



Price List - Carbide Tools MC 45

(With effect from 7th December 2018)



Addison & Co Ltd., established in 1873, is India's largest manufacturer of HSS Cutting Tools. The Company's current product range:

I. HSS Tools:

- a) Twist Drills
- b) Centre Drills
- c) Reamers
- d) Taps
- e) End Mills
- f) Counter Bores
- g) Countersinks
- h) Milling Cutters
- i) Tool Bits
- j) Broaches and Hobs

II. Carbide Tools:

- a) Multi-point Carbide-tipped Tools
- b) Solid Carbide Drills
- c) Solid Carbide Centre Drills
- d) Solid Carbide Reamers and
- e) Solid Carbide Endmills

III. Machine Tools:

- a) Tool and Cutter Grinder
 - Manual
 - CNC
- b) Drill Point Grinders
- c) Goniometer (Drill Measuring Instrument) and
- d) Accessories for our machines

At Addison, we have a policy – to build Precise tools which are of highest quality and to extend excellent technical service to the end-users.

Addison, an ISO 9001:2015 and ISO 14001:2015 certified company, manufactures tools with high quality CNC machines, state-of-the art manufacturing technology, a well-equipped metallurgical lab, a Tool Tech Centre (R&D) and Total Quality Control which has put its metal cutting tools on par with the best brands of cutting tools in the world.

The High Speed Steel and carbide rods used for manufacturing the above tools are of highest quality and procured from Europe, Japan and India.

Distribution of the above products in India is primarily done through the network of Authorised Dealers and Sub Dealers.

Addison also exports HSS and Carbide Tools to USA, Canada, Japan, Europe, Australia, Latin America, South East Asia, Middle-East and Africa.



Terms and Conditions

Price

This supersedes all our previous price lists.

Prices given in this pricelist are base prices. Taxes are extra as applicable.

Price given here are for standard products

For unlisted intermediate sizes, the higher price of the nearest listed size will apply.

The prices are for delivery on F.O.R. Destination

The prices are based on the present input costs and are subject to revision without prior notice.

The dealers / stockists are free to sell the goods at prices lower than the prices indicated in this price list.

Minimum Order Quantities (MOQ)

The Minimum Ordering Quantities (MOQ) mentioned against each product in this price list are for each size / length / bore size of that product. Any order for a quantity lesser than MOQ can be supplied with an additional surcharge, which will be furnished on request.

Delivery

Standard deliveries are indicated below, however Special Deliveries can be considered on request based on available load position at the time of Ordering.

Multi Point Carbide Tipped Tools

 * FMI (Fast Moving Items) – within 6 weeks for MOQ Quantities from the date of Firm Order

 ** SFMI (Semi-fast Moving Items) – within 8 Weeks for MOQ Quantities from the date of Firm Order

OTHER Items – within 12 Weeks for MOQ Quantities from the date of Firm Order

Micro Grain Solid Carbide Tools

 * FMI (Fast Moving Items) – within 2 weeks for MOQ Quantities from the date of Firm Order

OTHER Drills, End Mills & Centre Drills Items with in 4 weeks and OTHER Reamer Items – within 6 Weeks for MOQ Quantities from the date of Firm Order

Other Instructions

The products indicated in this pricelist are confirming to National & International Standards. However, we can manufacture and supply special and customized tools as per the requirement of the customers and end-users on request. For special requirements please send your enquiries to: customersupport@addison.co.in



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CARBIDE TIPPED STRAIGHT SHANK TWIST DRILLS
CARBIDE TIPPED TAPER SHANK TWIST DRILLS

IS.8307-1976 – GRADE OF TIP ISOIK-20
IS.8306-1976 – GRADE OF TIP ISOIK-20

Size		Price Per Piece (Rs.)		MOQ (No.)	Size		Price Per Piece (Rs.)		MOQ (No.)
mm	Inch	Straight Shank Drill	Taper Shank Drill		mm	Inch	Straight Shank Drill	Taper Shank Drill	
3.0		647 **	–	25		31/64	1375	2321	25
	1/8	647	–	25		1/2	1375 **	2321 **	25
3.5		668	–	25	13.0		1375 **	2321	25
	9/64	668	–	25		17/32	1485	2657	25
	5/32	670	–	25	14.0		1627 **	2657 **	20
4.0		670 **	–	25		9/16	1627	2657	20
	11/64	670	–	25	15.0		1823	2821	20
4.5		670 **	–	25		19/32	1823	2821	20
	3/16	731 **	–	25		5/8	2100	3052	20
5.0		731 **	–	25	16.0		2100 **	3052 **	20
	13/64	731	–	25		21/32	2208	3284	20
5.5		741 **	–	25	17.0		2208	3284 **	20
	7/32	741	–	25		11/16	2208	3284	20
	15/64	780	–	25	18.0		2429 **	3569 **	20
6.0		780 **	–	25		23/32	2429	3569	20
	1/4	793 **	–	25	19.0		2771	3816	20
6.5		793	–	25		3/4	2771	4390	20
	17/64	808	–	25		25/32	3142	4390	20
7.0		858 *	–	25	20.0		3142	4390 **	20
	9/32	858	–	25		13/16		4546	20
7.5		879 **	–	25	21.0			4546 **	20
	19/64	879	–	25		27/32		4546	20
	5/16	879 **	–	25	22.0			4763 **	20
8.0		879 **	–	25		7/8		4763	20
	21/64	907	–	25	23.0			5029	20
8.5		907 **	–	25		29/32		5029	20
	11/32	937	–	25		15/16		5279	20
9		937 **	–	25	24.0			5279	20
	23/64	1001	–	25		31/32		5472	20
9.5		1001	–	25	25.0			5472	20
	3/8	1007	1748	25		1		6723 **	20
	25/64	1007	1748	25	26.0			6723	15
10.0		1007 **	1748 **	25		1.1/32		6723	15
	13/32	1091	1954	25		1.1/16		6943	15
10.5		1091 **	1954	25	27.0			6943	15
	27/64	1105	1954	25		1.3/32		7309	15
11.0		1105 **	1954	25	28.0			7309	15
	7/16	1147	2136	25		1.1/8		7585	15
11.5		1147	2136	25	29.0			7585	15
	29/64	1147	2136	25		1.5/32		7585	15
	15/32	1238	2136	25	30.0			7806	15
12.0		1238 **	2136 **	25		1.3/16		7806	15

For Carbide Tipped Taper Shank Twist Drill to Addison Standard - Sizes 3.0mm to 9.5mm and 31.0mm to 50mm (Equivalent Inch Sizes) Please refer to Page No.5.



