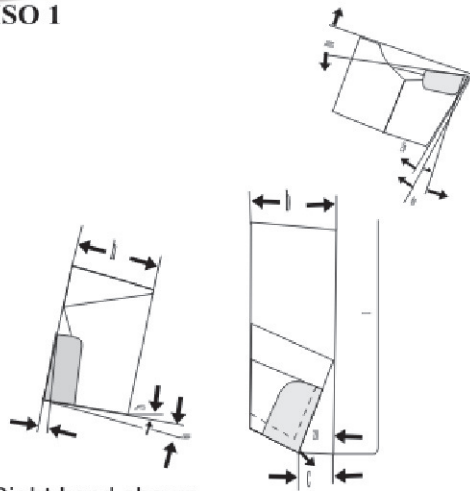


Tungsten Carbide Tipped Tools CTT



110 Bar Turning Tool

ISO 1

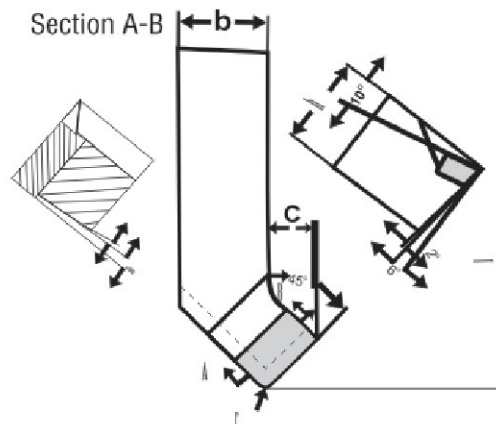


Right hand shown

Shank Section	Tool No.	h mm	b mm	c mm	i mm	Tip	
						RH	LH
	110-1010	10	10	4	90	A 8	B 8
	110-1212	12	12	5	100	A 10	B 10
	110-1616	16	16	6	110	A 12	B 12
	110-2020	20	20	8	125	A 16	B 16
	110-2525	25	25	10	140	A 20	B 20
	110-3232	32	32	12	170	A 25	B 25
	110-4040	40	40	16	200	A 32	B 32
110-1610	16	10	4	110	A 10	B 10	
110-2012	20	12	5	125	A 12	B 12	
110-2516	25	16	6	140	A 16	B 16	
110-3220	32	20	8	170	A 20	B 20	
110-4025	40	25	10	200	A 25	B 25	

ISO 2

111 CRANKED TURNING AND FACING TOOL

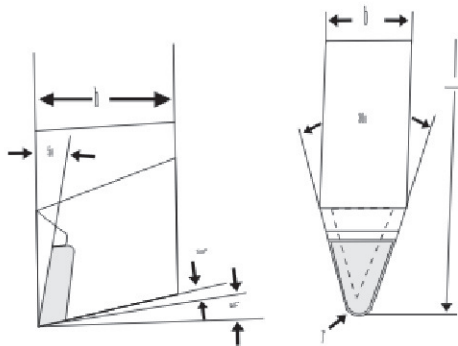


Right hand shown

Shank Section	Tool No.	h mm	b mm	l mm	C mm	Tip
	111-1010	10	10	90	6	C 8
	111-1212	12	12	100	7	C 10
	111-1616	16	16	110	8	C 12
	111-2020	20	20	125	10	C 16
	111-2525	25	25	140	12	C 20
	111-3232	32	32	170	14	C 25
	111-4040	40	40	200	18	C 32
	111-1610	16	10	110	7	C 10
	111-2012	20	12	125	8	C 12
	111-2516	25	16	140	10	C 16
	111-3220	32	20	170	12	C 20
111-4025	40	25	200	14	C 25	

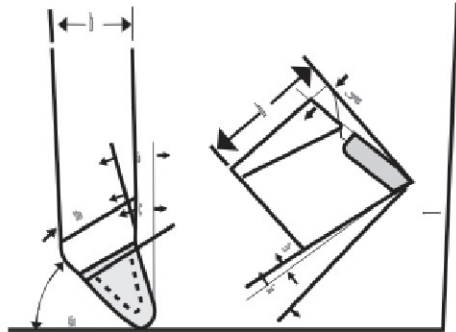
ISO 3

113 Straight Round Nose Turning Tool




Shank Section	Tool No.	h mm	b mm	l mm	r mm	Tip
	113-1010	10	10	90	1.0	G 8
	113-1212	12	12	100	1.5	G 10
	113-1616	16	16	110	2.5	G 12
	113-2020	20	20	125	3.5	G 16
	113-2525	25	25	140	4.5	G 20
	113-3232	32	32	170	6.0	G 25
	110-1610	16	10	110	1.0	G 8
	110-2012	20	12	125	1.5	G 10
	110-2516	25	16	140	2.5	G 12
	110-3220	32	20	170	3.5	G 16
	110-4025	40	25	200	4.5	G 20

