

CONCENTRATE ON HIGH TECHNOLOGY AND
CREATE VALUES CONSISTENTLY



YUANXIAN HIGH-TECH MATERIAL

A SUPPLIER OF HIGH PERFORMANCE METAL
MATERIAL SINCE THE YEAR 2007



Yuanxian High-Tech Material Trading (Tianjin) Co.,Ltd

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Yuanxian High-Tech Material Trading (Tianjin) Co.,Ltd



COMPANY INTRODUCTION

Yuanxian High-tech Material is a company serving a worldwide customers base providing innovative and reliable product solution that recognizes the value of customer care. Our main activity involves high strength & high tractility steel field and plastic polymer material field. We give stability of attention to our customer's demand ,and supply the right product to them.



Yuanxian High-tech Material 's founder Mr Li is a Master of Materials Engineering, during last 15 years , he is engaging in researching, developing and sourcing high-tech new materials in the areas all the time. In order to serve customers well , he creates this company .

Yuanxian Material Corporation , with a registered capital RMB 10 million , is located in free trade zone in Tianjin, less than one hour way from the biggest sea port in North of China, Xingang Port. All custom clearance could be finished quickly and export procedure is very easy.

For now , we have an annual supply capacity of 400 thousand tons of high performance special steel material , including pre-stressed concrete wire and strand , anchorage , pre-stressed concrete bars , pre-stressed screw bars, which are widely used in construction of bridge ,rail way ,highway ,subway, tunnel, airport ,nuclear power plant ,real estate building and other construction of geotechnical project and industry building.

We have an annual supply capacity of 5000 tons of plastic polymer material , including PET material products window film for auto industry ,commercial building ,safety protection field and home decorative area ,li-ion battery seperator for auto battery industry, and biodegradable plastic film for food packing and agriculture area.

Until now we have exported our products to Spain, France,Sweden,

Ukraine, Peru and other countries. Depending on deep understanding to the industry and customer's needs, as well as years of experience in professional services, all staff carry forward the spirit of enterprise "Honesty, Innovation, Sharing, Responsibility, Win-Win" , relying on quality products, continue to provide customers with more accurate professional services. Welcome you to make business discussion with us.



PRODUCTS LIST



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COMPANY CORE VALUES

Our Values:

Operational excellence :

Striving and achieving excellence in all we do ensures that we stand head and shoulders above our competitors.

Commitment to quality :

Benchmarking our products and service delivery to international quality standards are an uncompromising feature of our business.

Relationship Building :

Forging mutually beneficial & long term relationships with suppliers and principals with honesty and integrity equates to long-term sustainability.

Customer satisfaction :

Unwavering commitment to addressing our customer needs fully and efficiently forms the building blocks of our business.

Innovation :

At the forefront of technological advancements, from customers' feedback, to target market demand survey, to products' design from our technology department, finally to the new products' launch in the market, the whole circle time is very short.

Our Attitude:

We stand depending on Honesty, Integrity, Trust and Dignity, and grow with our partners. We are serious to customers' requirement, give stability of attention on these requirements ,and supply the right product to them.

COMPANY SOCIAL RESPONSIBILITY

Social responsibility:

Social responsibility refers to the responsibility of an organization to society. An organization should operate and manage in a socially beneficial manner. Social responsibility usually refers to the social obligations that the organization assumes above the organization's own goals. It goes beyond the legal and economic obligations of the organization, and also includes aspects such as environmental protection, production safety, social ethics, and public interest. It is the enterprise's responsibility to society as a whole.

All the company's business activities focus on improving the satisfaction of customers, employees and shareholders, and benefiting the society to conduct business. All our products are being and applied with the purpose of saving energy and reducing carbon dioxide emissions.

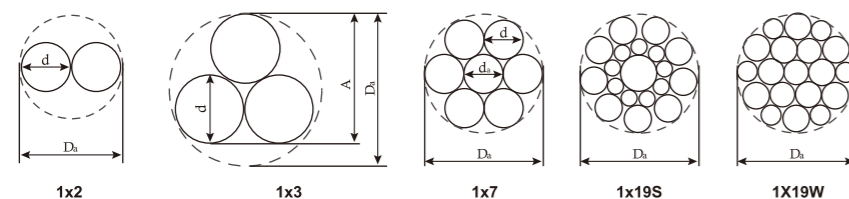


PRODUCTS INTRODUCTION

» Prestressed Concrete Strand

- ◆ Low relaxation Prestressed Concrete Strand is twisted by 2 wires, 3wires, 7 wires or 19 wires , which is applied to high efficiency and energy saving materials of concrete structures after stabilizing treatment.
- ◆ Product characterizes high intensity, high breakage force, high extension,product has a good effect on improving safety coefficient and enhancing anchored force, these features make it be qualified in construction of railways, highways, bridges, mine, nuclear power plant, hydropower, large-span buildings.
- ◆ Green products, low relaxation high tensile strength prestressed concrete strand could save at least 30% steel using quantity , effectively reducing carbon dioxide emissions

