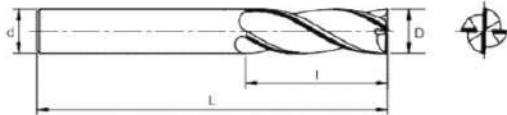




Drive Mech Built to Perfection

END MILLS

Square End Mills 2 & 4 Flute



Standard

ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	FLUTE (l)	OAL (L)
EM4F010S	1	4	5	50
EM4F015S	1.5	4	5	50
EM4F020S	2	4	8	50
EM4F025S	2.5	4	8	50
EM4F030S	3	3	10	39
EM4F040S	4	4	15	50
EM4F050S	5	5	16	50
EM4F060S	6	6	19	60
EM4F080S	8	8	21	60
EM4F100S	10	10	25	75
EM4F120S	12	12	25	75
EM4F140S	14	14	30	89
EM4F160S	16	16	32	89
EM4F180S	18	18	35	100
EM4F200S	20	20	40	100
EM4F250S	25	25	40	100

Long

ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	FLUTE (l)	OAL (L)
EM4F030L	3	3	19	60
EM4F040L	4	4	19	60
EM4F050L	5	5	25	60
EM4F060L	6	6	28	75
EM4F080L	8	8	29	75
EM4F100L	10	10	45	100
EM4F120L	12	12	51	100
EM4F140L	14	14	57	127
EM4F160L	16	16	57	127
EM4F180L	18	18	57	127
EM4F200L	20	20	57	127

Extra Long

ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	FLUTE (l)	OAL (L)
EM4F030X	3	3	25	75
EM4F040X	4	4	25	75
EM4F050X	5	5	30	75
EM4F060X	6	6	39	100
EM4F080X	8	8	42	100
EM4F100X	10	10	76	150
EM4F120X	12	12	76	150
EM4F140X	14	14	76	150
EM4F160X	16	16	76	150
EM4F180X	18	18	76	150
EM4F200X	20	20	76	150

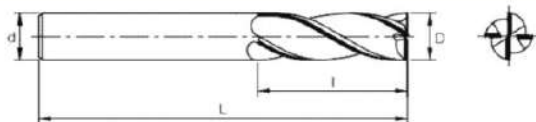




Drive Mech Built to Perfection

END MILLS

Ball-Nose End Mills 2 & 4 Flute



Standard

ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	FLUTE (l)	OAL (L)
BN4F010S	1	4	5	50
BN4F015S	1.5	4	5	50
BN4F020S	2	4	8	50
BN4F025S	2.5	4	8	50
BN4F030S	3	3	10	39
BN4F040S	4	4	16	50
BN4F050S	5	5	16	50
BN4F060S	6	6	19	60
BN4F080S	8	8	21	60
BN4F100S	10	10	25	75
BN4F120S	12	12	25	75
BN4F140S	14	14	30	89
BN4F160S	16	16	32	89
BN4F180S	18	18	35	100
BN4F200S	20	20	40	100
BN4F250S	25	25	40	100



Long

ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	FLUTE (l)	OAL (L)
BN4F030L	3	3	19	60
BN4F040L	4	4	19	60
BN4F050L	5	5	25	60
BN4F060L	6	6	28	75
BN4F080L	8	8	29	75
BN4F100L	10	10	45	100
BN4F120L	12	12	51	100
BN4F140L	14	14	57	127
BN4F160L	16	16	57	127
BN4F180L	18	18	57	127
BN4F200L	20	20	57	127

Extra Long

ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	FLUTE (l)	OAL (L)
BN4F030X	3	3	25	75
BN4F040X	4	4	25	75
BN4F050X	5	5	30	75
BN4F060X	6	6	39	100
BN4F080X	8	8	42	100
BN4F100X	10	10	76	150
BN4F120X	12	12	76	150
BN4F140X	14	14	76	150
BN4F160X	16	16	76	150
BN4F180X	18	18	76	150
BN4F200X	20	20	76	150

