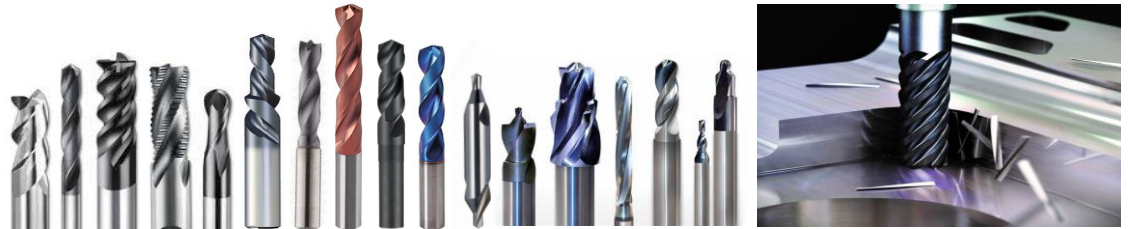


# SOUBI TOOLS

Manufacturer of Carbide Cutting Tools



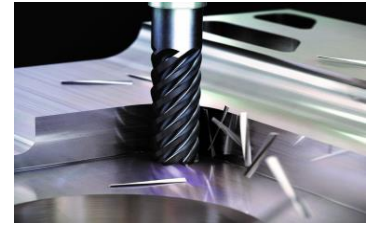
## SOUBI TOOLS

Everything You Need

Provides you the Best

- Drill ←
- Step Drill ←
- Center Drill ←
- Chamfer Drill ←
- Flat Endmill ←
- Ballnose Endmill ←
- Corner Radius ←
- Rougher Endmill ←
- Reamer ←
- Holemill ←
- T-Slot Cutter ←
- Woodruff Cutter ←
- Dovetail Cutter ←
- Special Tools ←





# SOUBI TOOLS

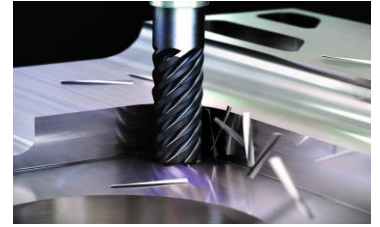
Flat Endmill - 2 Flute, 3 Flute & 4 Flute

Manufacturer of Carbide Cutting Tools

## STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4EM001S	1	3	3	39
ST4EM002S	1.5	3	5	39
ST4EM003S	2	3	7	39
ST4EM004S	2.5	3	8	39
ST4EM005S	3	3	10	39
ST4EM006S	4	4	16	51
ST4EM007S	5	5	16	51
ST4EM008S	6	6	19	63
ST4EM009S	8	8	21	63
ST4EM010S	10	10	22	70
ST4EM011S	12	12	25	76
ST4EM012S	14	14	30	89
ST4EM013S	16	16	32	89
ST4EM014S	18	18	35	101
ST4EM015S	20	20	40	101
ST4EM016S	25	25	40	101





# SOUBI TOOLS

Flat Endmill - 2 Flute, 3 Flute & 4 Flute

Manufacturer of Carbide Cutting Tools

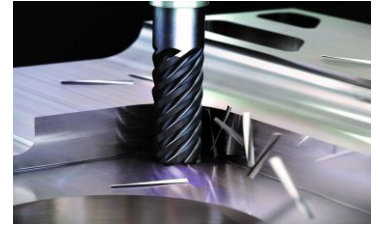
## LONG

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4EM017L	3	3	19	57
ST4EM018L	4	4	19	57
ST4EM019L	5	5	25	63
ST4EM020L	6	6	28	76
ST4EM021L	8	8	29	76
ST4EM022L	10	10	32	76
ST4EM023L	12	12	51	101
ST4EM024L	14	14	57	127
ST4EM025L	16	16	57	127
ST4EM026L	18	18	57	127
ST4EM027L	20	20	57	127

## EXTRA LONG

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4EM028X	3	3	25	76
ST4EM029X	4	4	25	76
ST4EM030X	5	5	30	76
ST4EM031X	6	6	39	101
ST4EM032X	8	8	42	101
ST4EM033X	10	10	45	101
ST4EM034X	12	12	76	150
ST4EM035X	14	14	76	150
ST4EM036X	16	16	76	150
ST4EM037X	18	18	76	150
ST4EM038X	20	20	76	150





