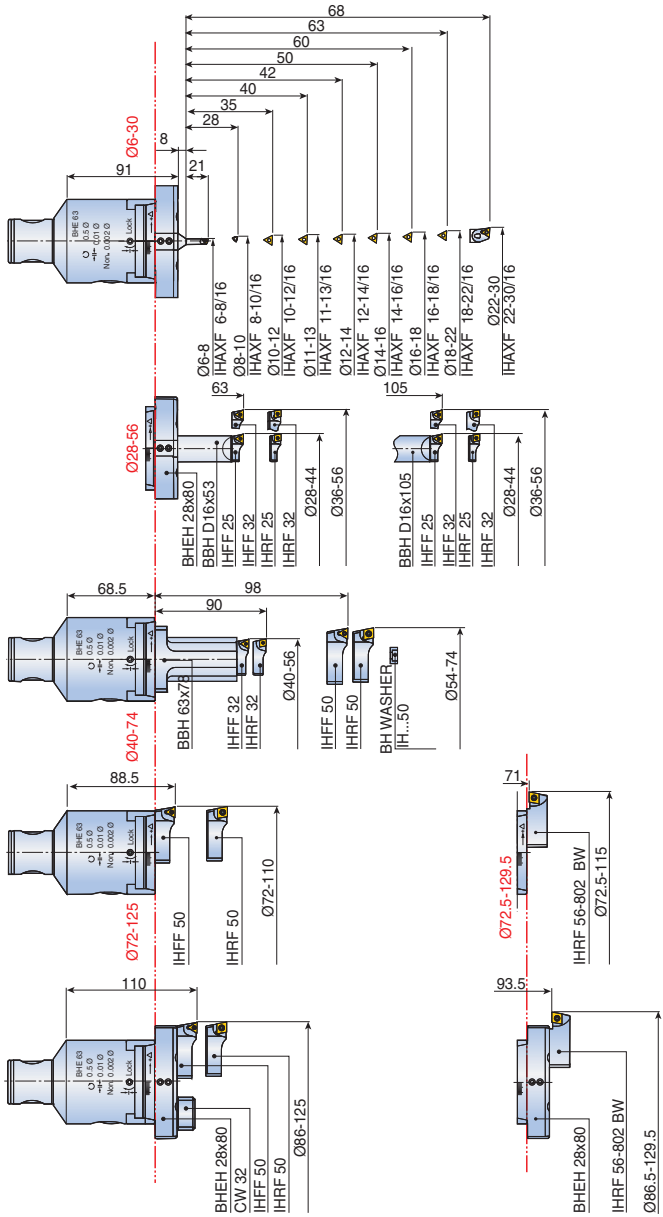
10µm
2µm



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

BHE MB63-63x89
ø6-129.5

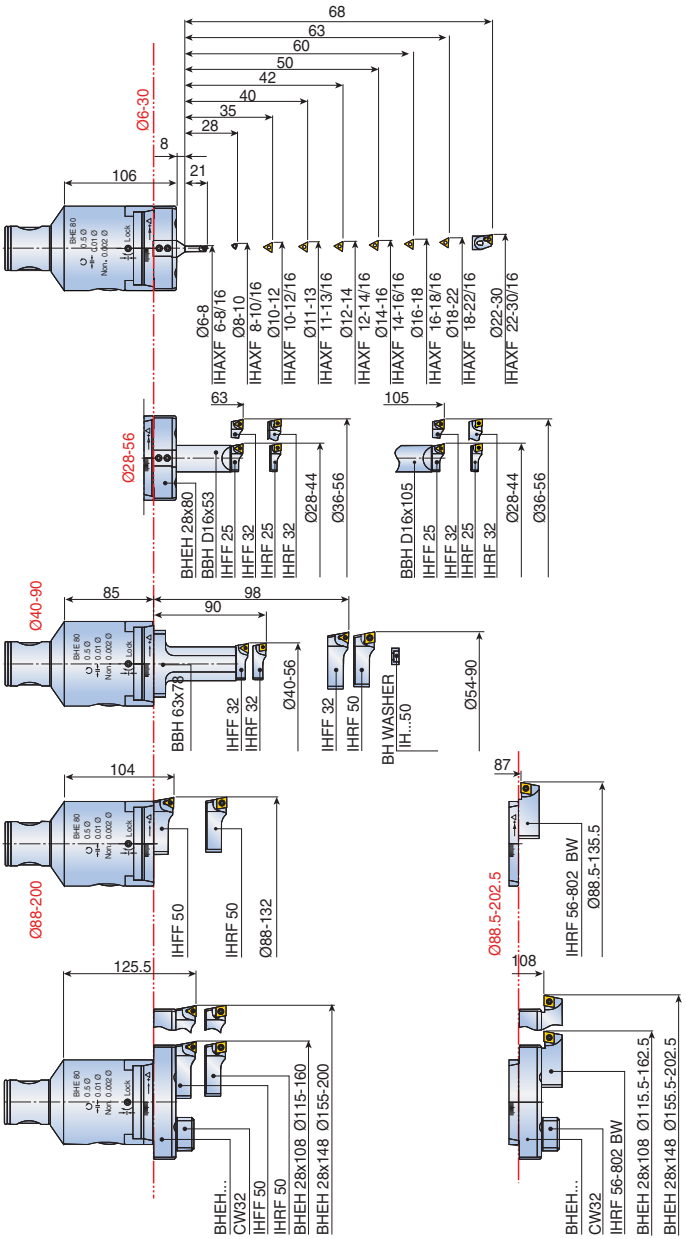
10µm
2µm



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

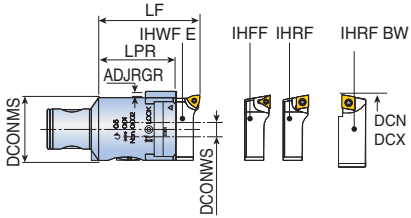
BHE MB80-80x104
ø6-202.5

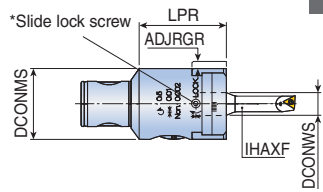
10µm
2µm



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

10μm
2μm





BHE MB50-50x80

Designation	Dimension (mm)							Kg
	DCONMS	DCN	DCX	LF	LPR	ADJRGR	DCONWS	
BHE MB16-16-34	MB16	18	24	34.0	26.0	2.0	-	0.1
MB20-20-40	MB20	22	30	40.0	31.5	3.0	-	0.1
MB25-25-50	MB25	28	40	50.0	40.0	3.0	-	0.2
MB32-32-63	MB32	35	53	63.0	51.5	4.0	-	0.4
MB40-40-80	MB40	48	66	80.0	66.0	5.0	-	0.8
MB50-50-80	MB50	2.5	110	80.0	61.0	5.0	16.0	1.1
MB63-63-89	MB63	6.0	125	89.0	69.5	10.0	-	2.1
MB80-80-104	MB80	6.0	200	104.0	84.5	12.0	-	3.8

