

SHAREATE

SHAREATE

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CEMENTED CARBIDE PRODUCTS

MINING AND CONSTRUCTION

Shareate Tools Ltd.

COMPANY PROFILE

Shareate Tools Ltd. (hereinafter referred to as "Shareate") is a national high-tech enterprise, focusing on six core businesses such as cemented carbide, mining drilling tools, cutting tools, petroleum instrumentation, engineering equipment, international trade and mining services, forming an operation model of upstream and downstream industrial chain penetration and industrial integration development. Shareate includes Australia AMS, the United States AMS, Canada Shareate, South Korea Shareate, Wuhan Shareate, and 24 other domestic and foreign molecular companies, with the domestic leading and largest drilling tools R&D, and manufacturing base, thousand-ton cemented carbide R&D and manufacturing base. Shareate has a sound technology research and development system and independent intellectual property rights system, the comprehensive introduction of the intelligent management system and production equipment, many products leading the domestic market segments, widely used in the petroleum industry, mining, infrastructure, aerospace, automobile manufacturing, electronic information, machining, intelligent equipment, and other fields.

In April 2017, Shareate established a wholly owned subsidiary Wuhan Shareate Tools LTD. (hereinafter referred to as "Wuhan Shareate") in Wuhan Caidian District. Wuhan Shareate's cemented segment covers tungsten carbide inserts for mining, cemented carbide bars, petroleum wear-resistant precision parts, and other categories. The mining products include carbide inserts for rock drilling, matrix for superhard composite sheets, and other wear-resistant parts

Shareate consistently supports the development of core technologies, works to establish a globally recognized brand of mining drilling tools and cemented carbide, and follows the path of internationalization, modernization, and integration of manufacturing services. Shareate is prepared to collaborate with local and international users to build a better future!



PASSION WINS DREAM QUALITY WINS RESPECT

Continuous Accumulation and Innovation of Cemented Carbide Technology for Over 40 Years

- © The first enterprise in China to fully introduce American cemented carbide production equipment and technology.
- © A pioneer in low-pressure sintering technology, possessing high-end professional pressure sintering furnaces.
- © Advanced and complete physical and chemical testing equipment and laboratory center, with research and development capabilities that are forward-looking for industry development.

ADVANCED MANUFACTURING EQUIPMENT

On-site 6S management, reasonable workstation layout, intelligent production line, advanced manufacturing equipment, and standardized operating procedures.



Intelligent manufacturing production line



Raw Materials Warehouse



Batching Workshop



Ball Milling Workshop



Spray Tower



Mixing Material Warehouse



Pressing Workshop



Sintering Workshop



Sintering Furnace



Grinding Workshop

ADVANCED INSPECTION EQUIPMENT

Advanced and complete test and inspection equipment, professional technical team



Rockwell Hardness Tester



Vickers Hardness Tester



Coercive Magnetometer



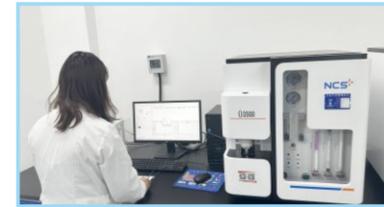
Cobalt Magnetometer



Metallographic Microscope



Scanning Electron Microscope



Oxygen Analyzer



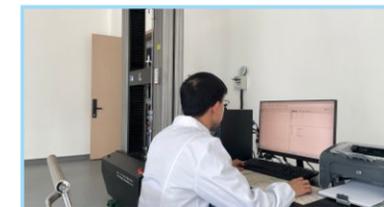
Infrared Carbon and Sulfur Analyzer



Fatigue Impact Testing Machine



Abrasive Wear Testing Machine



Universal Testing Machine



Image Measuring Instrument



Projector



Automatic Sorting



Keyence 3D Profile Measurement

CARBIDE INSERTS FOR OILFIELD AND MINING TRI-CONE DRILL BITS

Carbide inserts for oilfield and mining tri-cone drill bits come in a wide variety of grades and types. According to the shape of the insert tip, there are mainly spoon-shaped inserts, conical inserts, wedged inserts, flat inserts, etc., which can be customized in shape and size according to customer requirements.

* Grades properties and applications

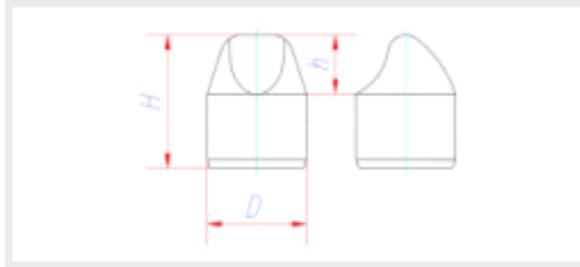
| Grade | Cobalt Content | Density | Hardness | Bending Strength | Application Introduction |
|-------|----------------|--------------------------|-----------|-----------------------|---|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.5) | N/mm ² (≥) | |
| JZ06 | 6 | 14.95 | 90.3 | 2700 | Applied to the wear protection of cone bits to reduce the wear of the bit steel body. |
| JZ08 | 8 | 14.75 | 89.5 | 3000 | With high wear resistance and applied to the tri-cone drill bits with medium exposed height of inserts. |
| JZ09 | 9 | 14.65 | 89.5 | / | Applied to various wear-resistant parts, such as wear protection insert and serrated insert. |
| JZ10 | 10 | 14.55 | 88.4 | 2900 | With higher wear resistance than JZ10C and applied to the tri-cone drill bits with medium exposed height of inserts in drilling medium-hard rock. |
| JZ10C | 10 | 14.55 | 87.8 | 2850 | Applied to the tri-cone drill bits with medium exposed height of inserts in drilling medium-hard rock. |
| XR11C | 11 | 14.45 | 87.0 | 2800 | With higher toughness than JZ10C and applied to the tri-cone drill bits with medium exposed height of inserts in drilling hard rock. |
| JZ12 | 12 | 14.35 | 87.8 | 3000 | With higher wear resistance than JZ12C and applied to the tri-cone drill bits with medium-long exposed height of inserts in drilling medium-hard rock. |
| JZ12C | 12 | 14.35 | 86.6 | 2800 | With high wear resistance and applied to the tri-cone drill bits with medium-long exposed heights of inserts in drilling medium-hard and hard rock. |
| JZ13 | 13 | 14.25 | 87.5 | 2900 | Applied to the tri-cone drill bits with medium-long exposed height of inserts in drilling medium-hard rock. |
| XR13C | 13 | 14.25 | 86.5 | 2800 | Applied to the tri-cone drill bits with medium-long exposed height of inserts in drilling medium-hard and hard rock. |
| JZ14 | 14 | 14.15 | 87.0 | 2850 | With higher wear resistance than JZ14C and applied to the tri-cone drill bits with medium-long exposed heights of inserts in drilling medium-hard and hard rock. |
| JZ14C | 14 | 14.15 | 85.9 | 2800 | Applied to the tri-cone drill bits with medium-long exposed height of inserts in drilling hard rock. |
| JZ16 | 16 | 13.95 | 86.5 | 2950 | Applied to the tri-cone drill bits with medium-long exposed height of inserts in drilling hard rock. |
| JZ16C | 16 | 13.95 | 85.5 | 2850 | With higher toughness than JZ16 and applied to the tri-cone drill bits with medium-long exposed height of inserts, suitable for higher speeds and drilling pressures. |