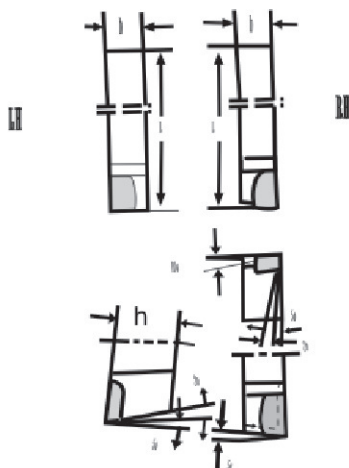
115 Cranked Round Nose Turning Tool




Right hand shown

Shank Section	Tool No.	h mm	b mm	l mm	c mm	r mm	Tip
	115-1010	10	10	90	3.0	1.0	G 8
	115-1212	12	12	100	3.5	1.5	G 10
	115-1616	16	16	110	4.5	2.5	G 12
	115-2020	20	20	125	5.0	3.5	G 16
	115-2525	25	25	140	5.5	4.5	G 20
	115-3232	32	32	170	6.5	6.0	G 25
	115-1610	16	10	110	3.0	A 10	G 8
	115-2012	20	12	125	3.5	A 12	G 10
	115-2516	25	16	140	4.5	A 16	G 12
	115-3220	32	20	170	5.0	A 20	G 16
	115-4025	40	25	200	5.5	A 25	G 20

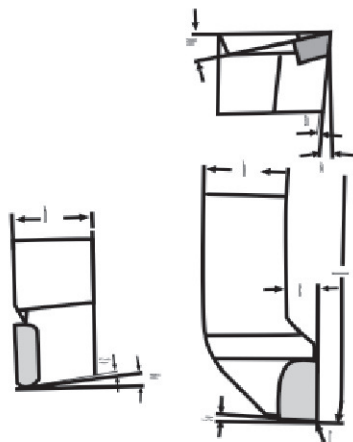
116 BAR TURNING TOOL




Shank Section	Tool No.	h mm	b mm	l mm	Tip	
					RH	LH
	116-1010	10	10	90	A 8	B 8
	116-1212	12	12	100	A 10	B 10
	116-1616	16	16	110	A 12	B 12
	116-2020	20	20	125	A 16	B 16
	116-2525	25	25	140	A 20	B 20
	116-3232	32	32	170	A 25	B 25
	110-1610	16	10	110	A 10	B 10
	110-2012	20	12	125	A 12	B 12
	110-2516	25	16	140	A 16	B 16
	110-3220	32	20	170	A 20	B 20
	110-4025	40	25	200	A 25	B 25

117 CRANKED KNIFE TOOL

ISO 6

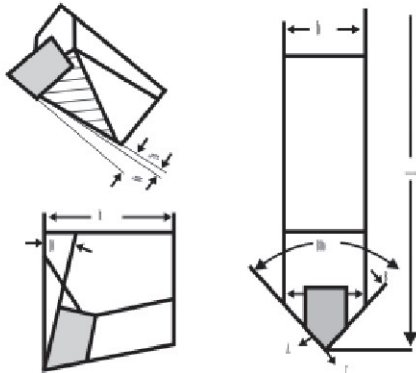



Right hand shown

Shank Section	Tool No.	h mm	b mm	l mm	c mm	Tip	
						RH	LH
	117-1010	10	10	90	4	A 8	B 8
	117-1212	12	12	100	5	A 10	B 10
	117-1616	16	16	110	6	A 12	B 12
	117-2020	20	20	125	8	A 16	B 16
	117-2525	25	25	140	10	A 20	B 20
	117-3232	32	32	170	12	A 25	B 25
	117-4040	40	40	200	14	A 32	B 32
	110-1610	16	10	110	5	A 10	B 10
	110-2012	20	12	125	6	A 12	B 12
	110-2516	25	16	140	8	A 16	B 16
	110-3220	32	20	170	10	A 20	B 20
110-4025	40	25	200	12	A 25	B 25	

