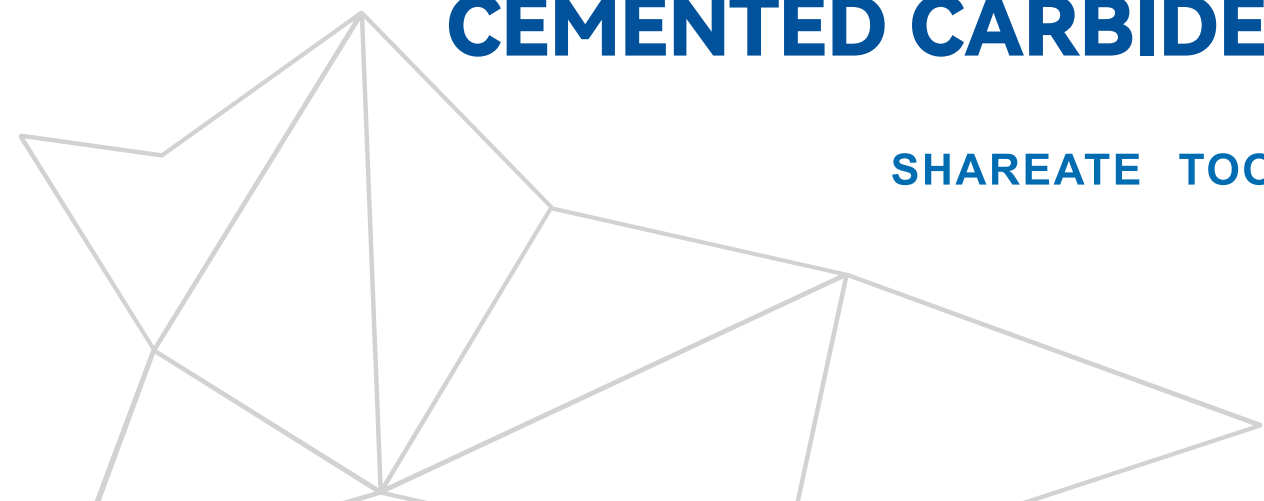


SHAREATE
SHAREATE TOOLS LTD.

Marketing Office
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CEMENTED CARBIDE ROD

SHAREATE TOOLS LTD.





COMPANY PROFILE

Registering and establishing in Suzhou Industrial Park on August 25, 2005, Shareate Tools Ltd. has been an international manufacturing service company with the integration of research & development, manufacturing, sales and service. The sale contents include professional cemented carbide products, mining drilling tools and mine services. It was overall-changed and established by Shareate Tools Ltd. in 2012. Many branches and subsidiaries are involved in the company, including rock drill tools department, mining carbide department, precision component department, profile department, Wuhan Shareate Tools Ltd. and so on.

In the aspect of mining rock drilling tool industry, a research and manufacturing base of mining cone bit and water well bit with the leading technology and scale has been firstly built. The company is known as the representative enterprise with advanced productivity in China's mining rock drilling tool industry. In our company, flexible production and manufacturing system has been adopted to achieve a flexible production line with numerical control machining center being the main body. Besides, a complete set of manufacturing equipment such as forging, heat treatment, numerical control machining center and advanced testing equipment are also well assembled in the company. The main products include 6 1/4-13 3/4 series of mining bits, and other size series of mining bits can be designed and manufactured according to the user's requirements. The products manufactured by our company enjoy a good reputation in the domestic and international market because of our high standard in material section, high level in technology and reliability.

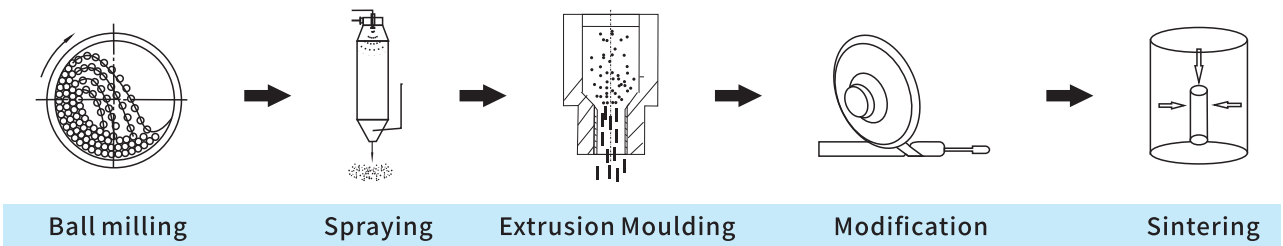
In the aspect of cemented carbide industry, a high-level technology manufacturing and research base of oil and mining tungsten carbide insert has been built. The main products are listed as follows: tungsten carbide insert for oil drill, tungsten carbide insert for mining, base bracket for diamond composite sheet, cemented carbide bar, materials for cemented carbide mould, cermet series, precision components, et al. The product are with the characteristics of wide range, complete varieties, and rich grades. The tungsten carbide insert and tungsten carbide substrate for oil and mining are located in the advanced position both in the domestic as well as around the world. Moreover, the products have been widely applied in products for oil and mining such as the cone bit, the top hammer bit, the downhole bit, the shield cutter, thanks to their excellent using performance and stability.

In the recent years, our products are exported to more than 20 countries and regions, including Australia, Peru, Chile, Japan, South Korea, the United States, Brazil, Russia, Mexico. Long-term and stable business relations with many internationally famous enterprises have been established at present. To achieve sustainable, rapid and efficient development, we strive to become an international manufacturing service provider in the field of cemented carbide and rock drilling tools.