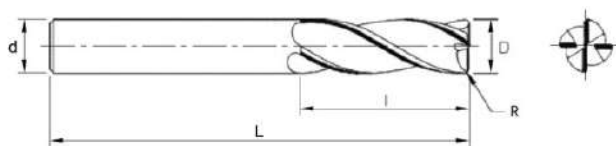




Drive Mech Built to Perfection

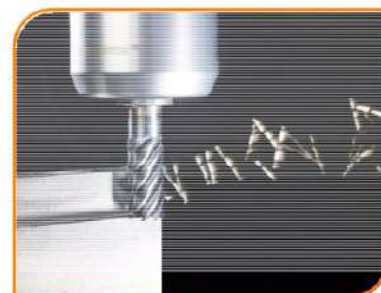
END MILLS

Corner Radius Mills 2 & 4 Flute



Standard

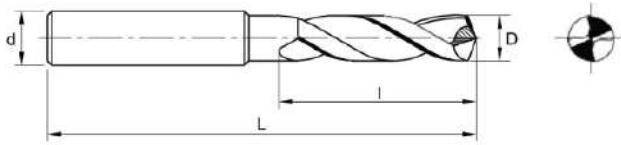
ITEM CODE	CUTTING DIA. (D)	SHANK DIA. (d)	RADIUS (R)	FLUTE (l)	OAL (L)
CR4F030 R0.5	3	3	0.5	10	50
CR4F040 R0.5	4	4	0.5	10	50
CR4F040 R1.0	4	4	1	14	50
CR4F050 R0.5	5	5	0.5	16	50
CR4F050 R1.0	5	5	1	16	50
CR4F060 R0.5	6	6	0.5	19	60
CR4F060 R1.0	6	6	1	19	60
CR4F060 R1.5	6	6	1.5	19	60
CR4F080 R0.5	8	8	0.5	21	60
CR4F080 R1.0	8	8	1	21	60
CR4F080 R1.5	8	8	1.5	21	60
CR4F080 R2.0	8	8	2.5	21	60
CR4F100 R0.5	10	10	0.5	25	75
CR4F100 R1.0	10	10	1	25	75
CR4F100 R1.5	10	10	1.5	25	75
CR4F100 R2.0	10	10	2	25	75
CR4F100 R2.5	10	10	2.5	25	75
CR4F120 R1.0	12	12	1	25	75
CR4F120 R1.5	12	12	1.5	25	75
CR4F120 R2.0	12	12	2	25	75
CR4F120 R3.0	12	12	3	25	75
CR4F160 R1.0	16	16	1	35	79
CR4F160 R2.0	16	16	2	35	79
CR4F160 R3.0	16	16	3	35	79
CR4F160 R4.0	16	16	4	35	79
CR4F200 R1.0	20	20	1	40	100
CR4F200 R2.0	20	20	2	40	100
CR4F200 R3.0	20	20	3	40	100
CR4F200 R4.0	20	20	4	40	100





Drive Mech Built to Perfection

Solid Carbide High Performance Drills



HP Drill 3D

ITEM CODE	CUTTING DIA	SHANK	FLUTE LENGTH	OAL
	D	d	L	L
SCHP3D0300	3.0 MM	6	20	62
SCHP3D031 to 037	3.1 to 3.7	6	20	62
SCHP3D038 to 047	3.8 to 4.7	6	24	66
SCHP3D048 to 060	4.8 to 6.0	6	28	66
SCHP3D061 to 070	6.1 to 7.0	8	34	79
SCHP3D071 to 080	7.1 to 8.0	8	41	79
SCHP3D081 to 100	8.1 to 10.0	10	47	89
SCHP3D0101 to 120	10.1 to 12.0	12	55	102
SCHP3D121 to 140	12.1 to 14.0	14	60	107
SCHP3D141 to 160	14.1 to 16.0	16	65	115
SCHP3D161 to 180	16.1 to 18.0	18	73	123
SCHP3D181 to 200	18.1 to 20	20	79	131

HP Drill 5D

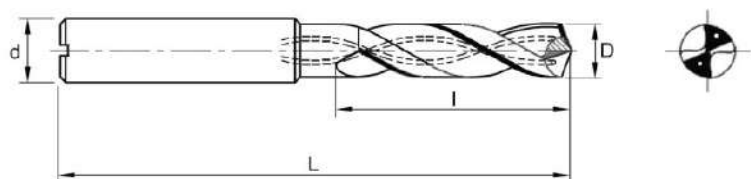
ITEM CODE	CUTTING DIA	SHANK	FLUTE LENGTH	OAL
	D	d	L	L
SCHP5D0300	3.0 MM	6	28	66
SCHP5D051 to 057	3.1 to 3.7	6	28	66
SCHP5D058 to 047	3.8 to 4.7	6	36	74
SCHP5D048 to 060	4.8 to 6.0	6	44	82
SCHP5D061 to 070	6.1 to 7.0	8	53	91
SCHP5D071 to 080	7.1 to 8.0	8	53	91
SCHP5D081 to 100	8.1 to 10.0	10	61	103
SCHP5D0101 to 120	10.1 to 12.0	12	71	118
SCHP5D121 to 140	12.1 to 14.0	14	77	124
SCHP5D141 to 160	14.1 to 16.0	16	83	133
SCHP5D161 to 180	16.1 to 18.0	18	93	143
SCHP5D181 to 200	18.1 to 20.0	20	101	153