★ The customized specification is available.



◎ SPOON-SHAPED INSERT

The spoon-shaped insert is used for inserted cone bits, and breaking rocks by cutting, and is suitable for high-speed drilling in soft rock formations.

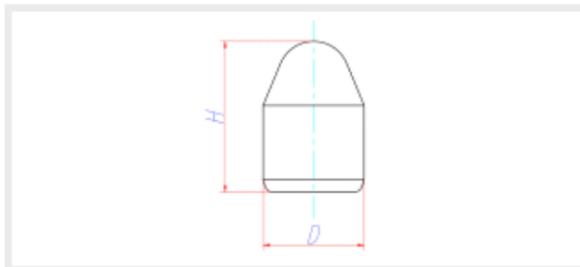


| Model | Basic size (mm) | | | Model | Basic size (mm) | | |
|-------|-----------------|------|------|-------|-----------------|------|------|
| | D | H | h | | D | H | h |
| S0813 | 8.1 | 13.0 | 5.0 | S1624 | 16.1 | 25.0 | 11.5 |
| S1115 | 11.1 | 15.0 | 7.0 | S2235 | 22.1 | 35.0 | 17.0 |
| S1320 | 13.1 | 20.0 | 8.5 | S3047 | 30.1 | 47.0 | 19.0 |
| S1423 | 14.1 | 23.0 | 11.0 | S3252 | 32.1 | 52.0 | 22.0 |

★ The customized specification is available.

◎ CONICAL INSERT

The conical insert is used for inserted cone bits, breaking rocks by chiseling and crushing, and is suitable for hard rock formations.

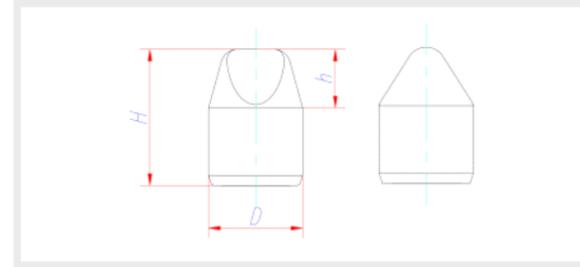


| Model | Basic size (mm) | | Model | Basic size (mm) | |
|-------|-----------------|------|-------|-----------------|------|
| | D | H | | D | H |
| Z0710 | 7.1 | 10.0 | Z1317 | 13.1 | 17.0 |
| Z0812 | 8.1 | 12.0 | Z1420 | 14.1 | 20.0 |
| Z0913 | 9.1 | 13.0 | Z1517 | 15.1 | 17.0 |
| Z1016 | 10.1 | 16.0 | Z1625 | 16.1 | 25.0 |
| Z1217 | 12.1 | 17.0 | Z1824 | 18.1 | 24.0 |

★ The customized specification is available.

◎ WEDGED INSERT

The wedged insert is used for inserted cone bit, breaking rocks by cutting and chiseling, and is suitable for medium soft rock formations.

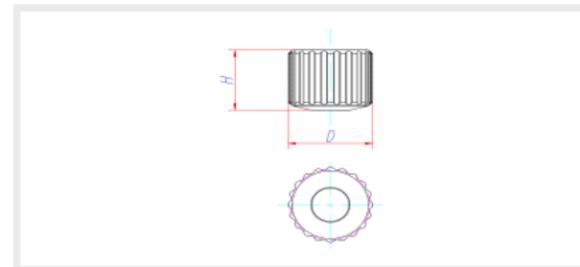


| Model | Basic size (mm) | | | Model | Basic size (mm) | | |
|-------|-----------------|------|-----|-------|-----------------|------|------|
| | D | H | h | | D | H | h |
| X1013 | 10.1 | 13.0 | 6.0 | X1420 | 14.1 | 20.0 | 8.8 |
| X1114 | 11.1 | 14.0 | 6.3 | X1620 | 16.1 | 20.0 | 10.0 |
| X1217 | 12.1 | 17.0 | 7.5 | X2032 | 20.1 | 32.0 | 16.0 |
| X1317 | 13.1 | 17.0 | 7.8 | X2632 | 26.1 | 32.0 | 10.0 |

★ The customized specification is available.

◎ SERRATED INSERT

The serrated insert can be applied to the cone bit and the stabilizer in the drilling rig, etc. It can reduce the wear of drill bit and drill pipe steel body.



| Model | Basic size (mm) | |
|-------|-----------------|------|
| | D | H |
| K0807 | 8.1 | 7.0 |
| K1008 | 10.1 | 8.0 |
| K1210 | 12.1 | 10.0 |

★ The customized specification is available.

CARBIDE INSERTS FOR MINING IMPACT DRILL BITS

Applied to the DTH drilling bits, hydraulic thread bits, and taper jointed bits. There are mainly ovoid inserts, parabolic inserts, conical inserts, etc., according to the shape of the insert tip, which can be customized in shape and size according to the customer's requirements.

