



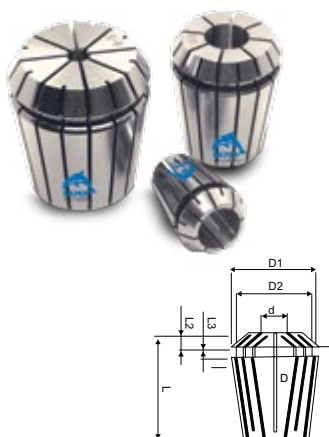
Product Catalogue
January
2025



TOOLINGS &
CUTTING TOOLS

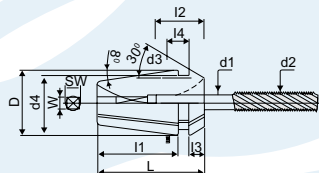
Website: www.dolphintools.co

ER Collets



Model	dl 17	D	D1	D2	L	L1	L2	L3	Collapsible capacity
ER8	1.0 - 5.0	8	8.5	6.5	13.5	2.7	1.5	1.5	0.5
ER11	1.0 - 7.0	11	11.5	9.5	18.0	3.8	2.5	2.0	0.5
ER16	1.0 - 2.5	16	17	13.8	27.5	6.26	4.0	2.7	0.5
	2.5 - 10.0	16	17	13.8	27.5	6.26	4.0	2.7	1.0
ER20	1.0 - 13.0	20	21	17.4	31.5	6.36	4.8	2.8	1.0
ER25	1.0 - 16.0	25	26	22.0	34.0	6.66	5.0	3.1	1.0
ER32	1.0 - 25.0	32	33	29.2	40.0	7.16	5.5	3.6	1.0
ER40	2.0 - 32.0	40	26	22.0	34.0	6.66	5.0	3.1	1.0
ER50	10.00-40.00	20	21	17.4	31.5	6.36	4.8	2.8	1.0

ERG Tap Collets



SDC Collet



Model	D	D3	D4	L	L1	L3	L4	CAPACITY
ER16G	16.74	16	13.8	27.5	20.8	4	6.26	M3-M10
ER20G	20.74	20	17.4	31.5	23.9	4.8	6.36	M3-M17
ER25G	25.74	25	22	34	25.9	5.0	6.66	M3 - M22
ER32G	32.74	32	29.2	40	31.8	5.5	7.16	M3 - M27

Model	RANGE	L	D
SDC 6	3-6MM	36	9.6
SDC 8	3-8MM	45	15
SDC 12	4-12MM	60	22

Oil Seal Collets (Without Rubber Seal)



MODEL	D	D1	L	L1	RANGE
ER25	25.00	26	34	6.7	3 - 16 MM
ER32	32.00	33	40	7.2	3 - 20 MM

Straight Collets for Powermill Chuck



SIZE	Range	D	D2	L
C-20	3-16MM	20	25	52
C-32	6-25 MM	32	37	73

A Type (HEX) Nuts



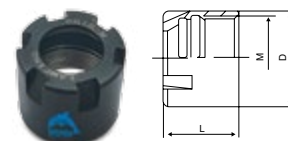
MODEL	L	D	M
ER8A	11	14	M10 X 0.75
ER11A	11.3	19	M14 X 0.75P
ER16A	17.5	28	M22 X 1.5P
ER20A	19	34	M25 X 1.5P
ER25A	20	42	M32 x 1.5P

ER - UM Nuts



MODEL	L	D	M
ER16UM	20	32	M20 X 1.5P
ER20UM	20	32	M24 X 1.5P
ER25UM	20	42	M32 X 1.5P
ER32UM	22.5	50	M40 X 1.5P
ER40UM	25.5	63	M50 X 1.5P
ER50UM	36	70	M64 X 2.0P

ER - M Nuts



MODEL	L	D	M
ER8M	10	12	10 X 0.75P
ER11M	12	16	M13 X 0.75P
ER16M	18	22	M19 X 1.0P
ER20M	19	28	M24 X 1.0P

ER (M) – Spanners



Model of Spanners	Type of nuts
ER8M	ER8M
ER11M	ER11M
ER16M	ER16M
ER20M	ER20M

ER (A / Hex) – Spanners



Model of Spanners	Type of nuts
ER8A	ER8A
ER11A	ER11A
ER16A	ER16A
ER20A	ER20A
ER25A	ER25A

ER (UM) – Spanners



Model of Spanners	Type of nuts
ER16	ER16UM
ER20	ER20UM
ER25	ER25UM
ER32	ER32UM
ER40	ER40UM
ER50	ER50UM

C – Spanners



Model of Spanners	Type of Chuck
C-ER25	1/2" Light
C-ER32	1/2" Heavy
C-ER40	5/8", 3/4", Heavy
KEYLESS CHUCK	1/2" HEAVY

3D-Taster / 3D Edge Fider



AXIS	SHANK DIA	ACCURACY	STYLUS
X, Y, Z	20 MM	0.01MM	33MM L X 4 MM DIA

Centering Indicator



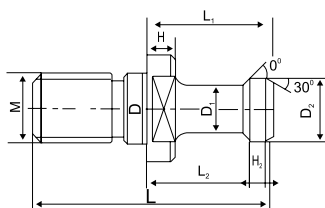
RANGE	ACCURACY
0-3 MM	0.01MM

Z – Axis Scale Zero Setters with Magnetic base



MODEL	Gross Attitude
DIAL TYPE (0.01MM)	50MM
DIGITAL (0.001 MM) IP 65 SERIES	50MM

Pull Studs – Regular / Through Coolant



MODEL	L	L1	L2	D	D1	D2	H	H1	M	θ
BT30 (Ø)	43	23	18	12.5	7	11	5	2.5	M12	45 60 90
BT40 (Ø)	60	35	28	17	100	15	6	3	M16	45 60 90
BT50 (Ø)	85	45	35	25	17	23	10	5	M24	45 60 90

Pull studs in SK/CAT/ other DIN specifications available against order

Master Mandrel (Spindle Tester)



Co-centricity 0.003mm

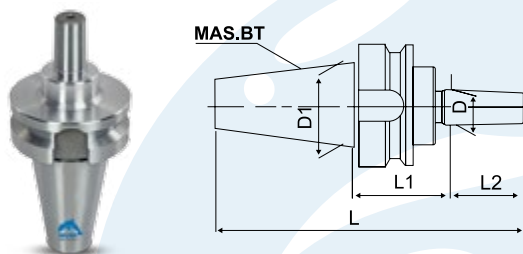
RANGE
BT40 DIA 40mm – 300mm Long
BT50 DIA 50mm – 300mm Long

Keyless Drill Chuck



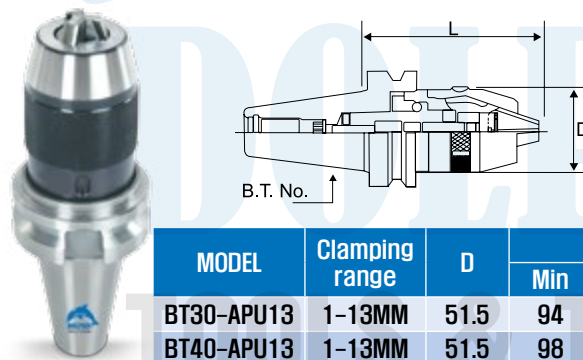
Model	Capacity	Taper	d	h	D	L	I
1/4"/6MM	0.5-6MM	JT1	10	14.5	35	67	61
3/8"/10MM	1-10MM	JT2	12	18.5	42	86	78
1/2"/13MM LIGHT	1-13MM	JT6	17.17	21	44	86	76
1/2"/13MM HEAVY	1-13MM	JT6	17.17	24	48	97	88
5/8"/16MM	3-16MM	JT3	20.599	24	52	108	98
3/4"/20MM	3-20MM	JT3	20.599	30.5	62	128	118

BT Drill Chuck Adaptor



MODEL	L2	L	D	D1	M
BT30-JT6	22.225	101.00	14.199	41.75	M12
BT40-JT6	22.225	132.6	14.199	44.45	M16

Integrated Keyless Drill Chuck



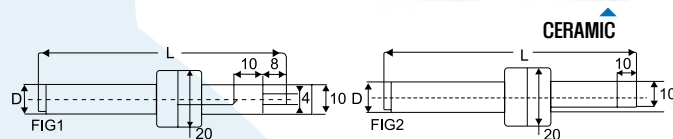
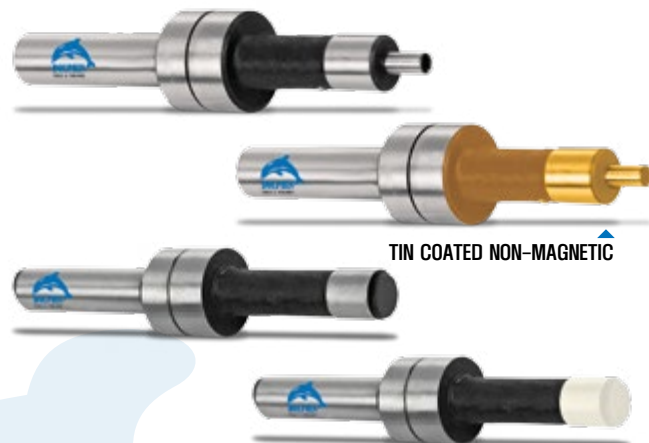
MODEL	Clamping range	D	L	
			Min	Max
BT30-APU13	1-13MM	51.5	94	105
BT40-APU13	1-13MM	51.5	98	109
BT40-APU16	3-16MM	58.0	115	130
BT50-APU13	1-13MM	51.5	98	109
BT50-APU16	3-16MM	58.0	115	130