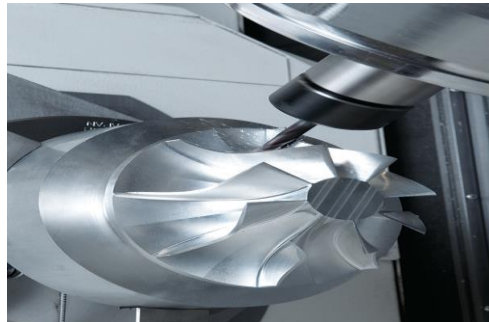
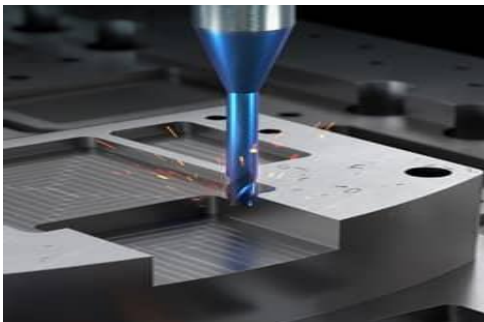
# SOUBI TOOLS

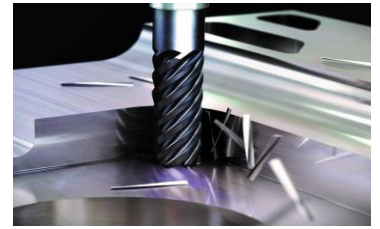
Ballnose Endmill - 2 Flute & 4 Flute

Manufacturer of Carbide Cutting Tools

## STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4BN001S	1	3	3	39
ST4BN002S	1.5	3	5	39
ST4BN003S	2	3	7	39
ST4BN004S	2.5	3	8	39
ST4BN005S	3	3	10	39
ST4BN006S	4	4	16	51
ST4BN007S	5	5	16	51
ST4BN008S	6	6	19	63
ST4BN009S	8	8	21	63
ST4BN010S	10	10	22	70
ST4BN011S	12	12	25	76
ST4BN012S	14	14	30	89
ST4BN013S	16	16	32	89
ST4BN014S	18	18	35	101
ST4BN015S	20	20	40	101
ST4BN016S	25	25	40	101





# SOUBI TOOLS

Ballnose Endmill - 2Flute & 4 Flute

Manufacturer of Carbide Cutting Tools

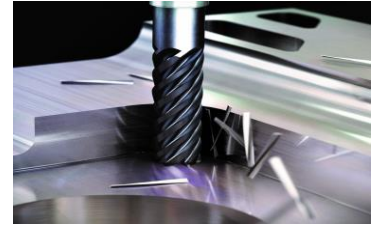
## LONG

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4BN017L	3	3	19	57
ST4BN018L	4	4	19	57
ST4BN019L	5	5	25	63
ST4BN020L	6	6	28	76
ST4BN021L	8	8	29	76
ST4BN022L	10	10	32	76
ST4BN023L	12	12	51	101
ST4BN024L	14	14	57	127
ST4BN025L	16	16	57	127
ST4BN026L	18	18	57	127
ST4BN027L	20	20	57	127

## EXTRA LONG

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4BN028X	3	3	25	76
ST4BN029X	4	4	25	76
ST4BN030X	5	5	30	76
ST4BN031X	6	6	39	101
ST4BN032X	8	8	42	101
ST4BN033X	10	10	45	101
ST4BN034X	12	12	76	150
ST4BN035X	14	14	76	150
ST4BN036X	16	16	76	150
ST4BN037X	18	18	76	150
ST4BN038X	20	20	76	150





# SOUBI TOOLS

Flate & Ball Tapper Neck Endmill - 2 & 4 Flute

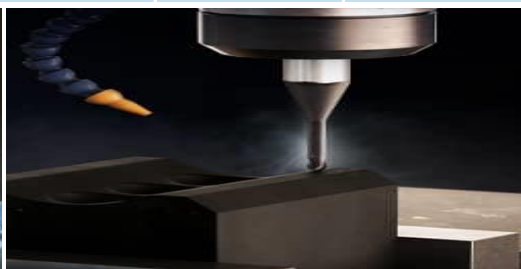
Manufacturer of Carbide Cutting Tools

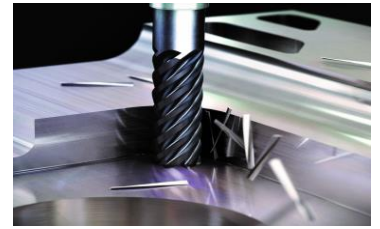
## Flate Tapper Neck Endmill

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4TNFE001	2	6	6	75
ST4TNFE002	3	6	8	75
ST4TNFE003	4	6	8	75
ST4TNFE004	5	8	10	100
ST4TNFE005	6	8	12	100
ST4TNFE006	8	10	14	100
ST4TNFE007	10	12	18	100
ST4TNFE008	12	14	22	150