Structure:



Specification:(the specifications we could produce)

Specification : YXXK-SHTS15 ENTERPRISE STANDARD (Ref GB/T5224-2014) FOR 1X7 PRESTRESSED CONCRETE STEEL STRAND

| Nominal diameter | Tolerance on Diameter | Nominal Area of Section | Weight of strand | Tensile Strength, Rm | Yield Strength, Rp0.2 | Elongation Lo=500mm, Agt | Curvative of strand | Lay Length | The Relaxation at 1000h (initial load to 70% of nominal max load) (r/%) Not more than |
|------------------|-----------------------|-------------------------|------------------|----------------------|-----------------------|--------------------------|------------------------------|------------|--|
| (mm) | (mm) | (mm ²) | (kg/1000m) | (N/mm ²) | (N/mm ²) | (%) | mm | mm | |
| 15.24 | +0.40,-0.15 | 140.00 | 1101 | 2260.00 | 1960.00 | 4 | Max bow height = 5mm/ 1meter | (12-16)d | 2.5 |

Specification : YXXK-LRNP15 ENTERPRISE STANDARD (Ref GB/T5224-2014, prEN10138-3:2011,NB/T20325.1-2014)

| Nominal diameter | Tolerance on Diameter | Nominal Area of Section | Weight of strand | Tensile Strength, Rm | Minimum Breaking load,Fm | Maximum value of maximum force,Fm, max | Minimum load at 0.2% Extension, Fp0.2 | Elongation Lo=500mm | Curvative of strand | Tensile Strength, Rm | The Relaxation at 1000h (initial load to 80% of nominal max load) (r/%) Not more than | Fatigue force range Fr with upper limit Fup according to 80 % actual maximum force (Fma) | Maximum D-value of deflected tensile | Stress corrosion resistance at 80 % actual max. force (Fma) |
|------------------|-----------------------|-------------------------|------------------|----------------------|--------------------------|--|---------------------------------------|---------------------|------------------------------|----------------------|--|--|--------------------------------------|---|
| (mm) | (mm) | (mm ²) | (kg/1000m) | (N/mm ²) | (KN) | (KN) | (KN) | (%) | | mm | | | | Test solution A, hours |
| 15.7 | +0.40,-0.15 | 150 | 1178 | 1860 | 279 | 309 | 257 | 3.5 | Max bow height = 5mm/ 1meter | (12-16)d | 2.5 | 200 MPa × Sn for ≥ 2 × 106 cycles | 28 % d | 5 |

GB/T5224-2014 ,FOR 1X7 PRESTRESSED CONCRETE STEEL STRAND

| Structure | Nominal diameter | Tolerance on Diameter | Nominal Area of Section | Weight of strand | Tensile Strength, Rm | Minimum Breaking oad,Fm | 0,2% proofforce , Fp0.2 | Elongation Lo=500mm, Agt | Curvative of strand | Lay Length | The Relaxation at 1000h (initial load to 70% of nominal max load) (r/%) Not more than |
|-----------|------------------|-----------------------|-------------------------|------------------|----------------------|-------------------------|-------------------------|--------------------------|-------------------------------|------------|--|
| | (mm) | (mm) | (mm ²) | (kg/1000m) | (N/mm ²) | KN | KN | (%) | mm | mm | |
| 1X7 | 9.5 | +0.30 | 54.8 | 430 | 1860 | 102 | 91.8 | 3.5 | Max bow height = 25mm/ 1meter | (12-16)d | 2.5 |
| | 9.5 | | 54.8 | 430 | 1960 | 107 | 96.3 | | | | |
| | 11. 10 | | -0.15 | 74.2 | 582 | 1860 | 138 | | | | |
| | 11. 10 | +0.40 | 74.2 | 582 | 1960 | 145 | 131 | | | | |
| | 12. 70 | | 98.7 | 775 | 1860 | 184 | 166 | | | | |
| | 12. 70 | | 98.7 | 775 | 1960 | 193 | 174 | | | | |
| | 15.2 | | 140 | 1101 | 1860 | 260 | 234 | | | | |
| | 15.2 | | 140 | 1101 | 1960 | 274 | 247 | | | | |
| | 15. 70 | | 150 | 1178 | 1860 | 279 | 251 | | | | |
| | 17. 80 | | 191 | 1500 | 1860 | 353 | 318 | | | | |
| (1X7)C | 12. 70 | -0.15 | 112 | 890 | 1860 | 208 | 187 | | | | |
| | 15. 20 | | 165 | 1295 | 1820 | 300 | 270 | | | | |
| | 18 | | 223 | 1750 | 1720 | 384 | 346 | | | | |

