

DAGGER BRAND[®]



SINCE -1937

Birla Precision Technologies Ltd.

**INDIAN TOOL
MANUFACTURERS**
(DIVISION)

TWIST DRILLS

REAMERS

MILLING CUTTERS

GROUND THREAD TAPS

MASONRY DRILLS

TOOL BITS



APPLICATION SPECIFIC
TAPS & DRILLS



**PRICE LIST
0421**





Birla Precision Technologies Limited

INDIAN TOOL MANUFACTURERS

(DIVISION)

PROFILE

INDIAN TOOL MANUFACTURER'S (ITM), A DIVISION OF BIRLA PRECISION TECHNOLOGIES LIMITED PIONEERED IN THE YEAR 1937 THE MANUFACTURE AND SUPPLY OF HIGH SPEED STEEL CUTTING TOOLS IN INDIA.

ITM HAS TWO MANUFACTURING UNITS IN MAHARASHTRA. THE FIRST PLANT AT NASIK WHERE STANDARD AS WELL AS SPECIAL TOOLS ARE MANUFACTURED AS PER CUSTOMER REQUIREMENT AND THE SECOND PLANT AT AURANGABAD. MANUFACTURING STANDARD CATALOGUE ITEMS. BOTH ARE ISO 9001 - 2000 CERTIFIED FROM TUV - RW.

ITM UNDERTAKES PRODUCTION OF CUTTING TOOLS IN VARIOUS GRADES OF HIGH SPEED STEEL LIKE M2, M35, M42, T42 ETC.

ITM ALSO PRODUCES AS PER SPECIFIC REQUIREMENTS OF THE CUSTOMER PARTICULARLY WITH REGARD TO PROFILE, GEOMETRY, DIMENSION ETC.

ITM'S "DAGGER" BRAND CUTTING TOOLS DISTRIBUTED WIDELY THROUGH A COUNTRY WIDE NETWORK OF DISTRIBUTORS AND DEALERS, BACKED BY BRANCH OFFICES / RESIDENT REPRESENTATIVES AND SERVICE ENGINEERS AT AHMEDABAD, BANGALORE, BARODA, BHOPAL, CHENNAI, COCHIN, DELHI, FARIDABAD, JAMSHEDPUR, KANPUR, KOLKATTA, LUDHIANA, MUMBAI, PUNE AND SECUNDERABAD.

UNIT NO. 1 NASIK PLANT



UNIT NO. 2 AURANGABAD PLANT



PRICE LIST 0421

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INDIAN TOOL MANUFACTURERS

(DIVISION)

TWIST DRILL

REAMERS

MILLING CUTTERS

GROUND THREAD TAPS

MASONRY DRILLS

TOOL BITS

PANTHER SERIES PRODUCTS
(DRILLS & TAPS)

REGISTERED OFFICE

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Mumbai - 400 004

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E-mail : info@birlaprecision.com

Web.: www.birlaprecision.com

NASIK UNIT

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Satpur, Nasik - 422 007.

Tel. : (0253) 2350320 / 21,

E-mail : itmnsk@indiantool.com

AURANGABAD UNIT

B-15/3, MIDC Industrial Area,
Waluj, Aurangabad - 431 133.

Tel. : (0240) 2564056 / 57

E-mail : itmagnb@indiantool.com

This Price List is subject to alteration without notice.

Prices are Exclusive of ALL TAXES.

(This Price list is effective from 22/04/2021
& supersedes all previous issues)



Birla Precision Technologies Limited

INDIAN TOOL MANUFACTURERS

(DIVISION)

BRANCHES

AHMEDABAD

104, New Cloth Market,
Ahmedabad - 380 002.
Tel : (079) - 22123277 / 22124642
E-mail : itmahm@indiantool.com

KANPUR

17, A, Express Road,
Canal Road,
Kanpur 208001
Mob.: 9795851437
E-mail : itmkanpur@indiantool.com

BANGALORE

TBH Plaza, 2nd Floor, No. 34,
SJP Road, Bangalore - 560 002
Tel : (080) - 22128347
Mob : 9900244241
E-mail : itmblr@indiantool.com

KOLKATA

'NICCO' House, 4th Floor,
2 Hare Street, Kolkata - 700 001.
Tel : (033) - 22485191 / 22486449
Mobile : 09339846922
E-mail : itmkol@indiantool.com

CHENNAI

157, Linghi Chetty Street,
Chennai - 600 001.
Tel : (044) - 25342636, 42012503
E-mail : itmchn@indiantool.com

LUDHIANA

JASSAL HOUSE, G.T. ROAD,
LUDHIANA - 141008
Tel : (0161) - 2722535
E-mail : itmldh@indiantool.com

DELHI

2/11, Ansari Road, Darya Ganj,
New Delhi - 110 002
Tel : (011) 43575500
E-mail : itmldh@indiantool.com

PUNE

Shop No. 15, Pesh Industrial Premises
Co.Op. Society Ltd., Plot No. S-79/1/A,
Telco Road, Next to - Century
Enka Industry, MIDC, Bhosari,
Pune - 411 026
Tel.: (020) 27123477
E-mail : itmpune@indian.tool.com

INDORE

M47, New Siyaganj,
Mal-Godam Road,
Indore - 452007 (MP)
Tel: (073) 4997791
Mob.: 9425956159
E-mail : itmindore@indiantool.com

SECUNDERABAD

5-1-535, 2nd Floor, Hill Street,
Ranigunj, Secunderabad - 500 003.
Tel : (040) - 27713177 / 27718093
E-mail : itmsec@indiantool.com

MUMBAI OFFICE

Dalmal House, 1st Floor, 206,
J. Bajaj Road, Niriman Point,
Mumbai - 400 021.
Phone : 91 - 02266168400 / 22819468
Mobile : 9967514596
Email : itmth@indiantool.com
website : www.indiantool.com



NINJA PRODUCTS



NINJA



NINJA

Taps

After successful launch of Panther Taps, we at Indian Tool Manufacturers (ITM) – A division of Birla Precision Technologies Ltd., are proud to announce launch of our “NINJA Taps”, a new series of superior quality Taps. These Taps are made out of premium quality of HSS grade of Materials.

ITM NINJA Taps meets the customer needs of precise thread quality and improved productivity. The range of these products consists of SPPT Taps, Spiral Taps, St. Flute Taps, and Roll Form Taps.

- Spiral Point Taps : (Size Range M3-M16)
- Spiral Flute Taps : (Size Range M3-M16)
- St. Flute Taps : (Size Range M3-M16)
- Roll Form Taps : (Size Range M6-M16)

NINJA

Drills

NINJA Series of Drills are made out of highest quality of HSS grade of Materials. These drills are manufactured on our latest CNC Machines, with special geometry to give better performance. These Drills can be used for Stainless Steels, Nickel Chromium Steels and Forged Steels, etc.

Size Range :

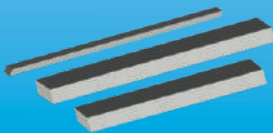
Ninja Series Drills are manufactured; as per IS: 5101 and BS: 328.

- Metric Size : 3.0 mm to 13.0 mm
- Inch Series : 1/8” to 1/2”

Applications :

Ninja series drills are best suitable for drilling on; Stainless Steels, Forged Steels, Nickel Chromium Steels and Tougher Machining Applications.

HATHYAR - TOOL BITS



ITM Hathyar Square Tool Bits are manufactured out of finest grades of HSS materials. All Tool Bits made with 15° bevel angle. This will give advantage to make easy end grinding preparation for end user.

HATHYAR - 20 – Suitable for free cutting materials.

HATHYAR - 50 – Suitable for difficult to cut materials.

HATHYAR - 51 – Suitable for Harder Alloy steels and stainless steels.



HSS TWIST DRILLS



ITM offer a extensive range of standard and special twist drills in different grades of HSS, available in various diameters.

RANGE :

Type : Parallel Shank Stub series, Jobber series, Long Series, Taper Shank drills, Core drills, Extra long drills with Parallel & Taper Shank, Combined drills and countersinks (Centre drills), Taper Pin Drills, Shell drills, Special drills etc.

Size :

Range : Parallel Shank Twist Drills: 3mm - 31.5mm, 3/64" - 1.15/64"
Taper Shank drills : 3.0mm - 102mm : 1/8" - 4"
MAL-2000mm

Material : HSS-M2

Note : Drills can be supplied as per specific Customers needs on request as follows :

- Intermediate Diameters.
- Non Standard and Special Drills.
- In different grades of HSS Like M35, M42 etc.
- Various surface coating like TiN, TiAlN etc.
- Special goemetry to suit various applications.



PANTHER PRODUCTS

New

PANTHER
Quicker • Sharper • More Powerful



APPLICATION SPECIFIC TAPS & DRILLS

These products are solutions for :

- ◆ Exceptional Performance ◆ Better Tool Life ◆ Superior quality

Drills

Panther series Drills are made-out of finest HSS Premium Materials and manufactured from latest CNC Machines, having special point geometry to produce better finish and accurate holes. These drills designed especially to machine difficult to cut material like Stainless steels, Nickel chromium steel and Forged steel, etc.

Advantages :

- ◆ Best Suitable for tougher material
- ◆ Unique point geometry to reduce thrust forced during drilling
- ◆ Special surface treatment for maximum wear resistance.
- ◆ Longer Tool Life

Taps

Panther series Taps are made - out of premium grades of HSS Materials. These taps are produced from our latest CNC Machines, having unique geometries to suit different work materials.

Panther series consists of Spiral Flute, Spiral Point, Roll Form and Cast Iron Taps. We can supply these taps with TiN, TiCN and Ti(Al)N coating to enhance performance of taps.

- ◆ **Spiral Flute Taps :** Best suitable for Blind Hole applications, spiral flutes eliminate the chip clogging.
- ◆ **Spiral Point Taps :** Best suitable for through hole applications, spiral point works as a chip breaker, to push chips towards forward direction.
- ◆ **Roll Form Taps :** Roll form tapping operation is a chip less operation, Form threads are produced by displacement of material. Best suitable for soft materials like Aluminum, Copper and Brass etc.
- ◆ **Cast Iron Taps :** Best suitable for blind and through application of Cast Iron materials.

Application Taps
'TORPEDO'
available on request.

TORPEDO
HIGH STRENGTH, HIGH PERFORMANCE.



HSS SCREWING TAPS



Available in a wide range of sizes, types and combinations.

RANGE :

Type : Hand and Short Machine Taps, Long Shank Machine Taps, .Nut Taps Pipe Taps, BSW, BSE, UNC, NC, NE, NGT and special Taps.

Size :

Range : 3mm - 100mm : 1/8 -4"

Material : HSS-M2

Note : Taps can be supplied as per Customers needs on request as follows :

- Serial or Non serial
- Individual Pieces or in Sets
- Different type of Flute like Straight, Helical, Spiral, Spiral Point & Fluteless.
- In different grades of HSS like M35, M42 etc.
- Various surface coating like TiN, TiTAIN etc.
- Special Taps as per Customer's Drawing.



HSS REAMERS



Available in a wide range of diameters and manufactured to suit specific reaming operations to provide perfect accuracy and optimum surface Finish.

RANGE :

Type : Parallel hand reamers, long fluted machine reamers, Chucking reamers with parallel shank or taper shank, Bridge reamers, Taper pin reamers, Socket reamers, Machine Jig reamers, Centre reamers, Shell reamers etc.

Size :

Range : 3.0mm - 76.2mm : 1/8" - 3"

Material : HSS-M2

Note : Reamers can also be supplied as per specific Customers needs as follows :

- Non standard and special as per Customers drawing.
- Intermediate diameters.
- In different grades of HSS like M35, M42 etc.
- Various surface coating like TiN, TiNAIN etc.



HSS MILLING CUTTERS



Available in a wide range of diameters and types suitable for various types of milling operations.

RANGE :

Size :

Range : Shank Type cutters : 3mm-63mm : 1/8"-2.1/2"

Bore Type cutter : 40mm-250mm : 1.1/2" - 10"

Type : Cylindrical cutters, Side & Face cutters, Shell End Mills, Single and Double Angle Cutters, Face cutters, Slotting cutters, Keyway Milling cutters, Hollow Mill, Convex and Concave Milling cutters, Single and Double corner rounding cutters, Parallel and Taper Shank Slot Drills, End Mills, "T" Slot cutters, Counter bores, Counter sinks, Woodruff Key Slot cutters with parallel shank and cutters as per special design.

Material : HSS-M2

Note : Milling cutters can also be supplied as per specific Customers needs as follows:

- Non standard and special as per Customer drawings.
- Intermediate diameters.
- In different grades of HSS like M35, M42 etc.

DAGGER BRAND®



MASONRY DRILLS



ITM's : Carbide Tipped Masonry Drills are manufactured from Alloy Steel, have Ground Flutes, are in Bright Finish and combined with ITM's unique brazing and treatment process results in withstanding shock and outstanding resistance to wear during its use.

RANGE :

Type : ITM Masonry Drills are available in three categories. Standard, Delux and Super Granato.

Size Range : 3.0mm to 13mm : 1/8" to 1/2" in all three categories

Standard Masonry Drills

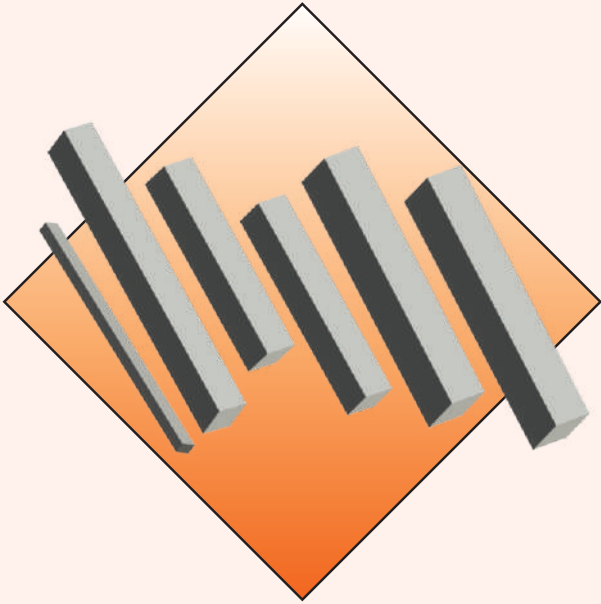
Suitable for all general purpose. Available in 10 pcs packing.

Deluxe Masonry Drills

Specially developed for use on tougher material like Stonework. Concrete and Marble etc.



HSS TOOL BITS



Backed by the high quality of High Speed Steel material ITM manufactures a comprehensive range of HSS Tool Bits, Dagger Tool bits ensure maximum red hardness for greater endurance.

Rigorous and regular metallurgical tests are undertaken to analyze the quality as well as the composition of the raw materials used. These include determination of carbide size, decarb, segregation, grain size, response to heat treatment etc., thus guaranteeing smooth, trouble free performance.

RANGE :

Size :

Range : Square tools size 5mm-25mm : 3/16"-1"

Material : HSS-M2 & T42.

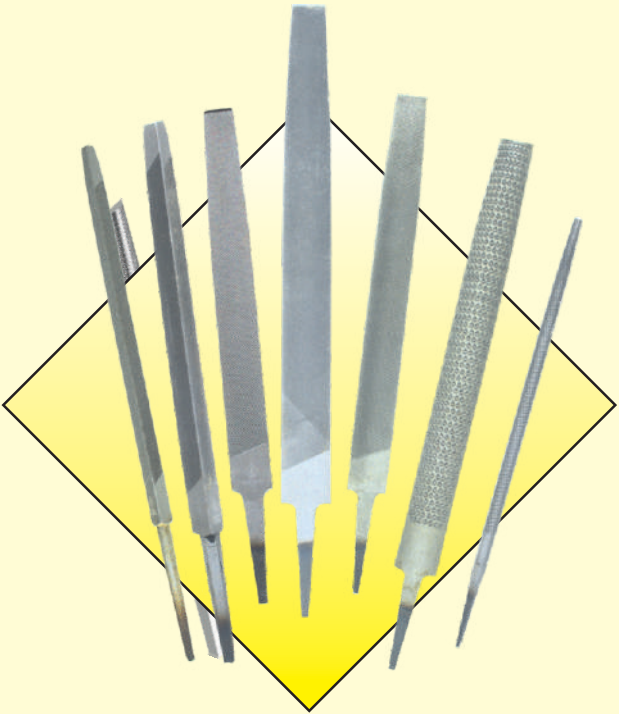
Note :

- Cryogenic treatment for special applications on request.
- All square tool bite are supplied with the bevel angle of 150.

DAGGER BRAND[®]



ENGINEERS FILES



Dagger Brand Files are made from the finest file steel material on State-of-the-Art Production Line. Files are manufactured on unique hydro pneumatically controlled machines resulting in uniform Teeth geometry and consistent desired finish cutting quality with.

RANGE :

Type : Machine Files, Saw Files, Rasps, Special Files & Mill Files

Size

Range : 100mm to 350mm : 4" to 14"

Cuts : Single Cut, Double Cut, Bastard Cut, 2nd Cut, Smooth Cut & Rasp Cut.

Shapes : Rectangle, Square, Round, Triangle, Half Round

Files are available in 10pcs packing up to 250mm & 5pcs packing for above 250mm.

TABLE COLOURS

Bastard Cut	: GREEN	
2nd Cut	: YELLOW	
Smooth Cut	: RED	



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HSS PARALLEL SHANK (JOBBER SERIES) TWIST DRILLS IS : 5101

SIZE			PRICE (Rs.) 10 Nos.	SIZE			PRICE (Rs.) 10 Nos.
MM	INCH	DG		MM	INCH	DG	
0.30			1371	2.90★			520
0.40			1189	2.95		32	520
0.50			863	3.00★			520
0.60			863	3.05		31★	620
0.70			863	3.10★			620
0.80★			723	3.17	1/8★		620
0.90★			689	3.20★			641
1.00★			440	3.26		30★	641
1.02		60	440	3.30★			641
1.04		59	440	3.40★			641
1.07		58	440	3.45		29	641
1.09		57	440	3.50★			641
1.10★			440	3.57	9/64★	28	641
1.18		56	440	3.60★			906
1.19	3/64★		440	3.66		27	906
1.20★			440	3.70★			906
1.30★			440	3.73		26	906
1.32		55	440	3.80★		25	906
1.40★		54	440	3.86		24	906
1.50★			440	3.90★			906
1.51		53	440	3.91		23	906
1.59	1/16★		440	3.97	5/32★		906
1.60★			440	3.99		22	906
1.61		52	474	4.00★			906
1.70★		51	474	4.04		21	1099
1.78		50★	474	4.09		20	1099
1.80★			474	4.10★			1099
1.85		49	474	4.20★			1099
1.90★			474	4.22		19★	1099
1.93		48★	474	4.30★		18	1099
1.98	5/64★		474	4.37	11/64★		1099
1.99		47★	474	4.39		17	1099
2.00★			474	4.40★			1099
2.06		46	474	4.50★		16	1443
2.08		45	474	4.57		15	1443
2.10★			474	4.60			1443
2.18		44	474	4.62		14	1443
2.20★			474	4.70		13	1443
2.26		43★	474	4.76	3/16★		1443
2.30★			474	4.80★		12	1443
2.37		42	474	4.85		11	1567
2.38	3/32★		474	4.90★			1567
2.40★			474	4.92		10	1567
2.44		41	474	4.98		9	1567
2.49		40	474	5.00★			1567
2.50★			474	5.06		8	1567
2.53		39	474	5.10★			1567
2.58		38	474	5.11		7	1567
2.60★			474	5.16	13/64★		1567
2.64		37	474	5.18		6	1567
2.70★			474	5.20★			1567
2.71		36	474	5.22		5	1691
2.78	7/64★		474	5.30★			1691
2.79		35	520	5.31		4	1691
2.80★			520	5.40★			1691
2.82		34	520				
2.87		33	520				



HSS PARALLEL SHANK (JOBBER SERIES) TWIST DRILLS IS : 5101

SIZE			PRICE (Rs.) 10 Nos.	SIZE			PRICE (Rs.) 10 Nos.
MM	INCH	DG		MM	INCH	DG	
5.41		3	1691	8.60★			4396
5.50★			1691	8.61		R	4396
5.56	7/32★		1691	8.70★			4396
5.60			1691	8.73	11/32★		4630
5.61		2	1902	8.80★			4630
5.70★			1902	8.84		S	4630
5.79		1	1902	8.90			4630
5.80★			1902	9.00★			4630
5.90			1902	9.09		T	4831
5.94		A	1902	9.10			4831
5.95	15/64★		1902	9.13	23/64★		4831
6.00★			1902	9.20★			4831
6.04		B	2071	9.30★			4831
6.10★			2071	9.34		U★	4831
6.15		C	2071	9.40★			4831
6.20★			2071	9.50★			4831
6.25		D	2071	9.52	3/8★		5476
6.30★			2071	9.58		V	5476
6.35★	1/4★	E	2071	9.60			5476
6.40★			2071	9.70			5476
6.50★			2642	9.80★		W	5476
6.53		F★	2642	9.90			6130
6.60★			2642	9.92	25/64★		6130
6.63		G	2642	10.00★			6130
6.70★			2642	10.08		X	6130
6.75	17/64★	H	2642	10.10			6130
6.80★			2642	10.20★			6130
6.90★		I	2892	10.26		Y	6642
7.00★			2892	10.30★			6642
7.03		J	2892	10.32	13/32★		6642
7.10★			2892	10.40★			6642
7.14	9/32★	K	2892	10.49		Z	6642
7.20★			2892	10.50★			6642
7.30			3052	10.60			6642
7.37		L	3052	10.70			7033
7.40			3052	10.72	27/64★		7033
7.49		M	3052	10.80			7033
7.50★			3052	10.90			7033
7.54	19/64★		3304	11.00★			7033
7.60			3304	11.10			7850
7.67		N	3304	11.11	7/16★		7850
7.70			3304	11.20★			7850
7.80★			3304	11.30			7850
7.90★			3304	11.40			7850
7.94	5/16★		3628	11.50★			8280
8.00★			3628	11.51	29/64★		8280
8.03		O	3628	11.60			8280
8.10★			3628	11.70			8280
8.20★		P	3628	11.80★			8280
8.30★			4396	11.90			8843
8.33	21/64★		4396	11.91	15/32★		8843
8.40★			4396	12.00★			8843
8.43		Q	4396	12.10			8843
8.50★			4396	12.20			8843



HSS PARALLEL SHANK (JOBBER SERIES) TWIST DRILLS IS : 5101

SIZE		PRICE (Rs.) 10 Nos.	SIZE		PRICE (Rs.) 10 Nos.
MM	INCH		MM	INCH	
12.30	31/64 ★	9379	14.29	9/16 ★	15201
12.40		9379	14.50 ★		15201
12.50 ★		9379	14.68	37/64	16379
12.60		9379	14.75		16379
12.70 ★	1/2 ★	9903	15.00 ★		16379
12.80 ★		10084	15.08	19/32	16379
12.90		10084	15.25		16379
13.00 ★		10084	15.48	39/64	17747
13.10	33/64 ★	12544	15.50 ★		17747
13.20		12544	15.75		17747
13.30		12544	15.87	5/8 ★	17747
13.40		12544	16.00 ★		17747
13.49	17/32 ★	13353	17.00		18772
13.50 ★		13353	17.46	11/16	18772
13.60		13353	18.00		20313
13.70		13353	19.00		21485
13.80		13353	19.05	3/4	21485
13.89	35/64	14488	20.00 ★		25665
13.90		14488	21.00		25665
14.00 ★		14488	22.00		28778
14.25 ★		14488	22.22	7/8	28778