## Tapper Neck Ball Nose Endmill

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4TNBE001	2	6	6	75
ST4TNBE002	3	6	8	75
ST4TNBE003	4	6	8	75
ST4TNBE004	5	8	10	100
ST4TNBE005	6	8	12	100
ST4TNBE006	8	10	14	100
ST4TNBE007	10	12	18	100
ST4TNBE008	12	14	22	150





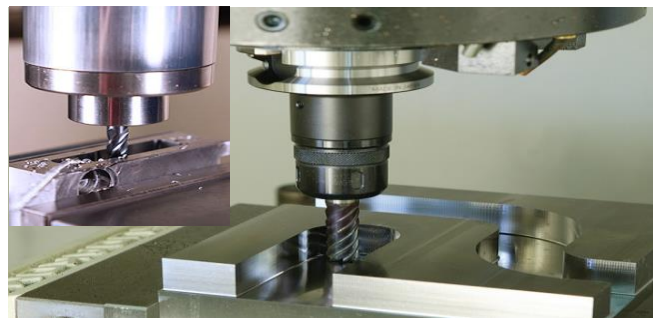
# SOUBI TOOLS

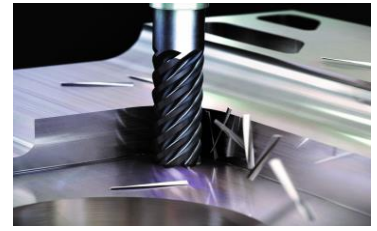
Corner Radius Endmill - 2 Flute & 4 Flute

Manufacturer of Carbide Cutting Tools

## STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	RADIUS	FLUTE (FL)	OAL
ST4CR001 R0.5	3	3	0.5	10	51
ST4CR002 R0.5	4	4	0.5	14	51
ST4CR003 R1.0	4	4	1	14	51
ST4CR004 R0.5	5	5	0.5	16	51
ST4CR005 R1.0	5	5	1	16	51
ST4CR006 R0.5	6	6	0.5	19	63
ST4CR007 R1.0	6	6	1	19	63
ST4CR008 R1.5	6	6	1.5	19	63
ST4CR009 R0.5	8	8	0.5	21	63
ST4CR010 R1.0	8	8	1	21	63
ST4CR011 R1.5	8	8	1.5	21	63
ST4CR012 R2.0	8	8	2	21	63
ST4CR013 R0.5	10	10	0.5	25	70
ST4CR014 R1.0	10	10	1	25	70
ST4CR015 R1.5	10	10	1.5	25	70
ST4CR016 R2.0	10	10	2	25	70
ST4CR017 R2.5	10	10	2.5	25	70





# SOUBI TOOLS

Corner Radius Endmill - 2 Flute & 4 Flute

Manufacturer of Carbide Cutting Tools

## STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	RADIUS	FLUTE (FL)	OAL
ST4CR018 R1.0	12	12	1	25	75
ST4CR019 R1.5	12	12	1.5	25	75
ST4CR020 R2.0	12	12	2	25	75
ST4CR021 R3.0	12	12	3	25	75
ST4CR022 R1.0	16	16	1	35	89
ST4CR023 R2.0	16	16	2	35	89
ST4CR024 R3.0	16	16	3	35	89
ST4CR025 R4.0	16	16	4	35	89
ST4CR026 R1.0	20	20	1	40	101
ST4CR027 R2.0	20	20	2	40	101
ST4CR028 R3.0	20	20	3	40	101
ST4CR029 R4.0	20	20	4	40	101

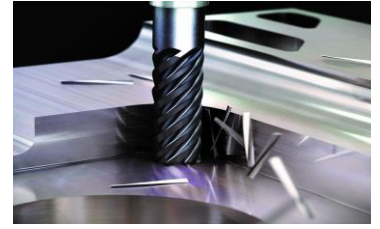


## Endmill - 6 Flute

### STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST6EM001S	6	6	19	63
ST6EM002S	8	8	21	63
ST6EM003S	10	10	22	70
ST6EM004S	12	12	25	75
ST6EM005S	14	14	30	76
ST6EM006S	16	16	32	76
ST6EM007S	18	18	35	100
ST6EM008S	20	20	40	100





