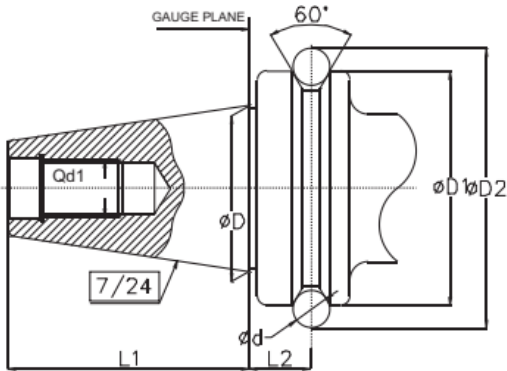


SHANK TYPES

MAS 403

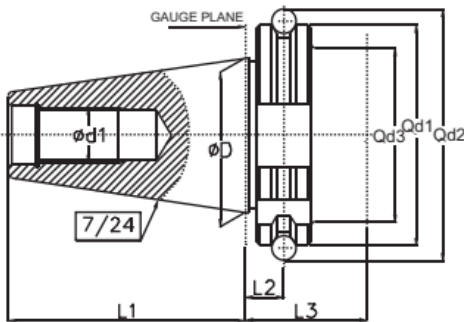
DIMENSIONS IN MM



TYPE	D	D1h8	D2 ^{±0.05}	d1 6H	MEASURING PIN d	L1 ^{±0.2}	L2 ^{±0.1}
BT 30	Ø31.75	Ø46	56.144	M12	Ø8	48.4	13.6
BT 40	Ø44.45	Ø63	75.679	M16	Ø10	65.4	16.6
BT 45	Ø57.15	Ø85	100.216	M 20	Ø12	82.8	21.2
BT50	Ø69.85	Ø100	119.020	M24	Ø15	101.8	23.2


DIN 69871
ISO 7388

DIMENSIONS IN MM

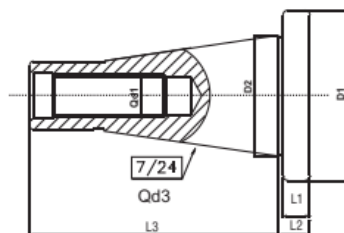


TYPE	D	D1 ^{-0.1}	D2 ^{±0.05}	D3Max	d1 6H	MEASURING PIN d	L1 ^{-0.3}	L2 ^{±0.1}	L3Min.
TC30	Ø31.75	Ø50.00	59.3	45	M12	Ø7	47.8	11.1	35
TC40	Ø44.46	Ø63.55	72.3	50	M16		68.4		
TC45	Ø 57.15	Ø82.55	91.35	63	M20		82.7		
TC 50	Ø 69.85	Ø 97.50	107.25	80	M24		101.75		

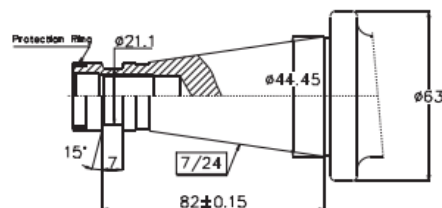
- Din 69871-FORM B
FOR COOLANT HOLES THROUGH FLANGE
- DIN 69871-FORM'A'
(WITHOUT COOLANT HOLES THROUGH FLANGE)

NOTE :

- TC is also called as SK
- TC type can be used in place of CAT and ANSI

ISO (For Conventional Machine)


- CONVENTIONAL & CNC MILLING MACHINES WITH
DRAW BAR
- CNC MILLING MACHINES LIKE DECKEL MIKRON,
MAHO FITTED WITH HYDRAULIC CLAMPING
ARRANGEMENT

ISO 40 (For CNC Machine)


TYPE	D	D1	d1	L1	L2	L3
ISO30	31.75	50.0	M12	8.0	9.6	68.4
ISO40	44.45	63.0	M16	10.0	11.6	93.4
ISO50	69.85	97.5	M24	12.0	15.2	126.8

UNIVERSAL TYPE : SUITABLE FOR

CONVENTIONAL MILLING MACHINE WITH DRAW BAR

Note : DIA d1 ALSO AVAILABLE IN INCH SIZE


DIN 2080

DIMENSIONS IN MM

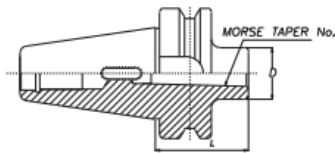


FIG 1

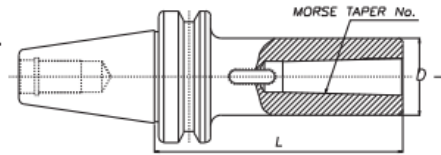


FIG 2



DIMENSIONS IN MM

DESIGNATION	MT NO.	L	D	FIG
BT 30/MTA1/50	1	50	25	1
BT 30/MTA1/120	1	120	25	2
BT 30/MTA2/62	2	62	32	1
BT 30/MTA2/120	2	120	32	2
BT 30/MTA3/80	3	80	40	1
BT 30/MTA3/135	3	135	40	2

BT 40/MTA1/45	1	45	25	1
BT 40/MTA1/120	1	120	25	2
BT 40/MTA2/60	2	60	32	1
BT 40/MTA2/120	2	120	32	2
BT 40/MTA3/75	3	75	40	1
BT 40/MTA3/135	3	135	40	2
BT 40/MTA4/95	4	95	50	1
BT 40/MTA4/165	4	165	50	2

BT 50/MTA1/45	1	45	25	1
BT 50/MTA1/120	1	120	25	2
BT 50/MTA1/180	1	180	25	2
BT 50/MTA2/45	2	45	32	1
BT 50/MTA2/135	2	135	32	2
BT 50/MTA2/180	2	180	32	2
BT 50/MTA3/45	3	45	40	1
BT 50/MTA3/150	3	150	40	2
BT 50/MTA3/180	3	180	40	2
BT 50/MTA4/75	4	75	50	1
BT 50/MTA4/180	4	180	50	2
BT 50/MTA5/105	5	105	70	1

NOTE :

- DETAILS GIVEN ABOVE ARE FOR MORSE TAPER ADAPTOR WITH BT SHANK ONLY. MORSE TAPER ADAPTOR DRAW TYPE (MTB) OFFERED ON REQUEST.
- MORSE TAPER ADAPTOR WITH OTHER TYPES OF SHANK LIKE SK, TC, CAT, ANSI, ISO, ETC ARE OFFERED AGAINST CUSTOMERS' REQUIREMENT. OTHER DETAILS REMAIN THE SAME.
- REFER PAGE NO 1 FOR SHANK DETAILS

ORDERING INSTRUCTION

BT 40 / MTA 3 / 75

GUAGE PLANE LENGTH L

MORSE TAPER NO. 3 TANG TYPE

SHANK TYPE

MTB 3-MORSE TAPER NO. 3 DRAW TYPE CAN BE SUPPLIED ON REQUEST



FIG-1

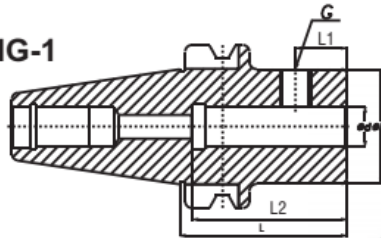
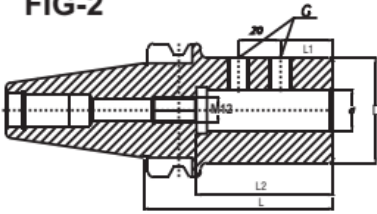


FIG-2



DIMENSIONS IN MM

DESIGNATION	D	L	D	L1	L2		L3	G	FIG
					MIN	MAX			
BT 30/SL 6/65	6	65	20	15	-	-	40	M6	1
BT 30/SL 8/65	8	65	24	15	-	-	40	M8	1
BT 30/SL 10/65	10	65	30	16	-	-	44	M8	1
BT 30/SL 12/65	12	65	35	20	-	-	50	M10	1
BT 30/SL 16/65	16	65	40	23	-	-	60	M10	1
BT 30/SLA 20/90	20	90	50	25	55	70	-	M10	2
BT 30/SLA 25/90	25	90	50	25	55	70	-	M10	2

BT 40/SL 6/65	6	65	20	15	-	-	40	M6	1
BT 40/SL 8/65	8	65	24	15	-	-	40	M8	1
BT 40/SL 10/65	10	65	30	16	-	-	44	M8	1
BT 40/SL 12/65	12	65	35	20	-	-	50	M10	1
BT 40/SL 16/65	16	65	40	23	-	-	60	M10	1
BT 40/SLA 20/90	20	90	50	25	55	70	-	M10	2
BT 40/SLA 25/90	25	90	50	25	55	70	-	M10	2
BT 40/SLA 32/90	32	90	60	30	55	70	-	M10	2
BT 40/SLA 40/90	40	90	70	30	55	70	-	M12	2