**CARBIDE TIPPED TAPER SHANK DRILLS
WITH ISOIK20 GRADE OF TIP**

**FL and OAL - Addison Standard
All other specifications to IS 7822 - 2005**

Size					Price Per Piece (Rs.)	MOQ (No.)
Dia (mm)	Dia (Inch)	FL (mm)	OAL (mm)	MT No.		
3		20	110	1	1748	25
	1/8	25	115	1	1748	25
3.5	9/64	25	115	1	1748	25
4	5/32	25	115	1	1748	25
4.5	11/64	28	118	1	1748	25
5	3/16	28	118	1	1748	25
5.5	13/64	32	122	1	1748	25
	7/32	32	122	1	1748	25
6	15/64	32	122	1	1748	25
	1/4	32	122	1	1748	25
6.5		32	122	1	1748	25
	17/64	40	130	1	1748	25
	9/32	40	130	1	1748	25
7.5	19/64	40	130	1	1748	25
8	5/16	40	130	1	1748	25
8.5	21/64	50	140	1	1748	25
9	11/32	50	140	1	1748	25
	23/64	50	140	1	1748	25
9.5	3/8	50	140	1	1748	25
	25/64	50	140	1	1748	25
31	1.7/32	125	275	4	8493	15
32	1.1/4	125	275	4	8857	15
33		125	275	4	9258	15
34	1.5/16	125	275	4	9580	15
35	1.3/8	125	275	4	9853	15
36		125	275	4	10177	15
37	1.7/16	125	275	4	9808	15
38	1.1/2	125	275	4	10820	15
39		125	275	4	11023	10
40	1.9/16	125	275	4	11250	10
41		125	275	4	11506	10
42	1.5/8	125	275	4	11832	10
43	1.11/16	125	275	4	12160	10
44		125	275	4	12477	10
45	1.3/4	125	275	4	12788	10
46	1.13/16	125	275	4	13173	10
47		125	275	4	13173	10
48	1.7/8	125	275	4	13367	10
49	1.15/16	125	275	4	13600	10
50		125	275	4	13825	10
	2	125	275	4	14067	10



CARBIDE TIPPED TAPER SHANK CORE DRILLS

IS 9771 - 1981

GRADE OF TIP : ISOIK - 20

Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch			mm	Inch		
12.0		4467	20	19.0		5818	20		1	6399	15
	1/2	4467	20		3/4	5818	20	26.0		6399	15
13.0		4467	20		25/32	6060	20		1.1/32	6399	15
	17/32	4660	20	20.0		6060	20	27.0		6399	15
14.0		5029	20		13/16	6060	20		1.1/16	6399	15
	9/16	5029	20	21.0		6060	20		1.3/32	6559	15
15.0		5029	20		27/32	6060	20	28.0		6559	15
	19/32	5029	20	22.0		6060	20		1.1/8	6652	15
	5/8	5204	20		7/8	6060	20		1.5/32	6652	15
16.0		5204	20	23.0		6060	20	30.0		6652	15
	21/32	5204	20		29/32	6060	20		1.3/16	6652	15
17.0		5204	20		15/16	6399	20		1.7/32	6845	15
	11/16	5204	20	24.0		6399	20		1.1/4	6845	15
18.0		5818	20		31/32	6399	20	32.0		6845	15
	23/32	5818	20	25.0		6399	20				

CARBIDE TIPPED SHELL CORE DRILLS

DIN 8022-1971

GRADE OF TIP ISO K-20

Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch			mm	Inch		
	1.1/4	5871	10	45.0		6291	10		2.3/4	8886	4
32.0		5871	10	46.0		6559	7	71.0		9439	4
33.0		5871	10		1-13/16	6559	7		2.7/8	9439	4
	1.5/16	5871	10	47.0		6559	7	76.0		9720	4
34.0		5871	10		1.7/8	6559	7		3	9720	4
	1.3/8	5871	10	48.0		6559	7	77.0		9720	4
35.0		5871	10	49.0		6559	7	78.0		9720	4
36.0		5992	10		1-15/16	6559	7		3.1/8	9720	4
	1.7/16	5992	10	50.0		6559	7		3.1/4	9720	4
37.0		5992	10		2	6845	7		3.3/8	9971	4
38.0		6060	10	51.0		6845	7	86.0		9971	4
	1.1/2	6060	10	52.0		6845	7	87.0		9971	4
39.0		6060	10		2.1/8	6845	7		3.1/2	9971	4
	1.9/16	6060	10	56.0		7151	4	91.0		10539	4
40.0		6060	10	57.0		7151	4	92.0		10539	4
41.0		6291	10		2.1/4	7151	4		3.5/8	10539	4
	1.5/8	6291	10		2.3/8	7151	4	93.0		10539	4
42.0		6291	10	61.0		8886	4	94.0		10539	4
	1.11/16	6291	10		2.1/2	8886	4		3.3/4	10539	4
43.0		6291	10	66.0		8886	4		3.7/8	10539	4
44.0		6291	10		2.5/8	8886	4		4	10539	4
	1.3/4	6291	10	67.0							



**CARBIDE TIPPED STRAIGHT
SHANK CHUCKING REAMERS**

IS : 10884 - 1984

GRADE OF TIP ISO K – 10

Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
6.0		3420	20		3/8	3667	20
	1/4	3420	20	10.0		3667 **	20
7.0		3420	20		13/32	3667	20
	9/32	3420	20	11.0		3667	20
	5/16	3185	20		7/16	3667	20
8.0		3185	20		15/32	4040	20
	11/32	3185	20	12.0		4040	20
9.0		3185	20		1/2	4040	20

CARBIDE TIPPED TAPER SHANK CHUCKING REAMERS

IS : 10885 – 1984

GRADE OF TIP ISO K – 10

Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
6.0		3420	20		11/16	4810	10
	1/4	3420	20	18.0		4810	10
7.0		3420	20		23/32	4810	10
	9/32	3420	20	19.0		4810	10
	5/16	3185	20		3/4	4810	10
8.0		3185	20		25/32	4810	10
	11/32	3185	20	20.0		4810	10
9.0		3185	20		13/16	4810	10
	3/8	3667	20	21.0		5352	10
10.0		3667 **	20		27/32	5352	10
	13/32	3667	20	22.0		5352	10
11.0		3667	20		7/8	5352	10
	7/16	3667	20	23.0		5352	10
	15/32	4040	20		29/32	5429	10
12.0		4040	20	24.0		6879	10
	1/2	4040	20	25.0		6879	10
13.0		4040	20		1	6879	10
	17/32	4240	20	26.0		6879	10
14.0		4240	10	27.0		7009	10
	9/16	4240	10	28.0		7009	10
15.0		4240	10	29.0		7009	10
	19/32	4810	10	30.0		7066	10
	5/8	4810	10			7066	10
16.0		4810	10	31.0		7066	10
	21/32	4810	10	32.0		7066	10
17.0		4810	10				



CARBIDE TIPPED SHELL REAMERS				IS : 11934 – 1987			
(BRAZED TYPE)				GRADE OF TIP ISO K – 10			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
19.0		5818	3	36.0		9258	3
	3/4	5818	3		1.7/16	9258	3
	13/16	6357	3	38.0		9336	3
21.0		6357	3		1.1/2	9336	3
22.0		6357	3	39.0		9336	3
	7/8	6357	3		1.9/16	9336	3
	15/16	6399	3	41.0		10875	3
24.0		6399	3		1.5/8	10875	3
25.0		7436	3	42.0		10875	3
	1	7436	3		1.11/16	10875	3
	1.1/16	7477	3	43.0		10875	3
27.0		7477	3	44.0		10875	3
	1.1/8	8841	3		1.3/4	10875	3
29.0		8841	3		1-13/16	10875	3
30.0		8841	3	47.0		11311	3
	1.3/16	9033	3		1.7/8	11311	3
	1.1/4	8841	3	48.0		11311	3
32.0		8841	3	49.0		11311	3
33.0		8841	3		1-15/16	11311	3
	1.5/16	8866	3	50.0		11311	3
	1.3/8	9258	3		2	11311	3
35.0		9258	3				