ITEMS MARKED ★ (ONLY IN RH) ARE EX-STOCK ITEMS. ALL REMAINING ITEMS IN (RH & LH) WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35000/- NETT OR MOQ OF 50 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTES :

- All sizes to be ordered in multiples of 10 only.
- For non-listed intermediate Sizes, the higher Price of the nearest listed size. (INCH or MM) will be applicable.
- (a) Quick Spiral or Slow Spiral Drills :

Sizes up to (3.17 mm) 1/8"	50% extra
Sizes over (3.17 mm) 1/8"	25% extra

 (b) Left Hand Drills :

Sizes (3.0 mm) 1/8" and above	25% extra
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 (c) Jobbers with Tenon **10% extra**
- For **M35 = 40% & M42 = 80% extra**

Price Rs. / Set

HSS PARALLEL SHANK (JOBBER SERIES) TWIST DRILLS IS : 5101

Jobber Drill 25 Pcs. Set (0.5 mm Rise) 1.00 To 13.00 MM.	10274
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Jobber Drill 13 Pcs. Set (1/64" Rise) 1/16" To 1/4"	1889
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HSS PARALLEL SHANK (STUB SERIES) TWIST DRILLS IS : 5100

SIZE		PRICE (Rs.) 10 Nos.	SIZE		PRICE (Rs.) 10 Nos.
MM	INCH		MM	INCH	
1.00★		461	9.20		4379
1.19	3/64	461	9.50		4379
1.20		461	9.52	3/8	4578
1.50		461	9.80		4578
1.59	1/16	461	9.92	25/64	5602
1.80		461	10.00		5602
1.98	5/64	461	10.20		5602
2.00		461	10.32	13/32	6030
2.20		461	10.50		6030
2.38	3/32	461	10.72	27/64	6789
2.50		461	10.80		6789
2.78	7/64★	461	11.00		6789
2.80		498	11.11	7/16	7071
3.00		520	11.20		7071
3.17	1/8★	603	11.50		7565
3.20		633	11.51	29/64	7565
3.50		633	11.80		7565
3.57	9/64★	633	11.91	15/32	8004
3.80		876	12.00		8004
3.97	5/32★	876	12.20		8004
4.00		876	12.30	31/64	8698
4.20		974	12.50		8698
4.37	11/64	974	12.70	1/2	8886
4.50		1291	12.80		9049
4.76	3/16★	1291	13.00		9049
4.80		1291	13.20		10596
5.00		1372	13.49	17/32	10596
5.16	13/16★	1372	13.50		11291
5.20		1372	13.80		11291
5.50		1491	14.00		12293
5.56	7/32	1491	14.25		12293
5.80		1678	14.29	9/16	12293
5.95	15/64	1678	14.50		12804
6.00		1678	14.75		13845
6.20		1878	15.00		13845
6.35	1/4★	1878	15.08	19/32	13845
6.50		2311	15.25		13845
6.75	17/64	2311	15.50		14987
6.80		2311	15.75		14987
7.00		2534	15.87	5/8	14987
7.14	9/32	2534	16.00		14987
7.20		2534	16.25		15226
7.50		2633	16.50		15226
7.54	19/64	2892	16.67	21/32	15226
7.80		2892	16.75		15533
7.94	5/16★	3182	17.00		15533
8.00		3182	17.25		15815
8.20		3182	17.46	11/16	15815
8.33	21/64	3975	17.50		15815
8.50		3975	17.75		16031
8.73	11/32	4146	18.00		16031
8.80		4146	18.25		16316
9.00		4146	18.26	23/32	16316
9.13	23/64	4379	18.50		16316



HSS PARALLEL SHANK (STUB SERIES) TWIST DRILLS IS : 5100

SIZE		PRICE (Rs.) 10 Nos.	SIZE		PRICE (Rs.) 10 Nos.
MM	INCH		MM	INCH	
18.75		16607	27.00		33089
19.00		16607	27.50		33089
19.05	3/4	16607	27.78	1.3/32	35018
19.25		16888	28.00		35018
19.50		16888	28.50		35284
19.75		16888	28.57	1.1/8	35284
19.84	25/32	16888	29.00		37026
20.00		17177	29.37	1.5/32	40759
20.25		17534	29.50		40759
20.50		17534	30.00		41304
20.64	13/16	17534	30.16	1.3/16	41304
20.75		18236	30.50		46481
21.00		18236	30.96	1.7/32	46481
21.25		18458	31.00		46481
21.43	27/32	18458	31.50		47178
21.50		19079	31.75	1.1/4	47178
21.75		19324	32.00		48194
22.00		19324	32.50		49704
22.22	7/8	19324	32.54	1.9/32	49704
22.25		20554	33.00		49704
22.50		20554	33.34	1.5/16	49704
22.75		20840	33.50		52283
23.00		20840	34.00		52283
23.02	29/32	20840	34.13	1.11/32	57380
23.25		22037	34.50		57380
23.50		22037	34.92	1.3/8	57380
23.75		22037	35.00		63092
23.81	15/16	22037	35.50		63992
24.00		24387	35.72	1.13/32	63992
24.25		24387	36.00		63992
24.50		24387	36.50		63992
24.61	31/32	24387	36.51	1.7/16	63992
24.75		26751	37.00		68790
25.00		26751	37.31	1.15/32	69819
25.25		26882	37.50		69819
25.40	1	26882	38.00		69819
25.50		30339	38.10	1.1/2	69819
26.00		30339	38.50		77962
26.19	1.1/32	31040	39.00		77962
26.50		31040	39.50		79305
26.99	1.1/16	31400	40.00		79305

ITEMS MARKED ★ (ONLY IN RH) ARE EX-STOCK ITEMS. ALL REMAINING ITEMS IN (RH & LH) WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35000/- NETT OR MOQ OF 50 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTES :

- Sizes upto 13 mm should be ordered in multiples of 10 only.
- For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.
- (a) **Quick Spiral or Slow Spiral Drills :**
 Sizes upto (3.17 mm) 1/8" **50% extra**
 Sizes over (3.17 mm) 1/8" **25% extra**
 (b) **Left Hand Drills IS : 5362 can be supplied from**
 Sizes (3.0 mm) 1/8" **25% extra**
- For **M35 = 40% & M42 = 80% extra**



HSS PARALLEL SHANK (LONG SERIES) TWIST DRILLS IS : 5102

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
0.60		506	5.30		504
0.70		472	5.40		504
0.80		423	5.50		504
1.00		269	5.56	7/32	504
1.10		269	5.60		547
1.19	3/64	269	5.70		547
1.20		269	5.80		547
1.30		269	5.90		547
1.40		269	5.95	15/64	547
1.50		269	6.00★		547
1.59	1/16	269	6.10		624
1.60		269	6.20		624
1.70		269	6.30		624
1.80		269	6.35	1/4★	570
1.90		269	6.40		795
1.98	5/64	269	6.50		795
2.00★		269	6.60		959
2.10		269	6.70		959
2.20		269	6.75	17/64	959
2.30		343	6.80		959
2.38	3/32★	343	6.90		959
2.40		343	7.00		959
2.50★		343	7.10		959
2.60		343	7.14	9/32	959
2.70		343	7.20		959
2.78	7/64	343	7.30		959
2.80★		343	7.40		959
2.90		343	7.50		959
3.00★		346	7.54	19/64	959
3.10		346	7.60		959
3.17	1/8★	346	7.70		959
3.20		346	7.80		959
3.30★		346	7.90		989
3.40		346	7.94	5/16	989
3.50★		346	8.00★		989
3.57	9/64	346	8.10		989
3.60		373	8.20		989
3.70		373	8.30		989
3.80		373	8.33	21/64	989
3.90		373	8.40		989
3.97	5/32★	373	8.50		996
4.00★		373	8.60		1047
4.10		373	8.70		1047
4.20		373	8.73	11/32	1047
4.30		373	8.80		1267
4.37	11/64	373	9.00		1101
4.40		373	9.13	23/64	1246
4.50		373	9.20		1267
4.60		373	9.50		1101
4.70		373	9.52	3/8	1101
4.76	3/16	373	9.80		1274
4.80		373	9.92	25/64	1274
4.90		439	10.00★		1151
5.00★		439	10.20		1274
5.10		439			
5.16	13/64	439			
5.20		439			



HSS PARALLEL SHANK (LONG SERIES) TWIST DRILLS IS : 5102

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
10.32	13/32	1151	18.65	47/64	3115
10.50		1383	18.75		3146
10.72	27/64	1571	19.00		3146
10.80		1571	19.05	3/4	3146
11.00		1447	19.25		3324
11.11	7/16	1447	19.45	49/64	3633
11.20		1681	19.50		3324
11.50		1488	19.75		3324
11.51	29/64	1681	19.84	25/32	3324
11.80		1681	20.00		3529
11.91	15/32	1488	20.24	51/64	3747
12.00		1534	20.25		3529
12.20		1710	20.30		3529
12.30	31/64	1710	20.64	13/16	3529
12.50		1533	20.75		3633
12.70	1/2	1533	21.00		3633
12.80		2348	21.03	53/64	3975
13.00		2128	21.25		3747
13.10	33/64	2366	21.43	27/32	3747
13.20		2366	21.50		3975
13.49	17/32	2170	21.75		3975
13.50		2366	21.83	55/64	4252
13.80		2575	22.00		3975
13.89	35/64	2575	22.22	7/8	3975
14.00		2366	22.25		4303
14.25		2366	22.15		4303
14.29	9/16	2366	22.62	57/64	4597
14.50		2479	22.75		4401
14.68	37/64	2730	23.00		4401
14.75		2479	23.02	29/32	4401
15.00		2479	23.25		4459
15.08	19/32	2479	23.42	59/64	5257
15.25		2575	23.50		4883
15.48	39/64	2813	23.75		4883
15.50		2575	23.81	15/16	4883
15.75		2575	24.00		5089
15.87	5/8	2575	24.21	61/64	5553
16.00		2615	24.25		5089
16.25		2615	24.50		5089
16.27	41/64	2910	24.61	31/32	5089
16.50		2665	24.75		5455
16.67	21/32	2665	25.00	63/64	5455
16.75		2730	25.25		5525
17.00		2730	25.40	1	5525
17.07	43/64	2966	25.50		6805
17.25		2730	25.75		6805
17.46	11/16	2730	25.80	1.1/64	6949
17.50		2910	26.00		6949
17.75		2910	26.19	1.1/32	6949
17.86	45/64	3218	26.25		7493
18.00		2966	26.50		7493
18.25		2966	26.59	1.3/64	7661
18.26	23/32	2966	26.75		7661
18.50		3089	26.99	1.1/16	7661



HSS PARALLEL SHANK (LONG SERIES) TWIST DRILLS IS : 5102

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
27.00		7808	29.37	1.5/32	8995
27.25		7808	29.50		9113
27.38	1.5/64	7897	29.75		9113
27.50		7897	29.77	1.11/64	9289
27.75		7897	30.00		9289
27.78	1.3/32	7897	30.16	1.3/16	9289
28.00		8625	30.25		9873
28.18	1.7/64	8740	30.50		9873
28.25		8740	30.56	1.13/64	10057
28.50		8740	30.75		10057
28.57	1.1/8	8740	30.96	1.7/32	10057
28.75		8814	31.00		11187
28.97	1.9/64	8995	31.25		11187
29.00		8995	31.35	1.15/64	11591
29.25		8995	31.50		11591

ITEMS MARKEDH (**ONLY IN RH**) ARE EX-STOCK ITEMS. ALL REMAINING ITEMS IN (**RH**) WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35000/- NETT OR MOQ OF 50 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTES :

- For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.
- (a) Quick Spiral or Slow Spiral Drills :

Sizes upto (3.17 mm) 1/8"	50% extra
Sizes over (3.17 mm) 1/8"	25% extra
- (b) Left Hand Drills to IS : 5362

Sizes	MOQ	}	25% extra
3.00 mm to 7.00 mm	1000 Nos.		
7.1mm to 12.7mm	500 Nos.		
12.8mm to 20mm	100 Nos.		
Above 20mm	25 Nos.		
- (c) Long Series Drills with Tenon

Sizes over 3 mm upto 6.50 mm	10% extra
Sizes over 6.50 mm	5% extra
- For **M35 = 40% & M42 = 80% extra**
 Sizes below 1mm are manufactured to our Standard.

HSS TAPER SHANK TWIST DRILLS IS : 5103

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
3.00★		424	5.50★		572
3.17	1/8★	424	5.56	7/32★	572
3.20		443	5.80★		589
3.50★		424	5.95	15/64	589
3.57	9/64	443	6.00★		572
3.80		443	6.20		660
3.97	5/32	424	6.35	1/4★	654
4.00★		424	6.50★		710
4.20★		572	6.75	17/64★	721
4.37	11/64	572	6.80★		721
4.50		572	7.00★		710
4.76	3/16★	572	7.14	9/32★	710
4.80★		572	7.20★		721
5.00★		572	7.50★		710
5.16	13/64★	589	7.54	19/64	721
5.20★		589	7.80★		721



HSS TAPER SHANK TWIST DRILLS IS : 5103

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
7.94	5/16★	712	16.25★		2422
8.00★		712	16.27	41/64★	2422
8.20★		869	16.50★		2574
8.33	21/64★	915	16.67	21/32★	2574
8.50★		793	16.75★		2574
8.73	11/32★	869	17.00★		2574
8.80★		954	17.07	43/64	2616
9.00		869	17.25		2616
9.13	23/64	954	17.46	11/16★	2616
9.20		954	17.50★		2715
9.50★		869	17.75		2754
9.52	3/8★	869	17.86	45/64★	2861
9.80		1026	18.00★		2861
9.92	25/64★	1026	18.25★		2861
10.00★		928	18.26	23/32★	2861
10.20★		1043	18.50★		2861
10.32★	13/32	1008	18.65	47/64★	2895
10.50★		1236	18.75★		2895
10.72	27/64★	1281	19.00★		2895
10.80★		1281	19.05	3/4★	2895
11.00★		1281	19.25		3041
11.11	7/16★	1281	19.45	49/64	3041
11.20★		1323	19.50★		3041
11.50★		1323	19.75		3041
11.51	29/64★	1323	19.84	25/32★	3041
11.80★		1323	20.00★		3271
11.91	15/32★	1323	20.24	51/64	3310
12.00★		1336	20.25★		3310
12.20★		1336	20.50		3310
12.30	31/64	1336	20.64	13/16★	3310
12.50		1336	20.75		3451
12.70	1/2	1336	21.00★		3451
12.80★		1860	21.03	53/64	3536
13.00★		1860	21.25		3536
13.10	33/64★	1940	21.43	27/32	3536
13.20★		1940	21.50		3647
13.49	17/32★	1940	21.75★		3647
13.50★		2078	21.83	55/64	3714
13.80★		2078	22.00		3714
13.89	35/64★	2078	22.22★	7/8★	3714
14.00★		2078	22.25		4048
14.25★		2233	22.50★		4048
14.29	9/16★	2233	22.62★	57/64	4127
14.50★		2319	22.75		4127
14.68	37/64★	2319	23.00★		4127
14.75★		2319	23.02	29/32	4329
15.00★		2319	23.25		4791
15.08	19/32★	2319	23.42	59/64	4912
15.25★		2353	23.50★		4912
15.48	39/64★	2353	23.75		4912
15.50★		2353	23.81★	15/16	4912
15.75★		2353	24.00★		5057
15.87	5/8	2353	24.21	61/64	5143
16.00★		2422	24.25		5143



HSS TAPER SHANK TWIST DRILLS IS : 5103

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
24.50★		5143	33.73	1.21/64	13398
24.61	31/32	5143	34.00★		13398
24.75		5373	34.13	1.11/32	13966
25.00★	63/64	5373	34.50		14673
25.25		5445	34.58	1.23/64	14809
25.40	1★	5445	34.92	1.3/8★	14809
25.50★		5919	35.00★		14809
25.75		5919	35.32	1.25/64	15695
25.80	1.1/64	5984	35.50		15695
26.00★		5984	35.72	1.13/32	15695
26.19	1.1/32	6272	36.00★		15926
26.25		6777	36.12	1.27/64	16254
26.50★		6777	36.50★		16254
26.59	1.3/64	6932	36.51	1.7/16	16254
26.75		6932	36.91	1.29/64	16254
26.99	1.1/16★	6932	37.00★		16656
27.00★		7160	37.31	1.15/32	16656
27.25		7160	37.50★		17737
27.38	1.5/64	7182	37.70	1.31/64	18014
27.50★		7182	38.00★		18014
27.75		7182	38.10	1.1/2★	18014
27.78	1.3/32	7182	38.15	1.33/64	18576
28.00★		7853	38.89	1.17/32	18576
28.18	1.7/64	7875	39.00		19674
28.25		7875	39.29	1.35/64	19674
28.50★		7875	39.50		19674
28.57	1.1/8★	7875	39.69	1.9/16	19674
28.75		8113	40.00★		20180
28.97	1.9/64	8246	40.08	1.37/64	20512
29.00★		8246	40.48	1.19/32	20512
29.25		8246	40.50		21332
29.37	1.5/32★	8246	40.88	1.39/64	21332
29.50★		8278	41.00★		21332
29.75		8278	41.27	1.5/8	21332
29.77	1.11/64	8452	41.50		22169
30.00★		8452	41.67	1.41/64	22169
30.16	1.3/16	8924	42.00★		22169
30.25		9610	42.07	1.21/32	22169
30.50★		9610	42.47	1.43/64	22737
30.56	1.13/64	9766	42.50		22737
30.75		9766	42.86	1.11/16	23016
30.96	1.7/32	9766	43.00★		23556
31.00★		10868	43.26	1.45/64	23556
31.25★		10868	43.50		23556
31.35	1.15/64	11342	43.66	1.23/32	23556
31.50★		11342	44.00★		24387
31.75	1.1/4★	11342	44.05	1.47/64	24387
32.00★		12418	44.45	1.3/4	24387
32.15	1.17/64	12418	44.50		24387
32.50★		12418	44.85	1.49/64	24959
32.54	1.9/32	12418	45.00★		24959
32.94	1.19/64	12714	45.24	1.23/32	24959
33.00★		12714	45.50		26089
33.34	1.5/16	12714	45.64	1.51/64	26089
33.50		13151	46.00		26089



HSS TAPER SHANK TWIST DRILLS IS : 5103

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
46.04	1.13/16	26089	61.12	2.13/32	74806
46.43	1.53/64	27405	61.15		74806
46.50		27405	61.91	2.7/16	74806
46.83	1.27/32	27405	62.00 ★		74806
47.00		27405	62.50		74806
47.23	1.53/64	27979	62.71	2.15/32	76065
47.50		27979	63.00		76065
47.62	1.7/8	27979	63.50	2.1/2	76065
48.00 ★		30509	64.00		84070
48.02	1.57/64	30509	64.29	2.17/32	84070
48.42	1.29/32	30509	65.00 ★		84070
48.50		30731	65.09	2.9/16	84695
48.82	1.59/64	30731	65.88	2.19/32	84695
49.00 ★		30731	66.00		84695
49.21	1.15/16	30731	66.67	2.5/8	84695
49.50		31063	67.00		86763
49.61	1.61/64	31063	67.47	2.21/32	93133
50.00 ★		31063	68.00		93133
50.01	1.31/32	31308	68.26	2.11/16	93133
50.40	1.63/64	32714	69.00		100950
50.50		32714	69.06	2.23/32	100950
50.80	2 ★	32714	69.85	2.3/4	100950
51.00 ★		44417	70.00		100950
51.50		44417	70.64	2.25/32	108877
51.59	2.1/32	44417	71.00		108877
52.00 ★		44417	71.44	2.13/16	108877
52.39	2.1/16	44417	71.50		108877
52.50		57808	72.00		110979
53.00		57808	72.23	2.27/32	110979
53.18	2.3/32	57808	73.00		110979
53.50		57808	73.02	2.7/8	110979
53.97	2.1/8	57808	73.82	2.29/32	118112
54.00		57808	74.00		118112
54.50		60727	74.61	2.15/16	118112
54.77	2.5/32	60727	75.00 ★		119581
55.00 ★		60727	75.41	2.31/32	119581
55.50		60727	76.00		119581
55.56	2.3/16	60727	76.20	3	119581
56.00		63279	76.99	3.1/32	163593
56.36	2.7/32	63279	77.00		163593
56.50		63279	77.79	3.1/16	163593
57.00		63279	78.00		163593
57.15	2.1/4	63279	78.58	3.3/32	166854
57.50		69058	79.00		166854
57.94	2.9/32	69058	79.37	3.1/8	171284
58.00 ★		69058	80.00		171284
58.50		69058	80.17	3.5/32	183203
58.74	2.5/16	69058	80.96	3.3/16	183203
59.00		70377	81.00		183203
59.50		70377	81.76	3.7/32	187964
59.53	2.11/32	70377	82.00		187964
60.00 ★		70377	82.55	3.1/4	187964
60.32	2.3/8	70377	83.00		191848
60.50		74806	83.34	3.9/32	191848
61.00		74806	84.00		191848



HSS TAPER SHANK TWIST DRILLS IS : 5103

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
84.14	3.5/16	195037	92.07	3.5/8	248246
84.99	3.11/32	195037	93.00		248246
85.00		187088	93.66	3.11/16	257635
85.72	3.3/8	222470	94.00		257635
86.00		222470	95.00		257635
86.52	3.13/32	222470	95.25	3.3/4	257635
87.00		222470	96.00		266260
87.31	3.7/16	227120	96.84	3.13/16	266260
88.00		227120	97.00		266260
88.11	3.15/32	227120	98.00		270969
88.90	3.1/2	227120	98.42	3.7/8	274836
89.00		227120	99.00		274836
90.00		231752	100.00		274836
90.49	3.9/16	240396	100.01	3.15/16	279546
91.00		240396	101.00		279546
92.00		240396	101.60	4	279546
			102.00		279546

ITEMS MARKED ★ (ONLY IN RH) ARE EX-STOCK ITEMS. ALL REMAINING ITEMS IN (RH) WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR MOQ OF 3 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTES :

1. For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.

2. (a) Quick Spiral or Slow Spiral Drills : **25% extra**
(b) Left Hand Drills

Size	MOQ	} 25% extra
3.00 mm to 7.00 mm	1000 Nos.	
7.1mm to 12.7mm	500 Nos.	
12.8mm to 20mm	100 Nos.	
Above 20mm	25 Nos.	

