

Content

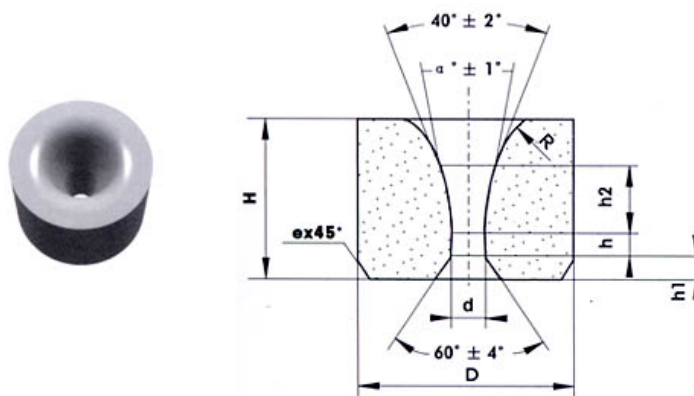
Carbide drawing dies nibs	1-4
Carbide punching and impacting dies	5
Carbide plates	6
Carbide bars	7
Carbide rods	8
Carbide disc	9
Blanks for carbide burrs	10
Carbide balls & seats	11
Carbide shims used with indexable inserts	12
Carbide saw tips	13
Carbide ceramic tile cutter	14-15
Brazed turning inserts	16-19
Carbide mining bits	20-21
Mining tools	22

Carbide drawing dies nibs

Grade	Density (g/cm ³)	Hardness (HRA)	TRS (MPa)	Applications recommended
YG6X	14.95	91.5	1800	For drawing steel and nonferrous wires or bars of less than $\varnothing$ 6.00mm under not so much stress.
YG6	14.95	90.5	1900	For drawing steel, nonferrous alloy bars of less than $\varnothing$ 20.00mm under more stress and also for drawing tubes of less than $\varnothing$ 10.00mm.
YG8	14.8	89.5	2200	For drawing steel and nonferrous bars and tubes, also for manufacturing mechanical parts, tools and wear parts.
YG10	14.5	88.5	2400	
YG15	14.0	87.0	2800	For drawing steel bars and tubes with a high reduction rate and for manufacturing anvils, drilling and punching and impacting.

Type S11

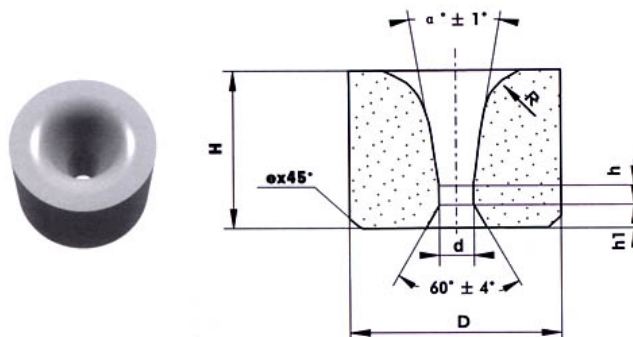
Carbide drawing die nibs with large reducing angles for drawing ferrous metal wires



Type	D	H	Range of d	h	α°
S11-	8	6	0.3-1.0	0.3-0.6	14°
	10	8	0.7	0.6	14°
	13	10	0.4-2.8	0.3-1.6	16°
	15	13	0.5-3.0	0.3-1.4	16°
	16	14	0.4-3.8	0.3-1.8	16°
	20	17	1.2-4.7	2.0-2.6	18°
	21	17	1.8-5.7	1.2-3.0	18°
	22	18	1.7-6.4	1.2-3.0	18°

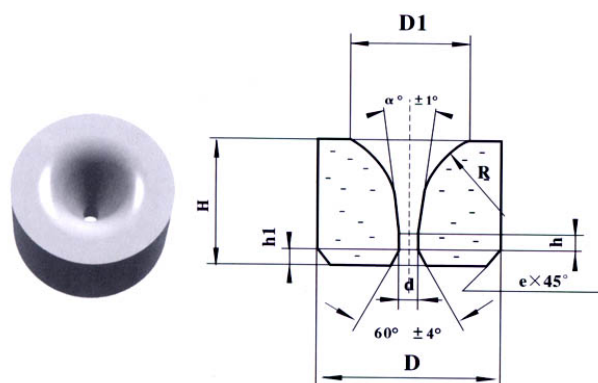
Type S13

Carbide drawing dies nibs with large reducing angles
for drawing ferrous and non-ferrous metal wires



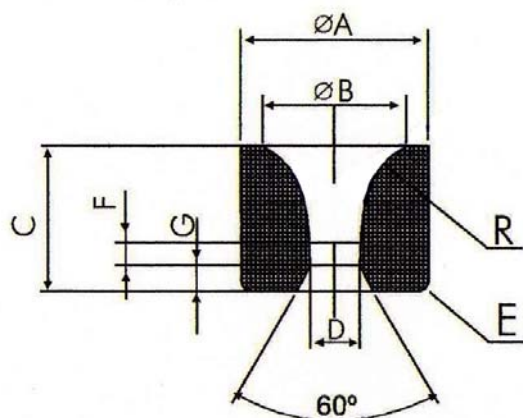
Type	D	H	d	h	α°
S13-	25	18	5.8	2.5	20°
	28	19	6.0-10.9	3-5	
	27	18	4.7-6.7	2.5	
	28	20	3.7-9.6	2.5	
	30	21	2.8-12.0	2.5-3.5	
	35	24	9.6-12.0	5	
	28	24	9.6-15.5	5	
	40	25	9.0-15.5	5	
	40	28	10.3	6	
	50	28	16.5-24.5	5.5-6	
	60	35	25.5-34.5	7	
	75	35	35.5-47.5	8	
	90	35	45-57	9-10	22°
	110	40	59-69	10-11	
	140	50	71-84	12	