CARBIDE TIPPED STRAIGHT SHANK END MILLS				IS : 9323 – 1991			
(BRAZED TYPE)				GRADE OF TIP ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
	5/16	2540	25		1/2	2709	25
8.0		2540	25		5/8	2865	20
	3/8	2547	25	16.0		2865	20
10.0		2547	25		3/4	3340	20
12.0		2709	25	20.0		3340	20

CARBIDE TIPPED TAPER SHANK END MILLS				IS : 9324 – 1991			
				GRADE OF TIP ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
12.0		3340	25	25.0		3972	20
	1/2	3340	25		1	3972	20
	5/8	3479	20		1-1/4	6399	15
16.0		3479	20	32.0		6399	15
	3/4	3895	20		1-1/2	7737	15
20.0		3895	20	40.0		7737	15



CARBIDE TIPPED STRAIGHT SHANK SLOT DRILLS				IS : 9325 – 1979			
(BRAZED TYPE)				GRADE OF TIP ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
	5/16	2136	70		9/16	2759	100
8.0		2136	70		5/8	3284	60
	3/8	2199	70	16.0		3284	60
10.0		2199	70		11/16	3322	60
	7/16	2368	70	18.0		3322	60
12.0		2368	100		3/4	3372	60
	1/2	2368	100	20.0		3372	60
14.0		2759	100				

Tip dimensions will be based on DIN. Type-A will be supplied as Standard.

CARBIDE TIPPED TAPER SHANK SLOT MILLING CUTTERS				IS : 9326 – 1979			
(WITH TAPPED END)				GRADE OF TIP : ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
mm	Inch			mm	Inch		
12.0		3651	100	20.0		4700	50
	1/2	3651	100	22.0		4945	20
14.0		4019	100		7/8	4945	20
	9/16	4019	100	25.0		4945	20
	5/8	4601	70		1	4945	20
16.0		4601	70	28.0		4983	15
	11/16	4638	50		1-1/8	4983	15
18.0		4638	50		1-1/4	4983	15
	3/4	4700	50	32.0		4983	15

CARBIDE TIPPED SIDE & FACE CUTTERS				DIN : 8047 – 1956			
(BRAZED TYPE)				GRADE OF TIP : ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
Dia x Width mm	Dia x Width Inch			Dia x Width mm	Dia x Width Inch		
80 x 6.0	3 x 1/4	8337	3	100 x 12	4 x 1/2	10473	3
80 x 8.0	3 x 5/16	8633	3	100 x 16	4 x 5/8	11286	3
80 x 10	3 x 3/8	8850	3	125 x 12	5 x 1/2	11773	3
100 x 8.0	4 x 5/16	9636	3	125 x 14	5 x 9/16	12697	3
100 x 10	4 x 3/8	9955	3	125 x 16	5 x 5/8	13101	3

CARBIDE TIPPED SHELL END MILLS				DIN : 8056 – 1980			
(BRAZED TYPE)				GRADE OF TIP : ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
Dia x Width mm	Dia x Width Inch			Dia x Width mm	Dia x Width Inch		
	1-1/2	3291	6		3	6802	3
40.0		3291	6	80.0		6802	3
50.0		3398	6	100		10499	3
	2	3398	6		4	9402	3
63.0		5043	3	125		13551	3
	2-1/2	5043	3		5	13551	3

CARBIDE TIPPED FACE MILL CUTTERS				TO ADDISON STANDARD			
(BRAZED TYPE)				GRADE OF TIP : ISO K – 20			
Size		Price Per Piece (Rs.)	MOQ (No.)	Size		Price Per Piece (Rs.)	MOQ (No.)
Dia x Width mm	Dia x Width Inch			Dia x Width mm	Dia x Width Inch		
63.0		4945	3	80		6634	3
	2-1/2	4945	3	100		10238	3
	3	6634	3		4	10238	3



MICRO GRAIN SOLID CARBIDE DRILLS

(L/D - 3)

TYPE OF TOOL : STRAIGHT SHANK TWIST DRILL (2 FLUTES)

DIMENSIONS ACCORDING TO : DIN 6539

SPIRAL ANGLE : 30°

POINT ANGLE : 135°



Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
1	1	6	26	809	907	5	5	26	62	1540 *	1725 *
1.1	1.1	7	28	809	907	5.1	5.1	26	62	1552	1737
1.2	1.2	8	30	809	907	5.2	5.2	26	62	1605	1798
1.3	1.3	8	30	809	907	5.3	5.3	26	62	1660	1860
1.4	1.4	9	32	809	907	5.4	5.4	28	66	1717	1923
1.5	1.5	9	32	809	907	5.5	5.5	28	66	1677	1877
1.6	1.6	10	34	817	914	5.6	5.6	28	66	1791	2007
1.7	1.7	10	34	817	914	5.7	5.7	28	66	1812	2031
1.8	1.8	11	36	817	914	5.8	5.8	28	66	1836	2057
1.9	1.9	11	36	817	914	5.9	5.9	28	66	1854	2076
2	2	12	38	817	914	6	6	28	66	1798 *	2013 *
2.1	2.1	12	38	936	1048	6.1	6.1	31	70	2079	2331
2.2	2.2	13	40	936	1048	6.2	6.2	31	70	2079	2331
2.3	2.3	13	40	936	1048	6.3	6.3	31	70	2079	2331
2.4	2.4	14	43	936	1048	6.4	6.4	31	70	2332	2611
2.5	2.5	14	43	936	1048	6.5	6.5	31	70	2215 *	2482 *
2.6	2.6	14	43	997	1117	6.6	6.6	31	70	2553	2861
2.7	2.7	16	46	997	1117	6.7	6.7	31	70	2683	3004
2.8	2.8	16	46	997	1117	6.8	6.8	34	74	2553 *	2861 *
2.9	2.9	16	46	997	1117	6.9	6.9	34	74	2553	2861
3	3	16	46	997	1117	7	7	34	74	2425 *	2718 *
3.1	3.1	18	49	1036	1160	7.1	7.1	34	74	2789	3123
3.2	3.2	18	49	1036 *	1160 *	7.2	7.2	34	74	2789	3123
3.3	3.3	18	49	1036	1160	7.3	7.3	34	74	2789	3123
3.4	3.4	20	52	1036	1160	7.4	7.4	34	74	2928	3280
3.5	3.5	20	52	1036	1160	7.5	7.5	34	74	2649	2968
3.6	3.6	20	52	1071	1202	7.6	7.6	37	79	2955	3307
3.7	3.7	20	52	1121	1256	7.7	7.7	37	79	2955	3307
3.8	3.8	22	55	1168	1309	7.8	7.8	37	79	2955	3307
3.9	3.9	22	55	1216	1362	7.9	7.9	37	79	2955	3307
4	4	22	55	1266	1417	8	8	37	79	2664 *	2984 *
4.1	4.1	22	55	1281	1435	8.1	8.1	37	79	3272	3664
4.2	4.2	22	55	1299	1455	8.2	8.2	37	79	3272	3664
4.3	4.3	24	58	1311	1465	8.3	8.3	37	79	3272	3664
4.4	4.4	24	58	1334	1492	8.4	8.4	37	79	3616	4048
4.5	4.5	24	58	1352	1513	8.5	8.5	37	79	3272	3664
4.6	4.6	24	58	1352	1513	8.6	8.6	40	84	3906	4377
4.7	4.7	24	58	1352	1513	8.7	8.7	40	84	3906	4377
4.8	4.8	26	62	1477	1654	8.8	8.8	40	84	3906	4377
4.9	4.9	26	62	1477	1654	8.9	8.9	40	84	3906	4377