Key Type Drill Chuck



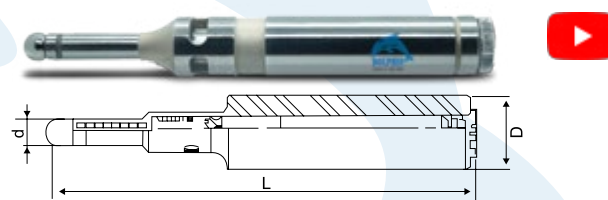
Size	Range	Taper
1/2" (13MM)	1-13MM	JT-6
3/4" (20MM)	3-20MM	JT-3
Stainless Steel	0-4MM	JT-0

Mechanical Edge Finders (Steel/Ceramic/Tin Coated)



MODEL	D(mm)	L1
4MM	4	90
10MM	10	83

Optical Edge Finders with Sound & Light



MODEL	D(mm)	L(mm)	D(mm)	Wt.
ES-20	20	160	10	0.28

MT Series Adaptor



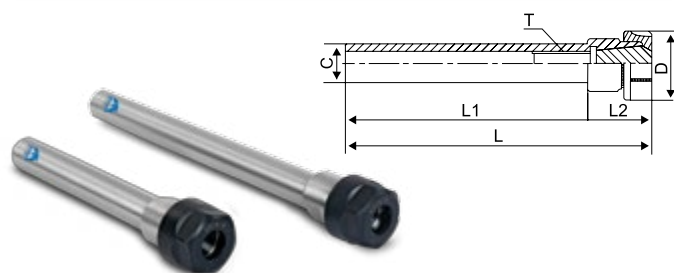
SHANK	ER 16	ER 20	ER 25	ER 32	ER 40	ER 50	FMB-22 /27/32	SLA-25 /32/40
MT-2	✓	✓	✓	✓				
MT-3	✓	✓	✓	✓	✓		✓	✓
MT-4				✓	✓		✓	✓
MT-5					✓	✓		

Flange Type Adaptors



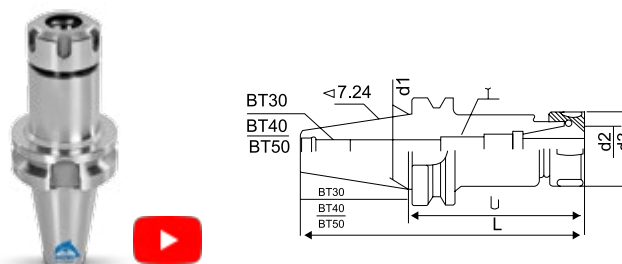
MODEL / RANGE
ER 32 - DIA 80mm
ER 40 - DIA 80mm

Cylindrical Collet Adaptor



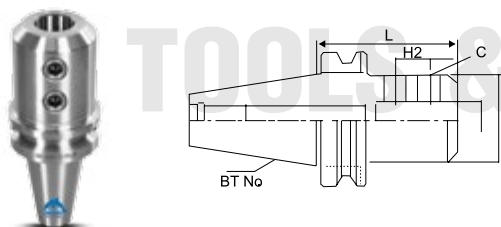
MODEL	L1	C	D
C10-ER8 A/M-100/150/200	100/150/200	10	14/12
C10-ER11 A/M-100/150/200	100/150/200	10	19/16
C12-ER11 A/M-100/150/200	100/150/200	12	19/16
C12-ER16 A/M-100/150/200	100/150/200	12	28/22
C16-ER11 A/M-100/150/200	100/150/200	16	19/16
C16-ER16 A/M-100/150/200/250/300	100/150/200/250/300	16	28/22
C20-ER16 A/M-100/150/200	100/150/200	20	28/22
C20-ER20 A/M-100/150/200/250/300	100/150/200/250/300	20	34/28
C20-ER25 UM-100	100	20	42
C25-ER16 A-100	100	25	28
C25-ER20 A-100	100	25	34
C25-ER25UM-100/150/200/250	100/150/200/250	25	42
C25-ER32UM-100	100	25	50
C32-ER16 A-100	100	32	28
C32-ER20 A-100	100	32	34
C32-ER25UM-100	100	32	42
C32-ER32UM-100/150/200	100/150/200	32	50
C32-ER40UM-100	100	32	63
C40-ER16A-100	100	40	28
C40-ER20 A-100	100	40	34
C40-ER25UM-100	100	40	42
C40-ER32UM-100	100	40	50
C40-ER40UM-100/150/200	100/150	40	63

BT Series ER Collet Adaptor



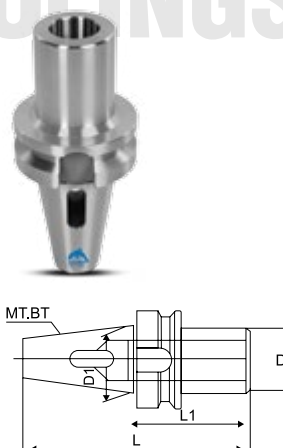
MODEL	L1	D3	D1
BT30-ER11 A/M-70/100	70/100	19/16	31.75
BT30-ER16 A/M-70/100	70/100	28/22	31.75
BT30-ER20A-70/100	70/100	34	31.75
BT30-ER25UM-70/100	70/100	42	31.75
BT30-ER32UM-70/100	70/100	50	31.75
BT30-ER40UM-80/100	80/100	63	31.75
BT40-ER11 A/M-70/100/150	70/100/150	19/16	44.25
BT40-ER16 A/M-70/100/150/200/250/300	70/100/150/200/250/300	28/22	44.25
BT40-ER20A-70/100/150/200/250/300	70/100/150/200/250/300	34	44.45
BT40-ER25UM-70/100/150/200/250/300	70/100/150/200/250/300	42	44.45
BT40-ER32UM-70/100/150/200/250/300	70/100/150/200/250/300	50	44.45
BT40-ER40UM-80/100/150/200/250/300	80/100/150/200/250/300	63	44.45
BT50-ER16 A-100/150/200/250/300	100/150/200/250/300	28	69.85
BT50-ER20 A-100/150/200/250/300	100/150/200/250/300	34	69.85
BT50-ER25UM-100/150/200/250/300	100/150/200/250/300	42	69.85
BT50-ER32UM-100/150/200/250/300	100/150/200/250/300	50	69.85
BT50-ER40UM-100/150/200/250/300	100/150/200/250/300	63	69.85
BT50-ER50UM-100/150	100/150	73	69.85

BT - Side Lock Adaptor



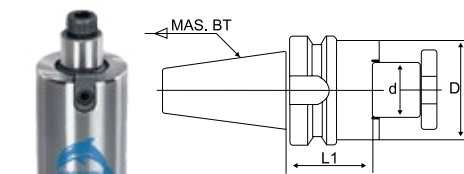
Model	L	C	Model	L	C
BT30-SLA 16	65	50	BT40-SLA 25	60/100/150/200	65
BT30-SLA 20	70	52	BT40-SLA 32	60/100/150/200	72
BT30-SLA 25	75	65	BT40-SLA 40	110/150/200	90
BT30-SLA 32	90	72	BT50-SLA 16	65	50
BT40-SLA-10	65	45	BT50-SLA 20	70	52
BT40-SLA-12	70	45	BT50-SLA 25	100/150/200	65
BT40-SLA16	65	50	BT50-SLA 32	105/150/200	72
BT40-SLA 20	70	52	BT50-SLA 40	110/150/200	90
BT40-SLA 22	90	52	BT50-SLA 50	120	100

BT - MT (Reduction Socket) Adaptor



MODEL	L	D	D1
BT30-MT1-50	95	25	25.00
BT30-MT2-60	108.4	32	31.75
BT30-MT3-70	128.4	40	31.75
BT40-MT1-50	110.4	25	25.00
BT40-MT2-60	125.4	32	44.45
BT40-MT3-70	135.4	40	44.45
BT40-MT4-90	155.4	48	44.45
BT50-MT2-45	146.8	25	69.85
BT50-MT3-65	166.8	40	69.85
BT50-MT4-90	186.8	48	69.85
BT50-MT5-105	196.8	63	69.85