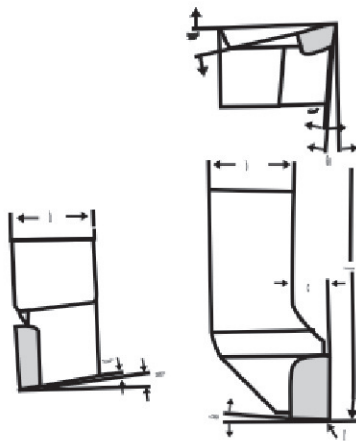
122 STRAIGHT FINISHING Tool

IND 1 Section A-B




Shank Section	Tool No.	h mm	b mm	l mm	Tip
	IND-1-1010	10	10	90	E 5
	IND-1-1212	12	12	100	E 6
	IND-1-1616	16	16	110	E 8
	IND-1-2020	20	20	125	E 10
	IND-1-2525	25	25	140	E 12
	IND-1-3232	32	32	170	E 16
	IND-1-1610	16	10	110	E 5
	IND-1-2012	20	12	125	E 6
	IND-1-2516	25	16	140	E 8
	IND-1-3220	32	20	170	E 10
IND-1-4025	40	25	200	E 12	

ISO 3

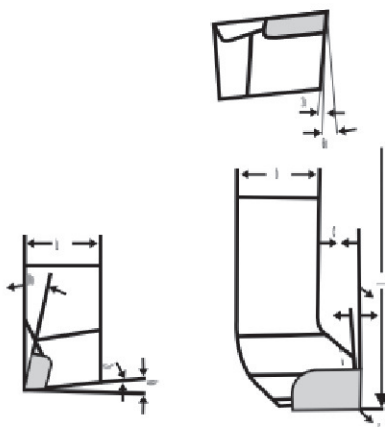


123 CRANKED FINISHING TOOL


Shank Section	Tool No.	h mm	b mm	c mm	l mm	Tip	
						RH	LH
	123-1010	10	10	4	90	A 08	B 08
	123-1212	12	12	6	100	A 10	B 10
	123-1616	16	16	8	110	A 12	B 12
	123-2020	20	20	10	125	A 16	B 16
	123-2525	25	25	12	140	A 20	B 20
	123-3232	32	32	14	170	A 25	B 25
	123-1610	16	10	5	110	A 10	B 10
	123-2012	20	12	6	125	A 12	B 12
	123-2516	25	16	8	140	A 16	B 16
	123-3220	32	20	10	170	A 20	B 20
123-4025	40	25	12	200	A 25	B 25	

Right hand shown

ISO 5



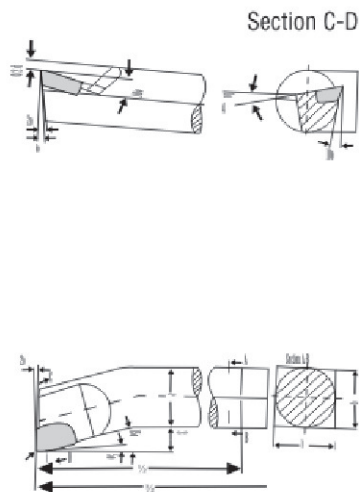
126 CRANKED FACING TOOL


Shank Section	Tool No.	h mm	b mm	l mm	c mm	Tip	
						RH	LH
	126-1010	10	10	90	5	B 8	A 8
	126-1212	12	12	100	6	B 10	A 10
	126-1616	16	16	110	8	B 12	A 12
	126-2020	20	20	125	10	B 16	A 16
	126-2525	25	25	140	12	B 20	A 20
	126-3232	32	32	170	16	B 25	A 25
	126-1610	16	10	110	6	B 10	A 10
	126-2012	20	12	125	8	B 12	A 12
	126-2516	25	16	140	10	B 16	A 16
	126-3220	32	20	170	12	B 20	A 20
126-4025	40	25	200	16	B 25	A 25	