Type W



Type	D	H	d	h	α°
W102-d	9	6	0.4-1.3	0.4-0.7	12°
W103-d	12	8	0.2-2.7	0.5-1.4	14°
W104-d	15	10	0.5-5.0	0.5-2.0	14°
W105-d	20	14	1.0-7.5	0.8-2.0	14°-16°
W106-d	25	18	5.3-8.0	1.9-2.2	16°
W107-d	30	22	2.9-11.7	2.2-3.6	16°
W108-d	35	25	6.0-16.0	2.5-4.8	16°
W109-d	40	27	10.3-16.5	3.2-4.6	18°
W110-d	50	30	14.4-19.4	4.4-4.8	18°
W111-d	60	35	18.5-27	4.8-5.6	18°
W112-d	70	40	24.5-31.5	5.4-6.0	18°

Type WTA



Type	A	B	C	D	E	F	G	R
WTA001	30.00	23.00	24.00	08.00	1.0×45*	04.00	04.00	10.00
WTA002	30.00	23.00	24.00	09.00	1.0×45*	04.00	04.00	10.00
WTA003	30.00	23.00	24.00	10.00	1.0×45*	04.00	04.00	10.00
WTA004	30.00	23.00	24.00	11.00	1.0×45*	04.00	04.00	10.00
WTA005	30.00	23.00	24.00	12.00	1.0×45*	04.00	04.00	10.00
WTA006	35.00	26.00	25.00	10.00	1.0×45*	04.00	04.00	12.00
WTA007	35.00	26.00	25.00	11.00	1.0×45*	04.00	04.00	12.00
WTA008	35.00	26.00	25.00	12.00	1.0×45*	04.00	04.00	12.00
WTA009	35.00	26.00	25.00	13.00	1.0×45*	04.00	04.00	12.00
WTA010	35.00	26.00	25.00	14.00	1.0×45*	04.00	04.00	12.00
WTA011	35.00	26.00	25.00	15.00	1.0×45*	04.00	04.00	12.00
WTA012	40.00	32.00	28.00	12.50	2.0×45*	06.00	05.00	12.00
WTA013	40.00	32.00	28.00	14.00	2.0×45*	06.00	05.00	12.00
WTA014	40.00	32.00	28.00	15.00	2.0×45*	06.00	05.00	12.00

WTA015	40.00	32.00	28.00	16.00	2.0×45*	06.00	05.00	12.00
WTA016	45.00	37.00	28.00	15.00	2.0×45*	06.00	05.00	12.00
WTA017	45.00	37.00	28.00	17.00	2.0×45*	06.00	05.00	12.00
WTA018	45.00	37.00	28.00	18.00	2.0×45*	06.00	05.00	12.00
WTA019	45.00	37.00	28.00	19.00	2.0×45*	06.00	05.00	12.00
WTA020	45.00	37.00	28.00	20.00	2.0×45*	06.00	05.00	12.00
WTA021	50.00	40.00	30.00	21.00	2.0×45*	06.00	05.00	12.00
WTA022	50.00	40.00	30.00	22.00	2.0×45*	06.00	05.00	12.00
WTA023	50.00	40.00	30.00	24.00	2.0×45*	06.00	05.00	12.00
WTA024	55.00	45.00	30.00	25.00	2.0×45*	06.00	05.00	12.00
WTA025	55.00	45.00	30.00	27.00	2.0×45*	06.00	05.00	12.00
WTA026	55.00	45.00	30.00	28.50	2.0×45*	06.00	05.00	12.00
WTA027	55.00	45.00	30.00	30.00	2.0×45*	06.00	05.00	12.00
WTA028	60.00	45.00	30.00	30.00	2.0×45*	06.00	05.00	12.00
WTA029	60.00	45.00	30.00	33.00	2.0×45*	06.00	05.00	12.00
WTA030	65.00	50.00	30.00	34.00	2.0×45*	06.00	05.00	12.00
WTA031	65.00	50.00	30.00	36.00	2.0×45*	06.00	05.00	12.00
WTA032	65.00	50.00	30.00	38.00	2.0×45*	06.00	05.00	12.00
WTA033	70.00	55.00	30.00	38.00	2.0×45*	06.00	05.00	12.00
WTA034	70.00	55.00	30.00	40.00	2.0×45*	06.00	05.00	12.00
WTA035	75.00	60.00	30.00	42.00	2.0×45*	06.00	05.00	12.00
WTA036	75.00	60.00	30.00	44.00	2.0×45*	06.00	05.00	12.00
WTA037	80.00	65.00	30.00	46.50	2.0×45*	06.00	05.00	12.00
WTA038	80.00	65.00	30.00	48.00	2.0×45*	06.00	05.00	12.00
WTA039	85.00	70.00	30.00	50.00	2.0×45*	06.00	05.00	12.00
WTA040	85.00	70.00	30.00	52.00	2.0×45*	06.00	05.00	12.00
WTA041	90.00	75.00	32.00	53.00	2.0×45*	07.00	05.00	12.00
WTA042	90.00	75.00	32.00	55.00	2.0×45*	07.00	05.00	12.00
WTA043	95.00	80.00	32.00	57.00	2.0×45*	07.00	05.00	12.00
WTA044	95.00	80.00	32.00	60.00	2.0×45*	07.00	05.00	12.00
WTA045	100.00	85.00	35.00	64.00	2.0×45*	07.00	05.00	12.00
WTA046	100.00	85.00	35.00	66.00	2.0×45*	07.00	05.00	12.00
WTA047	110.00	95.00	35.00	70.00	2.0×45*	07.00	05.00	12.00
WTA048	110.00	95.00	35.00	73.00	2.0×45*	07.00	05.00	12.00
WTA049	120.00	105.00	35.00	76.00	2.0×45*	07.00	05.00	12.00
WTA050	120.00	105.00	35.00	78.00	2.0×45*	07.00	05.00	12.00

All dimensions in (mm)

Note: We supply the drawing dies according to the drawing provided by customers.