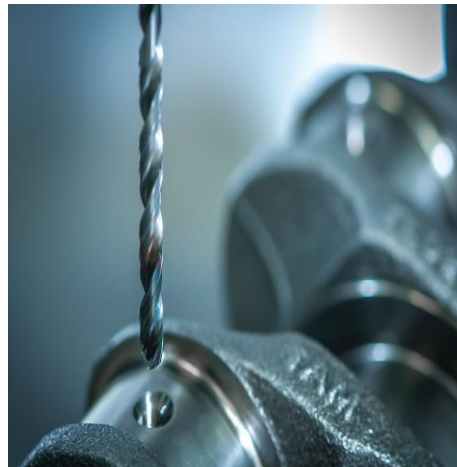
# SOUBI TOOLS

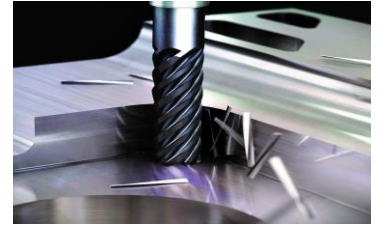
High Performance Regular Drills

Manufacturer of Carbide Cutting Tools

## DRILL 3D

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
	D	d	L2	L1
ST3DT030	3.00 MM	6	20	62
ST3DT031 to 037	3.1 to 3.7	6	20	62
ST3DT038 to 047	3.8 to 4.7	6	24	66
ST3DT048 to 060	4.8 to 6.0	6	28	66
ST3DT061 to 070	6.1 to 7.0	8	34	79
ST3DT071 to 080	7.1 to 8.0	8	41	79
ST3DT081 to 100	8.1 to 10.0	10	47	89
ST3DT101 to 120	10.1 to 12.0	12	55	102
ST3DT121 to 140	12.1 to 14.0	14	60	107
ST3DT141 to 160	14.1 to 16.0	16	65	115
ST3DT161 to 180	16.1 to 18.0	18	73	123
ST3DT181 to 200	18.1 to 20.0	20	79	131





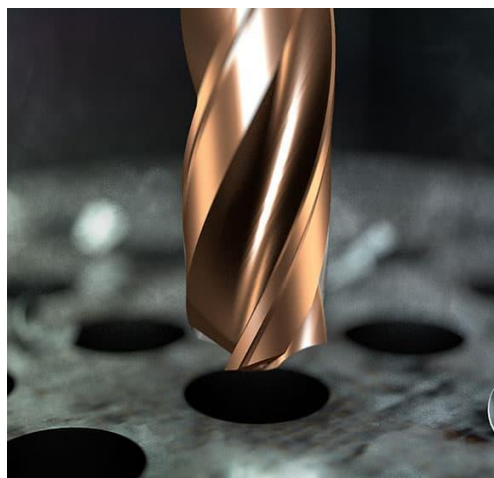
# SOUBI TOOLS

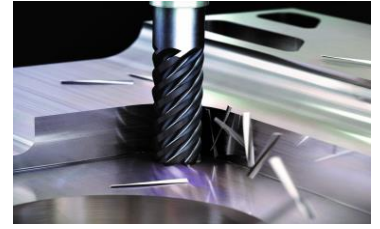
High Performance Regular Drills

Manufacturer of Carbide Cutting Tools

## DRILL 5D

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
	D	d	L2	L1
ST5DT030	3.00 MM	6	28	66
ST5DT031 to 037	3.1 to 3.7	6	28	66
ST5DT038 to 047	3.8 to 4.7	6	36	74
ST5DT048 to 060	4.8 to 6.0	6	44	82
ST5DT061 to 070	6.1 to 7.0	8	53	91
ST5DT071 to 080	7.1 to 8.0	8	53	91
ST5DT081 to 100	8.1 to 10.0	10	61	103
ST5DT101 to 120	10.1 to 12.0	12	71	118
ST5DT121 to 140	12.1 to 14.0	14	77	124
ST5DT141 to 160	14.1 to 16.0	16	83	133
ST5DT161 to 180	16.1 to 18.0	18	93	143
ST5DT181 to 200	18.1 to 20.0	20	101	153