Spare Parts H60-H67
Cutting Condition H68-H74
Slide H42-H44
H38-H41

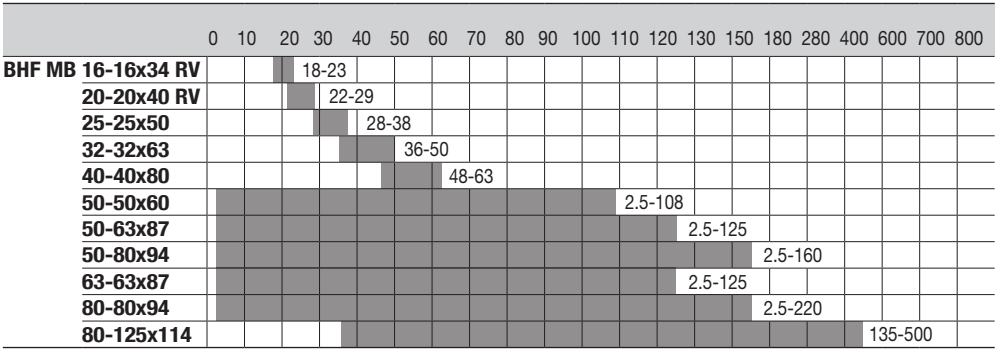
BHF fine boring heads

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

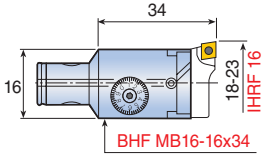
Fine boring head diameter range



BHF MB16-MB40
Diameter range: 18-63

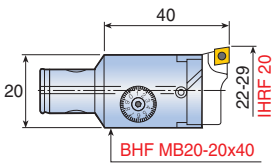
BHF MB16-16x34 RV

18-23



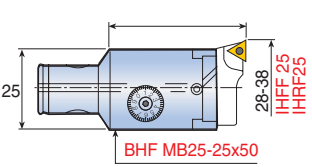
BHF MB20-20x40 RV

22-29



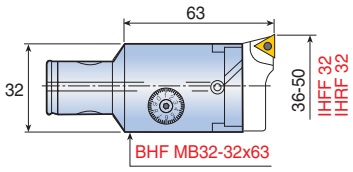
BHF MB25-25x50

28-38



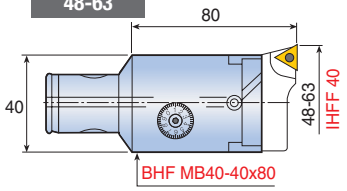
BHF MB32-32x63

36-50



BHF MB40-40x80

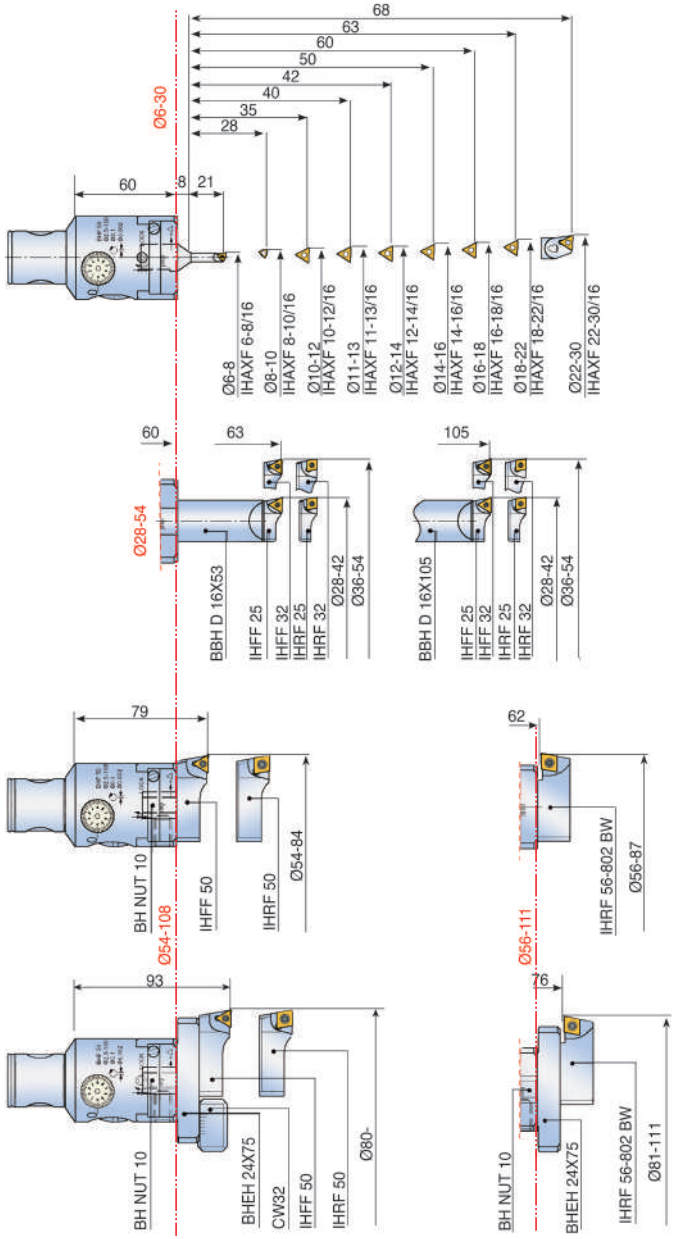
48-63



Fine boring head range: 2µm direct diametric adjustment

BHF MB50-50x60
Diamete

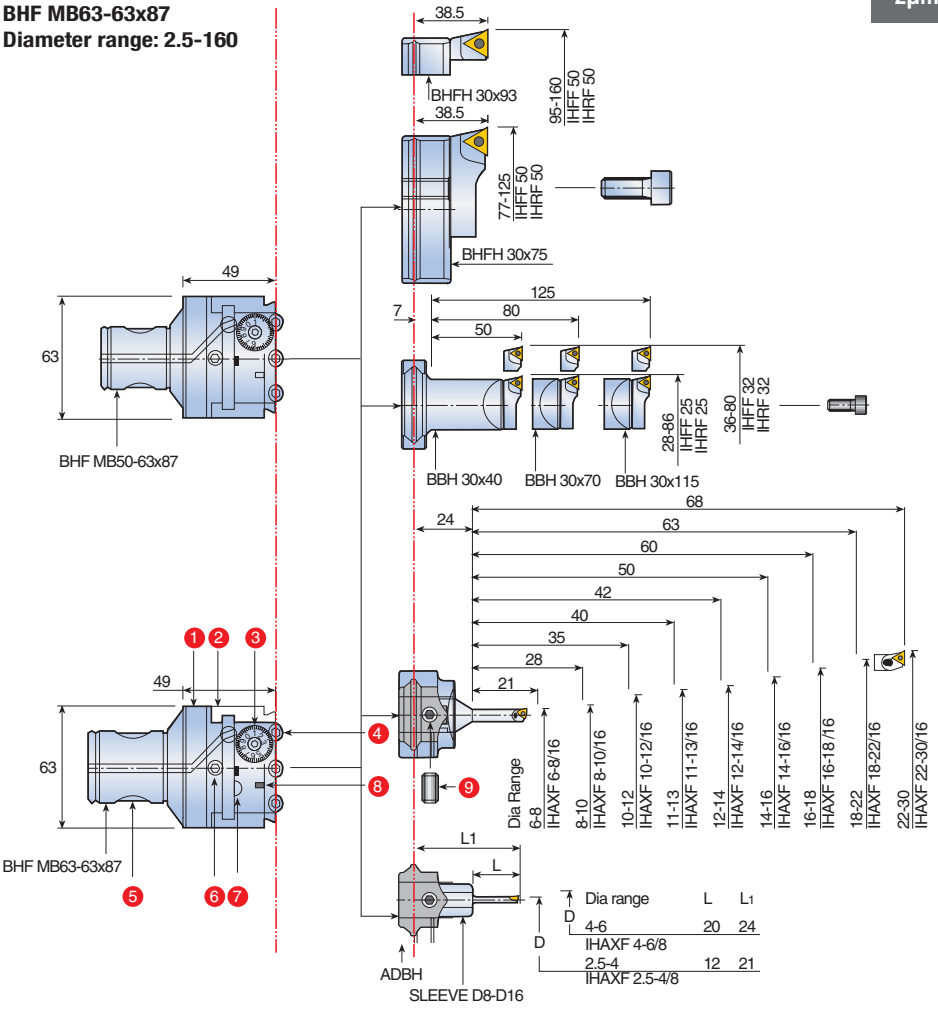
2µm



Fine boring head range: 2µm direct diametric adjustment

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

2µm

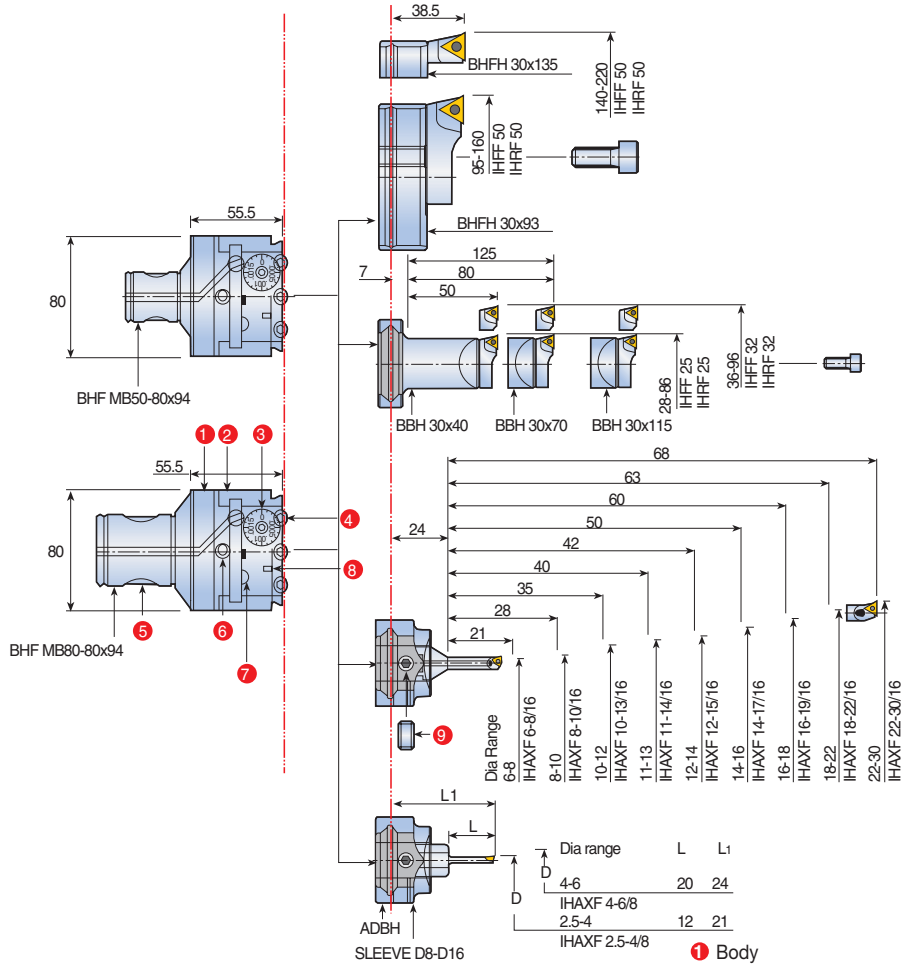


1. Body
2. Tool slide
3. Graduated dial
4. Toolholder locking screw
5. Expanding pin
6. Slide locking screw
7. Coolant nozzle
8. Oiling nipple
9. Toolholder locking screw

Fine boring head range: 2µm direct diametric adjustment

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

2µm

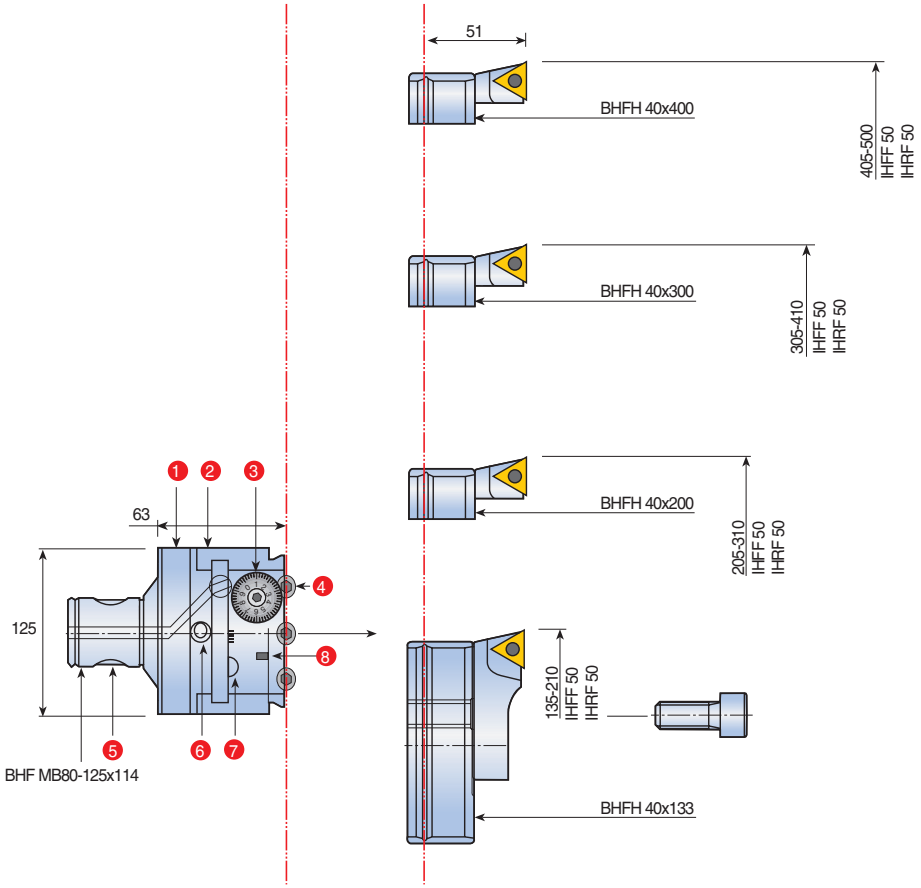


1. Body
2. Tool slide
3. Graduated dial
4. Toolholder locking screw
5. Expanding pin
6. Slide locking screw
7. Coolant nozzle
8. Oiling nipple
9. Toolholder locking screw