ASTM A416/A416M:2012, 1X7 PRESTRESSED CONCRETE STEEL STRAND

| Grade | Nominal diameter | Tolerance on Diameter | Nominal Area of Section | | Weight of strand | | Tensile Strength, Rm | Minimum Breaking oad,Fm | 0,2% proofforce , Fp0.2 | Rp0.1% | Elongation Lo=500mm, Agt | Curvative of strand | Lay Length | The Relaxation at 1000h (initial load to 70% of nominal max load) (r/%) Not more than | |
|------------|------------------|-----------------------|-------------------------|---------------------|------------------|--------------|----------------------|-------------------------|-------------------------|--------|--------------------------|---------------------|---------------|--|-----|
| | (mm) | (in.) | (mm ²) | (in. ²) | (kg/ 1000m) | (lb/ 1000ft) | (N/mm ²) | (KN) | (KN) | (KN) | (%) | mm | mm | | |
| 270 (1860) | 9.53 | 3/8 | +0.65,-0.15 | 54.80 | 0.085 | 432 | 290 | 1860 | 102.30 | 92.10 | N/A | 3.5 | Not Specified | (12-16)d | 2.5 |
| | 11.11 | 7/16 | +0.65,-0.15 | 74.20 | 0.115 | 582 | 390 | 1860 | 137.90 | 124.10 | N/A | | | | |
| | 12.70 | 1/2 | +0.65,-0.15 | 98.70 | 0.153 | 775 | 520 | 1860 | 183.70 | 165.30 | N/A | | | | |
| | 15.24 | 3/5 | +0.65,-0.15 | 140.00 | 0.217 | 1102 | 740 | 1860 | 260.70 | 234.60 | N/A | | | | |
| 17.78 | 7/10 | +0.65,-0.15 | 189.70 | 0.294 | 1487 | 1000 | 1860 | 353.20 | 318.00 | N/A | | | | | |

pr EN10138-3:2011 , 1X7 PRESTRESSED CONCRETE STEEL STRAND

| Steel Name | Steel Number | Diameter | Tensile strength | Cross-sectional area | Mass per meter | Permitted deviation on mass per meter | Characteristic value of maximum force | Maximum value of maximum force | Characteristic value of 0,1% proof force | Min.Elong. Lo=500mm | Curvative of strand | Lay Length | Relaxation 1000h value no more than (initial load at 70% specified breaking load) |
|------------|--------------|----------|------------------|----------------------|----------------|---------------------------------------|---------------------------------------|--------------------------------|--|---------------------|-------------------------------|------------|---|
| | | D | R _m | S _n | M | F _m | F _{m,max} | F _{p0.1} | | | | | |
| | | mm | MPa | mm ² | g/m | % | kN | kN | kN | % | mm | mm | (%) |
| Y1860S7 | 1.1366 | 9.30 | 1860 | 52.0 | 406.1 | ±2 | 96.7 | 111.0 | 85.1 | 3.5 | Max bow height = 25mm/ 1meter | (14-18)d | 2.5 |
| Y1860S7 | 1.1366 | 12.50 | 1860 | 93.0 | 726.3 | ±2 | 173.0 | 199.0 | 152.0 | | | | |
| Y1860S7 | 1.1366 | 15.20 | 1860 | 139.0 | 1086.0 | ±2 | 259.0 | 298.0 | 228.0 | | | | |
| Y1860S7 | 1.1366 | 15.70 | 1860 | 150.0 | 1172.0 | ±2 | 279.0 | 321.0 | 246.0 | | | | |
| Y1960S7 | 1.1367 | 9.30 | 1960 | 52.0 | 406.1 | ±2 | 102.0 | 117.0 | 91.0 | | | | |
| Y1960S7 | 1.1367 | 12.50 | 1960 | 93.0 | 726.3 | ±2 | 182.0 | 209.0 | 162.0 | | | | |
| Y2060S7 | 1.1368 | 12.50 | 2060 | 93.0 | 726.3 | ±2 | 192.0 | 221.0 | 171.0 | | | | |
| Y2060S7 | 1.1368 | 12.90 | 2060 | 100.0 | 781.0 | ±2 | 206.0 | 237.0 | 183.0 | | | | |
| Y2060S7G* | 1.1372 | 12.70 | 1860 | 112.0 | 874.7 | ±2 | 208.0 | 239.0 | 183.0 | | | | |
| Y2060S7G* | 1.1372 | 15.20 | 1860 | 165.0 | 1289.0 | ±2 | 307.0 | 353.0 | 270.0 | | | | |
| Y1700S7G* | 1.1370 | 18.00 | 1700 | 223.0 | 1742.0 | ±2 | 379.0 | 436.0 | 334.0 | | | | |