Drive Mech Built to Perfection

Solid Carbide High Performance
Through Coolant Drills



HP Drill 3D

ITEM CODE	CUTTING DIA	SHANK	OAL	FLUTE LENGTH
	D	d	L	L
SCHP3D0300 TC	3.0 MM	6	62	20
SCHP3D031 to 037 TC	3.1 to 3.7	6	62	20
SCHP3D038 to 047 TC	3.8 to 4.7	6	66	24
SCHP3D048 to 060 TC	4.8 to 6.0	6	66	28
SCHP3D061 to 070 TC	6.1 to 7.0	8	79	34
SCHP3D071 to 080 TC	7.1 to 8.0	8	79	41
SCHP3D081 to 100 TC	8.1 to 10.0	10	89	47
SCHP3D0101 to 120 TC	10.1 to 12.0	12	102	55
SCHP3D121 to 140 TC	12.1 to 14.0	14	107	60
SCHP3D141 to 160 TC	14.1 to 16.0	16	115	65
SCHP3D161 to 180 TC	16.1 to 18.0	18	123	73
SCHP3D181 to 200 TC	18.1 to 20	20	131	79

HP Drill 5D

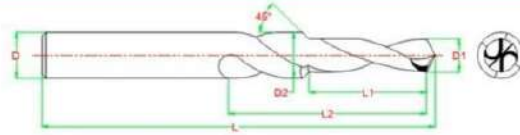
ITEM CODE	CUTTING DIA	SHANK	OAL	FLUTE LENGTH
	D	d	L	L
SCHP5D0300 TC	3.0 MM	6	66	28
SCHP5D051 to 057 TC	3.1 to 3.7	6	66	28
SCHP5D058 to 047 TC	3.8 to 4.7	6	74	36
SCHP5D048 to 060 TC	4.8 to 6.0	6	82	44
SCHP5D061 to 070 TC	6.1 to 7.0	8	91	53
SCHP5D071 to 080 TC	7.1 to 8.0	8	91	53
SCHP5D081 to 100 TC	8.1 to 10.0	10	103	61
SCHP5D0101 to 120 TC	10.1 to 12.0	12	118	71
SCHP5D121 to 140 TC	12.1 to 14.0	14	124	77
SCHP5D141 to 160 TC	14.1 to 16.0	16	133	83
SCHP5D161 to 180 TC	16.1 to 18.0	18	143	93
SCHP5D181 to 200 TC	18.1 to 20.0	20	153	101





Drive Mech Built to Perfection

Step Drill Flute & Ball Tapper Neck End Mill - 2 & 4 Flute



HIGH PERFORMANCE STEP DRILSS - LxD 2

ITEM CODE	THREAD	DRILL DIA D1	DRILL DIA D2	SHANK DIA d	FL L1	FL L2	OAL	CHAMFER
SD2 042 060	M5	4.2	6.0	6.0	12.5	25.5	66	45
SD2 051 080	M6	5.1	8.0	8.0	14.5	30.0	79	45
SD2 068 100	M8	6.8	10.0	10.0	16.5	32.0	89	45
SD2 086 120	M10	8.6	12.0	12.0	20.5	35.0	102	45
SD2 102 140	M12	10.2	14.0	14.0	22.5	40.0	107	45
SD2 120 160	M14	12.0	16.0	16.0	26.5	45.0	115	45
SD2 140 180	M16	14.0	18.0	18.0	30.5	50.0	123	45

HIGH PERFORMANCE STEP DRILSS - LxD 3

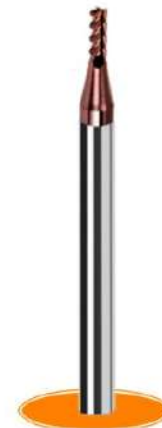
ITEM CODE	THREAD	DRILL DIA D1	DRILL DIA D2	SHANK DIA d	FL L1	FL L2	OAL	CHAMFER
SD3 042 060	M5	4.2	6.0	6.0	16.5	30.0	66	45
SD3 051 080	M6	5.1	8.0	8.0	20.5	40.0	79	45
SD3 068 100	M8	6.8	10.0	10.0	23.5	45.0	89	45
SD3 086 120	M10	8.6	12.0	12.0	29.5	55.0	102	45
SD3 102 140	M12	10.2	14.0	14.0	35.5	65.0	107	45
SD3 120 160	M14	12.0	16.0	16.0	40.5	70.0	115	45
SD3 140 180	M16	14.0	18.0	18.0	45.5	75.0	123	45

Taper Neck End Mill - 2 & 4 Flute

ITEM CODE	CUTTING DIA.	SHANK DIA	FLUTE	OAL
EM4F020TN	1	6	6	75
EM4F020TN	1.5	6	6	75
EM4F020TN	2	6	6	75
EM4F030TN	3	6	8	75
EM4F040TN	4	6	8	75
EM4F050TN	5	8	10	100
EM4F060TN	6	8	12	100
EM4F080TN	8	10	14	100
EM4F100TN	10	12	18	100
EM4F120TN	12	14	22	150