Fine boring head range: 2µm direct diametric adjustment

BHF MB80-125x114
Diameter range:135-500

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 MB16-MB50, Dia.2.5-108

BHF MB: Fine boring heads

2µm

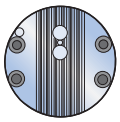


Fig.1

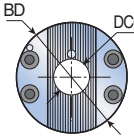
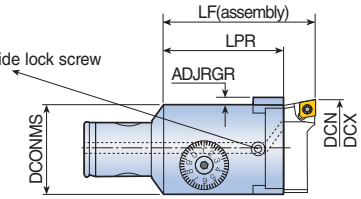


Fig.2



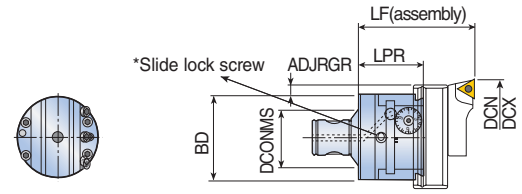
Designation	Dimension (mm)								Insert holder	Kg	Fig
	DCONMS	DCN	DCX	BD	LPR	LF	ADJRGA	DCONWS			
BHF MB16-16x34 RV	MB16	18	23	16	26.0	34	1	-	IH..16	0.1	1
MB20-20x40 RV	MB20	22	29	20	32.5	40	2	-	IH..20	0.1	1
MB25-25x50	MB25	28	38	25	40.0	50	2	-	IH..25	0.2	1
MB32-32x63	MB32	36	50	32	51.5	63	3	-	IH..32	0.4	1
MB40-40x80	MB40	48	63	40	66.0	80	4	-	IH..40	0.8	1
MB50-50x60	MB50	2.5	108	50	60.0	79	4	16	IH..50	1.1	2

Spare Parts H60-H67
Cutting Condition H68-H74
Slide H42-H44
H38-H41

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

Fine boring heads

2µm



Designation	Dimension (mm)							Kg
	DCONMS	DCN	DCX	BD	LPR	LF	ADJRGR	
BHF **MB50-63x87**	MB50	2.5	125	63	49	87	5	1.3
MB50-80x94	MB50	2.5	160	80	58	94	5	2.2
MB63-63x87	MB63	2.5	125	63	49	87	5	1.6
MB80-80x94	MB80	2.5	220	80	58	94	5	2.6
MB80-125x114	MB80	135	500	125	63	114	5	5.7

Spare Parts H60-H65 | Cutting Condition H68-H74 | Slide H42-H44 | H38-H41

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

IHAXF

Fine Boring Bar

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

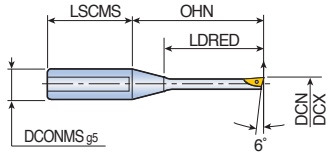


Fig.1

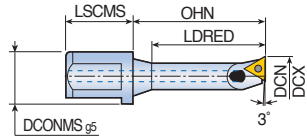


Fig.2

Designation		Dimension (mm)						Coolant hole	Spare parts			Fig.
		DCN	DCX	LDRED	OHN	LSCMS	DCONMS		Insert	Screw	Key	
IHAXF	**2.5-4/8**(1)	2.5	4	12.5	21	22	8	x	Solid	-	-	1
	4-6/8(1)	4	6	20.0	24	24	8	x	Solid	-	-	1
	6-8/16	6	8	21.0	29	22	16	●	WCGT 0201	SR 14-299	T 6	2
	8-10/16	8	10	28.0	36	22	16	●	WCGT 0201	SR 14-299	T 6	2
	10-12/16	10	12	35.0	43	22	16	●	TPGX 0902	SR 14-298	T 8	2
	11-13/16	11	13	40.0	48	22	16	●	TPGX 0902	SR 14-298	T 8	2
	12-14/16	12	14	42.0	48	22	16	●	TPGX 0902	SR 14-298	T 8	2
	14-16/16	14	16	50.0	52	22	16	●	TPGX 0902	SR 14-298	T 8	2
	16-18/16	16	18	50.0	58	22	16	●	TPGX 0902	SR 14-298	T 8	2
	18-22/16	18	22	60.0	63	22	16	●	TPGX 0902	SR 14-298	T 8	2
	22-30/16	22	30	60.0	68	22	16	●	TPGX 0902	SR 14-298	T 8	2

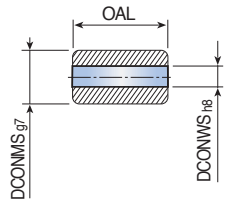
H54-H57

▸ (1) Brazed tool

SLEEVE

Fine Boring Bar

Reducers for fine boring heads

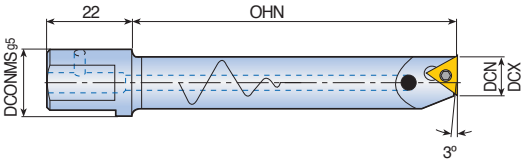


Designation	Dimension (mm)		
	DCONMS	DCONWS	OAL
SLEEVE D8-D16	16	8	23

IHAXF-AVI

Fine Boring Bar

Vibration dampening for fine boring bars – Heavy metal shank

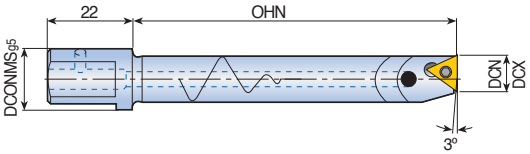


Designation	Dimension (mm)				Spare parts		
	DCN	DCX	OHN	DCONMS	Insert	Screw	Key
IHAXF 6-8-AVI	6	8	36	16	WCGT 0201..	SR 14-299	T 6
8-10-AVI	8	10	48	16	WCGT 0201..	SR 14-299	T 6
10-12-AVI	10	12	60	16	TPGX 0902..	SR 14-298	T 8
12-14-AVI	12	14	72	16	TPGX 0902..	SR 14-298	T 8
14-16-AVI	14	16	84	16	TPGX 0902..	SR 14-298	T 8
16-18-AVI	16	18	96	16	TPGX 0902..	SR 14-298	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..	SR 14-298	T 8
12-14-E	12	14	90	16	TPGX 0902..	SR 14-298	T 8
14-16-E	14	16	105	16	TPGX 0902..	SR 14-298	T 8
16-18-E	16	18	120	16	TPGX 0902..	SR 14-298	T 8

H54-H57

Insert holders for mounting on the MB fine boring heads

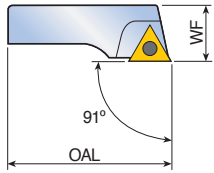


Fig.1

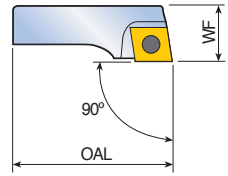
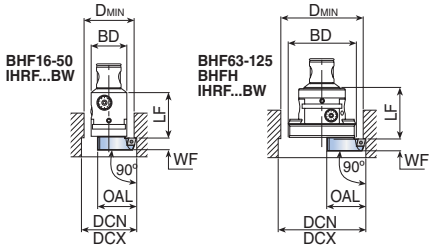


Fig.2

Designation		Dimension (mm)				Spare parts			Fig.
		DCN	DCX	WF	OAL	Insert	Insert screw	Torx key	
IHFF	**25**	28	40	10.0	26.5	TPGX 0902...	SR 14-298	T 8	1
	32	35	53	11.5	34.5	TPGX 0902...	SR 14-298	T 8	1
	40	48	66	14.0	44.0	TPGX 1103...	SR-17979 M3x8	T 8	1
	50	54	86	19.0	52.0	TPGX 1103...	SR-17979 M3x8	T 8	1
IHRF	**16**	18	24	8.0	17	CCGT 0602..	SR 14-548	T 7	2
	20	22	30	8.5	21.0	CCGT 0602..	SR 14-548	T 7	2
	25	28	40	10.0	26.5	CCGT 0602..	SR 14-548	T 7	2
	32	35	53	11.5	34.5	CCGT 0602..	SR 14-548	T 7	2
	40	48	66	14.0	44.0	CCGT 09T3...	SR 16-236	T 15	2
	50	54	86	19.0	52.0	CCGT 09T3...	SR 16-236	T 15	2

Back face for BHF fine boring holders



Designation	Dimension (mm)						Boring heads	Spare parts		
	DCN	DCX	BD	LF	WF	OAL		Insert	Clamping screw	Torx key
IHRF 20-25 BW	20	25	16	27.5	8.0	18.0	BHF MB16-16x34	CCGT 0602..	SR 14-548	T 7
24.5-32 BW	24.5	32	20	33.5	8.5	22.5	BHF MB20-20x40	CCGT 0602..	SR 14-548	T 7
31.5-41.5 BW	31.5	41.5	25	41.5	9.5	28.5	BHF MB25-25x50	CCGT 0602..	SR 14-548	T 7
38.5-51.5 BW	38.5	51.5	32	53.0	11.0	35.5	BHF MB32-32x63	CCGT 0602..	SR 14-548	T 7
50.5-65 BW	50.5	65	40	68.0	13.5	46.0	BHF MB40-40x80	CCGT 09T3..	SR 14-236	T 15
56-802 BW	56	86	50	62.0	17.5	53.0	BHF MB50-50x60	CCGT 09T3..	SR 14-236	T 15
	82	120	75	70.2	17.5	53.0	BHF63+BHFH30x75	CCGT 09T3..	SR 14-236	T 15
	100	142	93	79.5	17.5	53.0	BHF80+BHFH30x93	CCGT 09T3..	SR 14-236	T 15
	140	240	135	98.0	17.5	53.0	BHF125+BHFH40x133	CCGT 09T3..	SR 14-236	T 15