PRODUCTS INTRODUCTION

» Prestressed Concrete Strand

7 wires uncoated steel strands could be produced in conformity with more standards:



- ◆ BS5896
- ◆ ASTM A779
- ◆ ISO 6934
- ◆ UNE 36094
- ◆ JIS3536
- ◆ KS D7002
- ◆ ABNT NBR7483
- ◆ AS/NZS4672
- ◆ GOST13840
- ◆ GOST-R-53772

19 WIRES PRESTRESSED CONCRETE STEEL STRAND

| Structure | Standard | Nominal diameter | Tolerance on Strand Diameter | Nominal Area of Section | Weight of strand | Tensile Strength, Rm | Minimum Breaking oad, Fm | 0.2% proof force, Fp0.2 | Elongation Lo=500mm, Agt | Curvative of strand | Lay Length | Relaxation 1000h value no more than (initial load at 70% specified breaking load) |
|----------------|---------------|------------------|------------------------------|-------------------------|------------------|----------------------|--------------------------|-------------------------|--------------------------|---------------------|------------|---|
| | | mm | mm | (mm ²) | (kg/1000m) | (N/mm ²) | KN | KN | % | mm | mm | |
| 1x19S(1+9+9) | GB/T5224-2014 | 28.6 | +0.40,-0.15 | 532 | 4229 | 1720 | 915 | 805 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 17.8 | +0.40,-0.15 | 208 | 1652 | 1770 | 368 | 334 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 19.3 | +0.40,-0.15 | 244 | 1931 | 1770 | 431 | 379 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 20.3 | +0.40,-0.15 | 271 | 2149 | 1770 | 480 | 422 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 21.8 | +0.40,-0.15 | 313 | 2482 | 1770 | 554 | 488 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 28.6 | +0.40,-0.15 | 532 | 4229 | 1770 | 942 | 829 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 20.3 | +0.40,-0.15 | 271 | 2149 | 1810 | 491 | 432 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 21.8 | +0.40,-0.15 | 313 | 2482 | 1810 | 567 | 499 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 17.8 | +0.40,-0.15 | 208 | 1652 | 1860 | 387 | 341 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 19.3 | +0.40,-0.15 | 244 | 1931 | 1860 | 454 | 400 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 20.3 | +0.40,-0.15 | 271 | 2149 | 1860 | 504 | 444 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19S(1+9+9) | GB/T5224-2014 | 21.8 | +0.40,-0.15 | 313 | 2482 | 1860 | 583 | 513 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19W(1+6+6/6) | GB/T5224-2014 | 28.6 | +0.40,-0.15 | 532 | 4229 | 1720 | 915 | 805 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19W(1+6+6/6) | GB/T5224-2014 | 28.6 | +0.40,-0.15 | 532 | 4229 | 1770 | 942 | 829 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19W(1+6+6/6) | GB/T5224-2014 | 28.6 | +0.40,-0.15 | 532 | 4229 | 1860 | 990 | 854 | 3.5 | 25 | (12-18)d | 2.5 |
| 1x19 | JIS3536 | 19.3 | +0.60,-0.25 | 243.7 | 1931 | | 451 | 387 | 3.5 | | (12-18)d | 2.5 |
| 1x19 | JIS3536 | 20.3 | +0.60,-0.25 | 270.9 | 2149 | | 495 | 422 | 3.5 | | (12-18)d | 2.5 |
| 1x19 | JIS3536 | 21.8 | +0.60,-0.25 | 312.9 | 2482 | | 573 | 495 | 3.5 | | (12-18)d | 2.5 |
| 1x19 | JIS3536 | 28.6 | +0.60,-0.25 | 532.4 | 4229 | | 949 | 807 | 3.5 | | (12-18)d | 2.5 |