BT – Face / Shell / Mill Adaptor



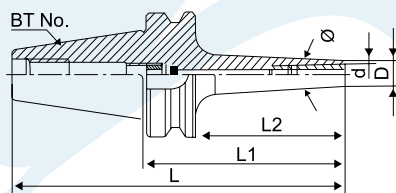
FMB-EXTENSION SPACER	L
22	50
22	100
27	50
27	100



**FLANGE
TYPE**

MODEL	L1	D	d
BT30-FMB22-45	45	50	22
BT30-FMB27-45	45	60	27
BT30-FMB32-60	60	78	32
BT40-FMB16-60/100/150/200	60/100/150/200	34	16
BT40-FMB22-60/100/150/200/ 250/300/400	60/100/150/200/250/300/400	48	22
BT40-FMB27-60/100/150/200/ 250/300/400	60/100/150/200/250/300/400	54	27
BT40-FMB32-60/100/150/200/250/300	60/100/150/200/250/300	78	32
BT40-FMB40-60/100/150/200/250/300	60/100/150/200/250/300	89	40
BT40-FMB40	FLANGE Type		
BT50-FMB16-100/150/200/250/300	100/150/200/250/300	34	16
BT50-FMB22-100/150/200/ 250/300/400/500	60/100/150/200/250/300/400/500	50	22
BT50-FMB27-100/150/200/ 250/300/400/500	60/100/150/200/250/300/400/500	60	27
BT50-FMB32-100/150/200/250/300	60/100/150/200/250/300	78	32
BT50-FMB40-100/150/200/250/300	100/150/200/250/300	98	40
BT50-FMB40	FLANGE Type		
BT50-FMB60	FLANGE Type		

BT – SDC Adaptor



Model	L1	θ	D	d
BT40-SDC06-120/150	120/150	6°	14	3-6
BT40-SDC08-120/150	120/150	6°	22	3-8
BT40-SDC12-120/150	120/150	6°	34	3-12
BT50-SDC06-120/150	120/150	6°	14	3-6

SDC Cylindrical Adaptor



Model	D	L
C 16 – SDC 6 – 150 L	16	150
C 20 – SDC6 – 200 L	20	200
C 16 – SDC 8 – 150 L	16	150
C 20 – SDC 8– 200 L	20	200

ISO (NT) Series Adaptors



**INTEGRATED KEYLESS
ADAPTOR**



**ER SERIES
ADAPTOR**



**FACE MILL
ADAPTOR**



**JT-6
ADAPTOR**



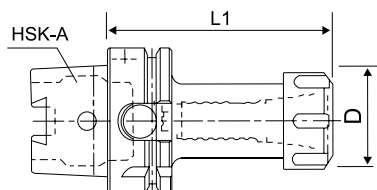
**MT REDUCTION
ADAPTOR**



**SIDE LOCK
ADAPTOR**

Model	
ISO (NT) 30 / 40 / 50	
ER SERIES ADAPTOR	ER16, ER20, ER25, ER32, ER40, ER50
FACE MILL ADAPTOR	22, 27, 32, 40
MT REDUCTION ADAPTOR	MT-1, 2, 3
SIDE LOCK ADAPTOR	SLA- 20, 25, 32, 40
INTEGRATED KEYLESS ADAPTOR	APU-13 / 16
JT-6 ADAPTOR	JT-6

HSK Series Adaptor



Model	D	L1
HSK 63A - ER25	42	80
HSK 63A - ER32	50	100
HSK 63A - ER40	63	100
HSK 63A - FMB22	48	50
HSK 63A - FMB27	58	60
HSK 63A - SLA25	90	65
HSK 63A - SLA32	100	72

R-8 (M1 TR) Adaptors



R-8 (M1 TR) COLLETS
ER SERIES ADAPTORS
FACE MILL ADAPTORS
DRILL CHUCK ADAPTORS
MORSE TAPER ADAPTOR
KEYLESS CHUCK ADAPTOR

Model	
THREAD PITCH : 12 X 1.5 / M 12 / 7/16 UNF	
R-8 (M1 TR) COLLETS	3MM -20 MM
ER SERIES ADAPTORS	ER 16, ER20, ER25, ER32, ER40
FACE MILL ADAPTORS	22, 27, 32, 40
MORSE TAPER ADAPTOR	MT-2/3
DRILL CHUCK ADAPTORS	JT-6
KEY LESS CHUCK ADAPTORS	APU-13

BT Series Angle Heads (90°)



Model		MAX SPEED	MAX TORQUE	L	Power
BT30/BT40/BT50	ER 16	4500 RPM	12 NM	60/120	1.5 kw
BT30/BT40/BT50	ER 20	4000 RPM	16 NM	50/110	2 kw
BT30/BT40/BT50	ER 25	4000 RPM	32 NM	50/110	3 kw
BT30/BT40/BT50	ER 32	3500 RPM	40 NM	60/130	4 kw
BT30/BT40/BT50	ER 40	3000 RPM	75 NM	70/150	6 kw



BT Power Milling Chucks

Accuracy 0.003mm

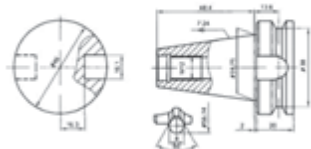


Model	L	L1
BT30 C-20-90L	138	90
BT40 C-20-90L	155	90
BT40 C-32-100L	170	100
BT50 C-32-110L	206	110

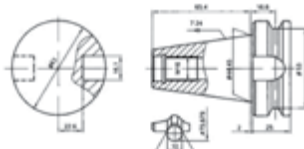


Shank Specifications

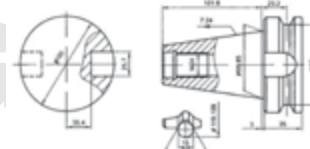
BT 30



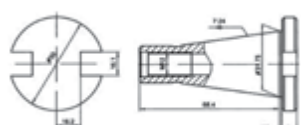
BT 40



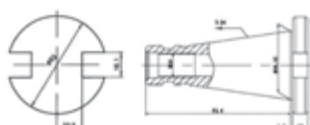
BT 50



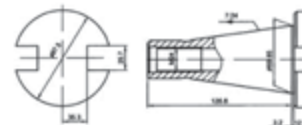
NT / ISO 30



NT / ISO 40

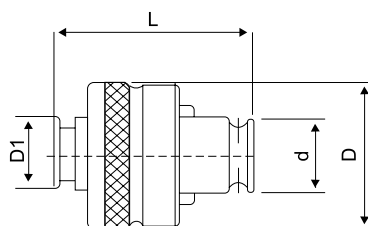


NT / ISO 50



Also available Adaptors: BBT/CAT/SK SERIES
similar specs as BT SERIES applicable

Tapping Collets, with Auto Clutch



Tapping Collets, Reducer



MODEL	SIZE	ISO SERIES		DIN	
		SHANK	SQAURE	SHANK	SQAURE
GT12: (d=19, D=38, L=54) Range 3-16 mm	M2	2.8	2.1		
	M3	3.15	2.5	3.5	2.5
	M4	4	3	4.5	3.4
	M5	5	4	6	4.9
	M6	6.3	5	6	4.9
	M8	8	6.3	8	6.3
	M10	10	8	10	8
	M12	9	7.1		
	M14	11.2	9		
	M16	12.5	10	12	9
	M18	14	11.2		
	M20	14	11.2		
	M22	16	12.5		
	M24	18	14		
	M27	20	16		
	M30	23	17		
GT24: (d=30, D=58, L=79.5) Range 5-30 mm					

MODEL
GT24 to GT 12

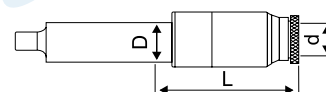
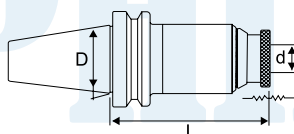
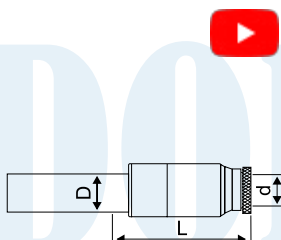
Quick Change Tapping Adaptor: **R8 (M1TR)-Gt-12: M3-M16**



Quick Change Tapping Adaptor: **Cylindrical**

Quick Change Tapping Adaptor: **BT Series**

Quick Change Tapping Adaptor: **MT Series**



MODEL	Range	D	d	L
Q25-GT12	M3-M16	ø 25	ø 19	110
Q32-GT12	M3-M16	ø 32	ø 19	110
Q40-GT12	M3-M16	ø 40	ø 19	110
Q40-GT24	M5-M30	ø 40	ø 30	130

MODEL	Range	D	d	L
BT 30-GT12	M3-M16	31.75	19	110
BT40-GT12	M3-M16	44.45	19	110
BT40-GT24	M5-M30	44.45	30	130
BT50-GT12	M3-M16	69.85	19	110
BT50-GT24	M5-M30	69.85	30	130