ADVANCED MANUFACTURING
EQUIPMENT



* Process Demonstration



ADVANCED INSPECTION EQUIPMENT



FINE GRAIN ROD PRODUCT CATEGORY

* Product Type

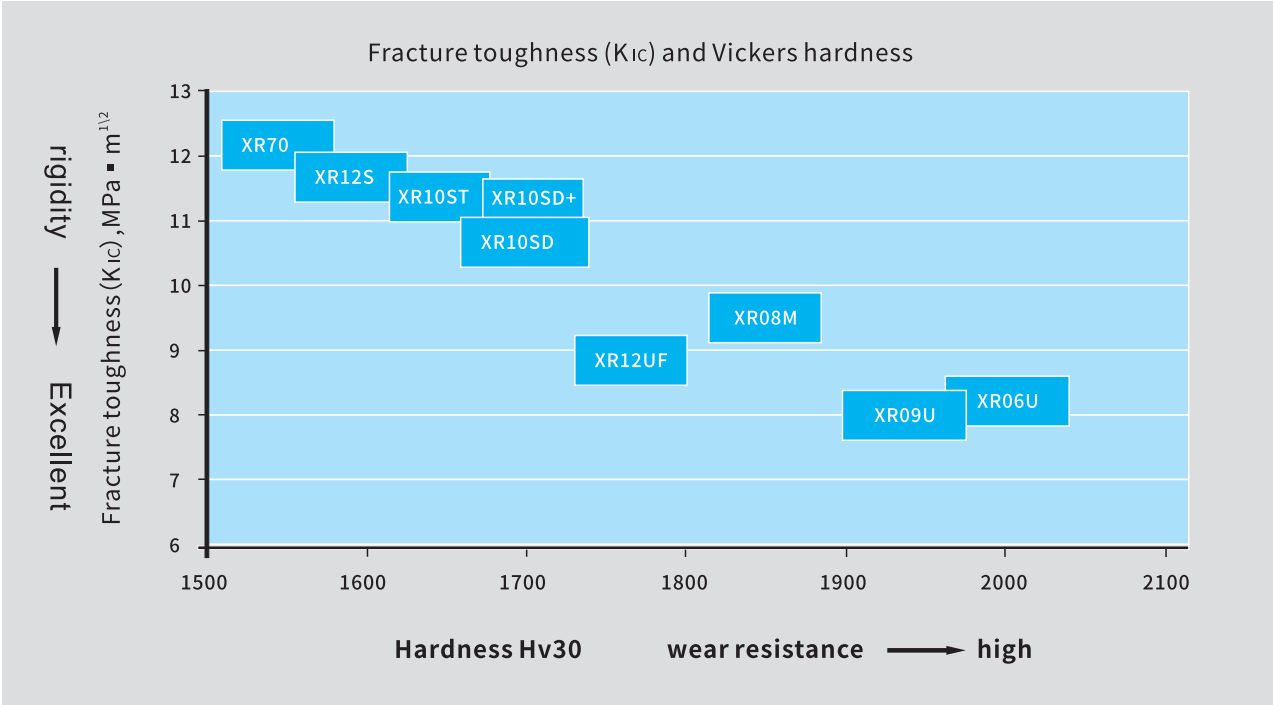
Grade	Co (%)	Grain Size (μm)	Density (g/cm ³)	Hardness		Flexural Strength (MPa)	Fracture Toughness (MNmm ^{-3/2})	ISO Category	Application Recommend
				HRA	HV30				
XR06U	6.5	0.4	14.75	94.0	2000	>3600	9.5	K05-K10	High wear resistance, excellent performance in high speed milling, suitable for non-ferrous metal, acrylic, fiber reinforced materials, etc. Can be used for PCB drilling and milling.
XR08M	8.5	0.4	14.60	93.3	1840	>4000	9.8	K05-K10	High wear resistance, good adhesion with coating, suitable for quenched steel, medium and high hard die steel and other rough processing.
XR09U	9	0.2	14.45	94.0	1980	>4000	9.5	K05-K10	High wear resistance, high heat conduction, suitable for hardening steel, high hardening die steel and other finishing.
XR10SD	10	0.6	14.40	92.1	1640	>4000	11.5	K30-K40	High wear resistance and good toughness, excellent performance in medium speed milling, suitable for carbon steel, alloy steel, stainless steel and other rough machining.
XR12UF	12	0.4	14.10	92.6	1720	>4200	9.5	K20-K30	High wear-resisting and excellent hardness, excellent performance in high-speed light cutting, suitable for carbon steel, stainless steel, nonferrous metals and other finishing.
XR12S	12	0.6	14.10	91.8	1590	>4000	11.8	K30-K40	High toughness and good wear resistance, suitable for 3C stainless
XR70	12	0.7	14.10	91.5	1550	>4000	12.2	K30-K40	High toughness, high red hardness, has excellent performance in low speed and high feed cutting, suitable for high temperature alloy and other rough machining.
XR10ST	10	0.7	14.40	91.8	1580	>4000	12.0	K30-K40	Excellent wear-resisting and toughness, universal drilling and milling brand, suitable for processing carbon steel, cast iron, stainless steel, etc.
XR10SD+	10	0.6	14.40	92.0	1620	>4000	11.7	K30-K40	High toughness and good wear resistance, excellent performance in medium speed drilling, suitable for carbon steel, alloy steel, stainless steel and other hole processing.

✳ Model Selection (★:first selection;○:secondary selection)

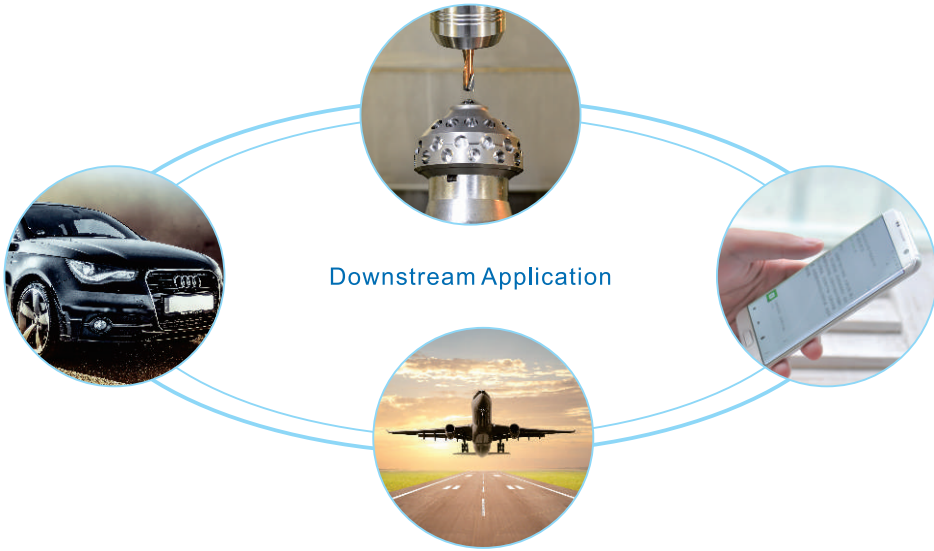
Processing Materials		Tool Type	XR06U	XR08M	XR09U	XR10SD	XR12UF	XR12S	XR70	XR10ST	XR10SD+
P	Steel	Drill bit								○	★
		End mill				★					
		Rough machining									
		Fine machining					★				
M	Stainless Steel	Drill bit								○	★
		End mill				★		★	○		
		Rough machining									
		Fine machining					★				
K	Cast Iron	Drill bit								★	○
		End mill				★					
		Rough machining									
		Fine machining					★				
N	Non-ferrous	Drill bit								★	○
		End mill				★					
		Rough machining									
		Fine machining					★				
S	Heat-resistant Alloy	Drill bit								○	★
		End mill				★		○	★		
		Rough machining									
		Fine machining			○		○	★			
H	High Hardness Materia	Drill bit									★
		End mill				○					
		Rough machining		★							
		Fine machining	★	○	★						
其他	Compound Material	Drill bit	○		○						
		End mill									
		Rough machining									
		Fine machining	★		★						

Model	Comparison table for brands				
	Sandvik	Guhring	Ceratizit	KFC	IMC
XR06U		KFM308			
XR08M	Dm80				
XR09U	Pn90	K55SF	TSF22	K55SF	Uf09
XR10ST		DK400N		K40XF	Uf10
XR10SD/XR10SD+	H10F	DK460UF	Mg18	K40UF	
XR12UF		DK500UF	TSF44	K44UF	Uf12
XR70/XR12S	Am70				

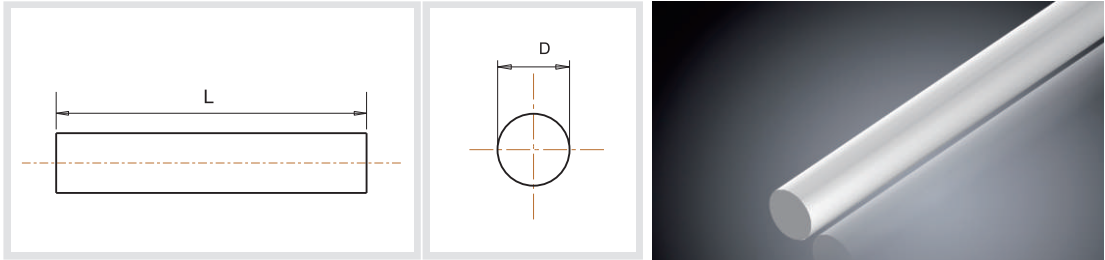
✳ Material properties



- ◎ Use raw materials with high purity and high quality after strict screening
- ◎ Advanced production equipment and unique manufacturing technology to achieve stable quality and short lead time
- ◎ Advanced quality assurance system
- ◎ Unremitting development of new materials
- ◎ Build a strong customer service team