# SOUBI TOOLS

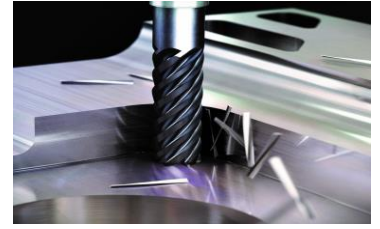
High Performance Through Coolant Drills

Manufacturer of Carbide Cutting Tools

## DRILL 3D

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
	D	d	L2	L1
ST3DNT030	3.00 MM	6	20	62
ST3DNT031 to 037	3.1 to 3.7	6	20	62
ST3DNT038 to 047	3.8 to 4.7	6	24	66
ST3DNT048 to 060	4.8 to 6.0	6	28	66
ST3DNT061 to 070	6.1 to 7.0	8	34	79
ST3DNT071 to 080	7.1 to 8.0	8	41	79
ST3DNT081 to 100	8.1 to 10.0	10	47	89
ST3DNT101 to 120	10.1 to 12.0	12	55	102
ST3DNT121 to 140	12.1 to 14.0	14	60	107
ST3DNT141 to 160	14.1 to 16.0	16	65	115
ST3DNT161 to 180	16.1 to 18.0	18	73	123
ST3DNT181 to 200	18.1 to 20.0	20	79	131





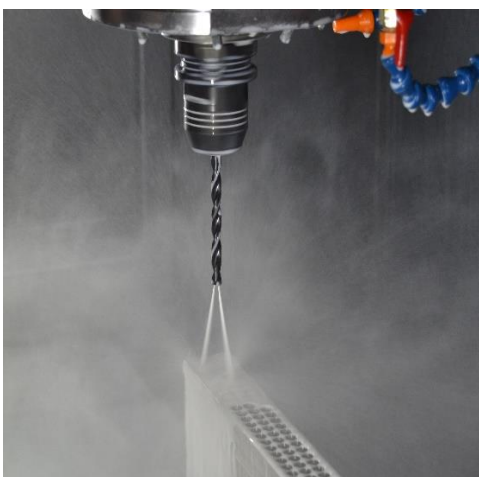
# SOUBI TOOLS

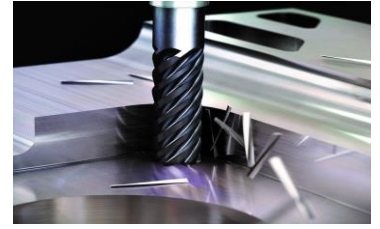
High Performance Through Coolant Drills

Manufacturer of Carbide Cutting Tools

## DRILL 5D

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
	D	d	L2	L1
ST5DNT030	3.00 MM	6	28	66
ST5DNT031 to 037	3.1 to 3.7	6	28	66
ST5DNT038 to 047	3.8 to 4.7	6	36	74
ST5DNT048 to 060	4.8 to 6.0	6	44	82
ST5DNT061 to 070	6.1 to 7.0	8	53	91
ST5DNT071 to 080	7.1 to 8.0	8	53	91
ST5DNT081 to 100	8.1 to 10.0	10	61	103
ST5DNT101 to 120	10.1 to 12.0	12	71	118
ST5DNT121 to 140	12.1 to 14.0	14	77	124
ST5DNT141 to 160	14.1 to 16.0	16	83	133
ST5DNT161 to 180	16.1 to 18.0	18	93	143
ST5DNT181 to 200	18.1 to 20.0	20	101	153





# SOUBI TOOLS

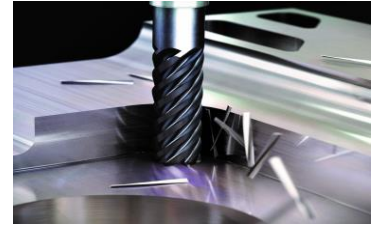
High Performance Jobber Drills

Manufacturer of Carbide Cutting Tools

## JOBBER DRILL

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
STJDR001	2.0 to 2.20	2.0 to 2.20	22	49
STJDR002	2.25 to 2.45	2.25 to 2.45	27	53
STJDR003	2.50 to 2.70	2.50 to 2.70	30	57
STJDR004	2.75 to 3.00	2.75 to 3.00	33	61
STJDR005	3.10 to 3.40	3.10 to 3.40	36	65
STJDR006	3.50 to 3.80	3.50 to 3.80	39	70
STJDR007	3.90 to 4.20	3.90 to 4.20	43	75
STJDR008	4.30 to 4.70	4.30 to 4.70	47	80
STJDR009	4.80 to 5.30	4.80 to 5.30	52	86
STJDR010	5.40 to 6.00	5.40 to 6.00	57	93
STJDR011	6.10 to 6.70	6.10 to 6.70	63	101
STJDR012	6.80 to 7.50	6.80 to 7.50	69	109
STJDR013	7.60 to 8.50	7.60 to 8.50	75	117
STJDR014	8.60 to 9.50	8.60 to 9.50	81	125
STJDR015	9.60 to 10.6	9.60 to 10.6	87	133
STJDR016	10.70 to 11.8	10.70 to 11.8	94	142
STJDR017	11.90 to 13.2	11.90 to 13.2	101	151
STJDR018	13.40 to 14.0	13.40 to 14.0	108	160
STJDR019	14.25 to 15.0	14.25 to 15.0	114	169
STJDR020	15.25 to 16.0	15.25 to 16.0	120	178
STJDR021	16.50 to 18.0	16.50 to 18.0	125	184





