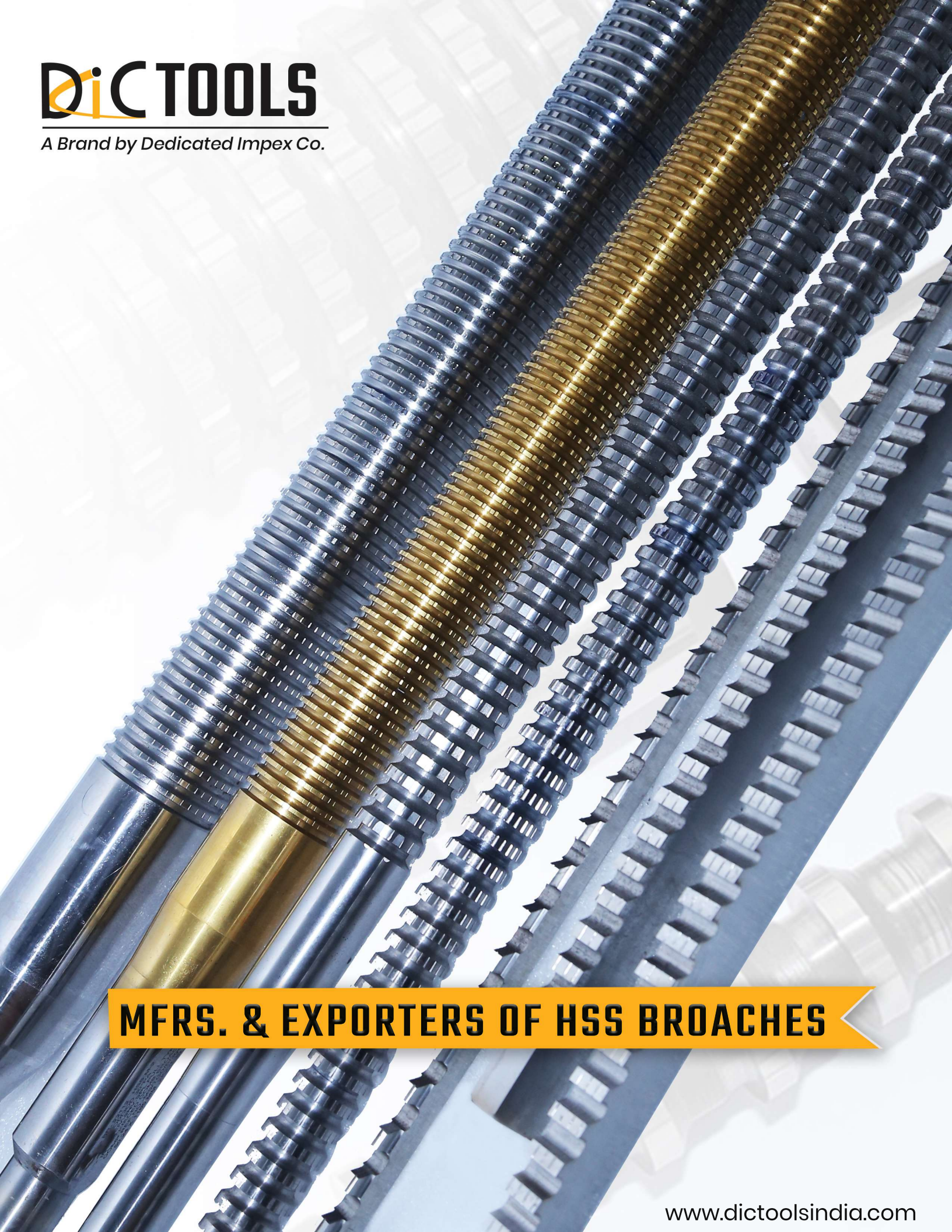
DiC TOOLS

A Brand by Dedicated Impex Co.



MFRS. & EXPORTERS OF HSS BROACHES

www.dictoolsindia.com

DiC TOOLS
A Brand by Dedicated Impex Co.

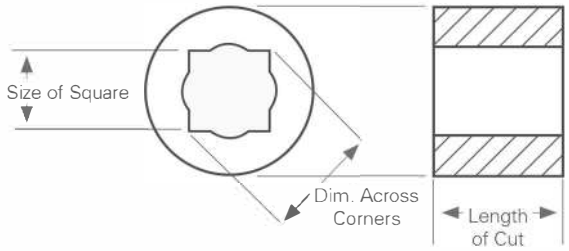
INDEX...

Product name	Page No.
Square Broaches	01
Round Broaches	02
Hexagonal Push Broaches (Inch & Metric)	03
Involute Spline Broaches	04
Keyway Broaches	05
Broach Bushings	06
Metric Keyway Broaches	07
Keyway Broach Sets	08- 12
Push-Type Keywey Broaches	13
Pull-Type Keywey Broaches	14-15
Keyseating Broaches	16
Metric Keyseating Broaches	17
Surface Broaches & Rack Broaches	18
Customer Segments	19

Square Broaches



American Standard / Metric Square Broach



Standard Square Broaches

Square Size (inch)	Tolerances	Broach Length	Pilot Diameter	Drill Size	Dimension Across Corners	Tooth Pitch	Length of Cut Min.	Length of Cut Max.	Pressure Required. for Max. L/C (lbs.)
1/8	.1255 – .1265	4-1/8	.1285	No. 30	.1750 – .1770	1/8	3/16	1/2	700
5/32	.1565 – .1575	5-1/8	.1590	No. 21	.2180 – .2200	5/32	1/4	1/2	600
3/16	.1880 – .1890	5-9/16	.1935	No. 10	.2620 – .2640		1/4	5/8	1,080
7/32	.2190 – .2200	6-3/8	.2280	No. 1	.3060 – .3080	3/16	1/4	3/4	1,410
1/4	.2505 – .2515	6-1/2	.2656	17/64	.3510 – .3530				1,740
9/32	.2815 – .2825	7-3/4	.2969	19/64	.3930 – .3950	7/32	5/16	1	2,130
5/16	.3130 – .3140	7-7/8	.3281	21/64	.4370 – .4390		3/8	1	2,100
11/32	.3440 – .3450	9-3/8	.3594	23/64	.4830 – .4850	1/4	3/8	1-1/4	3,480
3/8	.3755 – .3765	9-3/8	.3906	25/64	.5240 – .5260				3,720
13/32	.4065 – .4075	10-5/8	.4219	27/64	.5690 – .5710	9/32	1/2	1-3/8	4,080
7/16	.4380 – .4390	10-7/8	.4531	29/64	.6110 – .6130	5/16	1/2	1-3/8	4,500
15/32	.4690 – .4700	12	.5000	1/2	.6570 – .6590				4,000
1/2	.5005 – .5015	12	.5312	17/32	.6990 – .7010				4,500
9/16	.5630 – .5640	14-3/4	.5938	19/32	.7870 – .7890	3/8	1/2	1-1/2	5,700
5/8	.6260 – .6270	16-5/16	.6562	21/32	.8730 – .8750	7/16	5/8	1-5/8	5,920
11/16	.6885 – .6895	17-3/4	.7500	3/4	.9630 – .9650				4,800
3/4	.7510 – .7520	17-3/4	.8125	13/16	1.0450 – 1.0470				5,940
7/8	.8765 – .8775	22-3/4	.9375	15/16	1.2270 – 1.2290	7/16	5/8	2	9,200
1	1.002 – 1.0030	24-1/8	1.0938	1-3/32	1.4030 – 1.4050				9,200

