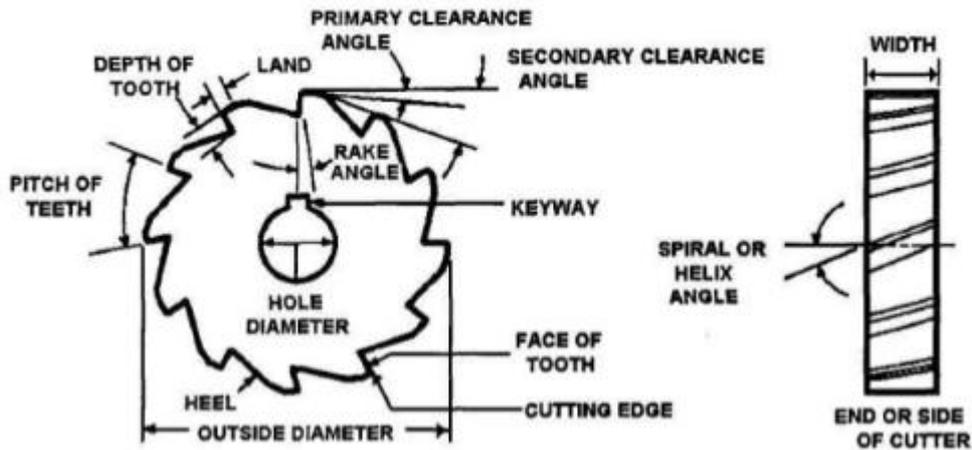


## Milling Cutters

### Nomenclature



- Cylindrical Cutters
- Side and Face Cutters
- Slotting Cutters
- Metal Slitting Saws
- Keyway Milling Cutters
- Shell End Single Angle Milling Cutters
- Single Angle Cutters
- Double Angle Cutters
- Equal Angle Cutters
- Convex Milling Cutters
- Concave Cutters
- Single Corner Rounding Cutters
- Gear Cutters
- Rotary Cutters
- Face Cutters
- Hollow Cutters

**Cutters – Cylindrical**

**IS (mm)**



Diameter js16	Bore H7	Length js16
50	22	40
50	22	63
50	22	80
63	27	50
63	27	70
80	32	63

Diameter js16	Bore H7	Length js16
80	32	100
100	40	70
100	40	125
125	50	80
125	50	125
160	60	125

**Cutters – Cylindrical**

**BS 122 (inches)**



Diameter + 0.045" 0.000	Bore + 0.00075" + 0.00025"	Length
2.1/2	1	1
2.1/2	1	2
2.1/2	1	3
2.1/2	1	4
3	1.1/4	1
3	1.1/4	2
3	1.1/4	3
3	1.1/4	4
3	1.1/4	5
3	1.1/4	6
3.1/2	1.1/4	2
3.1/2	1.1/4	3
3.1/2	1.1/4	4
3.1/2	1.1/4	5
3.1/2	1.1/4	6

Diameter + 0.045" 0.000	Bore + 0.00075" + 0.00025"	Length
3.1/2	1.1/4	7
4	1.1/4 or 1.1/2	2
4	1.1/4 or 1.1/2	3
4	1.1/4 or 1.1/2	4
4	1.1/4 or 1.1/2	5
4	1.1/4 or 1.1/2	6
4	1.1/4 or 1.1/2	7
4	1.1/4 or 1.1/2	8
4.1/2	1.1/2 or 2	2
4.1/2	1.1/2 or 2	3
4.1/2	1.1/2 or 2	4
4.1/2	1.1/2 or 2	5
4.1/2	1.1/2 or 2	6
4.1/2	1.1/2 or 2	7
4.1/2	1.1/2 or 2	8

Cutters – Side & Face (Straight)

IS

(mm)



Diameter js16	Width k11	Bore H7
50	5	16
50	6	16
50	8	16
50	10	16
63	5	22
63	6	22
63	8	22
63	10	22
63	12	22
63	14	22
63	16	22
80	5	27
80	6	27
80	8	27
80	10	27
80	12	27
80	14	27
80	16	27
80	18	27
80	20	27
100	6	32
100	8	32
100	10	32
100	12	32
100	14	32
100	16	32
100	18	32
100	20	32
100	22	32
100	25	32
125	8	32