Right hand shown

135 - 136 BORING AND FACING TOOL

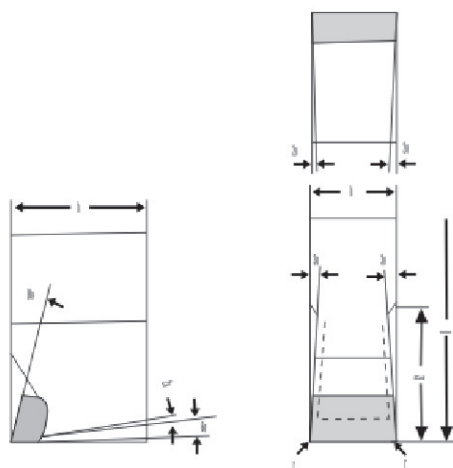
ISO - 9




Shank Section	Tool No.	h mm	b mm	d mm	c mm	l1 mm	l2 mm	Smallest bore size mm	Tip
	135-0808	8	8	8	3	125	40	1A	A 5
	135-1010	10	10	10	4	150	50	18	A 6
	135-1212	12	12	12	5	180	63	21	A 8
	135-1616	16	16	16	6	210	80	27	A 10
	135-2020	20	20	20	8	250	100	34	A 12
	135-2525	25	25	25	10	300	125	43	A 16
	135-3232	32	32	32	12	355	160	52	A 20
							h1		
	136-8	-	-	8	3	125	7.5	14	A 5
	136-10	-	-	10	4	150	9.5	18	A 6
	136-12	-	-	12	5	180	11.5	21	A 8
	136-16	-	-	16	6	210	13.5	27	A 10
	136-20	-	-	20	8	250	19.5	34	A 12
136-25	-	-	25	10	300	24.5	43	A 16	
136-32	-	-	32	12	355	31.5	52	A 20	

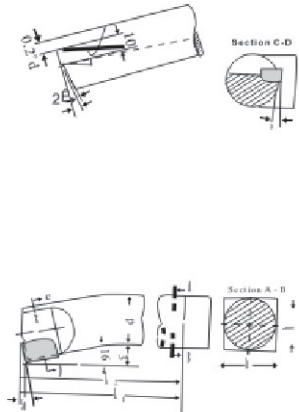
ISO 4



127 RECESSING TOOL

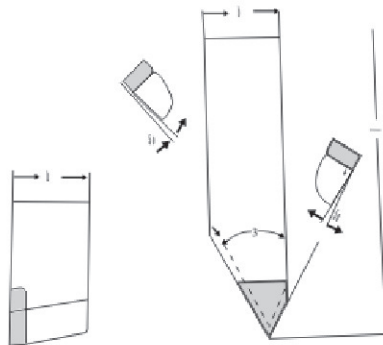



Shank Section	Tool No.	h mm	b mm	l mm	C mm	Tip
	127-1010	10	10	90	10	C 10
	127-1212	12	12	100	12	C 12
	127-1616	16	16	110	16	C 16
	127-2020	20	20	125	20	C 20
	127-2525	25	25	140	25	C 25
	127-3232	32	32	170	32	C 32
	127-1610	16	10	110	16	C 10
	127-2012	20	12	125	20	C 12
	127-2516	25	16	140	25	C 16
	127-3220	32	20	170	32	C 20
	127-4025	40	25	200	40	C 25

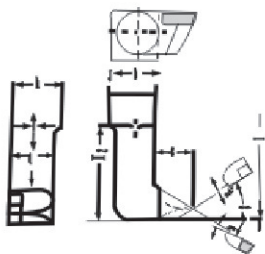
ISO -8


130-131 BORING TOOL


Shank Section	Tool No.	h mm	b mm	d mm	C mm	l1 mm	l2 mm	Smallest bore size mm	Tip
	130-0808	8	8	8	3	125	40	14	A 5
	130-1010	10	10	10	4	150	50	18	A 6
	130-1212	12	12	12	5	180	63	21	A 8
	130-1616	16	16	16	6	210	80	27	A 10
	130-2020	20	20	20	8	250	100	34	A 12
	130-2525	25	25	25	10	300	125	43	A 16
	130-3232	32	32	32	12	355	160	52	A 20
	131-8	-	-	8	3	125	7.5	14	A 5
	131-10-	-	10	4	150	9.5	18	A 6	
	131-12-	-	12	5	180	11.5	21	A 8	
	131-16-	-	16	6	210	13.5	27	A 10	
	131-20-	-	20	8	250	19.5	34	A 12	
	131-25-	-	25	10	300	24.5	43	A 16	
	131-32-	-	32	12	355	31.5	52	A 20	

165 STRAIGHT THREADING TOOL


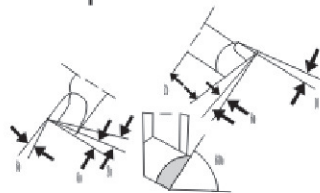
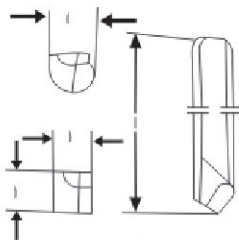
Shank Section	Tool No.	h mm	b mm	l mm	Tip
	165-1010	10	10	90	E 4
	165-1212	12	12	100	E 5
	165-1616	16	16	110	E 6
	165-2020	20	20	125	E 8
	165-2525	25	25	140	E 10
	165-3232	32	32	170	E 12
	165-1610	16	10	110	E 5
	165-2012	20	12	125	E 6
	165-2516	25	16	140	E 8
	165-3220	32	20	170	E 10
	165-4025	40	25	200	E 12