2 WIRES AND 3 WIRES PRESTRESSED CONCRETE STEEL STRAND

| Structure | Standard | Nominal diameter | Wire Diameter | Tolerance on Strand Diameter | Nominal Area of Section | Weight of strand | Tensile Strength, Rm | Minimum Breaking oad, Fm | 0.2% proof force, Fp0.2 | 0.1% proof force, Fp0.1 | Minimum Load at 1% Extension, Fp1.0 | Elongation Lo=500mm, Agt | Curvative of strand | Lay Length |
|-----------|---------------|------------------|---------------|------------------------------|-------------------------|------------------|----------------------|--------------------------|-------------------------|-------------------------|-------------------------------------|--------------------------|---------------------|------------|
| | | mm | mm | mm | (mm ²) | (kg/1000m) | (N/mm ²) | KN | KN | | | % | mm | mm |
| 1X2 | GB/T5224-2014 | 5.00 | 2.50 | +0.15,-0.05 | 9.82 | 77.1 | 1860 | 18.3 | 16.5 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 5.00 | 2.50 | +0.15,-0.05 | 9.82 | 77.1 | 1960 | 19.2 | 17.3 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 5.80 | 2.90 | +0.15,-0.05 | 13.20 | 104.0 | 1860 | 24.6 | 22.1 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 5.80 | 2.90 | +0.15,-0.05 | 13.20 | 104.0 | 1960 | 25.9 | 23.3 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 8.00 | 4.00 | +0.25,-0.10 | 25.10 | 197.0 | 1860 | 46.7 | 42.0 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 8.00 | 4.00 | +0.25,-0.10 | 25.10 | 197.0 | 1960 | 49.2 | 44.3 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 10.00 | 5.00 | +0.25,-0.10 | 39.30 | 309.0 | 1860 | 73.1 | 65.8 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 10.00 | 5.00 | +0.25,-0.10 | 39.30 | 309.0 | 1960 | 77.0 | 69.3 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | GB/T5224-2014 | 12.00 | 6.00 | +0.25,-0.10 | 56.50 | 444.0 | 1860 | 105.0 | 94.5 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 6.20 | 2.90 | +0.15,-0.05 | 19.80 | 155.0 | 1860 | 36.8 | 33.1 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 6.20 | 2.90 | +0.15,-0.05 | 19.80 | 155.0 | 1960 | 38.8 | 34.9 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 6.50 | 3.00 | +0.15,-0.05 | 21.20 | 166.0 | 1860 | 39.4 | 35.5 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 6.50 | 3.00 | +0.15,-0.05 | 21.20 | 166.0 | 1960 | 41.6 | 37.4 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 8.60 | 4.00 | +0.20,-0.10 | 37.70 | 296.0 | 1860 | 70.1 | 63.1 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 8.60 | 4.00 | +0.20,-0.10 | 37.70 | 296.0 | 1960 | 73.9 | 66.5 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 8.74 | 4.05 | +0.20,-0.10 | 38.60 | 303.0 | 1860 | 71.8 | 64.6 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 10.80 | 5.00 | +0.20,-0.10 | 58.90 | 462.0 | 1860 | 110.0 | 99.0 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 10.80 | 5.00 | +0.20,-0.10 | 58.90 | 462.0 | 1960 | 115.0 | 104.0 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 12.90 | 6.00 | +0.20,-0.10 | 84.80 | 666.0 | 1860 | 158.0 | 142.0 | | | 3.5 | 25mm | (12-16)d |