Tapper Neck Ball Nose End Mill - 2 & 4 Flute

ITEM CODE	CUTTING DIA.	SHANK DIA	FLUTE	OAL
BN4F020TN	1	6	6	75
BN4F020TN	1.5	6	6	75
BN4F020TN	2	6	6	75
BN4F030TN	3	6	8	75
BN4F040TN	4	6	8	75
BN4F050TN	5	8	10	100
BN4F060TN	6	8	12	100
BN4F080TN	8	10	14	100
BN4F100TN	10	12	18	100
BN4F120TN	12	14	22	150





Drive Mech Built to Perfection

Rougher Single LIP - 3 FLute End Mill

Rougher Endmill - 4 Flute (Standard)

ITEM CODE	CUTTING DIA.	SHANK DIA.	FLUTE	OAL
EM4F050RF	5	5	16	50
EM4F060RF	6	6	19	60
EM4F080RF	8	8	21	60
EM4F100RF	10	10	25	75
EM4F120RF	12	12	25	75
EM4F140RF	14	14	30	89
EM4F160RF	16	16	32	89
EM4F180RF	18	18	40	100
EM4F200RF	20	20	40	100



Single LIP Endmill - 1 Flute (Standard) Uncoated

ITEM CODE	CUTTING DIA.	SHANK DIA.	RADIUS	FLUTE	OAL
EM1F060CR0.5	6	6	0.5	10	60
EM1F080CR0.5	8	8	0.5	12	60
EM1F100CR1.0	10	10	1	15	70
EM1F120CR1.0	12	12	1	20	75
EM1F140CR1.0	14	14	1	20	75
EM1F160CR1.0	16	16	1	25	75
EM1F180CR1.0	18	18	1	25	100
EM1F200CR1.0	20	20	1	25	100



Aluminum End Mill : (Uncoated) 3 Flute End Mill

ITEM CODE	CUTTING DIA.	AL HANK DIA.	FLUTE	OAL
EM3F030AL	3	6	9	50
EM3F040AL	4	6	12	50
EM3F050AL	5	6	15	50
EM3F060AL	6	6	18	50
EM3F080AL	8	8	20	60
EM3F100AL	10	10	30	75
EM3F120AL	12	12	32	75
EM3F160AL	16	16	40	89
EM3F200AL	20	20	45	100





Drive Mech Built to Perfection

Flat & Ball End Mill - 2 & 4 Flute (Extra Long)

Flat End Mill

ITEM CODE	CUTTING DIA.	SHANK DIA.	FLUTE	OAL
EM4F030EL	3	3	28	101
EM4F040EL	4	4	28	101
EM4F050EL	5	5	30	101
EM4F060EL	6	6	40	150
EM4F080EL	8	8	42	150
EM4F100EL	10	10	45	150
EM4F100EL	10	10	65	200
EM4F120EL	12	12	76	200
EM4F120ELX	12	12	76	250
EM4F120ELXX	12	12	76	300
EM4F160EL	16	16	76	200
EM4F200EL	20	20	76	200
EM4F250EL	25	25	76	200
EM4F250ELX	25	25	76	250
EM4F250ELX	25	25	76	300



Ball End Mill

ITEM CODE	CUTTING DIA.	SHANK DIA.	FLUTE	OAL
EM4F030EL	3	3	28	101
EM4F040EL	4	4	28	101
EM4F050EL	5	5	30	101
EM4F060EL	6	6	40	150
EM4F080EL	8	8	42	150
EM4F100EL	10	10	45	150
EM4F100ELX	10	10	65	200
EM4F120EL	12	12	76	200
EM4F120ELX	12	12	76	250
EM4F120ELXX	12	12	76	300
EM4F160EL	16	16	76	200
EM4F200EL	20	20	76	200
EM4F250EL	25	25	76	200
EM4F250ELX	25	25	76	250
EM4F250ELX	25	25	76	300





Drive Mech Built to Perfection

Solid Carbide Hole Mill Solid Carbide Reamer Tools

Hole Mill

ITEM CODE	CUTTING DIA.	SHANK DIA.	FLUTE	OAL
HM3F 030	3	6	14	62
HM3F 040	4	6	17	62
HM3F 050	5	6	20	62
HM3F 060	6	6	20	62
HM3F 070	7	8	24	75
HM3F 080	8	8	29	75
HM3F 085	8.5	10	35	80
HM3F 100	10	10	35	80
HM3F 105	10.5	12	40	102
HM3F 120	12	12	40	102
HM3F 125	12.5	14	43	107
HM3F 140	14	14	43	107
HM3F 145	14.5	16	45	110
HM3F 160	16	16	45	110