166 INTERNAL THREADING TOOL


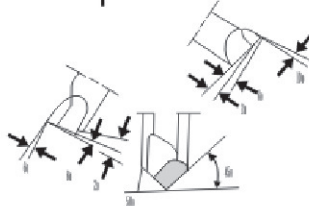
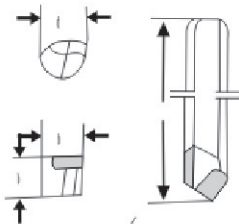
Shank Section	Tool No.	h mm	b mm	d mm	C mm	l1 mm	l2 mm	Smallest bore size mm	Tip
	166-1010	10	10	9	12	100	30	24	E 4
	166-1212	12	12	11	14	110	35	30	E 5
	166-1616	16	16	15	16	140	45	36	E 6
	166-2020	20	20	18	18	160	55	45	E 8
	166-2525	25	25	22	20	200	65	55	E 10
	166-3232	32	32	28	25	250	75	70	E 12

140-142 BORING TOOL

H0 Type



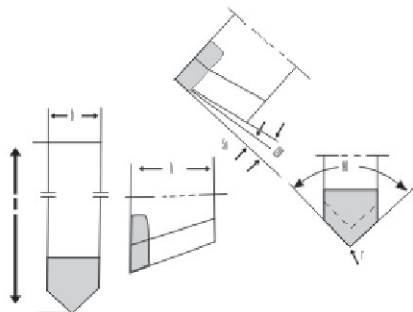
H2 Type



SHANK TOLERANCES $b = h \pm 11$
 $d = h \pm 8$

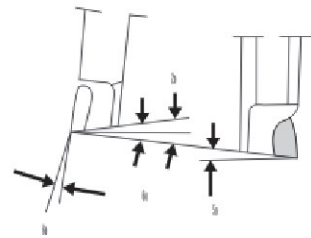
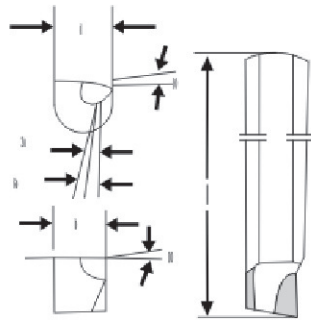
Shank	Tool No.	b/d		h		Tip	
		mm	inch	mm	inch	RH	LH
	141-0006	6		18	5.5	A 6	B 6
	141-0008	8		24	7.5	A 6	B 6
	141-0010	10		50	8.5	A 8	B 8
	141-0012	12		60	10.5	A 10	B 10
	141-0016	16		90	14.0	A 12	B 12
	141-0020	20		120	17.0	A 16	B 16
	141-0025	25		175	22.0	A 20	B 20
	141-0606	6		18		A 6	B 6
	141-0808	8		24		A 6	B 6
	141-1010	10		50		A 8	B 8
	141-1212	12		60		A 10	B 10
	141-1616	16		90		A 12	B 12
	141-2020	20		120		A 16	B 16
	141-2525	25		175		A 20	B 20
	E.141. 3/8"	3/8"		50	21/64"	A 8	B 8
	E.141. 1/2"	1/2"		60	27/64"	A 10	B10
	E.141. 5/8"	5/8"		90	35/64"	A 12	B 12
	E.141. 3/4"	3/4"		120	43/64"	A 16	B 16
	E.141. 1.0"	1.0"		175	7/8"	A 20	B 20
	E.141. 3/8"	3/8"		50		A 8	B 8
	E.141. 1/2"	1/2"		60		A 10	B 10
	E.141. 5/8"	5/8"		90		A 12	B 10
	E.141. 3/4"	3/4"		120		A 16	B 12
	E.141. 1.0"	1.0"		175		A 20	B 20

163 STRAIGHT TURNING TOOL & GROOVING TOOL



Shank Section	Tool No.	h mm	b mm	l mm	Tip
	163-1010	10	10	90	F 10
	163-1212	12	12	100	F 12
	163-1616	16	16	110	F 16
	163-2020	20	20	125	F 20
	163-2525	25	25	140	F 25
	163-3232	32	32	170	F 32
	163-1610	16	10	110	F 10
	160-2012	20	12	125	F12
	163-2516	25	16	140	F 16
	163-3220	32	20	170	F 20