MICRO GRAIN SOLID CARBIDE DRILLS

(L/D - 3)

TYPE OF TOOL : STRAIGHT SHANK TWIST DRILL (2 FLUTES)

DIMENSIONS ACCORDING TO : DIN 6539

SPIRAL ANGLE : 30°

POINT ANGLE : 135°



Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
9	9	40	84	3754	4204	12.5	12.5	51	102	6646	7443
9.1	9.1	40	84	4462	4996	12.6	12.6	51	102	8614	9646
9.2	9.2	40	84	4462	4996	12.7	12.7	51	102	8614	9646
9.3	9.3	40	84	4462	4996	12.8	12.8	51	102	8614	9646
9.4	9.4	40	84	4682	5246	12.9	12.9	51	102	8614	9646
9.5	9.5	40	84	3706	4151	13	13	51	102	8614	9646
9.6	9.6	43	89	4723	5292	13.1	13.1	51	102	11251	12599
9.7	9.7	43	89	4723	5292	13.2	13.2	51	102	11251	12599
9.8	9.8	43	89	4723	5292	13.3	13.3	54	107	11251	12599
9.9	9.9	43	89	5121	5735	13.4	13.4	54	107	11251	12599
10	10	43	89	4589	5142	13.5	13.5	54	107	11251	12599
10.1	10.1	43	89	4860	5443	13.6	13.6	54	107	11251	12599
10.2	10.2	43	89	4860	5443	13.7	13.7	54	107	11251	12599
10.3	10.3	43	89	4860	5443	13.8	13.8	54	107	11251	12599
10.4	10.4	43	89	4860	5443	13.9	13.9	54	107	11251	12599
10.5	10.5	43	89	5218	5845	14	14	54	107	11251	12599
10.6	10.6	43	89	5218	5845	14.5	14.5	56	111	11085	12389
10.7	10.7	47	95	5218	5845	15	15	56	111	11085	12389
10.8	10.8	47	95	5218	5845	15.5	15.5	58	115	11856	13161
10.9	10.9	47	95	5218	5845	16	16	58	115	11187	12494
11	11	47	95	5397	6045	16.5	16.5	60	119	17855	19942
11.1	11.1	47	95	5397	6045	17	17	60	119	20116	22202
11.2	11.2	47	95	5397	6045	17.5	17.5	62	123	20866	22953
11.3	11.3	47	95	5397	6045	18	18	62	123	21259	23347
11.4	11.4	47	95	5397	6045	18.5	18.5	64	127	23369	25456
11.5	11.5	47	95	5762	6552	19	19	64	127	24664	26751
11.6	11.6	47	95	6479	7254	19.5	19.5	66	131	25108	29281
11.7	11.7	47	95	6479	7254	20	20	66	131	25786	29959
11.8	11.8	47	95	6479	7254						
11.9	11.9	51	102	6479	7254						
12	12	51	102	6479	7254						
12.1	12.1	51	102	6646	7443						
12.2	12.2	51	102	6646	7443						
12.3	12.3	51	102	6646	7443						
12.4	12.4	51	102	6646	7443						



“MICRO GRAIN SOLID CARBIDE DRILLS

(L/D - 5)

TYPE OF TOOL : STRAIGHT SHANK TWIST DRILL (2 FLUTES)

DIMENSIONS ACCORDING TO : DIN 338 / IS 5101

SPIRAL ANGLE : 30°

POINT ANGLE : 135°



Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
1	1	12	34	933 *	1045 *	4.5	4.5	47	80	1558 *	1742 *
1.1	1.1	14	36	933	1045	4.6	4.6	47	80	1558	1742
1.2	1.2	16	38	933 *	1045 *	4.7	4.7	47	80	1558	1742
1.3	1.3	16	38	933 *	1045 *	4.8	4.8	52	86	1701 *	1904 *
1.4	1.4	18	40	933 *	1045 *	4.9	4.9	52	86	1701	1904
1.5	1.5	18	40	933 *	1045 *	5	5	52	86	1776 *	1988 *
1.6	1.6	20	43	941 *	1055 *	5.1	5.1	52	86	1786 *	2001 *
1.7	1.7	20	43	941	1055	5.2	5.2	52	86	1853 *	2074 *
1.8	1.8	22	46	941 *	1055 *	5.3	5.3	52	86	1915	2144
1.9	1.9	22	46	941	1055	5.4	5.4	57	93	1979	2213
2	2	24	49	941 *	1055 *	5.5	5.5	57	93	1932 *	2163 *
2.1	2.1	24	49	1079	1208	5.6	5.6	57	93	2065	2313
2.2	2.2	27	53	1079 *	1208 *	5.7	5.7	57	93	2089 *	2339 *
2.3	2.3	27	53	1079	1208	5.8	5.8	57	93	2120 *	2371 *
2.4	2.4	30	57	1079 *	1208 *	5.9	5.9	57	93	2135	2391
2.5	2.5	30	57	1079 *	1208 *	6	6	57	93	2074 *	2321
2.6	2.6	30	57	1149 *	1286 *	6.1	6.1	63	101	2399 *	2685
2.7	2.7	33	61	1149 *	1286 *	6.2	6.2	63	101	2399 *	2685
2.8	2.8	33	61	1149 *	1286 *	6.3	6.3	63	101	2399	2685
2.9	2.9	33	61	1149	1286	6.4	6.4	63	101	2688	3009
3	3	33	61	1149 *	1286 *	6.5	6.5	63	101	2553 *	2861 *
3.1	3.1	36	65	1195 *	1338 *	6.6	6.6	63	101	2945	3296
3.2	3.2	36	65	1195 *	1338 *	6.7	6.7	63	101	3092	3467
3.3	3.3	36	65	1195 *	1338 *	6.8	6.8	69	109	2945 *	3296 *
3.4	3.4	39	70	1195 *	1338 *	6.9	6.9	69	109	2945	3296
3.5	3.5	39	70	1195 *	1338 *	7	7	69	109	2798 *	3133 *
3.6	3.6	39	70	1237 *	1384 *	7.1	7.1	69	109	3215	3599
3.7	3.7	39	70	1291	1446	7.2	7.2	69	109	3215	3599
3.8	3.8	43	75	1348 *	1507 *	7.3	7.3	69	109	3215	3599
3.9	3.9	43	75	1402	1571	7.4	7.4	69	109	3377	3779
4	4	43	75	1459 *	1631 *	7.5	7.5	69	109	3054	3422
4.1	4.1	43	75	1477 *	1655 *	7.6	7.6	75	117	3406	3816
4.2	4.2	43	75	1498 *	1676 *	7.7	7.7	75	117	3406	3816
4.3	4.3	47	80	1509	1691	7.8	7.8	75	117	3406	3816
4.4	4.4	47	80	1537	1721	7.9	7.9	75	117	3406	3816