Reamer (Straight & Helical Flute) 4 & 6 Flute

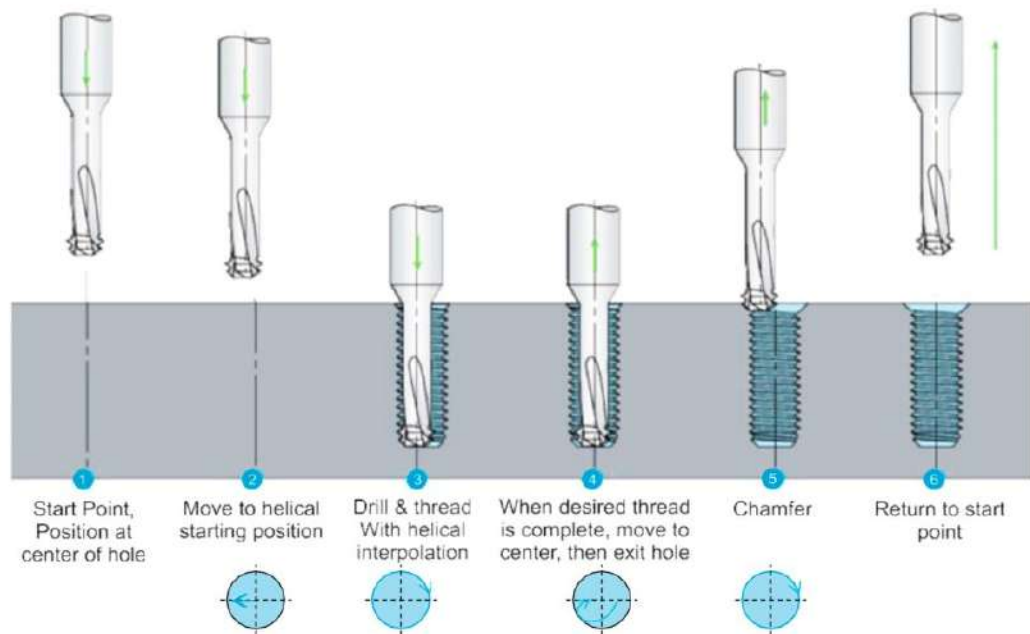
ITEM CODE	CUTTING DIA.	SHANK DIA.	FLUTE	OAL
RM4F030	3	6	15	60
RM4F040	4	6	18	60
RM4F050	5	6	20	60
RM4F060	6	6	25	75
RM4F080	8	8	30	76
RM4F100	10	10	35	100
RM4F120	12	12	40	100