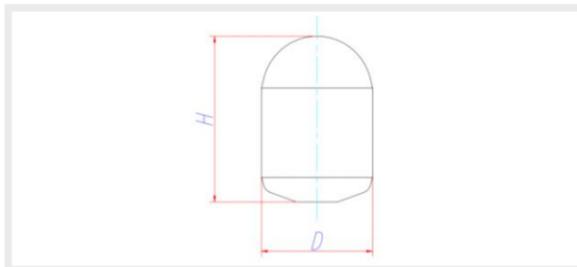
* Grades properties and applications

| Grade | Cobalt Content | Density | Hardness | Bending Strength | Application Introduction |
|--------|----------------|--------------------------|-----------|-----------------------|---|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.3) | N/mm ² (≥) | |
| XR062 | 6 | 14.95 | 90.0 | 2800 | Applied to the DTH bits and thread bits for medium and high air pressure, can be used on medium-hard rock formations. |
| XR06A | 6 | 14.95 | 90.5 | 2900 | Applied to the DTH bits, thread bits, and ordinary small-diameter bits for medium and low air pressure can be used on medium-soft or medium-hard rock formations. |
| XR06AH | 6 | 14.95 | 90.3 | 3100 | Applied to the DTH bits and thread bits for high air pressure, can be used on medium hard or hard rock formations, with good impact toughness and versatility |
| XR06AT | 6 | 14.95 | 90.6 | 3200 | Applied to the DTH bits and thread bits for high air pressure, suitable for hard and extremely hard rock formations, with good wear resistance |

★ The customized specification is available.

◎ OVOID INSERT

The ovoid insert is used for the DTH drilling bit and hydraulic thread bit. It breaks rocks by chiseling and crashing, suitable for a hard and extremely hard rock formation.

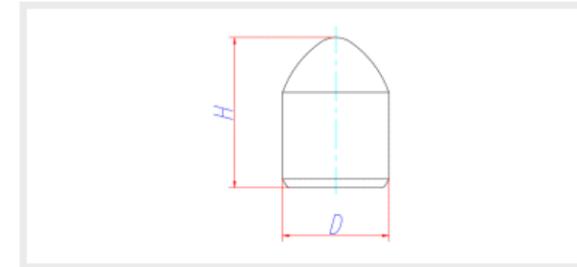


| Model | Basic size (mm) | | Model | Basic size (mm) | |
|-------|-----------------|------|-------|-----------------|------|
| | D | H | | D | H |
| Q0606 | 6.1 | 6.0 | Q1417 | 14.1 | 17.0 |
| Q0709 | 7.1 | 9.0 | Q1624 | 16.1 | 24.0 |
| Q0810 | 8.1 | 10.0 | Q1826 | 18.1 | 26.0 |
| Q0910 | 9.1 | 10.0 | Q1927 | 19.1 | 27.0 |
| Q1012 | 10.1 | 12.0 | Q2028 | 20.1 | 28.0 |
| Q1114 | 11.1 | 14.0 | Q2230 | 22.1 | 30.0 |
| Q1216 | 12.1 | 16.0 | Q2540 | 25.2 | 40.0 |

★ The customized specification is available.

◎ PARABOLIC INSERT

The parabolic insert is applied to the DTH drilling bits, hydraulic thread bits, and taper jointed bits. It breaks rocks by chiseling, crushing and cutting, suitable for drilling medium-hard rock formations.

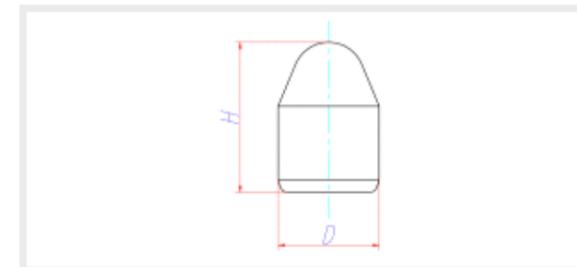


| Model | Basic size (mm) | | | Model | Basic size (mm) | | |
|-------|-----------------|------|-----|-------|-----------------|------|------|
| | D | H | h | | D | H | h |
| D0710 | 7.1 | 10.0 | 3.9 | D1320 | 13.1 | 20.0 | 6.3 |
| D0812 | 8.1 | 12.0 | 4.5 | D1419 | 14.1 | 19.0 | 7.1 |
| D0914 | 9.1 | 14.0 | 4.7 | D1521 | 15.1 | 21.0 | 8.5 |
| D1016 | 10.1 | 16.0 | 5.1 | D1622 | 16.1 | 22.0 | 9.8 |
| D1117 | 11.1 | 17.0 | 5.8 | D1827 | 18.1 | 27.0 | 9.7 |
| D1218 | 12.1 | 18.0 | 7.2 | D2030 | 20.1 | 30.0 | 11.4 |

★ The customized specification is available.

◎ CONICAL INSERT

The conical insert is applied to the DTH drilling bits, hydraulic thread bits, and taper jointed bits. It breaks rocks by chiseling, crushing and cutting, suitable for drilling medium-hard rock formations.



| Model | Basic size (mm) | | Model | Basic size (mm) | |
|-------|-----------------|------|-------|-----------------|------|
| | D | H | | D | H |
| Z0710 | 7.1 | 10.0 | Z1317 | 13.1 | 17.0 |
| Z0811 | 8.1 | 11.0 | Z1419 | 14.1 | 19.0 |
| Z0912 | 9.1 | 12.0 | Z1520 | 15.1 | 20.0 |
| Z1013 | 10.1 | 13.0 | Z1622 | 16.1 | 22.0 |
| Z1114 | 11.1 | 14.0 | Z1824 | 18.1 | 24.0 |
| Z1215 | 12.1 | 15.0 | Z1928 | 19.1 | 28.0 |

★ The customized specification is available.