| 1X3 | GB/T5224-2014 | 12.90 | 6.00 | +0.20,-0.10 | 84.80 | 666.0 | 1960 | 166.0 | 149.0 | | | 3.5 | 25mm | (12-16)d |
| 1X3I | GB/T5224-2014 | 8.74 | 4.05 | +0.20,-0.10 | 38.60 | 303.0 | 1860 | 71.8 | 64.6 | | | 3.5 | 25mm | (12-16)d |
| 1X2 | pr EN10138 | 4.5 | 2.25 | | 7.95 | 62.1 | 1860 | 14.8 | | 13.0 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 4.85 | 2.25 | | 11.90 | 92.9 | 1860 | 22.1 | | 19.4 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 6.5 | 3.00 | | 21.20 | 165.6 | 1860 | 39.4 | | 34.7 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 6.9 | 3.25 | | 23.40 | 182.8 | 1860 | 43.5 | | 38.3 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 7.5 | 3.50 | | 29.00 | 226.5 | 1860 | 53.9 | | 47.4 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 8.6 | 4.00 | | 37.40 | 292.1 | 1860 | 69.6 | | 61.2 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 6.3 | 2.90 | | 19.80 | 154.6 | 1920 | 38.0 | | 33.4 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 6.5 | 3.00 | | 21.20 | 165.6 | 1920 | 40.7 | | 35.8 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 4.8 | 2.25 | | 12.00 | 93.7 | 1960 | 23.5 | | 20.9 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 5.2 | 2.40 | | 13.60 | 106.2 | 1960 | 26.7 | | 23.8 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 6.5 | 3.00 | | 21.20 | 165.5 | 1960 | 41.6 | | 37.0 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 6.85 | 3.25 | | 23.60 | 184.3 | 1960 | 46.3 | | 41.2 | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 5.2 | 2.40 | | 13.60 | 106.2 | 2060 | 28.0 | | | | 3.5 | 25mm | (14-22)d |
| 1X3 | pr EN10138 | 5.2 | 2.40 | | 13.60 | 106.2 | 2160 | 29.4 | | | | 3.5 | 25mm | (14-22)d |
| 1X2 | ASTM A910 | 5.8 | 2.9 | +0.66,-0.15 | 13.20 | 104.0 | 1860 | 24.0 | | | | 3.5 | | (12-16)d |
| 1X3 | ASTM A910 | 4.8 | 2.25 | +0.66,-0.15 | 12.00 | 94.2 | 1860 | 22.8 | | | 21.6 | 3.5 | | (12-16)d |
| 1X3 | ASTM A910 | 5.2 | 2.40 | +0.66,-0.15 | 13.60 | 107.0 | 1860 | 25.2 | | | 20.5 | 3.5 | | (12-16)d |
| 1X3 | ASTM A910 | 6.2 | 2.90 | +0.66,-0.15 | 19.80 | 155.0 | 1860 | 37.2 | | | 22.7 | 3.5 | | (12-16)d |
| 1X3 | ASTM A910 | 6.5 | 3.00 | +0.66,-0.15 | 21.30 | 167.0 | 1860 | 39.6 | | | 33.5 | 3.5 | | (12-16)d |
| 1X3 | ASTM A910 | 7.5 | 3.50 | +0.66,-0.15 | 29.00 | 228.0 | 1860 | 54.0 | | | 36.0 | 3.5 | | (12-16)d |
| 1X3 | ASTM A910 | 8.6 | 4.00 | +0.66,-0.15 | 37.40 | 298.4 | 1860 | 69.7 | | | 45.0 | 3.5 | | (12-16)d |
| 1X2 | JIS3536 | 5.8 | 2.9 | +0.03,-0.03 | 13.21 | 104.0 | 1860 | 25.5 | 22.6 | | 62.7 | | | (12-16)d |
| 1X3 | JIS3536 | 6.2 | 2.9 | +0.03,-0.03 | 19.82 | 156.0 | 1860 | 38.2 | 33.8 | | | | | (12-16)d |