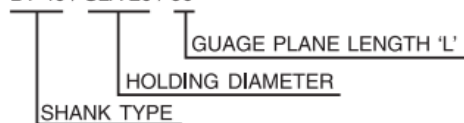
BT 50/SL 6/75	6	75	20	15	-	-	40	M6	1
BT 50/SL 8/75	8	75	24	15	-	-	40	M8	1
BT 50/SL 10/75	10	75	30	16	-	-	44	M8	1
BT 50/SL 12/75	12	75	35	20	-	-	50	M10	1
BT 50/SL 16/75	16	75	40	23	-	-	60	M10	1
BT 50/SLA 20/105	20	105	50	25	55	70	-	M10	2
BT 50/SLA 25/105	25	105	50	25	55	70	-	M10	2
BT 50/SLA 32/105	32	105	60	30	65	80	-	M10	2
BT 50/SLA 40/105	40	105	80	30	65	80	-	M12	2

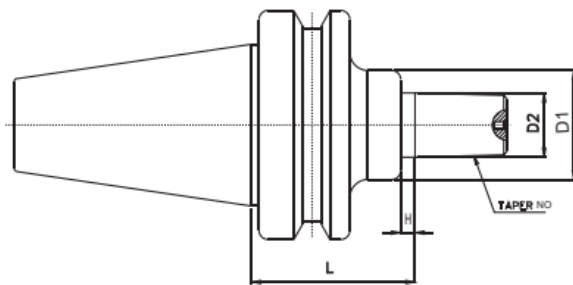
NOTE :

- DETAILS GIVEN ABOVE ARE FOR SIDE LOCK HOLDER WITH BT SHANK ONLY.
- SIDE LOCK HOLDER WITH OTHER TYPES OF SHANK LIKE SK, TC, CAT, ANSI, ISO, ETC ARE OFFERED ON CUSTOMERS' REQUIREMENT. OTHER DIMENSION REMAIN THE SAME.
- *THIS DIMM. 20, WILL BE 25 FOR SLA40 & SLA50 HOLDERS.
- REFER PAGE 1 FOR TAPER DETAILS.
- **ALSO AVAILABLE AS PER DIN 1835B / DIN 6535HE.**

ORDERING INSTRUCTION

BT 40 / SLA 20 / 90





DIMENSIONS IN MM

DESIGNATION	KEYLESS CHUCK CLAMPING RANGE	TAPER NO.	L	D ₂	D ₁	H
BT 30/JTA 1/45	0-3	JTA1	45	9.754	30	3
BT 30/JTA 1/90	0-3	JTA1	90	9.754	30	3
BT 30/JTA 2/45	0-6	JTA2	45	14.199	30	4
BT 30/JTA 2/90	0-6	JTA2	90	14.199	30	4
BT 30/B 12/45	0-6	B 12	45	12.065	30	3
BT 30/B 12/90	0-6	B 12	90	12.065	30	3
BT 30/B 16/45	0.8-13	B 16	45	15.733	30	4
BT 30/B 16/90	0.8-13	B16	90	15.733	30	4

BT 40/JTA 1/45	0-3	JTA1	45	9.754	30	3
BT 40/JTA 1/90	0-3	JTA1	90	9.754	30	3
BT 40/JTA 2/45	0-6	JTA2	45	14.199	30	4
BT 40/JTA 2/90	0-6	JTA2	90	14.199	30	4
BT 40/JTA 6/45	0.8-13	JTA6	45	17.170	30	4
BT 40/JTA 6/90	0.8-13	JTA6	90	17.170	30	4
BT 40/B 12/45	0-6	B12	45	12.065	30	3
BT 40/B 12/90	0-6	B12	90	12.065	30	3
BT 40/B 16/45	0.8-13	B16	45	15.733	30	4
BT 40/B 16/90	0.8-13	B16	90	15.733	30	4

BT 50/JTA 1/45	0-3	JTA1	45	9.754	30	3
BT 50/JTA 1/90	0-3	JTA1	90	9.754	30	3
BT 50/JTA 2/45	0-6	JTA2	45	14.199	30	4
BT 50/JTA 2/90	0-6	JTA2	90	14.199	30	4
BT 50/JTA 6/45	0.8-13	JTA6	45	17.170	30	4
BT 50/JTA 6/90	0.8-13	JTA6	90	17.170	30	4
BT 50/B 12/45	0-6	B12	45	12.065	30	3
BT 50/B 12/90	0-6	B12	90	12.065	30	3
BT 50/B 16/45	0.8-13	B16	45	15.733	30	4
BT 50/B 16/90	0.8-13	B16	90	15.733	30	4

NOTE :

- DETAILS GIVEN ABOVE ARE FOR DRILL CHUCK ADAPTOR WITH BT SHANK ONLY.
- DRILL CHUCK ADAPTOR WITH OTHER TYPES OF SHANK LIKE SK, TC, CAT, ANSI, ISO, ETC ARE OFFERED ON CUSTOMERS' REQUIREMENT. OTHER DETAILS REMAIN THE SAME.
- REFER PAGE 1 FOR TAPER DETAILS.
- **ADAPTORS ARE ALSO AVAILABLE WITH KEYLESS CHUCK.**

ORDERING INSTRUCTION

BT 40 / JTA 2 / 45

GUAGE PLANE LENGTH 'L'

JACOB TAPER 2

SHANK TYPE

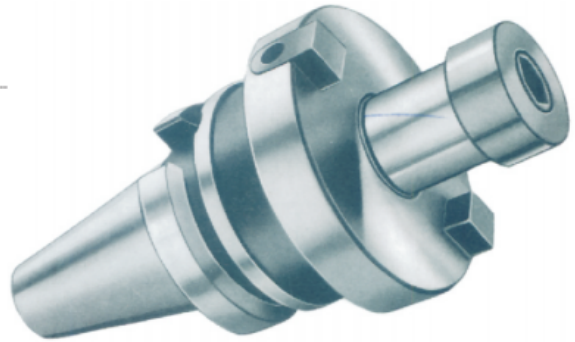
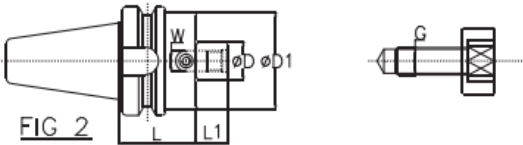
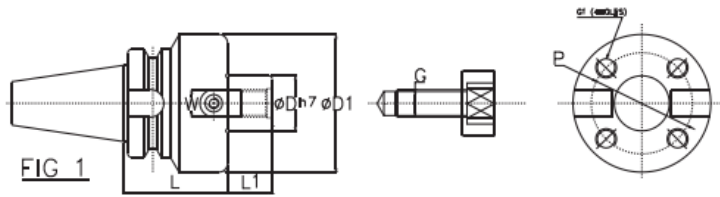


FIG 2

DIMENSIONS IN MM

DESIGNATION	D	L	L1	D1	W	G	G1	P	FIG	CUTTER DIA
BT 30/FMB 22/45	22	45	18	56	10	M10	-	-	1	63 & 50
BT 30/FMB 27/45	27	45	26	80	12	M12	-	-	1	80
BT 40/FMB 27/60	27	60	26	80	12	M12	-	-	1	80
BT 40/FMB 27/90	27	90	26	80	12	M12	-	-	1	80
BT 40/FMB 32/60	32	60	26	80	14	M16	-	-	1	100
BT 40/FMB 32/90	32	90	26	80	14	M16	-	-	1	100
BT 40/FMB 40/60	40	60	26	85	16	M20	-	-	1	125
BT 40/FMB 40/75	40	75	26	85	16	M20	-	-	1	125
BT 50/FMB 27/45	27	45	26	80	12	M12	-	-	2	80
BT 50/FMB 27/90	27	90	26	80	12	M12	-	-	2	80
BT 50/FMB 27/150	27	150	26	80	12	M12	-	-	2	80
BT 50/FMB 32/60	32	60	26	80	14	M16	-	-	2	100
BT 50/FMB 32/90	32	90	26	80	14	M16	-	-	2	100
BT 50/FMB 40/45	40	45	26	85	16	M20	-	-	2	125
BT 50/FMB 40/75	40	75	26	85	16	M20	-	-	2	125
BT 50/FMB 40/105	40	105	26	85	16	M20	-	-	2	125
BT 50/FMB 40F/75	40	75	26	110	16	M20	M12	66.7	1	160
BT 50/FMB 60/75	60	75	25	140	25.4	-	M16	101.6	1	200-500

NOTE :

- DETAILS GIVEN ABOVE ARE FACE MILL ARBOR WITH BT SHANK ONLY.
- FACE MILL ARBOR WITH OTHER TYPES OF SHANK LIKE SK, TC, CAT, ANSI, ISO, ETC ARE OFFERED ON CUSTOMERS' REQUIREMENT. OTHER DETAILS REMAIN THE SAME.
- REFER PGE 1 FOR TAPER DETAILS.