3. Oversize shank Drills to IS : 5104 in the following range **10% extra**

4. For **M35 = 40% & M42 = 80% extra**

SIZE RANGE		MT NO.	INSTEAD OF MT NO.
MM	INCH		
11.8 to 14.0	15/32 to 35/64	2	1
18.0 to 23.0	23/32 to 29/32	3	2
26.5 to 31.75	1.3/64 to 1.1/4	4	3
40.0 to 80.80	1.37/64 to 2	5	4
63.0 to 76.20	2.1/2 to 3	6	5

MORSE TAPER SHANK TWIST DRILLS (IS : 5103)

MORSE TAPER SHANK NO.	DRILL SIZE			
	MM		INCH	
	OVER	UPTO & INCL.	OVER	UPTO & INCL.
1	3.00	14.00	1/8	35/64
2	14.00	23.00	35/64	29/32
3	23.00	31.75	29/32	1.1/4
4	31.75	50.80	1.1/4	2
5	50.80	76.20	2	3
6	76.20	100.00	3	4


HSS TAPER SHANK 3 OR 4 FLUTED CORE DRILLS IS : 5366

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
7.94	5/16	1371	28.57	1.1/8	8616
8.00		1374	29.00		9017
9.52	3/8	1512	29.37	1.5/32	9017
10.00		1512	30.00		9577
10.32	13/32	1512	30.16	1.3/16	9577
11.00		1513	30.96	1.7/32	9942
11.11	7/16	1513	31.00		11178
11.91	15/32	1619	31.75	1.1/4	11670
12.00		1619	32.00		12789
12.70	1/2	1710	32.54	1.9/32	12789
13.00		2312	33.00		13057
13.49	17/32	2531	33.34	1.5/16	13057
14.00		2531	34.00		14320
14.29	9/16	2604	34.13	1.11/32	14320
15.00		2717	34.92	1.3/8	15124
15.08	19/32	2717	35.00		15124
15.87	5/8	2779	35.72	1.13/32	16267
16.00		2779	36.00		16267
16.67	21/32	2929	36.51	1.7/16	17160
17.00		2929	37.00		17160
17.46	11/16	3162	37.31	1.15/32	17648
18.00		3403	38.00		18881
18.26	23/32	3403	38.10	1.1/2	18881
19.00		3887	39.00		20705
19.05	3/4	3887	39.69	1.9/16	20705
19.84	25/32	3905	40.00		20705
20.00		3905	41.00		22820
20.64	13/16	4176	41.27	1.5/8	22820
21.00		4146	42.00		23496
21.43	27/32	4416	42.07	1.21/32	23496
22.00		4416	42.86	1.11/16	24252
22.22	7/8	4685	43.00		24252
23.00		4960	44.00		25633
23.02	29/32	4960	44.45	1.3/4	25633
23.81	15/16	5413	45.00		26539
24.00		5682	45.24	1.25/32	26538
24.61	31/32	5682	46.00		27522
25.00		6574	46.04	1.13/16	27522
25.40	1	6574	47.00		28601
26.00		7096	47.62	1.7/8	30074
26.19	1.1/32	7096	48.00		30074
26.99	1.1/16	7832	49.00		32114
27.00		7832	49.21	1.15/16	32114
27.78	1.3/32	8130	50.00		34559
28.00		8615	50.80	2	38212


HSS TAPER SHANK 3 OR 4 FLUTED CORE DRILLS IS : 5366

SIZE		PRICE (Rs.) EACH	SIZE		PRICE (Rs.) EACH
MM	INCH		MM	INCH	
51.00		38545	64.00		72183
52.00		42450	65.00		72183
52.39	2.1/16	42450	65.09	2.9/16	72183
53.00		49588	66.00		75683
53.97	2.1/8	49588	66.67	2.5/8	75683
54.00		51976	67.00		78842
55.00		51976	68.00		82670
55.36	2.3/16	51976	68.26	2.11/16	82670
56.00		54177	69.00		86710
57.00		54177	69.85	2.3/4	88334
57.15	2.1/4	54177	70.00		88334
58.00		59205	71.00		90083
58.74	2.5/16	59205	71.44	2.13/16	90083
59.00		60300	72.00		94200
60.00		60300	73.00		97692
60.32	2.3/8	60300	73.02	2.7/8	97692
61.00		64263	74.00		101386
61.91	2.7/16	64263	74.61	2.15/16	101386
62.00		64263	75.00		105122
63.00		66110	76.00		110171
63.50	2.1/2	66110	76.20	3	110171

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTES :

1. For non listed intermediate sizes. The higher price of the nearest listed size (INCH or MM) will be applicable.
2. Sizes upto 20 mm will be with 3 flutes and above 20 mm will be with 4 flutes unless otherwise specified.
3. Core drills with non-standard number of flutes - **10% extra**
4. For **M35 = 40% & M42 = 80% extra**

HSS SHELL DRILLS BS : 122 - 1964*

NOM DIA INCH	PRICE (Rs.) EACH	NOM DIA INCH	PRICE (Rs.) EACH
1	3432	2	7586
1.1/16	3624	2.1/8	8385
1.1/8	3840	2.1/4	9176
1.3/16	4076	2.3/8	10267
1.1/4	4256	2.1/2	12486
1.5/16	4463	2.5/8	14506
1.3/8	4717	2.3/4	15958
1.7/16	4925	2.7/8	17733
1.1/2	5103	3	19475
1.9/16	5394	3.1/8	21837
1.5/8	5630	3.1/4	23949
1.11/16	6391	3.3/8	25757
1.3/4	6538	3.1/2	27655
1.13/16	6794	3.5/8	32672
1.7/8	6999	3.3/4	34180
1.15/16	7337	3.7/8	39565
		4	43724

IMPORTANT NOTES

* For Metric sizes , price as per IS: 7772 - 1992 of the next listed size will be applicable.

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS.35,000/- NETT OR 3 NOS, PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**



HSS COMBINED DRILLS & COUNTERSINKS (CENTRE DRILLS) IS : 6708 / TYPE 'A'

PILOT DIA MM	BODY DIA MM	PRICE (Rs.) EACH	PILOT DIA MM	BODY DIA MM	PRICE (Rs.) EACH
1	3.15	226	4★	10	497
1.25	3.15	226	5	12.5	839
1.6★	4	226	6.3	16	992
2★	5	226	8	20	1532
2.5★	6.3	260	10	25	1973
3.15★	8	403			

HSS COMBINED DRILLS & COUNTERSINKS (CENTRE DRILLS) IS : 6710 / TYPE 'R'

PILOT DIA MM	BODY DIA MM	PRICE (Rs.) EACH	PILOT DIA MM	BODY DIA MM	PRICE (Rs.) EACH
2	5	225	5	12.5	839
2.5	6.3	260	6.3	16	992
3.15	8	403	8	20	1532
4	10	498	10	25	1973

HSS COMBINED DRILLS & COUNTERSINKS (CENTRE DRILLS) IS : 6709 / TYPE 'B'

PILOT DIA MM	BODY DIA MM	PRICE (Rs.) EACH	PILOT DIA MM	BODY DIA MM	PRICE (Rs.) EACH
1	4	370	4★	14	1483
1.25	5	396	5★	18	2120
1.6	6.3	461	6.3	20	2497
2	8	651	8	25	3232
2.5	10	832	10	31.5	3836
3.15	11.20	1108			

HSS COMBINED DRILLS & COUNTERSINKS (CENTRE DRILLS) BS : 328 (PART 2) 1950

B.S. NO.	PILOT DIA INCH	BODY DIA INCH	OAL INCH	PRICE (Rs.) EACH
BS-1	3/64	1/8	1.1/2	226
BS-2★	1/16	3/16	1.3/4	226
BS-3★	3/32	1/4	2	260
BS-4★	1/8	5/16	2.1/4	403
BS-5★	3/16	7/16	2.1/2	527
BS-6★	1/4	5/8	3	992
BS-7	5/16	3/4	3.1/2	1532

ITEMS MARKEDH ARE EX-STOCK ITEMS. ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR MOQ OF 3 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTES :

LEFT HAND DRILLS

Size	MOQ	
Body Dia upto 8.0mm	- 1000 Nos.	} 35% extra
Body Dia from 10mm to 14mm	- 500 Nos.	
Body Dia from 16mm to 20mm	- 100 Nos.	

For M35 = 40% & M42 = 80% extra

LH Centre Drills TYPE 'R' not possible



HSS TAPER SHANK TWIST DRILLS (LONG SERIES) IS : 8305 - 1976 (TYPE - N)

SIZE		OAL	PRICE (Rs.) EACH	SIZE		OAL	PRICE (Rs.) EACH
MM	INCH	MM		MM	INCH	MM	
5.00★		155	1307	12.50		215	3337
	13/64	155	1307		1/2	215	3337
5.20		155	1307	12.80		215	3337
5.50		161	1455	13.00★		215	3337
	7/32	161	1455		33/64	215	3337
5.80		161	1455	13.20		215	3338
	15/64	161	1455		17/32	223	3658
6.00★		161	1455	13.50		223	3658
6.20		167	1622	13.80		223	3805
	1/4	167	1621		35/64	223	3805
6.50		167	1622	14.00★		223	3806
	17/64	174	1749	14.25		245	4749
6.80		174	1749		9/16	245	4749
7.00		174	1749	14.50		245	4749
	9/32	174	1749		37/64	245	4855
7.20		174	1803	14.75		245	4855
7.50		174	1803	15.00		245	4855
	19/64	181	1907		19/32	251	4964
7.80		181	1907	15.25		251	4964
	5/16	181	1907		39/64	251	4964
8.00★		181	1907	15.50		251	4964
8.20		181	1945	15.75		251	5092
	21/64	181	1945		5/8	251	5092
8.50★		181	1945	16.00		251	5092
	11/32	188	2108	16.25		257	5181
8.80		188	2109		41/64	257	5181
9.00★		188	2109	16.50		257	5181
	23/64★	188	2158		21/32	257	5292
9.20		188	2158	16.75		257	5292
9.50		188	2158	17.00		257	5292
	3/8	197	2158		43/64	263	5746
9.80		197	2451	17.25		263	5746
	25/64	197	2451		11/16	263	5746
10.00★		197	2451	17.50		263	5746
10.20		197	2520	17.75		263	5760
	13/32	197	2520		45/64	263	5760
10.50		197	2520	18.00★		263	5760
	27/64	206	2575	18.25		269	5850
10.80★		206	2575		23/32	269	5850
11.00		206	2575	18.50		269	5850
	7/16	206	2671		47/64	269	5944
11.20★		206	2671	18.75		269	5944
11.50		206	2671	19.00		269	5944
	29/64	206	2671		3/4	275	5944
11.80		206	2671	19.25		275	6107
	15/32	215	3166		49/64	275	6107
12.00		215	3166	19.50		275	6107
12.20		215	3337	19.75		275	6207
	31/64	215	3337		25/32	275	6207



HSS TAPER SHANK TWIST DRILLS (LONG SERIES) IS : 8305 - 1976 (TYPE-N)

SIZE		OAL	PRICE (Rs.) EACH	SIZE		OAL	PRICE (Rs.) EACH
MM	INCH	MM		MM	INCH	MM	
20.00		275	6207	28.25		351	15685
	51/64	282	6310	28.50		351	15685
20.25		282	6310				
20.50		282	6310		1.1/8	351	15685
	13/16	282	6428	28.75		351	16127
20.75		282	6428				
21.00★		282	6428	29.00		351	16127
	53/64	282	7468	29.25		351	16573
21.25		289	7467		1.5/32	351	16573
	27/32	289	7468	29.50		351	16573
21.50		289	7467	29.75		351	17043
21.75		289	7616	30.00		351	17043
	55/64	289	7616		1.3/16	360	17043
22.00		289	7616	30.25		360	17495
	7/8	289	8133	30.50		360	17495
22.25		289	8133	30.75		360	17495
22.50		296	8133		1.7/32	360	17495
	57/64	296	8526	31.00		360	17495
22.75		296	8526	31.25		360	17623
23.00		296	8526	31.50		360	17623
	29/32	296	10415	31.75	1.1/4	369	18302
23.25		319	10415	32.00		397	21082
	59/64	319	10415	32.50		397	21993
23.50		319	10415		1.9/32	397	21993
23.75		327	10415	33.00		397	21993
	15/16	327	10415		1.5/16	397	21993
24.00		327	10415	33.50		397	22950
	61/64	327	10870	34.00		406	22950
24.25		327	10870		1.11/32	406	23953
24.50		327	10870	34.50		406	23953
	31/32	327	11267		1.3/8	406	23953
24.75		327	11267	35.00		406	23953
25.00		327	11267	35.50		406	23953
25.25★		335	11267		1.13/32	416	26249
	1	335	11267	36.00		416	26249
25.50		335	11267	36.50		416	27230
25.75		335	11717		1.7/16	416	27230
26.00		335	11717	37.00		416	27230
	1.1/32	335	12054		1.15/32	416	29489
26.25		335	12054	37.50		416	29489
26.50		335	12054	38.00		426	29489
26.75		343	14288		1.1/2	426	29489
	1.1/16	343	14288	38.50		426	30456
27.00		343	14288		1.17/32	426	30456
27.25		343	14744	39.00		426	30456
27.50		343	14744	39.50		426	31662
27.75		343	15196		1.9/16	426	31662
	1.3/32	343	15196	40.00		426	31662
28.00		343	15196				



HSS TAPER SHANK TWIST DRILLS (LONG SERIES) IS : 8305 - 1976 (TYPE-N)

SIZE		OAL	PRICE (Rs.) EACH	SIZE		OAL	PRICE (Rs.) EACH
MM	INCH	MM		MM	INCH	MM	
	1.19/32	436	31662		1.25/32		43772
40.50		436	31662	45.50		459	43772
41.00		436	31662	46.00			43772
	1.5/8	436	31662		1.13/16		43772
41.50		436	33282	46.50		459	45552
42.00		436	33282		1.27/32		45552
	1.21/32	436	35212	47.00			45552
42.50		436	35212	47.50		459	47854
	1.11/16	447	37828		1.7/8	470	47854
43.00		447	37828	48.00			47854
43.50		447	39876		1.29/32		52413
	1.23/32	447	39876	48.50		470	52413
44.00		447	39876	49.00			52413
	1.3/4	447	41516		1.15/16	470	52413
44.50		447	41516	49.50			52413
45.00		447	41516	50.00			55112

ITEMS MARKED H ARE EX-STOCK ITEMS. ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975

SIZE		OVERALL LENGTH IN MILLIMETERS											
		200	225	250	275	300	315	325	350	375	400		
MM	INCH	PRICE EACH											
3.0	1/8	1837	2158	2391	2721	3086	-	3563	-	-	-	-	-
3.5		1888	2158	2459	2789	3165	-	3660	-	-	-	-	-
4.0	5/32	1888	2158	2459	2789	3165	-	3660	-	-	-	-	-
4.5		1937	2220	2459	2856	3356	-	3850	-	-	-	-	-
5.0	3/16	1937	2220	2459	2856	3356	-	3850	-	-	-	-	-
5.5	7/32	1937	2237	2578	3024	3427	-	3952	-	-	-	-	-
6.0		1947	2237	2604	3024	3427	3747	3952	-	-	-	-	-
6.5	1/4	1975	2307	2618	3176	3563	3865	4069	-	-	-	-	-
7.0		2153	2424	2720	3236	3728	4100	4273	-	-	-	-	-
7.5		2176	2484	2799	3294	3826	4192	4354	-	-	-	-	-
8.0	5/16	2274	2540	2910	3413	3922	4258	4475	-	-	-	-	-
8.5		2348	2634	2967	3475	3995	4311	4600	-	-	-	-	-



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975 (Contd.)

SIZE		OVERALL LENGTH IN MILLIMETERS											
		200	225	250	275	300	315	325	350	375	400		
MM	INCH	PRICE EACH											
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
9.0		2386	2673	3038	3492	4026	4423	4639	-	-	-	-	-
9.5	3/8	2444	2704	3038	3589	4128	4483	4659	-	-	-	-	-
10.0		2451	2773	3128	3652	4207	4592	4788	5359	6042	6720	7281	7822
10.5		2520	2878	3337	3858	4423	4789	5030	5751	6462	7281	8290	
11.0		2576	2967	3370	3922	4504	4946	5160	5857	6568	7343		
11.5	7/16	2671	3029	3456	4017	4614	5030	5257	6014	6739	7534		
12.0		-	3166	3607	4177	4788	5225	5490	6207	6892	7731		
12.5	1/2	-	3337	3728	4330	4936	5393	5641	6500	7337	8290		



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975 (Contd.)

SIZE		OVERALL LENGTH IN MILLIMETERS											
		250	275	300	315	325	350	375	400	425	450	475	500
MM	INCH	PRICE EACH											
13.0		4423	5066	5751	6244	6568	7473	8387	9421	-	-	-	-
13.5		4566	5168	5907	6397	6685	7615	8597	9659	-	-	-	-
14.0		4717	5322	6014	6526	6792	7765	8773	9844	-	-	-	-
14.5	9/16	4749	5394	6105	6560	6892	7914	8925	10016	11777	13145	14792	16589
15.0		4855	5512	6251	6700	7061	8072	9049	10180	11724	13304	14940	16759
15.5		4966	5640	6311	6831	7156	8195	9222	10320	11808	13432	15070	16904
16.0	5/8	5092	5736	6438	6928	7285	8313	9366	10497	12053	13663	15254	17089
16.5		5181	5811	6560	7061	7400	8467	9538	10752	12236	13808	15410	17194
17.0		5292	5952	6629	7144	7500	8597	9666	10870	12381	13979	15559	17354
17.5	11/16	-	-	6792	7281	7645	8762	9830	11000	12529	14141	15756	17518
18.0		-	-	6892	7445	7765	8903	10002	11201	12686	14287	15920	17686
18.5		-	-	7002	7534	7905	8981	10121	11376	12848	14452	16029	17857



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975 (Contd.)

SIZE		OVERALL LENGTH IN MILLIMETERS												
		250	275	300	315	325	350	375	400	425	450	475	500	
MM	INCH	PRICE EACH												
19.0	3/4	-	-	7126	7645	8023	9129	10277	11528	12983	14616	16187	17959	
19.5		-	-	7214	7731	8101	9293	10479	11762	13145	14789	16381	18134	
20.0		-	-	7337	7857	8255	9401	10619	11931	13406	14940	16559	18356	
20.5		-	-	7473	8000	8371	9558	10752	12109	13568	15196	16815	18633	
21.0	13/16	-	-	7607	7905	8514	9764	10974	12308	13860	15455	17123	18924	
21.5		-	-	7765	8290	8656	9934	11185	12542	14066	15781	17432	19310	
22.0		-	-	7934	8512	8903	10121	11376	12753	14287	16027	17710	19615	
22.5	7/8	-	-	8144	8690	9093	10292	11528	12889	14534	16249	18015	19942	



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975 (Contd.)

SIZE		OVERALL LENGTH IN MILLIMETERS											
		300	315	325	350	375	400	425	450	475	500	525	
MM	INCH	PRICE EACH											
23.0		8525	9099	8897	10632	11779	13118	14744	16544	18281	20232		
23.5		9366	-	9825	11414	12547	13567	15244	17015	18834	20853		
24.0	15/16	9366	-	9825	11528	12710	14042	15723	17554	19347	21410		
24.5		9659	-	10255	12052	13145	14521	16241	18054	19913	21991		
25.0		-	-	10627	12496	13663	14968	16699	18577	20466	22606		
25.5	1	-	-	-	12882	14066	15413	17174	19063	21017	23133		
26.0		-	-	-	13406	14574	15913	17686	19627	21559	23751		
26.5		-	-	-	13808	14999	16357	18178	20127	22069	24331		
27.0	1.1/16	-	-	-	14287	15526	16841	18659	20630	22645	24899		
27.5		-	-	-	14744	15920	17257	19155	21151	23169	25459		
28.0		-	-	-	15196	16381	17762	19627	21662	24209	26076		
28.5	1.1/8	-	-	-	15687	16865	18203	20085	22188	24291	26613		



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975 (Contd.)

SIZE		OVERALL LENGTH IN MILLIMETERS											
		300	315	325	350	375	400	425	450	475	500	525	
MM	INCH	PRICE EACH											
29.0		-	-	-	16127	17327	18701	20591	22717	24805	27216	-	-
29.5		-	-	-	16573	17762	19143	21082	23201	25366	27811	-	-
30.0	1.3/16	-	-	-	17043	18240	19615	21559	23724	25899	28358	-	-
31.0	1.1/4	-	-	-	17495	18696	20090	22094	24340	26574	29158	-	-
32.0		-	-	-	17623	19063	21082	23169	25518	27811	30512	32508	-
33.0	1.5/16	-	-	-	-	-	21991	24200	26656	29056	31846	33974	-
34.0		-	-	-	-	-	22951	25228	27794	30314	33214	35406	-
35.0	1.3/8	-	-	-	-	-	23954	26337	28940	31581	34569	36839	-
36.0		-	-	-	-	-	24899	27335	30059	32797	35923	38211	-
37.0	1.7/16	-	-	-	-	-	25848	28358	31205	34030	37230	39644	-
38.0	1.1/2	-	-	-	-	-	26832	29488	32413	35305	38643	41139	-
39.0		-	-	-	-	-	27811	30780	33443	36426	39798	42362	-



HSS TAPER SHANK TWIST DRILLS - EXTRA LONG IS : 7822 - 1975 (Contd.)

SIZE		OVERALL LENGTH IN MILLIMETERS					
		400	425	450	475	500	525
MM	INCH	PRICE EACH					
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
40.0		28975	31662	34621	37657	41104	43697
41.0	1.5/8	-	-	-	-	42465	-
42.0		-	-	-	-	44353	-
43.0		-	-	-	-	46321	-
44.0		-	-	-	-	48252	-
45.0	1.3/4	-	-	-	-	50219	-
46.0	1.13/16	-	-	-	-	52345	-
47.0		-	-	-	-	54461	-
48.0	1.7/8	-	-	-	-	56583	-
49.0	1.15/16	-	-	-	-	58664	-
50.0		-	-	-	-	61028	-

IMPORTANT NOTES :

- 1) Size 6 mm to 50 mm OAL 200,250,315,400 & 500 mm will be to IS 7822 - 1975. All other size to over standard. 2) For **M35 = 40% & M42 = 80% extra**
- 3) For non listed intermediate sizes , the higher price of the nearest listed size (INCH or MM) will be applicable..
- 4) ITEMS MARKED * ARE EX-STOCK ITEMS , ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS.35,000/- NETT OR MOQ OF 3 NOS PER SIZE WHICHEVER IS HIGHER.