PRODUCTS INTRODUCTION

» Unbonded Steel Strand for Prestressed Concrete

This product is suitable for cast-in-place concrete projects. Such as cast-in-place slabs, geotechnical projects, foundation piles, slope support, etc. It has the characteristics of no need to reserve holes, easy construction, saving bellows materials, and random bending. Its application in recoverable anchor cables saves a lot of cost for engineering projects.

The specifications shall be conforming with JG 161-2004. Steel is in accordance with GB/T5224-2014, or EN10138/BS5896, or ASTM A416, or other standards clients require. Sheathing: GB 11116, GB/T9341. Grease: JG3007-1993.



YXXK-UPS Series Unbonded PC Strand (Ref. JG161-2004, Single layer HDPE Sheathing)

| CODE | Steel | | | Grease | Sheathing thickness | μ | κ |
|------------|---------------|---------------------------------|------------------------|----------------|---------------------|----------|-------------|
| | Diameter (mm) | Section Area (mm ²) | Tensile Strength (Mpa) | W3 (g/m) | (mm) | | |
| | | | | (no less than) | (no less than) | | |
| YXXK-UPS9 | 9.53 | 54.84 | 1860 | 32 | 0.8 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPS13 | 12.7 | 98.71 | 1860 | 43 | 1 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPS13 | 12.9 | 100 | 1860 | 45 | 1 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPS15 | 15.24 | 140 | 1860 | 50 | 1 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPS15 | 15.7 | 150 | 1860 | 53 | 1 | 0.04~0.1 | 0.003~0.004 |

YXXK-UPD Series Unbonded PC Strand (Double layer HDPE Sheathing)

| CODE | Steel | | | Grease | Sheathing thickness | | μ | κ |
|------------|---------------|---------------------------------|------------------------|----------------|---------------------------------|---------------------------------|----------|-------------|
| | Diameter (mm) | Section Area (mm ²) | Tensile Strength (Mpa) | W3 (g/m) | (mm) | | | |
| | | | | (no less than) | Inner HDPE Layer (no less than) | Outer HDPE Layer (no less than) | | |
| YXXK-UPD13 | 12.7 | 98.71 | 1860 | 43 | 1 | 1 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPD13 | 12.9 | 100 | 1860 | 45 | 1 | 1 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPD15 | 15.24 | 140 | 1860 | 50 | 1 | 1 | 0.04~0.1 | 0.003~0.004 |
| YXXK-UPD15 | 15.7 | 150 | 1860 | 53 | 1 | 1 | 0.04~0.1 | 0.003~0.004 |

μ - Friction coefficient between steel strands and inner wall of sheath in unbonded prestressing tendon
κ - Friction coefficient considering local deviation per meter length of unbonded prestressing tendon

» Galvanized 7 Wires Prestressed Steel Strand

High Strength Low Relaxation hot-dip Galvanized Steel Strand for Prestress.

- ◆ The specifications is conforming with standard YB/T 152-1999
- ◆ Specification : 12.7mm, 12.9mm, 15.2mm, 15.7mm
- ◆ Tensile Strength: 1860Mpa
- ◆ Galvanized coating thickness: 190- 400 g/m²

| Structure | Nominal diameter | Tolerance on Diameter | Nominal Area of Section | Weight of strand | Tensile Strength, Rm | Minimum Breaking load, Fm | 0.2% proof force, Fp0.2 | Elongation Lo=500mm, Agt | Curvative of strand | Lay Length | The Relaxation at 1000h (initial load to 70% of nominal max load) (r%) Not more than |
|-----------|------------------|-----------------------|-------------------------|------------------|----------------------|---------------------------|-------------------------|--------------------------|---------------------|------------|--|
| | (mm) | (mm) | (mm ²) | (kg/1000m) | (N/mm ²) | KN | KN | (%) | mm | mm | |
| 1X7 | 12.50 | +0.30 | 93 | 730 | 1860 | 173 | 154 | 3.5 | 25 | (12-16)D | 2.5 |
| | 12.90 | -0.10 | 100 | 785 | 1860 | 186 | 166 | | | | |
| | 15.2 | +0.40 | 139 | 1091 | 1860 | 259 | 230 | | | | |
| | 15.70 | -0.20 | 1 | 1178 | 1860 | 279 | 248 | | | | |

» Epoxy Coated PC STRAND

Filled epoxy resin steel strand is to spray epoxy powder on the surface of the whole steel strand through electrostatic spraying during the process of steel strand splicing, and also fill the gap of each steel wire, so that the epoxy resin powder can be completely wrapped and filled inside and outside the steel strand, so as to achieve perfect anti-corrosion effect. The epoxy resin coating has excellent corrosion resistance, can permanently bond with the bare steel strand, and has sufficient toughness to make the steel strand stretch or bend within a certain angle, so that the layer will not peel off or crack, and should also be able to resist physical wear and chemical erosion. The main application fields are: stay cable, geotechnical anchorage, external cabled pipe pile, marine structure and dam reinforcement engineering, especially the external cable assembled in sections.



Filled Epoxy-Coated 1x7 PC Strand

Technological characteristics

- ◆ The steel strand is self-produced and produced within 3 days to avoid rust and dust bonding on the surface. The process is strictly controlled during production and no oil stain is allowed; Conduct performance design and process control of steel strand according to customer requirements.
- ◆ The secondary spraying film-forming technology is adopted to increase the coating thickness and improve the coating uniformity.