ORDERING INSTRUCTION

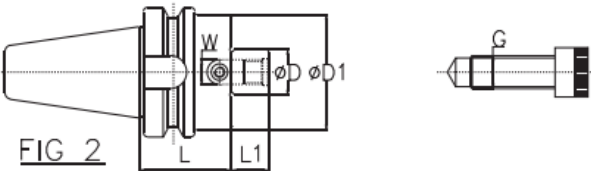
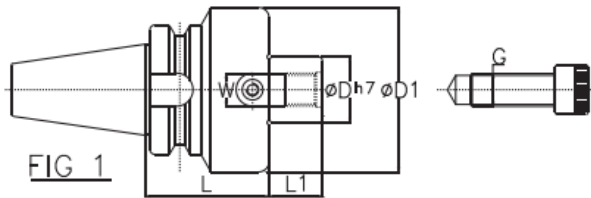
BT 40 / FMB 27 / 90

SHANK TYPE

GUAGE PLANE LENGTH 'L'

FACE MILL

BORDE DIA OF THE FACE MILL 'D'



DIMENSIONS IN MM

DESIGNATION	D	L	L1	D1	W	G	FIG	CUTTER DIA
BT 40/FMC 22/45	22	45	18	45	10	M10	2	50 & 63
BT 40/FMC 22/90	22	90	18	45	10	M10	2	50 & 63
BT 40/FMC 27/60	27	60	20	70	12	M12	1	80
BT 40/FMC 27/90	27	90	20	70	12	M12	1	80
BT 40/FMC 32/60	32	60	22	85	14	M16	1	100
BT 40/FMC 32/75	32	75	22	85	14	M16	1	100

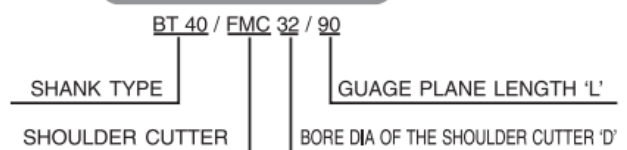
BT 45/FMC 22/45	22	45	18	45	10	M10	2	50 & 63
BT 45/FMC 22/120	22	120	18	45	10	M10	2	50 & 63
BT 45/FMC 27/60	27	60	20	70	12	M12	2	80
BT 45/FMC 27/120	27	120	20	70	12	M12	2	80
BT 45/FMC 32/60	32	60	22	85	14	M16	1	100
BT 45/FMC 32/105	32	105	22	85	14	M16	2	100

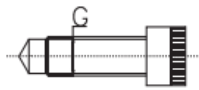
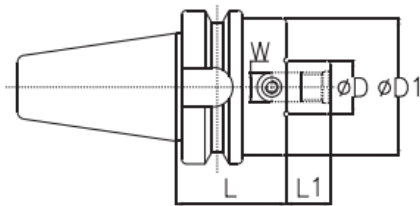
BT 50/FMC 22/60	22	60	18	45	10	M10	2	50 & 63
BT 50/FMC 22/105	22	105	18	45	10	M10	2	50 & 63
BT 50/FMC 22/150	22	150	18	45	10	M10	2	50 & 63
BT 50/FMC 27/45	27	45	20	70	12	M12	2	80
BT 50/FMC 27/90	27	90	20	70	12	M12	2	80
BT 50/FMC 27/150	27	150	20	70	12	M12	2	80
BT 50/FMC 32/45	32	45	22	85	14	M16	2	100
BT 50/FMC 32/75	32	75	22	85	14	M16	2	100
BT 50/FMC 32/105	32	105	22	85	14	M16	2	100

NOTE :

- DETAILS GIVEN ABOVE ARE FOR SHOULDER CUTTER ARBOR WITH BT SHANK ONLY.
- SHOULDER CUTTER ARBOR WITH OTHER TYPES OF SHANK LIKE SK, TC, CAT, ANSI, ISO, ETC ARE OFFERED ON CUSTOMER'S REQUIREMENT. OTHER DETAILS REMAIN THE SAME.
- REFER PAGE 1 FOR TAPER DETAILS.

ORDERING INSTRUCTION





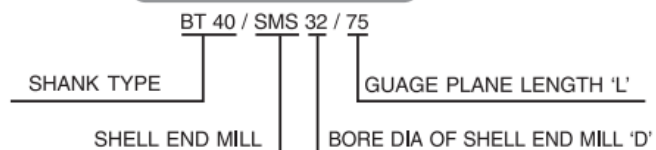
DIMENSIONS IN MM

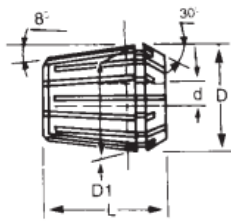
DESIGNATION	D	L	L1	D1	W	G
BT 40/SMS 16/60	16	60	14	34	8	M8
BT 40/SMS 16/120	16	120	14	34	8	M8
BT 40/SMS 22/60	22	60	16	42	10	M10
BT 40/SMS 22/120	22	120	16	42	10	M10
BT 40/SMS 27/45	27	45	18	50	12	M12
BT 40/SMS 27/105	27	105	18	50	12	M12
BT 40/SMS 32/45	32	45	20	60	14	M16
BT 40/SMS 32/60	32	60	20	60	14	M16
BT 40/SMS 32/75	32	75	20	60	14	M16
BT 45/SMS 16/60	16	60	14	34	8	M8
BT 45/SMS 16/120	16	120	14	34	8	M8
BT 45/SMS 22/120	22	120	16	42	10	M10
BT 45/SMS 27/60	27	60	18	50	12	M12
BT 45/SMS 27/105	27	105	18	50	12	M12
BT 45/SMS 32/45	32	45	20	60	14	M16
BT 45/SMS 32/75	32	75	20	60	14	M16
BT 50/SMS 16/75	16	75	14	34	8	M8
BT 50/SMS 16/120	16	120	14	34	8	M8
BT 50/SMS 22/75	22	75	16	42	10	M10
BT 50/SMS 22/120	22	120	16	42	10	M10
BT 50/SMS 27/60	27	60	18	50	12	M12
BT 50/SMS 27/105	27	105	18	50	12	M12
BT 50/SMS 32/45	32	45	20	60	14	M16
BT 50/SMS 32/75	32	75	20	60	14	M16
BT 50/SMS 40/45	40	45	23	70	16	M20
BT 50/SMS 40/75	40	75	23	70	16	M20
BT 50/SMS 50/60	50	60	26	90	18	M24

NOTE : • DETAILS GIVEN ABOVE ARE FOR SHELL END MILL ARBOR WITH BT SHANK ONLY.

- SHELL END MILL ARBOR WITH ORTHER TYPES OF SHANK LIKE SK, TC, CAT, ANSI, ISO, ETC ARE OFFERED ON CUSTOMER REQUIREMENT. OTHER DETAILS REMAIN THE SAME.
- REFER PAGE 1 FOR TAPER DETAILS.
- 'COMBI' SHELL END MILL ARBOR ALSO AVAILABLE ON REQUEST.

ORDERING INSTRUCTION



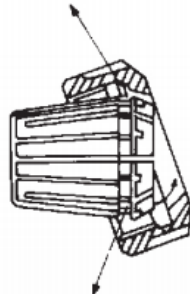


Dimension in mm

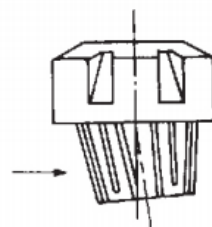
Collet Designation	Bore Range <i>d</i>			Total pieces/set	Clamping capacity per set		Each collet collapse by	<i>D</i>	Gauge plane Dia <i>D1</i>	<i>L</i>
	From	To	in steps		From	To				
ER 8	1	5	0.5	9	0.5	5.0	0.5	8.5	8	13.5
ER 11	1	7	0.5	13	0.5	7.0	0.5	11.5	11	18
ER 16	1	10	1	10	0.5	10.0	1.0	17.0	16	27
ER 20	2	13	1	12	1.0	13.0	1.0	21.0	20	31
ER 25	2	16	1	15	1.0	16.0	1.0	26.0	25	35
ER 32	3	20	1	18	2.0	20.0	1.0	33.0	32	40
ER 40	4	26	1	23	3.0	26.0	1.0	41.0	40	46
ER 50	12	34	2	12	10.0	34.0	2.0	52.0	50	60

ER COLLET RUN-OUT

Eccentric Projection of Nut



Groove in the collet

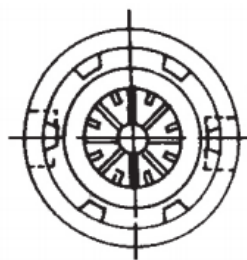
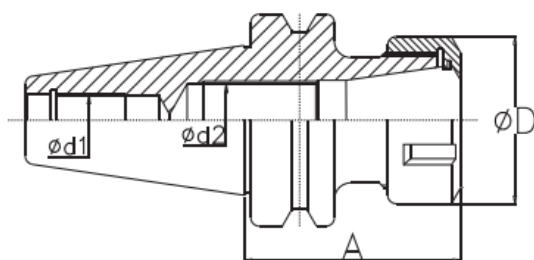


CLAMPING RANGE <i>d</i>		<i>L</i>	RUNOUT (TIR)	
ABOVE	UPTO		NORMAL PRECISION	HIGH PRECISION
1.0	1.5	6	0.015	0.010
1.5	3.0	10		
3.0	6.0	16		
6.0	10.0	25		
10.0	18.0	40	0.020	0.015
18.0	26.0	50		
26.0	34.0	60		

ORDERING INSTRUCTION
ER 40/5

COLLET TYPE

NOMINAL BORE SIZE IN MM.