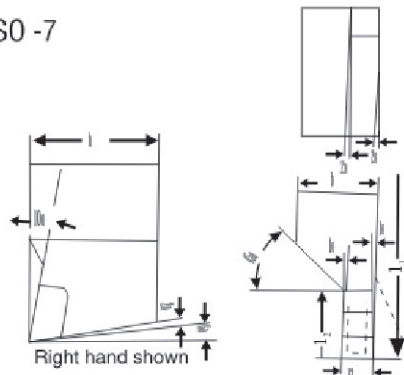
141 BORING TOOL



Right hand shown
 SHANK TOLERANCES
 B=h 11
 D=h 8

Shank	Tool No.	b/d mm/inch	l mm	h mm/inch	Tip	
					RH	LH
	141-0006	6	18	5.5	A 6	B 6
	141-0008	8	24	7.5	A 6	B 6
	141-0010	10	50	8.5	A 8	B 8
	141-0012	12	60	10.5	A 10	B 10
	141-0016	16	90	14.0	A 12	B 12
	141-0020	20	120	17.0	A 16	B 16
	141-0025	25	175	22.0	A 20	B 20
	141-0606	6	18		A 6	B 6
	141-0808	8	24		A 6	B 6
	141-1010	10	50		A 8	B 8
	141-1212	12	60		A 10	B 10
	141-1616	16	90		A 12	B 12
	141-2020	20	120		A 16	B 16
	141-2525	25	175		A 20	B 20
	E.141. 3/8"	3/8"	50	21/64"	A 8	B 8
	E.141. 1/2"	1/2"	60	27/64"	A 10	B 10
	E.141. 5/8"	5/8"	90	35/64"	A 12	B 12
	E.141. 3/4"	3/4"	120	43/64"	A 16	B 16
	E.141. 1.0"	1.0"	175	7/8"	A 20	B 20
	E.141. 3/8"	3/8"	50		A 8	B 8
	E.141. 1/2"	1/2"	60		A 10	B 10
	E.141. 5/8"	5/8"	90		A 12	B 12
	E.141. 3/4"	3/4"	120		A 16	B 16
	E.141. 1.0"	1.0"	175		A 20	B 20

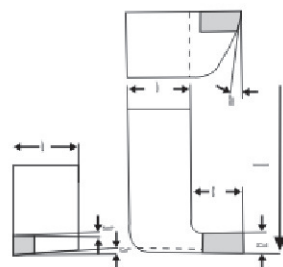
ISO -7



150 PARTING TOOL

Shank	Tool No.	h	b	l1	l2	l3	Tip
		mm	mm	mm	mm	mm	
	150-1006	10	6	90	10	3	D 3
	150-1208	12	8	100	12	3	D 3
	150-1610	16	10	110	14	4	D 4
	150-2012	20	12	125	16	5	D 5
	150-2516	25	16	140	20	6	D 6
	150-3220	32	20	170	25	8	D 8
	150-4025	40	25	200	32	10	D 10



156 CRANKED INTERNAL RECESSING TOOL



Right hand shown

Shank	Tool No.	h	b	c	l1	l2	Smallest bore size mm	Tip
		mm	mm	mm	mm	mm		
	156-1010	10	10	9	100	3	25	D 3
	156-1212	12	12	11	110	4	30	D 4
	156-1616	16	16	14	140	5	40	D 5
	156-2020	20	20	18	160	6	50	D 6
	156-2525	25	25	20	200	8	60	D 8
	156-3232	32	32	28	250	10	85	D 10
	156-4040	40	40	30	315	12	100	D 12

Indian Standard Application of Carbides for Machining, Ranges of application and Colour Code

Identification Colour	Designation	Material to be Machined
	P10	<p>Material to be Machined Steel, steel casting Machining Conditions Turning Threading and Milling-High cutting speed</p>
	P20	<p>Material to be Machined Steel, steel casting, Malleable cast iron forming long chips Machining & Milling-Medium cutting speed and medium chip section, Planing with small chip section</p>
	P30	<p>Material to be Machined Steel, steel casting, Malleable cast iron forming long chips Machining Conditions Turning, Milling & Planing-Medium or low cutting speed, medium or large chip section and machining under unfavourable conditions such as heat erogenous material, changing hardness or chip section, intermittent turning or subject to vibrations.</p>
	P40	<p>Material to be Machined Steel, steel Casting, with sand inclusions or shrinkage cavities Machining Conditions Turning, Planing of using large rake angle; for machining under unfavourable conditions, such as heat erogenous materials, changing hardness or chip sections, intermittent turning or subject to vibrations; and work on automatic machines.</p>
	K10	<p>Material to be Machined Grey cast iron of hardness more than 220 HB, Malleable cast iron forming short chips, Tempered steel, Aluminium alloys containing sillicon, copper alloys, plastics, glass, hard rubber, hard carboard, porcelain, stone.</p> <p>Machining, Conditions Turning, Milling, Boring, Scraping</p>
	K20	<p>Material to be Machined Grey cast iron of hardness more than 220 HB, Non-ferrous metals, such as Copper, Brass, Aluminium, Laminated wood of abrasive type Machining, Conditions Turning, milling, planing, requiring high toughness.</p>