Carbide punching and impacting dies

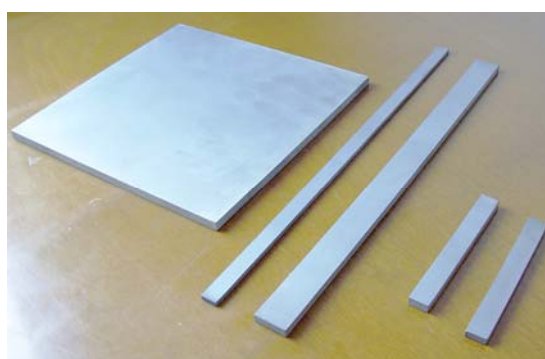
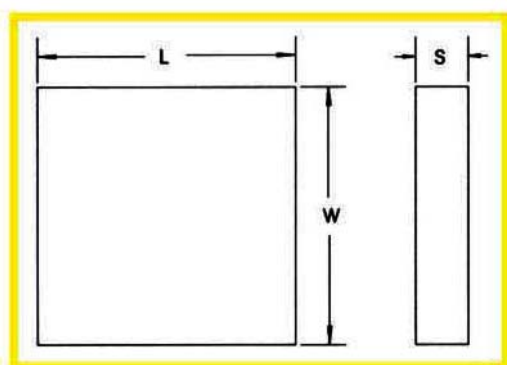


Grades	Density g/cm3	T.R.S MPa	Hardness HRA	Performance & application recommended
YG11	14.4	2600	88.5	Forming or stamping dies for metal powders and nonmetal powders.
YG15	14.0	2800	87.5	For fabricating drawing dies of steel tubes and rods under High compressibility ratio; punching、 stamping、 forging tools under large stress.
YG20	13.5	3200	85.5	For fabricating of stamping dies for watch parts, spring plates of musical instruments, battery jars, small sized steel balls, screws, screw caps.
YG16C	13.9	2900	85.5	Impact resistance forging dies.
YG18C	13.7	3100	84.5	Impact resistance forging dies, hot-press forging dies and rollers.
YG20C	13.5	3300	83.5	Dies for wear resistant or impact resistant application.
YG22C	13.3	3500	83.0	Nut forming dies and high impact resistance forging dies.
YG25C	13.1	3600	82.5	Stainless bolt header dies and rollers.

Note: We supply the cold forging dies according to the drawing provided by customers.

Carbide plates

Grade	Density g/cm ³	T.R.S MPa	Hardness HRA	Performance & application recommended
YG6A	14.95	1800	92.5	Fine grade alloy, with good wear resistance, used for processing blades, wear resistance parts etc.
YG8	14.80	2200	89.5	High bending strength, wear resistance lower than MK6A, used for processing blades, wear resistance parts etc.
YG15	14.0	2800	87.5	Used for punch dies, stamping dies and wear resistance parts.
YG20	13.5	3200	85.5	High bending strength, used for step dies and other stamping dies.



Note: We supply the carbide plates according to the customers' requirements.

Carbide bars

Grade	ISO Code	Cobalt Content	Density	Hardness	T.R.S
		(%)	g/cm3	HRA	MPa
K10T	K05-K10	4.5-6.0	14.95-15.05	92.7	1800
YG6X	K10	6	14.95	91.5	1800
YG6	K20	6	14.95	90.5	1900
YG8	K30	8	14.80	89.5	2200
YL10.2	K30	10	14.50	91.8	2400
YG13X	K30-K40	13	14.30	89.5	2600
YG15	K40	15	14.00	87.5	2800

Note: We supply the carbide bars according to the customers' requirements.

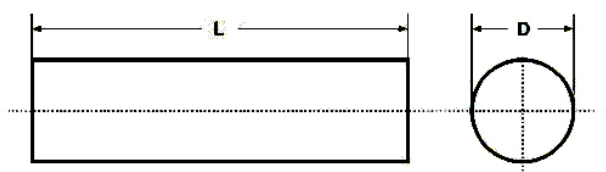
The table for STB sizes

TYPE	T (mm)	W (mm)	L (mm)
STB 12	0.8	1.6	25.4
STB 13	1.2	2.4	25.4
STB 13A	1.2	2.4	20.6
STB 24A	1.6	3.2	25.4
STB 24B	1.6	3.2	76.2
STB 24C	1.6	3.2	31.8
STB 26A	1.6	4.8	25.4
STB 26C	1.6	4.8	76.2
STB 28A	1.6	6.4	25.4
STB 28B	1.6	6.4	31.8
STB 28D	1.6	6.4	76.2
STB 14	2.0	3.2	28.6
STB 34	2.4	3.2	127.0
STB 36	2.4	4.8	28.6
STB 36A	2.4	4.8	31.8
STB 38A	2.4	6.4	25.4
STB 38B	2.4	6.4	38.1
STB 38D	2.4	6.4	127.0
STB 310A	2.4	7.9	50.8
STB 310B	2.4	7.9	76.2
STB 310C	2.4	7.9	127.0
STB 312	2.4	9.5	127.0
STB 46	3.2	4.8	152.4
STB 48A	3.2	6.4	25.4
STB 48B	3.2	6.4	31.8
STB 48C	3.2	6.4	57.2
STB 48D	3.2	6.4	76.2
STB 48E	3.2	6.4	152.4
STB 410	3.2	6.4	152.4