MICRO GRAIN SOLID CARBIDE DRILLS

(L/D - 5)

TYPE OF TOOL : STRAIGHT SHANK TWIST DRILL (2 FLUTES)

DIMENSIONS ACCORDING TO : DIN 338 / IS 5101

SPIRAL ANGLE : 30°

POINT ANGLE : 135°



Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
8	8	75	117	3073 *	3438 *	11.5	11.5	94	142	6745	7693
8.1	8.1	75	117	3772	4224	11.6	11.6	94	142	7469	8364
8.2	8.2	75	117	3772	4224	11.7	11.7	94	142	7469	8364
8.3	8.3	75	117	3772	4224	11.8	11.8	94	142	7469	8364
8.4	8.4	75	117	4169	4668	11.9	11.9	101	151	7469	8364
8.5	8.5	75	117	3772 *	4224 *	12	12	101	151	7469 *	8364 *
8.6	8.6	81	125	4503	5045	12.1	12.1	101	151	10771	13371
8.7	8.7	81	125	4503	5045	12.2	12.2	101	151	11484	14085
8.8	8.8	81	125	4503	5045	12.3	12.3	101	151	11484	14085
8.9	8.9	81	125	4503	5045	12.4	12.4	101	151	11484	14085
9	9	81	125	4326 *	4847 *	12.5	12.5	101	151	11484	14085
9.1	9.1	81	125	5143	5761	12.6	12.6	101	151	11484	14085
9.2	9.2	81	125	5143	5761	12.7	12.7	101	151	12022	14626
9.3	9.3	81	125	5143	5761	12.8	12.8	101	151	12022	14626
9.4	9.4	81	125	5400	6047	12.9	12.9	101	151	12022	14626
9.5	9.5	81	125	5400 *	6047 *	13	13	101	151	12075	14676
9.6	9.6	87	133	5445	6100	13.1	13.1	101	151	12092	14695
9.7	9.7	87	133	5445	6100	13.2	13.2	101	151	13129	15728
9.8	9.8	87	133	5445	6100	13.3	13.3	108	160	13129	15728
9.9	9.9	87	133	5907	6613	13.4	13.4	108	160	13129	15728
10	10	87	133	5606 *	5925 *	13.5	13.5	108	160	13129	15728
10.1	10.1	87	133	5606	5925	13.6	13.6	108	160	13129	15728
10.2	10.2	87	133	5602	6276	13.7	13.7	108	160	13529	16129
10.3	10.3	87	133	5602	6276	13.8	13.8	108	160	13529	16129
10.4	10.4	87	133	5602	6276	13.9	13.9	108	160	13529	16129
10.5	10.5	87	133	6016	6740	14	14	108	160	13775	16375
10.6	10.6	87	133	6016	6740	14.5	14.5	114	169	15639	18324
10.7	10.7	94	142	6224	6971	15	15	114	169	15882	18483
10.8	10.8	94	142	6224	6971	15.5	15.5	120	178	19981	22581
10.9	10.9	94	142	6224	6971	16	16	120	178	19279	21880
11	11	94	142	6224	6971	16.5	16.5	125	184	19174	23349
11.1	11.1	94	142	6745	7693	17	17	125	184	21483	25632
11.2	11.2	94	142	6745	7693	17.5	17.5	130	191	22029	26204
11.3	11.3	94	142	6745	7693	18	18	130	191	22424	26596
11.4	11.4	94	142	6745	7693	18.5	18.5	135	198	27028	31200
						19	19	135	198	29097	33271
						19.5	19.5	140	205	30147	34321
						20	20	140	205	30940	35113



MICRO GRAIN SOLID CARBIDE INTERNAL COOLANT DRILLS

(L/D -3)

DIMENSIONS ACCORDING TO : DIN 6537K

TYPE OF SHANK : Reinforced Shank as per DIN 6535 HA

SPIRAL ANGLE : 30°

POINT ANGLE : 140°



Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
5	6	28	66	4924	5363	11.2	12	55	102	11392	12448
5.1	6	28	66	4924	5363	11.5	12	55	102	11761	12820
5.2	6	28	66	4924	5363	11.8	12	55	102	11761	12820
5.5	6	28	66	4924	5363	12	12	55	102	11504	12562
5.55	6	28	66	4924	5363	12.2	14	60	107	13844	15149
5.8	6	28	66	4924	5363	12.25	14	60	107	13844	15149
6	6	28	66	4815	5252	12.5	14	60	107	13844	15149
6.1	8	34	79	6022	6726	12.7	14	60	107	13844	15149
6.2	8	34	79	6022	6726	12.75	14	60	107	13809	15115
6.3	8	34	79	6022	6726	12.8	14	60	107	13809	15115
6.5	8	34	79	6022	6726	13	14	60	107	13809	15115
6.6	8	34	79	6022	6726	13.1	14	60	107	14124	15431
6.8	8	34	79	6022	6726	13.5	14	60	107	14124	15431
6.9	8	34	79	6232	6354	13.8	14	60	107	14071	15378
7	8	34	79	6232	6354	14	14	60	107	13745	15049
7.1	8	41	79	6232	6354	14.25	16	65	115	21263	22568
7.4	8	41	79	6232	6354	14.5	16	65	115	21263	22568
7.5	8	41	79	6232	6354	14.75	16	65	115	21228	22534
7.8	8	41	79	6232	6354	14.8	16	65	115	21228	22534
8	8	41	79	6081	6787	15	16	65	115	21228	22534
8.1	10	47	89	9154	10213	15.1	16	65	115	21596	22901
8.4	10	47	89	9154	10213	15.5	16	65	115	21596	22901
8.5	10	47	89	9154	10213	15.8	16	65	115	21596	22901
8.6	10	47	89	9154	10213	16	16	65	115	21406	22621
8.7	10	47	89	9154	10213	16.5	18	73	123	24716	26803
8.8	10	47	89	9154	10213	16.75	18	73	123	25515	27603
9	10	47	89	9154	10213	16.8	18	73	123	25515	27603
9.3	10	47	89	9154	10213	17	18	73	123	25515	27603
9.5	10	47	89	9154	10213	17.5	18	73	123	25461	27551
9.6	10	47	89	9154	10213	17.8	18	73	123	25461	27551
9.8	10	47	89	9154	10213	18	18	73	123	25327	27414
10	10	47	89	8811	9869	18.5	20	79	131	29986	34157
10.2	12	55	102	11392	12448	18.8	20	79	131	29986	34157
10.4	12	55	102	11392	12448	19	20	79	131	29947	34122
10.5	12	55	102	11392	12448	19.5	20	79	131	29896	34068
10.6	12	55	102	11392	12448	19.8	20	79	131	29896	34068
10.8	12	55	102	11392	12448	20	20	79	131	29759	33932
11	12	55	102	11392	12448						

Application : Machining for Steels and Heat Resistant Steels.