HSS PARALLEL SHANK TWIST DRILLS EXTRA LONG TO OUR STANDARD

PRICE (Rs.) EACH

SIZE		OVERALL LENGTH IN MILLIMETERS												
MM	INCH	50	100	125	150	175	200	225	250	300	350			
0.5	-	774	-	-	-	-	-	-	-	-	-	-	-	-
0.6	-	724	-	-	-	-	-	-	-	-	-	-	-	-
0.8	-	495	-	-	-	-	-	-	-	-	-	-	-	-
1.0	-	-	479	-	-	-	-	-	-	-	-	-	-	-
1.2	3/64	-	479	-	-	-	-	-	-	-	-	-	-	-
-	1/16	-	-	591	706	-	-	-	-	-	-	-	-	-
-	5/64	-	-	613	738	-	-	-	-	-	-	-	-	-
3.0	1/8	-	-	-	996	1220	1381	1642	1937	2416	-	-	-	-
3.5	-	-	-	-	971	1131	1455	1808	2176	2776	3768	-	-	-
4.0	5/32	-	-	-	971	1131	1455	1808	2176	2776	3828	-	-	-
4.5	-	-	-	-	995	1220	1455	1808	2176	2859	3828	-	-	-
5.0	3/16	-	-	-	995	1269	1576	1936	2285	3029	4016	-	-	-
5.5	7/32	-	-	-	1089	1357	1684	2062	2433	3218	4186	-	-	-
6.0	-	-	-	-	1089	1417	1734	2099	2519	3296	4344	-	-	-
6.5	1/4	-	-	-	-	-	1773	2564	3452	4344	5232	-	-	-
7.0	-	-	-	-	-	-	1968	2821	3609	4497	5385	-	-	-
7.5	9/32	-	-	-	-	-	2004	2999	3975	4951	5927	-	-	-
8.0	5/16	-	-	-	-	-	2103	3124	4099	5074	6049	-	-	-
8.5	11/32	-	-	-	-	-	2170	3188	4147	5106	6065	-	-	-
9.0	-	-	-	-	-	-	2170	3188	4147	5106	6065	-	-	-
9.5	3/8	-	-	-	-	-	2285	3208	4238	5267	6296	-	-	-
10.0	-	-	-	-	-	-	2381	3297	4427	5557	6687	-	-	-
10.5	13/32	-	-	-	-	-	2460	3521	4592	5749	6906	-	-	-
11.0	7/16	-	-	-	-	-	-	3643	4733	5823	6913	-	-	-
11.5	-	-	-	-	-	-	-	3643	4733	5823	6913	-	-	-
12.0	15/32	-	-	-	-	-	-	3824	4914	6004	7094	-	-	-
12.5	1/2	-	-	-	-	-	-	3943	5033	6123	7213	-	-	-

IMPORTANT NOTES :

- 1) Other details will be maintained as per IS: 7823-1983. 2) For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable .
- 3) ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS.35,000/- NETT OR 15 NOS, PER SIZE WHICHEVER IS HIGHER. 4) For M35 = 40% & M42 = 80% extra



HSS - PARALLEL SHANK TWIST DRILLS IS : 5101

SIZE		PANTHER PRICE (Rs.) 10 Nos.	NINJA PRICE (Rs.) 10 Nos.	SIZE		PANTHER PRICE (Rs.) 10 Nos.	NINJA PRICE (Rs.) 10 Nos.
MM	INCH			MM	INCH		
2.00		640	-	6.35	1/4	2795	3728
2.10		640	-	6.50		3566	4756
2.20		640	-	6.60		3566	4756
2.30		640	-	6.70		3566	4756
2.40		640	-	6.75	17/64	3566	4756
2.50		640	-	6.80		3566	4756
2.60		640	-	7.00		3904	5205
2.70		640	-	7.14	9/32	3904	5205
2.80		640	-	7.20		3904	-
2.90		640	-	7.40		4121	-
3.00		703	936	7.50		4121	5494
3.10		836	1116	7.60		4460	-
3.17	1/8	836	1116	7.80		4460	-
3.20		867	1153	7.94	5/16	4895	6529
3.30		867	1153	8.00		4895	6529
3.40		867	1153	8.10		4895	-
3.50		867	1153	8.20		4895	6529
3.57	9/64	867	1153	8.30		5934	7912
3.60		1223	-	8.33	21/64	5934	7912
3.70		1223	1631	8.50		5934	7912
3.80		1223	1631	8.60		5934	7912
3.90		1223	-	8.70		5934	7912
3.97	5/32	1223	1631	8.80		6252	8334
4.00		1223	1631	9.00		6252	8334
4.10		1485	1977	9.30		6520	8696
4.20		1485	1977	9.40		6520	-
4.30		1485	-	9.50		6520	8696
4.37	11/64	1485	-	9.52	3/8	7393	9857
4.40		1485	-	9.70		7393	-
4.50		1949	2597	9.80		7393	-
4.60		1949	-	10.00		8275	11034
4.76	3/16	1949	2597	10.20		8275	11034
4.80		1949	-	10.30		8970	11956
5.00		2116	2821	10.32	13/32	8970	11956
5.10		2116	2821	10.40		8970	11956
5.16	13/64	2116	2821	10.50		8970	11956
5.20		2116	2821	10.70		9494	-
5.30		2282	3043	11.00		9494	12659
5.40		2282	-	11.11	7/16	10598	14131
5.50		2282	3043	11.50		11178	14904
5.56	7/32	2282	-	11.80		11178	14904
5.60		2282	3043	12.00		11938	15917
5.80		2568	-	12.50		12663	16883
6.00		2568	3424	12.70	1/2	13368	17825
6.10			-	12.80		13613	18152
6.20		2795	3728	13.00		13613	18152
6.30		2795	-				

MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ 50 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTE :

All sizes to be ordered in multiples of 10 only.



HSS - TAPER SHANK TWIST DRILLS IS : 5103

SIZE		PANTHER PRICE (Rs.) EACH	NINJA PRICE (Rs.) EACH	SIZE		PANTHER PRICE (Rs.) EACH	NINJA PRICE (Rs.) EACH
MM	INCH			MM	INCH		
9.52	3/8	1174	1565	16.67	21/32	3473	4633
10.00		1253	1671	16.75		3473	4633
10.20		1408	1876	17.00 ★		3473	4633
10.32	13/32	1361	1814	17.25		3531	4708
10.50		1667	2225	17.46	11/16 ★	3531	4708
11.00		1730	2306	17.50 ★		3666	4888
11.50		1786	2381	18.00 ★		3863	5150
12.00 ★		1805	2405	18.25		3863	5150
12.50		1805	2405	18.26	23/32	3863	5150
12.70	1/2 ★	1805	2405	18.50 ★		3863	5150
13.00 ★		2510	3347	18.75		3908	5211
13.20		2620	3492	19.00 ★		3908	5211
13.49	17/32	2620	3492	19.05	3/4 ★	3908	5211
13.50 ★		2805	3740	19.25		4106	5474
13.80		2805	3740	19.50 ★		4106	5474
13.89	35/64	2805	3740	19.84	25/32 ★	4106	5474
14.00 ★		2805	3740	20.00 ★		4414	5887
14.20		3015	4020	20.24	51/64	4467	5958
14.25		3015	4020	20.25		4467	5958
14.29	9/16 ★	3015	4020	20.50 ★		4467	5958
14.50 ★		3132	4175	20.64	13/16	4467	5958
14.75		3132	4175	21.00 ★		4659	6213
15.00 ★		3132	4175	21.50 ★		4923	6564
15.08	19/32	3132	4175	22.00 ★		5015	6685
15.25		3177	4236	22.22	7/8	5015	6685
15.50 ★		3177	4236	22.50 ★		5464	7286
15.87	5/8 ★	3177	4236	23.00 ★		5572	7428
16.00 ★		3272	4361	23.50 ★		6632	8841
16.25		3272	4361	24.00 ★		6827	9102
16.27	41/64	3272	4361	24.50		6942	9257
16.30		3473	4633	25.00 ★	63/64	7254	9672
16.50 ★		3473	4633	25.40	1 ★	7350	9802

ITEMS MARKED ★ (ONLY IN RH) ARE EX-STOCK ITEMS.
ALL REMAINING ITEMS IN (RH) WILL ATTRACT MINIMUM
ORDER VALUE - OF RS. 35,000/- NETT OR MOQ 3 NOS PER
SIZE WHICHEVER IS HIGHER.



HSS PARALLEL HAND REAMERS, HSS LONG FLUTED MACHINE REAMERS AND HSS PARALLEL/TAPER SHANK CHUCKING REAMERS

Price (Rs.) Each

SIZE		HAND REAMERS IS : 5444	LONG FLUTED MACHINE REAMERS IS : 5445	CHUCKING REAMERS	
MM	INCH			PARALLEL SHANK IS:5446	TAPER SHANK IS:5447
3.00		1176	1176	1176	1176
3.17	1/8	1176	1176	1176	1176
3.50		1176	1176	1176	1176
3.97	5/32	1176	1176	1176	1176
4.00		1176	1176	1176	1176
4.50		1176	1176	1176	1176
4.76	3/16	1176	1176	1176	1176
5.00		1176	1176	1176	1176
5.50		1176	1176	1176	1176
5.56	7/32	1176	1176	1176	1176
6.00		1366	1366	1366	1366
6.35	1/4	1366	1366	1366	1366
7.00		1368	1368	1368	1368
7.14	9/32	1368	1368	1368	1368
7.94	5/16	1552	1552	1552	1552
8.00		1552	1552	1552	1552
8.73	11/32	1619	1619	1619	1619
9.00		1619	1619	1619	1619
	23/64	1619	1619	1619	1619
9.52	3/8	1764	1764	1764	1764
	25/64	1955	1955	1955	1955
10.00		1955	1955	1955	1955
10.32	13/32	1955	1955	1955	1955
11.00		2195	2195	2195	2195
11.11	7/16	2195	2195	2195	2195
11.91	15/32	2283	2283	2283	2283
12.00		2283	2283	2283	2283
12.70	1/2	2369	2369	2369	2369
13.00		2882	2882	2882	2882
13.49	17/32	2882	2882	2882	2882
14.00		2882	2882	2882	2882
14.29	9/16	2882	2882	2882	2882
15.00		2901	2901	2901	2901
15.08	19/32	2901	2901	2901	2901
15.87	5/8	2901	2901	2901	2901
16.00		2901	2901	2901	2901
16.67	21/32	3339	3339	-	3339
17.00		3339	3339	-	3339
17.46	11/16	3339	3339	-	3339
18.00		3578	3578	-	3578
18.26	23/32	3802	3802	-	3802
19.00		3802	3802	-	3802
19.05	3/4	3802	3802	-	3802
20.00		4239	4239	-	4239
20.64	13/16	4316	4316	-	4316
21.00		4797	4797	-	4797
22.00		4797	4797	-	4797
22.22	7/8	4797	4797	-	4797
23.00		5599	5599	-	5599
23.81	15/16	6203	6203	-	6203
24.00		6203	6203	-	6203
25.00		6217	6217	-	6217
25.40	1	6330	6330	-	6330
26.00		7683	7683	-	7683
26.99	1.1/16	8787	8787	-	8787
27.00		8787	8787	-	8787
28.00		8787	8787	-	8787
28.57	1.1/8	8787	8787	-	8787
29.00		9321	9321	-	9321
30.00		10058	10058	-	10058
30.16	1.3/16	10058	10058	-	10058
31.00		11107	11107	-	11107
31.75	1.1/4	11107	11107	-	11107
32.00		11107	11107	-	11107
33.00		12613	12613	-	12613
33.34	1.5/16	12613	12613	-	12613
34.00		14170	14170	-	14170
34.92	1.3/8	15506	15506	-	15506
35.00		15506	15506	-	15506
36.00		15506	15506	-	15506
36.51	1.7/16	15619	15619	-	15619



HSS PARALLEL HAND REAMERS, HSS LONG FLUTED MACHINE REAMERS AND HSS TAPER SHANK CHUCKING REAMERS

Price (Rs.) Each

SIZE		HAND REAMERS IS : 5444	LONG FLUTED MACHINE REAMERS IS:5445	CHUCKING REAMERS TAPER SHANK IS:5447
MM	INCH			
37.00		17020	17020	17020
38.00		17020	17020	17020
38.10	1.1/2	17020	17020	17020
39.00		18809	18809	18809
39.69	1.9/16	20558	20558	20558
40.00		20558	20558	20558
41.00		20733	20733	20733
41.27	1.5/8	24434	24434	24434
42.00		24434	24434	24434
42.86	1.11/16	24434	24434	24434
43.00		24434	24434	24434
44.00		24434	24434	24434
44.45	1.3/4	24434	24434	24434
45.00		28634	28634	28634
46.00		28634	28634	28634
47.00		30917	30917	30917
47.62	1.7/8	33206	33206	33206
48.00		33206	33206	33206
49.00		33206	33206	33206
49.21	1.15/16	33206	33206	33206
50.00		33206	33206	33206
50.80	2	33206	33206	33206
51.00		33206	33206	33206
52.00		39580	39580	-
52.39	2.1/16	39580	39580	-
53.00		39580	39580	-
53.97	2.1/8	39580	39580	-
54.00		39580	39580	-
55.00		45959	45959	-
55.56	2.3/16	45959	45959	-
56.00		45959	45959	-
57.00		45959	45959	-
57.15	2.1/4	45959	45959	-
58.00		49174	49174	-
58.74	2.5/16	49174	49174	-
59.00		49174	49174	-
60.00		58343	58343	-
60.32	2.3/8	58343	58343	-
61.00		58343	58343	-
61.91	2.7/16	58343	58343	-
62.00		58343	58343	-
63.00		58343	58343	-
63.50	2.1/2	58343	58343	-
64.00		58343	58343	-
65.00		-	70441	-
65.09	2.9/16	70441	70441	-
66.00		-	72819	-
66.67	2.5/8	72819	72819	-
67.00		72819	72819	-
68.00		-	78064	-
68.26	2.11/16	78064	78064	-
69.00		-	78064	-
69.85	2.3/4	78064	78064	-
70.00		-	78064	-
71.00		78064	78064	-
71.44	2.13/16	82019	82019	-
72.00		-	95365	-
73.00		-	95365	-
73.02	2.7/8	95365	95365	-
74.00		-	95365	-
74.61	2.15/16	95365	95365	-
75.00		-	100142	-
76.00		-	100142	-
76.20	3	100142	100142	-

ITEM MARKED ★ ARE EX-STOCK ITEMS. ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS 35,000/- NETT OR MOQ OF 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**

IMPORTANT NOTES :

For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.



HSS TAPER SHANK EXTRA LONG MACHINE REAMERS

SIZE MM	PRICE (Rs.) EACH
8 x 125 x 200	2247
8 x 175 x 250	2402
8 x 200 x 300	2634
9 x 125 x 200	2193
9 x 175 x 250	2525
9 x 225 x 300	3304
10 x 125 x 200	2823
10 x 175 x 250	3010
10 x 200 x 300	3195
10 x 300 x 400	3415
12 x 160 x 250	3345
12 x 200 x 300	3525
13 x 200 x 300	4031
14 x 160 x 250	3757
14 x 200 x 300	4412
15 x 200 x 300	4481
15 x 300 x 400	5013
16 x 200 x 300	4481
16 x 300 x 400	5013
17 x 200 x 300	5056
18 x 200 x 300	5557
19 x 200 x 300	5903
20 x 200 x 300	6551
20 x 300 x 400	7400
22 x 200 x 300	7438
25 x 200 x 325	9658
25 x 275 x 400	10847
26 x 275 x 400	13412
28 x 275 x 400	15405

HSS TAPER SHANK EXTRA LONG MACHINE REAMERS

SIZE INCH MM MM	PRICE (Rs.) EACH
5/16 x 125 x 200	2247
5/16 x 175 x 250	2402
5/16 x 200 x 300	2634
3/8 x 125 x 200	2823
3/8 x 175 x 250	3010
3/8 x 200 x 300	3195
7/16 x 160 x 250	3345
7/16 x 200 x 300	3525
1/2 x 125 x 200	3773
1/2 x 200 x 300	3813
9/16 x 200 x 300	4481
9/16 x 250 x 350	4748
5/8 x 200 x 300	4481
5/8 x 250 x 350	4794
5/8 x 300 x 400	5013
11/16 x 200 x 300	5562
3/4 x 200 x 300	5903
3/4 x 300 x 400	6284
13/16 x 200 x 300	7438
7/8 x 200 x 300	8812
7/8 x 300 x 400	9002
1 x 200 x 325	9658
1 x 275 x 400	10847
1.1/8 x 275 x 400	16480

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.



HSS TAPER PIN REAMERS (TAPER 1:50) HAND IS 5881 - 1984, MACHINE IS : 5918 - 1984

NOMINAL DIA MM	PRICE (Rs.) EACH	NOMINAL DIA MM	PRICE (Rs.) EACH
3	2523	16	5714
4	2523	20	8888
5	2523	25	9431
6	2523	30	12690
8	3415	32	13943
10	3788	40	24933
12	4573	50	43213
14	5134		

HSS TAPER PIN REAMERS (TAPER 1:48) HAND/MACHINE - BS : 122 : 12 : 1964

NOMINAL DIA INCH	PRICE (Rs.) EACH	NOMINAL DIA INCH	PRICE (Rs.) EACH
3/16	2351	13/32	3676
7/32	2351	7/16	3785
1/4	2351	1/2	4279
9/32	2572	9/16	4947
5/16	2848	5/8	5504
11/32	3214	3/4	6936
3/8	3248	7/8	8558

ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT MOQ OF 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

R.H. Cutting with straight flutes will be supplied as standard for hand taper pin Reamer.

R.H. Cutting with L.H. helical flutes will be supplied as standard for Machine Taper Pin Reamer.

HSS MACHINE JIG REAMERS IS : 11002-1989

SIZE MM	PRICE (Rs.) EACH	SIZE MM	PRICE (Rs.) EACH
10	2510	33	15333
11	2510	35	17657
12	2876	36	18944
13	3417	39	20254
14	3417	40	23283
15	3758	41	23283
16	3758	43	26011
17	4338	44	28581
19	4860	45	31036
20	5300	46	31036
22	6113	47	33836
23	6113	48	36799
24	7873	49	36799
25	8532	50	40911
27	9537	-	-
28	10364	-	-
30	11278	-	-
32	13057	-	-

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.



HSS SOCKET REAMERS :
PARALLEL SHANK - IS : 5882 / TAPER SHANK - IS 5807.
***TYPE ' A ' (ROUGHING), TYPE ' B ' (PRE - FINISHING) ,**
TYPE ' C ' (FINISHING)

MORSE TAPER NO	PARALLEL SHANK PRICE (Rs) EACH	TAPER SHANK PRICE (Rs) EACH
0	2697	3202
1	2969	3377
2	4134	5012
3	6007	7515
4	9938	11837
5	20254	21757
6	35741	49834

* Type required to be specified in order.

HSS MACHINE BRIDGE REAMERS - IS 5919

SIZE MM	PRICE (Rs.) EACH	SIZE MM	PRICE (Rs.) EACH	SIZE MM	PRICE (Rs.) EACH
11	2984	20	6718	31	12844
11.5	3487	21	7465	32	12844
12	3487	21.5	7465	33	13819
13	3802	22	7465	35	14824
13.5	3802	23	8142	36	15821
14	3802	23.5	8142	37	16864
15	4412	25.0	8853	40	26814
17	5444	27	9980	43	31736
17.5	5444	28	10801	49	43165
19	6113	30	11660	-	-

HSS MACHINE BRIDGE REAMERS BS: 122 (Part 2) : 1964

SIZE INCH	PRICE (Rs.) EACH	SIZE INCH	PRICE (Rs.) EACH	SIZE INCH	PRICE (Rs.) EACH
7/16	2984	13/16	6493	1.3/16	11194
1/2	3227	7/8	7465	1.1/4	12488
9/16	3802	15/16	8142	1.5/16	13219
5/8	4412	1	8853	1.3/8	14170
11/16	5444	1.1/16	9634	1.7/16	15146
3/4	6113	1.1/8	10350	1.1/2	16864

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**

IMPORTANT NOTES :

For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.



HSS SHELL REAMERS IS : 5926 : 1970 (WITH 1: 30 TAPER HOLE)

SIZE MM	PRICE (Rs.) EACH	SIZE MM	PRICE (Rs.) EACH	SIZE MM	PRICE (Rs.) EACH
21	3870	42	7312	66	16558
22	3870	43	7312	67	18167
23	3870	44	7418	68	18167
24	3870	45	7738	70	18167
25	3870	46	7738	72	20201
26	4102	47	8105	73	20201
27	4102	49	8323	76	22168
28	4400	50	8663	79	24870
30	4632	52	9594	80	27260
32	4850	54	9594	82	27260
33	5092	56	10528	85	29403
35	5358	57	10528	89	31495
36	5582	58	11803	91	37251
38	5878	60	11803	92	37251
39	6170	62	14261	95	38940
40	6170	63	14261	98	44956
41	6445	65	16558	99	49765
				100	49765

HSS COUNTERSINKS WITH TAPER SHANK BS: 122 (PART 2): 1964 (INCLUDED ANGLE 60 OR 90)

BODY DIA INCH	PRICE (Rs.) EACH	BODY DIA INCH	PRICE (Rs.) EACH	BODY DIA INCH	PRICE (Rs.) EACH
1/2★	2063	1.1/8★	6374	2	19153
5/8★	2740	1.1/4	8022	2.1/4	21714
3/4	3104	1.3/8	9379	2.1/2	26948
7/8	3919	1.1/2	11115	2.3/4	31807
1★	4931	1.3/4	16436	3	38467

HSS TAPER SHANK COUNTERBORES IS : 5710 - 1988

CUTTER DIA MM	PRICE (Rs.) EACH	CUTTER DIA MM	PRICE (Rs.) EACH
13.5	3133	34	14791
14.5	3501	36	16076
16.5	4021	37	16752
17.5	4325	39	18150
19.5	5107	41	19683
20.0	5352	43	20350
22.0	6128	46	23168
23.0	7032	48	25150
25.0	8513	51	28389
26.0	9434	53	30842
28.0	10536	55	33951
29.0	11107	57	37301
31.0	12109	59	41333
33.0	13873	61	46050

Counterbores will be supplied without pilots and grub screws.
Pilot holes and grub screw holes, will however, be provided.

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF
Rs. 35,000 / - NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

For non listed intermediate sizes, the higher price of the nearest
listed size (INCH or MM) will be applicable.



HSS TAPER SHANK COUNTER BORES BS : 122 (PART 2) : 1964

CONTERBORE DIA INCH	PRICE (Rs.) EACH	CONTERBORE DIA INCH	PRICE (Rs.) EACH
1/2	2749	1.1/8	10536
9/16	3417	1.1/4	12109
5/8	3815	1.3/8	14791
11/16	4325	1.1/2	17182
3/4	4860	1.5/8	19694
13/16	5388	1.3/4	22312
7/8	6128	1.7/8	24786
15/16	7201	2	27366
1	8513	-	-

IMPORTANT NOTES :

1. Counterbores upto and including 1/2" dia. Are supplied without integrated pilots, the diameter of which should be specified at the time of order.
2. Counterbores above 1/2" dia. Will be provided with pilot holes and grub screw holes. The pilots & grub screws will not be supplied by us.
3. For non listed intermediate sizes, the higher price of the nearest listed size (INCH or MM) will be applicable.