Diameter js16	Width k11	Bore H7
125	10	32
125	12	32
125	14	32
125	16	32
125	18	32
125	20	32
125	22	32
125	25	32
125	28	32
160	10	40
160	12	40
160	14	40
160	16	40
160	18	40
160	20	40
160	22	40
160	25	40
160	28	40
160	32	40
200	12	40
200	14	40
200	16	40
200	18	40
200	20	40
200	22	40
200	25	40
200	28	40
200	32	40
200	36	40
200	40	40

Cutters – Slotting

BS 122 (inches)



Diameter + 0.045" 0.000	Bore + 0.00075" + 0.00025"	Width + 0.001" - 0.001"
2.1/2	1	1/4
2.1/2	1	5/16
2.1/2	1	3/8
2.1/2	1	7/16
2.1/2	1	1/2
3	1	1/4
3	1	5/16
3	1	3/8
3	1	7/16
3	1	1/2
3	1	5/8
3	1	3/4
3.1/2	1	1/4
3.1/2	1	5/16
3.1/2	1	3/8
3.1/2	1	7/16
3.1/2	1	1/2
3.1/2	1	5/8
3.1/2	1	3/4
3.1/2	1	7/8
4	1	1/4
4	1	5/16
4	1	3/8
4	1	7/16

Diameter + 0.045" 0.000	Bore + 0.00075" + 0.00025"	Width + 0.001" - 0.001"
4	1	1/2
4	1	5/8
4	1	3/4
4	1	7/8
4	1	1
5	1.1/4	1/4
5	1.1/4	5/16
5	1.1/4	3/8
5	1.1/4	7/16
5	1.1/4	1/2
5	1.1/4	5/8
5	1.1/4	3/4
5	1.1/4	7/8
5	1.1/4	1
6	1.1/4	1/4
6	1.1/4	5/16
6	1.1/4	3/8
6	1.1/4	7/16
6	1.1/4	1/2
6	1.1/4	5/8
6	1.1/4	3/4
6	1.1/4	7/8
6	1.1/4	1

**Cutters – Metal Slitting Saws**

**IS (mm)**



Diameter	Bore H7	Width js11	No. of Teeth	
			Fine pitch	Coarse pitch
50	13	3	48	24
50	13	4	48	24
50	13	5	48	24
63	16	3	64	32
63	16	4	64	32
63	16	5	48	24
63	16	6	48	24
80	22	3	80	40
80	22	4	64	32
80	22	5	64	32
80	22	6	64	32
100	22	3	80	40
100	22	4	80	40
100	22	5	80	40

Diameter	Bore H7	Width js11	No. of Teeth	
			Fine pitch	Coarse pitch
100	22	6	64	32
125	22	3	100	48
125	22	4	100	48
125	22	5	80	40
125	22	6	80	40
160	32	4	100	48
160	32	5	100	48
160	32	6	100	48
200	32	4	128	64
200	32	5	128	64
200	32	6	100	48
250	32	4	160	80
250	32	5	128	64
250	32	6	128	64

**Cutters – Metal Slitting Saws**

**BS 122 (inches)**



Diameter + 0.045" - 0.000	Bore + 0.00075" + 0.00025"	Width + 0.001" - 0.001"	No of Teeth
2.1/2	1	1/8	26
2.1/2	1	5/32	26
3	1	1/8	28
3	1	5/32	28
4	1	1/8	34
4	1	5/32	34
4	1	3/16	34
5	1	1/8	40
5	1	5/32	40

Diameter + 0.045" - 0.000	Bore + 0.00075" + 0.00025"	Width + 0.001" - 0.001"	No of Teeth
5	1	3/16	40
6	1	1/8	44
6	1	5/32	44
6	1	1/4	44
7	1	3/16	48
7	1	1/4	48
8	1	3/16	52
8	1	1/4	52



Cutters – Keyway

IS

(mm)