H54-H57

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

Slide extensions for fine boring holders

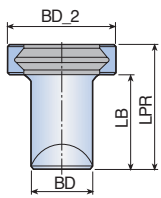


Fig.1

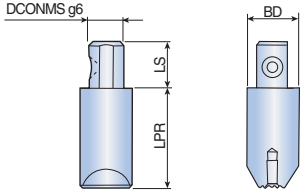


Fig.2

Designation	Dimension (mm)							Kg	Fig.
	BD	DCONMS	LB	LPR	BD_2	OAW	LS		
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
BBH D16-53	25	16	-	53	-	-	21.5	0.5	2
D16-105	25	16	-	95	-	-	21.5	0.8	2

Slide for BHF & BHE fine boring holders

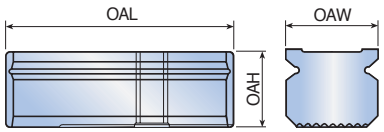


Fig.1

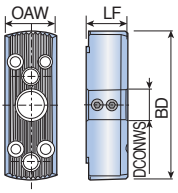
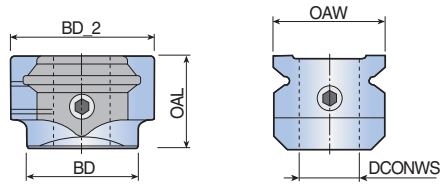


Fig.2

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
	24x100	-	-	24	100	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

ADBH

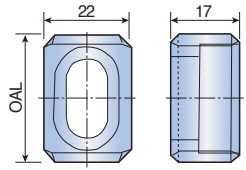
Sleeve for fine boring holders



Designation	Dimension (mm)					Lock Screw	Kg
	BD	BD_2	OAL	OAW	DCONWS		
ADBH 30xD16	30	39	25	30.5	16	SR M8x8 DIN 915	0.2

CW32

Counter balancing weight



Designation	Dimension (mm)	Kg
	OAL	
CW 32	31.5	0.5

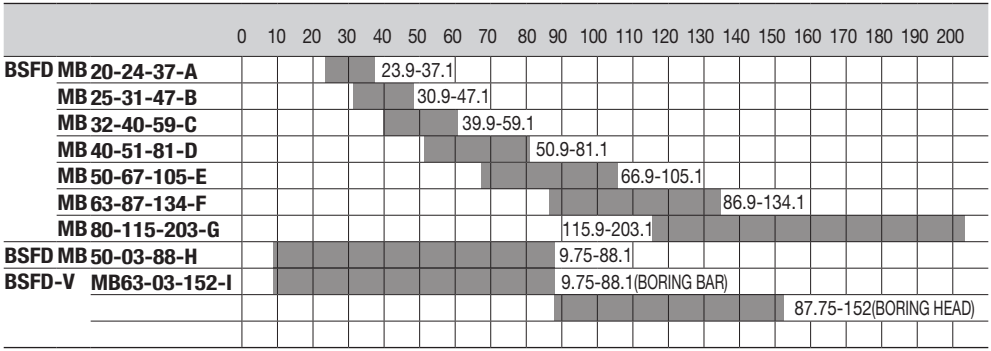
BSFD fine boring heads

The Boring Heads Feature an MB20 to MB80 Connection. Boring Super Fine Digital Heads from Ø3mm – Ø203.1mm

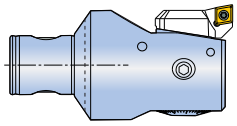
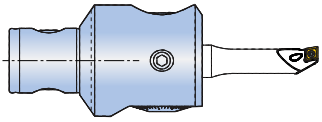
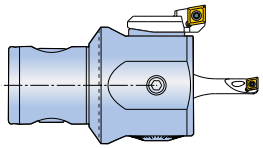


1μm

Fine boring head diameter range



BSFD

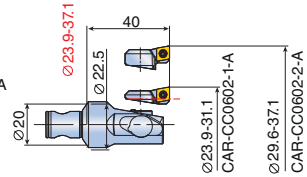
Boring Type		Adapter & Extension	Insert Holder
BSFD MB		-	CAR-CC...
		ADP-V...	CAR-V-CC...
BSFD MB-H		-	BAR-CC...HI
		SH-DX...	BAR-DX-CC...
BSFD-V MB-I		-	BAR-CC...HI
		SH-DX...	BAR-DX-CC...
		ADP-V...	CAR-V-CC...

Digital fine boring head range : 1µm direct diametric adjustment.

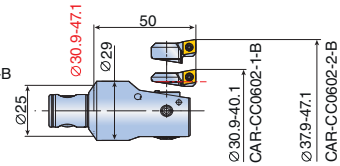
BSFD MB A-F

1µm

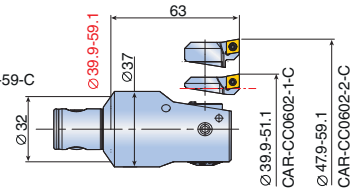
A BSFD MB20-24-37-A



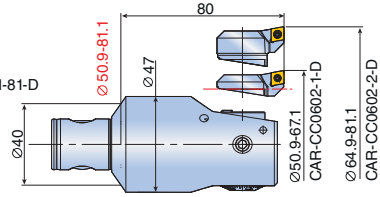
B BSFD MB25-31-47-B



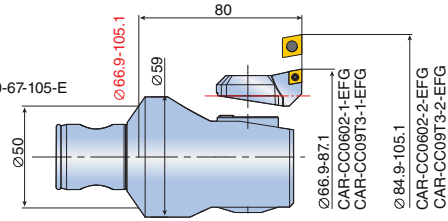
C BSFD MB32-40-59-C



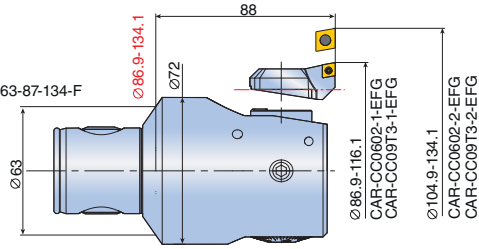
D BSFD MB40-51-81-D



E BSFD MB50-67-105-E



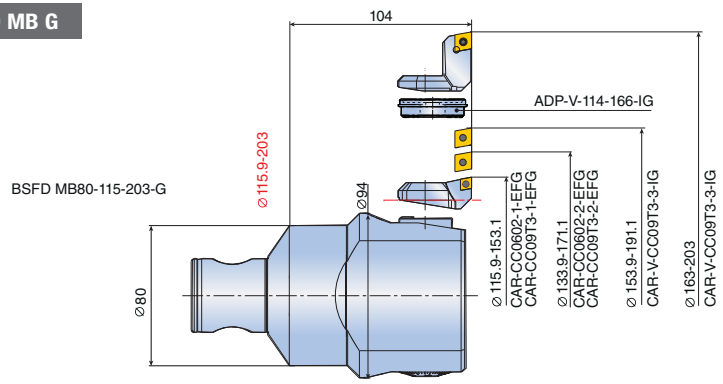
F BSFD MB63-87-134-F



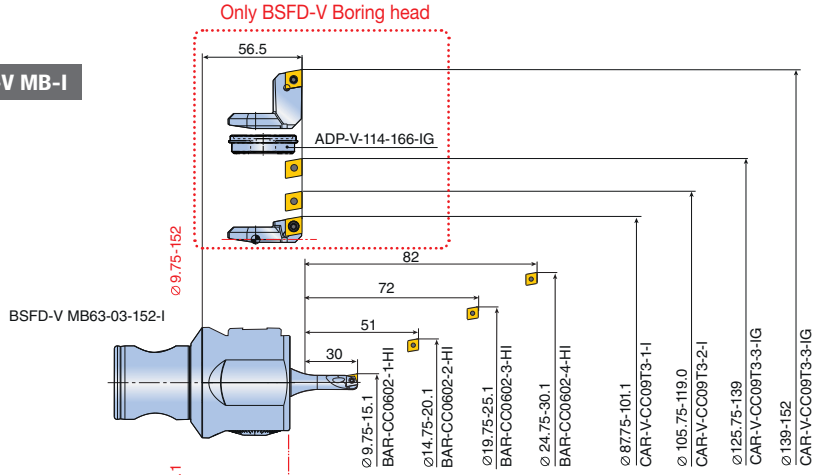
Digital fine boring head range : 1µm direct diametric adjustment.

BSFD MB G

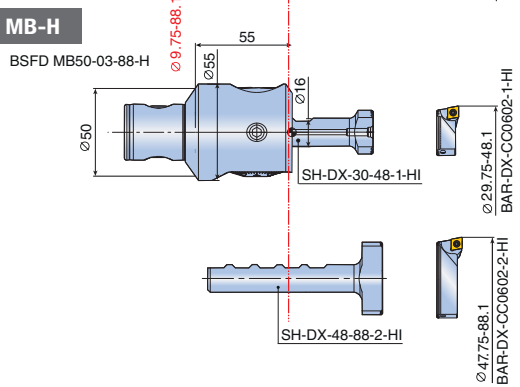
1µm



BSFD-V MB-I



BSFD MB-H

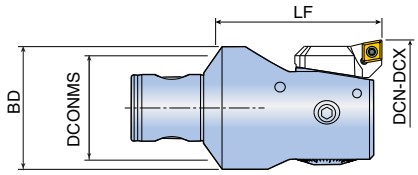


BSFD MB

Fine Boring Heads

Digital fine boring heads with 1 μm accurate adjustment and detachable display

1μm



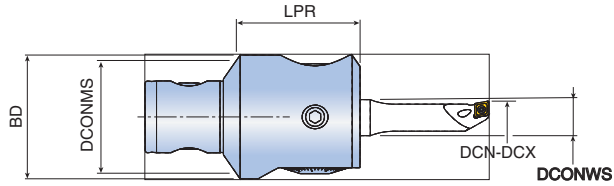
Designation		Dimension (mm)					Insert Holder	Kg
		DCONMS	DCN	DCX	LF	BD		
BSFD	**MB20-24-37-A**	20	23.9	37.1	40	22.5	CAR-CC…A	0.1
	MB25-31-47-B	25	30.9	47.1	50	29	CAR-CC…B	0.2
	MB32-40-59-C	32	39.9	59.1	63	37	CAR-CC…C	0.5
	MB40-51-81-D	40	50.9	81.1	80	47	CAR-CC…D	1.0
	MB50-67-105-E	50	66.9	105.1	80	59	CAR-CC…EFG	1.6
	MB63-87-134-F	63	86.9	134.1	88	72	CAR-CC…EFG	3.1
	MB80-115-203-G	80	115.9	203.1	104	94	CAR-CC…EFG	5.0