HSS CYLINDRICAL CUTTER IS : 6309

DIA MM	BORE MM	WIDTH MM	PRICE (Rs.) EACH	DIA MM	BORE MM	WIDTH MM	PRICE (Rs.) EACH
40	16	20	2798	80	32	80	13570
40	16	32	3498	80	32	100	15623
40	16	50	4353	100	40	40	11277
40	16	70	5836	100	40	70	17081
50	22	25	3584	100	40	90	21162
50	22	40	4244	100	40	110	29730
50	22	63	5573	100	40	125	36216
50	22	80	7214	125	50	50	25456
63	27	32	5106	125	50	80	36110
63	27	50	6436	125	50	110	48597
63	27	70	8472	125	50	125	54365
63	27	90	9946	125	50	140	60469
80	32	36	7214	160	60	125	90457
80	32	63	11468	-	-	-	-

HSS HELICAL CYLINDRICAL CUTTERS BS: 122 (PART 1) : 1953

PRICE (Rs.) EACH

LENGTH OF CUTTER INCH	DIAMETER OF CUTTER		
	3	4	5
2	12730	18691	31171
3	16114	25002	41992
4	21669	31840	52846
5	31307	46061	63531
6	39698	54202	74485

IMPORTANT NOTE

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS HIGH POWER CYLINDRICAL CUTTERS BS: 122 (PART 1) : 1953

PRICE (Rs.) EACH

LENGTH OF CUTTER INCH	DIAMETER OF CUTTER				
	2.1/2	3	3.1/2	4	4.1/2
1	4561	5752	6375	8060	11623
2	6754	8853	10630	14111	19517
3	8987	12025	14842	20146	27568
4	11196	15285	19108	25676	36110
5	13499	21494	28101	35649	44457
6	15798	31937	33439	41676	52834
7	18024	31937	38842	49686	61866
8	21106	36481	44248	56596	69712

IMPORTANT NOTE

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs.35,000 / - NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS SIDE & FACE CUTTERS - IS : 6308 - 1982

PRICE (Rs.) EACH

DIA MM	BORE MM	WIDTH MM	STRAIGHT TEETH TYPE "B"	STAGGERED TEETH TYPE "A"
50	16	5	3280	4080
		6	3408	4244
		8	3498	4362
		10	3715	4643
63	22	6	4018	5193
		8	4244	5666
		10	4618	5836
		12	4817	6289
		14	4962	6747
		16	5205	7277
80	27	6	4399	5523
		8	4876	6008
		10	5205	6876
		12	5550	7277
		14	5903	7808
		16	6176	7966
		18	6876	9022
100	★★	6	6289	7626
		8	6724	8162
100	32	10	7432	8747
		12	7966	9723
		14	8440	9946
		16	9022	10730
		18	9623	11031
		20	10362	11648
		22	10847	13319
125	★★	6	8816	10938
		8	9463	11785
		10	10139	13714
125	32	12	11554	14239
		14	12515	15211
		16	13048	15798
		18	13992	18019
		20	14489	19439
		22	16000	21125
		25	17496	21967
		28	19702	25149



HSS SIDE & FACE CUTTERS - IS : 6308 - 1982

PRICE (Rs.) EACH

DIA MM	BORE MM	WIDTH MM	STRAIGHT TEETH TYPE "B"	STAGGERED TEETH TYPE "A"
150	★★	6	10730	13798
		8	11673	14927
		10	12664	16086
		12	14667	18527
		14	15686	19702
		16	16715	20895
		18	18769	23178
		20	18769	23178
		22	20837	25680
		25	22844	28283
		28	24750	31012
		32	26600	33834
160	★★	6	14600	16307
		8	15519	17337
		10	16440	18363
		12	17341	19364
160	40	14	18255	20401
		16	19330	21422
		18	20700	23702
		20	21734	23702
		22	23016	26273
		25	24842	30464
		28	26600	31723
		32	28955	34587
200	★★	6	19108	21194
		8	20618	22825
		10	22314	25084
		12	25792	28359
		14	27471	30344
200	40	16	29170	32363
		18	32552	36695
		20	32907	37813
		22	35934	41132
		25	39316	45169
		28	41392	47972
		32	46009	53769
225	★★	8	26868	29385
		10	29246	31654
		12	34048	37156
		14	36499	40173
		16	38992	43158
		18	43988	50016
		20	43988	50016
		22	48561	55384
		25	53179	60574
		28	57903	65471
		32	62618	70343
250	★★	10	33815	36330
		12	39554	43316
		14	42823	46675
		16	45978	50016
		18	51970	57860
		20	51970	57860
		22	57513	64119
		25	63410	69823
		28	68930	77257
				32

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 2 NOS. PER SIZE WHICHEVER IS HIGHER.

IMPORTANT NOTE

★★ BORE REQUIRED FOR THESE SIZES TO BE SPECIFIED WHILE ORDERING.



HSS STRAIGHT TEETH SIDE & FACE CUTTERS BS : 122 (PART 1) : 1953

WIDTH OF CUTTER EDGE & BOSS INCH	DIAMETER OF CUTTER				
	2.1/2"	3"	3 1/2"	4"	5"
	PRICE (Rs) EACH				
1/4	4018	4453	5292	6272	8816
5/16	4209	4679	5592	6724	9463
3/8	4399	4963	5947	7173	10139
7/16	4598	5193	6299	7626	10847
1/2	4795	5467	6608	7966	11554
5/8	5141	5995	7324	9022	13048
3/4	5492	6436	8022	9946	14489
7/8	5860	7163	8649	10847	16000
1	6272	7740	9514	11785	17496
1.1/4	7050	8547	10762	13395	20207
1.1/2	7855	9767	12127	14754	22989

HSS STRAIGHT TEETH SIDE & FACE CUTTERS BS : 122 (PART 1) : 1953

WIDTH OF CUTTER EDGE & BOSS INCH	DIAMETER OF CUTTER				
	6"	7"	8"	9"	10"
	PRICE (Rs) EACH				
1/4	10730	15912	19108	24613	-
5/16	11673	17218	20618	26867	-
3/8	12664	18525	22314	29246	33815
7/16	13664	19763	24049	31523	36342
1/2	14667	21346	25791	34049	39553
5/8	16708	23899	29170	38992	45978
3/4	18769	26503	32553	43201	51970
7/8	20836	29138	35935	48561	57515
1	22843	31741	39316	53178	63411
1.1/4	26600	36928	46001	62618	74391
1.1/2	30344	42182	52686	72083	86262
1.3/4	-	-	-	88397	104756

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 2 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**

★★ BORE REQUIRED FOR THESE SIZES TO BE SPECIFIED WHILE ORDERING.

IMPORTANT NOTE :

Cutter of width of 3/4" and above will be supplied with Left hand Helical Flutes.

HSS STAGGERED TEETH SIDE & FACE CUTTERS BS : 122 (PART 1) 1953

WIDTH OF CUTTER EDGE & BOSS INCH	DIAMETER OF CUTTER					
	3"	4"	5"	6"	7"	8"
	PRICE (Rs) EACH					
1/4	5592	7626	10938	13798	18025	21222
5/16	5947	8162	11786	14927	20688	22825
3/8	6645	8649	13714	16086	22315	25084
7/16	6754	9177	13956	17286	23432	26724
1/2	6876	9722	14239	18527	24492	28359
5/8	7697	10730	15798	20895	28726	32363
3/4	8177	12246	18025	23178	32132	36806
7/8	8917	13319	20895	25680	35353	41132
1	9623	14521	21967	28264	38512	45157



HSS STAGGERED TEETH SIDE & FACE CUTTERS BS : 122 (PART 1) : 1953

WIDTH OF CUTTER EDGE & BOSS INCH	DIAMETER OF CUTTER	
	9"	10"
	PRICE (Rs) EACH	
5/16	29385	33658
3/8	31654	36330
7/16	34837	38002
1/2	37204	43316
5/8	43158	50016
3/4	50016	57860
7/8	55384	64119
1	57497	69823
1.1/4	70343	84721
1.1/2	80404	97346
1.3/4	98071	116979

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 2 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

★ ★ BORE REQUIRED FOR THESE SIZES TO BE SPECIFIED WHILE ORDERING.

HSS SINGLE ANGLE CUTTERS IS : 6324 - 1971

DIA MM	BORE MM	WIDTH MM	ANGLE DEGREES	PRICE (Rs) EACH
50	16	12	60, 65, 70, 75, 80 & 85	3098
63	22	18	60, 65, 70, 75, 80 & 85	4618
63	22	26	70, 75 & 80	5491
80	22	32	70, 75 & 80	7214
100	27	36	70, 75 & 80	10824

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS SINGLE ANGLE CUTTERS - BS : 122 (PART 1) : 1953

WIDTH OF CUTTER INCH	ANGLE DEGREES	PRICE (Rs) EACH	
		DIAMETER OF CUTTER	
		2.3/4"	3"
5/16	30	3840	4245
7/16	30, 40	4209	4802
1/2	45, 50, 60, 70, 80	4453	5028
5/8	50, 60, 70, 80	4962	5592

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS DOUBLE ANGLE CUTTERS BS : 122 (PART 1) : 1953

★ Angle in degrees

DIA INCH	BORE INCH	WIDTH INCH	PRICE (Rs) EACH
2.3/4	1	5/8	4453
3	1.1/4	3/4	5592

★ Angle required to be specified at the time of order.

HSS EQUAL ANGLE CUTTER - BS : 122 (PART 1) : 1953

WIDTH OF CUTTER INCH	INCLUDED ANGLE IN DEGREES	DIAMETER OF CUTTER	
		2.3/4"	3"
		PRICE (Rs) EACH	
5/16	30, 40	3840	4245
7/16	30, 40	4018	4453
1/2	45, 60, 90	4018	4453
5/8	60, 90	4453	4875



HSS EQUAL ANGLE CUTTERS - IS : 6326

DIA MM	BORE MM	WIDTH MM	ANGLE DEGREES	PRICE (Rs) EACH
56	16	10	45	3408
63	22	12		3840
80	22	16		4875
100	27	18		7087
56	16	12	60	3565
63	22	16		4245
80	22	20		5293
100	27	25		8291
56	16	14	90	3840
63	22	18		4453
80	22	22		5753
100	27	28		8987

HSS DOUBLE (Unequal) ANGLE CUTTER - IS 6325

DIA MM	BORE MM	WIDTH MM	ANGLE DEGREES	PRICE (Rs) EACH
50	16	12	55 X 12	3408
			60 X 15	3408
			65 X 15	3408
			70 X 15	3408
			75 X 15	3408
			80 X 15	3408
50	16	14	90 X 20	3716
50	16	16	100 X 25	4018
63	22	18	55 X 12	4665
			60 X 15	4665
			63 X 15	4665
			70 X 15	4665
			75 X 15	4665
			80 X 15	4665
63	22	20	90 X 20	4886
63	22	22	100 X 25	5282
80	22	32	65 X 15	7214
			70 X 15	7214
			75 X 15	7214
100	27	36	70 X 15	10824
			75 X 15	10824
			80 X 15	10824

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 20 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS CONVEX CUTTERS IS : 6323 : 1982

DIA MM	BORE MM	WIDTH MM	RADIUS MM	PRICE (Rs) EACH
50	22	3	1.6	4092
50	22	4	2	4092
56	22	5	2.5	4843
56	22	6	3	4843
63	22	8	4	5141
63	22	10	5	5666
70	22	12	6	6108
70	22	16	8	6724
90	27	18	9	8987
90	27	20	10	9463
90	27	22	11	10428
90	27	24	12	11175
100	27	28	14	14252
110	32	32	16	18025
110	32	36	18	23795
125	40	40	20	26388

HSS CONCAVE CUTTERS IS : 6322 : 1982

DIA MM	BORE MM	WIDTH MM	RADIUS MM	PRICE (Rs) EACH
56	22	8	1.6	5141
56	22	9	2	5402
56	22	10	2.5	5558
63	22	12	3	6038
63	22	16	4	6212
63	22	20	5	7288
70	22	24	6	8687
70	22	28	7	9116
80	27	32	8	11915
90	27	36	9	14239
90	27	40	10	15798
100	27	42	11	18424
100	27	44	12	19044
100	27	46	12.5	19415
100	27	50	14	21364
110	32	56	16	29409
125	32	62	18	40064
125	32	70	20	42182

HSS CONVEX / CONCAVE CUTTERS : BS : 122 (PART 1) : 1953

DIA OF CUTTER INCH	DIA OF CURCLE INCH	DIA OF BORE INCH	CONVEX CUTTER		CONCAVE CUTTER	
			WIDTH OF CONVEX CUTTER INCH	PRICE (Rs) EACH	WIDTH OF CONCAVE CUTTER INCH	PRICE (Rs) EACH
2.1/4	1/8	1	1/8	4353	5/16	5141
	3/16		3/16	4643	3/8	5330
	1/4		1/4	4852	1/2	5679
2.1/2	5/16	1	5/16	5141	5/8	6222
	3/8		3/8	5478	3/4	6747
	7/16		7/16	5676	7/8	7288
	1/2		1/2	6112	1	7772
2.3/4	9/16	1	9/16	6222	1.3/16	9116
	5/8		5/8	6754	1.3/16	9348
3	11/16	1	11/16	7493	1.3/8	11167
	3/4		3/4	7855	1.3/8	11341
3.1/4	13/16	1	13/16	8886	1.9/16	13570
	7/8		7/8	9463	1.9/16	13798
3.1/2	15/16	1	15/16	10599	1.3/4	16146
	1		1	11085	1.3/4	16375
4	1.1/8	1.1/4	1.1/8	14252	1.15/16	20019
	1.1/4		1.1/4	15686	2.1/8	21364
4.1/4	1.3/8	1.1/4	1.3/8	21590	2.5/16	28154
	1.1/2		1.1/2	23355	2.1/2	32262

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS SINGLE / DOUBLE CORNER ROUNDING CUTTERS BS : 122 (PART 1) : 1953

DIA OF CUTTER INCH	CORNER RADIUS INCH	DIA OF BORE INCH	SINGLE CUTTER		DOUBLE CUTTER	
			WIDTH OF CUTTER INCH	PRICE (Rs) EACH	WIDTH OF CUTTER INCH	PRICE (Rs) EACH
2.1/4	1/16	1	5/16	4561	7/16	6448
	3/32		5/16	4561	7/16	6448
	1/8		5/16	4561	7/16	6448
2.1/2	5/32	1	7/16	5141	5/8	7253
	3/16		7/16	5141	5/8	7253
	7/32		1/2	5434	3/4	7772
	1/4		1/2	5434	3/4	7772
2.3/4	9/32	1	5/8	6375	15/16	9247
	5/16		5/8	6375	15/16	9247
3	11/32	1	11/16	7555	1.1/16	10769
	3/8		11/16	7555	1.1/16	10769
3.1/4	13/32	1	3/4	8555	1.3/16	12363
	7/16		3/4	8555	1.3/16	12363
3.1/2	15/32	1	7/8	10169	1.3/8	14927
	1/2		7/8	10169	1.3/8	14927
	9/16		1	11196	1.5/8	16697
	5/8		1	11196	1.5/8	16697
3.3/4	11/16	1	1.1/8	16470	1.7/8	23590
	3/4		1.1/8	16470	1.7/8	23590

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS SINGLE CORNER ROUNDING CUTTERS IS : 6314 - 1982

DIA MM	BORE MM	WIDTH MM	RADIUS MM	PRICE (Rs) EACH
56	22	4	1.6	4353
56	22	5	2.5	4353
63	22	6	3	5028
63	22	8	4	5261
63	22	10	5	5606
70	22	12	6	5995
70	22	14	7	6299
80	27	16	8	7808
90	27	18	9	9426
90	27	20	10	10240
100	27	22	12	16603
100	27	22	12.5	16603
100	27	25	14	17585
110	32	28	16	18896
125	32	31	18	24163
125	32	35	20	25690

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS PARALLEL SHANK END MILL IS : 6353 (STANDARD SERIES)

DIA MM	PRICE (Rs.) EACH	IS : 6353 - 1971		IS : 6353 - 1991	
		CEL (MM)	OAL (MM)	CEL (MM)	OAL (MM)
3★	678	10	42	8★	40
3.5	678	-	-	10	42
4★	678	11	43	11★	43
5★	678	13	47	13★	47
6★	758	16	52	13★	57
7★	852	-	-	16★	60
8★	852	-	-	19★	63
9★	852	-	-	19★	69
10★	852	22	67	22★	72
11★	852	22	67	22★	79
12★	881	26	76	26★	83
13	995	26	76	26	83
14	1092	26	76	26★	83
16★	1275	32	88	32★	92
17	1394	32	88	32	92
18★	1550	32	88	32★	92
19	1550	32	88	32	92
20★	1714	38	101	38★	104
21	1924	38	101	38	104
22★	1945	38	101	38★	104
24	2109	38	101	45	121
25★	2268	45	116	45★	121
26	2352	45	116	45	121
27	2767	45	116	45	121
28	3228	45	116	45	121
29	3228	45	116	45	121
30★	3552	45	116	45★	121
32★	3874	63	140	53★	133
33	4292	63	140	53	133
35	4679	70	160	53	133
36	5102	70	160	53	133
37	5498	70	160	53	133
38	5861	70	160	63	155
39	6216	70	160	63	155
40	6602	70	160	63	155
41	6602	70	160	63	155
43	7515	80	180	63	155
45	8419	80	180	63	155
46	8419	90	200	63	155
49	9260	90	200	75	177
50	10188	90	200	75	177
51	10188	90	200	75	177
53	12541	90	200	75	177
54	14857	100	220	75	177
56	17865	100	220	75	177
57	20778	100	220	75	177
59	20778	100	220	75	177
61	22185	110	250	90	192
63	23094	110	250	90	192

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT MOQ OR 3 NOS. PER SIZE. WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

1. For non-listed intermediates sizes, the higher price of the nearest listed size will be applicable.
2. LH End Mill Dia 17 mm & above on special request - 25 % extra
3. Long series End Mills, if required, can be supplied at 30 % extra subject to the order value being minimum Rs. 35,000/- NETT, per size or minimum 3 Nos. per size whichever is higher.



HSS TAPER SHANK END MILLS IS : 6354 (STANDARD SERIES)

DIA MM	PRICE (Rs) EACH	IS:6354-1971 TANGED END		IS:6354-1991 TAPPED END		MT No.
		CEL (MM)	OAL (MM)	CEL (MM)	OAL (MM)	
6	1129	16	90	13	83	1
7	1129	-	-	16	86	1
8	1129	19	93	19	89	1
9	1222	-	-	19	89	1
10	1222	22	96	22	92	1
11	1343	-	-	22	92	1
12	1343	26	100	26	96	1
12★	1753	26	118	26	111	1
14	1855	26	100	26	96	2
14★	1975	26	118	26	111	1
16	1977	32	124	32	117	2
18	2414	32	124	32	117	2
20	2787	38	130	38	123	2
20★	3045	38	150	38	140	3
22	2925	38	130	38	123	2
22★	3191	-	-	38	140	3
25	3446	45	157	45	147	3
26	4291	45	157	45	147	3
28	4799	45	157	45	147	3
30	5278	53	165	45	147	3
32	5603	53	165	53	155	3
32★	5603	53	183	53	178	4
33	6774	53	165	53	155	3
33★	7430	-	-	53	178	4
35	7430	53	165	53	155	3
35★	7430	-	-	53	178	4
36	8073	70	210	53	155	3
36★	8808	-	-	53	178	4
38	8881	63	203	63	188	4
38★	10325	-	-	63	221	5
40	10325	63	203	63	188	4
40★	10325	63	203	63	221	5
41	10325	63	203	63	188	4
41★	11352	-	-	63	221	5
43	11352	63	203	63	188	4
43★	11352	-	-	63	221	5
44	11860	63	203	63	188	4
44★	11860	-	-	63	221	5
45	12755	63	203	63	188	4
45★	12755	-	-	63	221	5
46	13055	63	203	63	188	4
46★	13522	-	-	63	221	5
48	13522	63	203	75	200	4
48★	15206	-	-	75	233	5
50	15206	75	215	75	200	4
50★	15206	75	250	75	233	5
51	15206	75	250	75	200	4
51★	21306	-	-	75	233	5
53	21307	75	250	75	200	4
53★	26925	-	-	75	233	5
56	26923	75	250	75	200	4
56★	26923	-	-	75	233	5
60	28256	-	-	75	200	4
60★	28256	75	250	75	233	5
63	33881	90	265	90	248	5

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**

★ These sizes will be supplied with the smaller MT Shank unless otherwise specified.

IMPORTANT NOTES :

THE FOLLOWING IF REQUIRED, CAN BE SUPPLIED SUBJECT TO THE ORDER VALUE BEING Rs. 35,000/- NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

- Standard Series Type 'B' Tapped End as per IS:6354 - 1971at the same rate.
- Long Series End Mill, Tanged End or Tapped End if required can be supplied at 30 % extra subject to the order value being minimum Rs. 35,000/- per size or minimum 3 Nos. each whichever is higher.
- For non-listed intermediates sizes, the higher price of the nearest listed size will be applicable subject to order value being minimum. Rs.35.00/- per size or minimum 3 Nos. each whichever is higher.
- Left Hand Cutter at **25 % extra**.
Dia 6.0 mm to 12.0 mm in Tapped End & Tanged End Not Possible



HSS END MILLS BS : 122 (PART 1) 1953

DIA INCH	PARALLEL SHANK PRICE (Rs.) EACH	TAPER SHANK PRICE (Rs.) EACH
1/8	678	1054
5/32	678	1054
3/16	678	1054
7/32	678	1054
1/4★	758	1054
9/32	852	1079
5/16★	852	1079
3/8★	852	1173
7/16	852	1189
1/2★	881	1343
9/16	1092	1855
5/8★	1275	1977
11/16	1426	2229
3/4★	1550	2353
13/16	1714	2673
7/8	1945	2928
15/16	-	3179
1★	2268	3419
1.1/8	3228	4768
1.1/4	3874	5603
1.3/8	4679	7430
1.1/2	5478	8881
1.5/8	6602	10325
1.3/4	8419	11860
1.7/8	9282	13522
2	10165	15206
2.1/16	12541	-
2.1/8	14857	21073
2.3/16	17865	-
2.1/4	19329	26921
2.5/16	20778	-
2.3/8	22185	29379
2.1/2	25013	33881

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT MOQ OR 3 NOS. PER SIZE. WHICHEVER IS HIGHER.

IMPORTANT NOTES :

1. Taper Shank End Mills with Tapped End for size 9/16" and over, if required, can be supplied at the same rate as the Tanged End.
2. Intermediate sizes (non-listed) price of the next larger listed size.
3. Left Hand Cutter at 25 % extra.
in case of Taper Shank End Mill Dia 11/16" & above with MOQ.
4. For M35 = 40% & M42 = 80% extra



HSS PARALLEL SHANK SLOT MILLING CUTTERS IS : 6352 (SHORT SERIES)

DIA MM	PRICE (Rs) EACH	IS:6352-1971		IS:6352-1991	
		CEL (MM)	OAL (MM)	CEL (MM)	OAL (MM)
3	823	6	40	5	37
3.5	823	6	40	6	38
4	823	6	40	7	39
5	823	8	45	8	42
6★	881	8	45	8★	52
7	881	10	50	10	54
8★	881	10	50	11★	55
9	881	10	50	11	61
10	914	12	56	13	63
11	914	12	56	13	70
12	997	16	63	16	73
14	1275	16	63	16	73
16	1435	18	70	19	79
18	1767	18	70	19	79
20	1767	20	80	22	88
22	2060	22	90	22	88
25	2444	25	100	26	102
28	4049	25	100	26	102
32	4242	28	110	32	112
35	5102	32	118	32	112
36	5478	32	118	32	112
38	5908	36	125	38	130
40	6323	36	125	38	130
41	7151	-	-	38	130
42	7151	-	-	38	130
43	7951	-	-	38	130
44	7951	-	-	38	130
45	7951	-	-	38	130
46	8829	-	-	38	130
47	8829	-	-	38	130
48	8829	-	-	45	147
49	9681	-	-	45	147
50	9681	-	-	45	147

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT MOQ OR 5 NOS. PER SIZE. WHICHEVER IS HIGHER.

IS : 6352 - 1971 1) TYPE 'A' - FLATE FACE HELICAL FLUTED

IS : 6352 - 1991 1) TYPE 'A' - FLATE FACE HELICAL FLUTED

IMPORTANT NOTES :

1. Type 'A' will be supplied unless otherwise specified.
2. Other Type if required can be supplied at the same rate.
3. Left Hand Cutter at 25 % extra.
4. Standard Series Slot Milling Cutter if required can be supplied a 30 % extra, subject to the order value being minimum Rs. 35,000/- NETT. Or 5 Nos. per size whichever is higher.
5. For M35 = 40% & M42 = 80% extra



HSS TAPER SHANK SLOT MILLING CUTTERS IS : 6388 (SHORT SERIES)

DIA MM	PRICE (Rs.) EACH	IS : 6388 - 1971			IS : 6388 - 1991		MT NO.
		CEL MM	(TANGED END)	(TAPPED END)	(TAPPED END)		
			OAL MM	OAL MM	CEL MM	OAL MM	
6	1257	-	-	-	8	78	1
7	1257	16	90	-	10	80	1
8	1382	16	90	-	11	81	1
9	1382	16	90	-	11	81	1
10	1412	16	90	-	13	83	1
11	1412	16	90	-	13	83	1
12	1576	16	90	-	16	86	1
12★	1844	-	-	-	16	101	2
14	1977	16	90	-	16	86	1
14★	2052	-	-	-	16	101	2
16	2052	18	110	100	19	104	2
18	2353	18	110	100	19	104	2
20	2353	20	114	104	22	107	2
20★	2910	20	-	-	22	124	3
22	2923	22	118	108	22	107	2
22★	3483	-	-	-	22	124	3
25	3481	25	143	130	26	128	3
26	4803	25	143	130	26	128	3
28	5088	25	143	130	26	128	3
32	6100	28	148	135	32	134	3
32★	7353	-	-	-	32	157	4
35	7904	32	179	164	32	134	3
35★	9152	-	-	-	32	157	4
36	9218	32	179	164	32	134	3
36★	9218	-	-	-	32	157	4
38	9218	36	186	171	38	163	4
38★	12689	-	-	-	38	196	5
40	10521	36	186	171	38	163	4
40★	14000	-	-	-	38	196	5

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

★ These sizes will be supplied with the smaller MT Shank unless otherwise specified.