DESIGNATION	SUITABLE FOR COLLET	COLLET CLAMPING CAPACITY	A	d1	STOPPER SCREW d2	NUT		SPANNER DESIGNATION
						D	DESIGNATION	
BT 30/A70/ER 16	ER 16	0.5-10	70	M12	M8 X 1	28	NUT/ER16	SP 25
BT 30/A70/ER16M	ER 16	0.5-10	70	M12	M8 X 1	22	NUT/ER16M	SP 16M
BT 30/A120/ER16M	ER 16	0.5-10	120	M12	M8 X 1	22	NUT/ER16M	SP 16M
BT 30/A70/ER20	ER 20	1-13	70	M12	M8 X 1	34	NUT/ER20	SP 30
BT 30/A70/ER32	ER 32	2-20	70	M12	M8 X 1	50	NUT/ER32	SP 32

BT 40/A70/ER16	ER 16	0.5-10	70	M16	M8 X 1	28	NUT/ER16	SP 25
BT 40/A105/ER16	ER 16	0.5-10	105	M16	M8 X 1	28	NUT/ER16	SP 25
BT 40/A125/ER16M	ER 16	0.5-10	125	M16	M8 X 1	22	NUT/ER16M	SP 16M
BT 40/A70/ER20	ER 20	1-13	70	M16	M12 X 1	34	NUT/ER20	SP 30
BT 40/A105/ER20	ER 20	1-13	105	M16	M12 X 1	34	NUT/ER20	SP 30
BT 40/A135/ER20M	ER 20	1-13	135	M16	M12 X 1	28	NUT/ER20M	SP 20M
BT 40/A70/ER25	ER 25	1-16	70	M16	M18 X 1.5	42	NUT/ER25	SP 25
BT 40/A105/ER25	ER 25	1-16	105	M16	M18 X 1.5	42	NUT/ER25	SP 25
BT 40/A150/ER25M	ER 25	1-16	150	M16	M18 X 1.5	35	NUT/ER25M	SP 25M
BT 40/A70/ER32	ER 32	2-20	70	M16	M22 X 1.5	50	NUT/ER32	SP 32
BT 40/A100/ER32	ER 32	2-20	100	M16	M22 X 1.5	50	NUT/ER32	SP 32
BT 40/A80/ER40	ER 40	3-26	80	M16	M22 X 1.5	63	NUT/ER40	SP 40
BT 40/A100/ER40	ER 40	3-26	100	M16	M22 X 1.5	63	NUT/ER40	SP 40
BT 40/A70/ER025	ERO 25	1.5-16	70	M16	M22 X 1.5	43	NUT/ER025	SP 25
BT 40/A80/ER035	ERO 35	1.5-25	80	M16	M22 X 1.5	60	NUT/ER035	SP 40
BT 40/A100/ER044	ERO 44	3.5-32	100	M16	M22 X 1.5	72	NUT/ER044	SP 50
BT 40/A80/TG100	TG 100	6-25	80	M16	M22 X 1.5	63	NUT/TG100	SP 40

BT 50/A135/ER16M	ER 16	0.5-10	135	M24	M8 X 1	22	NUT/ER16M	SP 16M
BT 50/A135/ER20M	ER 20	1-13	135	M24	M12 X 1	28	NUT/ER20M	SP 20M
BT 50/A135/ER25M	ER 25	1-16	135	M24	M18 X 1.5	35	NUT/ER25M	SP 25M
BT 50/A100/ER32	ER 32	2-20	100	M24	M22 X 1.5	50	NUT/ER32	SP 32
BT 50/A80/ER40	ER 40	3-26	80	M24	M22 X 1.5	63	NUT/ER40	SP 40
BT 50/A100/ER50	ER 50	10-34	100	M24	M22 X 1.5	78	NUT/ER50	SP 50
BT 50/A90/ER035	ERO 35	1.5-25	90	M24	M18 X 1.5	60	NUT/ER035	SP 40
BT 50/A100/ER044	ERO 44	3.5-32	100	M24	M18 X 1.5	72	NUT/ER044	SP 50

1. Details are given above for collet chucks with BT shank only. 2. Collet chuck with other types of shank like SK, TC, CAT, ANSI, ISO etc, are offered on customers' request. 3. Refer patge No. 1 for Shank details.

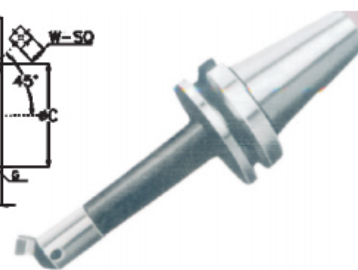
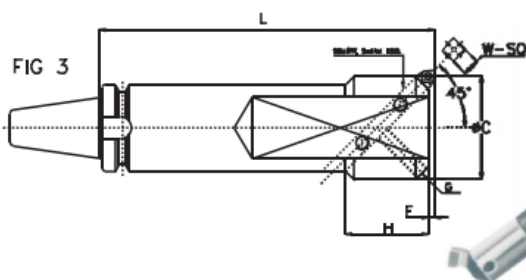
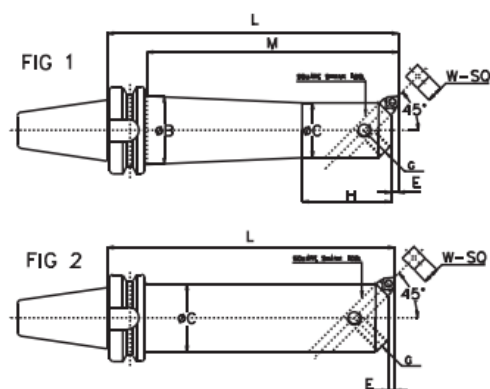
ORDERING INSTRUCTION

BT40/A70/ER25

COLLET TYPE

GUAGE PLANE LENGTH

SHANK TYPE



Dimension in mm

FIG	DESIGNATION	D		L	M	G	'W' SQ.	C	B	H	E	APPROX. WEIGHT (KG.)
		MIN	MAX									
1	BT 40-BSA 25-135	25	38	135	105	M6	8	20	22	35	1.0	1.5
	BT 40-BSA 30-150	30	42	150	120			24	26	40	1.6	
	BT 40-BSA 38-165	38	52	165	135	M8	10	30	33	50	2.6	2.0
	BT 40-BSA 50-165	50	65	165	135			40	44	65	3.0	
	BT 40-BSA 50-210			210	180	M10	16	50	-	-	2.0	3.0
2	BT 40-BSA 62-165	62	90	165	135			56	80	80	2.4	4.5
1	BT 40-BSA 62-225			225	195							
2	BT 40-BSA 72-165	72	110	165	-			60	-	-	2.4	4.0
	BT 40-BSA 72-225			225	-							5.5
3	BT 40-BSA 90-165	90	125	165	-	M12	75	-	60	60	4.0	4.5
	BT 40-BSA 90-210			210	-							5.5

1	BT 50-BSA 25-135	25	38	135	92	M6	8	20	22	35	1.0	4.2
	BT 50-BSA 30-165	30	42	150	122			24	26	40	1.6	4.4
	BT 50-BSA 38-180	38	52	185	137	M8	10	30	33	50	2.6	4.8
	BT 50-BSA 42-210	42	56	210	167			34	37	60	2.0	5.0
		BT 50-BSA 50-180	50	65	180	137		12	40	44	65	3.0
2	BT 50-BSA 50-240	240			197				5.7			
1	BT 50-BSA 62-195	62	90	195	152	M10	16	50	56	80	2.0	6.2
2	BT 50-BSA 62-270			270	227				7.6			
	BT 50-BSA 72-195	72	110	195	152	60		66	95	2.4	7.0	
	BT 50-BSA 72-285			285	242			9.3				
3	BT 50-BSA 90-210	90	125	210	167			-	75	80	110	4.0
	BT 50-BSA 90-300			300	257				12.3			
	BT 50-BSA 105-195	105	160	195	-	90	-		60	3.0	10.7	
	BT 50-BSA 105-285			285	-		94		130		15.0	
	BT 50-BSA 130-255	130	190	255	-		110		-	85	6.0	14.5

1. Tennon slot and tool are in same plane. 2. L,M & E correspond to D minimum. 3. Boring bars with others types of shank like SK, TC, ANSI, ISO, etc are offered on customers' Request. 4. Boring bar is supplied without tool. 5. Width across flat in fig 3 is 50 mm for BT40 & 75 min for BT 50. 6. Rough boring bar-B type for square mounting (BSB) can be offered against request. 6. Refer page No. 1 for Shank details.