CARBIDE INSERTS FOR ENGINEERING

It can be applied to roller cutters and disc cutters, mainly divided into shafts, and reverse well inserts. It can be customized according to customer requirements of size and size production

* Grades properties and applications

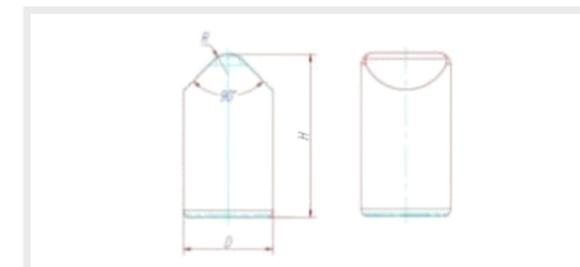
| Grade | Cobalt Content | Density | Hardness | Bending Strength | Application Introduction |
|-------|----------------|--------------------------|-----------|-----------------------|---|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.3) | N/mm ² (≥) | |
| JZ10C | 10 | 14.55 | 87.8 | 2850 | With good wear resistance and applied to the roller cutter and disk cutter inserts used in medium-hard rock formations. |
| XR11C | 11 | 14.45 | 87.0 | 2800 | Applied to the roller cutter and disk cutter inserts used in medium-hard rock formations. |
| XR13C | 13 | 14.25 | 86.5 | 2800 | With good toughness and applied to the roller cutter and disk cutter inserts used in hard rock formations |
| JZ16 | 16 | 13.95 | 86.5 | 2950 | With good toughness and applied to the roller cutter inserts used in medium hard to hard rock formations |
| JZ16C | 16 | 13.95 | 85.5 | 2850 | With excellent impact resistance and applied to the roller inserts used in hard to extremely hard rock formations with high compressive strength. |

★ The customized specification is available.



© AIRFOIL INSERT

The unique insert design is used to increase the drilling speed in engineering operations and break rocks through cutting and chiseling. It is suitable for medium soft rock formations.

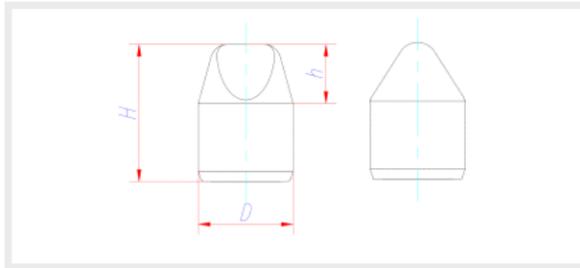


| Model | Basic size (mm) | | Model | Basic size (mm) | |
|-------|-----------------|------|-------|-----------------|------|
| | D | H | | D | H |
| X1625 | 16.0 | 25.0 | X2235 | 22.0 | 35.0 |
| X1826 | 18.0 | 26.0 | X2240 | 22.0 | 40.0 |
| X2030 | 20.0 | 30.0 | X2437 | 24.1 | 37.0 |

★ The customized specification is available.

WEDGED INSERT

It breaks rock by cutting and chiseling, suitable for soft rock formations with high drilling speed and low insert breakage rate.



| Model | Basic size (mm) | | | Model | Basic size (mm) | | |
|-------|-----------------|------|-----|-------|-----------------|------|------|
| | D | H | h | | D | H | h |
| X1015 | 10.0 | 15.0 | 6.2 | X1620 | 16.4 | 20.0 | 7.6 |
| X1114 | 11.6 | 14.0 | 7.5 | X1828 | 18.5 | 28.0 | 13.3 |
| X1217 | 12.2 | 17.0 | 6.0 | X2032 | 20.6 | 32.0 | 15.5 |
| X1218 | 12.5 | 18.0 | 7.3 | X2838 | 28.6 | 38.0 | 15.4 |
| X1421 | 14.4 | 21.0 | 8.1 | X3040 | 30.5 | 40.0 | 16.3 |

★ The customized specification is available.



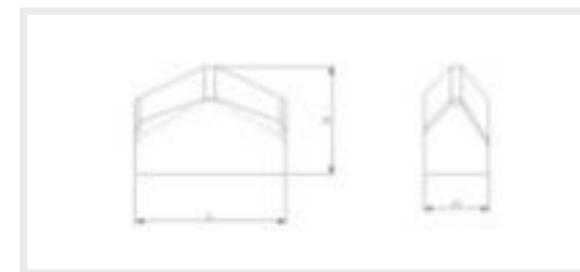
CARBIDE INSERTS FOR SHIELD TBM

It has the characteristics of high strength, wear resistance, and so on.

| Grade | Cobalt Content | Density | Hardness | Bending Strength | Application Introduction |
|-------|----------------|--------------------------|-----------|-----------------------|---|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.3) | N/mm ² (≥) | |
| JZ10C | 10 | 14.55 | 87.8 | 2850 | With good wear resistance and applied to the shield tips used for medium-hard formations. |
| JZ12C | 12 | 14.33 | 86.6 | 2800 | With good toughness and thermal fatigue resistance for shield tips used in complex formation. |
| JZ14 | 14 | 14.15 | 87.0 | 2850 | Used For medium to hard formation shield tips. |

★ The customized specification is available.

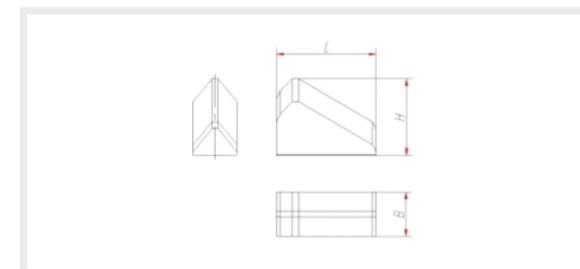
MASTER INSERTS



| Model | L | I | H |
|--------------|----|----|----|
| DKY050040025 | 50 | 25 | 40 |
| DKY060042028 | 60 | 28 | 42 |

★ The customized specification is available.