# SOUBI TOOLS

ROUGHER Endmill - 4 Flute

Manufacturer of Carbide Cutting Tools

## STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4RE001S	5	5	16	51
ST4RE002S	6	6	19	63
ST4RE003S	8	8	21	63
ST4RE004S	10	10	25	70
ST4RE005S	12	12	25	75
ST4RE006S	14	14	30	89
ST4RE007S	16	16	32	89
ST4RE008S	18	18	40	101
ST4RE009S	20	20	40	101

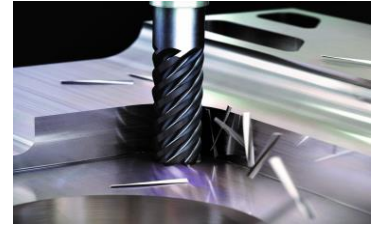


## SINGLE LIP Endmill - 1 Flute

### STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	RADIUS	FLUTE (FL)	OAL
STEM101R0.5	6	6	0.5	10	63
STEM102R0.5	8	8	0.5	12	63
STEM103R1.0	10	10	1	15	70
STEM104R1.0	12	12	1	20	75
STEM105R1.0	14	14	1	20	76
STEM106R1.0	16	16	1	25	76
STEM107R1.0	20	20	1	25	100





# SOUBI TOOLS

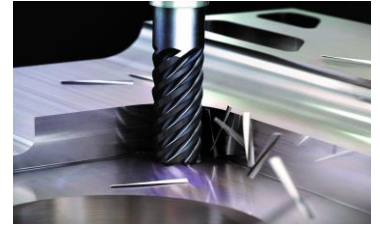
Reamer - 4 Flute & 6 Flute (Straight & Helical)

Manufacturer of Carbide Cutting Tools

## STANDARD

ORDER NO	CUTTING DIA	SHANK DIA	FLUTE (FL)	OAL
ST4RM001S	3	6	15	60
ST4RM002S	4	6	18	60
ST4RM003S	5	6	20	60
ST4RM004S	6	6	25	75
ST4RM005S	8	8	30	76
ST4RM006S	10	10	35	100
ST4RM007S	12	12	40	100





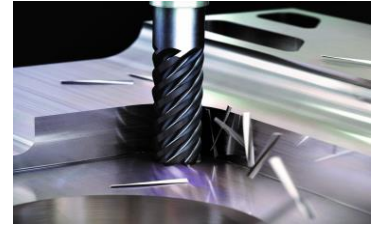
# SOUBI TOOLS

Manufacturer of Carbide Cutting Tools

## Cutting Parameters

### Recommended Cutting Parameters for Endmills & Ball Nose

Material	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 to 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



# SOUBI TOOLS

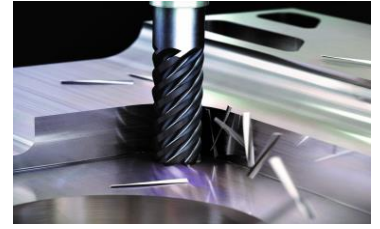
## Cutting Parameters

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### Recommended Cutting Parameters for Drill

Material	Cutting Speed Vc (m/min)		Feed Rate f (mm/rev) with Drill $\phi$			
	Without Coolant	With Coolant Hole	$\phi 3 - 5$	$\phi 6 - 8$	$\phi 10 - 12$	$\phi 16 - 20$
Carbon & Alloy Steel upto 30 HRC	100 ~ 140	120 ~ 180	0.100-0.0106	0.200-0.240	0.260-0.300	0.440-0.500
Carbon & Alloy Steel < 38 to 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 recommended datas are only for reference.



# SOUBI TOOLS

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## Few Of our Services are listed Below

1. Carbide Cutting tools Resharpenering & Coating
2. Broach tool Sharpenering
3. Id Broaching Operation
4. Hob Cutter Sharpenering



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