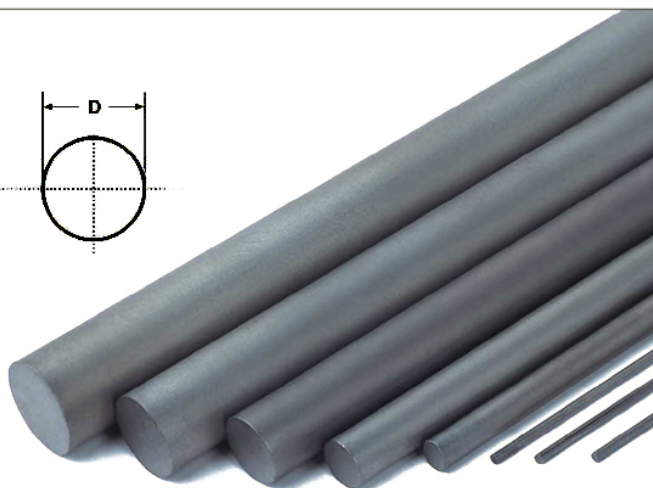
TYPE	T (mm)	W (mm)	L (mm)
STB 410A	3.2	7.9	38.1
STB 410B	3.2	7.9	76.2
STB 412A	3.2	9.5	50.8
STB 412B	3.2	9.5	76.2
STB 412C	3.2	9.5	152.4
STB 412D	3.2	9.5	25.4
STB 416	3.2	12.7	152.4
STB 416A	3.2	12.7	25.4
STB 416B	3.2	12.7	38.1
STB 416C	3.2	12.7	76.2
STB 420	3.2	15.9	152.4
STB 68	4.8	6.4	152.4
STB 68A	4.8	6.4	76.2
STB 610	4.8	7.9	152.4
STB 610A	4.8	7.9	76.2
STB 612	4.8	9.5	152.4
STB 612A	4.8	9.5	76.2
STB 616	4.8	12.7	152.4
STB 616A	4.8	12.7	76.2
STB 620	4.8	15.9	152.4
STB 620A	4.8	15.9	76.2
STB 812	6.4	9.5	152.4
STB 812A	6.4	9.5	76.2
STB 816	6.4	12.7	152.4
STB 816A	6.4	12.7	76.2
STB 820	6.4	15.9	152.4
STB 820A	6.4	15.9	76.2
STB 824	6.4	19.1	152.4
STB 824A	6.4	19.1	76.2

Carbide rods

Grade	ISO Code	Cobalt Content	Density	Hardness	T.R.S.
		(%)	g/cm ³	HRA	MPa
K10T	K05-K10	4.5-6.0	14.95-15.05	92.7	1800
YG6X	K10	6	14.95	91.5	1800
YG6	K20	6	14.95	90.5	1900
YG8	K30	8	14.80	89.5	2200
YL10.2	K30	10	14.50	91.8	2400
YG13X	K30-K40	13	14.30	89.5	2600
YG15	K40	15	14.00	87.5	2800

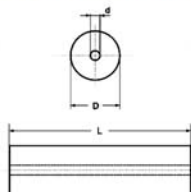


Carbide Rods



Produce all kinds unground carbide rods and milling cutting blanks ISO h6

Rods with central coolant hole



Rods with 2 straight coolant holes



Carbide disc

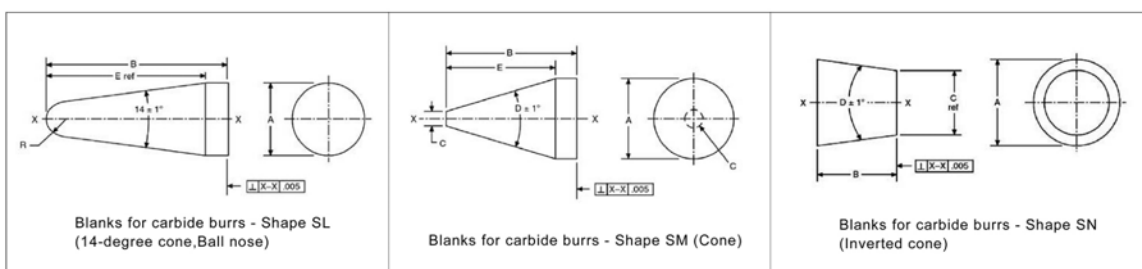
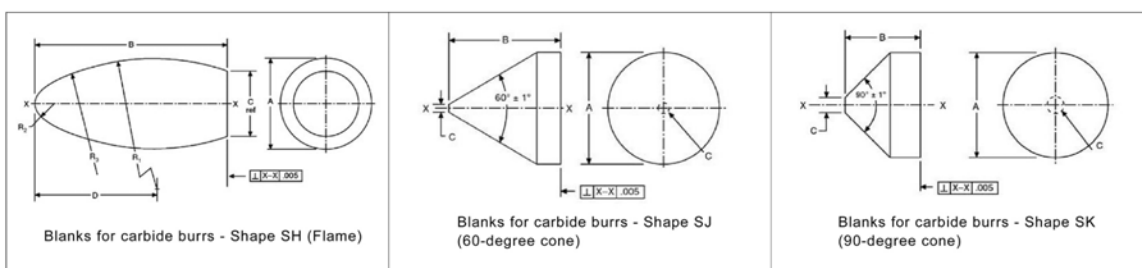
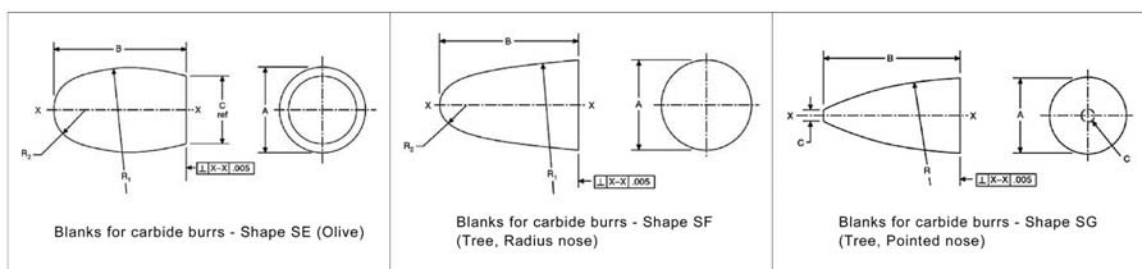
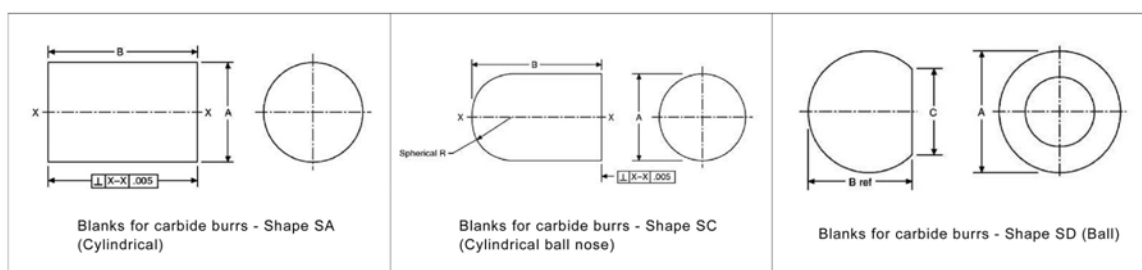