Solid Rods-Metric



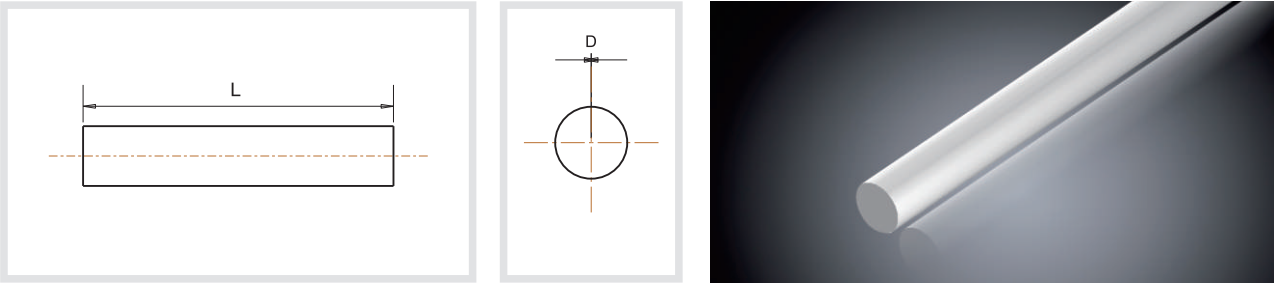
Length(mm)	Tolerance(mm)
310	+0.5/+1.0
330	+1.0/+2.0
415	+2.0/+5.0

✳ The following services are available

定长

Diameter D(mm)	Tolerance (mm)	Series Number
2.2	-0/+0.2	RS022****
3.2	-0/+0.2	RS032****
4.2	-0/+0.2	RS042****
5.2	-0/+0.2	RS052****
6.2	-0/+0.2	RS062****
7.2	-0/+0.2	RS072****
8.2	-0/+0.3	RS082****
9.2	-0/+0.3	RS092****
10.2	-0/+0.3	RS102****
11.2	-0/+0.3	RS112****
12.2	-0/+0.3	RS122****
13.2	-0/+0.3	RS132****
14.2	-0/+0.3	RS142****
15.2	-0/+0.3	RS152****
16.2	-0/+0.4	RS162****
17.2	-0/+0.4	RS172****
18.2	-0/+0.4	RS182****
19.2	-0/+0.4	RS192****
20.2	-0/+0.5	RS202****
21.2	-0/+0.5	RS212****
22.2	-0/+0.5	RS222****
23.2	-0/+0.5	RS232****
24.2	-0/+0.5	RS242****
25.2	-0/+0.5	RS252****
26.2	-0/+0.5	RS262****
27.2	-0/+0.5	RS272****
28.2	-0/+0.5	RS282****
29.2	-0/+0.5	RS292****
30.2	-0/+0.5	RS302****
31.2	-0/+0.5	RS312****
32.2	-0/+0.5	RS322****
33.2	-0/+0.5	RS332****
34.2	-0/+0.5	RS342****
35.2	-0/+0.5	RS352****
36.2	-0/+0.7	RS362****
37.2	-0/+0.7	RS372****
38.2	-0/+0.7	RS382****
39.2	-0/+0.7	RS392****
40.2	-0/+0.7	RS402****

Fixed Unground Solid Round Rod



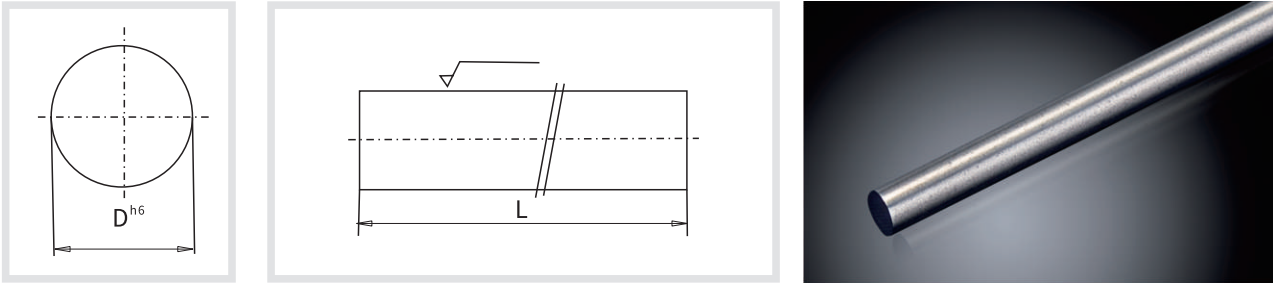
Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

*The following services are available



Diamete D(mm)	Tolerance (mm)	Series Number
2.0	-0/+0.2	RS020****
3.0	-0/+0.2	RS030****
4.0	-0/+0.2	RS040****
5.0	-0/+0.2	RS050****
6.0	-0/+0.2	RS060****
7.0	-0/+0.2	RS070****
8.0	-0/+0.3	RS080****
9.0	-0/+0.3	RS090****
10.0	-0/+0.3	RS100****
11.0	-0/+0.3	RS110****
12.0	-0/+0.3	RS120****
13.0	-0/+0.3	RS130****
14.0	-0/+0.3	RS140****
15.0	-0/+0.3	RS150****
16.0	-0/+0.4	RS160****
17.0	-0/+0.4	RS170****
18.0	-0/+0.4	RS180****
19.0	-0/+0.4	RS190****
20.0	-0/+0.5	RS200****
21.0	-0/+0.5	RS210****
22.0	-0/+0.5	RS220****
23.0	-0/+0.5	RS230****
24.0	-0/+0.5	RS240****
25.0	-0/+0.5	RS250****
26.0	-0/+0.5	RS260****
27.0	-0/+0.5	RS270****
28.0	-0/+0.5	RS280****
29.0	-0/+0.5	RS290****
30.0	-0/+0.5	RS300****
31.0	-0/+0.5	RS310****
32.0	-0/+0.5	RS320****
33.0	-0/+0.5	RS330****
34.0	-0/+0.5	RS340****

Ground Solid Round Rod



Diameter(mm)	Tolerance(mm)
所有	ISO h6/h5

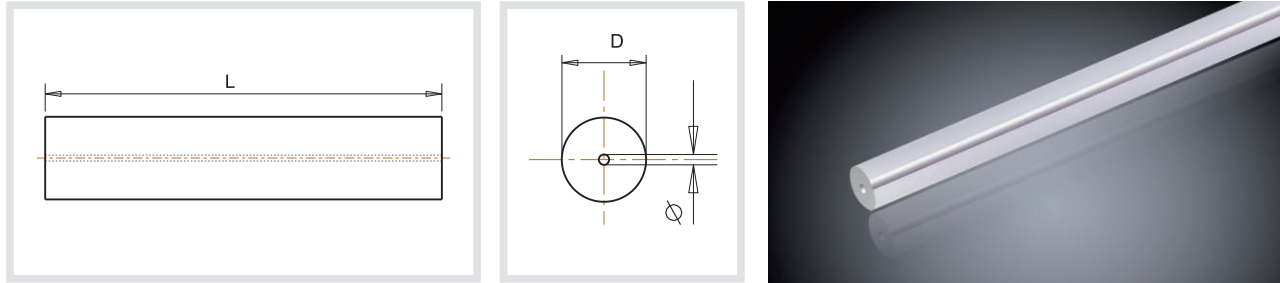
Length(mm)	Tolerance(mm)
≤50	+0.2/+0.8
50<L≤150	+0.5/+1.0