Metric Standard Square Broaches

Square Size (mm)	Tolerances (Dec. Equiv.)	Broach Length	Pilot Diameter	Drill Size	Dimension Across Corners	Tooth Pitch	Length of Cut Min.	Length of Cut Max.	Pressure Required. for Max. L/C (lbs.)
4	.1575 – .1580	5-1/8	.1614	4.1	.2205 – .2220	5/32	1/4	1/2	480
5	.1968 – .1973	6-1/2	.2047	5.2	.2765 – .2780				800
6	.2362 – .2370	6-11/16	.2519	6.4	.3300 – .3320	3/16	1/4	3/4	1,300
7	.2756 – .2764	7-3/4	.2913	7.4	.3850 – .3870	7/32	3/8	1	1,800
8	.3150 – .3158	7-7/8	.3307	8.4	.4400 – .4420				2,300
9	3543 – .3551	9-3/8	.3701	9.4	.4970 – .4990	1/4	3/8	1-1/4	3,500
10	.3937 – .3945	10-1/4	.4094	10.4	.5530 – .5550				3,600
12	.4724 – .4732	12	.5039	12.8	.6620 – .6640	5/16	1/2	1-3/8	4,200
14	.5512 – .5520	14-3/4	.5826	14.8	.7730 – .7750	3/8	1/2	1-1/2	5,600
16	.6302 – .6310	16-5/16	.6614	16.8	.8790 – .8810	7/16	5/8	1-5/8	6,000
18	.7090 – .7097	17-7/8	.7716	19.6	.9930 – .9950				5,200
20	.7874 – .7882	20-7/8	.8504	21.6	1.1030 – 1.1050				6,600
22	.8663 – .8671	22-3/4	.9291	23.6	1.2130 – 1.2150	7/16	5/8	2	8,900
24	.9453 – .9460	24	1.0079	25.6	1.3230 – 1.3250				9,200
25	.9845 – .9852	24-1/8	1.0630	27.0	1.3790 – 1.3810				9,200

Round Broaches

High Speed Steel



Diameter (Inch)	Broach Length (Inch)	Pilot Diameter (Inch)	Drill Size (Inch)	Minimum Length of Cut (Inch)	Maximum Length of Cut (Inch)
1/4	5-7/8	15/64	15/64	5/16	3/4
5/16	5-7/8	19/64	19/64	5/16	3/4
3/8	6-7/8	23/64	23/64	3/8	1
7/16	6-7/8	27/64	27/64	3/8	1
1/2	8	31/64	31/64	1/2	1-1/4
5/8	8-1/2	39/64	39/64	1/2	1-1/4
3/4	9-1/8	47/64	47/64	5/8	1-1/2
7/8	9-1/4	55/64	55/64	5/8	1-1/2
1	10-1/4	63/64	63/64	5/8	1-3/4

Hexagonal Broaches

High Speed Steel



Hex Size (Inch)	Broach Length (Inch)	Pilot Diameter (Inch)	Drill Size (Inch)	Minimum Length of Cut (Inch)	Maximum Length of Cut (Inch)
1/8	4-1/8	1/8	1/8	3/16	3/8
5/32	4-15/16	5/32	5/32	1/4	1/2
3/16	5-1/16	3/16	3/16	1/4	5/8
7/32	5-3/8	7/32	7/32	1/4	3/4
1/4	6	1/4	1/4	1/4	3/4
9/32	7-1/4	9/32	9/32	5/16	1
5/16	7-3/4	5/16	5/16	3/8	1
11/32	7-3/4	11/32	11/32	3/8	1-1/4
3/8	8-1/2	3/8	3/8	3/8	1-1/4
13/32	9-5/8	13/32	13/32	1/2	1-3/8
7/16	10-5/8	7/16	7/16	1/2	1-3/8
15/32	11-7/8	15/32	15/32	1/2	1-3/8
1/2	11-7/8	1/2	1/2	1/2	1-3/8
9/16	13-3/4	9/16	9/16	1/2	1-5/8
5/8	16-1/4	5/8	5/8	5/8	2
11/16	16-3/4	11/16	11/16	5/8	2
3/4	17-1/4	3/4	3/4	5/8	2
7/8	18-1/2	7/8	7/8	5/8	2
1	19-3/4	1	1	5/8	2