Grade	Density g/cm3	T.R.S MPa	Hardness HRA	Performance & application recommended
YG6A	14.95	1800	92.5	Fine grain alloy, good wear resistance. Semi-finishing of chilled cast iron, non-ferrous metals alloys, semi-finishing and finishing of hardened steel, alloy steel.
YG8	14.80	2200	89.5	High strength in use, impact and shock resistance higher than YG6, but wear resistance and cutting speed comparatively lower. Roughing of cast irons, non-ferrous metals and their alloys as well as non-metallic materials at low cutting speed.
YG10X	14.5	2400	91.5	Fine grain alloy, good wear resistance. Used for processing hard wood, veneer board, PCB, PVC and metals.
YL10.2	14.5	2400	91.8	Fine grade alloy, with high wear resistance, high bending strength, high resistance to bonding, high thermal strength. Machining of refractory alloys, stainless steel and high manganese steel, etc.
G20	14.3	2420	90.0	Conventional wear resistance, high bending strength, used for steel alloy etc.

Note: We supply the carbide disc according to the customers' requirements.

Blanks for carbide burrs

Grade	Density g/cm ³	T.R.S MPa	Hardness HRA
YG6	14.9	2100	90.5
YG6X	14.95	1800	91.5



Carbide balls & seats



Precision machined carbide balls and valve seats

- ◆ High strength, high wear resistance, high precision, high temperature resistant, corrosion resistant.
- ◆ They are mainly used for the sealing of valves of oil pumps in petroleum industry's sand containing wells, viscous oil wells, sea oil wells and high pressure sulfur resistant oil wells, etc.
- ◆ They are used with compatible cemented carbide valve seats.
- ◆ The surface finish, tolerance class and tolerances of dimensions have respectively reached the standards of the machine industry: G5, G10, G16, G40 and G100 of JB/T 9145-1999.
- ◆ Precision machined cemented carbide balls of other grades and specifications are also available based on customers' demands.
- ◆ Compatible high precision valve seats can also be made available.

Carbide grade

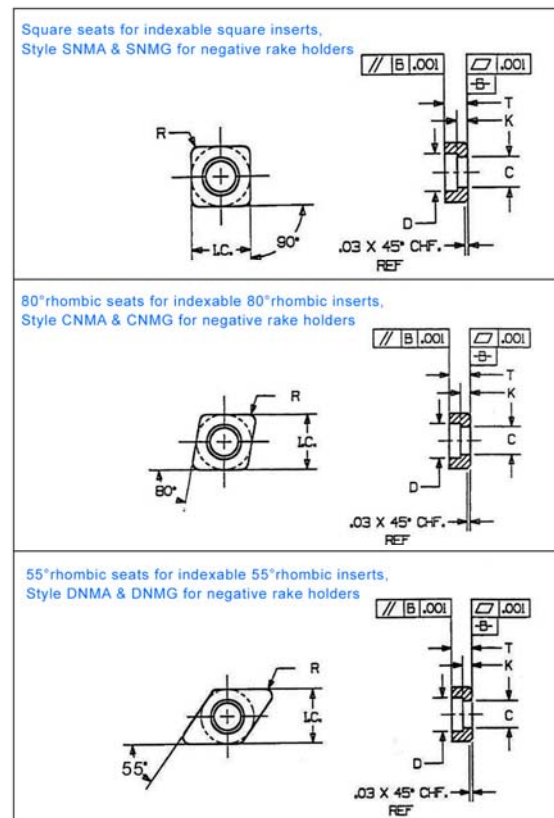
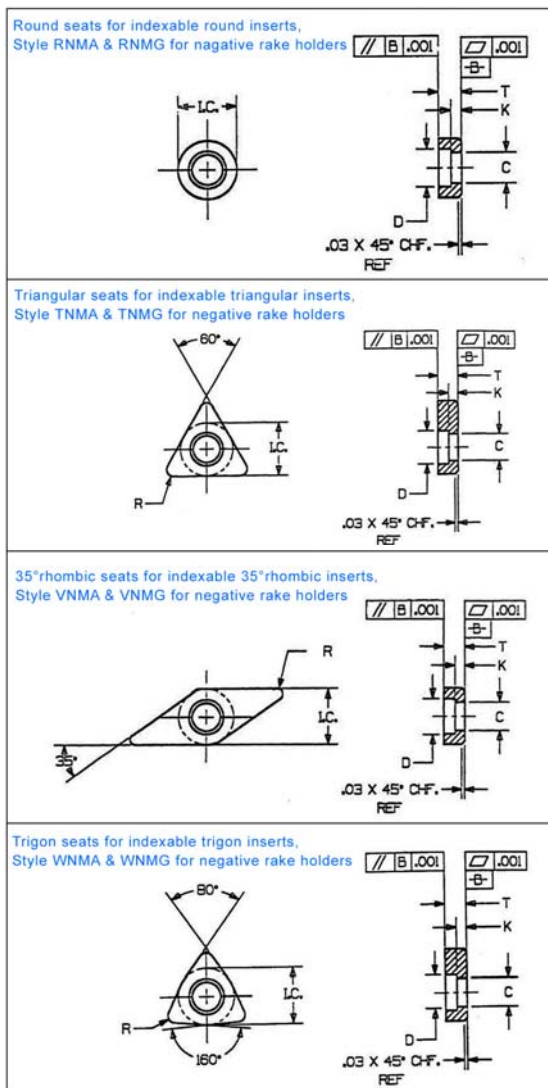
Grade	Density(g/cm ³)	Hardness(HRA≥)	TRS(MPa)
YG6X	14.95	91.5	1800
YG8	14.80	89.5	2200
YG11	14.40	87.0	2500

Many carbide grades can meet your requirements for precision machined cemented carbide balls in their good precision, good wear resistance and good corrosion resistance.