*The following services are available



Diamete D(mm)	Length L(mm)	Series Number
3.0	≤150	RS030****M
4.0	≤150	RS040****M
5.0	≤150	RS050****M
6.0	≤150	RS060****M
7.0	≤150	RS070****M
8.0	≤150	RS080****M
9.0	≤150	RS090****M
10.0	≤150	RS100****M
11.0	≤150	RS110****M
12.0	≤150	RS120****M
13.0	≤150	RS130****M
14.0	≤150	RS140****M
15.0	≤150	RS150****M
16.0	≤150	RS160****M
17.0	≤150	RS170****M
18.0	≤150	RS180****M
19.0	≤150	RS190****M
20.0	≤150	RS200****M
21.0	≤150	RS210****M
22.0	≤150	RS220****M
23.0	≤150	RS230****M
24.0	≤150	RS240****M
25.0	≤150	RS250****M
26.0	≤150	RS260****M
27.0	≤150	RS270****M
28.0	≤150	RS280****M
29.0	≤150	RS290****M
30.0	≤150	RS300****M
31.0	≤150	RS310****M
32.0	≤150	RS320****M
33.0	≤150	RS330****M
34.0	≤150	RS340****M
35.0	≤150	RS350****M
36.0	≤150	RS360****M
37.0	≤150	RS370****M
38.0	≤150	RS380****M
39.0	≤150	RS390****M
40.0	≤150	RS400****M

Rods with Central Coolant Hole



Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

✳ The following services are available



✳ Available Grade

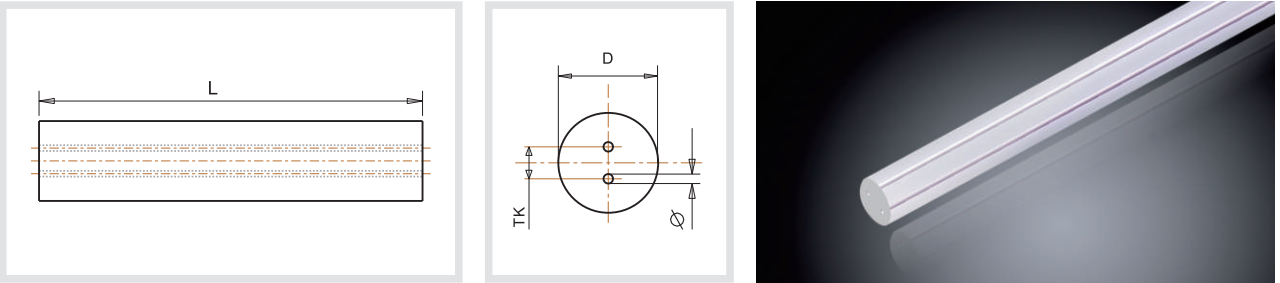
XR10ST XR10SD+ XR09U

✳ Regular Length

330

Diameter D(mm)	Tolerance (mm)	Inner Diameter Φ(mm)	Tolerance (mm)	Series Number
2.2	-0/+0.2	0.20~1.00	±0.05	RC022****
3.2	-0/+0.2			RC032****
4.2	-0/+0.2			RC042****
5.2	-0/+0.2			RC052****
6.2	-0/+0.2			RC062****
7.2	-0/+0.2			RC072****
8.2	-0/+0.3	1.00~2.00	±0.15	RC082****
9.2	-0/+0.3			RC092****
10.2	-0/+0.3			RC102****
11.2	-0/+0.3			RC112****
12.2	-0/+0.3			RC122****
13.2	-0/+0.3	1.45~6.00	±0.20	RC132****
14.2	-0/+0.3			RC142****
15.2	-0/+0.3			RC152****
16.2	-0/+0.4			RC162****
17.2	-0/+0.4			RC172****
18.2	-0/+0.4			RC182****
19.2	-0/+0.4			RC192****
20.2	-0/+0.5			RC202****
21.2	-0/+0.5			RC212****
22.2	-0/+0.5			RC222****
23.2	-0/+0.5			RC232****
24.2	-0/+0.5			RC242****
25.2	-0/+0.5			RC252****
26.2	-0/+0.5			RC262****
28.2	-0/+0.5			RC282****
30.2	-0/+0.5			RC302****
32.2	-0/+0.5			RC322****

Rods with Two Straight Coolant Holes



Diameter D(mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	Inner diameter d (mm)	Tolerance (mm)	Series number
3.2	0.1~0.3	1.50	±0.15	0.50	±0.10	RP033*****
4.2	0.1~0.3	2.00	±0.20	0.60	±0.10	RP043*****
5.2	0.1~0.3	2.60	±0.20	0.80	±0.10	RP053*****
6.2	0.1~0.3	2.90	±0.20	1.00	±0.10	RP062*****
8.2	0.1~0.4	3.80	±0.20	1.00	±0.15	RP082*****
8.2	0.1~0.4	2.50	±0.20	0.80	±0.15	RP082*****
10.2	0.1~0.4	4.80	±0.30	1.40	±0.15	RP102*****
10.2	0.1~0.4	2.50	±0.30	0.80	±0.15	RP102*****
12.2	0.1~0.4	5.85	±0.40	1.75	±0.15	RP122*****
12.2	0.1~0.4	3.30	±0.40	1.20	±0.15	RP122*****
13.2	0.2~0.5	5.85	±0.50	1.75	±0.25	RP132*****
13.2	0.2~0.5	4.50	±0.50	1.40	±0.25	RP132*****
14.2	0.2~0.5	6.80	±0.50	1.75	±0.25	RP142*****
14.2	0.2~0.5	4.80	±0.50	1.50	±0.25	RP142*****
15.2	0.2~0.5	4.80	±0.50	1.50	±0.25	RP152*****
16.2	0.2~0.6	7.80	±0.50	2.00	±0.25	RP162*****
16.2	0.2~0.6	4.80	±0.50	1.50	±0.25	RP162*****
18.2	0.2~0.6	6.00	±0.50	2.00	±0.30	RP182*****
20.2	0.3~0.8	9.80	±0.50	2.50	±0.30	RP202*****
21.2	0.3~0.8	9.80	±0.50	2.50	±0.30	RP210*****
22.2	0.3~0.8	11.00	±0.50	2.50	±0.30	RP222*****
25.2	0.3~0.8	12.00	±0.50	3.00	±0.30	RP252*****
25.2	0.3~0.8	10.00	±0.50	3.00	±0.30	RP252*****
28.2	0.3~0.8	14.00	±0.50	3.00	±0.30	RP282*****
30.2	0.3~0.8	14.00	±0.50	3.00	±0.30	RP302*****

Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

✳ The following services are available



✳ Available Grade

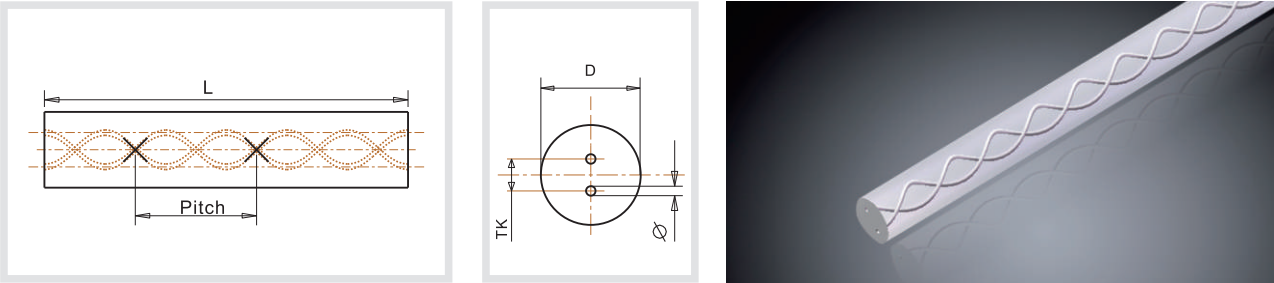
XR10ST XR10SD+
XR12UF

✳ Regular Length

330

✳ Can be used for PCD tool shank

Rods with 2 Helical Coolant Holes(30°)