ORDERING INSTRUCTION
BT40/BS A 50/210
SHANK TYPE
GUAGE PLANE LENGTH
ROUGH BORING BAR
ANGULAR MOUNTING



FIG 1

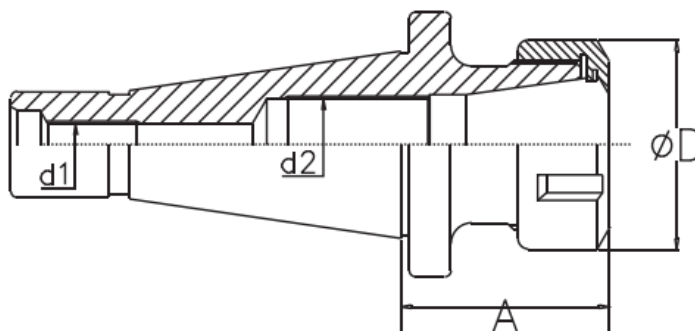
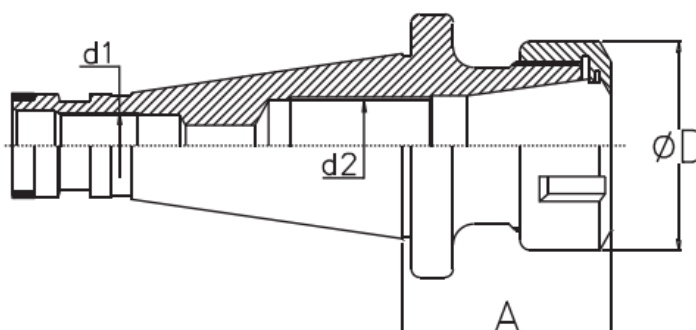


FIG 2



DESIGNATION	SUITABLE FOR COLLET	COLLET CLAMPING CAPACITY	A	d1	STOPPER SCREW d2	NUT		SPANNER DESIGNATION
						D	DESIGNATION	
ISO30/ER32/1	ER 32	2-20	50	M12	M14 X 1	50	NUT/ER32	SP 32
ISO30/ER40/1	ER 40	3-26	70	M12	M14 X 1	63	NUT/ER40	SP 40

ISO40/ER16/2	ER 16	0.5-10	50	M16	M8 X 1	28	NUT/ER16	SP 16
ISO40/ER20/2	ER 20	1-13	50	M16	M12 X 1	34	NUT/ER20	SP 20
ISO40/ER25/1	ER 25	1-16	50	M16	M18 X 1.5	42	NUT/ER25	SP 25
ISO40/ER32/2	ER 32	2-20	50	M16	M22 X 1.5	50	NUT/ER32	SP 32
ISO40/ER40/2	ER 40	3-26	50	M16	M22 X 1.5	63	NUT/ER40	SP 40
ISO40/ER025/2	ER 025	1.5-16	50	M16	M18 X 1.5	43	NUT/ER025	SP 25
ISO40/ER035/2	ER 035	1.5-25	50	M16	M18 X 1.5	60	NUT/ER035	SP 40
ISO40/ER044/2	ER 044	3.5-32	65	M16	M22 X 1.5	72	NUT/ER044	SP 50

ISO50/ER40/1	ER 40	3-26	60	M24	M22 X 1.5	63	NUT/ER40	SP 40
ISO50/ER50/1	ER 50	10-34	65	M24	M22 X 1.5	78	NUT/ER50	SP 50

Place separate order for Spanners

ORDERING INSTRUCTION

ISO 40/A50/ER40

SHANK TYPE

COLLET TYPE

GUAGE PLANE LENGTH



FIG-1

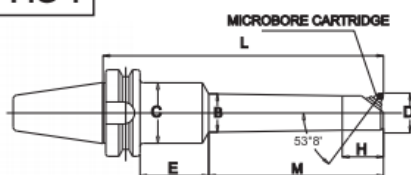


FIG-2

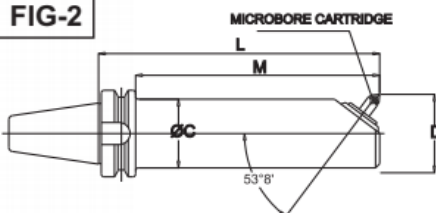


FIG-3

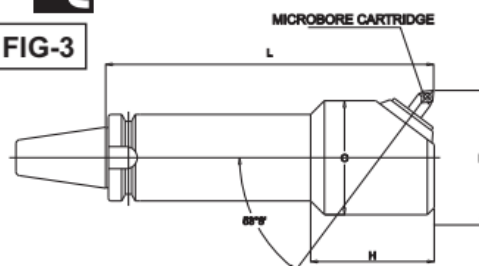
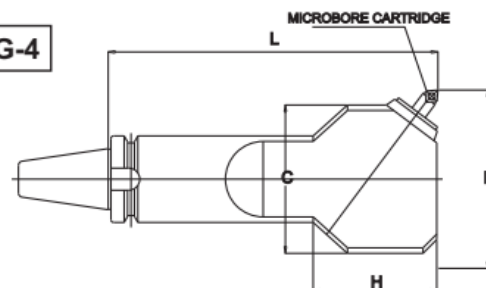


FIG-4



Dimension in mm

FIG	DESIGNATION	D		L	E	M	H	C	B	MICROBORE UNIT (CARTRIDGE)	APPROX. WEIGHT (KG.)			
		MIN	MAX											
1	BT 40-BCA 13.5-105	13.5	16	105	8	67	15	44	13	M1B2F40	1.5			
	BT 40-BCA 13.5-165			165	68						2.0			
	BT 40-BCA 14.5-105	14.5	17	105	8				14		1.5			
	BT 40-BCA 14.5-165			165	68						2.0			
	BT 40-BCA 16-105	16.0	22.5	105	2	73	18		15	M1A2F40	1.5			
	BT 40-BCA 16-180			180	77						2.0			
	BT 40-BCA 19-120	19.0	23.0	120	4	86	23		18	M2B2	1.5			
	BT 40-BCA 19-180			180	64						2.0			
	BT 40-BCA 23-135	23.0	29.0	135	-	105	24	-	22	M3B2	1.5			
	BT 40-BCA 23-195			195	60						2.0			
	BT 40-BCA 29-150	29.0	41.0	150	5	115	30		44	28	M3A2	1.5		
	BT 40-BCA 29-195			195	50							2.0		
	BT 40-BCA 38-150	38.0	49.0	150	5					172	41	35	M5B2	2.0
	BT 40-BCA 38-210			210	8									37
	BT 40-BCA 46-150	46.0	66.0	150	5	115	45	55	41	M5A2	2.5			
	BT 40-BCA 46-225			225	13				182		44	3.0		
2	BT 40-BCA 62-165	62.0	87.0	165	-	135	-	51	-	M7A2	3.5			
1	BT 40-BCA 62-225			225	11	184	60	62	57		4.5			
	BT 40-BCA 83-120	83.0	108.0	120	-	-	-	63	-		3.5			
2	BT 40-BCA 83-165			165	-		-		4.5					
	BT 40-BCA 83-225			225	-		-		6.0					
3	BT 40-BCA 98-165	98.0	142.0	165	-	-	90	83	-		M10A2	6.0		

ORDERING INSTRUCTION

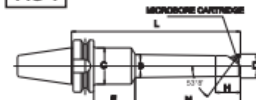
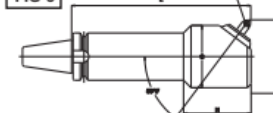
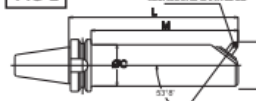
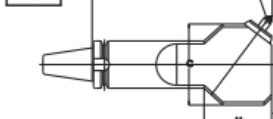
BT40/BC A 29/165

SHANK TYPE

GAUGE PLANE LENGTH

MICRO BORE
ANGULAR MOUNTING

BORE DIA 'D' MIN.