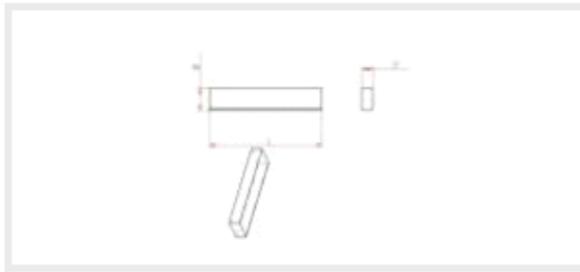
PAIRED INSERTS



| Model | L | I | H |
|--------------|----|------|----|
| DKY040035022 | 40 | 21.7 | 35 |
| DKY045040025 | 45 | 24.5 | 40 |

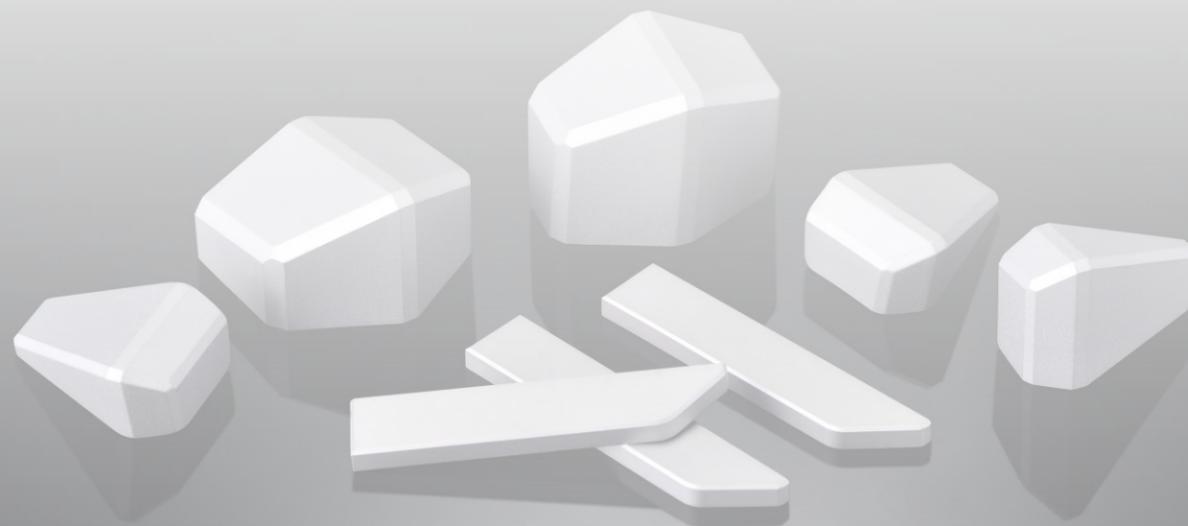
★ The customized specification is available.

LONG INSERTS



| Model | L | I | H |
|--------------|----|----|----|
| DKY093016010 | 93 | 10 | 16 |
| DKY073016010 | 73 | 10 | 16 |

★ The customized specification is available.



CARBIDE CUTTING PICKS

The carbide cutting picks are super coarse grain carbides with good toughness and thermal fatigue resistance, which is suitable for inserted carbide cutting picks and engineering rotary cutter picks. According to the shape of the insert, there are mainly multi-conical inserts and mushroom-shaped inserts, etc., and the shape and size can be customized according to the requirements of customers.

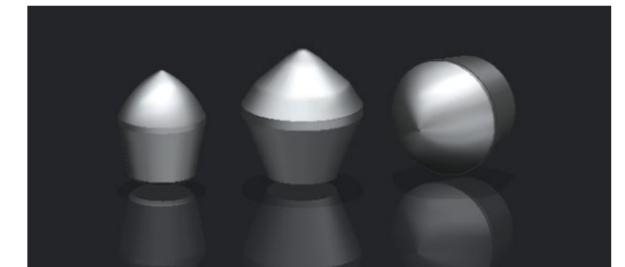
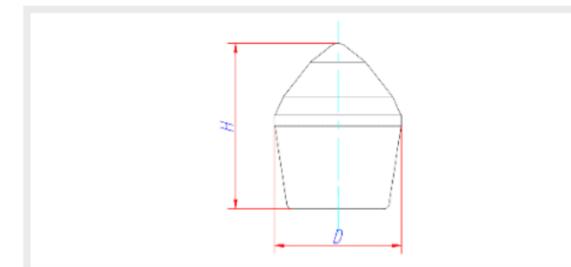
Grade Chart

| Grade | Cobalt Content | Density | Hardness | Bending Strength | Application Introduction |
|--------|----------------|--------------------------|-----------|-----------------------|--|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.3) | N/mm ² (≥) | |
| XR08TC | 8 | 14.72 | 86.0 | 2500 | It has high wear resistance and is suitable for engineering rotary digging in medium-hard rock formations. |
| XR09CC | 9 | 14.67 | 86.3 | 2700 | With moderate wear resistance and toughness, it is suitable for engineering rotary digging in medium-hard rock formations. |
| XR06VC | 6 | 14.95 | 86.0 | 1800 | Super coarse grain grade with extremely high toughness, suitable for coal mining and complex rock excavation. |
| XR08KC | 8 | 14.72 | 85.5 | 2300 | It has high toughness and is suitable for tunneling in extremely hard rock formations. |
| XR10CC | 10 | 14.45 | 86.5 | 2800 | It has high wear resistance and is suitable for coal mining containing waste rock. |

★ The customized specification is available.

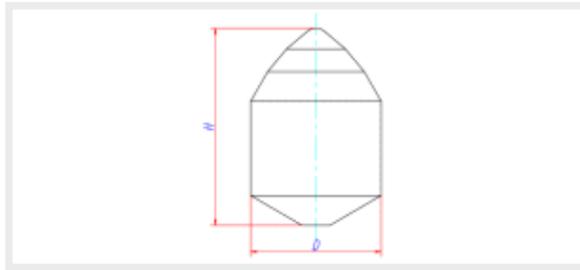
MULTI-CONICAL INSERT

The multi-conical insert can be applied to the coal cutter pick and rotary cutter pick. It is suitable for cutting hard coal rock formation and rock formation.



| Model | Basic size (mm) | |
|--------|-----------------|------|
| | D | H |
| Z2228Y | 22.0 | 28.0 |
| Z2431Y | 24.0 | 31.0 |
| Z2838Y | 28.0 | 38.0 |
| Z3037Y | 30.0 | 37.0 |

★ The customized specification is available.

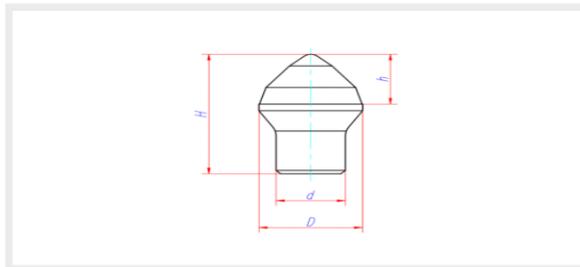


| Model | Basic size (mm) | |
|-------|-----------------|------|
| | D | H |
| Z1625 | 16.0 | 25.0 |
| Z1825 | 18.0 | 25.0 |
| Z2030 | 20.0 | 30.0 |
| Z2230 | 22.0 | 30.0 |
| Z2335 | 23.0 | 35.0 |
| Z2532 | 25.0 | 32.0 |

★ The customized specification is available.