Diameter js16	Bore H7	Width d9
50	16	5
50	16	6
50	16	8
50	16	10
63	22	5
63	22	6
63	22	8
63	22	10
63	22	12
63	22	14
80	27	5
80	27	6
80	27	8
80	27	10
80	27	12
80	27	14
80	27	16
80	27	18
100	32	6
100	32	8
100	32	10
100	32	12
100	32	14
100	32	16
100	32	18
100	32	20
100	32	22
100	32	25
125	32	8

Diameter js16	Bore H7	Width d9
125	32	10
125	32	12
125	32	14
125	32	16
125	32	18
125	32	20
125	32	22
125	32	25
160	40	10
160	40	12
160	40	14
160	40	16
160	40	18
160	40	20
160	40	22
160	40	25
160	40	28
160	40	32
200	40	12
200	40	14
200	40	16
200	40	18
200	40	20
200	40	22
200	40	25
200	40	28
200	40	32
200	40	36
200	40	40



## Cutters – Shell End single Angle IS (mm)



Diameter js16	Bore H7	Width js14		Tol. On Angle
		Angle $\alpha$ 45°	Angle $\alpha$ 50°,55°,60°	
40	10	10	13	± 25'
50	13	13	16	
63	16	18	20	
80	22	22	25	± 20'
100	27	28	32	
125	32	36	40	
160	40	45	50	

## Cutters – Single Angle IS (mm)



Diameter js16	Bore H7	Width js16	Angle +1°/-0°
50	16	12	60°, 65°, 70°, 75°, 80°, 85°
63	22	18	60°, 65°, 70°, 75°, 80°, 85°

Diameter js16	Bore H7	Width js16	Angle +1°/-0°
63	22	26	70°, 75°, 80°
80	22	32	70°, 75°, 80°
100	27	36	70°, 75°, 80°

**Cutters – Double Angle**

IS (mm)



Diameter js16	Bore H7	Width js16	Small Angle + 1°/ 0°	Included Angle + 1°/ 0°
50	16	12	12°	55°
50	16	12	15°	60°
50	16	12	15°	65°
50	16	12	15°	70°
50	16	12	15°	75°
50	16	12	15°	80°
50	16	14	20°	90°
50	16	16	25°	100°
63	22	18	12°	55°
63	22	18	15°	60°
63	22	18	15°	65°

Diameter js16	Bore H7	Width js16	Small Angle + 1°/ 0°	Included Angle + 1°/ 0°
63	22	18	15°	70°
63	22	18	15°	75°
63	22	18	15°	80°
63	22	20	20°	90°
63	22	22	25°	100°
80	22	32	15°	65°
80	22	32	15°	70°
80	22	32	15°	75°
100	27	36	15°	70°
100	27	36	15°	75°
100	27	36	15°	80°

**Cutters – Equal Angle**

IS (mm)



Diameter js16	Bore H7	Width js16	Included Angle
50	16	8	45°
50	16	10	60°
50	16	14	90°
63	22	10	45°
63	22	14	60°
63	22	20	90°

Diameter js16	Bore H7	Width js16	Included Angle
80	27	12	45°
80	27	18	60°
80	27	22	90°
100	32	18	45°
100	32	25	60°
100	32	32	90°

**Cutters – Equal Angle**

BS122 (inches)



Diameter + 0.045° 0.000	Bore + 0.00075° + 0.00025°	Width + 0.015° 0.000°	Included Angle
2.3/4	1	5/16	30°
		7/16	40°
		1/2	45°, 60°, 90°

Diameter + 0.045° 0.000	Bore + 0.00075° + 0.00025°	Width + 0.015° 0.000°	Included Angle
3	1.1/4	5/16	30°
		7/16	40°
		1/2	45°
		5/8	60°, 90°



### Cutters – Convex

### IS (mm)

Radius k11	Diameter js16	Bore H7	Width
1.60	50	16	3.2
2.00	50	16	4.0
2.50	63	22	5.0
3.00	63	22	6.0
3.15	63	22	6.3
4.00	63	22	8.0
5.00	63	22	10.0
6.00	80	27	12.0