BSFD MB-H

Fine Boring Heads

Digital fine boring head with 1 μm accurate adjustment and detachable display

1μm



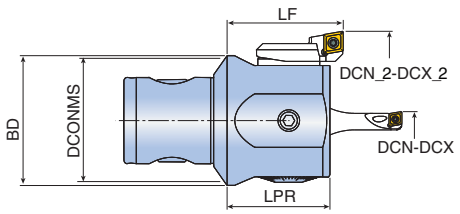
Designation		Dimension (mm)						Insert Holder	Kg
		DCONMS	DCN	DCX	LPR	BD	DCONWS		
BSFD	**MB50-03-88-H**	50	3	88.1	55	50.15	16	BAR-CC…HI	1.1

Spare Parts H60-H67
Cutting Condition H68-H74
H50-H52

BSFD-V MB-I

Digital fine boring vario head with 1 µm accurate adjustment and detachable display

1µm



Designation	Dimension (mm)								Insert Holder	Kg
	LF	DCONMS	DCN	DCX	DCN_2	DCX_2	LPR	BD		
BSFD-V MB63-03-152-I	56.5	63	9.75	88.1	87.75	152	50	63.15	BAR-CC…HI CAR-V…	1.6

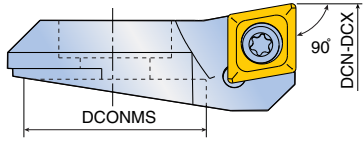
Spare Parts H60-H67
Cutting Condition H68-H74
H50-H52

▸ Note: When using ADP-V-114-116-IG on BSFD-V MB63-03-152-I & CAR-V-CC09T3-3-IG, Maximum diameter is 203mm.

CAR-CC

Fine Boring Insert Holders

Side lock insert holders for BSFD MB boring heads



Designation	Dimension (mm)							
	DCN	DCX	DCN_2	DCX_2	DCN_3	DCX_3	DCONMS	Insert
CAR- CC0602-1-A	23.9	31.1	-	-	-	-	11	CC..0602..
CC0602-2-A	29.6	37.1	-	-	-	-	11	CC..0602..
CC0602-1-B	30.9	40.1	-	-	-	-	13	CC..0602..
CC0602-2-B	37.9	47.1	-	-	-	-	13	CC..0602..
CC0602-1-C	39.9	51.1	-	-	-	-	17	CC..0602..
CC0602-2-C	47.9	59.1	-	-	-	-	17	CC..0602..
CC0602-1-D	51.1	67.1	-	-	-	-	22	CC..0602..
CC0602-2-D	64.9	81.1	-	-	-	-	22	CC..0602..
CC0602-1-EFG	66.9	87.1	86.9	116.1	115.9	153.1	30	CC..0602..
CC09T3-1-EFG	66.9	87.1	86.9	116.1	115.9	153.1	30	CC..09T3..
CC0602-2-EFG	84.9	105.1	104.9	134.1	133.9	171.1	30	CC..0602..
CC09T3-2-EFG	84.9	105.1	104.9	134.1	133.9	171.1	30	CC..09T3..

- DCN_2-DCX_2: for BSFD MB63-87-134-F boring head
- DCN_3-DCX_3: for BSFD MB80-115-203-G boring head

BAR-CC0602-HI

Fine Boring Bar

Indexable boring bars for the BSFD-H/I boring heads

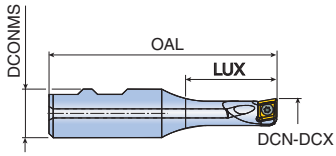


Fig.1

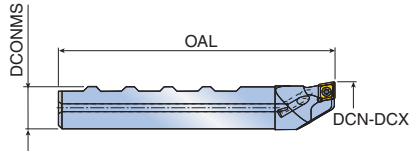
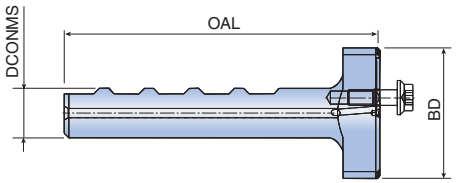


Fig.2

Designation	Dimension (mm)							
	DCN	DCX	LUX	DCONMS	OAL	Fig.	Insert	Coolant hole
BAR- CC0602-1-HI	9.75	15.1	30	16	75	1	CC..0602..	●
CC0602-2-HI	14.75	20.1	51	16	90	1	CC..0602..	●
CC0602-3-HI	19.75	25.1	72	16	105	2	CC..0602..	●
CC0602-4-HI	24.75	30.1	82	16	115	2	CC..0602..	●

SH-DX-HI

Extension shanks for sliding insert holders for BSFD-H/I boring heads

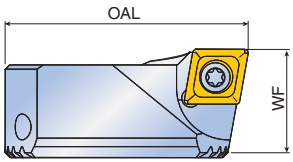


Designation	Dimension (mm)			Insert Holder	Kg
	BD	OAL	DCONMS		
SH-DX-30-48-1-HI	25	103	16	BAR-DX...1-HI	0.18
DX-48-88-2-HI	42	101	16	BAR-DX...2-HI	0.22

BAR-DX-CC...-HI

Fine Boring Insert Holders

Sliding insert holders for BSFD-H/I boring heads



Designation	Dimension (mm)					Extension Shanks
	WF	OAL	DCN	DCX	Insert	
BAR-DX-CC0602-1-HI	12	28.2	29.75	48.1	CC..0602..	SH-DX...1-HI
DX-CC0602-2-HI	14	46.0	47.75	88.1	CC..0602..	SH-DX...2-HI



CAR-V-I/IG

Side lock insert holders for BSFD-V-I boring heads

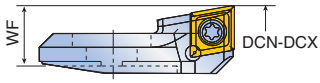


Fig.1

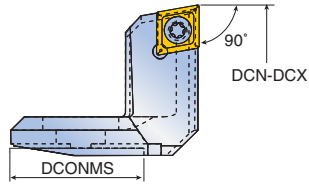


Fig.2

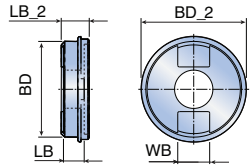
Designation	Dimension (mm)					
	WF	DCN	DCX	DCONMS	Insert	Fig.
CAR- **V-CC09T3-1-I**	13.05	87.75	101.10	30	CC..09T3..	1
V-CC09T3-2-I	22.05	105.75	119.00	30	CC..09T3..	1
V-CC09T3-3-IG	32.05	153.90	191.10	30	CC..09T3..	2

H54

- Note: When using ADP-V-114-116-IG on BSFD-V MB63-03-152-I & CAR-V-CC09T3-3-IG, Maximum diameter is 203mm.

ADP-V-IG

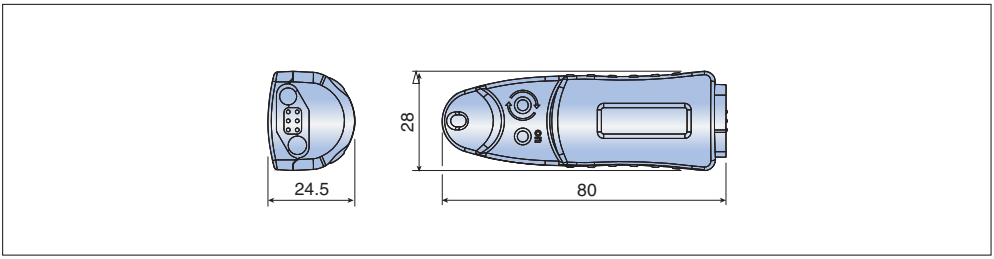
Adapter plate for diameter range extension of the CAR-V-I/IG insert holders



Designation	Dimension (mm)					Insert Holder
	BD	BD_2	LB	LB_2	WB	
ADP- **V-114-166-IG**	30	33	6.5	8.8	10	CAR-V…IG

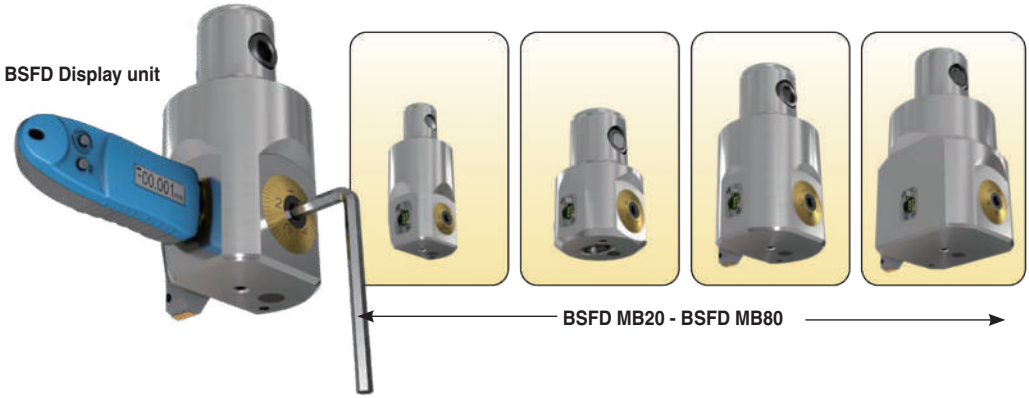
BSFD DISPLAY UNIT

Digital display unit for BSFD boring heads with 1 μm accurate adjustment

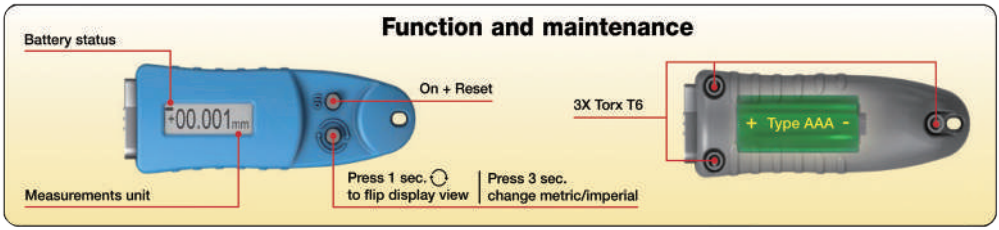


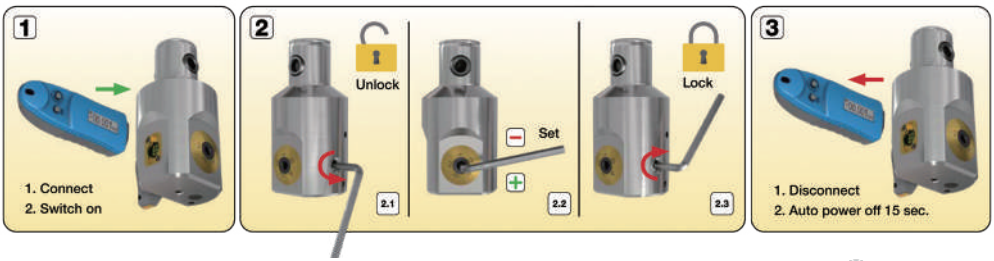
Designation	Dimension (mm)
	Accuracy
BSFD DISPLAY UNIT	0.001