IS : 6352 - 1971 1) TYPE 'A' & 'D' - FLATE FACE HELICAL FLUTED
2) TYPE 'B' & 'F' - FLATE FACE STRIGHT FLUTED

IS : 6352 - 1991 1) TYPE 'D' - FLATE FACE HELICAL FLUTED

IMPORTANT NOTES :

1. Type 'A' (IS:6388 - 1971) and Type 'D' (IS:6388 - 1991) will be supplied Unless otherwise specified.
2. Other Type if required can be supplied at the same rate.
3. For non-listed intermediates sizes, the higher price of the nearest listed size will be applicable.
4. Left Hand Cutter at 25 % extra from Dia 14.0 mm & above only.
5. Standard Series Slot Milling Cutters if required can be supplied at 30 % extra.

**HSS SLOT DRILLS****BS : 122 (PART 1) : 1953**

DIA INCH	PARALLEL SHANK PRICE (Rs.) EACH	TAPER SHANK PRICE (Rs.) EACH
1/8	823	1130
5/32	823	1130
3/16	823	1130
7/32	878	1239
1/4	881	1303
5/16	881	1382
3/8	881	1382
7/16	900	1412
1/2	997	1576
9/16	1275	1977
5/8	1435	2052
11/16	1623	2230
3/4	1767	2353
13/16	2060	2923
7/8	2060	2923
1	2444	3481
1.1/8	3479	5088
1.1/4	4242	6100
1.3/8	5102	7904
1.1/2	5908	9218
1.5/8	7313	-
1.3/4	7951	-
1.7/8	8829	-
2	9680	-

- 1) Straight flute, Flat Faced, will be supplied unless otherwise specified.
2) Spiral Fluted, Flate faced same rate. 3) Left hand Cutter 25 % extra.

HSS TAPER SHANK T-SLOT CUTTERS -**BS : 122 (PART 1) : 1953**

NOMINAL SIZE OF BOLT INCH	DIA OF CUTTER INCH	WIDTH OF CUTTER INCH	MT SHANK NO.	TAPPED END PRICE (Rs.) EACH
1/4	37/64	1/4	2	4437
5/16	45/64	5/16	2	5003
3/8	53/64	23/64	2	5470
7/16	61/64	27/64	2	5797
1/2	1.5/64	15/32	2	7003
5/8	1.21/64	37/64	3	11337
3/4	1.33/64	11/16	3	14076
7/8	1.45/64	51/64	3	16601
1	1.61/64	29/32	4	20558
1.1/8	2.1/8	1.1/16	4	26537
1.1/4	2.5/16	1.3/16	4	31568
1.3/8	2.1/2	1.5/16	5	38965
1.1/2	2.3/4	1.7/16	5	49888

HSS TAPER SHANK T - SLOT CUTTERS (STAGGERED TEETH) IS : 2668 : 1992

NOMINAL OF T-SLOT MM	DIA OF CUTTER MM	WIDTH MM	PRICE (Rs.) EACH
10★	18	8	5523
12★	21	9	6035
14★	25	11	11600
18★	32	14	14523
22	40	18	19455
28	50	22	25091
36	60	28	45215
42	72	35	54871

★ These sizes will be supplied with the smaller MT Shank unless otherwise specified.

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS WOODRUFF KEYSLOT CUTTERS - IS 2669 - 1971 (Straight Teeth Type)

DIA MM	WIDTH MM	NOM SIZE OF KEY MM	PRICE (Rs) EACH
16.5	5	5 x 6.5	2020
19.5	5	5 x 7.5	2297
	6	6 x 7.5	2297
22.5	5	5 x 9	2613
	6	6 x 9	2613
	8	8 x 9	2613
28.5	6	6 x 11	4239
	8	8 x 11	4239
	10	10 x 11	4239
32.5	7	7 x 13	5012
	8	8 x 13	5012
	10	10 x 13	5012
45.5	10	10 x 16	8513

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 10 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS CUTTER FOR WOODRUFF KEYSEATS - BS : 122 (PART 1) 1953

B. S. Cutter & KEY No.	PRICE (Rs.) EACH	B. S. Cutter & KEY No.	PRICE (Rs.) EACH	B. S. Cutter & KEY No.	PRICE (Rs.) EACH
606	2520	609	4426	1011	6374
607	2958	809	4426	1211	6374
807	2958	1009	4458	812	7201
608	3578	810	5236	1012	7201
808	3578	1010	5236	1212	7201
1008	3578	1210	5236		

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS FACE CUTTERS : (As per Table No 19 of BSS : 122 : 1938)

DIAMETER OF CUTTER INCH	OVERALL LENGTH OF CUTTER INCH	DIAMETER OF BORE INCH	PRICE (Rs.) EACH
1.3/4	1.1/4	3/4	4562
2	1.1/4	3/4	5261
2.1/2	1.1/4	3/4	6645
3	1.11/16	1.1/8	9514
4	1.3/4	1.1/8	15912
5	2	1.1/2	26764

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS KEYWAY MILLING CUTTERS FORM RELIEVED IS : 6355 (STRAIGHT TEETH TYPE)

DIA MM (js 16)	BORE MM (H7)	WIDTH MM (d9)	PRICE (Rs) EACH
50	16	5	2975
		6	3217
		8	3413
		10	3565
63	22	6	3493
		8	3653
		10	4018
		12	4363
		14	4618
		16	4962
		18	5333
80	27	6	4886
		8	5207
		10	5558
		12	6222
		14	6724
		16	7144
		18	7546
100	32	20	8022
		6	5753
		8	6175
		10	6724
		12	7322
		14	7878
		16	8477
		18	8970
		20	9167
125	32	22	10240
		25	10938
		8	8816
		10	9643
		12	10517
		14	11591
		16	12363
		18	13395
		20	14186
160	40	22	15110
		25	16542
		32	17931
		10	15888
		12	16727
		14	17823
		16	19083
		18	20309
		20	21669
200	40	22	23073
		25	25049
		28	26448
		32	29930
		12	24599
		14	25988
		16	27637
		18	29585
		20	31670
22	34030		
25	36686		
28	39757		
32	44253		
36	48745		
40	53372		

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF
Rs. 35,000/- NETT OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



HSS SLOTTING CUTTERS - BS : 122 (PART 1) : 1953 (STRAIGHT TEETH)

WIDTH OF CUTTER	DIAMETER OF CUTTER PRICE (Rs.) EACH					
	INCH	2.1/2"	3"	3.1/2"	4"	5"
1/4	2418	2764	3448	4157	6645	8585
5/16	2621	2975	3785	4643	7277	9515
3/8	2798	3201	4092	5068	7917	10434
7/16	2958	3498	4400	5902	8585	11366
1/2	3126	3675	4717	5947	9249	12314
5/8	3498	4138	5371	7434	10517	14182
3/4	3745	4509	5836	7546	11554	15727
7/8	4008	4977	6299	8687	12611	17286
1	4245	5491	6754	8945	13664	18899

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS SHELL END MILLS - IS : 6257 - 1982

DIA MM (js 16)	BORE (H7)	WIDTH (js 16)	PRICE (Rs.) EACH
40	16	32	5293
50	22	36	6436
63	27	40	8472
80	27	45	12515
100	32	50	19108
125	40	56	32037
160	50	63	60469

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

HSS SHELL END MILL - BS : 122 (PART 1) : 1953

DIA OF CUTTER INCH	LENGTH OF CUTTER INCH	DIA OF BORE INCH	PRICE (Rs.) EACH
1.1/4	1	1/2	3641
1.1/2	1.1/8	1/2	4453
1.3/4	1.1/4	3/4	5292
2	1.3/8	3/4	6016
2.1/4	1.1/2	1	7254
2.1/2	1.5/8	1	8438
2.3/4	1.5/8	1	9592
3	1.3/4	1.1/4	11167
3.1/2	1.7/8	1.1/4	13924
4	2.1/4	1.1/2	20477
4.1/2	2.1/4	1.1/2	24551
5	2.1/4	1.1/2	32037
5.1/2	2.1/4	2	37477
6	2.1/4	2	43224

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NETT OR 3 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



**HSS HAND AND SHORT MACHINE TAPS (COARSE PITCH) -NON
SERIAL IS 6175: 1992 :PART I ,PART II & PART III AND HSS
NUT TAPS - IS : 6175 - 1991 (PART V) (6H TOLERANCE)**

PRICE Rs. / EACH

NOM DIA X PITCH	PART I	PART II			PART III			NUT TAPS
	STR FLUTES	STR FLUTES	SPIRAL POINT*	SPIRAL FLUTES	STR FLUTES	SPIRAL POINT*	SPIRAL FLUTES	
M2.0x0.40	535							
M2.2x0.45	535							
M2.3x0.40	535							
M2.5x0.45	535							
M3x0.5		324	409	442	354	446	522	
M3.5x0.6		324	409	442	354	446	522	
M4x0.7		324	409	442	354	446	522	
M4.5x0.75		350	431	470	375	470	527	
M5x0.8		349	431	470	375	470	527	
M6x1.0		349	431	470	385	484	531	741
M8x1.25		412	500	545	434	552	626	836
M10x1.5		506	622	676	510	681	744	1110
M12x1.75					790	953	1068	1713
M14x2.00					1120	1384	1630	2382
M16x2.00					1120	1384	1630	2382
M18x2.5					1727	2079	2363	3642
M20x2.5					2201	2634	3172	4863
M22x2.5					2357	2808	3297	4975
M24x3.0					2590	3127	3578	5606
M25x3.0					3205			6688
M27x3.0					3982			8594
M30x3.5					4458			10718
M33x3.5					5425			11831
M36x4.0					7546			15305
M39x4.0					8857			18437
M42x4.5					10335			21745
M45x4.5					13906			26222
M48x5.00					14826			30964
M52x5.0					18613			
M56x5.5					26488			
M60x5.5					27916			
M64x6.0					29360			
M68x6.0					36637			

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 3 NOS. PER SIZE. WHICHEVER IS HIGHER.

NOTES :

- Sizes upto M 10 will be supplied as per Part II unless otherwise specified.
- A Set Consist of Taper, Second & Bottoming.
- Serial Taps can be supplied at the same price.
- Left Hand Taps at **25% Extra**.
- For **M35 = 40% & M42 = 80% extra**

IMPORTANT NOTES : (NUT TAPS - MOQ)

UPTO M10 (50 NOS EACH) OVER M10 - M28 (25 NOS EACH)
OVER M28 - M35 (15 NOS EACH) OVER M35 (10 NOS EACH)



**HSS HAND AND SHORT MACHINE TAPS (FINE PITCH) - NON
SERIAL IS 6175 : 1992 : (6H TOL) PART II & PART III (6H-TOL) AND
HSS NUT TAPS - IS : 6175 - 1991 (PART V)**

PRICE Rs. / EACH

NOM DIA X PITCH	PART II			PART III			NUT TAPS
	STR FLUTES	SPIRAL POINT*	SPIRAL FLUTES	STR FLUTES	SPIRAL POINT*	SPIRAL FLUTES	
M3.0x0.35	479	644					
M3.5x0.35	479	644					
M4x0.5	479	583					
M4.5x0.5	470	583					
M5x0.5	470	568					
M6x0.75	475	644	610	525	573	678	837
M7x0.75	550	644	725	550	655		1063
M8x0.75							
M8x1.0	497	594	652	550	602	723	964
M9x1.0							
M10x1.0	566	683	783	634	684	865	1270
M10x1.25	566	683	783	634	684	865	1270
M12x1.0							1994
M12x1.25				921	1046	1236	1994
M12x1.5				921	1046	1236	1994
M14x1.0							2974
M14x1.25				1177	1408	1697	2974
M14x1.5				1137	1408	1646	2974
M16x1.0							2974
M16x1.5				1137	1408	1653	2974
M18x1.0							4207
M18x1.5				1963	2201	2637	4207
M18x2.0				1963	2201	2637	4207
M20x1.5				2450	2756	3370	5393
M20x2.0				2450	2756	3370	5393
M22x1.5				2654	3019	3693	5724
M22x2.0				2654	3019	3693	5724
M24x1.5				2964	3325	4097	6808
M24x2.0				2964	3325	4097	6808
M25x1.5				3175			7656
M25x2.0				3175			
M26x1.5				3310			
M26x2.0				3310			
M27x1.5				4446			9646
M27x2.0				4446			
M28x1.5				4446			12011
M28x2.0				4446			
M30x1.5				5002			12011
M30x2.0				5002			12011
M30x3.0				5002			
M32x1.5				5301			
M32x2.0				5301			
M33x1.5				6106			
M33x2.0				6106			13320
M33x3.0				6106			



HSS HAND & SHORT MACHINE TAPS (FINE PITCH) NON SERIAL IS : 6175 : 1992 : PART III (6H-TOL)

PRICE Rs. / EACH

NOM DIA X PITCH	STRAIGHT FLUTES
M35x1.5	8467
M36x1.5	8467
M36x2.0	8467
M36x3.0	8467
M39x1.5	10545
M39x2.0	10545
M39x3.0	10545
M42x1.5	11681
M42x2.0	11681
M42x3.0	11681
M42x4.0	11681
M45x1.5	16255
M45x2.0	16255
M45x3.0	16255
M45x4.0	16255
M48x1.5	16883
M48x2.0	16883
M48x3.0	16883
M48x4.0	16883
M50x1.5	18687
M50x2.0	18687
M50x3.0	18687
M52x1.5	21025
M52x2.0	21025
M52x3.0	21025
M52x4.0	21025
M56x1.5	28834
M56x2.0	28834
M56x3.0	28834
M56x4.0	28834
M60x1.5	30497
M60x2.0	30497
M60x3.0	31052
M60x4.0	31052
M64x1.5	32603
M64x2.0	32603
M64x3.0	33048
M64x4.0	33048
M68x1.5	41255
M68x2.0	41255
M68x3.0	41587
M68x4.0	41587
M72x6.0	49434
M76x6.0	60338
M80x6.0	73027
M85x6.0	89884
M90x6.0	112308
M95x6.0	141355
M100x6.0	174639

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 5 NOS. PER SIZE. WHICHEVER IS HIGHER.

NOTES :

1. Sizes upto M 10 will be supplied as per Part II unless otherwise specified.
2. Serial Taps can be supplied at the same price.
3. A Set Consist of Taper & Bottoming.
4. Left Hand Taps at **25% Extra**.
5. For **M35 = 40% & M42 = 80% extra**

NOTE: (NUT TAPS - MOQ)

UPTO M10 -	(50 NOS EACH)
OVER M10 - M28	(25 NOS EACH)
OVER M28 - M35	(15 NOS EACH)
OVER M35	(10 NOS EACH)



HSS LONG SHANK MACHINE TAPS (COARSE PITCH) IS 6175 : 1991 : PART IV (6H - TOL)

PRICE Rs. / EACH

NOM DIA X PITCH	STR FLUTES TYPE 'A', 'C', 'D'	SPIRAL POINT TYPE 'B'	SPIRAL FLUTES TYPE 'C'
M3x0.5	710	820	832
M4x0.7	710	820	832
M5x0.8	513	602	626
M6x1.0	549	646	679
M8x1.25	594	710	734
M10x1.5	754	865	920
M12x1.75	1053	1223	1341
M14x2.0	1516	1763	2030
M16x2.0	1516	1763	2030
M18x2.5	2230	2579	2908
M20x2.5	2771	3184	3464
M22x2.5	3078	3578	3488
M24x3.0	3399	3971	4330
M27x3.0	4951		
M30x3.5	5617		
M33x3.5	6625		
M36x4.0	8928		
M39x4.0	10444		
M42x4.5	12227		
M45x4.5	16043		
M48x5.0	17978		
M52x5.0	20794		
M56x5.5	27571		
M60x5.5	31589		
M64x6.0	35636		
M68x6.0	49667		

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 5 NOS. PER SIZE. WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

MACHINE TAPS

Type 'A' - 5 Deg Taper angle with Longer taper lead

Type 'B' - 10 Deg Taper angle with Spiral point

Type 'C' - 20 Deg Taper angle with Shorter taper lead

Type 'D' - 10 Deg Taper angle without Spiral point

HSS LONG SHANK MACH. TAPS TO DIN - 2183 BSW / UNC / BSF / UN / NF (TYPE A, B & C)

SIZE INCH	PRICE (Rs.) EACH TYPE 'A' & 'C'	PRICE (Rs.) EACH TYPE 'B'
1/8	502	587
3/16	552	629
1/4	559	666
5/16	650	754
3/8	781	983
7/16	929	1099
1/2	1102	1269
5/8	1615	1866
3/4	2016	2756
7/8	3231	3611
1	4049	4271
1.1/8	5395	5776
1.1/4	6506	7027
1.1/2	10139	10598
1.3/8	10139	10598
1.5/8	12113	12589
1.3/4	14069	14574
1.7/8	17188	17649
2	20318	20762



HSS LONG SHANK MACHINE TAPS (FINE PITCH) IS 6175 : 1991 : PART IV : (6H -TOL)

PRICE Rs. / EACH

NOM DIA X PITCH	STRAIGHT FLUTES TYPE 'A', 'C', 'D'	SPIRAL POINT TYPE 'B'
M3x0.35	964	1035
M3.5x0.35	964	1035
M4x0.5	964	1035
M4.5x0.5	624	732
M5x0.5	624	732
M6x0.75	624	732
M7x0.75	714	826
M8x1.0	656	782
M10x1.0	790	914
M10x1.25	803	929
M12x1.25	1143	1321
M12x1.5	1143	1321
M14x1.25	1496	1769
M14x1.5	1496	1769
M16x1.5	1465	1802
M18x1.5	2453	2978
M18x2.0	2453	2978
M20x1.5	3209	3788
M20x2.0	3209	3788
M22x1.5	3327	3933
M22x2.0	3327	3933
M24x1.5	3718	4386
M24x2.0	3718	4386
M25x1.5	4733	5593
M25x2.0	4733	5593
M26x1.5	4838	5711
M26x2.0	4838	5711
M27x1.5	5831	6665
M27x2.0	5831	6665
M28x1.5	6339	7228
M28x2.0	6339	7228
M30x1.5	6562	
M30x2.0	6562	
M30x3.0	6562	
M32x1.5	7207	
M32x2.0	7207	
M33x1.5	7936	
M33x2.0	7936	
M33x3.0	7936	
M35x1.5	11093	
M36x1.5	11093	
M36x2.0	11093	
M36x3.0	11093	
M39x1.5	13640	
M39x2.0	13640	
M39x3.0	13640	
M40x1.5	14583	
M40x2.0	14583	
M40x3.0	14583	
M42x1.5	15018	
M42x2.0	15018	
M42x3.0	15018	
M42x4.0	15018	
M45x1.5	20937	
M45x2.0	20937	
M45x3.0	20937	
M45x4.0	20937	
M48x1.5	22069	



HSS LONG SHANK MACHINE TAPS (FINE PITCH) IS 6175 : 1991 : PART IV : (6H -TOL)

PRICE Rs. / EACH

NOM DIA X PITCH	STRAIGHT FLUTES TYPE 'A', 'C', 'D'
M48x2.0	22069
M48x3.0	22069
M48x4.0	22069
M50x1.5	25508
M50x2.0	25508
M50x3.0	25508
M52x1.5	27282
M52x2.0	27282
M52x3.0	27282
M52x4.0	27282

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 5 NOS. PER SIZE. WHICHEVER IS HIGHER.

HSS PIPE TAPS NPS NPT NPSF - BS : 949 - 1969 BSP BS : 949 - 1957 BSPT BS : 949 PART III - 1982

TAP SIZE	PRICE Rs. / EACH					
	PARALLEL THREAD			TAPER THREAD		
INCH	BSP	NPS	NPSF	BSPT	NPT	NPTF
1/16					661	661
1/8	541	614	744	691	713	850
1/4	843	1063	1312	1237	1297	1602
3/8	1243	1308	1620	1636	1713	1940
1/2	1812	1947	2356	2351	2468	2795
5/8	2051	-	-	-	-	-
3/4	2781	2917	3588	3639	3691	4267
7/8	3469	-	-	-	-	-
1	4371	4870	5956	5656	5806	6637
1.1/4	6565	7674	-	8291	8394	9777
1.1/2	8192	9483	-	10169	10841	-
1.3/4	12531	-	-	-	-	-
2	14706	16945	-	17865	18774	-
2.1/4	25435	-	-	-	-	-
2.1/2	36698	-	-	53564	54403	-
2.3/4	40956	-	-	-	-	-
3	47548	-	-	70083	70652	-
3.1/2	61882	-	-	92378	92536	-
4	77786	-	-	116445	118598	-

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 5 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra

IMPORTANT NOTES :

BSP(P), BSP(T), NPS NPT NPTS NPTF

A set consists of 2 Taps (Taper & Plug)

we can also supply BSP (P) Taps to new

BS 949:Part - III- 1982 (G Series) at the same rate as per order.

HSS HAND TAPS BA - BS : 949 : 1969 AND HSS NUT TAPS BA - BA : 949 :1969

SIZE BA	PRICE (Rs) EACH		
	STRAIGHT FLUTES	SPIRAL POINT	NUT TAPS
0	399	499	814
1	399	499	814
2	339	454	707
3	339	454	707
4 ★	339	454	707
5	339	454	781
6	375	488	866

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 75 NOS. PER SIZE WHICHEVER IS HIGHER.