Radius k11	Diameter js16	Bore H7	Width
6.30	80	27	12.6
8.00	80	27	16.0
10.00	100	32	20.0
12.00	100	32	24.0
12.50	100	32	25.0
16.00	125	32	32.0
20.00	125	32	40.0

### Cutters – Convex

### BS122 (inches)

Diameter + 0.045" 0.000	Width & Diameter of Circle	Bore + 0.00075" + 0.00025"
2.1/4	1/8	1
2.1/4	3/16	1
2.1/4	1/4	1
2.1/2	5/16	1
2.1/2	3/8	1
2.1/2	7/16	1
2.1/2	1/2	1
2.3/4	9/16	1
2.3/4	5/8	1
3	11/16	1

Diameter + 0.045" 0.000	Width & Diameter of Circle	Bore + 0.00075" + 0.00025"
3	3/4	1
3.1/4	13/16	1
3.1/4	7/8	1
3.1/2	15/16	1
3.1/2	1	1
4	1.1/8	1.1/4
4	1.1/4	1.1/4
4.1/4	1.3/8	1.1/4
4.1/4	1.1/2	1.1/4

### Cutters – Concave

### IS (mm)

Radius N11	Width	Diameter js16	Bore H7
1.6	8	50	16
2.0	9	50	16
2.5	10	63	22
3.0	12	63	22
3.15	12	63	22
4.0	16	63	22
5.0	20	63	22
6.0	24	80	27

Radius N11	Width	Diameter js16	Bore H7
6.3	24	80	27
8.0	32	80	27
10.0	36	100	32
12.0	40	100	32
12.5	40	100	32
16.0	50	125	32
20.0	60	125	32

### Cutters – Concave

### BS122 (inches)

Diameter + 0.045" 0.000	Diameter of Circle	Bore + .00075" + .00025"	Width + 0.010" 0.000"
2.1/4	1/8	1	5/16
2.1/4	3/16	1	3/8
2.1/4	1/4	1	1/2
2.1/2	5/16	1	5/8
2.1/2	3/8	1	3/4
2.1/2	7/16	1	7/8
2.1/2	1/2	1	1
2.3/4	9/16	1	1.3/16
2.3/4	5/8	1	1.3/16
3	11/16	1	1.3/8

Diameter + 0.045" 0.000	Diameter of Circle	Bore + .00075" + .00025"	Width + 0.010" 0.000"
3	3/4	1	1.3/8
3.1/4	13/16	1	1.9/16
3.1/4	7/8	1	1.9/16
3.1/2	15/16	1	1.3/4
3.1/2	1	1	1.3/4
4	1.1/8	1.1/4	1.15/16
4	1.1/4	1.1/4	2.1/8
4.1/4	1.3/8	1.1/4	2.5/16
4.1/4	1.1/2	1.1/4	2.1/2





**Cutters – Single Corner**

**IS (mm)**

Diameter js16	Bore H7	Width	Corner Radius N11
50	16	5	1.60
50	16	5	2.00
63	22	5	2.50
63	22	6	3.00
63	22	6	3.15
63	22	8	4.00
63	22	10	5.00

Diameter js16	Bore H7	Width	Corner Radius N11
80	27	12	6.00
80	27	12	6.30
80	27	16	8.00
100	32	18	10.00
100	32	20	12.00
100	32	20	12.50
125	32	24	16.00
125	32	28	20.00

**Cutters – Single Corner**

**BS122 (inches)**

Diameter + 0.045" 0.000	Corner Radius	Bore + 0.00075" + 0.00025"	Width + 0.010" 0.000
2.1/4	1/16	1	5/16
2.1/4	3/32	1	5/16
2.1/4	1/8	1	5/16
2.1/2	5/32	1	7/16
2.1/2	3/16	1	7/16
2.1/2	7/32	1	1/2
2.1/2	1/4	1	1/2
2.3/4	9/32	1	5/8
2.3/4	5/16	1	5/8