MICRO GRAIN SOLID CARBIDE INTERNAL COOLANT DRILLS

(L/D -5)

DIMENSIONS ACCORDING TO : DIN 6537 L

TYPE OF SHANK : Reinforced Shank as per DIN 6535 HA

SPIRAL ANGLE : 30°

POINT ANGLE : 140°



Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
5	6	44	82	6623	7282	11.2	12	71	118	15978	17037
5.1	6	44	82	6623	7282	11.5	12	71	118	15978	17037
5.2	6	44	82	6623	7282	11.8	12	71	118	15978	17037
5.5	6	44	82	6623	7282	12	12	71	118	15978	17037
5.55	6	44	82	6623	7282	12.2	14	77	124	18844	20152
5.8	6	44	82	6623	7282	12.25	14	77	124	18844	20152
6	6	44	82	6442	7100	12.5	14	77	124	18844	20152
6.1	8	53	91	7581	8638	12.7	14	77	124	18844	20152
6.2	8	53	91	7581	8638	12.75	14	77	124	18844	20152
6.3	8	53	91	7581	8638	12.8	14	77	124	18844	20152
6.5	8	53	91	7581	8638	13	14	77	124	18844	20152
6.6	8	53	91	7581	8638	13.1	14	77	124	18844	20152
6.8	8	53	91	7581	8638	13.5	14	77	124	18812	20116
6.9	8	53	91	7545	8601	13.8	14	77	124	18812	20116
7	8	53	91	7545	8601	14	14	77	124	18584	19891
7.1	8	53	91	7545	8601	14.25	16	83	133	21932	24534
7.4	8	53	91	7545	8601	14.5	16	83	133	21932	24534
7.5	8	53	91	7545	8601	14.75	16	83	133	21932	24534
7.8	8	53	91	7545	8601	14.8	16	83	133	21895	24497
8	8	53	91	7345	8393	15	16	83	133	21895	24497
8.1	10	61	103	9693	10751	15.1	16	83	133	21895	24497
8.4	10	61	103	9693	10751	15.5	16	83	133	21895	24497
8.5	10	61	103	9693	10751	15.8	16	83	133	21895	24497
8.6	10	61	103	9693	10751	16	16	83	133	21652	24253
8.7	10	61	103	9693	10751	16.5	18	93	143	25588	29762
8.8	10	61	103	9693	10751	16.75	18	93	143	25588	29762
9	10	61	103	9693	10751	16.8	18	93	143	25588	29762
9.3	10	61	103	9693	10751	17	18	93	143	25554	29725
9.5	10	61	103	9693	10751	17.5	18	93	143	25554	29725
9.6	10	61	103	9693	10751	17.8	18	93	143	25554	29725
9.8	10	61	103	9693	10751	18	18	93	143	25327	29500
10	10	61	103	9472	10528	18.5	20	101	153	31302	35478
10.2	12	71	118	15978	17037	18.8	20	101	153	31302	35478
10.4	12	71	118	15978	17037	19	20	101	153	31302	35478
10.5	12	71	118	15978	17037	19.5	20	101	153	31248	35424
10.6	12	71	118	15978	17037	19.8	20	101	153	31248	35424
10.8	12	71	118	15978	17037	20	20	101	153	30989	35161
11	12	71	118	15978	17037						

Application : Machining for Steels and Heat Resistant Steels.



MICRO GRAIN SOLID CARBIDE INTERNAL COOLANT BURNISHING DRILLS

(L/D - 5)

DIMENSIONS ACCORDING TO : DIN 6537 K



TYPE OF SHANK : Reinforced Shank as per DIN 6535 HA

TYPE OF FLUTE : 2 Flute, Straight Helix with Double Margin

POINT ANGLE : 120°

Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
5	6	28	66	2991	3431	11.2	12	55	102	7715	8773
5.1	6	28	66	2991	3431	11.5	12	55	102	8084	9142
5.2	6	28	66	2991	3431	11.8	12	55	102	8084	9142
5.5	6	28	66	2991	3431	12	12	55	102	7829	8883
5.55	6	28	66	2991	3431	12.2	14	60	107	13494	14801
5.8	6	28	66	2991	3431	12.25	14	60	107	13494	14801
6	6	28	66	2852	3319	12.5	14	60	107	13494	14801
6.1	8	34	79	3888	4866	12.7	14	60	107	13494	14801
6.2	8	34	79	3888	4593	12.75	14	60	107	13459	14763
6.3	8	34	79	3888	4593	12.8	14	60	107	13459	14763
6.5	8	34	79	3888	4593	13	14	60	107	13459	14763
6.6	8	34	79	3888	4593	13.1	14	60	107	13775	15079
6.8	8	34	79	3888	4593	13.5	14	60	107	13775	15079
6.9	8	34	79	4096	4804	13.8	14	60	107	13720	15025
7	8	34	79	4096	4804	14	14	60	107	13394	14701
7.1	8	41	79	4096	4804	14.25	16	65	115	15562	16868
7.4	8	41	79	4096	4804	14.5	16	65	115	15562	16868
7.5	8	41	79	4096	4804	14.75	16	65	115	15527	16831
7.8	8	41	79	4096	4804	14.8	16	65	115	15527	16831
8	8	41	79	3948	4653	15	16	65	115	15527	16831
8.1	10	47	89	6193	7251	15.1	16	65	115	15897	17201
8.4	10	47	89	6193	7251	15.5	16	65	115	15897	17201
8.5	10	47	89	6193	7251	15.8	16	65	115	15897	17201
8.6	10	47	89	6193	7251	16	16	65	115	15897	17201
8.7	10	47	89	6193	7251	16.5	18	73	123	18240	20327
8.8	10	47	89	6193	7251	16.75	18	73	123	19041	21127
9	10	47	89	6193	7251	16.8	18	73	123	19041	21127
9.3	10	47	89	6193	7251	17	18	73	123	19041	21127
9.5	10	47	89	6193	7251	17.5	18	73	123	18989	21074
9.6	10	47	89	6193	7251	17.8	18	73	123	18989	21074
9.8	10	47	89	6193	7251	18	18	73	123	18854	20937
10	10	47	89	5848	6908	18.5	20	79	131	22837	27012
10.2	12	55	102	7715	8773	18.8	20	79	131	22837	27012
10.4	12	55	102	7715	8773	19	20	79	131	22803	26975
10.5	12	55	102	7715	8773	19.5	20	79	131	22749	26922
10.6	12	55	102	7715	8773	19.8	20	79	131	22749	26922
10.8	12	55	102	7715	8773	20	20	79	131	22614	26785
11	12	55	102	7715	8773						

Application : Machining for Cast iron, Aluminium Silicon Alloy and Aluminium Alloys only.