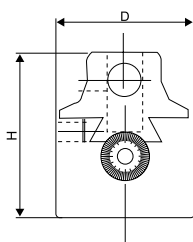
MODEL	Range	D	d	L
MT2-GT12	M3-M16	ø 17.780	ø 19	110
MT3-GT12	M3-M16	ø 23.825	ø 19	110
MT3-GT24	M5-M30	ø 23.825	ø 30	130
MT4-GT24	M5-M30	ø 31.267	ø 30	130

Synchro Tapping Adaptor



MODEL	Range
BT 40 ER 32	M3-M27

F1 Rough Boring Heads



MODEL	D	H	MAX OFFSET	BORING BARDIA	MIN RADUATION	DIAL OF BORING
F1-12mm	50MM	63	16mm	12mm	0.01mm	10-125mm
F1-18	75MM	80	25mm	18mm	0.01mm	12-225mm
F1-25mm	100MM	88	41mm	25mm	0.01mm	15-630mm

F1 Rough Boring Heads Shanks



BT-30/BT-40/BT-50



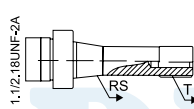
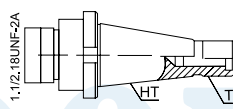
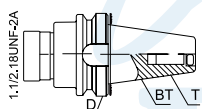
ISO-30/ISO-40



R8 (MNTR)

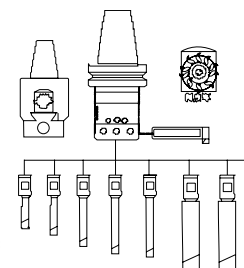


MT-3/MT-4



MODEL	T	L	THREAD
BT30/BT40/BT50	M16-2.0P	102	1.1/2"X18
NT (ISO)30	M12-1.75P	102	1.1/2"X18
NT (ISO) 40	M16-2.0P	135	1.1/2"X18
R8	M12/12X1.5/7/16-20UNF	132.5	1.1/2"X18
MT-3 /MT-4	M12/M16	120/150	1.1/2"X18

Fine Boring Head Set BT40-Range 8-280mm (0.01mm)



Spare Shank for Fine Boring Head: BT50/ISO50/ISO40



Model	Boring Range	Min Graduation	Max Offset	Weight
NBH2084	8-280MM	0.01MM /	28.0MM	3.0

Boring Cutter	Boring Range	DM	Insert	Bolt	Wrench	Weight
BJ2208-32	8-11	32	TBGT0 60102L	SB-1STR -M2	T6	0.095
BJ2010-40	10-13	40				0.095
BJ2012-53	12-17	53	TBGH0 90202L	SB-2STR -M2.5	T8	0.12
BJ2016-68	16-21	68				0.16
BJ2020-83	20-130	83	TPGH11 0302L	SB-3STR -M3	T8	0.22
BJ2025-96	25-135	96				0.34
BJ2030-115	30-140	115				0.54
BJ20-20	120-280	84 + BT bar				0.23

Fine Boring Head Set BT40- Range 8-204mm (0.005mm)



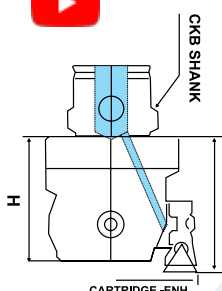
BORING CUTTER	BORING RANGE	DM	INSERT	SCREW	WRENCH
SBJ 1608	8-38	32	TBGH 0601 L	M2	T-6
SBJ 1612	12-42	53	TBGH0902 L	M2.5	T-8
SBJ 1620	20-50	83	TBGH1103 L	M3	T-10
SBJ 1645	45-75	90	TBGH1103 L	M3	T-10
NO.1	74-103	-	TBGH1103 L	M2	T-6
NO.2	99-128	-	TBGH1103 L	M2	T-6
NO.3	124-153	-	TBGH1103 L	M2	T-6
NO.4	147-176	-	TBGH1103 L	M2	T-6
NO.5	172-203	-	TBGH1103 L	M2	T-6

Model	Accuracy	Boring Range	Adjustment Precision	Adjust the Stroke
NBH2084S	≤ 0.005MM	Ø 8- Ø 280MM	Ø 0.005MM	Ø 30.00MM

Spare Shank for Fine Boring Head: BT 50/BBT - 40/ HSK 63 A TAPER

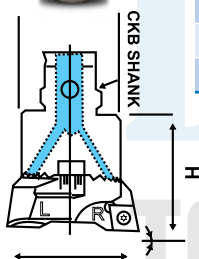


CKB MICRO BORING HEADS FINE BORING EWN SERIES



Model / Range	Cartridge	Internal Boring Range	Counter Boring Range	Insert	H (Height)
CKB-1, EWN 20MM-36MM	ENH1-1	20-26		TPGT-08	32
	ENH1-2	25-31	30-31		
	ENH1-3	30-36	30-36		
CKB-2, EWN 25 MM - 47 MM	ENH2-1	25-33			37
	ENH2-2	32-40	36-47		
	ENH2-3	39-47	39-47		
CKB-3, EWN 32 MM- 60 MM	ENH3-1	32-42		TPGT-11	37
	ENH3-2	41-51	46-51		
	ENH3-3	50-60	50-60		
CKB-4, EWN 40MM-79MM	ENH4-1	41-54			47
	ENH4-2	53-66	58-66		
	ENH4-3	61-74	61-74		
CKB-5, EWN 53MM-95MM	ENH5-1	53-70	62-70		56
	ENH5-2	68-85	69-85		
	ENH5-3	78-95	78-95		
CKB-6, EWN 68MM-150MM	ENH6-1	68-100	80-100		66
	ENH6-2	93-125	93-125		
	ENH6-3	125-150	125-150		
CKB-6, EWN 100MM-203MM	ENH7-1	100-153	112-153		66
	ENH7-2	125-178	125-178		
	ENH7-3	150-203	150-203		

TWIN CUTTER – ROUGH BORING HEADS – TWN SERIES



MODEL / RANGE	H	INSERT
CKB-1 TWN 19MM-26 MM	30	CCMT06020
CKB-2 TWN 25MM-33MM	35	CCMT06020
CKB-3 TWN 32MM-42 MM	40	CCMT06020
CKB-4 TWN 40MM-55 MM	50	CCMT09T30
CKB-5 TWN 52MM-70 MM	60	CCMT09T30
CKB-6 TWN 68MM-92 MM	70	CCMT12040
CKB-6 TWN 90MM-122 MM	85	CCMT12040
BST -TWN 120MM-164MM	95	CCMT12040

ADAPTORS FOR FINE BORING HEADS



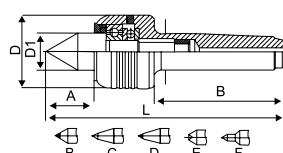
MODEL / RANGE
BT 40 CKB 1 X 100 L
BT 40 CKB 1 X 130 L
BT 40 CKB 2 X 100 L
BT 40 CKB 2 X 165 L
BT 40 CKB 3 X 100 L
BT 40 CKB 3 X 165 L
BT 40 CKB 4 X 100 L
BT 40 CKB 4 X 150 L
BT 40 CKB 5 X 100 L
BT 40 CKB 5 X 150 L
BT 40 CKB 6 X 100 L
BT 40 CKB 6 X 150 L
BT 40 BST-100 L

*Other sizes of BT40/BT50 CKB Adaptors not mentioned above available on request

CNC Live Centers (Stub or extended point)

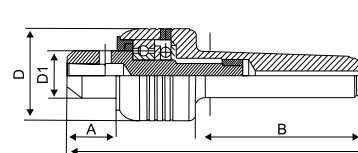


Available in carbide tipped points also



Model	A	B	D	D1	L	Max load	Max Speed	Accu- racy
MT2	28	65	46	24	140	100	3500	0.01
MT3	38	81	59	28	170	250	3000	0.015
MT4	45	102	64	31	198	400	2500	0.015
MT5	52	130	78	44	245	700	2000	0.02

CNC Interchangeable Points Live Centers



Model	A	B	D	D1	L	Max load	Max Speed	Accuracy
MT2	27	65	46	24	140	100	3500	0.01
MT3	32	81	59	28	170	250	3000	0.015
MT4	34.5	102	64	31	198	400	2500	0.015
MT5	44	130	78	44	245	700	2000	0.02

Supplied with one Spare Point + One Drift

Lock Down Machine Vices



Jaw Width	Max Open	Jaw Height	Weight
6"	160MM	45	34KG
6"	200MM	50	46KG
6" Swivel Base	160MM	45	37KG
6" Swivel Base	200MM	50	51KG

Hydraulic Vice



Jaw Width	Opening	H	Max Clamp Force	Weight
6"	200MM	48	4500 KGF	45KG
6"	300MM	52	4500 KGF	60KG

Precision Self Centring 5 Axis Vice



JAW WIDTH	Length	OPENING	CLAMPING FORCE
75	100	40	2500 kg
75	150	70	2500 kg
126	126	60	2500 kg

Feature:

ACCURACY: 0.01 /100 MM, ALLOY STEEL, CLAMP PRESSURE 4,000 KG

Precision Modular Vice



JAW WIDTH	OPENING	H	MAX CLAMP FORCE	WEIGHT
150 MM	200 MM	50	3500 kg	30 kg
150 MM	300 MM	50	3500 kg	35 kg

Feature: ACCURACY: 0.02 MM, HARDNESS: 60 HRC, ALLOY STEEL, SERRATED JAWS, MAX CLAMP PRESSURE: 3,500 KG

Clamping Kits



Model	Table Slot	Stud Sizes	Kit Includes
M10	12	10-1.5P	24 PC: STUDS
M12	14	12-1.75P	6 PC :T-NUTS
M14	16	14-2.0P	4 PC : COUPLING NUTS
M16	18	16-2.0P	6 PC : FLANGE NUTS
M18	20	18-2.5P	6 PC : STEP CLAMPS
M20	22	20-2.5P	12PC : STEP BLOCKS

CNC Tooling Trolleys



MODEL	
BT40	35 SLOTS
BT50	25 SLOTS
HSK-63	25 SLOTS



Spare Cups

CNC SPINDLE CLEANER



CNC Spindle Cleaner
BT 30 / BT 40 / BT 50



CNC Spindle Cleaner
HSK 63 / HSK 100

Tool Holder Tray



Suitable to hold Endmills / Drills / Collets, etc.

Model	
62 holes	DIA : 6 - 42 MM

Tool Holder (Locking) Device



BT Series



HSK Series



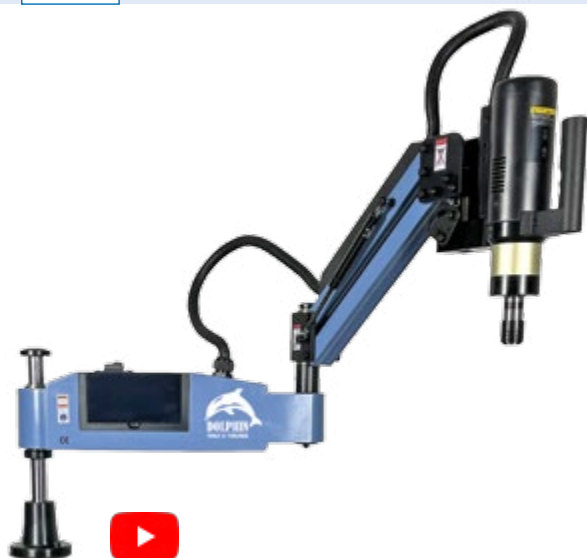
Universal Type
Extra heavy duty

MODEL
BT-30 / 40 / 50
HSK - 50 / 63 / 100
UNIVERSAL TYPE (BT, SK, CAT, NT - 40, HSK 63)



CNC Scrap Cleaner Fan

Works as a fan to dust off burrs from the machine bed within seconds



Electric (Servo) Tapping Machine

Tapping Range	M3- M16	M5 -M 30
Price	74000	100000
Tapping Collet	Dolphin GT -12	Dolphin GT - 24
Input Volatge	220 V/ 50HZ	220 V /50HZ
Rated Power	600 W	1200 W
Working Radius	1045 mm	1180 mm
Max Speed	375 RPM	200 RPM
Dimension	70X66X22 CM	81X77X22 CM
Weight	31 KG	53 KG

** Supplied with full set of tapping collets

Tapping Table



SIZE	M3- M16	M5 -M 30
Price	45000	60000
Dimension	80x50x75 cm	90x60x80 cm
Weight	70 kg	90 kg
Material	Cast Iron	
Table Top	Grinding Finish	

Magnetic Clamp (For Onsite Tapping)



SIZE	M3- M16	M5 -M 30
Force	300 KGS	1000 KGS

Pneumatic Hand Champfering Machine

IDLE SPEED	INSERT	CAPACITY	APERAPURE	RATE
30000 RPM	TCMT08	C0.1- C1.5	>7mm	8000.00



Grinding / Resharpener Machine for Tools

Drill Grinding Machine (Suitable For Hss, Carbide Both)



RANGE	3-14 MM	3-20 MM
PRICE	28000.00	55000.00
SPARE WHEEL	5000.00	6000.00

POINT ANGLE	90°--140°	95°--145°
POWER	AC,220V	AC,220V
MOTOR	120W/4800RPM	180W/4800RPM
DIMENSION CMS	36X21X19	43X22X21
WEIGHT	9KG	14KG

Endmill Grinding Machine (Carbide Endmill Only)



RATE/ PC	4-14 MM	3-20 MM
PRICE	56,600.00	95,000.00
SPARE WHEEL	5,200.00	5,200.00

POINT ANGLE	90°--140°	95°--145°
POWER	AC,220V	AC,220V
MOTOR	180W/4800RPM	180W/4800 RPM
DIMENSION CMS	35X23X24	35X23X24
WEIGHT	15KG	16KG

Solid Carbide Endmill

4/2 Fluted Flat, Ball, Corner Radius

***** Flute lengths of the endmill are subject to variations.
Dimension given are in mm



45-HRC



55-HRC



65-HRC
(Quick Helix 45°)



75-HRC
Ceramic

DIA	FL	OAL	SHANK
0.2	1	50	4
0.3	1	50	4
0.4	1	50	4
0.5	1	50	4
0.6	1.5	50	4
0.7	1.5	50	4
0.8	1.5	50	4
1	3	50	4
1.5	5	50	4
2	6	50	4/6
2.5	8	50	4
3	15	50	3/4/6
3.5	12	50	4
4	15	50	4/6
4.5	16	50	6
5	13	50	5/6
5.5	19	50	6
6	15	50	6
6.5	20	60	8
7	20	60	8
7.5	20	60	10
8	20	60	8
8.5	25	75	10
9	25	75	10
10	25	75	12
11	25	75	12
12	30	75	14
13	45	100	14
14	45	100	16
15	45	100	16
16	45	100	18
18	45	100	20
20	45	100	22
22	40	100	22
24	40	100	25
25	40	100	25

Solid Carbide Long Endmill



DIA	FL	OAL	SHANK
2	12	75	4
3	25	75	3
3	40	100	3
4	25	75	4
4	40	100	4
5	25	75	5
5	40	100	5
6	25	75	6
6	40	100	6
6	70	150	6
8	25	75	8
8	35	100	8
8	70	150	8
10	50	100	10
10	70	150	10
10	70	200	10
12	45	100	12
12	70	150	12
12	70	200	12
14	70	200	14
16	80	150	16
16	80	200	16
18	80	150	18
20	80	150	20
20	85	200	20
25	75	150	25

3 Fluted High Helix- Alluminium FLAT/CORNER RADIUS)

PILOT DIA	BODY DIA	TOTAL	SHANK
3	10	50	3
4	12	50	4
5	15	50	5
6	18	50	6
8	24	60	8
10	30	70	10
12	35	75	12
14	45	100	14
16	45	100	16
20	45	100	20
6	30	100	6
8	35	100	8
10	40	100	10
12	45	100	12
16	80	150	16

Roughing Endmill 55 HRC



DIA	FL	OAL	SHANK
4	12	50	4
5	13	50	5
6	15	50	6
8	20	63	8
10	25	70	10
12	25	75	12
16	45	100	16
20	45	100	20

Long Neck Endmill 55 HRC: Flat/Ball



DIA	NECK L	FL	SHANK	OAL
0.5	8	2	4	50
0.8	10	3	4	50
1	12/16/20	3	4	50
1.5	12/16/20	6	4	50
2	12/16/20	6	4	50
2.5	12/16/20	8	4	50
3	16/20	9	4	50

Thread Mill - 55 HRC



PITCH	FL	SHA- NK	OAL	FLUTE
METRIC				
5X0.8	10	4	50	3
6X1.0	12	6	60	3
8X1.25	16	6	60	3
10X1.5	20	8	60	3
12X1.75	30	10	75	4
16X2.0	30	12	75	4
20X2.5	40	16	100	4

NPT				
1/16"X27	12	6	60	3
1/8"X27	12	6	60	3
1/4"X18	14	8	60	3
3/8"X18	20	10	75	4
1/2"X14	25	16	90	4

BSP				
1/16"X28	12	6	60	3
1/8"X28	12	8	60	3
1/4"X19	18	8	60	3
3/8"X19	15	10	75	4
1/2"X14	30	16	90	4
1"X11	35	16	90	4

Solid Carbide Threading Taps



SIZE	UNC
M 2 X 0.4	1/4"
M 2.5 X 0.45	
M 3 X 0.5	5/16"
M 4 X 0.7	3/8"
M 5 X 0.8	7/16"
M 6 X 1.0	1/2"
M 8 X 1.25	5/8"
M 10 X 1.5	
M 12 X 1.75	
M 14 X 2.0	
M 16 X 2.0	
M 20 X 2.5	