Diameter + 0.045" 0.000	Corner Radius	Bore + 0.00075" + 0.00025"	Width + 0.010" 0.000
3	11/32	1	11/16
3	3/8	1	11/16
3.1/4	13/32	1	3/4
3.1/4	7/16	1	3/4
3.1/2	15/32	1	7/8
3.1/2	1/2	1	7/8
3.1/2	9/16	1	1
3.1/2	5/8	1	1
3.3/4	11/16	1	1.1/8
3.3/4	3/4	1	1.1/8



**Cutters – Gear Cutters**

**BS**

**(mm)**



Module in mm	Bore				
	22	27	32	40	50
	Diameter				
0.50	57	–	–	–	–
0.75	57	–	–	–	–
1.00	57	–	–	–	–
1.25	61	–	–	–	–
1.50	64	–	–	–	–
1.75	64	–	–	–	–
2.00	67	67	73	83	–
2.25	67	67	73	83	–
2.50	–	70	77	86	–
2.75	–	70	77	86	–
3.00	–	73	83	92	–
3.25	–	75	83	92	–
3.50	–	77	86	96	–
3.75	–	80	86	96	–
4.00	–	80	89	99	–
4.50	–	86	96	105	–
5.00	–	86	96	105	–
5.50	–	92	102	111	–
6.00	–	96	108	118	–
6.50	–	105	111	121	–
7.00	–	–	115	124	–
8.00	–	–	121	130	–
9.00	–	–	133	134	147
10.00	–	–	133	140	150
11.00	–	–	140	147	158
12.00	–	–	140	147	158
14.00	–	–	158	178	178
16.00	–	–	–	–	191
20.00	–	–	–	–	203

**Cutters – Rotary**

**BS**

**(inches)**



Dia. Of Rollers	Cutter No.	Outside Dia. of Cutter	Width of Cutter	Bore Dia.
0.197	1	2.3/4	0.50	1
0.197	2	2.3/4	0.50	1
0.197	3	2.3/4	0.50	1
0.250	1	2.3/4	0.60	1
0.250	2	2.3/4	0.60	1
0.250	3	2.3/4	0.60	1
0.305	1	2.3/4	0.75	1
0.305	2	2.3/4	0.75	1
0.305	3	2.3/4	0.75	1
0.335	1	2.3/4	0.75	1
0.335	2	2.3/4	0.75	1
0.335	3	2.3/4	0.75	1
0.400	1	2.3/4	0.90	1
0.400	2	2.3/4	0.90	1
0.400	3	2.3/4	0.90	1
0.475	1	3.1/4	1.05	1
0.475	2	3.1/4	1.05	1
0.475	3	3.1/2	1.05	1
0.625	1	4.1/4	1.35	1.1/4
0.625	2	4.1/4	1.30	1.1/4
0.625	3	4.1/4	1.25	1.1/4

**Cutters – Face Cutters**

**BS**

**(mm)**



Diameter + 0.045 <sup>±</sup> 0.000	Length + 0.030 <sup>±</sup> 0.000 <sup>±</sup>	Bore + 0.00075 <sup>±</sup> + 0.00025 <sup>±</sup>
1.3/4	1.1/4	3/4
2	1.1/4	3/4
2.1/2	1.1/4	3/4

Diameter + 0.045 <sup>±</sup> 0.000	Length + 0.030 <sup>±</sup> 0.000 <sup>±</sup>	Bore + 0.00075 <sup>±</sup> + 0.00025 <sup>±</sup>
3	1.11/16	1.1/8
4	1.3/4	1.1/8
5	2	1.1/2



**Cutters – Hollow Milling Cutters**

BS

(inches)



Bore Diameter 0.000 / - 0.002"	Outside Diameter	Overall Length
1/4	5/8	1.1/2
9/32	3/4	1.1/2
5/16	3/4	1.1/2
11/32	3/4	1.1/2
3/8	1	1.3/4
7/16	1	1.3/4
1/2	1	1.3/4
9/16	1.1/4	2

Bore Diameter 0.000 / - 0.002"	Outside Diameter	Overall Length
5/8	1.1/4	2
11/16	1.1/2	2
3/4	1.1/2	2
13/16	1.1/2	2
7/8	1.3/4	2.1/4
15/16	1.3/4	2.1/4
1	1.3/4	2.1/4