Diameter D(mm)	Tolerance (mm)	Pitch(±5°) (mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	d (mm)	Tolerance (mm)	Series Number
4.3	+0.3~-0.8	21.77	-0.44~0.44	2.10	±0.10	0.60	±0.10	RH043*****
6.3	+0.3~-0.8	32.65	-0.65~0.67	2.40	±0.20	0.70	±0.15	RH063*****
7.3	+0.3~-0.8	38.09	-0.76~0.78	3.50	±0.20	1.00	±0.15	RH073*****
8.3	+0.3~-0.8	43.53	-0.86~0.89	3.80	±0.20	1.00	±0.15	RH083*****
9.3	+0.3~-0.8	48.97	-0.97~1.00	4.50	±0.30	1.40	±0.15	RH093*****
10.3	+0.3~-0.8	54.41	-1.08~1.12	4.50	±0.30	1.40	±0.15	RH103*****
11.3	+0.3~-0.8	59.86	-1.19~1.22	4.90	±0.40	1.40	±0.15	RH113*****
12.3	+0.3~-0.8	65.30	-1.30~1.33	5.85	±0.40	1.40	±0.20	RH123*****
13.3	+0.5~-1.1	70.74	-1.41~1.45	6.10	±0.40	1.75	±0.20	RH133*****
14.3	+0.5~-1.1	76.18	-1.51~1.56	6.70	±0.40	1.75	±0.20	RH143*****
15.3	+0.5~-1.1	81.62	-1.62~1.67	7.30	±0.40	1.75	±0.20	RH153*****
16.3	+0.5~-1.1	87.06	-1.73~1.78	7.90	±0.40	1.75	±0.20	RH163*****
17.3	+0.5~-1.1	92.50	-1.83~1.90	8.50	±0.40	1.75	±0.20	RH173*****
18.3	+0.5~-1.1	97.95	-1.95~2.00	9.15	±0.40	2.00	±0.25	RH183*****
19.3	+0.5~-1.1	103.39	-2.06~2.11	9.70	±0.50	2.00	±0.25	RH193*****
20.3	+0.5~-1.1	108.83	-2.16~2.22	9.90	±0.50	2.00	±0.25	RH203*****
22.3	+0.5~-1.1	119.71	-2.38~2.45	11.10	±0.50	2.00	±0.25	RH223*****
23.3	+0.5~-1.1	125.15	-2.48~2.56	11.70	±0.50	2.00	±0.25	RH233*****
25.3	+0.8~-1.5	136.03	-2.70~2.79	12.80	±0.50	2.00	±0.25	RH253*****
26.3	+0.8~-1.5	141.48	-2.81~2.89	13.30	±0.50	2.00	±0.25	RH263*****
28.3	+0.8~-1.5	152.36	-3.03~3.12	14.20	±0.60	2.50	±0.25	RH283*****
30.3	+0.8~-1.5	163.24	-3.24~3.34	15.40	±0.60	2.50	±0.25	RH303*****
32.3	+0.8~-1.5	174.12	-6.81~7.24	16.30	±0.60	3.00	±0.25	RH323*****

Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

✳ The following services are available



✳ Available Grade

XR10ST XR10SD+

✳ Regular Length

330 360 415

Rods with 2 Helical Coolant Holes(30°)

Diameter D(mm)	Tolerance (mm)	Pitch(±5°) (mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	d (mm)	Tolerance (mm)	Series Number
4.3	+0.3/0.8	21.77	-0.44~0.44	1.20	±0.10	0.25	±0.10	Rh043*****
6.3	+0.3/0.8	32.65	-0.65~0.67	1.40	±0.10	0.40	±0.15	RH063*****
8.3	+0.3/0.8	43.53	-0.86~0.89	2.40	±0.20	0.70	±0.15	RH083*****
10.3	+0.3/0.8	54.41	-1.08~1.12	2.60	±0.20	0.70	±0.15	RH103*****
10.3	+0.3/0.8	54.41	-1.08~1.12	3.80	±0.20	1.00	±0.15	RH103*****
12.3	+0.3/0.8	65.30	-1.30~1.33	3.80	±0.20	1.00	±0.15	RH123*****
14.3	+0.5/+1.1	76.18	-1.51~1.56	4.20	±0.20	1.40	±0.15	RH143*****
16.3	+0.5/+1.1	87.06	-1.73~1.78	5.10	±0.30	1.20	±0.15	RH163*****
18.3	+0.5/+1.1	97.95	-1.95~2.00	5.90	±0.30	1.40	±0.15	RH183*****
20.3	+0.5/+1.1	108.83	-2.16~2.22	6.70	±0.30	1.50	±0.15	RH203*****

Rods with 3 Helical Coolant Holes(30°)

Diameter D(mm)	Tolerance (mm)	Pitch(±5°) (mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	d (mm)	Tolerance (mm)	Series Number
6.3	+0.5/+1.0	32.65	-0.65~0.67	2.75	±0.10	0.50	±0.10	RH063*****
8.3	+0.5/+1.0	43.53	-0.86~0.89	3.85	±0.20	0.70	±0.15	RH083*****
9.3	+0.5/+1.0	48.97	-0.97~1.00	4.95	±0.20	0.85	±0.15	RH093*****
10.3	+0.5/+1.0	54.41	-1.08~1.12	4.95	±0.20	0.85	±0.15	RH103*****
12.3	+0.5/+1.0	65.30	-1.30~1.33	6.05	±0.30	1.10	±0.15	RH123*****
14.3	+0.5/+1.0	76.18	-1.51~1.56	7.05	±0.30	1.40	±0.15	RH143*****
16.3	+0.5/+1.0	87.06	-1.73~1.78	8.05	±0.30	1.60	±0.20	RH163*****
18.3	+0.5/+1.0	97.95	-1.95~2.00	9.25	±0.30	1.70	±0.20	RH183*****
20.3	+0.5/+1.0	108.83	-2.16~2.22	9.95	±0.30	1.90	±0.20	RH203*****

Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

✳ The following services are available



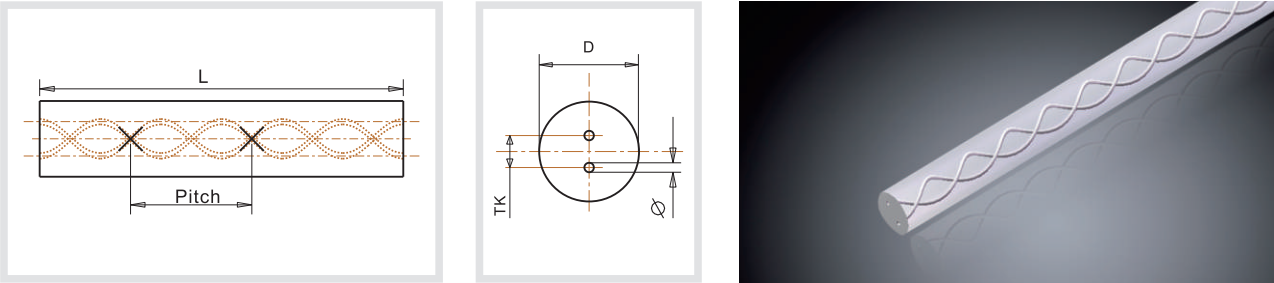
✳ Available Grade

XR10ST XR10SD+

✳ Regular Length

330 360 415

Rods with 2 Helical Coolant Holes (40°)