Hexagonal Push Broaches

Hexagonal Push Broaches 1/8" - 1" — Standard Inch

Size Square	EDP No.	Dimension Tolerance	Dimension Across Corners	Pilot Diameter	Drill Size	Broach Length	Length of Cut Min.	Length of Cut Max.	Pressure for Max.L/C (lbs.)
1/8	12008	.1255 - .1260	.1450 - .1470	.1245 –	1/8	4-5/8	3/16	3/8	120 lbs
5/32	12010	.1565 - .1570	.1800 - .1820	.1557 –	5/32	5-1/2	1/4	1-1/2	340 lbs
3/16	12012	.1880 - .1890	.2145 - .2155	.1870 –	3/16	5-9/16	1/4	5/8	520 lbs
7/32	12014	.2190 - .2200	.2500 - .2520	.2182 –	7/32	6	1/4	3/4	890 lbs
1/4	12016	.2505 - .2515	.2865 - .2875	.2495 –	1/4	6-1/2	1/4	3/4	1,250 lbs
9/32	12018	.2815 - .2825	.3220 - .3240	.2807 –	9/32	7-3/4	3/8	1	1,650 lbs
5/16	12020	.3130 - .3140	.3580 - .3590	.3120 –	5/16	8-1/4	3/8	1	2,175 lbs
11/32	12022	.3440 - .3450	.3950 - .3970	.3432 –	11/32	8-1/4	3/8	1-1/4	3,500 lbs
3/8	12024	.3755 - .3765	.4300 - .4310	.3745 –	3/8	9	3/8	1-1/4	3,700 lbs
13/32	12026	.4065 - .4075	.4670 - .4690	.4057 –	13/32	10	1/2	1-3/8	4,100 lbs
7/16	12028	.4385 - .4395	.5020 - .5030	.4370 –	7/16	10-3/4	1/2	1-3/8	4,575 lbs
15/32	12030	.4690 - .4700	.5390 - .5410	.4682 –	15/32	12-3/8	1/2	1-3/8	4,700 lbs
1/2	12032	.5005 - .5015	.5740 - .5750	.4995 –	1/2	12-1/2	1/2	1-3/8	5,300 lbs
9/16	12036	.5630 - .5640	.6480 - .6500	.5620 –	9/16	14-1/4	1/2	1-1/2	6,700 lbs
5/8	12040	.6260 - .6270	.7170 - .7185	.6245 –	5/8	16-7/8	5/8	1-5/8	7,250 lbs
11/16	12044	.6880 - .6890	.7930 - .7950	.6870 –	11/16	17	5/8	1-5/8	9,300 lbs
3/4	12048	.7510 - .7520	.8610 - .8625	.7495 –	3/4	17-7/8	5/8	1-5/8	13,500 lbs
7/8	12056	.8755 - .8765	1.0060 - 1.0075	.8745 –	7/8	18-7/8	5/8	1-5/8	18,500 lbs
1	12064	1.0020 - 1.0030	1.1520 - 1.1530	.9995 –	1	19-7/8	5/8	1-5/8	20,050 lbs

Hexagonal Push Broaches 4mm - 25mm — Metric

Size Square	EDP No.	Dimension Tolerance	Dimension Across Corners	Pilot Diameter	Drill Size	Broach Length	Length of Cut Min.	Length of Cut Max.	Pressure for Max.L/C (lbs.)
4 mm	12104	.1580 - .1585	.1820 - .1830	.1575 –	4.0	5-1/2	1/4	1/2	340 lbs
5 mm	12105	.1973 - .1983	.2270 - .2280	.1968 –	5.0	6	1/4	3/4	890 lbs
6mm	12106	.2367 - .2377	.2730 - .2740	.2362 –	6.0	6-1/2	1/4	3/4	1,250 lbs
7 mm	12107	.2760 - .2770	.3180 - .3190	.2756 –	7.0	7-3/4	3/8	1	1,650 lbs
8mm	12108	.3155 - .3165	.3634 - .3644	.3150 –	8.0	8-1/4	3/8	1	2,175 lbs
10 mm	12110	.3942 - .3952	.4543 - .4553	.3937 –	10.0	10	1/2	1	4,100 lbs
12 mm	12112	.4729 - .4739	.5452 - .5462	.4724 –	12.0	12-3/8	1/2	1-3/8	4,700 lbs
14 mm	12114	.5517 - .5527	.6332 - .6342	.5512 –	14.0	14-1/4	1/2	1-3/8	6,700 lbs
16 mm	12116	.6310 - .6320	.7248 - .7258	.6290 –	16.0	16-7/8	5/8	1-1/2	7,250 lbs
18 mm	12118	.7092 - .7102	.8150 - .8160	.7087 –	18.0	17	5/8	1-5/8	9,400 lbs
20 mm	12120	.7879 - .7889	.9049 - .9059	.7874 –	20.0	17-7/8	5/8	1-5/8	14,150 lbs
22 mm	12122	.8666 - .8676	.9958 - .9968	.8661 –	22.0	18-7/8	5/8	1-5/8	18,500 lbs
24 mm	12124	.9454 - .9464	1.0868 - 1.0878	.9449 –	24.0	19-7/8	5/8	1-5/8	20,500 lbs
25 mm	12125	.9848 - .9858	1.1323 - 1.1333	.9842 –	25.0	19-7/8	5/8	1-5/8	22,000 lbs



Involute Spline Broach

We suply Push & Pull Type Broaches in HSS M2, HSS M3 Type II, HSS M35 and ASP2030 Grades.

SPLINE BROACHES

- Straight
- Involute
- Serration
- Interspace



Module	Width of base chip space	No. of theeth	Overall length	Broaching length
1	1.571	12~40	430~1000	10~120
1.25	1.963		550~1120	18~120
1.5	2.356		570~1140	
2	3.142		650~1390	
2.5	3.927		740~1600	
3	4.712	12~30	820~1580	
3.5	5.498	12~26	850~1670	
4	6.283	12~22	920~1520	
5	7.854	12~18	1120~1620	

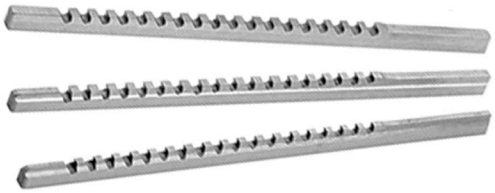
Involute spline broaches with standard pressure angle 30

Fine pitch involute broaches of m0.5~m0.8 , base circle dia. ≧ 6mm can be ordered

Involute serration broaches with standard PA45 , m0.5~m2.5 can be ordered also

NOTE: WE CAN MANUFACTURE BROACHES UPTO 2000MM AS PER CUSTOMER REQUIREMENT.

Keyway Broaches (High Speed Steel & TiN Coated)



Broach Size	Broach Dimensions (Inch)	No. of Shims INCLUDED	Tooth Pitch (Inch)	No. of Teeth	Minimum Length of Cut (Inch)	Maximum Length of Cut (Inch)
1/16 A	1/8 x 5	0	3/16	18	13/64	1-1/8
3/32 A	1/8 x 5	0	3/16	18	13/64	1-1/8
1/8 A	1/8 x 5	1	3/16	18	13/64	1-1/8
3/32 B	3/16 x 6-3/4	0	9/32	16	19/64	1-11/16
1/8 B	3/16 x 6-3/4	1	9/32	16	19/64	1-11/16
5/32 B	3/16 x 6-3/4	1	9/32	16	19/64	1-11/16
3/16 B	3/16 x 6-3/4	1	9/32	16	19/64	1-11/16
3/16 C	3/8 x 11-3/4	1	3/8	20	25/64	2-1/2
1/4 C	3/8 x 11-3/4	1	3/8	20	25/64	2-1/2
5/16 C	3/8 x 11-3/4	2	3/8	20	25/64	2-1/2
3/8 C	3/8 x 11-3/4	2	3/8	20	25/64	2-1/2
5/16 D	9/16 x 13-7/8	2	5/8	17	1	6
3/8 D	9/16 x 13-7/8	2	5/8	17	1	6
7/16 D	9/16 x 13-7/8	3	5/8	17	1	6
1/2 D	9/16 x 13-7/8	3	5/8	17	1	6
5/8 E	3/4 x 15-1/2	4	5/8	20	1	6
3/4 E	3/4 x 15-1/2	5	5/8	20	1	6
7/8 F	1 x 20-1/4	6	5/8	26	1	6
1 F	1 x 20-1/4	7	5/8	26	1	6
1-1/8	1-1/8 x 20-1/4	8	5/8	26	1	6
1-1/4	1-1/4 x 20-1/4	9	3/4	22	1-1/2	8