For M35 = 40% & M42 = 80% extra



**HSS GROUND THREAD TAPS :
STANDARD HAND & SHORT MACHINE TAPS :
B.S.B.(BRITISH STANDARD BRASS) WHITWORTH FORM
B.S.CY.(BRITISH STANDARD CYCLE) 60° THREAD FORM
B.S. 949 - 1969**

B. S. CY SIZE INCH	TPI	PRICE (Rs) EACH	
		STR. FLUTES	SPIRAL POINTED
3/16	32	381	466
1/4	26	411	475
5/16	26	513	585
3/8	26	624	713
7/16	26	783	941
1/2	26	970	1131
9/16	26	1552	1715
1	24	3079	-
1.370	24	6509	-

B. S. B SIZE INCH	TPI	PRICE (Rs) EACH	
		STR. FLUTES	SPIRAL POINTED
1/4	26	400	469
5/16	26	528	604
3/8	26	604	692
7/16	26	801	953
1/2	26	987	1149
9/16	26	1540	1695
5/8	26	1540	-
3/4	26	1993	-
1	26	3069	-

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40%** & **M42 = 80%** extra

**HSS GROUND THREAD TAPS :
STANDARD HAND & SHORT MACHINE TAPS :
B.S. CON (BRITISH STANDARD CONDUIT) WHITWORTH FORM
B.S. : 949 --1969 (ZONE - 3)**

B. S. CON SIZE INCH	TPI	PRICE (Rs) EACH	
		STR. FLUTES	SPIRAL POINTED
1/2	18	1036	1036
-	-	-	-
5/8	18	1584	-
3/4	16	2096	-
1	16	3269	-
1.1/4	16	4746	-
-	-	-	-
1.1/2	14	7590	-
2	14	13270	-

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000/- NET OR 10 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40%** & **M42 = 80%** extra

PRICES FOR LPG CYLINDER 3/4 NGT TAPS :	EACH (Rs.)
1. 3/4" - 14 NGT tap interrupted 5 flutes to our Drg.No. M22 - 531	4710
2. 3/4" - 14 NGT tap interrupted 5 flutes to our Drg.No. M22 - 574	5187
3. 3/4" - 14 NGT tap interrupted 5 flutes to our Drg.No. M22 - 535	4502
4. 3/4" - 14 NGT tap NON-interrupted 4 flutes to our Drg.No. M22 - 535	3601

PRICES FOR LPG CYLINDER BSGT TAPS :	EACH (Rs.)
0.715" x 14 TPI - BSGT Tap Interrupted 5 flutes to our Drg. No. SKT-012	5289
0.715" x 14 TPI -BSGT Tap NON-Interrupted 4 flutes to our Drg. No. SKT- 012	4613

IMPORTANT NOTE :

ALL NGT & BSGT TAPS ARE SUBJECT TO ORDER VALUE BEING MINIMUM OF Rs. 35,000/ - NETT. OR 15 NOS. PER SIZE WHICHEVER IS HIGHER.

**Prices for all TiN and TiAlN Taps will
be given on specific request.**



HSS HAND TAPS BSW ,BSF,UNC,UNF AND HSS NUT TAPS BS : 949 : 1969

SIZE INCH	PRICE (Rs) EACH			
	STRAIGHT FLUTES	SPIRAL POINT	SPIRAL FLUTES	NUT TAPS
1/8	340	406		
3/16	340	417		732
1/4	353	424	493	830
5/16	399	494	546	1040
3/8	485	594	677	1371
7/16	621	765	890	1699
1/2	785	942	1087	2360
9/16	1137	1386	1672	2360
5/8	1137	1386	1672	3063
11/16				3063
3/4	1713	2051	2426	3601
7/8	2363	2847	3314	4932
1	2989	3452	3963	6415
1.1/8	4047			8638
1.1/4	4865			10707
1.3/8	6282			12742
1.1/2	7542			15269
1.5/8 (BSF ONLY)	8887			17185
1.3/4	10452			21479
2	14824			30610
2.1/4	22099			
2.1/2	29078			
2.3/4	36275			
3	48707			

ITEM MARKED ★ ARE EX-STOCK ITEMS ALL REMAINING ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ OF 75 NOS. PER SIZE. WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**

IMPORTANT NOTES :

A Set Consist of Taper, Second & Bottoming.

HSS NIB TAPS (CORSE PITCH) TO OUR STANDARD

NOM DIA X PITCH	STRIGHT FLUTES PRICE (Rs.) EACH
M4x0.7	479
M5x0.8	513
M6x1.0	573
M8x1.25	598
M10x1.5	753
M12x1.75	882
M14x2.0	1531
M16x2.0	1531
M18x2.5	2402
M20x2.5	3211
1/8" BSW	512
5/32" BSW	524
3/16" BSW	524
1/4" BSW	534
5/16" BSW	598
3/8" BSW	753
7/16" BSW	1057
1/2" BSW	1057
9/16" BSW	1531
5/8" BSW	1531

ALL ABOVE ITEMS WILL ATTRACT MINIMUM ORDER VALUE OF Rs. 35,000 / - NETT OR 30 NOS. PER SIZE WHICHEVER IS HIGHER.

For **M35 = 40% & M42 = 80% extra**



HSS (M42) NINJA SERIES TAPS TO IS : 6175 - PART - II & PART - III

	NOM DIA X PITCH	IS 6175 - PART II & III				
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves
Bright / Steam Tempered	M3 X 0.5	748	840	623		
	M4 X 0.7	748	840	623		
	M5 X 0.8	782	886	657		
	M6 X 1.0	782	886	657		
	M8 X 1.25	654	1270	724		
	M10 X 1.25					
	M10 X 1.5	1081	1244	901		
	M12 X 1.75	1696	1958	1436		
	M14 X 1.5	2322	2665	1933		
	M14 X 2.0	2309	2636	1919		
	M16 X 1.5	3378	2658	1931		
	M16 X 2.0	2309	2636	1919		
Tin- Coating	NOM DIA X PITCH	IS 6175 - PART II & III				
	M3 X 0.5	822	923	681		
	M4 X 0.7	822	923	681		
	M5 X 0.8	858	973	719		
	M6 X 1.0	858	973	719		
	M8 X 1.25	959	1096	795		
	M10 X 1.25					
	M10 X 1.5	1187	1363	986		
	M12 X 1.75	1858	2142	1574		
	M14 X 1.5	2544	3033	2119		
	M14 X 2.0	2530	2891	2105		
	M16 X 1.5	2540	3214	2115		
M16 X 2.0	2530	2891	2105			
TiCN / Ti(AI)N	NOM DIA X PITCH	IS 6175 - PART II & III				
	M3 X 0.5	893	1006	740		
	M4 X 0.7	893	1006	740		
	M5 X 0.8	933	1058	780		
	M6 X 1.0	933	1058	780		
	M8 X 1.25	1043	1194	864		
	M10 X 1.25					
	M10 X 1.5	1287	1482	1073		
	M12 X 1.75	2021	2327	1709		
	M14 X 1.5	2764	3287	2301		
	M14 X 2.0	2750	3145	2286		
	M16 X 1.5	2760	3467	2299		
M16 X 2.0	2750	3145	2286			

HSS PARALLEL SHANK END MILL IS : 6353

DIA (MM)	PANTHER PRICE (Rs.) EACH	NINJA PRICE (Rs.) EACH	IS : 6353 - 1991	
			CEL (MM)	OAL (MM)
3 ★	916	1221	8 ★	40
4 ★	916	1221	11 ★	43
5 ★	916	1221	13 ★	47
6 ★	1023	1364	13 ★	57
7 ★	1150	1534	16 ★	60
8 ★	1150	1534	19 ★	63
9 ★	1150	1534	19 ★	69
10 ★	1150	1534	22 ★	72
11 ★	1150	1534	22 ★	79
12 ★	1189	1586	26 ★	83
14	1474	1965	26 ★	83
16 ★	1721	2295	32 ★	92
18 ★	2092	2790	32 ★	92
20 ★	2314	3086	38 ★	104
22 ★	2626	3501	38 ★	104
25 ★	3062	4083	45 ★	121
28	4358	5810	45	121
32 ★	5230	6974	53 ★	133
36	6888	9183	53	133



HSS - E PANTHER SERIES TAPS TO IS 6175 - PART - II PART - IV AND DIN-371 Price (Rs.) Each

Bright / Steam Tempered	NOM DIA X PITCH	IS 6175 - PART II & DIN 371				
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves
	M3x0.5	559	626	465		
	M4x0.7	559	626	465	979	1080
	M5x0.8	584	661	491	979	1080
	M6x1.0	584	661	491	979	1080
	M8x1.0	777	948	646	1359	1419
	M8x1.25	654	747	541	1131	1184
	M10x1.25	936	1074	782	1384	1446
	M10x1.5	807	929	672	1384	1446
	M12X1.75					
	M14X2.0					
	M16X1.5					
	M16X2.0					

Tin Coating	NOM DIA X PITCH	IS 6175 - PART II & DIN 371					
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves	
		M3x0.5	613	689	508		
		M4x0.7	613	689	508	1056	1155
		M5x0.8	640	726	536	1056	1155
		M6x1.0	640	726	536	1056	1155
		M8x1.0	838	1021	679	1446	1508
		M8x1.25	716	818	594	1220	1271
		M10x1.25	1027	1177	855	1490	1553
		M10x1.5	886	1018	736	1456	1553
		M12X1.75					
		M14X2.0					
	M16X1.5						
	M16X2.0						

Ticn / Ti (Al) N	NOM DIA X PITCH	IS 6175 - PART II & DIN 371					
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves	
		M3x0.5	666	750	552		
		M4x0.7	666	750	552	1135	1234
		M5x0.8	696	790	582	1135	1234
		M6x1.0	696	790	582	1135	1234
		M8x1.0	901	1091	749	1535	1596
		M8x1.25	778	890	644	1308	1360
		M10x1.25	1117	1280	931	1597	1659
		M10x1.5	960	1106	800	1596	1659
		M12X1.75					
		M14X2.0					
	M16X1.5						
	M16X2.0						

Bright / Steam Tempered	NOM DIA X PITCH	IS 6175 - PART IV					
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves	
		M6X1.0	929		774		
		M8X1.0					
		M8X1.25	988		825		
		M10X1.25					
		M10X1.5	1204		1005		
		M12X1.75	1749		1442		
		M14X2.0					
		M16X1.5					
	M16X2.0						

Tin Coating	NOM DIA X PITCH	IS 6175 - PART IV					
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves	
		M6X1.0	1018		848		
		M8X1.0					
		M8X1.25	1081		902		
		M10X1.25					
		M10X1.5	1318		1102		
		M12X1.75	1913		1578		
		M14X2.0					
	M16X1.5						
	M16X2.0						

Ticn / Ti (Al) N	NOM DIA X PITCH	IS 6175 - PART IV					
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves	
		M6X1.0	1106		921		
		M8X1.0					
		M8X1.25	1176		981		
		M10X1.25					
		M10X1.5	1433		1199		
		M12X1.75	2080		1716		
		M14X2.0					
	M16X1.5						
	M16X2.0						

* MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ 3 NOS. PER SIZE. WHICHEVER IS HIGHER.



**HSS - E PANTHER SERIES TAPS TO IS 6175
PART - III, DIN-374 AND DIN-376**

Price (Rs.) Each

	NOM DIA X PITCH	IS 6175 - PART III					
		SPPT	Spiral	Cast Iron	Fluteless	Fluteless Oil Grooves	
Bright / Steam Tempered	M3x0.5						
	M4x0.7						
	M5x0.8						
	M6x1.0						
	M8x1.0						
	M8x1.25						
	M10x1.25						
	M10x1.5						
	M12X1.75	1266	1459	1072		2383	
	M14X2.0	1723	1967	1432		3296	
	M16X1.5	1730	1984	1442		3529	
	M16X2.0	1723	1967	1432		3529	
	M18X2.5	2381	2721	1979			
	M20X1.5	3990	5187	3582			
	M20X2.5	3137	3586	2609		6286	
Tin Coating	NOM DIA X PITCH	IS 6175 - PART III					
	M3x0.5						
	M4x0.7						
	M5x0.8						
	M6x1.0						
	M8x1.0						
	M8x1.25						
	M10x1.25						
	M10x1.5						
	M12X1.75	1386	1598	1174		2504	
	M14X2.0	1888	2157	1571		3512	
	M16X1.5	1895	2399	1578		3745	
	M16X2.0	1888	2157	1571		3745	
	M18X2.5	2533	2873	2131			
	M20X1.5	4522	5756	4026			
M20X2.5	3343	3794	2815		6503		
Ticn / Ti (Al) N	NOM DIA X PITCH	IS 6175 - PART III					
	M3x0.5						
	M4x0.7						
	M5x0.8						
	M6x1.0						
	M8x1.0						
	M8x1.25						
	M10x1.25						
	M10x1.5						
	M12X1.75	1508	1736	1275		2696	
	M14X2.0	2052	2347	1707		3728	
	M16X1.5	2060	2587	1716		3961	
	M16X2.0	2052	2347	1707		3961	
	M18X2.5	2684	3026	2282			
	M20X1.5	5054	6326	4469			
M20X2.5	3549	3999	3021		6721		
Bright / Steam Tempered	NOM DIA X PITCH	DIN 374 / DIN-376					
	M6X1.0						
	M8X1.0	1057	1420	909	1679		
	M8X1.25						
	M10X1.25	1324	1620	1081	2054		
	M10X1.5						
	M12X1.75	1749	2346	1442		3052	
	M14X2.0	2400	3214	1977		4190	
	M16X1.5	2520	3309	2071			
	M16X2.0	2400	3214	1977		4190	
	M18X2.5	3705	4816	3234			
	M20X1.5						
	M20X2.5	4556	5922	3973			
	Tin Coating	NOM DIA X PITCH	DIN 374 / DIN-376				
		M6X1.0					
M8X1.0		1151	1527	987	1800	1875	
M8X1.25							
M10X1.25		1441	1753	1176	2198	2294	
M10X1.5							
M12X1.75		1913	2537	1578		3314	
M14X2.0		2539	3354	2118		4342	
M16X1.5		2716	3386	2242		4976	
M16X2.0		2539	3354	2118		4342	
M18X2.5		3856	4967	3386			
M20X1.5							
M20X2.5		4762	6128	3120			
Ticn / Ti (Al) N		NOM DIA X PITCH	DIN 374 / DIN-376				
		M6X1.0					
	M8X1.0	1244	1635	1065	1921	1995	
	M8X1.25						
	M10X1.25	1554	1889	1272	2343	2437	
	M10X1.5						
	M12X1.75	2080	2726	1716		3576	
	M14X2.0	2679	3495	2258		4492	
	M16X1.5	2939	3479	2430		5233	
	M16X2.0	2679	3495	2258		4492	
	M18X2.5	4008	5119	3536			
	M20X1.5						
	M20X2.5	4968	6335	4385			

* MINIMUM ORDER VALUE OF RS. 35,000/- NETT OR MOQ 3 NOS. PER SIZE, WHICHEVER IS HIGHER.



MASONRY DRILLS - CARBIDE TIPPED
(GROUND FLUTED & BRIGHT PLATED)
TO OUR STANDARD

SIZE		FLUTE LENGTH	OVER ALL LENGTH	PRICE (Rs) EACH	
MM	INCH			Standard	Deluxe
3	1/8 ★	40	76	57	65
4	5/32	45	85	69	77
5	3/16★	45	87	77	85
5.5	7/32★	45	87	92	102
6	15/64	60	107	102	112
6.5	1/4★	60	107	92	102
7	9/32	60	107	179	195
8	5/16	80	120	157	174
9	11/32	80	120	208	229
10	3/8★	80	120	184	204
11	7/16	115	160	260	286
12	15/32	115	160	230	254
13	1/2	115	160	230	254

ITEMS MARKED ★ ARE EX-STOCK.



HSS HATHYAR TOOL BITS (BLANKS)

SQUARE	PRICE (Rs.) EACH			
SIZE IN INCH	CORRESPONDING SIZE MM	HATHYAR 600	HATHYAR 900	HATHYAR 1000
3/16 x 3	5 x 75	120	308	
3/16 x 4	5 x 100	157	452	
3/16 x 6	5 x 150	244	958	
1/4 x 3	6 x 75	137	413	
1/4 x 4	6 x 100	159	551 ★	557 ★
1/4 x 6	6 x 150	230 ★	896 ★	904 ★
1/4 x 8	6 x 200	330	1530	
5/16 x 3	8 x 75	152	533	
5/16 x 4	8 x 100	194	728	
5/16 x 6	8 x 150	326	1174 ★	1185 ★
5/16 x 8	8 x 200	414	1670	
3/8 x 3		190 ★	626 ★	666 ★
3/8 x 4		230 ★	830 ★	896 ★
3/8 x 6		358 ★	1337 ★	1415 ★
3/8 x 8		490 ★	1911 ★	2025 ★
3/8 x 10		631	2527	
	10x 75	211	691	
	10x 100	251	929	
	10x 150	389	1454	
	10x 200	542	2045	
	10x 250	687	2700	
1/2 x 3	12x 75	285	1026	
1/2 x 4	12x 100	358 ★	1339 ★	1423 ★
1/2 x 6	12x 150	549	2110 ★	2200 ★
1/2 x 8	12x 200	723	2946 ★	3067 ★
1/2 x 10	12x 250	1098	4059	
5/8 x 4	16x 100	568	2149	
5/8 x 6	16x 150	840	3315	3499
5/8 x 8	16x 200	1137	4653	
3/4 x 4		788	3106	
3/4 x 6		1152	4568	4859
3/4 x 8		1574	6262	
	20x 100	860	3402	
	20x 150	1254	5096	
	20x 200	1715	6788	
1 x 6	25x 150	1941	7663	
1 x 8	25x 200	2638	10191	

Prices of HSS M35 (5% Cobalt) and HSS M42 (8% Cobalt) will be given on only request.

1. Items marked ★ are Ex-Stock, other sizes against specific orders.
2. Quantity to be ordered in multiple of 10 only for sizes upto and including 1/2" square.



DECIMAL EQUIVALENTS

FRACTIONS OF AN INCH EXPRESSED AS MILLIMETERS

Fractional Inch	MM	Fractional Inch	MM	Fractional Inch	MM	Fractional Inch	MM
1/64	0.3969	1.1/64	25.797	2.1/64	51.197	3.1/64	76.597
1/32	0.7938	1.1/32	26.194	2.1/32	51.594	3.1/32	76.994
3/64	1.1906	1.3/64	26.591	2.3/64	51.991	3.3/64	77.391
1/16	1.5875	1 1/16	26.988	2 1/16	52.388	3 1/16	77.788
5/64	1.9844	1 5/64	27.384	2 5/64	52.784	3 5/64	78.184
3/32	2.3813	1 3/32	27.781	2 3/32	53.181	3 3/32	78.581
7/64	2.7781	1 7/64	28.178	2 7/64	53.578	3 7/64	78.978
1/8	3.1750	1 1/8	28.575	2 1/8	53.975	3 1/8	79.375
9/64	3.5719	1 9/64	28.972	2 9/64	54.372	3 9/64	79.772
5/32	3.9688	1 5/32	29.369	2 5/32	54.769	3 5/32	80.169
11/64	4.3656	1 11/64	29.766	2 11/64	55.166	3 11/64	80.566
3/16	4.7625	1 3/16	30.163	2 3/16	55.563	3 3/16	80.963
13/64	5.1594	1 13/64	30.559	2 13/64	55.959	3 13/64	81.359
7/32	5.5563	1 7/32	30.956	2 7/32	56.356	3 7/32	81.756
15/64	5.9531	1 15/64	31.353	2 15/64	56.753	3 15/64	82.153
1/4	6.3500	1 1/4	31.750	2 1/4	57.150	3 1/4	82.550
17/64	6.7469	1 17/64	32.147	2 17/64	57.547	3 17/64	82.947
9/32	7.1438	1 9/32	32.544	2 9/32	57.944	3 9/32	83.34
19/64	7.5406	1 19/64	32.941	2 19/64	58.341	3 19/64	83.741
5/16	7.9375	1 5/16	33.338	2 5/16	58.738	3 5/16	84.138
21/64	8.3344	1 21/64	33.734	2 21/64	59.134	3 21/64	84.534
11/32	8.7313	1 11/32	34.131	2 11/32	59.531	3 11/32	84.931
23/64	9.1281	1 23/64	34.528	2 23/64	59.928	3 23/64	85.328
3/8	9.5250	1 3/8	34.925	2 3/8	60.325	3 3/8	85.725
25/64	9.9219	1 25/64	35.322	2 25/64	60.722	3 25/64	86.122
13/32	10.3188	1 13/32	35.719	2 13/32	61.119	3 13/32	86.519
27/64	10.7156	1 27/64	36.116	2 27/64	61.516	3 27/64	86.916
7/16	11.1125	1 7/16	36.513	2 7/16	61.913	3 7/16	87.313
29/64	11.5094	1 29/64	36.909	2 29/64	62.309	3 29/64	87.709
15/32	11.9063	1 15/32	37.306	2 15/32	62.706	3 15/32	88.106
31/64	12.3031	1 31/64	37.703	2 31/64	63.103	3 31/64	88.503
1/2	12.7000	1 1/2	38.100	2 1/2	63.500	3 1/2	88.900
33/64	13.0969	1 33/64	38.497	2 33/64	63.897	3 33/64	89.297
17/32	13.4938	1 17/32	38.894	2 17/32	64.294	3 17/32	89.694
35/64	13.8906	1 35/64	39.291	2 35/64	64.691	3 35/64	90.091
9/16	14.2875	1 9/16	39.291	2 35/64	64.691	3 35/64	90.091
37/64	14.6844	1 37/64	40.084	2 37/64	65.484	3 37/64	90.884
19/32	15.0813	1 19/32	40.481	2 19/32	65.881	3 19/32	90.281
39/64	15.4781	1 39/64	40.878	2 39/64	66.278	3 39/64	91.678
5/8	15.8750	1 5/8	41.275	2 5/8	66.675	3 5/8	92.075
41/64	16.2719	1 41/64	41.672	2 41/64	67.072	3 41/64	92.472
21/32	16.6688	1 21/32	42.069	2 21/32	67.469	3 21/32	92.869
43/64	17.0656	1 43/64	42.466	2 43/64	67.866	3 43/64	93.266
11/16	17.4625	1 11/16	42.863	2 11/16	68.263	3 11/16	93.663
45/64	17.8594	1 45/64	43.259	2 45/64	68.659	3 45/64	94.059
23/32	18.2563	1 23/32	43.656	2 23/32	69.056	3 23/32	94.456
47/64	18.6531	1 47/64	44.053	2 47/64	69.453	3 47/64	94.853
3/4	19.0500	1 3/4	44.450	2 3/4	69.850	3 3/4	95.250
49/64	19.4469	1 49/64	44.847	2 49/64	70.247	3 49/64	95.647
25/32	19.8438	1 25/32	45.244	2 25/32	70.644	3 25/32	96.044
51/64	20.2406	1 51/64	45.641	2 51/64	71.041	3 51/64	96.441
13/16	20.6375	1 13/16	46.038	2 13/16	71.438	3 13/16	96.838
53/64	21.0344	1 53/64	46.434	2 53/64	71.834	3 53/64	97.234
27/32	21.4313	1 27/32	46.831	2 27/32	72.331	3 27/32	97.631
55/64	21.8281	1 55/64	47.228	2 55/64	72.628	3 55/64	98.028
7/8	22.2250	1 7/8	47.625	2 7/8	73.025	3 7/8	98.425
57/64	22.6219	1 57/64	48.022	2 57/64	73.422	3 57/64	98.822
29/32	23.0188	1 29/32	48.419	2 29/32	73.819	3 29/32	99.219
59/64	23.4156	1 59/64	48.816	2 59/64	74.216	3 59/64	99.616
15/16	23.8125	1 15/16	49.213	2 15/16	74.613	3 15/16	100.013
61/64	24.2094	1 61/64	49.609	2 61/64	75.009	3 61/64	100.409
31/32	24.6063	1 31/32	50.006	2 31/32	75.406	3 31/32	100.806
63/64	25.0031	1 63/64	50.403	2 63/64	75.803	3 63/64	101.203
1	25.4000	2	50.800	3	76.200	4	101.600