Diameter D(mm)	Tolerance (mm)	Pitch(±5°) (mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	d (mm)	Tolerance (mm)	Series Number
6.4	+0.5~+1.0	22.46	-0.39~0.40	2.00	±0.20	0.50	±0.15	RH064*****
8.4	+0.5~+1.0	29.95	-0.53~0.54	2.60	±0.30	0.65	±0.15	RH084*****
10.4	+0.5~+1.0	37.44	-0.66~0.67	3.20	±0.30	0.80	±0.15	RH104*****
12.4	+0.5~+1.0	44.93	-0.79~0.80	3.80	±0.40	0.90	±0.20	RH124*****
14.4	+0.5~+1.0	52.42	-0.92~0.94	4.30	±0.40	1.00	±0.20	RH144*****
16.4	+0.5~+1.0	59.90	-1.05~1.07	5.10	±0.40	1.20	±0.20	RH164*****
18.4	+0.5~+1.0	67.39	-1.18~1.21	5.90	±0.40	1.40	±0.25	RH184*****
20.4	+0.5~+1.0	74.88	-1.31~1.34	6.60	±0.50	1.50	±0.25	RH204*****

Rods with 3 Helical Coolant Holes (40°)

Diameter D(mm)	Tolerance (mm)	Pitch(±5°) (mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	d (mm)	Tolerance (mm)	Series Number
6.4	+0.5~+1.0	22.46	-0.39~0.40	2.00	2.00	0.50	±0.15	RH064*****
8.4	+0.5~+1.0	29.95	-0.53~0.54	2.60	2.60	0.65	±0.15	RH084*****
10.4	+0.5~+1.0	37.44	-0.66~0.67	3.30	3.30	0.80	±0.15	RH104*****
12.4	+0.5~+1.0	44.93	-0.79~0.80	4.00	4.00	0.90	±0.20	RH124*****
14.4	+0.5~+1.0	52.42	-0.92~0.94	4.50	4.50	1.00	±0.20	RH144*****
16.4	+0.5~+1.0	59.90	-1.05~1.07	5.30	5.30	1.20	±0.20	RH164*****
18.4	+0.5~+1.0	67.39	-1.18~1.21	5.90	5.90	1.40	±0.25	RH184*****
20.4	+0.5~+1.0	74.88	-1.31~1.34	6.60	6.60	1.50	±0.25	RH204*****

Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

✳ The following services are available



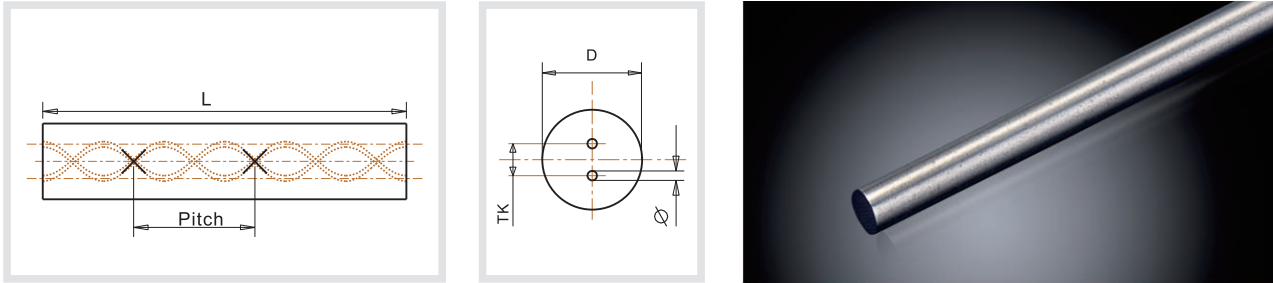
✳ Available Grade

XR10ST XR10SD+

✳ Regular Length

330

Non-standard Angle Rods with Helical Coolant Holes



Diameter D(mm)	Twirl angle (°)	Tolerance (mm)	Pitch(±5°) (mm)	Tolerance (mm)	TK (mm)	Tolerance (mm)	d (mm)	Tolerance (mm)	Series Number
14.0	15	+0.5~+1.0	164.14	-5.55~5.92	6.70	±0.40	1.90	±0.20	RH143*****
16.0	15	+0.5~+1.0	187.59	-6.34~6.77	8.00	±0.40	2.10	±0.20	RH163*****
18.0	15	+0.5~+1.0	211.04	-7.13~7.61	9.00	±0.40	2.30	±0.25	RH183*****
20.0	15	+0.5~+1.0	234.49	-7.93~8.46	10.00	±0.50	2.50	±0.25	RH203*****
8.0	36	+0.5~+1.0	34.59	-0.63~0.64	3.40	±0.10	1.00	±0.20	RH083*****
6.0	43	+0.5~+1.0	20.21	-0.35~0.36	1.50	±0.10	0.60	±0.15	RH063*****
6.0	46	+0.5~+1.0	18.20	-0.32~0.32	1.70	±0.10	0.50	±0.15	RH063*****
4.0	35	+0.5~+1.0	17.95	-0.33~0.34	1.75	±0.10	0.40	±0.10	RH043*****

Length(mm)	Tolerance(mm)
<150	+0.5/+1.0
150≤L≤300	+1.0/+2.0
>300	+2.0/+5.0

✳ The following services are available



✳ Available Grade

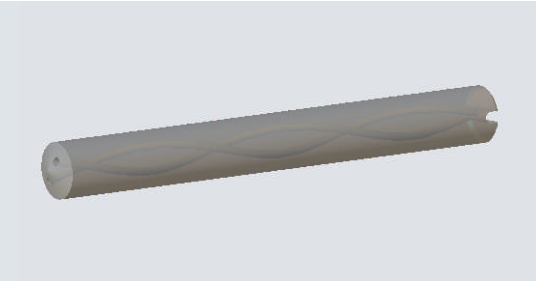
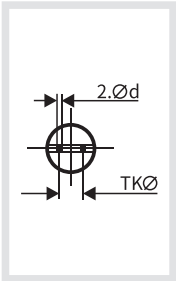
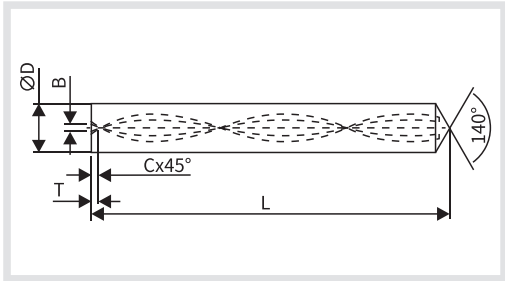
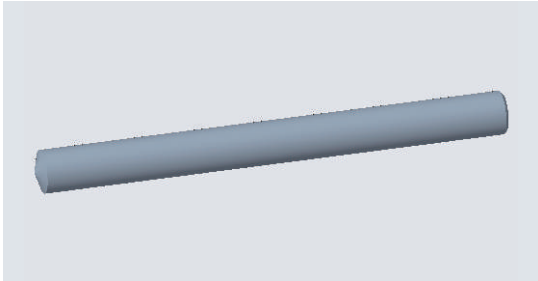
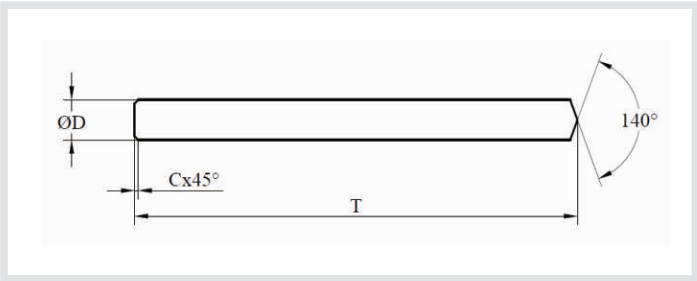
XR10ST XR10SD+