◎ MUSHROOM-SHAPED INSERT

The mushroom-shaped insert can be applied to the coal cutter pick. It is suitable for cutting soft to medium-hard coal formations.



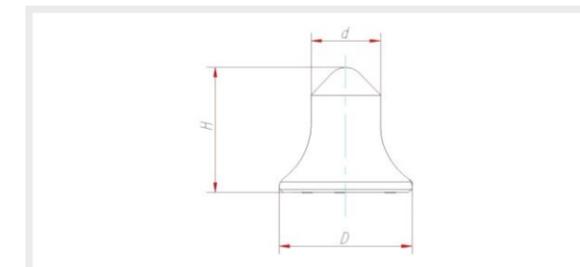
| Model | Basic size (mm) | | | |
|--------|-----------------|------|------|------|
| | D | H | d | h |
| Z2430Y | 24.0 | 30.0 | 20.0 | 13.0 |
| Z2532Y | 25.0 | 32.0 | 20.0 | 13.0 |
| Z2836Y | 28.0 | 36.0 | 20.0 | 15.5 |
| Z3038Y | 30.0 | 38.0 | 25.0 | 16.0 |

★ The customized specification is available.

CARBIDE PICKS FOR ROAD MILLING

Milling picks for cement, asphalt, and mixed pavement.

| Grade | Cobalt Content | Density | Hardness | Bending Strength | Application Introduction |
|--------|----------------|--------------------------|-----------|-----------------------|---|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.3) | N/mm ² (≥) | |
| XR06EC | 6 | 14.95 | 88.5 | 2700 | Suitable for roughening and milling of concrete pavement. |
| XR06CC | 6 | 14.95 | 87.7 | 2500 | 1 Suitable for milling asphalt and mixed surface. 2 Suitable for milling of asphalt and mixed surface. |



| Model | Basic size (mm) | | |
|--------|-----------------|------|------|
| | D | H | d |
| WL1818 | 18.7 | 17.7 | 10.5 |
| WL1918 | 19.0 | 18.2 | 11.5 |
| WL2020 | 20.4 | 20.2 | 11.0 |
| WL2222 | 22.0 | 22.8 | 11.5 |
| WL2522 | 25.0 | 22.8 | 12.0 |

★ The customized specification is available.

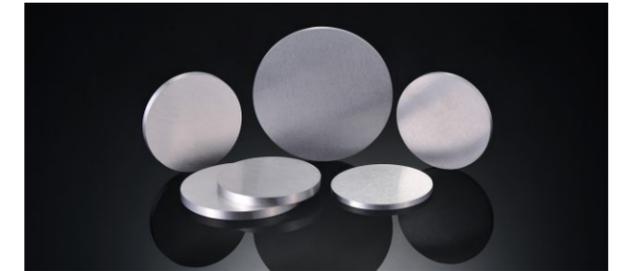
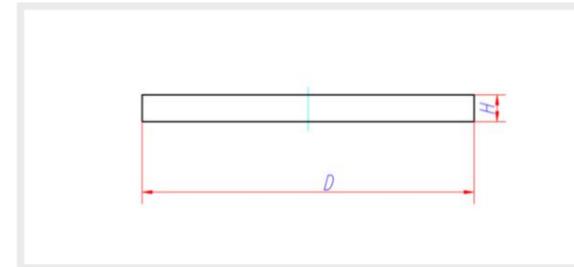
CARBIDE SUBSTRATES FOR SUPERHARD MATERIAL COMPACT

Carbide Substrates of superhard material compact for oil and gas extraction, coal geology and precision cutting, can be customized in shape and size according to the customer's usage requirements.

| Grade | Cobalt Content | Density | Hardness | Bending Strength |
|--------|----------------|--------------------------|-----------|-----------------------|
| | %(±0.5) | g/cm ³ (±0.1) | HRA(±0.5) | N/mm ² (≥) |
| JZ13 | 13 | 14.25 | 87.5 | 2900 |
| JZ13A | 13 | 14.25 | 88.5 | 3300 |
| JZ16 | 16 | 13.95 | 86.5 | 2850 |
| XR111 | 11 | 14.45 | 89.7 | 3000 |
| XR121 | 12 | 14.35 | 89.2 | 3100 |
| XR13II | 13 | 14.25 | 88.5 | 3300 |
| XR131 | 13 | 14.25 | 88.7 | 3000 |
| XR133 | 13 | 14.25 | 88.1 | 3100 |

★ The customized specification is available.

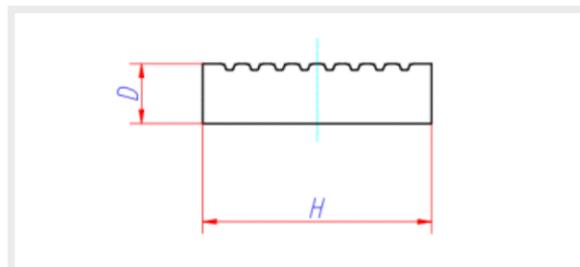
CARBIDE SUBSTRATES FOR PRECISION CUTTING



| Model | Basic size (mm) | |
|-------|-----------------|---------|
| | D | H |
| J32 | 32.3 | 3.0-8.0 |
| J47 | 47.7 | 3.0-8.0 |
| J52 | 52.0 | 3.0-8.0 |
| J55 | 55.1 | 3.0-8.0 |
| J58 | 58.1 | 3.0-8.0 |
| J62 | 61.9 | 3.0-8.0 |
| J66 | 66.0 | 3.0-8.0 |
| J77 | 77.4 | 3.0-8.0 |

★ The customized specification is available.