FIG-1

FIG-3

FIG-2

FIG-4

A TYPE ANGULAR MOUNTING

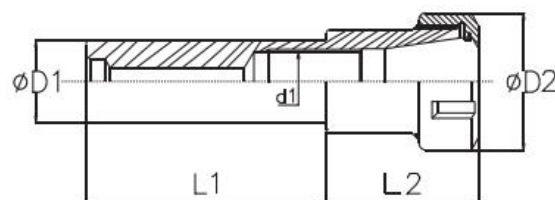
Dimension in mm

FIG	DESIGNATION	D		L	E	M	H	C	B	MICROBORE UNIT (CARTRIDGE)	APPROX. WEIGHT (KG.)	
		MIN	MAX									
1	BT 50-BCA 13.5-120	13.5	16	120	10	67	15	44	13	M1B2F40	4.0	
	BT 50-BCA 13.5-195			195	85				5.0			
	BT 50-BCA 14.5-120	14.5	17	120	10				14		4.0	
	BT 50-BCA 14.5-195			195	85						5.0	
	BT 50-BCA 16-120	16	22.5	120	4	73	18		15	M1A2F40	4.0	
	BT 50-BCA 16-195			195	79						5.0	
	BT 50-BCA 19-135	19	23	135	6	86	23	44	18	M2B2	4.0	
	BT 50-BCA 19-210			210	81						5.0	
	BT 50-BCA 23-150	23	29	150	2	105	24		22	M3B2	4.5	
	BT 50-BCA 23-225			225	77						5.0	
	BT 50-BCA 29-165	29	41	165	7	115	30			28	M3A2	4.5
	BT 50-BCA 29-225			225	67							5.5
	BT 50-BCA 38-165	38	49	165	7		172	41	55	35	M5B2	4.5
	BT 50-BCA 38-225			225	10					35		5.0
	BT 50-BCA 46-165	46	66	165	7	115	45	55	41	M5A2	5.0	
	BT 50-BCA 46-225			255	6	206			44		6.0	
2	BT 50-BCA 62-180	62	87	180	-	137	-	51	-	M7A2	6.0	
1	BT 50-BCA 62-240			240	13	184	60	70	57		7.0	
	BT 50-BCA 62-330			330	7	280			59		8.5	
2	BT 50-BCA 83-165	83	108	165	-	122	-	63	-		6.5	
1	BT 50-BCA 83-240			240	7	170	70	90	70		9.0	
	BT 50-BCA 83-345			345	-	302		-	76		12.0	
2	BT 50-BCA 98-165	98	142	165	-	122	-	83	-	8.5		
1	BT 50-BCA 98-240			240		197				11.5		
	BT 50-BCA 98-345			345		302				85	-	92
4	BT 50-BCA 132-210	132	176	210	-	-	65	108	-	M10A2	12.0	
	BT 50-BCA 132-315			315							18.5	
4	BT 50-BCA 166-225	166	210	225	-	-	70	142	-		13.0	
	BT 50-BCA 166-315			315							18.5	
	BT 50-BCA 200-210			200							244	210

NOTE : CARTRIDGES AND INSERT DETAILS TO BE SPECIFIED WHILE ORDERING.

1. Details given above are for boring bars with BT shank only. 2. Boring bars with other types of shank like SK, TC, CAT, ANSI, ISO, etc are offered on Customers request. 3. Refer page No. 1 for Shank details. 4. Boring bars is supplied without microbore Unit. 5. L & M corresponds to d min. 6. Micro-boring bar-B type-for square mounting (BCB) can be offered on request.

ORDERING INSTRUCTION
BT50 BC A 200 210
SHANK TYPE
GAUGE PLANE LENGTH
**MICRO BORE
ANGULAR MOUNTING**
BORE DIA 'D' MIN.

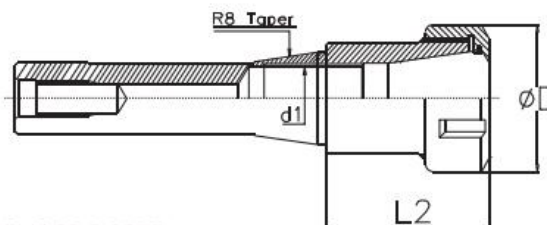
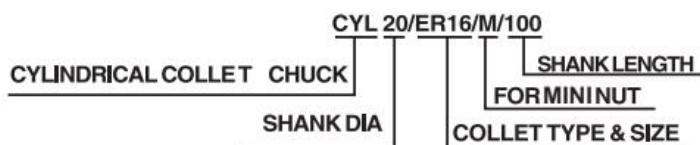


Dimension in mm

DESIGNATION	SUITABLE FOR COLLET	COLLET CLAMPING CAPACITY	D1	NUT		d1	L1	L2	SPANNER Designation
				D2	DESIGNATION				
CYL8/ER8M/80	ER8	0.5-5	8	12	NUT /ER8M	-	80	23	SP 8M
CYL12/ER11M/100	ER11	0.5-7	12	16	NUT /ER11M	-	100	30	SP 11M
CYL16/ER16/60	ER16	0.5-10	16	28	NUT /ER16	M8 x 1	60	37	SP 16
CYL20/ER16/100	ER16	0.5-10	20	28	NUT /ER16	M12 x 1	100	37	SP 16
CYL16/ER20M/100	ER20	1-13	16	28	NUT /ER20M	M8 x 1	100	46	SP 20M
CYL20/ER20/100	ER20	1-13	20	34	NUT /ER20	M12 x 1	100	41	SP 20
CYL20/ER25/100	ER25	1-16	20	42	NUT /ER25	M12 x 1	100	47	SP 25
CYL25/ER25/100	ER25	1-16	25	42	NUT /ER25	M18 x 1.5	100	47	SP 25
CYL20/ER32/100	ER32	2-20	20	50	NUT /ER32	M12 x 1	100	58	SP 32
CYL25/ER32/100	ER32	2-20	25	50	NUT /ER32	M18 x 1.5	50	58	SP 32
CYL25/ER40/50	ER40	3-26	25	63	NUT /ER40	M18 x 1.5	50	60	SP 40

Cylindrical Collet Chucks of special sizes can be supplied on request.

ORDERING INSTRUCTION



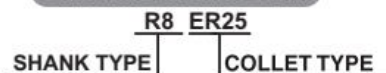
COLLET CHUCK-R8 SHANK

Dimension in mm

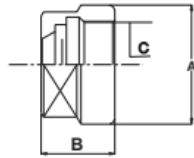
DESIGNATION	SUITABLE FOR COLLET	COLLET CLAMPING CAPACITY	L	STOPPER SCREW d1	NUT		SPANNER Designation
					D	DESIGNATION	
R8/ER25	ER25	2-16	50	M14 x 1	42	NUT /ER25	SP 25
R8/ER32	ER32	3-20	60	M14 x 1	50	NUT /ER32	SP 32
R8/ER035	ER035	2-25	70	M14 x 1	60	NUT/ER035	SP 40

1. Collet chuck of special lengths and other collet types are offered on customers' Request. 2. Place separate order for spanners.

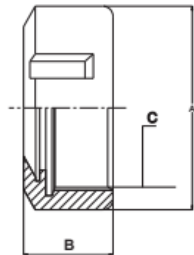
ORDERING INSTRUCTION



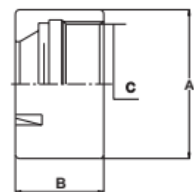
Dimension in mm

HEXAGONAL NUT FOR ER COLLET CHUCK

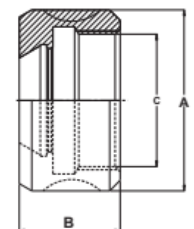
NT/ER	A	B	C	SPANNER TO BE USED
NUT/ER11	19.0	11.5	M14 x 0.75	SP 11
NUT/ER16	28.0	17.0	M22 x 1.50	SP 16
NUT/ER20	34.0	19.0	M25 x 1.50	SP 20

SLOTTED NUT FOR ER COLLET CHUCK

NT/ER	A	B	C	SPANNER TO BE USED
NUT/ER25	42.0	20.0	M32 x 1.50	SP 25
NUT/ER32	50.0	22.0	M40 x 1.50	SP 32
NUT/ER40	63.0	25.0	M50 x 1.50	SP 40
NUT/ER50	78.0	35.0	M64 x 2.00	SP 50

MINI NUT FOR ER COLLET CHUCK

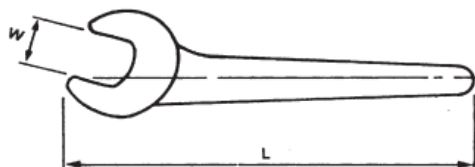
NT/ER	A	B	C	SPANNER TO BE USED
NUT/ER 8M	12.0	11.0	M10 x 0.75	SP 8M
NUT/ER 11M	16.0	11.5	M13 x 0.75	SP 11M
NUT/ER 16M	22.0	17.0	M19 x 1.00	SP 16M
NUT/ER 20M	28.0	19.0	M24 x 1.00	SP 20M
NUT/ER 25M	35.0	20.0	M30 x 1.00	SP 25M

SLOTTED NUT FOR ERO COLLET CHUCK

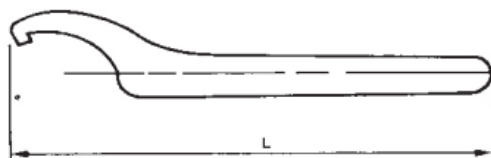
NT/ER	A	B	C	SPANNER TO BE USED
NUT/ERO 25	43.0	24.5	M33 x 1.50	SP 25
NUT/ERO 35	60.0	30.0	M48 x 2.00	SP 40
NUT/ERO 44	72.0	34.0	M60 x 2.50	SP 50