✳ Regular Length

330

Preforms

□ To Customer Specification □



* Ground Solid-Rods with Tapered End

Diameter (mm)	Length L (mm)	Diameter Tolerance (h5)/mm	Length Tolerance TK (mm)	Chamfer Angle	Chamfer Size (mm)	Taper Angle Standard	Taper Surface Roughness
6	66	-0.005~0	+0.2~+0.5	45°±3°	C0.6	140°~142°	Ra3.0
6	82	-0.005~0	+0.5~+1.0	45°±3°	C0.6	140°~142°	Ra3.0
8	80	-0.006~0	+0.5~+1.0	45°±3°	C0.6	140°~142°	Ra3.0
8	92	-0.006~0	+0.5~+1.0	45°±3°	C0.6	140°~142°	Ra3.0
10	90	-0.006~0	+0.5~+1.0	45°±3°	C0.6	140°~142°	Ra3.0
10	104	-0.006~0	+0.5~+1.0	45°±3°	C0.6	140°~142°	Ra3.0
12	103	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
12	119	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
14	108	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
14	125	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
16	115	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
16	133	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
18	124.5	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
18	144.5	-0.008~0	+0.5~+1.0	45°±3°	C0.8	140°~142°	Ra3.0
20	133	-0.009~0	+0.5~+1.0	45°±3°	C1.0	140°~142°	Ra3.0
20	155	-0.009~0	+1.0~+1.5	45°±3°	C1.0	140°~142°	Ra3.0

* Ground Drill Blanks with Slot and Tapered

Diameter (mm)	Length L (mm)	Diameter Tolerance (h5)	Length Tolerance (mm)	Slot Width B (±0.2mm)	Slot Depth T (+0~+0.4mm)	Chamfer Size C (±0.1mm)	Chamfer Angle	Point Angle	Eccentric Distance e	Screw pitch P	Taper Roughness
6	66	-0.005~0	0.2~0.5	1.5	0.90	0.5	45°±3°	140°~142°	≤0.15	32.65	Ra3.0
6	82	-0.005~0	0.5~1.0	1.5	0.90	0.5	45°±3°	140°~142°	≤0.15	32.65	Ra3.0
8	80	-0.006~0	0.5~1.0	2.0	1.40	0.6	45°±3°	140°~142°	≤0.15	43.53	Ra3.0
8	92	-0.006~0	0.5~1.0	2.0	1.40	0.6	45°±3°	140°~142°	≤0.15	43.53	Ra3.0
10	90	-0.006~0	0.5~1.0	2.5	1.65	0.6	45°±3°	140°~142°	≤0.2	54.41	Ra3.0
10	104	-0.006~0	0.5~1.0	2.5	1.65	0.6	45°±3°	140°~142°	≤0.2	54.41	Ra3.0
12	103	-0.008~0	0.5~1.0	2.5	1.75	0.8	45°±3°	140°~142°	≤0.3	65.3	Ra3.0
12	119	-0.008~0	0.5~1.0	2.5	1.75	0.8	45°±3°	140°~142°	≤0.3	65.3	Ra3.0
14	108	-0.008~0	0.5~1.0	3.0	2.15	0.8	45°±3°	140°~142°	≤0.4	76.18	Ra3.0
14	125	-0.008~0	0.5~1.0	3.0	2.15	0.8	45°±3°	140°~142°	≤0.4	76.18	Ra3.0
16	115	-0.008~0	0.5~1.0	3.0	2.30	0.8	45°±3°	140°~142°	≤0.4	87.06	Ra3.0
16	133	-0.008~0	0.5~1.0	3.0	2.30	0.8	45°±3°	140°~142°	≤0.4	87.06	Ra3.0
18	124.5	-0.008~0	0.5~1.0	3.5	2.50	0.8	45°±3°	140°~142°	≤0.4	97.95	Ra3.0
18	144.5	-0.008~0	0.5~1.0	3.5	2.50	0.8	45°±3°	140°~142°	≤0.4	97.95	Ra3.0
20	133	-0.009~0	0.5~1.0	3.5	2.70	1.0	45°±3°	140°~142°	≤0.4	108.83	Ra3.0
20	155	-0.009~0	1.0~1.5	3.5	2.70	1.0	45°±3°	140°~142°	≤0.4	108.83	Ra3.0

* The following services are available



The Taper End Angles can be Selected 120°~150°

* Available Grade

XR10ST XR10SD+

* The following services are available



The Taper End Angles can be Selected 120°~150°

* Available Grade

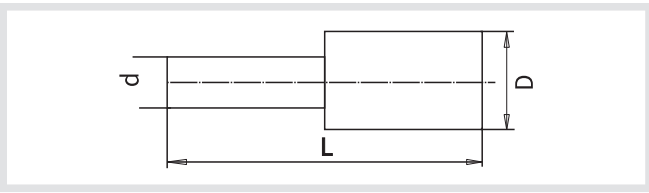
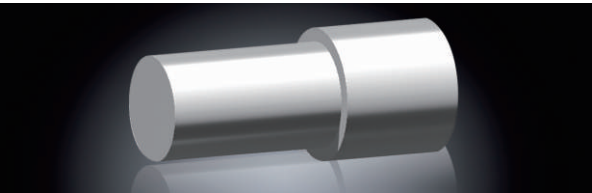
XR10ST XR10SD+

Unground Preforms Classification

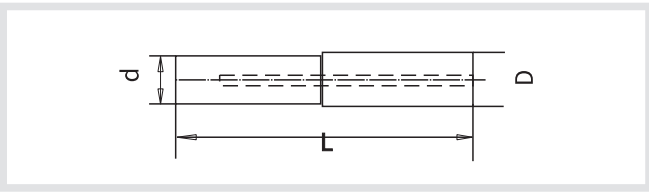
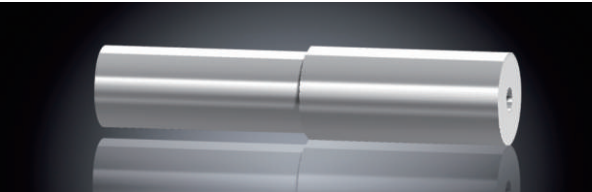
capability description

- * Length can be completed from 20 to 130mm
- * The maximum diameter below 40mm, thickness above 3mm, minimum diameter above 10mm
- * The production cycle of the Customized products are 7-10 days, inner and outer tip can be customized