Drive Mech Built to Perfection

THREAD MILL



Note



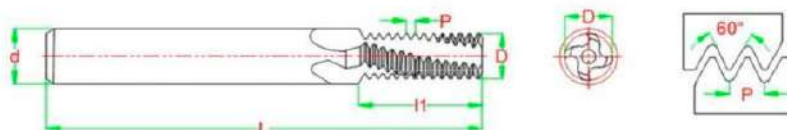
Note





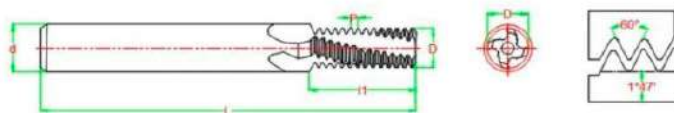
Drive Mech Built to Perfection

THREAD MILL



ISO METRIC

ITEM CODE	THREAD SIZE	PITCH MM	SHANK DIA d	CUTTING DIA D	FLUTE I1	OAL L	NO. FLUTE Z	DRILL DIA MM
TM3F-M3P050-ISO	M3 x 0.5	0.5	4	2.4	6.0	50	3	2.5
TM3F-M4P050-ISO	M4 x 0.5	0.5	4	3.2	8.0	50	3	3.5
TM3F-M5P050-ISO	M5 x 0.5	0.5	6	4.2	10.0	50	3	4.5
TM3F-M4P070-ISO	M4 x 0.7	0.7	4	3.2	10.0	50	3	3.3
TM3F-M6P075-ISO	M6 x 0.75	0.75	6	5.0	12	50	3	5.3
TM3F-M5P080-ISO	M5 x 0.8	0.8	4	3.9	12	50	3	4.2
TM3F-M6P100-ISO	M6 x 1.0	1.0	6	4.8	12	50	3	5.0
TM3F-M8P100-ISO	M8 x 1.0	1.0	8	6.7	16	60	4	7.0
TM3F-M10P100-ISO	M10 x 1.0	1.0	10	8.5	20	75	4	9.0
TM3F-M12P100-ISO	M12 x 1.0	1.0	12	10.7	24	75	4	11.0
TM3F-M8P125-ISO	M8 x 1.25	1.3	8	6.5	20	60	3	6.8
TM3F-M10P125-ISO	M10 x 1.25	1.3	10	8.5	20	75	4	8.8
TM3F-M12P125-ISO	M10 x 1.5	1.5	10	8.2	20	75	4	8.5
TM3F-M12P150-ISO	M12 x 1.5	1.5	10	9.9	24	75	4	10.5
TM3F-M14P150-ISO	M14 x 1.5	1.5	12	11.9	30	78	4	12.5
TM3F-M16P150-ISO	M16 x 1.5	1.5	14	13.9	30	78	4	14.5
TM3F-M12P175-ISO	M12 x 1.75	1.8	10	9.9	25	75	4	10.2
TM3F-M14P200-ISO	M14 x 2.0	2.0	12	11.6	28	75	4	12
TM3F-M16P200-ISO	M16 x 2.0	2.0	14	13.6	32	78	4	14
TM3F-M18P250-ISO	M18 x 2.5	2.5	16	14.8	35	78	4	15.5
TM3F-M20P250-ISO	M20 x 2.5	2.5	18	17.1	38	100	4	17.5
TM3F-M24P300-ISO	M24 x 3.0	3.0	20	19.9	38	100	4	21



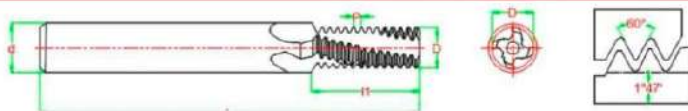
NPT

ITEM CODE	THREAD SIZE	PITCH TPI	SHANK DIA d	CUTTING DIA D	FLUTE I1	OAL L	NO. FLUTE Z	DRILL DIA MM
TM3F-D6-P27-NPT	1/16" X 27	27	6	5.9	9.9	51	3	6.3
TM3F-D8-P27-NPT	1/8" X 27	27	8	7.65	9.9	60	3	8.5
TM3F-D10-P18-NPT	1/4" X 18	18	10	9.9	14.8	75	3	11.1
TM4F-D12-P18-NPT	3/8" X 18	18	12	11.15	14.8	75	4	14.5
TM4F-D16-P14-NPT	1/2"-3/4" X 14	14	16	14.25	19	78	4	17.7
TM4F-D20-P11.5-NPT	1", 1 1/4", 1 1/2", 2" x 11.5	11.5	20	19.6	23.2	100	4	29
TM4F-D20-P8-NPT	2 1/2", -3" x 8	8	20	19.6	33.3	100	4	66.5



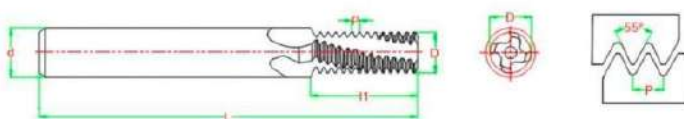
Drive Mech Built to Perfection

THREAD MILL



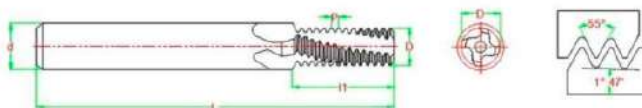
NPTF

ITEM CODE	THREAD SIZE	PITCH TPI	SHANK DIA d	CUTTING DIA D	FLUTE I1	OAL L	NO. FLUTE Z	DRILL DIA MM
TM3F-D6-P27-NPTF	1/16" X 27	27	6	5.9	9.9	51	3	6.3
TM3F-D8-P27-NPTF	1/8" X 27	27	8	7.65	9.9	60	3	8.5
TM3F-D10-P18-NPTF	1/4" X 18	18	10	9.9	14.8	75	3	11.1
TM4F-D12-P18-NPTF	3/8" X 18	18	12	11.15	14.8	75	4	14.5
TM4F-D16-P14-NPTF	1/2"-3/4" X 14	14	16	14.25	19	78	4	17.7
TM4F-D20-P11.5-NPTF	1", 1 1/4", 1 1/2", 2" X 11.5	11.5	20	19.6	23.2	100	4	29
TM4F-D20-P8-NPTF	2 1/2", -3" X 8	8	20	19.6	33.3	100	4	66.5