Solid Carbide Centre Drill



PILOT DIA	BODY DIA	TOTAL L
1	3.15	35
1.25	3	35
1.6	4	50
2	5	50
2.5	6.3	60
3.15	8	60
4	10	65
5	12.5	70
6.3	16	70

Solid Carbide Single Fluted Endmill



DIA	FL	OAL
3	12	38
4	22	50
5	22	50
6	20	50
8	30	60



Solid Carbide Drills



DIA	FL	OAL	DIA	FL	OAL
0.8	12	34	5.9	40	75
0.9	12	34	6.0	40	75
1	12	34	6.1	60	100
1.1	18	40	6.2	60	100
1.2	18	40	6.3	60	100
1.3	18	40	6.4	60	100
1.4	18	40	6.5	60	100
1.5	18	40	6.6	60	100
1.6	18	40	6.7	60	100
1.8	18	40	6.8	60	100
2	24	49	6.9	60	100
2.1	30	57	7.0	60	100
2.2	30	57	7.1	60	100
2.3	30	57	7.2	60	100
2.4	30	57	7.3	60	100
2.5	30	57	7.4	60	100
2.6	35	65	7.5	60	100
2.7	35	65	7.6	60	100
2.8	35	65	7.7	60	100
2.9	35	65	7.8	60	100
3	35	65	7.9	60	100
3.1	35	65	8.0	60	110
3.2	35	65	8.1	60	110
3.3	35	65	8.2	60	110
3.4	35	65	8.3	60	110
3.5	35	65	8.4	60	110
3.6	35	65	8.5	60	110
3.7	35	65	8.6	60	110
3.8	35	65	8.7	60	110
4.0	35	65	8.8	60	110
4.1	40	75	8.9	60	110
4.2	40	75	9.0	60	110
4.3	40	75	9.5	60	110
4.4	40	75	10.0	65	110
4.5	40	75	10.2	65	110
4.6	40	75	10.5	65	110
4.7	40	75	10.8	65	110
4.8	40	75	11.0	65	110
4.9	40	75	11.5	65	110
5.0	40	75	12.0	65	110
5.1	40	75	12.5	60	110
5.2	40	75	13.0	60	110
5.3	40	75	14.0	60	110
5.4	40	75	15.0	60	110
5.5	40	75	16.0	60	110
5.6	40	75	18.0	60	110
5.7	40	75	20.0	60	110
5.8	40	75			

Solid Carbide Reamer



DIA	FL	OAL
2	25	50
2.5	25	50
3	25	60
4	25	60
5	25	60
6	25	60
7	30	75
8	30	75
10	30	75
12	30	75

Solid Carbide 2 Fluted Ball/Flat Endmill



DIA	FL	OAL
4	20	50
5	20	50
6	20	50
8	25	60
6	30	100
8	35	100
10	40	100
12	45	100

Solid Carbide Spot Drill: 60°/90°



DIA	LENGTH
4 mm	50
6 mm	50
8 mm	60
10 mm	75
12 mm	75

Solid Carbide T-Slot



DIA	THICK	SHANK DIA	OAL	NECK DIA	NECK LENGTH
10	1/2/2.5	10	60	5	15
12	3/4	12	60	6	15
16	3/4/5	16	75	8	15



Carbide Taper Ball Nose Endmill (2 Fluted)



DIA X FL X OAL
2-6 X 25 X 50
3-6 X 25 X 50

Through Coolant Drill (55 HRC)



DIA	FLUTE	OAL	SHANK
8	40	80	8
8.2	40	80	10
8.5	40	80	10
9	40	80	10
9.5	40	80	10
10	40	80	10
10.2	55	105	12
10.5	55	105	12
11	55	105	12
11.5	55	105	12
12	55	105	12
12.5	65	105	14
13	65	105	14

Solid Carbide Corn Endmill



DIA	FL	SHANK	OAL
6	25	6	50
6	32	6	60

Indexable Face Mill Cutters



RPMT
Radius



APMT 90°



DIA	BORE	Z	INSERT		KEY	SCREW	KEY
			APMT	RPMT			
50	22	4	11/16	1204	T-15	M 4 X 10	T-15
52	22	4		1204	T-15	M 4 X 10	T-15
63	22	5	1604	1204	T-15	M 4 X 10	T-15
80	27	6	1604	1204	T-15	M 4 X 10	T-15
100	32	6	1604	1204	T-15	M 4 X 10	T-15
125	40	6	1604	1204	T-15	M 4 X 10	T-15
160	40	9	1604	1204	T-15	M 4 X 10	T-15
200	60	12	1604	1204	T-15	M 4 X 10	T-15
250	60	12	1604	1204	T-15	M 4 X 10	T-15

Indexable Side and Face Cutters



DIA	THICK	BORE	Z	Insert
100	8	32	14	MPHT060304
100	10	32	14	MPHT060304
125	10	40	14	MPHT060304
125	12	40	12	MPHT080305
125	16	40	10	MPHT120408
160	12	40	14	MPHT080305
160	16	40	12	MPHT120408
160	20	40	12	MPHT120408
200	16	40	14	MPHT120408
200	20	40	14	MPHT120408

Indexable End Mill Cutters



RPMT APMT 90°
Radius

DIA	LENGTH	SHANK	Z	INSERT				KEY
				APMT	SCREW	RPMT	SCREW	
10	120	10	1	1135	M-2.5X6	-	-	T-8
12	130	12	1	1135	M-2.5X6	0802	M-3X8	T-8
16	150/200	16	2	1135	M-2.5X6	0802	M-3X8	T-8
20	150/200	20	2	1135	M-2.5X6	0802	M-3X8	T-8
25	150/200/250	25	2	1135	M-2.5X6	-	-	T-15
25	150/200/250	25	2	1604	M-4X10	1003	M-3.5X8	T-15
32	200/250/300	32	3	1604	M-4X10	1204	M-4X10	T-15
40	250/300	40	3	1604	M-4X10	1204	M-4X10	T-15

Indexable Counter Sink Tool 90°



RANGE	SHANK DIA	Z	INSERT
8-25MM	20MM	1	TCMT16
20-40 MM	20MM	2	TCMT16



Indexable Cutter: LNMU-03



DIA	LENGTH
16 MM	150/200 MM
20 MM	150/200 MM
25 MM	150/200 MM



DIA	BORE	Z
50 MM	22 MM	7
63 MM	22 MM	8

Indexable T-Slot Cutters



DIA	THICK	Shank Dia	OAL	Z	Insert
20	6	14	120	2	SPMG04
25	6	16	120	4	SPMG04
35	6	20	150	6	SPMG04
40	6	20	150	6	SPMG04
45	6	25	150	6	SPMG04
50	6	25	150	6	SPMG04
16	8	12	120	2	MPHT060304
20	8	14	120	2	MPHT060304
25	8	16	150	2	MPHT060304
30	8	16	150	4	MPHT060304
35	8	20	150	4	MPHT060304
40	8	20	150	4	MPHT060304
50	8	25	150	4	MPHT060304
60	8	32	150	6	MPHT060304

DIA	THICK	Shank Dia	OAL	Z	Insert
70	8	32	150	8	MPHT060304
80	8	32	150	8	MPHT060304
100	8	32	150	8	MPHT060304
40	10	20	150	4	CCMT0604
50	10	25	150	4	CCMT0604
60	10	25	150	6	CCMT0604
40	12	20	150	4	MPHT080305
50	12	20	150	4	MPHT080305
60	12	25	150	6	MPHT080305
70	12	32	150	6	MPHT080305
80	12	32	150	8	MPHT080305
100	12	32	150	8	MPHT080305
50	16	25	150	4	MPHT120408
50	20	25	150	4	MPHT120408
80	20	32	150	6	MPHT120408

U Drills (Dx3 and Dx4)

Dimension in (mm)