Broach Shims



Broach Size	Shim Thickness (Inch)
1/8 A	0.0310
1/8 B	0.0310
5/32 B	0.0420
3/16 B	0.0500
3/16 C	0.0500
1/4 C	0.0625

Broach Size	Shim Thickness (Inch)
5/16 C	0.0550
3/8 C	0.0625
5/16 D	0.0560
3/8 D	0.0625
7/16 D	0.0560
1/2 D	0.0625

Broach Size	Shim Thickness (Inch)
5/8 E	0.0625
3/4 E	0.0625
7/8 F	0.0625
1 F	0.0625
1-1/8	0.0625
1-1/4	0.0625

Broach Bushings

Collared & Plain Types



Diameter (Inch)	Collared Bushings			Plain Bushings	
	A Bushings for A Broaches	B Bushings for B Broaches	C Bushings for C Broaches	D Bushings for D Broaches	E Bushings for E Broaches
	Length (Inch)	Length (Inch)	Length (Inch)	Length (Inch)	Length (Inch)
1/4	1-1/8	–	–	–	–
5/16	1-1/8	–	–	–	–
3/8	1-1/8	–	–	–	–
7/16	1-1/8	–	–	–	–
1/2	1-1/8	1-11/16	–	–	–
9/16	–	1-11/16	–	–	–
5/8	–	1-11/16	–	–	–
11/16	–	1-11/16	–	–	–
3/4	–	1-11/16	2-1/2	–	–
13/16	–	1-11/16	2-1/2	–	–
7/8	–	1-11/16	2-1/2	–	–
15/16	–	–	2-1/2	–	–
1	–	–	2-1/2	–	–
1-1/16	–	–	2-1/2	–	–
1-1/8	–	–	2-1/2	–	–
1-3/16	–	–	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	4	–
1-1/2	–	–	2-1/2	4	–
1-9/16	–	–	2-1/2	4	–
1-5/8	–	–	–	4	–
1-11/16	–	–	–	4	–
1-3/4	–	–	–	4	–
1-13/16	–	–	–	5	–
1-7/8	–	–	–	5	–
1-15/16	–	–	–	5	–
2	–	–	–	5	–
2-1/16	–	–	–	5	–
2-1/8	–	–	–	5	–
2-3/16	–	–	–	5	–
2-1/4	–	–	–	5	–
2-5/16	–	–	–	5	6
2-3/8	–	–	–	6	6
2-7/16	–	–	–	6	6
2-1/2	–	–	–	6	6
2-9/16	–	–	–	6	6
2-5/8	–	–	–	6	6
2-11/16	–	–	–	6	6
2-3/4	–	–	–	6	6
2-13/16	–	–	–	6	6
2-7/8	–	–	–	6	6
2-15/16	–	–	–	6	6
3	–	–	–	6	6

Metric Keyway Broaches

High Speed Steel & TiN Coated



Keyway Width (mm)	Broach Dimensions (Inch)	Standard Keys (mm)	No. of Shims INCLUDED	Tooth Pitch (Inch)	Minimum Length of Cut (Inch)	Maximum Length of Cut (Inch)
2 A	1/8 x 5	2 x 2	0	3/16	13/64	1-1/8
3 A	1/8 x 5	3 x 3	1	3/16	13/64	1-1/8
4 B1	1/4 x 6-3/4	4 x 4	1	9/32	19/64	1-11/16
5 B1	1/4 x 6-3/4	5 x 5	1	9/32	19/64	1-11/16
5 C	3/8 x 11-3/4	5 x 5	1	3/8	25/64	2-1/2
6 C	3/8 x 11-3/4	6 x 6	1	3/8	25/64	2-1/2
8 C	3/8 x 11-3/4	8 x 7	2	3/8	25/64	2-1/2
10 D	9/16 x 13-7/8	10 x 8	2	5/8	1	6
12 D	9/16 x 13-7/8	12 x 8	2	5/8	1	6
14 D	9/16 x 13-7/8	14 x 9	2	5/8	1	6
16 E	3/4 x 15-1/2	16 x 10	3	5/8	1	6
18 E	3/4 x 15-1/2	18 x 11	3	5/8	1	6
20 F	1 x 20-1/4	20 x 12	3	5/8	1	6
22 F	1 x 20-1/4	22 x 14	4	5/8	1	6
24 F	1 x 20-1/4	24 x 14	5	5/8	1	6
25 F	1 x 20-1/4	25 x 14	4	5/8	1	6

Metric Broach Shims



Broach Size	Shim Thickness (Inch)
3 A	0.0310
4 B1	0.0380
5 B1	0.0500
5 C	0.0470
6 C	0.0625
8 C	0.0500

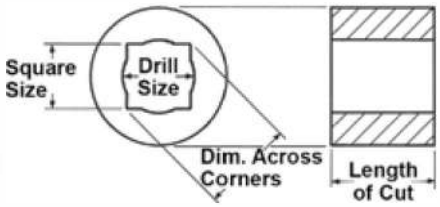
Broach Size	Shim Thickness (Inch)
10 D	0.0560
12 D	0.0560
14 D	0.0625
16 E	0.0560
18 E	0.0560
20 F	0.0625