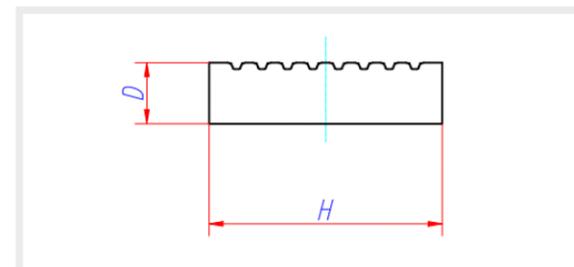
CARBIDE SUBSTRATES OF PDC COMPACT FOR OIL AND GAS EXTRACTION



| Model | Basic size (mm) | |
|-------|-----------------|----------|
| | D | H |
| J15 | 14.5-14.8 | 3.0-13.0 |
| J18 | 17.4-18.5 | 5.0-16.0 |
| J21 | 20.4-21.5 | 8.0-19.0 |

★ The customized specification is available.

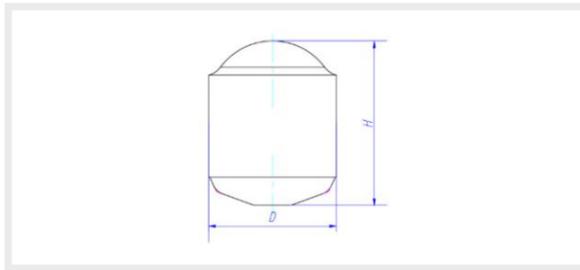
CARBIDE SUBSTRATES OF PDC COMPACT FOR COAL GEOLOGY



| Model | Basic size (mm) | |
|-------|-----------------|---------|
| | D | H |
| J12 | 11.5-12.5 | 3.0-8.0 |
| J15 | 14.2-15.2 | 3.0-8.0 |

★ The customized specification is available.

☉ CARBIDE INSERTS FOR PDC COMPOSITE INSERT



| Model | | Basic size (mm) | |
|-------|-------|-----------------|------|
| | | D | H |
| Q08 | Q0810 | 8.0 | 10.0 |
| | Q0812 | | 12.0 |
| Q09 | Q0913 | 9.0 | 13.0 |
| | Q0913 | | 14.0 |
| Q10 | Q1013 | 10.0 | 13.0 |
| | Q1014 | | 14.0 |
| Q11 | Q1113 | 11.5 | 13.0 |
| | Q1114 | | 14.0 |
| Q12 | Q1216 | 12.0 | 16.0 |
| | Q1216 | | 17.0 |
| Q13 | Q1308 | 13.0 | 8.0 |
| | Q1312 | | 12.0 |
| Q16 | Q1610 | 16.0 | 10.0 |
| | Q1618 | | 18.0 |
| Q19 | Q1913 | 19.0 | 13.0 |
| | Q1917 | | 17.0 |

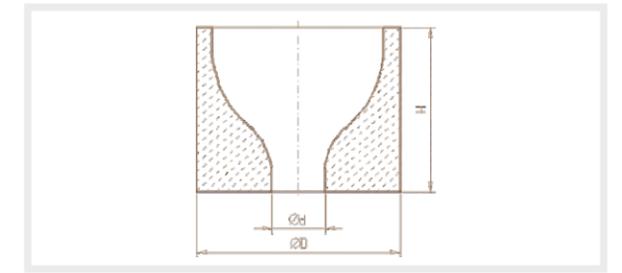
★ The customized specification is available.



DRILLING ACCESSORIES

☉ NOZZLE

Shareate can provide various types of thread nozzles for PDC bits, common type nozzles, extended nozzles, center nozzles, etc. for tri-cone drill bits.