Cat No.	U DRILLS (D x 2) Size			U DRILLS (Dx3) Size		U DRILLS (Dx4) Size		Insert	Clamp Screw	Wrench
	D	L	d	L	d	L	d			
SP 10 - C20	10	20	20.0	30	20.0	-	-	SPMT 04 02 04	M2.2	T6
SP 10.5 - C20	10.5	21		31.5						
SP 11.0 - C20	11	22		33						
SP 11.5 - C20	11.5	23		34.5						
SP 12.5 - C20	12.5	25.0		37.5						
SP 13.0 - C20	13.0	26.0		39.0						
SP 13.5 - C20	13.5	27.0	25.0	40.5	25.0	50.0	20.0	SPMG 05 02 04	M2.5 x 5.5	T6
SP 14.0 - C25	14.0	28.0		42.0		52.0				
SP 14.5 - C25	14.5	29.0		43.5		54.0				
SP 15.0 - C25	15.0	30.0		45.0		56.0				
SP 15.5 - C25	15.5	31.0		46.5		58.0				
SP 16.0 - C25	16.0	32.0		48.0		60.0				
SP 16.5 - C25	16.5	33.0		49.5		62.0	25.0	SPMG 06 02 04	M2.5 X 5.5	T7
SP 17.0 - C25	17.0	34.0		51.0		64.0				
SP 17.5 - C25	17.5	35.0		52.5		66.0				
SP 18.0 - C25	18.0	36.0		54.0		68.0				
SP 18.5 - C25	18.5	37.0		55.5		70.0				
SP 19.0 - C25	19.0	38.0		57.0		72.0				
SP 19.5 - C25	19.5	39.0		58.5		74.0				
SP 20.0 - C25	20.0	40.0		60.0		76.0				
SP 20.5 - C25	20.5	41.0		61.5		78.0				
SP 21.0 - C32	21.0	42.0		63.0		80.0				
SP 21.5 - C25	21.5	43.0		64.5		82.0				
SP 22.0 - C25	22.0	44.0		66.0		84.0				
SP 22.5 - C25	22.5	45.0		67.5		86.0				
SP 23.0 - C25	23.0	46.0		69.0		88.0				
SP 23.5 - C25	23.5	47.0		70.5		90.0				
SP 24.0 - C25	24.0	48.0		72.0		92.0				
SP 24.5 - C25	24.5	49.0	32.0	73.5	32.0	94.0	32.0	SPMG 07 T3 08	M2.5 X 8.0	T8
SP 25.0 - C32	25.0	50.0		75.0		96.0				
SP 25.5 - C32	25.5	51.0		76.5		98.0				
SP 26.0 - C32	26.0	52.0		78.0		100.0				
SP 26.5 - C32	26.5	53.0		79.5		102.0				
SP 27.0 - C32	27.0	54.0		81.0		104.0				
SP 27.5 - C32	27.5	55.0		82.5		106.0				
SP 28.0 - C32	28.0	56.0		84.0		108.0				
SP 28.5 - C32	28.5	57.0		85.5		110.0				
SP 29.0 - C32	29.0	58.0		87.0		112.0				
SP 29.5 - C32	29.5	59.0		88.5		114.0				
SP 30.0 - C32	30.0	60.0		90.0		116.0				
SP 30.5 - C32	30.5			91.5		118.0		SPMG 09 04 08	M3.5 x 9.0	T15
SP 31.0 - C32	31.0			93.0		120.0				
SP 31.5 - C32	31.5			94.5		122.0				
SP 32.0 - C32	32.0			96.0		124.0				
SP 32.5 - C32	32.5			97.5		126.0				
SP 33.0 - C32	33.0			99.0		128.0				
SP 33.5 - C32	33.5		40.0	100.5	40.0	130.0	40.0	SPMG 11 04 08	M4.0 x 10.0	T15
SP 34.0 - C32	34.0			102.0		132.0				
SP 35.0 - C32	35.0			105.0		134.0				
SP 36.0 - C32	36.0			108.0		136.0				
SP 37.0 - C32	37.0			111.0		140.0				
SP 38.0 - C32	38.0			114.0		144.0				
SP 39.0 - C32	39.0			117.0		148.0		SPMG 14 05 12	M5	T20
SP 40.0 - C32	40.0			120.0		152.0				
SP 41.0 - C32	41.0			123.0		156.0				
SP 42.0 - C32	42.0			126.0		160.0				
SP 43.0 - C40	43.0			129.0		164.0				
SP 44.0 - C40	44.0			132.0		168.0				
SP 45.0 - C40	45.0			135.0		172.0				
SP 46.0 - C40	46.0			138.0		176.0				
SP 47.0 - C40	47.0			141.0		180.0				
SP 48.0 - C40	48.0			144.0		184.0				
SP 49.0 - C40	49.0			147.0		188.0				
SP 50.0 - C40	50.0			150.0		192.0				
SP 52.0 - C40	52.0			156.0		196.0		SPMG 09 04 08	M3.5	T15
SP 54.0 - C40	54.0			162.0		200.0				
SP 55.0 - C40	55.0			165.0		206.0				
						212.0				
						215.0				

HSS Endmill Cutter (M2 / M42)

2/4/6 Fluted Flat and Ball Nose



M-2
Tin Coated



M-42
Endmill



HSS-E
Roughing
Endmill

Dimension in (mm)

DIA	SHANK DIA	CUT- TING LENGTH	TOTAL LENGTH
2	4	7	52
2.5	4	7	52
3	4	8	52
4	4	8	52
5	5	13	57
6	6	13	57
7	8	19	63
8	8	19	63
9	10	22	72
10	10	22	72
11	12	26	83
12	12	26	83
13	12	26	83
14	12	26	83
15	12	26	83
16	16	32	92
17	16	32	92
18	16	32	92
19	16	32	92
20	20	38	104
21	20	38	104
22	20	38	104
23	20	38	104
24	20	45	121
25	25	45	121

Available in Long and Extra Long Series

Dimension in (inch)

DIA	SHANK DIA	CUT- TING LENGTH	TOTAL LENGTH
1/8"	1/4"	5/16"	2"
5/32"	1/4"	3/8"	2"
3/16"	1/4"	1/2"	2.1/4"
7/32"	1/4"	1/2"	2.1/4"
1/4"	1/4"	1/2"	2.1/4"
5/16"	3/8"	3/4"	2.1/2"
7/16"	1/2"	1"	3.1/4"
1/2"	1/2"	1"	3.1/4"
5/8"	5/8"	1.1/4"	3.1/4"
3/4"	5/8"	1.1/2"	3.1/2"
1"	3/4"	1.3/4"	3.3/4"



R Type A Type

Counter Sink (3 Fluted) 90° Straight Shank



DIA	SHANK DIA	TOTAL LENGTH
8	6	50
10	6	50
12	8	56
16	10	60
20	10	65
25	10	70
31	12	70
40	12	90

Shank Type Radius Cutter



RADIUS	DIA	SHANK DIA	TOTAL LENGTH
R-2	10	10	60
R-3	12	12	60
R-4	14	12	65
R-5	16	12	65
R-6	20	16	70
R-8	24	20	80
R-10	28	25	85

Tap+Drill Combined (1/4" Hex Shank)



SIZE	DRILL DIA	TOTAL LENGTH
M 3	2.5	55
M 4	3.3	55
M 5	4.2	55
M 6	5	55
M 8	6.8	55
M 10	8.5	55



Dimension in (inch)

SIZE	PILOT DIA	BODY DIA	STANDARD LENGTH	Long Series	EXTRA LONG SERIES
BS-1	3/64"	1/8"	1.1/2"	100MM	
BS-2	1/16"	3/16"	1.3/4"	100MM	
BS-3	3/32"	1/4"	2"	100MM	
BS-4	1/8"	5/16"	2.1/4"	100MM	150MM
BS-5	3/16"	7/16"	2.1/2"	100MM	150MM
BS-6	1/4"	5/8"	3"	100MM	150MM
BS-7	5/16"	3/4"	3.1/2"	100MM	150MM

Dimension in (mm)

SIZE	PILOT DIA	BODY DIA	STANDARD LENGTH	Long Series	EXTRA LONG SERIES
2X5	2	5.0	42	100MM	
2.5X6.3	2.5	6.3	47	100MM	
3.15X8	3.15	8.0	52	100MM	
4X10	4	10.0	59	100MM	150MM
5X12.5	5	13.0	66	100MM	150MM
6.3X16	6	16.0	74		
8X20	8	20.0	83		
10X25	10	25.0	103		

HSS Single Fluted Endmill: M-42 Cobalt



Dimension in (inch)

DIA	FLUTE	TOTAL LENGTH	SHANK
5	20	80	8
5	20	100	8
6	20	80	8
6	20	64	6
6	20	100	8
8	20	80	8
8	20	100	8
10	25	76	10
10	30	100	10

Hss Counter Bore (Parallel Shank)



SIZE	PILOT DIA	CUTTER DIA	SHANK DIA	Length
3 MM	3.2	6	5	42
4 MM	3.0	4	4	60
5 MM	5.2	9	6	50
6 MM	6.2	11	10	60
8 MM	8.2	14	10	65
10 MM	10.3	17	12	75
12 MM	12.3	20	12	80

Step Drill



Straight / Spiral

SIZE
4-22MM
4-32MM

Hand & Short Machine Taps

Hand Taps-
METRIC/INCHES:
Coarse and
fine pitch



Spiral Point (SPPT):
M2/HSS-CO



**Spiral
Fluted-HSS-CO**



Roll Form Taps
(For Aluminium)



With Oil
Groove

Tap Extractor
(For removal of
Broken Taps)
M3-M30



METRIC: ISO 539/IS 6175 | BSW/BSF/UNF/UNC: ISO539/IS 6175 | BSP/BSPT/NPT/NPTF: BS949
AVAILABLE: **HELICOIL, BSCON, UNEF, BSB, BA, PG SERIES**

HSS E Cobalt High Performance Drills Jobber Series (HSS E) Ground Finish (IS: 5101/DIN : 338)