MICRO GRAIN SOLID CARBIDE INTERNAL COOLANT BURNISHING DRILLS

(L/D -5)

DIMENSIONS ACCORDING TO : DIN 6537 L



TYPE OF SHANK : Reinforced Shank as per DIN 6535 HA

TYPE OF FLUTE : 2 Flute, Straight Helix with Double Margin

POINT ANGLE : 120°

Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)		Drill Dia (mm) h7	Shank Dia (mm) h6	Flute Length (mm)	Overall Length (mm)	Price Per Piece (Rs.)	
				Uncoated	Coated					Uncoated	Coated
5	6	44	82	4042	4699	11.2	12	71	118	10443	11498
5.1	6	44	82	4042	4699	11.5	12	71	118	10443	11498
5.2	6	44	82	4042	4699	11.8	12	71	118	10443	11498
5.5	6	44	82	4042	4699	12	12	71	118	10148	11204
5.55	6	44	82	4042	4699	12.2	14	77	124	13776	15082
5.8	6	44	82	4042	4699	12.25	14	77	124	13776	15082
6	6	44	82	3859	4517	12.5	14	77	124	13776	15082
6.1	8	53	91	4725	5785	12.7	14	77	124	13776	15082
6.2	8	53	91	4725	5785	12.75	14	77	124	13776	15082
6.3	8	53	91	4725	5785	12.8	14	77	124	13776	15082
6.5	8	53	91	4725	5785	13	14	77	124	13776	15082
6.6	8	53	91	4725	5785	13.1	14	77	124	13776	15082
6.8	8	53	91	4725	5785	13.5	14	77	124	13742	15046
6.9	8	53	91	4693	5751	13.8	14	77	124	13742	15046
7	8	53	91	4693	5751	14	14	77	124	13515	14820
7.1	8	53	91	4693	5751	14.25	16	83	133	16232	18833
7.4	8	53	91	4693	5751	14.5	16	83	133	16232	18833
7.5	8	53	91	4693	5751	14.75	16	83	133	16232	18833
7.8	8	53	91	4693	5751	14.8	16	83	133	16194	18796
8	8	53	91	4493	5549	15	16	83	133	16194	18796
8.1	10	61	103	6780	7840	15.1	16	83	133	16194	18796
8.4	10	61	103	6780	7840	15.5	16	83	133	16194	18796
8.5	10	61	103	6780	7840	15.8	16	83	133	16194	18796
8.6	10	61	103	6780	7840	16	16	83	133	15953	18553
8.7	10	61	103	6780	7840	16.5	18	93	143	19112	22964
8.8	10	61	103	6780	7840	16.75	18	93	143	19112	22964
9	10	61	103	6780	7840	16.8	18	93	143	19112	22964
9.3	10	61	103	6780	7840	17	18	93	143	19078	23249
9.5	10	61	103	6780	7840	17.5	18	93	143	19078	23249
9.6	10	61	103	6780	7840	17.8	18	93	143	19078	23249
9.8	10	61	103	6780	7840	18	18	93	143	18854	23024
10	10	61	103	6559	7618	18.5	20	101	153	24158	28329
10.2	12	71	118	10443	11498	18.8	20	101	153	24158	28329
10.4	12	71	118	10443	11498	19	20	101	153	24158	28329
10.5	12	71	118	10443	11498	19.5	20	101	153	24103	28277
10.6	12	71	118	10443	11498	19.8	20	101	153	24103	28277
10.8	12	71	118	10443	11498	20	20	101	153	23843	28016
11	12	71	118	10443	11498						

Application : Machining for Cast iron, Aluminium Silicon Alloy and Aluminium Alloys only.



MICRO GRAIN SOLID CARBIDE CENTRE DRILLS				
DIMENSIONS ACCORDING TO : IS : 6708 – 1977				
CENTRE DRILL TYPE : Type A				
Point Angle : 120°				
Pilot Dia	Body Dia	OAL	Price Per Piece (Rs.)	
mm - k12	mm - h9	mm	Uncoated	Coated
1	3.15	31.50	2,123	2,484
1.25	3.15	31.50	2,123	2,484
2	4	35.50	2,148	2,513
2	5	40	2,161	2,531
2.5	6.3	45	2,931	3,527
3.15	8	50	3,473	4,067
4	10	56	4,594	5,188
5	12.5	63	7,166	7,901
6.3	16	71	9,784	10,517
8	20	80	15,536	17,302



MICRO GRAIN SOLID CARBIDE CENTRE DRILLS					
DIMENSIONS ACCORDING TO: BS 328 / Part 2 / 1950					
CENTRE DRILL TYPE : Type A					
Point Angle : 120°					
BS	Pilot Dia	Body Dia	OAL	Price Per Piece (Rs.)	
No.	Inch	Inch	Inch	Uncoated	Coated
2	1/16	3/16	1-3/4	2127	2499
3	3/32	1/4	2	2931	3528
4	1/8	5/16	2-1/4	3473	4067
5	3/16	7/16	2-1/2	6589	7184
6	1/4	5/8	3	9784	10518
7	5/16	3/4	3-1/2	15209	16975



MICRO GRAIN SOLID CARBIDE CHUCKING REAMER
DIMENSIONS ACCORDING TO : IS 5446 – 1978 / BS 328
TYPE : Straight Helix



Reamer Dia (mm) m6	Shank Dia (mm) h9	CEL (mm)	Overall Length (mm)	No. of Flutes	Price per Piece (Rs.)	
					UnCoated	Coated
3	3	15	61	4	1542	1993
4	4	19	75	4	1633	2111
5	5	23	86	4	1814	2344
5.5	5.6	26	93	4	2140	2672
6	5.6	26	93	6	2312	2842
6.5	6.3	28	101	6	2582	3436
7	7.1	31	109	6	3444	4298
7.5	7.1	31	109	6	3678	4532
8	8	33	117	6	4097	4951
8.5	8	33	117	6	4137	4989
9	9	36	125	6	5483	6337
9.5	9	36	125	6	5877	6732
10	10	38	133	6	6000	7683
10.5	10	38	133	6	6292	7977
11	10	41	142	6	7346	9035
11.5	10	41	142	6	7729	9413
12	10	44	151	6	8774	10458
12.5	10	44	151	6	9321	11421
13	10	44	151	6	9734	11836
13.5	12.5	47	160	6	10665	12767
14	12.5	47	160	8	11488	13587
14.5	12.5	50	162	8	13380	15481
15	12.5	50	162	8	13717	15818
15.5	12.5	52	170	8	14887	16988
16	12.5	52	170	8	14939	17040



**MICRO GRAIN SOLID CARBIDE END MILLS
(2 FLUTES/4 FLUTES)
(STANDARD SERIES) 30° RH HELIX ANGLE
WITH CENTRE CUTTING**

SIZE				SQUARE		BALL NOSE	
Dia (mm) h10	Shank Dia (mm) h6	CEL (mm)	OAL (mm)	Uncoated Rs.	Coated Rs.	Uncoated Rs.	Coated Rs.
3	3	12	38	764 *	937 *	918 *	1091 *
3.5	4	12	50	1053	1225	1265	1438 *
4	4	14	50	1053 *	1225 *	1265 *	1438 *
4.5	5	16	50	1323	1496	1594	1766
5	5	16	50	1323 *	1538 *	1594 *	1808 *
6	6	19	56	1388 *	1603 *	1668 *	1884 *
7	7	19	63	1579 *	1924 *	1895	2240
8	8	20	63	1567 *	1897 *	1881 *	2208 *
9	9	22	75	2459 *	2805 *	2948	3293
10	10	22	75	2923 *	3253 *	3509 *	3840 *
11	11	25	75	3374 *	3719 *	4048	4397
12	12	25	75	3548 *	3878 *	4265 *	4594 *
14	14	32	89	6314 *	6952 *	8416	9056
16	16	32	89	6744 *	7354 *	8094	8705
18	18	38	100	10432 *	11412 *	12526	13503
20	20	38	100	15035 *	16013 *	18047	19024
25	25	38	100	19691	22095	23630	26036