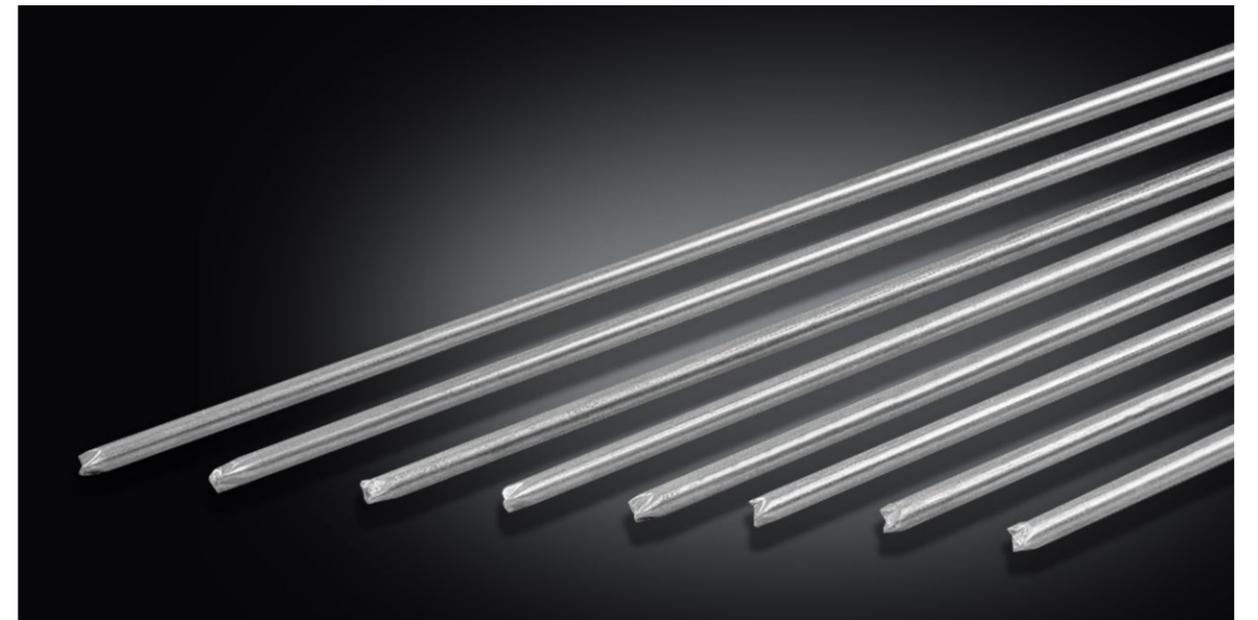


| Nozzle OD | 25.350-0.28 | 23.50±0.13 | 29.74±0.13 | 32.89±0.13 | 40.84±0.13 | Water Hole Diameter | |
|-----------------|----------------|-------------------------------|--------------------------------|------------------------------|-------------------------------|---------------------|-------|
| Assembly Length | | 19.05 | 20.62 | 26.97 | 26.97 | | |
| Bit Model | PDC Bit Series | Tri-cone Bit Series 53/4-63/4 | Tri-cone Bit Series 83/6-133/4 | Tri-cone Bit Series 143/4-26 | Tri-cone Bit Series 33/4-43/4 | | |
| Nozzle Type | Thread | Common | Common | Common | Extended | Common | |
| Nozzle Code | SD08 | S2-6 | S3-6 | S4-6 | | S5-6 | 6.53 |
| | SD09 | S2-7 | S3-7 | S4-7 | | S5-7 | 7.14 |
| | SD10 | S2-8 | S3-8 | S4-8 | | S5-8 | 7.92 |
| | SD11 | S2-9 | S3-9 | S4-9 | | S5-9 | 8.74 |
| | SD12 | S2-10 | S3-10 | S4-10 | | S5-10 | 9.53 |
| | SD13 | S2-10A | S3-10A | S4-10A | | S5-10A | 10.31 |
| | SD14 | S2-11 | S3-11 | S4-11 | | S5-11 | 11.13 |
| | SD15 | S2-12 | S3-12 | S4-12 | | S5-12 | 11.91 |
| | SD16 | S2-13 | S3-13 | S4-13 | | S5-13 | 12.7 |
| | SD17 | S2-13A | S3-13A | S4-13A | | S5-13A | 13.49 |
| | SD18 | S2-14 | S3-14 | S4-14 | | S5-14 | 14.27 |
| | | S2-15 | S3-15 | S4-15 | | S5-15 | 15.08 |
| | | | S3-16 | S4-16 | | S5-16 | 15.88 |
| | | | S3-17 | S4-17 | | S5-17 | 17 |
| | | | S3-17A | S4-17A | | S5-17A | 17.48 |
| | | | S3-18 | S4-18 | | S5-18 | 18.25 |
| | | | S3-19 | S4-19 | | S5-19 | 19.05 |
| | | | S3-20 | S4-20 | | S5-20 | 19.84 |
| | | | S3-21 | S4-21 | | S5-21 | 21 |
| | | | S3-22 | S4-22 | | S5-22 | 22.23 |
| | | | S3-23 | S4-23 | | S5-23 | 23.01 |
| | | | S3-24 | S4-24 | | S5-24 | 23.81 |

★ The customized specification is available.

TUNGSTEN CARBIDE TUBULAR WELDING RODS

Tungsten carbide welding rod has better weldability, wear resistance, and impact resistance, which is suitable for surfacing welding and repair of oil drilling tools, construction, building materials machinery, mining geological tools, agricultural machinery, and other strong wear parts.



*Specification and Application

| Grade | Specification | | Characteristics, Typical Application Areas, and Working Conditions |
|--------|---------------|-------------|--|
| | Diameter (mm) | Length (mm) | |
| XRYD-1 | Φ3.2 ~ Φ6 | 400-1000 | It has high resistance to low-stress abrasive wear and is suitable for surfacing and repairing of well drilling and salvage tools, concrete mixing blades, mud pumps, coal mine chutes, coal drill pipes, pulverizer blades, dredger blades, high-speed sand mixers and so on. |
| XRYD-2 | | | |
| XRYD-3 | Φ3.2 ~ Φ6 | 400-1000 | Having better resistance to low-stress abrasive wear, particularly applicable to the oil drilling tool, the geological tool, such as steel drill bit and fishtail bit; is subject to strong abrasion of mechanical parts by rock and sand. |
| XRYD-4 | | | |
| XRYD-5 | Φ3.2 ~ Φ6 | 400-1000 | Suitable for the working condition of medium impact and abrasion, such as the blades and scrapers of all kinds of mixers, and crushers. Disk-type scraper, slush pump blade, drill pipe joint, stabilizer, coal cutter pick, cone bit. |
| XRYD-6 | Φ2.8 ~ Φ6 | 400-1000 | Suitable for the surfacing of the workpiece suffering from higher impact loading, especially the tooth surface and tip of steel tooth bit for oil drilling, drilling Tig for mining. Coal cutter pick, rip saw tooth, etc. |
| XRYD-7 | | | |

★ The customized specification is available.

NOTES FOR CEMENTED CARBIDE

*01. Notes for Transportation

- ◆ The cemented carbide products could be easily broken when falling to the hard ground from a high position. Please check the products to see whether any damage happens when opening the package.
- ◆ Be careful not to get injure to hands or feet when carrying and using the products since the density of cemented carbide is two times higher than steel parts.
- ◆ The thin cement carbide products (pipe or strip shape or with sharp corners) will easily lose the corners or sides. So do not put excessive load on when fastening. Dismounting and transport before machining.

*02. Notes for Machining

© 2.1 Machining and grinding

- ◆ The cemented carbide could easily crack or chip under the condition of impact effect and excessive machining load. Before starting machining, please check whether the parts are fastened to the workbench.
- ◆ Don't strike the cemented carbide with an iron hammer due to its non-good impact resistance.
- ◆ The general cemented carbide is not easily fixed by a magnet. When using the magnet for fastening, please double-check whether the parts are loose or not.
- ◆ The surfaces machined are very smooth and the corners are very sharp. Be careful of your safety when carrying and using.

© 2.2 Electro machining

- ◆ When the cemented carbide is in the process of electro-machining, the machining surfaces are easily cracking and chipping corners, the workpiece programs need to be adjusted according to the geometric parameter of the parts and the degree of the carbide materials.
- ◆ Wire-electrode cutting sometimes causes the phenomenon of cracking on the machining surfaces. It is necessary to check the machining surfaces to confirm that there is no defect before starting the next procedure.

© 2.3 Welding

- ◆ When the cemented carbide is in the process of welding procedure, the cemented carbide and welding gap easily emerge from the cracks. It is necessary to proceed with the next procedure after checking and confirming that there is no defect. Be strict with the welding technology of cemented carbide and make for welding pretreatment and post-welding heat preservation which will protect the cemented carbide from fast heating and cooling to cause cracking of cemented carbide.