Type and specifications

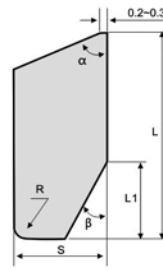
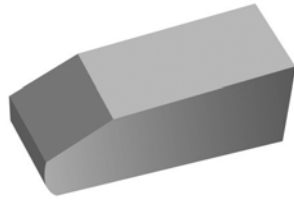
Dia. (D)	Inch	3/4	7/8	15/16	1	1 1/8	1 3/16
	mm	19.050	22.225	23.813	25.400	28.575	30.163
	Inch	1 1/4	1 3/8	1 1/2	1 5/8	1 11/16	1 3/4
	mm	31.750	34.925	38.100	41.275	42.863	44.450
	Inch		2	1 1/4		2 1/2	
	mm	50.000	50.800	57.150	60.000	63.500	

Carbide shims used with indexable inserts

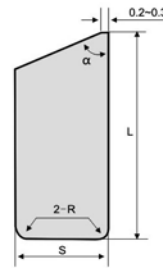


Carbide Saw Tips

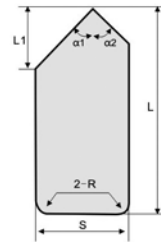
Series of JX saw tips



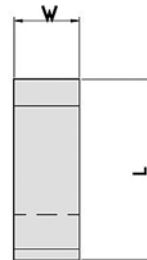
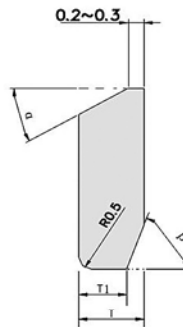
Series of JP saw tips



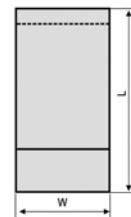
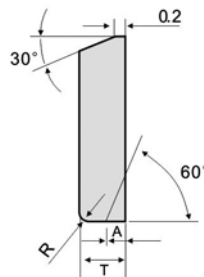
Series of JA saw tips



Saw tips of Europe standard



Saw tips of U.S.A standard

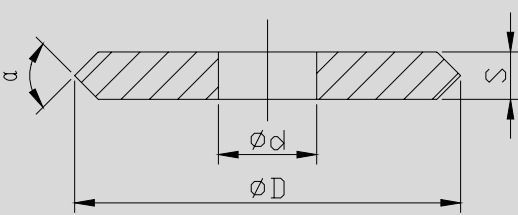


Note: We supply the carbide disc according to the customers' requirements.

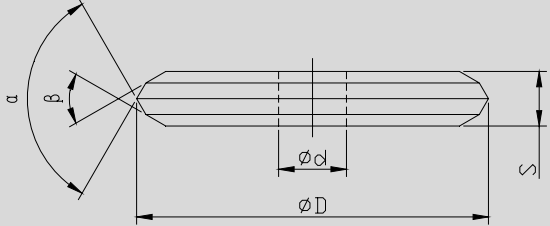
Carbide ceramic tile cutter



Grade	Cutting length (For common tile)	Density (g/cm ³)	Hardness (HRA)	T.R.S (MPa)
A01	500m	13.8-14.2	91.2	1700
A02	300m	11-11.3	91	1600
A03	100m	9-9.4	92	1200
A04	600m	14.6-15.1	91.5	1800



D (mm)	d (mm)	s (mm)	α
Φ22	Φ6	2	90°-120°
Φ22	Φ10.5	2	
Φ22	Φ15	2	
Φ20	Φ5	3	
Φ20	Φ14	5	
Φ18	Φ6	3	
Φ16	Φ6	4.9	
Φ16	Φ6	3	
Φ16	Φ6	2	
Φ16	Φ4	3	
Φ15	Φ6	2	
Φ15	Φ6	1.5	
Φ16	Φ6	1.5	
Φ14	Φ6	1.5	
Φ13.5	Φ6	1.5	
Φ13.5	Φ6	2	
Φ13.5	Φ6	1	
Φ12	Φ3	3	
Φ10	Φ4	3	
Φ8	Φ1.5	1	
Φ7	Φ1.9	1.2	
Φ6.4	Φ1.5	1.3	
Φ4.6	Φ1.3	1	
Φ3.5	Φ1	1	
Φ3.3	Φ1	1	

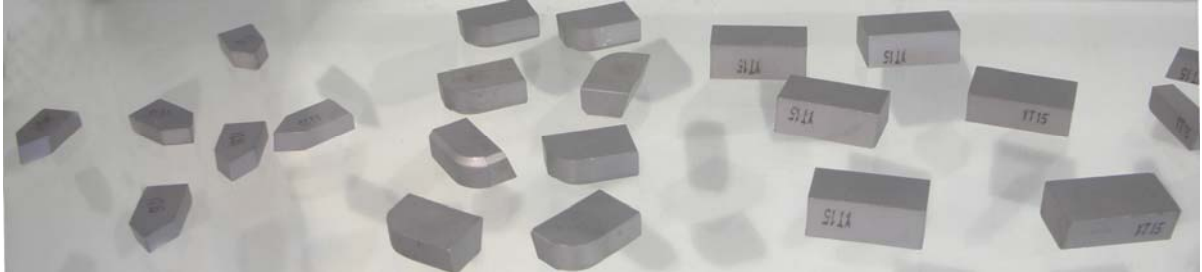


D (mm)	d (mm)	s (mm)	α、β
Φ22	Φ6	4.7	90°-120°
Φ18	Φ6	3.8	
Φ15	Φ6	2.9	

NOTE:

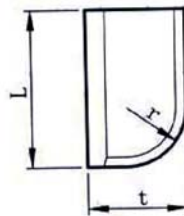
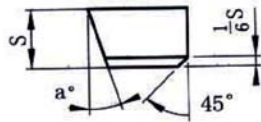
1. S, β, α are according to customer's requests.
2. The types in the above form are frequently-used.
3. We can produce the customized products whose types are not in the form according to our customers' requests.

Brazed turning inserts



Grade	ISO Code	Density g/cm3	Hardness HRA	T.R.S MPa	Applications recommended
YG3	K05	15.10	92.0	1400	Suitable for finishing of cast iron and nonferrous metal.
YG6X	K10	14.95	91.5	1800	The finishing & semi-finishing of cast iron and nonferrous metals and also for the machining of manganese steel and hardening steel.
YG6	K15	14.95	90.5	1900	Suitable for the roughing of cast iron and light alloys and also for the milling of cast iron and low-alloy steel.
YG8	K20	14.80	89.5	2200	
YW1	M10	13.10	91.6	1600	Suitable for finishing and semi-finishing of stainless steel and conventional alloy steel.
YW2	M20	13.00	90.6	1800	The grade can be used for the semi-finishing of stainless steel and low-alloy steel and it is mainly used for the machining of railway wheel hubs.
YT15	P10	11.4	91.5	1600	Suitable for the finishing and semi-finishing for steel and cast steel with a moderate feed rate and rather high cutting speed.
YT14	P20	11.6	90.8	1700	Suitable for the finishing and semi-finishing of steel and cast steel.
YT5	P30	12.9	90.5	2200	Suitable for the heavy duty rough turning of and cast steel with a big feed rate at a medium and low speed under unfavorable working conditions.

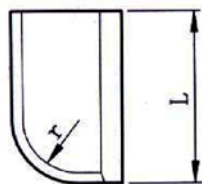
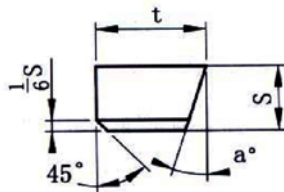
Type A



mm

Type	Dimensions				
	L	t	S	r	α°
A5	5	3	2	2	-
A6	6	4	2.5	2.5	-
A8	8	5	3	3	-
A10	10	6	4	4	18
A12	12	8	5	5	18
A16	16	10	6	6	18
A20	20	12	7	7	18
A25	25	14	8	8	18
A32	32	18	10	10	18
A40	40	22	12	12	18
A50	50	25	14	14	18

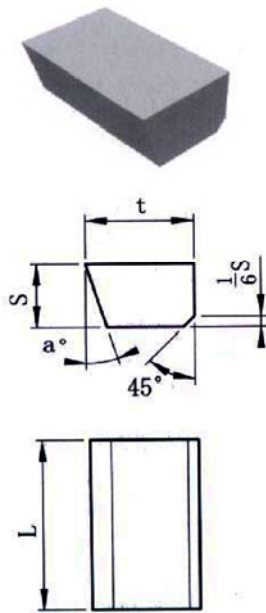
Type B



mm

Type	Dimensions				
	L	t	S	r	α°
B5	5	3	2	2	-
B6	6	4	2.5	2.5	-
B8	8	5	3	3	-
B10	10	6	4	4	18
B12	12	8	5	5	18
B16	16	10	6	6	18
B20	20	12	7	7	18
B25	25	14	8	8	18
B32	32	18	10	10	18
B40	40	22	12	12	18
B50	50	25	14	14	18

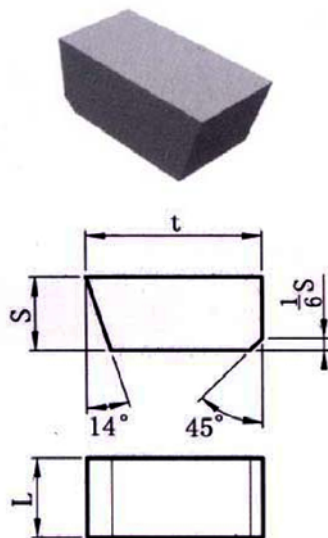
Type C



mm

Type	Dimensions			
	L	t	s	a°
C5	5	3	2	-
C6	6	4	2.5	-
C8	8	5	3	-
C10	10	6	4	18
C12	12	8	5	18
C16	16	10	6	18
C20	20	12	7	18
C25	25	14	8	18
C32	32	18	10	18
C40	40	22	12	18
C50	50	25	14	18

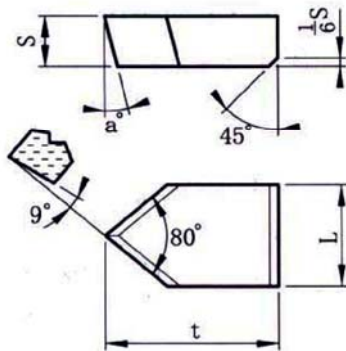
Type D



mm

Type	Dimensions		
	L	t	s
D3	3.5	8	3
D4	4.5	10	4
D5	5.5	12	5
D6	6.5	14	6
D8	8.5	16	8
D10	10.5	18	10
D12	12.5	20	12