ORDERING INSTRUCTION

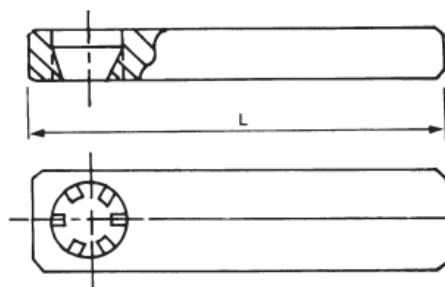
Dimension in mm

FOR HEXAGONAL NUT

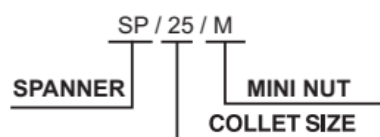
SPANNER DESIGNATION	W	L	SUITABLE FOR NUT
SP 11	17	155	NUT/ER11
SP25	25	210	NUT/ER16
SP 30	30	250	NUT/ER20

FOR SLOTTED NUT

SPANNER DESIGNATION	L	SUITABLE FOR NUT
SP 25	160	NUT/ER25 NUT/ER025
SP 32	165	NUT/ER32
SP 40	228	NUT/ER40 NUT/ER035
SP 50	280	NUT/ER50 NUT/ER044

FOR MINI NUT

SPANNER DESIGNATION	L	SUITABLE FOR NUT
SP 8M	75	NUT/ER8M
SP 11M	100	NUT/ER11M
SP 16M	140	NUT/ER16M
SP 20M	140	NUT/ER20M
SP 25M	148	NUT/ER25M

ORDERING INSTRUCTION



MAS 403

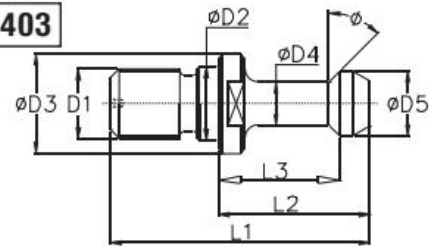


FIG-1

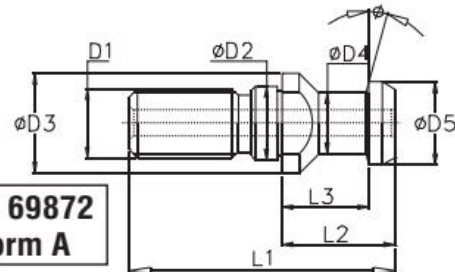
DIN 69872
Form A

FIG-2

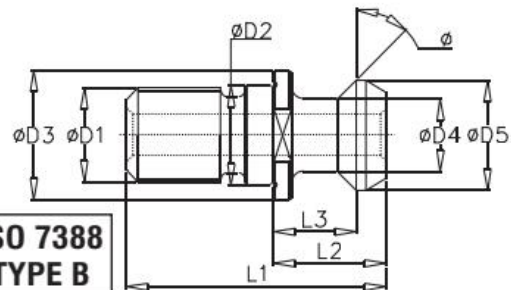
ISO 7388
TYPE B

FIG-3

Dimension in mm

DESIGNATION	DIMENSIONS									FIG REF.
	D1	D2	D3	D4	D5	L1	L2	L3	0	
PS30/45°/18/1	M12	12.5	16.5	7	11	43	23	18	45°	1
PS40/45°/28/1	M16	17	23	10	15	60	35	28	45°	1
PS50/45°/35/1	M24	25	38	17	23	85	45	35	45°	1
PS40/15°/20/2	M16	17	23	14	19	54	26	20	15°	2
PS45/15°/23/2	M20	21	30	17	23	65	30	23	15°	2
PS50/15°/25/2	M24	25	36	21	28	74	34	25	15°	2
PS40/45°/11/3	M16	17	22.5	12.95	18.95	44.5	16.4	11	45°	3
PS45/45°/15/3	M20	21	30	16.3	24.05	56	20.95	15	45°	3
PS50/45°/18/3	M24	25	37	19.6	29.1	65.6	25.55	18	45°	3

1. For coolant type add suffix 'C' to designation. 2. Other type of pull studs can be supplied on specific enquires with details

ORDERING INSTRUCTION

PS 40/45°/28/1

PULL STUD

SHANK TYPER

PULL STUD HEAD ANGLE

FIGURE NUMBER

LENGTH L3

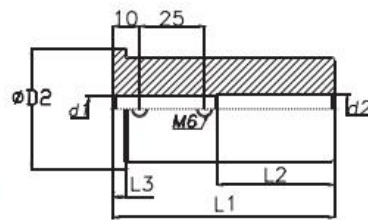


FIG 1

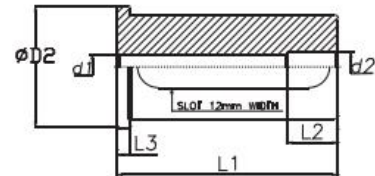


FIG 2

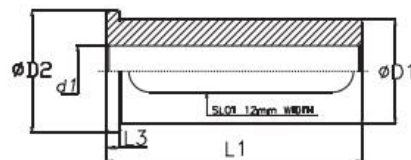


FIG 3

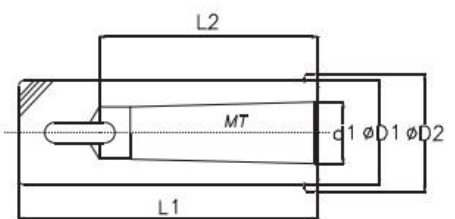


FIG 4

Dimension in mm

DESIGNATION	D1	D2	d1	d2	L1	L2	L3	TAPER	FIG. NO.
CYL 40/8	40	47	8	10	85	45	5	-	1
CYL 40/10	40	47	10	12	85	45	5	-	1
CYL 40/12	40	47	12	14	85	45	5	-	1
CYL 40/16	40	47	16	18	85	35	5	-	2
CYL 40/20	40	47	20	-	90	-	5	-	3
CYL 40/25	40	47	25	-	90	-	5	-	3
CYL 40/32	40	47	32	-	90	-	5	-	3
CYL 40/MTA1	40	47	12.065	-	85	56	5	MT1	4
CYL 40/MTA2	40	47	17.78	-	95	67	5	MT2	4
CYL 40/MTA3	40	47	23.825	-	115	84	5	MT3	4

ORDERING INSTRUCTION

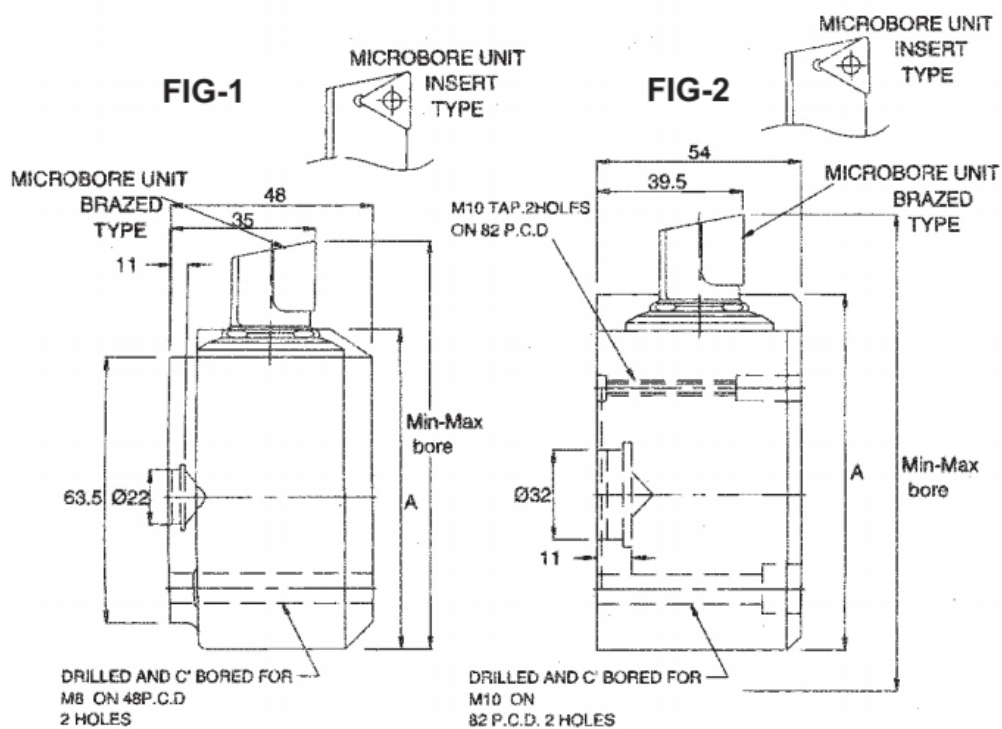
CYL40/MT A 3

SLEEVE OUTER DIA

MORSE TAPER NO.