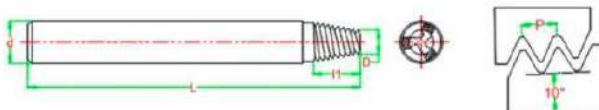
BSP

ITEM CODE	THREAD SIZE	PITCH TPI	SHANK DIA d	CUTTING DIA D	FLUTE I1	OAL L	NO. FLUTE Z	DRILL DIA MM
TM3F-D6-P28-BSP	1/16" x 28 , 1/8" x 28	28	6	5.8	16.8	60	3	6.7
TM3F-D8-P28-BSP	1/8" x 28	28	8	7.7	20.5	60	3	8.7
TM3F-D10-P19-BSP	1/4" x 19, 3/8" x 19	19	10	9.9	27.2	75	3	11.8
TM4F-D16-P19-BSP	3/8" x 19	19	16	13.4	33.9	100	4	15.2
TM4F-D16-P14-BSP	1/2", -3/4" x 14	14	16	15.7	44	100	4	19
TM5F-D20-P11-BSP	1", -1 1/2", 2", 2 1/2" x 11	11	20	19.9	42.1	100	5	30.7



BSPT

ITEM CODE	THREAD SIZE	PITCH TPI	SHANK DIA d	CUTTING DIA D	FLUTE I1	OAL L	NO. FLUTE Z	DRILL DIA MM
TM3F-D6-P28-BSPT	1/16" x 28 , 1/8" x 28	28	6	5.8	16.8	60	3	6.7
TM3F-D8-P28-BSPT	1/8" x 28	28	8	7.7	20.5	60	3	8.7
TM3F-D10-P19-BSPT	1/4" x 19, 3/8" x 19	19	10	9.9	27.2	75	3	11.8
TM4F-D16-P19-BSPT	3/8" x 19	19	16	13.4	33.9	100	4	15.2
TM4F-D16-P14-BSPT	1/2", -3/4" x 14	14	16	15.7	44	100	4	19
TM5F-D20-P11-BSPT	1", -1 1/2", 2", 2 1/2" x 11	11	20	19.9	42.1	100	5	30.7



TAPER THREAD MILLS SURGICAL APPLICATION

ITEM CODE	TAPER Ø	PITCH P MM	SHANK DIA d	CUTTING DIA D	FLUTE I1	OAL L	NO. FLUTE Z	DRILL DIA MM
TM3F-D60-P0.4T20	20°	0.4	6	3.2	8	60	3	60°
TM3F-D60-P0.5T20	20°	0.5	6	2.9	9	60	3	60°
TM3F-D55-P0.3T20	20°	0.3	4	1.5	4	60	3	55°
TM3F-D55-P0.4T20	20°	0.4	6	2.5	10	60	3	55°
TM3F-D55-P0.5T20	20°	0.5	6	2.9	9	60	3	55°
TM3F-D55-P0.6T20	20°	0.6	6	3.8	6.5	60	3	55°



Drive Mech Built to Perfection

Circle Segment & Turbine End Mill

CIRCLE SEGMENT & TURBINE END MILLS FOR MACHINING BLADES AND OTHER COMPLEX PARTS

Circle Segment and Turbine End Mills for Aerospace and Turbine Machining Strategies

Unique Geometry Designed for High Performance Machining

Over 80% Cycle Time Reduction!





Drive Mech Built to Perfection

Solid Carbide Center Drill
Solid Carbide Ground Blanks

CENTER DRILL

Solid Carbide Center Drills Solid Carbide Ground Blanks

Center Drills

ITEM CODE	CUTTING DIA.	SHANK DIA.	FLUTE	OAL
HM3F 030	1.6	4	2.4	50
HM3F 040	2	5	2.9	50
HM3F 050	2.5	6.3	3.6	50
HM3F 060	3.15	8	4.4	50
HM3F 080	4	10	5.6	60
HM3F 085	5	12.5	6.9	60
HM3F 100	6.3	16	8.3	75



Back Chamfer Tools

ITEM CODE	DIA	LENGTH	
SCGB030	3	100	
SCGB040	4	100	
SCGB050	5	100	
SCGB060	6	100	
SCGB080	8	100	
SCGB100	10	100	
SCGB120	12	100	
SCGB140	14	100	
SCGB160	16	100	
SCGB180	18	100	
SCGB200	20	100	



Ground Blanks

ITEM CODE	DIA	LENGTH	
SCGB030	3	100	
SCGB040	4	100	
SCGB050	5	100	
SCGB060	6	100	
SCGB080	8	100	
	10	100	
SCGB120	12	100	
	14	100	
SCGB160	16	100	
	18	100	
SCGB200	20	100	