Broach Size	Shim Thickness (Inch)
22 F	0.0560
24 F	0.0625
25 F	0.0560

Metric Square Broaches

High Speed Steel





Square Size (mm)	Tolerances Dec. Equiv. (Inch)	Broach Length (Inch)	Pilot Diameter (Inch)	Drill Size (mm)	Minimum Length of Cut (Inch)	Maximum Length of Cut (Inch)
4	0.1575 - 0.1580	5-1/8	0.1614	4.10	1/4	1/2
5	0.1968 - 0.1973	6-1/2	0.2047	5.20	1/4	1/2
6	0.2362 - 0.2367	6-11/16	0.2510	6.40	1/4	3/4
7	0.2756 - 0.2764	8	0.2913	7.40	3/8	1
8	0.3150 - 0.3156	7-1/8	0.3307	8.40	3/8	1
10	0.3937 - 0.3943	10-1/8	0.4094	10.40	3/8	1-1/4
12	0.4724 - 0.4731	12	0.5039	12.80	1/2	1-3/8
14	0.5512 - 0.5519	14-3/4	0.5826	14.80	1/2	1-1/2

Keyway Broach Sets



No. 00 Precision Set / No. 1

3 Broaches and 5 Bushings = 15 Keyway combinations.
Collared bushings only. Wt. 1 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/16, 3/32, 1/8	A / I	1/4, 5/16, 3/8, 7/16, 1/2

Standard Set No. 10

4 Broaches and 9 Bushings = 18 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	1/2, 5/8, 3/4, 7/8
1/4, 3/8	C / III	1, 1-1/8, 1-1/4, 1-3/8, 1-1/2

Standard Set No. C-10

4 Broaches and 18 Bushings = 36 Keyway combinations.
Collared bushings only. Wt. 13 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8
1/4, 3/8	C / III	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16

Standard Set No. 10A

4 Broaches and 9 Bushings = 18 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	9/16, 11/16, 13/16
1/4, 3/8	C / III	15/16, 1-1/16, 1-3/16 1-5/16, 1-7/16, 1-9/16

Standard Set No. C-10A

3 Broaches and 18 Bushings = 36 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8	B / II	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8
3/16, 1/4	C / III	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16

Standard Set No. 30

3 Broaches and 9 Bushings = 15 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8	B / II	1/2, 5/8, 3/4
3/16 , 1/4	C / III	7/8, 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2

Standard Set No. 30A / C-2

3 Broaches and 9 Bushings = 15 Keyway combinations.
Collared bushings only. Wt. 8 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8	B / II	9/16, 11/16, 13/16
3/16, 1/4	C / III	15/16, 1-1/16, 1-3/16, 1-5/16, 1-7/16, 1-9/16

Standard Set No. C-2A

3 Broaches and 9 Bushings = 15 Keyway combinations.
Collared bushings only. Wt. 8 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8	B / II	1/2, 5/8, 3/4, 7/8
3/16 , 1/4	C / III	1, 1-1/8, 1-1/4, 1-3/8, 1-1/2

Keyway Broach Sets



No. 10-10A Combination Set

4 Broaches and 18 Bushings = 36 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8
1/4, 3/8	C / III	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16

Standard Set C-1

4 Broaches and 9 Bushings = 18 Keyway combinations.
Collared bushings only. Wt. 8 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	1/2, 5/8, 3/4, 7/8
1/4, 3/8	C / III	1, 1-1/8, 1-1/4, 1-3/8, 1-1/2

No. 20 Combination Set

5 Broaches and 18 Bushings = 47 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8
1/4, 5/16, 3/8	C / III	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16

Standard Set C-1A

4 Broaches and 9 Bushings = 18 Keyway combinations.
Collared bushings only. Wt. 8 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	9/16, 11/16, 13/16
1/4, 3/8	C / III	15/16, 1-1/16, 1-3/16 1-5/16, 1-7/16, 1-9/16

No. 30-30A Combination Set

3 Broaches and 18 Bushings = 30 Keyway combinations.
Collared bushings only.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8	B / II	1/2, 9/16, 5/8, 11/16, 3/4, 13/16
3/16, 1/4	C / III	7/8, 15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16

Keyway Broach Sets



Standard Set No. 40A / 3-D

4 Broaches and 8 Bushings = 32 Keyway combinations.
Plain bushings only. Wt. 50 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
5/16, 3/8, 7/16, 1/2	D / IV	1-1/2, 1-5/8, 1-3/4, 1-7/8, 2, 2-1/8, 2-1/4, 2-1/2

Heavy Duty Set No. 40 1/2 A / 4-E

2 Broaches and 6 Bushings = 12 Keyway combinations.
Plain bushings only. Wt. 74 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
5/8, 3/4	E / V	2-3/8, 2-1/2, 2-5/8, 2-3/4, 2-7/8, 3

Standard Set No. 40 / 3-DA

4 Broaches and 8 Bushings = 32 Keyway combinations.
Plain bushings only. Wt. 50 lbs

Keyway Size (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
5/16, 3/8, 7/16, 1/2	D / IV	1-7/16, 1-9/16, 1-11/16, 1-13/16, 1-15/16, 2-3/16, 2-7/16, 2-15/16

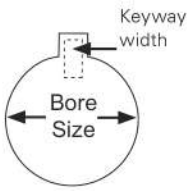
Heavy Duty Set No. 40 1/2 / 4-F

2 Broaches and 6 Bushings = 12 Keyway combinations.
Plain bushings only. Wt. 74 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
5/8, 3/4	E / V	2-5/16, 2-7/16, 2-9/16, 2-11/16, 2-13/16, 2-15/16

Keyway Broach Sets





Heavy Duty Set No. 50 / No. 5

3 Broaches and 17 Bushings = 29 Keyway combinations.
Plain bushings only. Wt. 175 lbs

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/2	D / IV	2, 2-1/16, 2-1/8, 2-3/16, 2-1/4, 2-5/16, 2-3/8, 2-7/16
5/8, 3/4	E / V	2-5/16, 2-3/8, 2-7/16, 2-1/2, 2-9/16, 2-5/8,
		2-11/16, 2-3/4, 2-13/16, 2-7/8, 2-15/16, 3

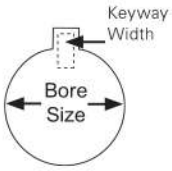
No. 100 Heavy Duty Combination Set

9 Broaches and 44 Bushings = 102 Keyway combinations.
Collared B / II and C / III bushings, plain D / IV and E / V bushing.