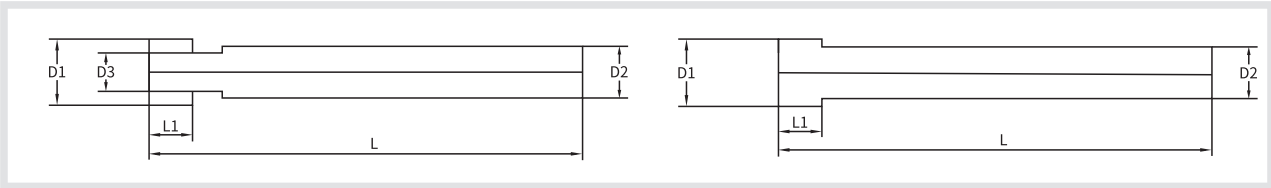
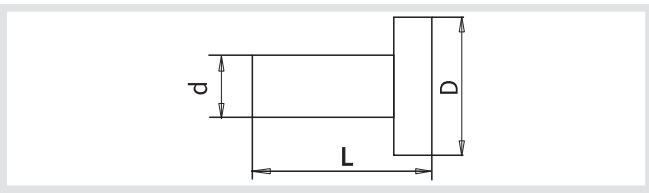
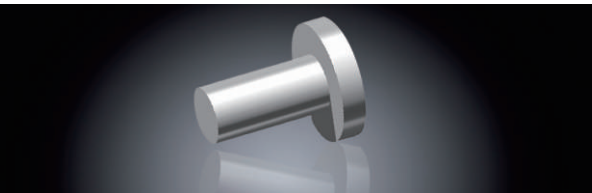
* Step Bar



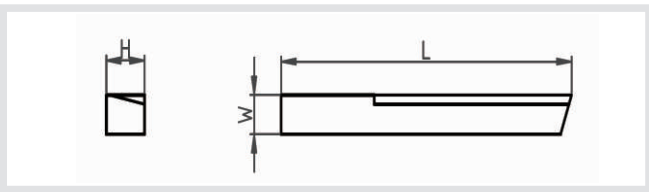
* Blind-hole step bar



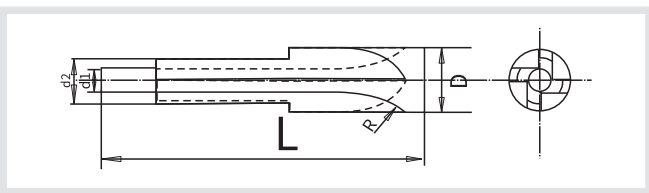
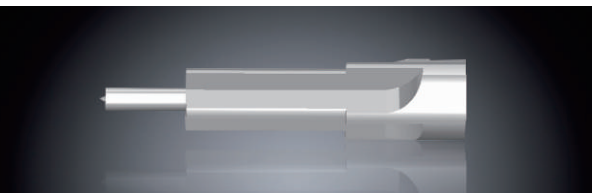
* T-bar



* knife blade



* Preform tool blank



Gear hobbing cutter product series

Hole type hob	<ul style="list-style-type: none">The number and angle of the customizable grooves. (It is also possible not to slot according to actual requirements)Customizable bevel of tooth endCustomizable chamfers for bores (single 45 degree chamfer, double 45 degree chamfer, sinking chamfer, etc.)		Handle type hob	<ul style="list-style-type: none">Various handled hobs with or without groovesCustomizable two-end center holes, standard (A, B, partial C) and non-standardVarious shank tapers can be machinedLocking groove or keyway can be machined	
	<ul style="list-style-type: none">Customizable positive or negative rake angles for hobs. (Negative front corner in right picture)			<ul style="list-style-type: none">Outer diameter, length, number of teeth and angle can be customized	
	<ul style="list-style-type: none">Customizable spiral grooves			<ul style="list-style-type: none">The figure at right shows a handle-type hob with BT handleHandle threads can be machined, M6 or higher meets 6H pass and stop gauge inspectionUS threads can also be made	
Milling insert (worm and worm milling cutter)	<ul style="list-style-type: none">Foil products with multiple groovesBoth side steps can be made according to actual requirements		Bowl shaper cutter	<ul style="list-style-type: none">Cutters with bowl shape for front and rear anglesChamfer protection for non-working faceThe inner support surface makes a yield groove	
Key broach	<ul style="list-style-type: none">Rough blank profile machining with periodic grooves to minimize accumulated errors		Taper shank gear shaper cutter	<ul style="list-style-type: none">One end (edge) with a central hole and one end with a threaded taper shankMachinable sinking centre hole	
	<ul style="list-style-type: none">It can machine inner hole avoidance			<ul style="list-style-type: none">Tail can be machined, M6 or higher to meet the 6H pass gauge inspection of internal threadsCan also process US threads	

★ Customized production can be made according to customer drawings.

Non-standard customized products

(customized according to customer drawings)

Interchangeable drill insert	Exchangeable endmill Heads
	

* Properties characterization of cemented carbide materials

© 1. Hardness (ISO3738 and IOS3878)

The ability of the material to resist local modeling deformation. The common hardness determination method for cemented carbide is Rockwell hardness or Vickers hardness test method. The Unit are HRA (60kg load) and HV30 (30kg load).Due to the different measurement techniques, the two hardness shall be converted according to the reference table of the measurement materials.

Rockwell hardness		Vickers hardness	
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© 2. Fracture Toughness







Fracture toughness (KIC) refers to the ability of the material to resist the instability and expansion of the internal cracks. Its size depends on the material composition, tissue, etc,Refactors, to characterize the comprehensive performance of materials.

© 3. Transverse Rupture Strength (ISO3327)

Transverse Rupture Strength (TRS) is the ability of a material to resist bending without fracture. The value is the material in a standard three-point bending test Stress measured at the breakpoint. When this experiment is applied to the carbide, C sample is used according to GBT / 3851-2015 measure. The TRS uses the average of several measurements as the measurements, which can vary widely. This result depends greatly on the sample surface smoothness, Surface residual stress, surface corrosion and material defects











INTRODUCTION OF POST PROCESSING

SHAREATE has been quietly providing high-quality cemented carbide products to meet your expectations. In addition to cemented carbide products, SHAREATE also provides a range of post-processing services, a variety of shape and geometry of the Bar, all-round to meet the needs of customers and the tool market, just by providing the blueprints, SHAREATE can quickly respond to your needs with a combination of superior manufacturing capabilities and a variety of shape-shifting technologies.

Signs	Services	Account
	Cut Off	Provide round bar cutting service of any standard length or special length.
	Fine grinding	Fine grinding to H6 tolerance, or other fine grinding tolerance, according to the drawing.
	Chamfer Angle	Provide round-rod chamfering service to improve your processing efficiency.
	Chamfer Angle	Provide repair service for large outside diameter or high segment difference to reduce grinding time.
	Gutter processing	Make all kinds of standard gutter.
	Customized Production	Custom length production service available

TECHNICAL INFORMATION

* Technical parameters of round Rod

Outside diameter		Ovality	
	Outside diameter of the Rod to be measured		Ovality is the radial distance between two concentric circles, including the circumference of the section of the bar
Length		Bore diameter	
	The length of the Rod to be measured		Diameter of inner cold hole of round Rod
Degree of finish		Eccentricity ratio	
	The surface quality of a round bar is usually expressed in terms of the maximum average finish Ra		The eccentricity ratio represents the deviation of the center of the Round Bar from the pitch circle formed by the inner cold hole, the deviation of the center of the Round Bar with a single straight hole and the center of the inner cold hole from the round bar
Flatness		Spiral Angle	
	A rotating Rod, mounted on two support points, is measured in the middle of its maximum curvature		The Helix Angle represents the angle between the Longitudinal center line and Helix of the Rod
Degree of concentricity		Cylindricity	
	Maximum bending of a Rod		The deviation of the surface of a bar from that of an ideal cylinder