Dia in mm	Flute Length	Overall Length	Dia in mm	Flute Length	Overall Length	Dia in mm	Flute Length	Overall Length
1	12	34	4.7	47	80	8.5	75	117
1.5	18	40	4.75 (3/16")	52	86	8.6	81	125
1.60 (1/16")	20	43	4.8	52	86	8.7	81	125
1.8	22	46	4.9	52	86	8.75 (11/32")	81	125
2.00 (5/64")	24	49	5	52	86	8.8	81	125
2.1	24	49	5.8	57	93	8.9	81	125
2.2	27	53	5.9	57	93	9	81	125
2.3	27	53	6.00 (15/64")	57	93	9.10 (23/64")	81	125
2.4	30	57	6.1	63	101	9.2	81	125
2.5	30	57	6.2	63	101	9.3	81	125
2.6	30	57	6.3	63	101	9.3	81	125
2.7	33	61	6.40 (1/4")	63	101	9.4	81	125
2.78 (7/64")	33	61	6.5	63	101	9.5	81	125
2.8	33	61	6.6	63	101	9.60 (3/8")	87	133
2.9	33	61	6.7	63	101	9.7	87	133
3	33	61	6.75 (17/64")	69	109	9.8	87	133
3.1	36	65	6.8	69	109	9.9	87	133
3.20 (1/8")	36	65	6.9	69	109	10.00 (25/64")	87	133
3.3	36	65	7	69	109	10.2	87	133
3.4	39	70	7.1	69	109	10.25 (13/32")	87	133
3.5	39	70	7.20 (9/32")	69	109	10.5	87	133
3.60 (9/64")	39	70	7.3	69	109	10.8	94	142
3.7	39	70	7.4	69	109	11	94	142
3.8	43	75	7.5	69	109	11.10 (7/16")	94	142
3.9	43	75	7.60 (19/64")	75	117	11.50 (29/64")	94	142
4.00 (5/32")	43	75	7.7	75	117	12	101	151
4.1	43	75	7.8	75	117	12.5	101	151
4.2	43	75	7.9	75	117	12.70 (1/2")	101	151
4.3	47	80	8.00 (5/16")	75	117	13	101	151
4.37 (11/64")	47	80	8.1	75	117			
4.4	47	80	8.2	75	117			
4.5	47	80	8.3	75	117			
4.6	47	80	8.40 (21/64")	75	117			

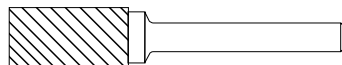
Tungsten Carbide Rotary Burrs



► Cross / Diamond Cut

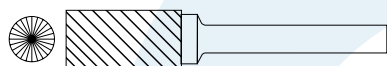


Cylindrical



STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
C-1	C-1 D	4	14	6
C-2	C-2 D	6	15	6
C-3	C-3 D	8	19	6
C-4	C-4 D	10	20	6
C-5	C-5 D	12	20	6
C-6	C-6 D	16	25	6
C-8	C-8 D	12	25	6
MC-1	MC-1D	3	15	3

Cylindrical End Cut



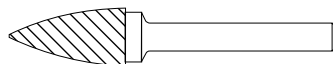
STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
CE-3	CE-3 D	8	19	6
CE-4	CE-4 D	10	20	6
CE-5	CE-5D	12	20	6

Cylindrical Ball



STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
B-1	B-1 D	6	15	6
B-2	B-2 D	8	20	6
B-3	B-3 D	10	20	6
B-4	B-4 D	12	20	6
B-5	B-5 D	16	25	6
MB-1		3	15	3

Tree Pointed

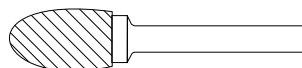


STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
T-1	T-1 D	6	20	6
T-2	T-2 D	10	20	6
T-3	T-3 D	12	25	6
T-4	T-4 D	16	30	6
MT-1	MT-1 D	3	15	3

Rim Shape

STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
R-2		19	6	6
R-3		13	10	6

Tree Radius



STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
TB-1	TB-1 D	6	15	6
TB-2	TB-2 D	10	20	6
TB-3	TB-3 D	12	25	6

Conical



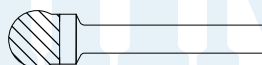
STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
A-1	A-1 D	6	20	6
A-2	A-2 D	10	20	6
A-3	A-3 D	12	25	6
A-4	A-4 D	10	10	6
A-5	A-5 D	16	13	6
A-6	A-6 D	16	12	6
MA-1	MA-1 D	3	10	3

Cone Shape Radius



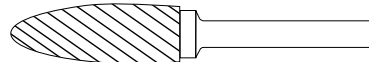
STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
K-1	K-1 D	10	20	6
K-2	K-2 D	12	20	6
K-3		16	16	40
MK-1		3	10	3

Ball



STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	SHANK DIA
S-1	S-1 D	6	6
S-2	S-2 D	8	6
S-3	S-3 D	10	6
S-4	S-4 D	12	6

Flame



STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
F-4	F-4D	12	24	6

Oval Shape

STANDARD CUT	CROSS/DIA-MOND CUT	HEAD DIA	EDGE LENGTH	SHANK DIA
O-2		13	20	6
O-3		16	25	6

Annular Core Cutter **One Touch Shank**

HSS E Cobalt
Cutting Depth 50 mm



Carbide Tipped
Cutting Depth 50 mm



Adaptor
MT-2 / MT-3 (14-60 mm)

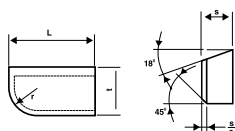


Conversion Shank
Weldon to One Touch



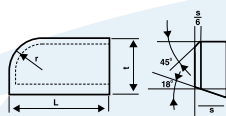
MCC BRAZED CARBIDE TIPS

A Type



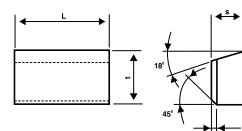
Type	L	t	s	r
A12	12	8	5	5
A16	16	10	6	6
A20	20	12	7	7
A25	25	14	8	8
A32	32	18	10	10

B Type



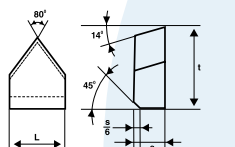
Type	L	t	s	r
B12	12	8	5	5
B16	16	10	6	6
B20	20	12	7	7
B25	25	14	8	8
B32	32	18	10	10

C Type



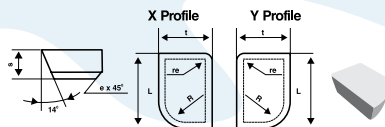
Type	L	t	s
C12	12	8	5
C16	16	10	6
C20	20	12	7
C25	25	14	8
C32	32	18	10

E Type



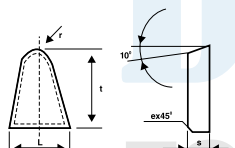
Type	L	t	s
E10	10	18	5
E12	12	20	6
E16	16	22	7
E20	20	25	8
E25	25	28	9
E32	32	32	10

A4 Type



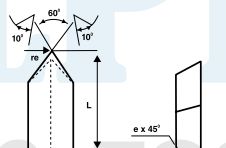
Type	L	t	s	R	e	re	Profile
A409	16	10	5.5	10	0.8	1	X
A410	16	10	5.5	10	0.8	1	Y
A411	20	12	7	12.5	0.8	1	X
A412	20	12	7	12.5	0.8	1	Y
A413	25	15	8.5	16	0.8	1	X
A414	25	15	8.5	16	0.8	1	Y

G Type



Type	L	t	s	r
G12	12	17	5	2.5
G16	16	20	6	3.5
G20	20	24	6	4.5
G25	25	28	8	6
G30	30	34	10	8

C1 Type



Type	L	t	s	re	e
C103	16	6	4	0.5	0.8
C105	20	8	5	0.5	0.8
C107	22	10	6	0.5	0.8
C109	25	12	7	0.8	0.8

Tolerance for the related dimension

(L, t, s, R, e, re)	tol.
≤ 6	± 0.2
> 6 ~ 12	± 0.3
> 12 ~ 25	± 0.4
> 25 ~ 40	± 0.60
> 40 ~ 55	± 0.70
> 55	± 1.00

Tolerance for the flanks

dim	tol.	dim	tol.
≤ 6	0 -0.5	> 14~18	0 -1
> 6~10	0 -0.6	> 18~24	0 -1.2
> 10~14	0 -0.8	> 24~30	0 -1.6

Tolerance for flatness

dim	tol.	dim	tol.
≤ 18	≤ 0.15	> 30~45	≤ 0.25
> 18~20	≤ 0.20	> 45	≤ 0.40

Density g/cm²: 14.5 - 14.9
Min. bending strength N/cm²: 2580
Min. Hardness HEA: 89.5

Tolerance for angle

dim	tol.	dim	tol.
≤ 30°	± 1°	> 30°	± 2°

Recognition Application: For semi-finishing of cast iron, non-ferrous metals and their alloys, and non-metallic materials at medium cutting speed.

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