MORSE TAPER

TANG TYPE

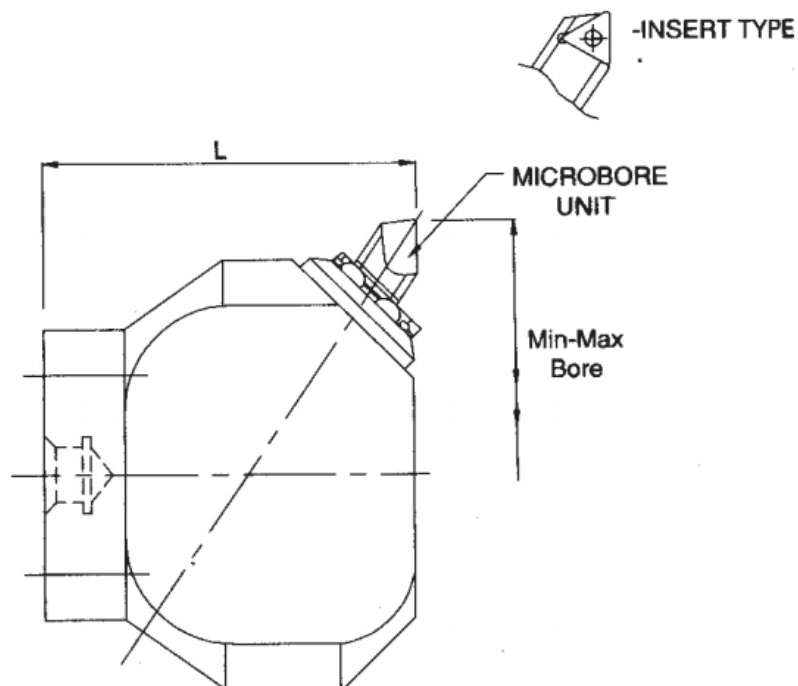


Microbore Boring Rings (See Figure 1)

A	Boring Range		Microbore Unit		
	Min.	Max.	Brazed	Indexable	ISO Insert
48	79	112.4	M7A5F100	M7A5T	TCMT 110204
64	97	130.4	M7A5100		
76	114	147.4	M7A5F100		TCMT 16 T3 04
90	132	165.4	M7A5F100		

Microbore Boring Rings (See Figure 2)

A	Boring Range		Microbore Unit		
	Min.	Max.	Brazed	Indexable	ISO Insert
102	140	197.2	M10A5F100	M10A5T	TCMT 16 T3 04
137	191	248.2	M10A5F100		
178	241	298.2	M10A5F100		
229	292	349.2	M10A5F100		
280	343	400.2	M10A5F100		
330	394	451.2	M10A5F100		



MICROBORE BORING RINGS

A	Boring Range		Microbore Unit		
	Min.	Max.	Brazed	Indexable	ISO Insert
79	104	65	M7A2F80	M7A2T	TCMT 110204
95	120	75	M7A2F80		
114	139	80	M7A2F80		
132	157	85	M7A2F80		
140	184	105	M10A2F80	M10A2T	TCMT 16T304
178	222	130	M10A2F80		
216	260	109	M10A2F80		
254	298	87	M10A2F80		

Note :

- Boring ring and boring bars are supplied without Tools.
- Party has to order tool separately indicating carbide grade.
- Indexable Tools can be used, but bore dia (min. and max.) Will differ.

Dear customer,

Precision. That is the watchword at **Akribis Technologies**, providers of total solutions to the entire tool holding requirements on your CNC machines. In Greek, '**Akribis**' means '**accurate**'.

With performance and cost effectiveness being the driving force behind all our products, Akribis Technologies draws upon the skills and experience of highly competent professionals , who have spent several years in collet and tool holding industry. Our product range includes steep taper tool holders of all types, boring bars, collets, sleeves and other accessories. We employ best practices in the industry in terms of material selection, processing, inspection and quality control..

Customer delight is the credo at Akribis Technologies. With ever increasing demands from discerning customers, we endeavour to reach and even surpass the benchmarks in terms of precision, productivity, cost effectiveness and customer responsiveness. Our aim is to make our '**First customer an always customer**'.

In this catalogue, Akribis Technologies presents the range of products that are offered as standard. These are by no means conclusive. It is our continuous endeavour to expand their range to meet the advances and trends in the machine tool industry. We also take up design and execution of tool holding products to meet the special needs of customers.

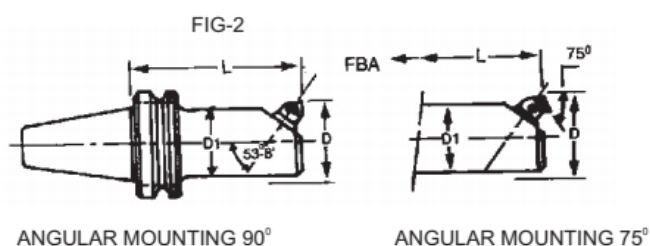
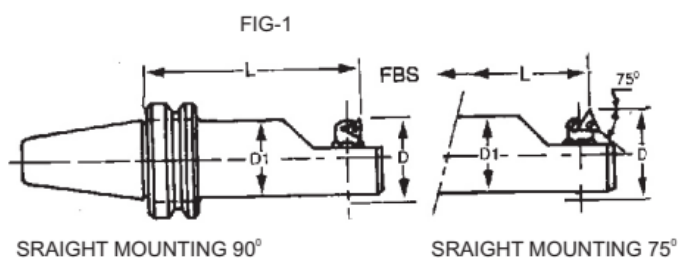
We will be happy to assist you in your selection and we look forward to be rewarded with long term association with your goodselves.

Akribis Technologies

- Value Driven
- Knowledge Driven
- Customer Driven

Dimension in mm

DESIGNATION	$\varnothing D$		D1	L	Fig Ref.	CARTRIDGE TO BE USED
	Min	Max				
BT40/FBS 90-128/150	27	32	26	150	1	R/L 148C - 11 - 0602
BT40/FBS 90-38/150	36.5	43.5	34.5	150	1	R/L 148C - 12 - 0902
BT40/FBS 75-51/165	50.1	62.1	46.5	165	1	R/L 148C - 23 - 1102
BT40/FBS 75-72/165	70.65	90.65	67	165	1	R/L 148C - 24 - 16T3
BT40/FBS 90-26/150	24.8	28.8	22	150	2	R/L 148C - 31 - 0602
BT40/FBS 90-33/150	32.5	38.1	28.5	150	2	R/L 148C - 32 - 0902
BT40/FBS 75-44/150	43.5	53.1	38	150	2	R/L 148C - 43 - 1102
BT40/FBS 75-62/165	60.8	76.8	55	165	2	R/L 148C - 44 - 60T3

**NOTE :**

- SPECIAL LENGTHS AND TYPE SHANKS ARE OFFERED CUSTOMERS' REQUEST.
- BORING BAR IS SUPPLIED WITHOUT FINE BORE UNIT

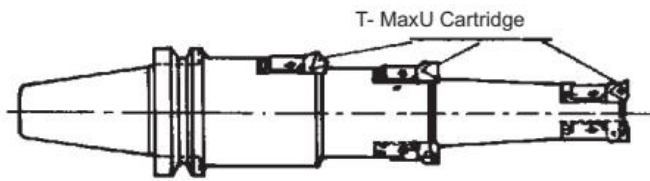
ORDERING INSTRUCTION**BT40 FBS90 28 150**

SHANK TYPE

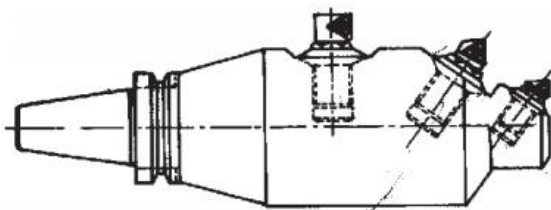
GAUGE PLANE LENGTH

FINE BORING ST MOUNTING 90°

BASIC BORE SIZE ON COMPONENT



COMBINATION FINISH BORING BAR



COMBINATION ROUGH BORING BAR



We offer combination boring bars to customer's specific needs

- a. of any shank taper or type,
- b. for rough boring, counter boring counter sinking, facing,
- c. for reverse boring,
- d. for finish boring,
- e. with and without coolant arrangement.

Customers are requested to furnish all particulars enable us to quote our price and delivery

NOTE :

- BORING BAR IS SUPPLIED WITHOUT CARTRIDGES

NOTES



NOTES



SI No.	DESCRIPTION	Page No
1	Shank Type	1
2	Collet Chucks-BT Shank	2
3	Collet Chuck - ISO Shank	3
4	Side lock Holder (SL/SLA)	4
5	Morse Toper Adaptor (MTA)	5
6	Face Mill Arbor (FMB)	6
7	Shoulder Cutter Arbor (FMC)	7
8	Shell End Mill Arbor (SMS)	8
9	Drill Chuck Adaptor (JFA/B)	9
10	Rough Boring Bar (B S A)	10
11	Micro Boring Bar (BCA)	11-12
12	Fine Boring Bar (BCA)	13
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