BSFD - Super fine digital boring heads

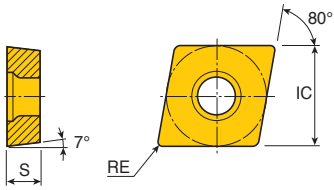


BSFD - Operating instructions





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

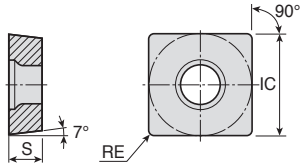
Insert	Designation	Cermet		CVD coated											PVD coated						Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT7025	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT5080	TT8020	TT8080	TT9020	TT9080	TT4430	P20	K10	K20
	**CCMT 060204 MT**	●	●	●	●			●	●			●	●	●	●	●						●	
	060208 MT	●	●	●	●			●	●					●	●				●				
	09T304 MT	●	●	●	●	●		●	●	●		●	●	●	●	●							
	09T308 MT		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●				
	120404 MT		●	●	●			●	●					●		●							
	120408 MT		●	●	●	●	●	●	●	●		●	●	●	●	●							
	120412 MT			●				●	●					●									
	**CCGT 060201 SA**														●			●					
	060202 SA														●			●					
	060204 SA														●			●					
	09T301 SA														●			●					
	09T302 SA														●			●		●			
	09T304 SA														●			●	●	●			
	09T308 SA														●			●					
	**CCGT 060202 FL**																					●	
	060204 FL																					●	
	09T302 FL																					●	
	09T304 FL																					●	
	09T308 FL																					●	
	120402 FL																					●	
	120404 FL																					●	
	120408 FL																					●	

● : 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	

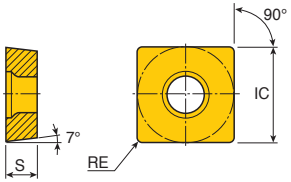
Insert	Designation	Cermet		CVD coated										PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P20	K10	K20
	**SCGT 09T308 FL**																			●	
	120402 FL																			●	
	120404 FL																			●	
	120408 FL																			●	

● : Standard items

SCMT

Boring Inserts

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	TT9225	TT9235	TT5100	TT7100		TT5080	TT6080	TT8020	TT8080	TT9020	P20	K10	K20
	**SCMT 09T304 FG**							●		●								●				
	09T308 FG	●						●	●	●		●			●		●	●				
	**SCMT 09T304 MT**	●	●	●	●			●	●	●		●					●					
	09T308 MT		●	●	●	●		●	●	●	●	●	●		●	●	●					
	120404 MT		●	●	●				●			●										
	120408 MT		●	●	●	●		●	●	●	●	●			●		●					
	120412 MT			●	●		●		●								●					

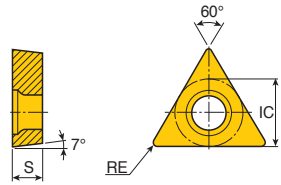
● : Standard items

TaeguTec

TCMT

Boring Inserts

Positive 7° clearance triangular inserts



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

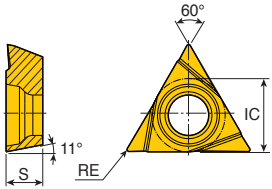
Insert	Designation	Cermet		CVD coated									PVD coated				Uncoated		
		PV3010	CT3000	TT7005	TT7015	TT8105B	TT8115B	TT8125B	TT8135B	TT9215	TT9225	TT9235	TT5100	TT7100	TT5080	TT8020	TT9020	TT9080	P30	K10	K20
	**TCMT 220508-19**																		●		

●: Standard items

TPGX

Boring Inserts

Positive 11° clearance triangular inserts



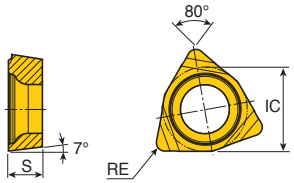
Size	Dimension (mm)		
	IC	S	RE
09	5.56	2.38	0.2-0.4
11	6.35	3.18	0.2-0.4

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	K20
 Left-hand	**TPGX 090202 L**		●																	●	
	090204 L		●																	●	
	110302 L		●																		
	110304 L		●																	●	

●: Standard items

ADVANCE CUTTING TaeguTec

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	K20
 Left-hand	**WCGT 020102L**																●				
	020104L																●				

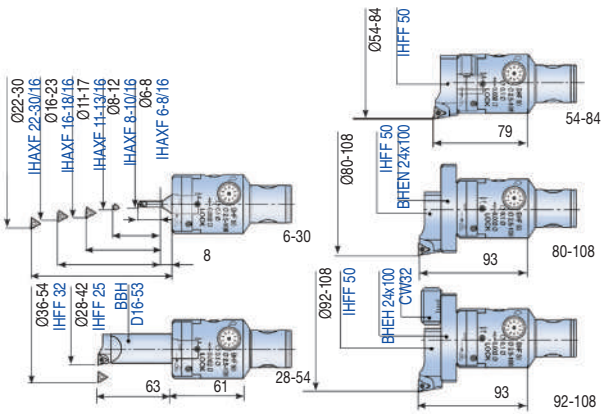
● : Standard items

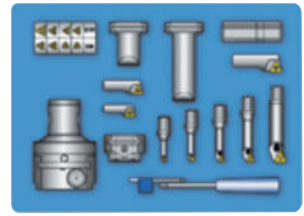
KIT BHF MB50-50 6-140

Kits

6-140mm diameter range

2µm





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 D16-53
1 BHEH 24x100
1 CW 32
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L

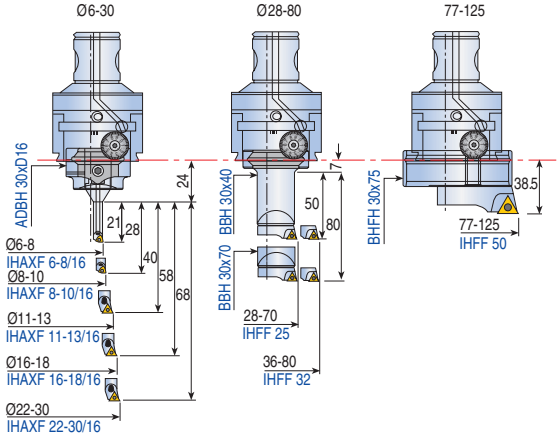
Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-50 6-140	MB50	6-140

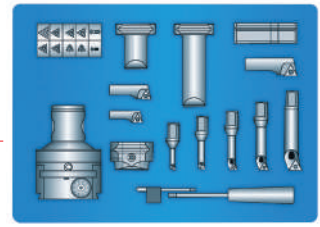
KIT BHF MB50-63/MB63-63

Kits

6-155mm diameter range

2µm





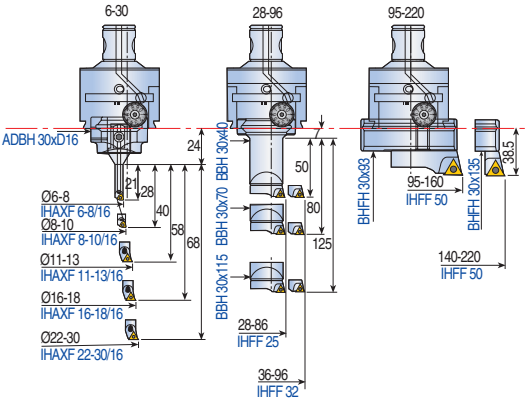
1 BHF MB...-63x87
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 ADBH 30xD16
1 BBH 30x40
1 BBH 30x70
1 BHFH 30x75
1 IHFF 25
1 IHFF 32
1 IHFF 50
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L
T-8/5
T-6/5

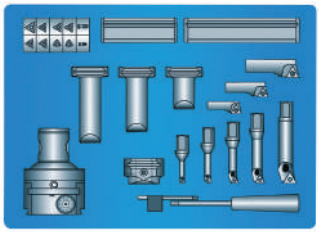
Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-63 6-155	MB50	6-155
MB63-63 6-155	MB63	6-155

KIT BHF MB50-80/80-80

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

2µm





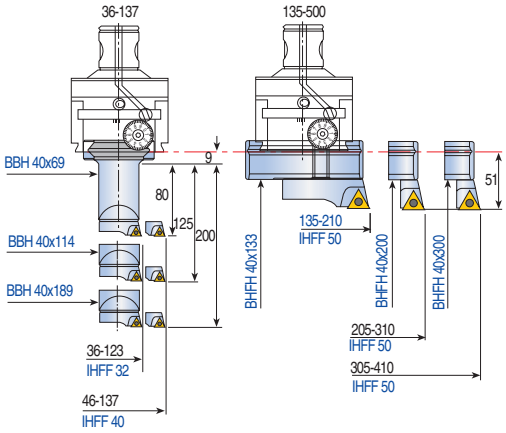
1 BHF MB..-80x94
1 IHAXF 6-8/16
1 IHAXF 8-10/16
1 IHAXF 11-13/16
1 IHAXF 16-18/16
1 IHAXF 22-30/16
1 ADBH 30xD16
1 BBH 30x40
1 BBH 30x70
1 BBH 30x115
1 BHFH 30x93
1 BHFH 30x135
1 IHFF 25
1 IHFF 32
1 IHFF 50
5 TPGX 090202L
1 TPGX 110302L
2 WCGT 020102L
T-8/5
T-6/5