Keyway Sizes (inch)	Broach Style	Bushing Diameters *(bore sizes, inch)*
1/8, 3/16	B / II	1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8
1/4, 5/16	C / III	15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16
3/8, 7/16, 1/2	D / IV	1-7/16, 1-1/2, 1-9/16, 1-5/8, 1-11/16, 1-3/4, 1-13/16, 1-7/8, 1-15/16, 2, 2-1/16, 2-1/8, 2- 3/16, 2-1/4
5/8, 3/4	E / V	2-5/16, 2-3/8, 2-7/16, 2-1/2, 2-9/16, 2-5/8, 2-11/16, 2-3/4, 2-13/16, 2-7/8, 2-15/16, 3

Metric Keyway Broach Sets







No. 30 Metric Set

6 Broaches and 18 Bushings = 36 Keyway Combinations
Collared Bushings Only. Wt. 100 lbs

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
14	D / IV	44, 46, 48, 50
16	E / V	52, 54, 55, 56, 58, 60, 62, 64, 65, 66, 68, 70
18	E / V	

No. 40 Metric Set

6 Broaches and 18 Bushings = 36 Keyway Combinations
Collared Bushings Only. Wt. 12 lbs

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
2 3	A / I	8, 10
4 5	B / II	12, 14, 16, 18
6 8	C / III	18, 19, 20, 22, 24, 25, 26, 28, 30, 32, 34

No. 60 Metric Set

2 Broaches and 3 Bushings = 6 Keyway combinations.
Collared bushings only.

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
2 3	A / I	6, 8, 10

No. 70 Metric Set

4 Broaches and 13 Bushings = 26 Keyway combinations.
Collared bushings only.

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
4 5	B / II	12, 14
		15, 16
6 8	C / III	18, 19, 20, 22
		24, 25, 26, 28, 30

No. 80 Metric Set

3 Broaches and 12 Bushings = 36 Keyway combinations.
Plain bushings only.

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
10	D / IV	32, 34, 35, 36
12		38, 40, 42, 44
14		45, 46, 48, 50

No. 90 Metric Set

2 Broaches and 8 Bushings = 16 Keyway combinations.
Plain bushings only.

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
16	E / V	52, 54, 55, 56
18		58, 60, 62, 65

Precision Set 10

2 Broaches and 5 Bushings = 10 Keyway combinations.
Collared bushings only. Wt. 1 lbs

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
2 3	A / I	6, 7, 8, 9, 10

Metric Set 12

2 Broaches and 6 Bushings = 12 Keyway combinations.
Plain bushings only. Wt. 70 lbs

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
16 18	E / V	54, 56, 58, 60, 62, 64

Metric Set 18

4 Broaches and 9 Bushings = 18 Keyway combinations. Collared bushings only. Wt. 7 lbs

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
4 5	B / II	12, 14, 16, 18
6 8	C / III	20, 22, 24, 26, 28

Metric Set 24

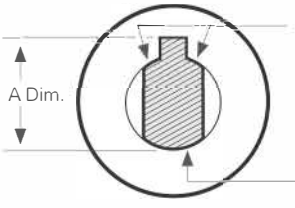
3 Broaches and 8 Bushings = 24 Keyway combinations.
Plain bushings only. Wt. 36 lbs

Keyway Sizes (mm)	Broach Style	Bushing Diameters *(bore sizes, mm)*
10 12 14	D / IV	34, 36, 38, 40, 42, 44, 46, 48

Push-Type Keyway Broaches



Production Broach Construction

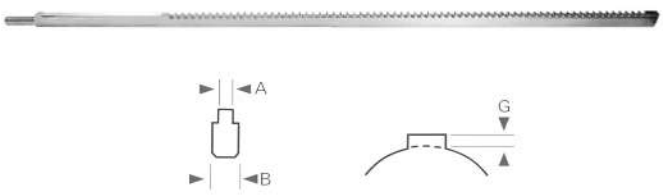


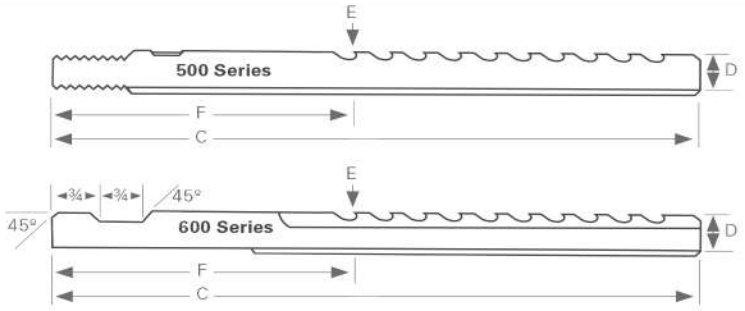
Shoulders and back are form-ground to fit bore. These 3 supporting surfaces extend the full length of the broach.

Keyway Width	Body Diameter	A Dimension	Broach Length	Tooth Pitch	Length of Cut* Min.	Length of Cut* Max.	Pressure Required. for Max. L/C (lbs.)
1/16"	3/16"	.224"	5-5/8	3/16	13/64	1	390
	1/4"	.287"	6-3/16	3/16	13/64	1	390
1/8"	3/8"	.437"	8-1/2	1/4	17/64	1-1/4	850
	1/2"	.565"	11-3/4	3/8	25/64	2-1/2	1,440
	9/16"	.630"	11-3/4	3/8	25/64	2-1/2	1,440
	5/8"	.693"	11-3/4	3/8	25/64	2-1/2	1,440
3/16"	5/8"	.716"	14-3/4	3/8	25/64	2-1/2	2,170
	3/4"	.844"					
	7/8"	.970"					
1/4"	1"	1.121"	18	3/8	25/64	2-1/2	2,870
4mm	10mm	11.9mm	12	9/32	19/64	1-7/8	1,550
		.468"					