GUIDE TO MACHINING

Feed		0.1mm - 0.3mm	0.25mm-0.5mm	0.4mm - 1.0mm	above 0.80 mm	Working angles		
Depth of cut		1mm - 3mm	3mm - 6mm	6mm - 12mm	above 10 mm	Clearance	Side rake	
Material Designation	Brinell Hardness HB	<i>CUTTING SPEED IN M / MIN</i>				Angle (Degrees)	Angle (Degrees)	
Steel	Containing 0.25 - .035% C	up to 150	P10	P20 and P25	P20 and P30	P40	5-8	12-18
	Containing 0.35 - 0.45% C	150 - 200	220 - 110	170 - 80	110 - 60	70 - 30	5-8	12
	Containing 0.45 - 0.60% C	200 - 250	200 - 100	150 - 70	100 - 55	65 - 30	5-8	12
	Over 0.6% C	250 - 315	150 - 80	120 - 55	75 - 40	50 - 25	5-8	6
Alloy steel	315 - 400	P10	P10 and P20			5 - 8	6	
	above 400	M 10 and K 10				5 - 8	6	
Stainless Steel		P10 and M 10	P20	Cutting edge with high surface finish required (diamond lapping)				
Cast Steel	up to 150	P20 and P20	P 25	P 30	P 40	5-8	12	
	150 - 200	200 - 100	160 - 70	100 - 50	60 - 30	5-8	6 - 12	
	200 - 250	160 - 90	120 - 60	90 - 45	50 - 25	5-8	6 - 12	
	250 - 315	140 - 75	100 - 50	75 - 40	45 - 25	5-8	0	
Grey Iron	up to 170	K 10	K 10	P 30 and K 20		5-8	6 - 12	
	170 - 230	100 - 60	90 - 50	70 - 40		5-8	6 - 8	
	above 230	100 - 55	75 - 45	65 - 35		5-8	0 - 6	
		90 - 40	70 - 30	50 - 20				
Malleable iron, black - heart		P 20 and M 10	P 20 and P 10			5-8	6 - 12	
Malleable iron, White - heart		150 - 80	120 - 60			5-8	6 - 12	
Chilled iron	up to 80 Shore	K 10	Skin turning			6	0	
	above 80 Shore	K 10	(low cutting depth and high feed)			6	0	
Copper, Brass, Bronze		K 20	K 20			10	18 - 25	
Alluminium alloys	up to 80 - 120	500 - 400	400 - 310			80 - 10		
		400 - 300	300 - 250					
Alluminium alloys containing Si	above 120	K 10 and K 20	K 20			10	20 - 30	
		1000 - 600	800 - 500			10	12 - 20	
		800 - 500	600 - 300					
		K 10	K 10			10	12	
		200 - 150	150 - 80					

GRINDING CARBIDE TOOLS

INSTRUCTIONS

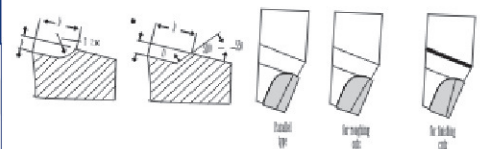
- (1) Use only true - running, properly dressed grinding wheels.
- (2) Wet grinding is preferable to dry. A copious and constant supply of coolant should be directed to the tip.
- (3) Always grind against the cutting edge. i.e. from tip to shank and never use, heavy pressure. The finish ground tip must neither shine nor show any discolouring.
- (4) Always use a gauge when grinding tool angles. The face of the chip breaker should also be ground true and square.
- (5) Never quench hot tools in water.
- (6) Check tool after grinding and before use.