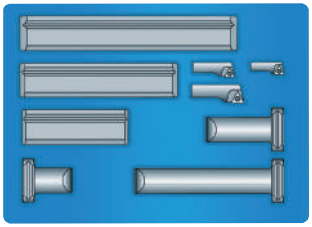
Designation	Dimension (mm)	
	SS	Boring range
KIT BHF MB50-80 6-220	MB50	6-220
MB80-80 6-220	MB80	6-220

KIT BHFH MB80-125

Kit BHFH MB80-125 holder for BHF MB80-125x114,36-410mm diameter range

2µm





1 BBH 40x69
1 BBH 40x114
1 BBH 40x189
1 BHFH 40x133
1 BHFH 40x200
1 BHFH 40x300
1 IHFF 32
1 IHFF 40
1 IHFF 50

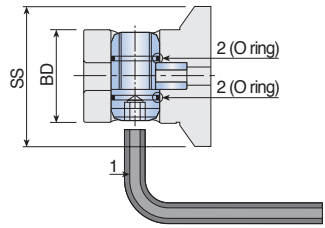
Designation	Dimension (mm)	
	SS	Boring range
KIT BHFH MB80-125	MB80	36-410

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

MB CLAMP

Spare Parts

MB system clamp set



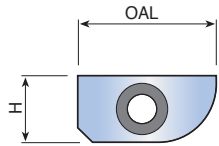


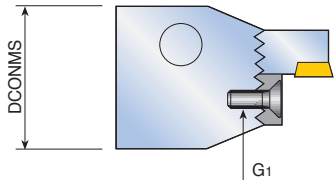
Designation		Dimension (mm)	
		SS	BD
BH	**MB 14/16 COUPLING SET**	MB14/MB16	10
	MB 20 COUPLING SET	MB20	13
	MB 25 COUPLING SET	MB25	16
	MB 32 COUPLING SET	MB32	20
	MB 40 COUPLING SET	MB40	25
	MB 50 COUPLING SET	MB50	32
	MB 63/80 COUPLING SET	MB63/MB80	42
	MB 110/140 COUPLING SET	MB110/MB140	76

PLT

Spare Parts

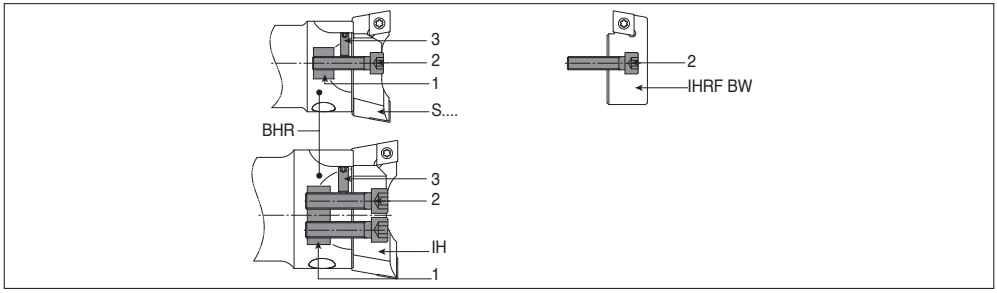
Cover plate



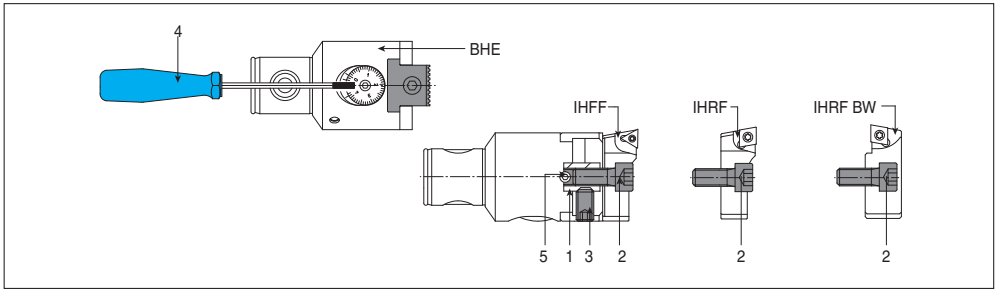


Designation		Dimension (mm)			
		DCONMS	H	OAL	G1
PLT	**16**	16	7	14	SR M3x12 DIN912
	20	20	8.5	17	SR M4x14 DIN912
	32	32	13.9	28	SR M5x20 DIN7991
	40	40	17.4	35	SR M6x25 DIN7991
	63	63	26.4	62	SR M10x30 DIN7991

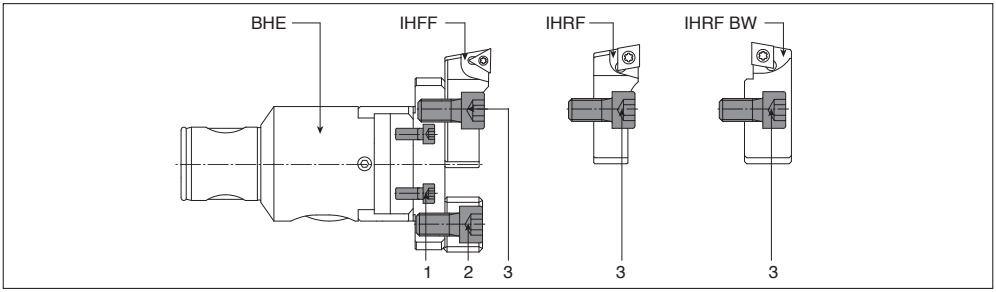
▸ Protects the serrated faces when a single toolholder is being used.



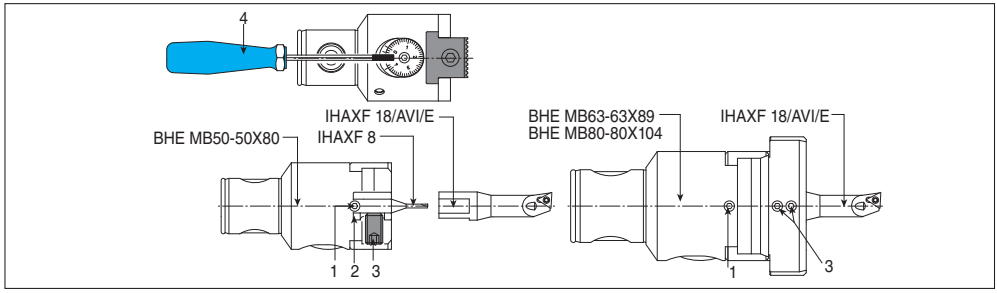
Designation	1	2	3
BHR MB16...16	BH NUT BHR MB16	SR M3x14 DIN 912	SR M3x4 DIN 913
MB20...20	BH NUT BHR MB20	SR M4x15 DIN 912	SR M3x5 DIN 913
MB25...25	BH NUT BHR MB25	SR M4x20 DIN 912	SR M3x8 DIN 913
MB32...32	BH NUT BHR MB32	SR M5x25 DIN 912	SR M4x12 DIN 913
MB40...50	BH NUT BHR MB40	SR M6x30 DIN 912	SR M5x14 DIN 913
MB50...50	BH NUT BHR MB50	SR M8x35 DIN 912	SR M5x12 DIN 913
MB50...63	BH NUT BHR MB63	SR M10x40 DIN 912	SR M6x16 DIN 913
MB63...63	BH NUT BHR MB63	SR M10x40 DIN 912	SR M6x16 DIN 913
MB80...80	BH NUT BHR MB80	SR M12x45 DIN 912	SR M8x25 DIN 913



Designation	1	2	3	4	5
BHE MB14-14x30	-	SR M3x6 DIN 912	-	BH HW 1.5 HANDLE	SR M2.5x3 DIN 913 45H
MB16-16x34	-	SR M3x6 DIN 912	-	-	SR M3x4 DIN 913 45H
MB20-20x40	-	SR M4x8 DIN 912	-	-	SR M3x4 DIN 913 45H
MB25-25x50	-	SR M5x10 DIN 912	-	-	SR M4x6 DIN 913 45H
MB32-32x63	-	SR M6x12 DIN 912	-	BH HW 2.5 HANDLE	SR M4x6 DIN 913 45H
MB40-40x80	-	SR M8x14 DIN 912	-	-	SR M5x10 DIN 913 45H
MB50-50x80	BH NUT 10	SR M10x25 DIN 912	SR M10x16 DIN 913 45H	BH HW 3.0 HANDLE	SR M6x10 DIN 913 45H
MB63-63x89	-	SR M10x20 DIN 912	-	-	SR M6x10 DIN 913 45H
MB80-80x104	-	SR M10x25 DIN 912	-	-	SR M8x12 DIN 913 45H



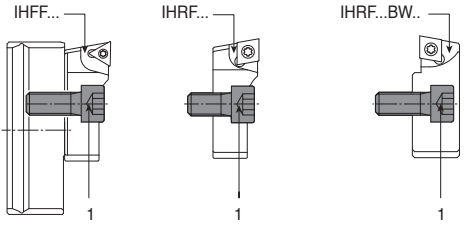
Designation	1	2	3
BHE **MB50-50x80**	SR M5x12 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912
MB63-63x89	SR M5x25 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912
MB80-80x104	SR M5x25 DIN 912	SR M10x20 DIN 912	SR M10x25 DIN 912



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

BHFH

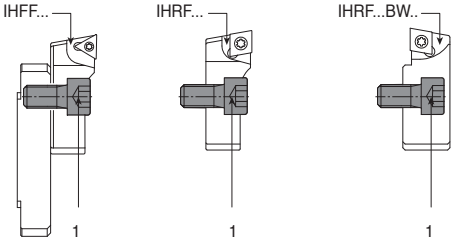
Spare Parts



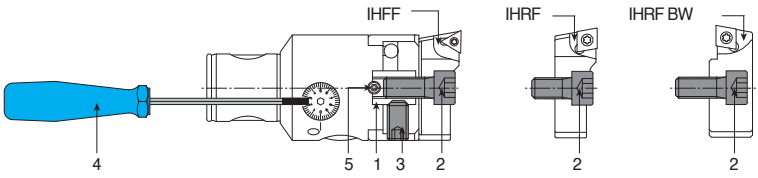
Designation	1
BHFH 30x75	SR M10x18 DIN 912
30x93	SR M10x18 DIN 912
30x135	SR M10x25 DIN 912
40x133	SR M10x18 DIN 912
40x200	SR M10x25 DIN 912
40x300	SR M10x25 DIN 912
40x400	SR M10x25 DIN 912