Pull-Type Keyway Broaches

Industry Standard 500 and 600 Series





Industry Standard 500 and 600 Series

Nom. Dim.	A Decimal Dim.†	Min. Hole Size	Min Length Cut#	Max Length Cut*	B	C	D	E	F	G	No.of Passes	Thread Size
1/16	.0635	3/8	3/8	1-1/4	.1552	20	.313	.271	7-13/16	.042	1	1/4 – 20
3/32	.0948	7/16	1/2	1-1/2	.1865	24	.367	.309	8-1/4	.058	1	5/16 – 18
3/32	.0948	9/16	5/8	2-1/2	.2490	33	.491	.433	10	.058	1	3/8 – 16
1/8	.1260	1/2	1/2	1-1/2	.2490	30	.438	.364	9	.074	1	3/8 – 16
1/8	.1260	11/16	5/8	2-1/2	.3115	33	.594	.520	10	.074	1	1/2 – 13
5/32	.1572	19/32	1/2	1-1/2	.2490	30	.525	.436	9	.089	1	3/8 – 16
5/32	.1572	23/32	5/8	2-1/2	.3115	33	.625	.536	10	.089	1	1/2 – 13
3/16	.1885	11/16	5/8	2-1/2	.3740	36	.581	.476	10	.105	1	1/2 – 13
3/16	.1885	7/8	11/16	3-1/2	.3740	36	.796	.691	10-11/16	.105	1	1/2 – 13
7/32	.2198	11/16	5/8	2-1/2	.3740	33	.557	.437	10	.120	1	1/2 – 13
7/32	.2198	15/16	11/16	3-1/2	.3740	42	.813	.693	11-1/16	.120	1	1/2 – 13
1/4	.2510	3/4	5/8	2-1/2	.3740	36	.612	.476	10	.136	1	1/2 – 13
1/4	.2510	1	11/16	4	.4990	45	.877	.741	12	.136	1	5/8 – 11
1/4	.2510	1-3/8	7/8	6	.6240	51	1.250	1.114	13-3/4	.136	1	3/4 – 10
9/32	.2828	7/8	11/16	4	.4990	42	.716	.564	11-5/8	.152	1	5/8 – 11
9/32	.2828	1-1/4	7/8	6	.4990	51	1.093	.941	13-1/2	.152	1	5/8 – 11
5/16	.3140	1-1/16	11/16	4	.4990	45	.908	.741	12	.167	1	5/8 – 11
5/16	.3140	1-5/16	7/8	6	.4990	51	1.158	.991	13-3/4	.167	1	5/8 – 11
3/8	.3765	1-9/16	11/16	4	.4990	45	.938	.739	12	.199	1	5/8 – 11
3/8	.3765	1-5/16	7/8	6	.4990	54	1.189	.990	13-1/2	.199	1	5/8 – 11
7/16	.4390	1-9/16	11/16	4	.6240	48	1.390	1.160	12	.230	1	3/4 – 10
7/16	.4390	1-3/4	1	8	.6240	48	1.611	1.496	15-5/8	.230	2	3/4 – 10
1/2	.5015	1-1/2	11/16	4	.6240	48	1.312	1.051	12	.261	1	3/4 – 10
1/2	.5015	1-9/16	1	8	.6240	48	1.377	1.246	16-1/2	.261	2	3/4 – 10
9/16	.5645	1-11/16	11/16	4	.6865	54	1.438	1.146	11-13/16	.292	1	1 – 8
9/16	.5645	1-5/8	1	8	.6865	51	1.391	1.245	16	.292	2	1 – 8
9/16	.5645	1-15/16	1-1/8	12	.8740	60	1.641	1.495	20	.292	2	1 – 8
5/8	.6270	1-7/8	1-1/16	4	.7490	60	1.625	1.301	12	.324	1	1 – 8
5/8	.6270	1-15/16	1	8	.8740	54	1.657	1.495	16-3/8	.324	2	1 – 8
5/8	.6270	1-15/16	1-1/8	12	.8740	60	1.657	1.495	20	.324	2	1 – 8
3/4	.7520	1-15/16	11/ 16	4	.8740	60	1.625	1.239	12	.386	1	1 – 8
3/4	.7520	2-1/16	1	8	.9990	60	1.688	1.495	16-1/4	.386	2	1-1/4 – 7
3/4	.7520	2-1/16	1-1/8	12	.9990	60	1.688	1.560	20	.386	3	1-1/4 – 7
7/8	.8770	2-1/4	11/16	4	1.1240	63	1.875	1.426	12-3/8	.449	1	1-1/4 – 7
7/8	.8770	2-1/8	1	8	1.1240	63	1.719	1.494	15-3/4	.449	2	1-1/4 – 7
7/8	.8770	2-1/8	1-1/8	12	1.1240	63	1.719	1.569	20	.449	3	1-1/4 – 7
1	1.0020	2-1/4	5/8	2-1/2	1.2490	63	1.750	1.239	10-1/2	.511	1	1-1/2 – 6
1	1.0020	2-1/4	7/8	6	1.2490	63	1.750	1.494	14-1/4	.511	2	1-1/2 – 6
1	1.0020	2-1/4	1-1/8	12	1.2490	63	1.750	1.580	20	.511	3	1-1/2 – 6