TOOL GRINDING DATA

Grinding Operations		Grinding Wheel				Peripheral Speed m/sec.	Grinding Method
		Type	Abrasive	Grit	Grade of Bond		
Grinding shank base of new tools		Cup wheel or cylinder	Corundum	36...46	H...K	18 - 25	Machine
Grinding clearance on shank		Straight wheel	Corundum	36...46	M...N	18 - 25	Off hand
Rough grinding tip		Straight or cup wheel	Silicon carbide	36...46	L...K	12 - 20	Off hand
Finish grinding tip		Cup wheel	Silicon carbide	80...100	L...K	6 - 12	Machine
Grinding primary rake land			Diamond	D 100..D 70	Metal	12 - 18	Off hand
or Grinding chip breaker into tip		Straight or cup wheel	Silicon carbide	150...200	J...K	12 - 18	Off hand
Grinding clearance lands		Straight or cup wheel	Diamond	D 100..D 70	Plastic or Metal	12 - 18	Off hand
Fine grinding tip (for precision tools)		Cup wheel	Silicon carbide	100...200	K...M	12 - 18	Off hand
Honing Cutting edge*		Cup wheel	Diamond	D 100..D 70	Plastic or Metal	12 - 18	Off hand
		Cup wheel	Silicon carbide	180...220	J...K	12 - 18	Off hand
		Cup wheel	Diamond	D 50...D 30	Plastic or Metal	12 - 18	Off hand
		Cup wheel	Diamond	D 15..D 7	Plastic	12 - 18	Off hand
	Hand hone	Silicon or boron carbide	Not coarser than used for preceding grind	Commercial type	The form and extent of the chamfer honed on the machining conditions. It is essential to hone the cutting edge if the tool is to be used for roughing or interrupted cuts.		
	Diamond lap	Diamond					

Chip Breaker Dimensions

Tensile strength of work tons/sq.in	Wide (b) when using feeds (s) of		Depth mm
	under 0.5 mm	over 0.5 mm	
Up to 48	12x to 8xs	1mm + 6xs	0.6-0.8
From 48 to 63	10x to 7xs	1mm + 5xs	0.4+0.6
Over 63	9x to 6xs	1mm + 4xs	0.3+0.4



- (1) The larger multipliers apply to smaller feeds and vice versa.



MIRANDA TOOLS

DORMER TOOLS INDIA PVT. LTD.

WORKS AND HEAD OFFICE : 903 / 904, GIDC Industrial Estate, Ankleshwar - 393 002. Gujarat.

Tele : (02646) 221519, 252368, 239707 Fax : (02646) 251326

E-mail : marketing@mirandatools.net website : www.mirandatools.in

Customer Care No. (02646) - 227162

CORPORATE OFFICE

Dormer Tools India Pvt. Ltd.

308-B, Southern Park, Saket District Centre, New Delhi - 110 017, Ph : 011 46015686

BRANCH OFFICES

WEST

MUMBAI

502, Durga Niwas,
Near Dahisar Municipal Dispensary,
L T Road, Dahisar West, Mumbai - 400 068.
Mobile No. : +91 9323823471. Tel : 022 28900243
mumbai@mirandatools.net

PUNE

Flat No. 2, Sai Darshan Apartment,
TELECO Nagar, Stadium Road, Yashwant Nagar,
Pimpri, Pune - 411018
Cell No. : 09371223472/75 Tele/fax : 020-27423411
Pune@mirandatools.net

AHMEDABAD

Star Mansion, 1st Floor, Opp. Electricity House
Relief Road, Ahmedabad - 380 001.
Cell No. : 9328223476/77 Tele / Fax : 079-25507421
ahmedabad@mirandatools.net

NORTH

NEW DELHI

1/22-B, Asaf Ali Road, New Delhi - 110 002
Cell No. : 9350885015 / 9313023481
Tele / Fax : 011-23236319 delhi@mirandatools.net

FARIDABAD

2a/46A, N.I.T. Faridabad, Near Hardware Chowk,
Faridabad - 121 001 Cell : 09313993118 / 9350623483
Tele / Fax : 0129-2423126, faridabad@mirandatools.net

LUDHIANA

2160/1, GILL ROAD, LUDHIANA - 141 003
Cell No. : 09356706157 / 9317823485
Tele / Fax : 0161-2532028 ludhiana@mirandatools.net

EAST

KOLKATA

5-B, Narendrachandra, Dutta Sarani, Kolkata - 700 001.
Cell No. : 09331701000 / 9339703486
Tele / Fax : 033 22304115, kolkata@mirandatools.net

SOUTH

CHENNAI

No. 65, Prakasamsalai, "BBC Villa" 3rd Floor,
Flat No. 32, Broadway, Chennai - 600 001.
Cell No. : 09381223492 / 9381223490
Tele / Fax : 044-25383351
chennai@mirandatools.net

BANGALORE

No.24 1ind Floor, Kota Complex, J. C. Road,
Bangalore - 560002
Cell No. : 09343143494 / 9341323491
Tele / Fax : 080-22234045
bangalore@mirandatools.net

SECUNDERABAD

8-1-11/7, 2nd Floor, Market Street,
Secunderabad - 500 003
Cell No. : 09346210922 / 9393023494
Tele : 040-27713910
secunderabad@mirandatools.net

Authorised Dealer