BHEH

Spare Parts

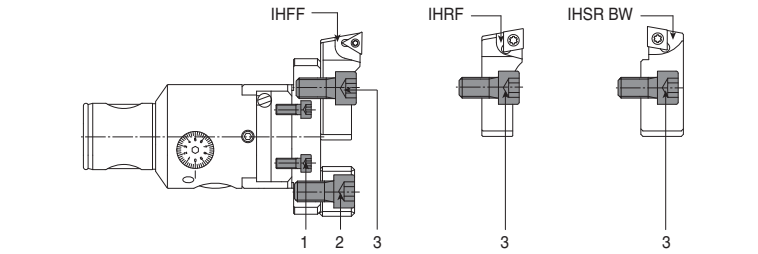


Designation	1
BHEH 24x75	SR M10x20 DIN 912
24x100	SR M10x20 DIN 912
28x80	SR M10x25 DIN 912
28x108	SR M10x25 DIN 912
28x148	SR M10x25 DIN 912

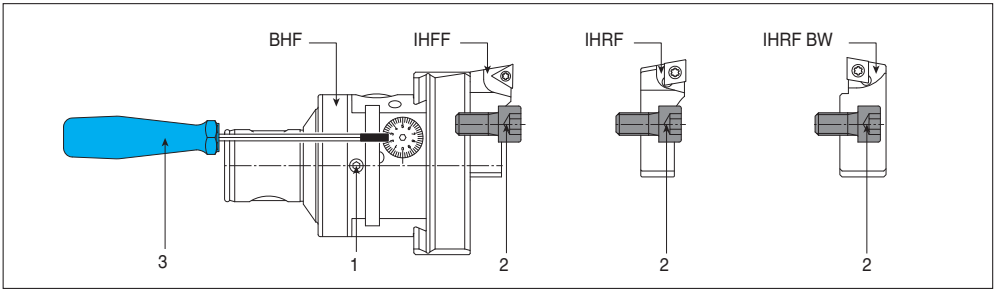


Designation	1	2	3	4	5
BHF...- 16...	-	SR M3x6 DIN 912	-	BH HW 1.5 HANDLE	SR M3x4.5 DIN 913
20...	-	SR M4x8 DIN 912	-	BH HW 1.5 HANDLE	SR M3x4.5 DIN 913
25...	-	SR M5x10 DIN 912	-	BH HW 2.0 HANDLE	SR M4x4 DIN 913
32...	-	SR M6x12 DIN 912	-	BH HW 2.0 HANDLE	SR M4x5 DIN 913
40...	-	SR M8x14 DIN 912	-	BH 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

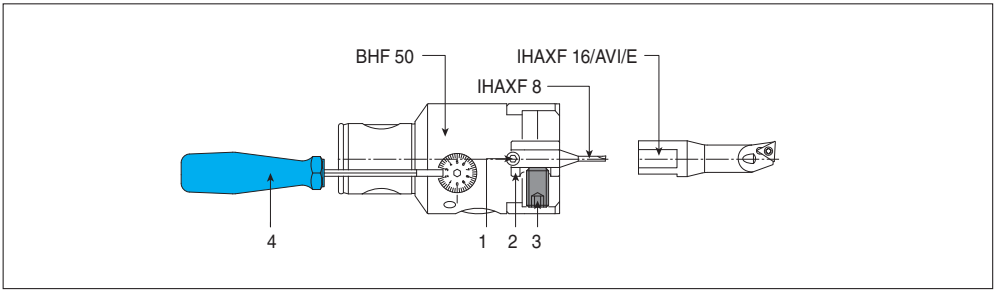
BHF Spare Parts



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



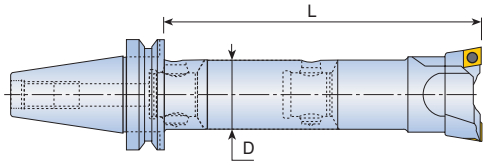
Designation	1	2	3
BHF...- 63...	SR M6x10 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE
80...	SR M6x14 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE
125...	SR M6x22 DIN 915	SR M10x25 DIN 912	BH HW 3.0 HANDLE



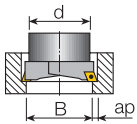
Designation	1	2	3	4
BHF...- 50...	SR M5x8 DIN 913	SLEEVE D8-D16	SR M10x10 DIN 913	BH HW 2.5 HANDLE

Recommended Cutting Conditions

BHR rough boring heads



Cutting depth



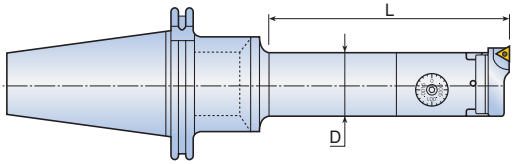
It's advisable to start with
B hole≥boring bar diameter d

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

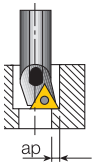
Recommended Cutting Conditions

Fine boring heads



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

Material	L/D	Stability	Cutting speed (Vc=m/min)	Feed f=mm/rev Insert radius R=0.2	Feed f=mm/rev Insert radius R=0.4	Cutting depth (ap)
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
				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
			4 ●●	Vc	90-130	90-120	100-140	90-140	100-150	80-120
				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
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				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	Austenitic	2.5 ●●●	Vc	110-130	100-130	120-150	110-140	110-160	100-150
				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
			4 ●●	Vc	80-110	80-110	90-130	90-120	100-150	90-130
				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
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				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	Ferritic & martensitic	2.5 ●●●	Vc	90-130	100-130	120-150	110-140	120-160	100-150
				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
			4 ●●	Vc	70-110	80-110	90-130	90-120	100-150	90-130
				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
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				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
				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
			4 ●●	Vc	70-100	70-100	80-130	70-120	90-140	90-130
				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
			6.3 ●	Vc	60-90	50-70	60-90	50-70	70-100	50-70
				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
				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
			4 ●●	Vc	100-160	90-140	120-180	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
			6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R
				f	0.08-0.2	0.08-0.15				
	Stainless steel	Austenitic	2.5 ●●●	Vc	120-200	100-160	120-200	100-160	120-200	100-180
				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
			4 ●●	Vc	100-150	90-140	100-160	90-140	N.R.	N.R.
				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
			6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
				f	0.08-0.2	0.08-0.15				
	Stainless steel cast	Ferritic & martensitic	2.5 ●●●	Vc	130-200	120-180	140-200	120-160	140-200	120-180
				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
			4 ●●	Vc	110-150	90-150	100-160	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
			6.3 ●	Vc	70-100	50-70	N.R.	N.R.	N.R.	N.R.
				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
				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
			4 ●●	Vc	100-140	90-140	100-160	90-140	N.R.	N.R.
				f	0.08-0.25	0.08-0.18	0.08-0.25	0.08-0.18		
			6.3 ●	Vc	70-190	50-70	N.R.	N.R.	N.R.	N.R.
				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

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 ❷ 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 ❺ until it completely enters the recess in the sleeve nut or boring bar

■ **Disassembly**

- Loosen the pin ❷ by turning counter-clockwise

■ **Positioning**

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

■ **Maintenance**

Weekly:

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

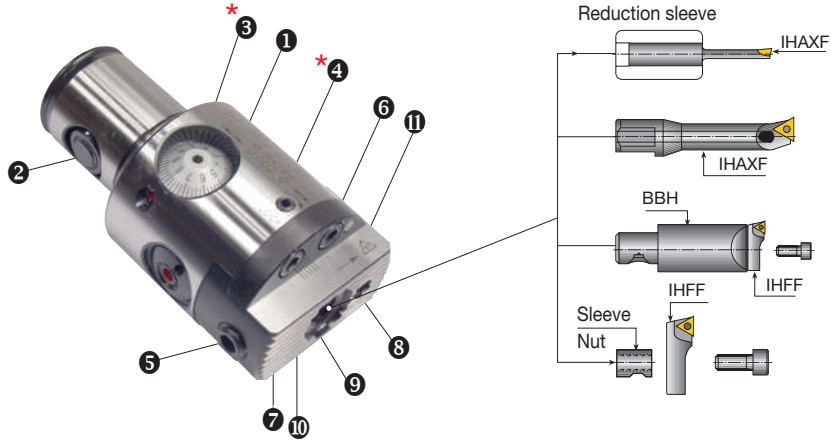
Periodically:

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

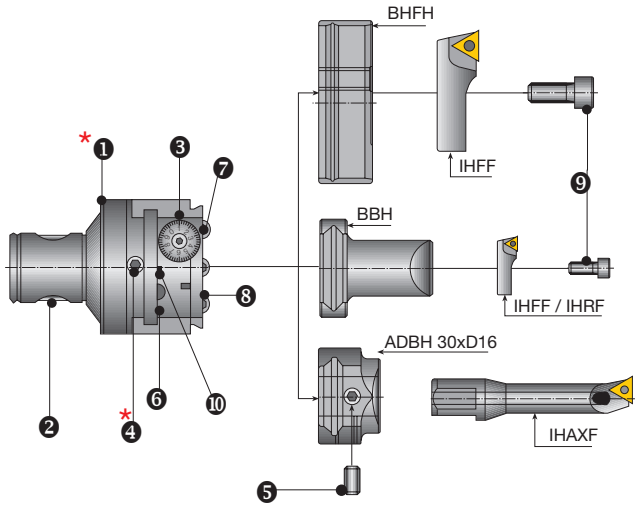
■ **Important note:**

- 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 ❸ in the reverse direction at least one rotation and then re-adjust in the original direction



* ❶ Body
❷ Expanding pin
* ❸ Graduated dial
* ❹ Slide locking screw
❺ Toolholder locking screw
❻ Coolant nozzle
❼ Slide holder
❽ Oiling nipple
❾ Tool bore .63H7
❿ Slide adjusting range
Do not exceed the range marks!!
⓫ Cutting edge position mark



* ❶ Body
❷ Expanding pin
❸ Graduated dial
* ❹ Slide locking screw
❺ Toolholder locking screw
❻ Coolant nozzle
❼ Slide holder
❽ Oiling nipple
❾ Toolholder locking screws
❿ Slide adjusting range
Do not exceed the range marks!!