Pull-Type Keyway Broaches

Nom. Dim.	A Decimal Dim.†	Min. Hole Size (mm)	Min Length Cut#	Max Length Cut*	B	C	D	E	F	G	No.of Passes	Thread Size
2	.0792	9 .354	9.5 3/8	31.8 1-1/4	3.942 .1552	508 20	7.95 .313	6.60 .260	197 7-3/4	1.35 .053	1	1/4 – 20
3	.1186	11 .433	12.7 1/2	38 1-1/2	4.737 .1865	610 24	9.32 .367	7.49 .295	197 7-3/4	1.83 .072	1	5/16 – 18
4	.1581	13 .512	12.7 1/2	38 1-1/2	6.325 .2490	838 33	11.13 .438	8.81 .347	229 9	2.31 .091	1	3/8 – 16
	.1581	13 .512	15.9 5/8	63.5 2-1/2	6.325 .2490	915 36	11.07 .436	8.76 .345	254 10	2.31 .091		
5	.1974	14 .551	14.3 9/16	44.5 1-3/4	7.91 .3115	915 36	11.07 .436	8.18 .322	248 9-3/4	2.89 .114	1	1/2 – 13
	.1974	23 .906	15.9 5/8	76.2 3	9.5 .3740	1067 42	2.65 .813	17.75 .699	279 11	2.89 .114		
6	.2368	18 .709	15.9 5/8	63.5 2-1/2	9.5 .3740	915 36	15.54 .612	11.96 .471	254 10	3.58 .141	1	1/2 – 13
	.2368	26 1.024	17.5 11/16	102 4	12.67 .4990	1143 45	22.28 .877	18.69 .736	305 12	3.58 .141		5/8 – 11
8	.3157	27 1.063	17.5 11/16	102 4	12.67 .4990	1143 45	23.06 .908	18.77 .739	305 12	4.29 .169	1	5/8 – 11
	.3157	33 1.299	22.2 7/8	152 6	12.67 .4990	1295 51	29.41 1.158	25.12 .989	353 13-7/8	4.29 .169		
10	.3944	27 1.063	17.5 11/16	102 4	12.67 .4990	1143 45	23.27 .916	18.77 .739	305 12	4.49 .177	1	5/8 – 11
	.3944	36 1.417	22.2 7/8	152 6	15.85 .6240	1295 51	31.75 1.250	27.25 1.073	353 13-7/8	4.49 .177		3/4 – 10
12	.4733	39 1.535	17.5 11/16	102 4	15.85 .6240	1219 48	34.06 1.341	29.46 1.160	302 11-7/8	4.60 .181	1	3/4 – 10
	.4733	39 1.535	25.4 1	203 8	15.85 .6240	1524 60	34.06 1.341	29.46 1.160	406 16	4.60 .181		
14	.552	40 1.575	17.5 11/16	102 4	17.44 .6865	1372 54	34.39 1.354	29.11 1.146	295 11-5/8	5.28 .208	1	1 – 8
	.552	44 1.732	25.4 1	203 8	19.02 .7490	1524 60	38.33 1.509	33.04 1.301	400 15-3/4	5.28 .208		
16	.6308	47 1.850	17.5 11/16	102 4	19.02 .7490	1524 60	41.28 1.625	35.46 1.396	305 12	5.82 .229	1	1 – 8
	.6308	48 1.890	28.6 1-1/8	305 12	22.2 .8740	1524 60	41.28 1.625	38.35 1.510	508 20	5.82 .229	2	
18	.7095	48 1.890	17.5 11/16	102 4	22.2 .8740	1524 60	41.28 1.625	35.26 1.388	305 12	6.02 .237	1	1 – 8
	.7095	51 2.008	28.6 1-1/8	305 12	25.37 .9990	1524 60	42.88 1.688	39.85 1.569	513 20-3/16	6.02 .237	2	1-1/4 – 7
20	.7884	56 2.205	17.5 11/16	102 4	28.55 1.1240	1600 63	47.63 1.875	4.94 1.612	302 11-7/8	6.68 .263	1	1-1/4 – 7
	.7884	53 2.087	28.6 1-1/8	305 12	28.55 1.1240	1600 63	43.66 1.719	4.31 1.587	503 19-13/16	6.68 .263	2	
22	.8672	57 2.244	17.5 11/16	102 4	28.55 1.1240	1600 63	47.63 1.875	4.39 1.590	302 11-7/8	7.24 .285	1	1-1/4 – 7
	.8672	53 2.087	28.6 1-1/8	305 12	28.55 1.1240	1600 63	43.66 1.719	4.03 1.576	503 19-13/16	7.24 .285	2	
25	.9853	56 2.205	17.5 11/16	102 4	31.72 1.2490	1600 63	44.45 1.750	36.98 1.456	270 10-5/8	7.47 .294	1	1-1/2 – 6
	.9853	56 2.205	28.6 1-1/8	305 12	31.72 1.2490	1600 63	44.45 1.750	4.72 1.603	508 20	7.47 .294	2	2-1/2 – 6

Keyseating Broaches

High Speed Steel

Keyway Width (Inch)	Broach Length (Inch)	Tooth Pitch (Inch)	Height at Teeth (Inch)	Body Width (Inch)
1/16	16	3/8	3/8	3/16
3/32	16	3/8	3/8	3/16
1/8	16	3/8	7/16	3/16
5/32	16	3/8	1/2	5/32
3/16	16	3/8	5/8	3/16
1/4	16	3/8	3/4	1/4
1/4	20	3/8	1	1/4
5/16	16	3/8	7/8	5/16
5/16	20	3/8	1	5/16
3/8	16	17/32	7/8	3/8
3/8	20	17/32	1	3/8
7/16	20	17/32	1	7/16
1/2	20	17/32	1	1/2
9/16	20	17/32	1	9/16
5/8	20	17/32	1	5/8
3/4	20	17/32	1	3/4
7/8	20	17/32	1	7/8
1	20	17/32	1	1



Metric Keyseating Broaches

High Speed Steel



Broach Size (mm)	Keyway Width Tolerance (Inch)	Body Dimensions W x H x L	Minimum Length of Cut (Inch)	Maximum Length of Cut (Inch)
2	0.0787 - 0.0792	3/16 x 3/8 x 16	5/8	1-7/8
3	0.1181 - 0.1186	3/16 x 7/16 x 16	5/8	1-7/8
4	0.1575 - 0.1580	3/16 x 1/2 x 16	5/8	1-7/8
5	0.1968 - 0.1973	5 mm x 9/16 x 16	5/8	1-7/8
6	0.2362 - 0.2367	6 mm x 3/4 x 16	5/8	1-7/8
6	0.2362 - 0.2367	6 mm x 3/4 x 20	5/8	3-1/8
8	0.3150 - 0.3155	8 mm x 7/8 x 16	1-1/16	3-3/16
8	0.3150 - 0.3155	8 mm x 7/8 x 20	1-1/16	5-5/16
10	0.3937 - 0.3942	10 mm x 7/8 x 20	1-1/16	5-5/16
12	0.4724 - 0.4730	12 mm x 1 x 20	1-1/16	5-5/16
13	0.5118 - 0.5125	13 mm x 1 x 20	1-1/16	5-5/16
14	0.5612 - 0.5519	14 mm x 1 x 20	1-1/16	5-5/16
16	0.8299 - 0.6306	16 mm x 1 x 20	1-1/16	5-5/16
18	0.7087 - 0.7093	18 mm x 1 x 20	1-1/16	5-5/16
20	0.7874 - 0.7883	20 mm x 1 x 20	1-1/16	5-5/16
22	0.8661 - 0.8669	22 mm x 1 x 20	1-1/16	5-5/16
24	0.9449 - 0.9458	24 mm x 1 x 20	1-1/16	5-5/16
25	0.9843 - 0.9853	25 mm x 1 x20	1-1/16	5-5/16

SURFACE BROACHES

- Material : M2, M35 & ASP 2030
- Maximum Width : 160mm
- Maximum Length: 1600mm
- Design & Profile As per Customer's Requirement.





RACK BROACHES

- Material: M2, M35 & ASP 2030
- Maximum Width : 160mm
- Maximum Length: 1600mm
- Design & Profile As per Customer's Requirement.



CUSTOMER SEGMENTS

DiC TOOLS
A Brand by Dedicated Impex Co.


Agricultural Equipment


Cars/ Auto Mobile


Renewable Energy


Engineering Vehicles


Commercial Vehicles


Construction Equipment


Railways


Three Wheelers


Other Allied Industries


Defence


Two Wheelers


Passenger Vehicle


Aerospace


Oil & Gas Industry


DIE & MOLD


Wood Industry


Fasteners Industry



DIC - INDIA

DEDICATED IMPEX CO.

D - 189, Industrial Focal Point, Patiala
147003 Punjab, India
info@dictoolsindia.com
+91-95922-28222

DiC TOOLS

A Brand by Dedicated Impex Co.