Type E



mm

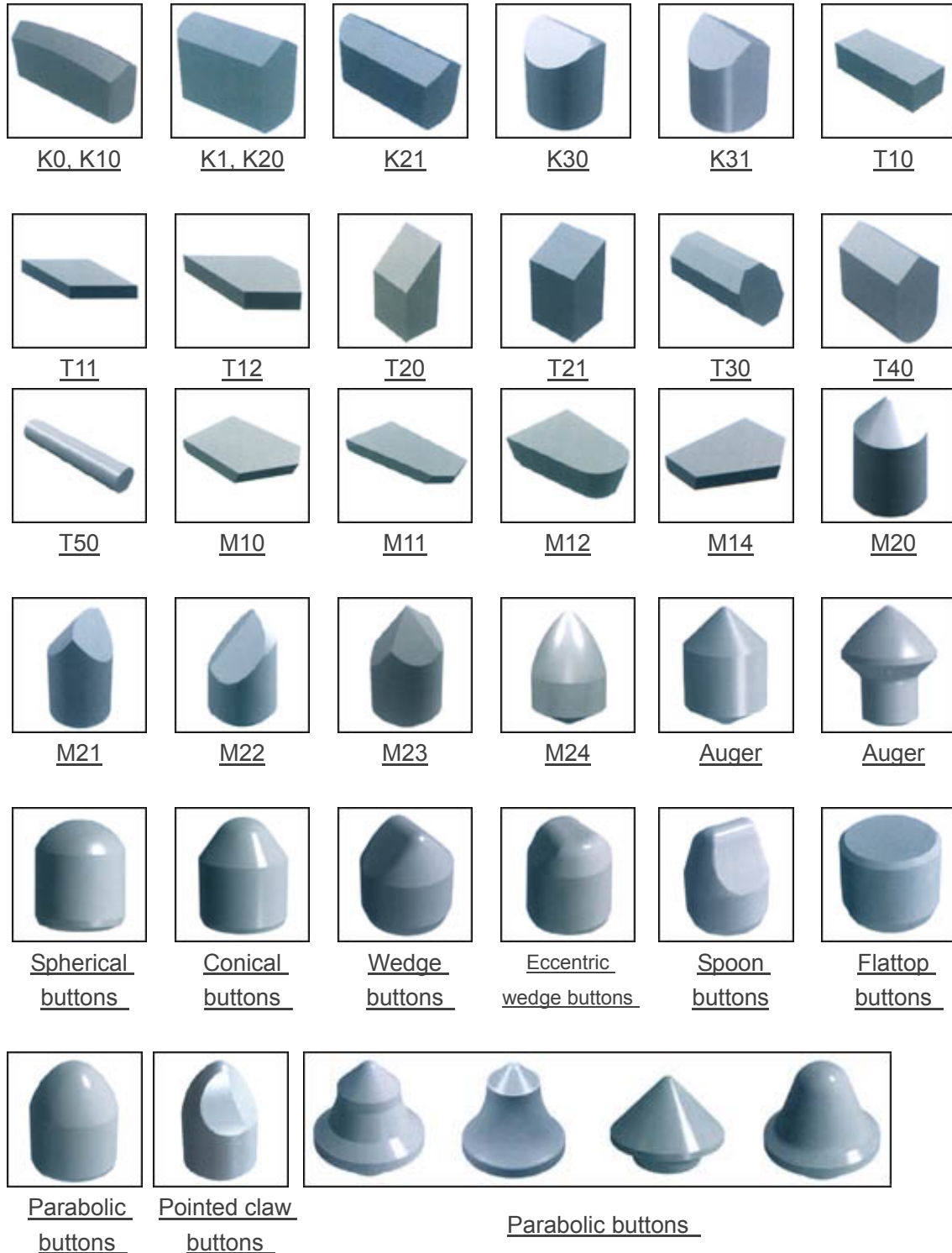
Type	Dimensions			
	L	t	s	α°
E4	4	10	2.5	-
E5	5	12	3	-
E6	6	14	3.5	9
E8	8	16	4	9
E10	10	18	5	9
E12	12	20	6	9
E16	16	22	7	9
E20	20	25	8	9
E25	25	28	9	9
E32	32	32	10	9

Carbide mining bits

Grade Introductions

Grade	Density g/cm ³	T.R.S MPa	Hardness HRA	Performance & application recommended
YG4C	15.10	1800	90.0	Mainly used as small buttons for percussion bits to cut soft and medium hard formations.
YG6	14.95	1900	90.5	For coring crowns, electric coal drill bits, coal cutting picks, oil cone bits and scraping knife bits, used in geological prospecting, coal mining and oil well boring.
YG8	14.80	2200	89.5	For coring crowns, electric coal drill bits, coal cutting picks, oil cone bits and scraping knife bits, used in geological prospecting, coal mining and oil well boring.
YK05	14.95	2500	90.5	Mostly used as the buttons of small and medium sized percussion bits and as the inserts of rotary prospecting bits to cut soft and medium hard formations.
YG8C	14.80	2400	88.5	
YK15	14.60	2450	87.6	Suitable to strips, conical buttons for rotary percussion-resistant, geological prospection buttons, cut soft and medium hard formations.
YK20	14.40	2500	86.8	Primarily for the buttons and inserts of rotary percussion bits to cut medium-hard and hard formations.
YK25	14.40	2550	87.2	Primarily for the buttons and inserts of rotary percussion bits to cut medium-hard and very hard formations.
YG11C	14.40	2700	86.5	Largely for the inserts and buttons of percussion bits and tricone bits to cut medium-hard, hard, and very hard formations.
YG13C	14.2	2850	86.0	Primarily for the buttons of tricone bits and inserts of rotary percussion bits to cut hard and very hard formations.
YG15C	14.0	3000	85.5	For oil cone drill bits, for medium soft and medium-hard rocks.

Types for Carbide Mining Bits



Note: The types can be offered according to customers' requirement.

Mining tools

We are experienced in all kinds of tools for rock and soil project, such as Hole Openers, Hammers & Hammer Bits, Drag Bits, rock drilling, etc.

We can produce the tools according to customers' requirement.