DRILLS FOR USE PRIOR TO TAPPING

Metric 60° INC ANGLE

Nom Dia	Pitch	Drill Dia	Nom Dia	Pitch	Drill Dia	Nom Dia	Pitch	Drill Dia	Nom Dia	Pitch	Drill Dia
2.0	0.40	1.60	11.0	1.50	9.50	24.00	2.00	22.00	39.00	2.00	37.00
2.2	0.45	1.75	12.0	1.00	11.00	24.00	3.00	21.00	39.00	3.00	36.00
2.5	0.35	2.15	12.0	1.25	10.80	25.00	1.00	24.00	39.00	4.00	35.00
2.5	0.45	2.05	12.0	1.50	10.50	25.00	1.50	23.50	40.00	1.50	35.80
3.0	0.35	2.65	12.0	1.75	10.20	25.00	2.00	23.00	40.00	2.00	38.00
3.0	0.50	2.50	14.0	1.00	13.00	26.00	1.50	24.50	40.00	3.00	37.00
3.5	0.35	3.15	14.0	1.25	12.80	27.00	1.00	26.00	42.00	1.50	40.50
3.5	0.60	2.90	14.0	1.50	12.50	27.00	1.50	25.50	42.00	2.00	40.00
4.0	0.50	3.50	14.0	2.00	12.00	27.00	2.00	25.00	42.00	3.00	39.00
4.0	0.70	3.30	15.0	1.00	14.00	27.00	3.00	24.00	42.00	4.00	38.00
4.5	0.50	4.00	15.0	1.50	13.50	28.00	1.00	27.00	42.00	4.50	37.50
4.5	0.75	3.70	16.0	1.00	15.00	28.00	1.50	26.50	45.00	1.50	43.50
5.0	0.50	4.50	16.0	1.50	14.50	28.00	2.00	26.00	45.00	2.00	43.00
5.0	0.80	4.20	16.0	2.00	14.00	30.00	1.00	29.00	45.00	3.00	42.00
5.5	0.50	5.00	17.0	1.00	16.00	30.00	1.50	28.50	45.00	4.00	41.00
6.0	0.75	5.20	17.0	1.50	15.50	30.00	2.00	28.00	45.00	4.50	40.50
6.0	1.00	5.00	18.0	1.00	17.00	30.00	3.00	27.00	48.00	1.50	46.50
7.0	0.75	6.20	18.0	1.50	16.50	30.00	3.50	26.50	48.00	2.00	46.00
7.0	1.00	6.00	18.0	2.00	16.00	32.00	1.50	30.50	48.00	3.00	45.00
8.0	0.75	7.20	18.0	2.50	15.50	32.00	2.00	30.00	48.00	4.00	44.00
8.0	1.00	7.00	20.0	1.00	19.00	33.00	1.50	31.50	48.00	5.00	43.00
8.0	1.25	6.80	20.0	1.50	18.50	33.00	2.00	31.00	50.00	1.50	48.00
9.0	0.75	8.20	20.0	2.00	18.00	33.00	3.00	30.00	50.00	2.00	48.00
9.0	1.00	8.00	20.0	2.50	17.50	33.00	3.50	29.50	50.00	3.00	47.00
9.0	1.25	7.80	22.0	1.00	21.00	35.00	1.50	33.50	52.00	1.50	50.50
10.0	0.75	9.20	22.0	1.50	20.50	36.00	1.50	34.50	52.00	2.00	50.00
10.0	1.00	9.00	22.0	2.00	20.00	36.00	2.00	34.00	52.00	3.00	49.00
10.0	1.25	8.80	22.0	2.50	19.50	36.00	3.00	33.00	52.00	4.00	48.00
10.0	1.50	8.50	24.0	1.00	23.00	36.00	4.00	32.00	52.00	5.00	47.00
11.0	0.75	10.20	24.0	1.50	22.50	38.00	1.50	36.50	56.00	5.50	50.50
11.0	1.00	10.00	-	-	-	39.00	1.50	37.50	-	-	-

AMERICAN NATIONAL THREADS

60° INC ANGLE

Size No.	N.C.		N.F.		U.N.C.		U.N.F.	
	TPI	Drill Size in m	TPI	Drill Size in m	TPI	Drill Size in m	TPI	Drill Size in m
0	-	-	80	1.25	-	-	-	-
2	56	1.85	64	1.90	-	-	-	-
4	40	2.35	48	2.40	40	2.35	-	-
6	32	2.85	40	2.95	32	2.85	-	-
8	32	3.50	36	3.50	32	3.50	-	-
10	24	3.90	32	4.10	24	3.90	32	4.10
12	24	4.50	28	4.70	-	-	-	-

BRITISH ASSOCIATION

47 1/2° INC ANGLE

Size mm	Dia	Pitch	Drill Size
0	6.0	1.00	5.10
1	5.3	0.90	4.50
2	4.7	0.81	4.00
3	4.1	0.73	3.40
4	3.6	0.66	3.00
5	3.2	0.59	2.65
6	2.8	0.53	2.30

DRILLS FOR USE PRIOR TO TAPPING

BRITISH STANDARD WHITWORTH FORM THREADS

55° INC ANGLE

Nom Dia	B.S.W		B.S.F		B.S.P (Parallel)		B.S.P (Taper)	
	Inch	TPI	D Size	TPI	Drill Size	TPI	Drill Size	TPI
1/8	40	2.55	-	-	28	8.80	28	8.40
3/16	24	3.70	32	5/32	-	-	-	-
7/32	-	-	28	4.60	-	-	-	-
1/4	20	5.10	26	5.30	19	11.80	19	11.20
9/32	-	-	26	6.11	-	-	-	-
5/16	18	6.50	22	6.80	-	-	-	-
3/8	16	5/16	20	8.30	19	15.25	19	14.75
7/16	14	9.30	18	9.70	-	-	-	-
1/2	12	10.50	16	7/16	14	3/4	14	23/32
9/16	12	12.10	16	1/2	-	-	-	-
5/8	11	13.50	14	14.00	14	53/64	-	-
11/16	11	15.00	14	15.50	-	-	-	-
3/4	10	41/64	12	16.75	14	24.50	14	15/16
7/8	9	19.25	11	25/32	14	28.25	-	-
1	8	22.00	10	22.75	11	30.75	11	30.00
1.1/8	7	24.75	9	25.50	-	-	-	-
1.1/4	7	1.3/32	9	1.1/8	11	39.50	11	44.50
1.3/8	-	-	8	31.50	-	-	-	-
1.1/2	6	33.5	8	1.23/64	11	1.25/32	11	56.00
1.5/8	-	-	8	37.90	-	-	-	-
1.3/4	5	39.00	7	41.00	11	51.00	-	-
2	4.5	44.5	7	47.00	11	2.1/4	11	2.13/16
2.1/4	4	51.00	6	53.00	11	63.26	-	-
2.1/2	4	57.00	6	58.00	11	72.73	-	-
2.3/4	3.5	62.14	6	63.35	11	79.08	-	-
3	3.5	68.30	5	69.50	11	85.43	11	(84.35)
3.1/2	-	-	-	-	11	97.88	11	(109.42)
4	-	-	-	-	11	110.58	-	-

AMERICAN NATIONAL FORM THREADS

60° INC ANGLE

Nom Dia	NC & U.N.C		N.E & U.N.F		N.P.T & N.P.S		
	Fractional Inch	TPI	Drill Size in mm	TPI	Drill Size in mm	Drill Size mm	
						TPI	
1/4	20	5.10	28	5.50	18	10.70	11.10
5/16	18	6.60	24	6.90	-	-	-
3/8	16	8.00	24	8.50	18	14.25	14.50
7/16	14	9.40	20	9.90	-	-	-
1/2	13	10.80	20	11.50	14	17.50	18.00
9/16	12	12.20	18	12.90	-	-	-
5/8	11	13.50	18	14.50	-	-	-
3/4	10	16.50	16	17.50	14	22.75	23.25
7/8	9	19.50	14	20.40	-	-	-
1	8	22.25	12	23.25	11.5	28.50	29.00
1.1/4	7	28.00	12	29.50	11.5	37.50	38.00
1.1/2	6	34.00	12	36.00	11.5	43.5	44



HARDNESS CONVERSION CHART

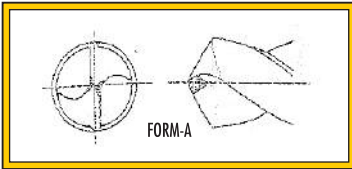
VHN	BHN	HRA	HRB	HRC
940		85.6		68
920		85.3		67.5
900		85		67
880	*767	84.7		66.4
860	*757	84.4		65.9
840	*745	84.1		65.3
820	*733	83.8		64.7
800	*722	83.4		64
780	*710	83		63.3
760	*698	82.6		62.5
740	*684	82.2		61.8
720	*670	81.6		61
700	*656	81.3		60.1
690	*647	81.1		59.7
680	*638	80.8		59.2
670	*630	80.6		58.8
660	620	80.3		58.3
650	611	80		57.8
640	601	79.8		57.3
630	591	79.5		56.8
620	582	79.2		56.3
610	573	78.9		55.7
600	564	78.6		55.2
590	554	78.4		54.7
580	545	78		54.1
570	535	77.8		53.6
560	525	77.4		53
550	517	77		52.3
540	507	76.7		51.7
530	497	76.4		51.1
520	488	76.1		50.5
510	479	75.7		49.8
500	471	75.3		49.1
490	460	74.9		48.4
480	452	74.5		47.7
470	442	74.1		46.9
460	433	73.6		46.1
450	425	73.3		45.3
440	415	72.8		44.5
430	405	72.3		43.6
420	397	71.8		42.7
410	388	71.4		41.8
400	379	70.8		40.8
390	369	70.3		39.8
380	360	69.8	*110	38.8
370	350	69.2		37.7
360	341	68.7	*109	36.6
350	331	68.1		35.5
340	322	67.8	*108	34.4
330	313	67		33.3
320	303	66.4	*107	32.2
310	294	65.8		31
300	284	65.2	*105.5	29.8
295	280	64.8		29.2
290	275	64.5	*104.5	28.5
285	270	64.2		27.8
280	265	63.8	*103.5	27.1
275	261	63.5		26.4
270	256	63.1	*102	25.6
265	252	62.7		24.8
260	247	62.4	*101.	24
255	243	62		23.1
250	238	61.6	99.5	22.2
245	233	61.2		21.3
240	228	60.7	98.1	20.3
230	219		96.7	*18
220	209		95	*15.7
210	200		93.4	*13.4
200	190		91.5	*11
190	181		89.5	*8.5
180	171		87.1	*6
170	162		85	*3
160	152		81.7	0
150	143		78.7	
140	133		75	
130	124		71.2	
120	114		66.7	
110	105		62.3	
100	95		56.2	

* values beyond range only for information

VHN	Vicker's Hardness Number / Diamond Pyramid.
BHN	Brinell Hardness Number (w-ball) 10 mm/3000 Kgs
HRA	Rockwell A Scale - Diamond Cone/60 Kgs
HRB	Rockwell B Scale - 1/16"dia. Ball/100 kgs
HRC	Rockwell C Scale - Diamond Cone/150 Kgs

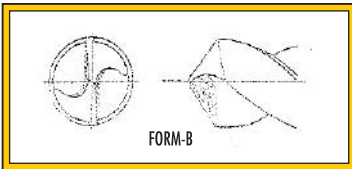


POINT ENHANCEMENT



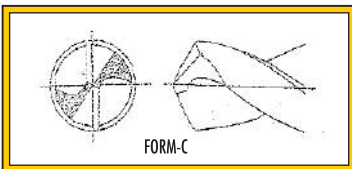
FORM A

Web thinned (thinned chisel)
Improves penetration
Ideal for long series



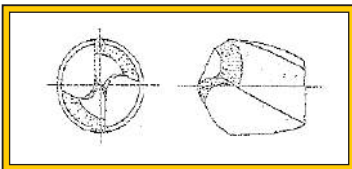
FORM B

Web thinned + Lips corrected
Optimized to heavy duty.
Ideal for deep hole drilling.



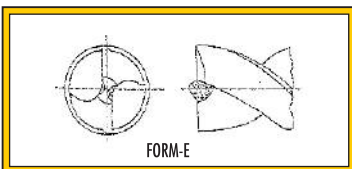
FORM C

Split point
Eases chip removal & penetration.
Ideal for crank shaft drilling.



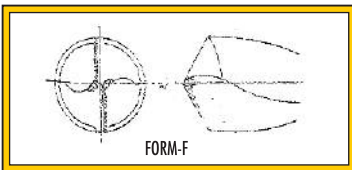
FORM D

Cast iron point
90 peripheral point + web thinning
Ideal for cast iron and abrasive plastics.



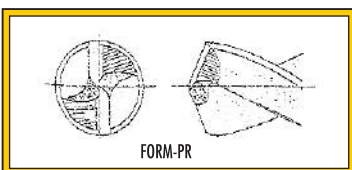
FORM E

Brad point
flat point + central drill
Ideal for sheet metal drilling.



FORM 4F

Fusion of form A & B (Four faces)
A high performing point for long chips
Ideal for stainless & high nickel.

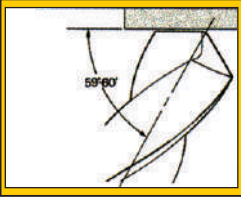


FORM R

Helical thinning
curls and breaks the chips.
Ideal for long chip type.

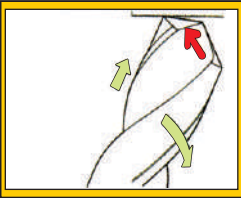


POINT GRINDING TECHNIQUES



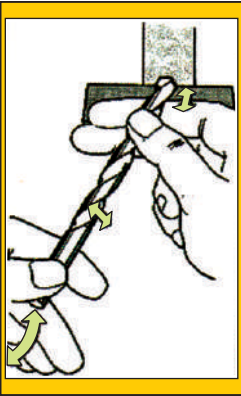
STEP - 1

Keep the cutting lip parallel to the grinding face
With an angle of 59° to the axis of drill body.



STEP - 2

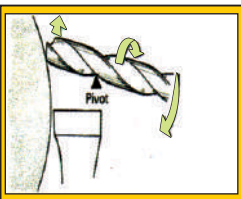
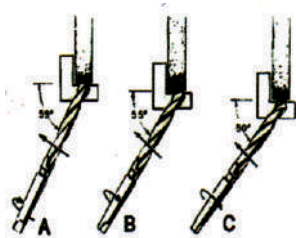
Start grinding from the lip down to heelside.
Simultaneously rotate the drill clockwise.



STEP - 3

Gradually co-ordinate these three movements :

- Clockwise rotation of the drill point.
- Downward movement of shank-end of drill.
- Left swing movement of the shank-end.
 59° to 55° and 50° by the end of grinding.



← SIDE VIEW of the point grinding



TROUBLE SHOOTING (DRILLS)

	PROBLEM	CAUSES	REMEDIES
1	Oversize hole	1. Unequal lip angles 2. Unequal lip lengths	Regrind drill point to correct angle with proper relief
2	Irregular & poor finish	1. Loose hold. 2. Chocking of chips 3. Excessive feed rate	Check the holder and run-out Increase the force & volume of coolant. Decrease the feed rate.
3	Bucking of the drill	Axial deflection of drill	Use correct guide bushes.
4	Chattering of drill	1. Hard/tough workpiece 2. Torsional deflection	Use a shorter drill with thick web to improper sturdiness
5	Breaking of the drill	1. Poor rigidity of fixture. 2. Improper speed and feed. 3. Insufficient chip removal 4. Excessive web-thickness	Use rigid fixture and chucks. Select speed and feed as per job. Remove the chips frequently Web thinning & proper point grinding.
6	Breakage in deep hole	1. Blockage of chips 2. Non-uniform back-taper 3. Runout on OD	Try wood-pecking system. Check back taper uniformity Check concentricity
7	Rubbing	1. Improper Point relief 2. Non-uniform back taper	Regrind drill-point with proper relief. Check for negative back-taper on body.
8	Burning Land washes off	1. Insufficient coolant flow. 2. Inappropriate coolant 3. Hard work-piece	Ensure proper coolant flow Use proper coolant recommended. Select the right drill suitable for job.
9	Splitting of drills	1. Axial play in spindle 2. Springy clamping of job 3. Excessive feed	Correct the spindle play. Ensure rigid clamping. Reduce the feed.
10	Tang breakage	1. Slipping chuck 2. Defect in inner surface of morse taper	Modify the inner surface of the holder or change the holder.

TROUBLE SHOOTING (TAPS)

	PROBLEM	CAUSES	REMEDIES
1	Tap breakage	1. Incorrect tap 2. Incorrect chamfer symmetry 3. Small hole 4. Hits at bottom of hole 5. Tool hardness, geometry 6. Blunt tap	- Choose suitable type tap - Ensure proper centre align - Select proper hole size - Use slipping clutch / shorten - Check the hardness of job - Regrind the tap
2	Poor tap life chipping / wear	1. Surface hardening of hole 2. Chip congestion 3. Thread surface 4. Ineffective coolant supply 5. High cutting speed 6. Smaller hole size 7. Cold welding/irregular job micro	- Work hardening material, Lower speed - Check speed. Use alternate type - Ensure proper geometry - Improper the efficiency of coolant - Lower the existing speed - Refer the chart for correct hole size - Improper lubrication & speed
3	Larger Thread (Oversize cutting)	1. Incorrect type of tap 2. Smaller hole size 3. Improper alignment 4. Spindle restriction 5. Built up edges 6. High speed	- Use specified tap for application - Use the recommended hole size - Check the alignment & eccentricity - Check the spindle condition / run out - Improper lubrication - Lower the speed
4	Smaller thread (undersize cutting)	1. Incorrect tap selection 2. Inaccurate setup 3. Rigid spindle 4. Tolerance	- Check the correctness of tap used - Recheck the alignment - Ensure spindle movement smooth - Ensure geometrical tolerances
5	Bell mouth Hole	1. Incorrect starting pressure	- Use a spindle with axial float
6	Unsatisfactory finish (Poor finish)	1. Blunt tap 2. Badly reground 3. Coolant improper quality / qty.	- Resharpen the tap. - Grind properly. - Use ample supply of right lubricant



ENHANCEMENT (METALLURGICAL)

SURFACE TREATMENTS :

STEAM TEMPERING : Gives a strongly adhering blue oxide surface that acts to retain cutting fluid and prevent chips welding to cutting edges. More effective on drills and taps.

NITRIDING : This process can increase the surface wear resistance. Particularly useful on taps and drills used on abrasive material like cast iron and backlite.

SURFACE COATING :

TiN - TITANIUM NITRIDE : (GOLDEN COLOUR) :

Ceramic coating applied by physical vapour deposition (PVD) gives high hardness and low friction properties, improve the performance and considerably longer life to HSS tools. Mainly for drills and taps.
Hardness : 2300 HV.

TiAlN - TITANIUM ALUMINIUM NITRIDE : (VIOLET COLOUR)

Multi-layer PVD coating improves tool life substantially. Higher toughness and oxidation stability permits dry machining, Ideal for drills and taps used at higher speeds and feeds. (hardness : 3300 HV)

TiCN - TITANIUM CARBO-NITRIDE : (BLUISH GREY)

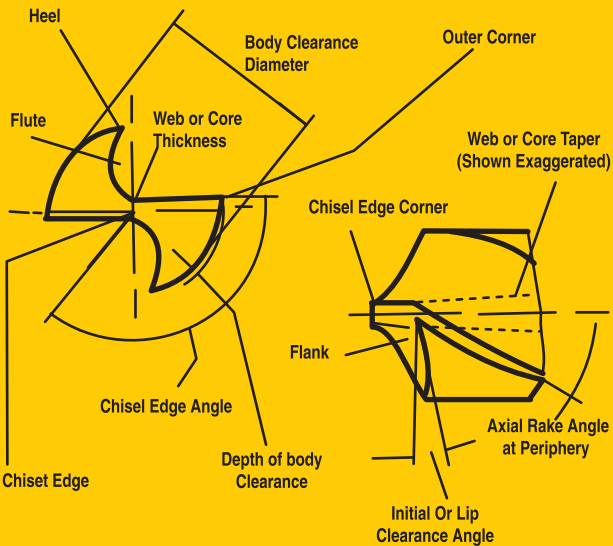
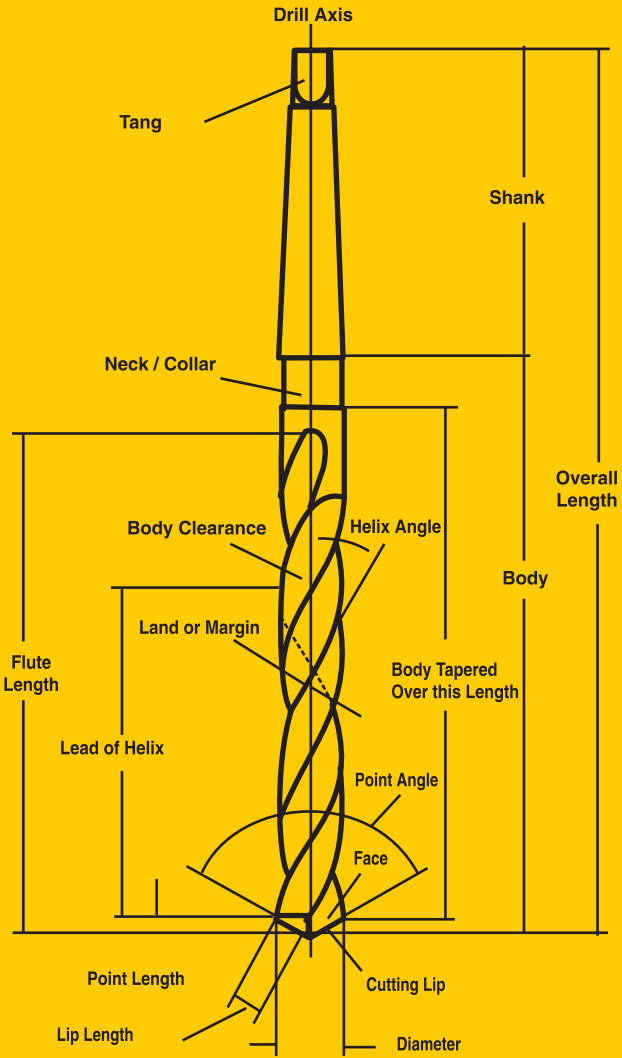
This coating is harder than TiN with lower coefficient of friction. Ideal for milling cutters. (hardness : 3000 HV) (other coatings : Titanium Diboride-TiB₂, Chromium nitride-CrN, Zirconium nitride-ZrN, Diamond like coat-DLC, Tungsten carbide - WC/C, Aluminium chromium nitride-AlCrN, Diamond coating - crystalline & multi layers)

THERMAL TREATMENTS :

CRYOGENIC TEMPERING : Sub zero treatment of tools at very low temperatures (-190°C) using liquid nitrogen, enhances the properties in micro levels. This considerably improves the endurance and performance of tool

CHOICE OF HSS GRADES :

M2 -Molybdenum grade - Popular for all general purpose-%6W:5Mo:2V (6:5:2)
M35 -5% Cobalt grade - For tougher application & RED hardness - %6W:5Mo:2V:5Co (6:5:2:5)
M42 -8% Cobalt grade - Better than M35 -%2W:10Mo:1V : 8Co (2:10:1:8)
T42 -10% Cobalt grade - For Tool Bits -%10W:4Mo:3V 10Co (10:4:3:10)
(*Only popular grades addressed here)



NOMENCLATURE OF TAPER SHANK DRILL

DAGGER BRAND[®]



SINCE -1937

Birla Precision Technologies Ltd.

**INDIAN TOOL
MANUFACTURERS
(DIVISION)**

QUALITY POLICY

We at ITM are committed to manufacture Quality Cutting Tools by continual improvements in process, by adapting our skills, knowledge, innovation & creativity and by implementation of quality systems through involvement of all the employees.

We shall strive to achieve Customers' satisfaction through continual improvements in

"TIMELY DELIVERY OF QUALITY PRODUCTS AND SERVICES."

VEDANT BIRLA

(Chairman & Managing Director)

Dealer