Recommended Cutting Parameters for Endmills & Ball Nose

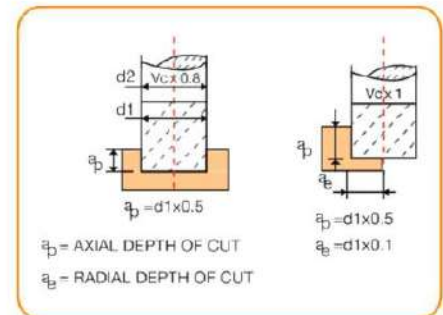
ITEM CODE	SPEED (M / Min)	Feed (mm / Tooth)		
		Dia <= 6mm	Dia <= 12mm	Dia <= 25mm
Carbon & Alloy Steel upto 30 HRC	50 ~ 190	0.005 - 0.040	0.025 - 0.076	0.076 - 0.179
Carbon & Alloy Steel < 30 ~ 40 HRC	20 ~ 60	0.005 - 0.013	0.005 - 0.025	0.025 - 0.076
Die & Mould Steel	20 ~ 80	0.005 - 0.025	0.025 - 0.050	0.050 - 0.152
Stainless Steels - 300 Series	40 ~ 80	0.005 - 0.025	0.025 - 0.050	0.050 - 0.152
Stainless Steels - 400 Series	30 ~ 60	0.005 - 0.013	0.013 - 0.025	0.025 - 0.130
Grey Cast Iron	50 ~ 180	0.005 - 0.040	0.040 - 0.076	0.076 - 0.203
Ductile Cast Iron	30 ~ 120	0.005 - 0.025	0.025 - 0.050	0.050 - 0.152
Malleable Cast Iron	40 ~ 150	0.005 - 0.025	0.025 - 0.076	0.076 - 0.178
Nickel Based Alloys	5 ~ 40	0.008 - 0.020	0.020 - 0.025	0.025 - 0.050
Titanium Alloys	10 ~ 60	0.005 - 0.020	0.020 - 0.050	0.050 - 0.102
Cobalt Based Alloys	5 ~ 30	0.005 - 0.020	0.020 - 0.025	0.025 - 0.050
Aluminium	180 ~ 400	0.005 - 0.050	0.050 - 0.102	0.102 - 0.203
Magnesium	300 ~ 400	0.013 - 0.050	0.050 - 0.102	0.102 - 0.254
Copper / Brass	80 ~ 280	0.013 - 0.050	0.050 - 0.076	0.076 - 0.152
Plastic	180 ~ 400	0.015 - 0.076	0.076 - 0.152	0.052 - 0.381
Wood*	" 15.000-25.000 RPM	0.038 - 0.076	0.076 - 0.130	0.130 - 0.179

Formulas

Cutting Speed	$V_c = \frac{\pi \times D \times n}{1000}$
Spindla Speed	$n = \frac{V_c \times 1000}{\pi \times D}$
Feed Per Flute	$f_z = \frac{V_f}{n}$
Table Feed	$v_f = f_z \times n$
Feed Per Rev.	$f = f_z \times z$

Symbols

D (mm)	Tool Diameter
Z	No. of Flutes
Vc (m/min)	Cutting Speed
fz (mm)	Feed per Flutes
n (rpm)	Spindle Speed
Vf (mm/min)	Table Feed



Recommended Cutting Parameters for Drill

ITEM CODE	Cutting Speed Vc (m/min)		Feed Rate f (mm/rev) with Drill Ø			
	Without Coolant	With Coolant Hole	Ø 3 - 5	Ø 6 - 8	Ø 10 - 12	Ø 16 - 20
Carbon & Alloy Steel upto 30 HRC	100 ~ 140	120 ~ 180	0.100-0.160	0.200-0.240	0.260-0.300	0.440-0.500
Carbon & Alloy Steel < 38 ~ 40 HRC	60 ~ 110	80 ~ 130	0.100-0.160	0.200-0.240	0.220-0.240	0.440-0.500
Alloyed Steel < 48 < 55 HRC	20 ~ 30	30 ~ 50	0.060-0.070	0.080-0.120	0.070-0.090	0.090-0.100
Stainless Steels - 300 & 400 Series	50 ~ 80	60 ~ 100	0.060-0.010	0.080-0.150	0.070-0.150	0.090-0.150
Cast Iron and Malleable Cast Iron	80 ~ 180	130 ~ 210	0.200-0.240	0.260-0.300	0.300-0.320	0.500-0.600
Titanium Alloys	60 ~ 90	80 ~ 110	0.080-0.120	0.160-0.200	0.240-0.260	0.400-0.500
Copper / Brass	120 ~ 220	180 ~ 270	0.160-0.200	0.300-0.400	0.560-0.600	0.500-0.600

- The above mentioned recommended date (Cutting Speed) are only for reference.



Drive Mech Built to Perfection

DRIVE MECH

End Mill | Ball Nose | Corner Radius | Drill | Step Drills | Center Drill
Thread Mill | Reamer | Chamfer Drill Mill | Special Tools



+91 9979040087 | +91 8141223020



metrology2009@yahoo.in



www.metrologycorporation.in



Shed No. 147, Swetayan Industrial Park, Opp. Bahuchar Party Plot,
Kathawada, Ahmedabad – 382350, Gujarat (India)