**MICRO GRAIN SOLID CARBIDE END MILLS
(2 FLUTES/4 FLUTES)
(LONG SERIES) 30° RH HELIX ANGLE WITH CENTRE CUTTING**

SIZE				SQUARE		BALL NOSE	
Dia (mm) h10	Shank Dia (mm) h6	CEL (mm)	OAL (mm)	Uncoated Rs.	Coated Rs.	Uncoated Rs.	Coated Rs.
3	3	25	75	1539 *	1712 *	1849	2021
4	4	25	75	1740 *	1912 *	2091 *	2263 *
5	5	25	75	1934 *	2151 *	2321	2536
6	6	25	75	2017 *	2234 *	2427 *	2642 *
8	8	25	75	2226 *	2555 *	2669 *	3001 *
8	8	38	100	3339	3706	3871	4352
8	8	50	100	3339	3706	3871	4352
10	10	38	100	3552 *	4033 *	4264	4743
12	12	50	100	5081 *	5562 *	6380 *	6859 *
12	12	75	150	10343	11276	11225	12159
14	14	75	150	13067	14269	15683	16888
16	16	75	150	15651	16797	18784	20935
18	18	75	150	20525	22444	24626	26545
20	20	75	150	27300	29216	32766	34685
25	25	75	150	32760	37494	39314	44048





**MICRO GRAIN SOLID CARBIDE END MILLS
(2 FLUTES/4 FLUTES)
(STUB SERIES) 30° RH HELIX ANGLE
WITH CENTRE CUTTING**

SIZE				SQUARE		BALL NOSE	
Dia (mm) h10	Shank Dia (mm) h6	CEL (mm)	OAL (mm)	Uncoated Rs.	Coated Rs.	Uncoated Rs.	Coated Rs.
3	3	6	38	668	847	800	981
3.5	4	7	50	951	1131	1142	1323
4	4	8	50	951	1131	1142	1323
4.5	5	9.5	50	1190	1369	1429	1609
5	5	10	50	1190	1413	1429	1655
6	6	12	50	1218	1443	1461	1688
7	7	12	50	1355	1700	1625	1972
8	8	12	50	1374	1720	1655	2001
9	9	14	56	1784	2129	2144	2489
10	10	16	56	2568	2913	3084	3431
11	11	19	63	2892	3236	3471	3816
12	12	19	63	2981	3327	3579	3926



COATING PROPERTIES				COATING APPLICATIONS	
	Titanium Nitride TiN	Titanium Carbonitride TiCN	Titanium Aluminum Nitride TiAlN	Work Materials Ferrous < 45 RC	Milling TiCN / TiN
Micro Hardness (HV 0.05)	2300	3000	3000 – 3500	Ferrous > 45 RC	TiAlN
				Aluminum Alloys	TiCN
Max Working Temperature	600 °C	400 °C	800 °C	Copper Alloys	TiCN / TiN
				Titanium Alloys	TiCN / TiAlN
Colour	Gold	Blue - Gray	Violet-Gray	Nickel Alloys	TiCN



**RECOMMENDED PARAMETERS
For Solid Carbide Twist Drills**



Material	Hardness	Cutting Speed m/min	Drill Size ϕ / Feed mm / Revolution					
			ϕ 1 – 2	ϕ 3 – 5	ϕ 6 – 8	ϕ 9 – 12	ϕ 13 – 16	ϕ 17 – 20
Structural Steels	> 70 HRB	40 – 60	0.01	0.02	0.04	0.06	0.08	0.12
Carbon Tool Steels	100 – 180 HRB	25 – 35	0.01	0.01	0.02	0.03	0.05	0.06
	160 – 180 HRB	20 – 25	0.01	0.01	0.02	0.02	0.03	0.04
Stainless Steel		20 – 30	0.01	0.02	0.03	0.05	0.08	0.10
Cast Iron	160 – 200 HRB	60 – 80	0.03	0.04	0.08	0.10	0.12	0.16
	> 200 HRB	25 – 40	0.01	0.02	0.04	0.06	0.06	0.08
Cast Steel	< 50 HRB	40 – 60	0.03	0.04	0.06	0.08	0.10	0.12
	< 70 HRB	25 – 40	0.01	0.02	0.04	0.06	0.08	0.10
Copper		80 – 100	0.02	0.04	0.06	0.08	0.12	0.16
Gun Metal, Bronze, Zinc, Brass		80 – 120	0.05	0.06	0.08	0.10	0.16	0.20
AluminiumAlloys		150 – 250	0.02	0.08	0.16	0.20	0.28	0.36
Laminated Paper		60 – 100	0.01	0.02	0.04	0.08	0.10	0.15
Thermosetting Plastics, Bakelite		80 – 120	0.02	0.03	0.08	0.12	0.16	0.22
Thermoplastics, Synthetics		80 – 150	0.01	0.02	0.04	0.06	0.10	0.12

RECOMMENDED PARAMETERS For End Mills



Material	Cutting Speed m/min	End Mill Size ϕ / Feed / Tooth (mm)				
		upto ϕ 6	ϕ 7 - 12	ϕ 13 - 19	ϕ 20 - 25	
Aluminium	140 – 300	0.05	0.10	0.15	0.20	
Aluminium Alloys	240 – 300	0.05	0.10	0.15	0.20	
Brass	75 – 100	0.05	0.08	0.10	0.13	
Bronze	240 – 300	0.05	0.08	0.10	0.13	
Copper & its Alloys	240 – 300	0.05	0.08	0.13	0.18	
Cast Iron	Soft Hard	90 – 100 75 – 90	0.05	0.10	0.15	0.20
Malleable Iron	60 – 100	0.03	0.05	0.08	0.10	
Magnesium and its alloys	300	0.03	0.08	0.13	0.20	
Monel	60 – 75	0.05	0.10	0.15	0.20	
Plastic	220 – 300	0.05	0.05	0.08	0.10	
Steel	Low Carbon Med. Carbon	100 – 180 60 – 120	0.03 0.03	0.08 0.08	0.13 0.13	0.15 0.15
Steel	High Nickel 40 - 45 Rc 46 - 50 Rc 51 - 55 Rc	60 – 75 45 – 75 20 – 45 10 – 20	0.03 0.03 0.03 0.03	0.05 0.03 0.03 0.03	0.08 0.05 0.05 0.05	0.10 0.08 0.08 0.08
Stainless Steel	Free Machining Work Machining	90 – 120 60 – 90	0.03 0.03	0.05 0.03	0.10 0.08	0.15 0.13
Titanium	20 – 50	0.03	0.05	0.10	0.15	

Application : The figures given in the tables are starting speeds only. They may get changed to suit the working condition with respect to job.

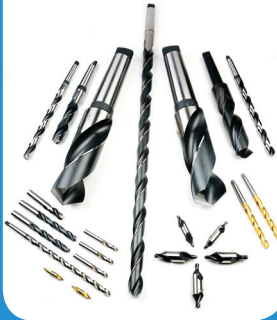


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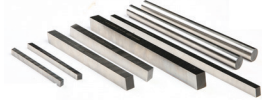
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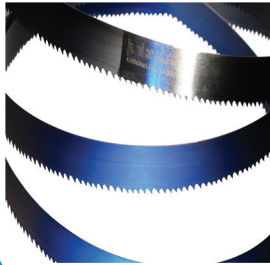
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