Technological process

- ◆ Steel strand → setting out → cleaning → drying → medium frequency heating → strand splitting → electrostatic spraying → secondary coating → leveling treatment → solidification and water cooling → online detection → take-up → finished product inspection → packaging → warehousing

Characteristics of filled epoxy resin steel strand

- ◆ Strong anti-corrosion ability, which can prolong the service life of the structure
- ◆ The construction is convenient and simple, which can greatly shorten the construction cycle
- ◆ The inspection and maintenance are convenient, and a single steel strand can be replaced to save maintenance costs
- ◆ The anchorage is safe and reliable. The special anchorage system is adopted, which has high fatigue performance.



PRODUCTS INTRODUCTION

» Epoxy Coated PC STRAND

Executive standard for filled epoxy coated steel strand
 GB/T21073-2007, JB/T737-2009, ASTM A882/A882M, JG/T387.2012, ISO14655:1999

Comparison of main performance indexes of different standards

| ITEM | U.S.A Standard | International | China | Our Enterprise |
|-------------------|--------------------|---------------|----------------|-------------------|
| Standard Name | ASTMA882/A882M-20a | ISO14655-1999 | GB/T21073-2007 | Q/320281PD07-2010 |
| Coating Thickness | 0.38-1.14mm | 0.4-1.15mm | 0.4-1.14mm | 0.4-1.14mm |
| Tensile Strength | >1860MPa | >1860MPa | >1860MPa | >1880MPa |
| Yield Strength | >1647MPa | >1647MPa | >1647MPa | >1650MPa |
| Relaxation | <6.5% | <6.5% | <6.5% | <6.0% |
| Elongation | >4.0% | >4.0% | >4.0% | >4.0% |

| Nominal diameter | Maximum Force | Maximum value of the maximum force | Coating Thickness | Weight per meter | Bending experiment | Tensile test |
|------------------|---------------|------------------------------------|-------------------|------------------|---|--|
| (mm) | Fm/kN ≥ | Fm max/kN ≤ | mm | kg/m | / | / |
| 15.2 | 260 | 288 | 380-1140 | 1.15 | Bend 180 degrees along the nominal diameter of 32 times the diameter of epoxy coated steel strand, and there is no visible crack or coating falling off | there is no visible crack or coating falling off |
| 12.7 | 184 | 203 | 380-1140 | 0.83 | Bend 180 degrees along the nominal diameter of 32 times the diameter of epoxy coated steel strand, and there is no visible crack or coating falling off | there is no visible crack or coating falling off |



Individual Epoxy-Coated 1x7 PC Strand

Individual epoxy coated steel strand

Individual epoxy coated or Single wire coated with epoxy coating steel strand is sprayed with epoxy resin powder on the steel wire of single steel strand by high-voltage electrostatic spraying method, and then heated, melted, solidified and cooled, so as to form a layer of dense epoxy coating on the steel wire surface, and then wound into 1x7 steel strand.

Individual epoxy coated steel strand has the following characteristics

- ♦ Excellent anti-corrosion performance (chemical resistance, salt spray resistance, chloride permeability resistance and dry resistance)
- ♦ The epoxy layer is thin and uniform in thickness. The clip bites through and the epoxy layer is directly clamped on the steel strand matrix, which has excellent matching with the anchor unit
- ♦ Excellent bending resistance, high temperature resistance and impact resistance

Executive standard for filled epoxy coated steel strand GB/T25823-2010

| Nominal diameter | Maximum Force | Maximum value of the maximum force | Coating Thickness | Weight per meter | Bending experiment | Tensile test |
|------------------|---------------|------------------------------------|-------------------|------------------|--|--|
| (mm) | Fm/kN ≥ | Fm max/kN ≤ | mm | kg/m | / | / |
| 15.2 | 260 | 288 | ≥0.13 | 1.15 | Bend 180 degrees along the nominal diameter of 5 times the diameter of epoxy coated steel strand, and there is no visible crack or coating falling off | there is no visible crack or coating falling off |
| 12.7 | 184 | 203 | ≥0.13 | 0.83 | Bend 180 degrees along the nominal diameter of 5 times the diameter of epoxy coated steel strand, and there is no visible crack or coating falling off | there is no visible crack or coating falling off |





PRODUCTS INTRODUCTION

» Prestressed Concrete Wire

Prestressed concrete steel wire is a kind of steel wire made of carbon steel wire material, and used in prestressed concrete structures .High-strength, low-relaxation, supply in coil, large-length, low-consumption, spiral rib steel wire has strong bond with concrete. There are three types , they are Plain PC wire , spiral rib PC wire ,indented PC wire.

Application :

Used in prestressed concrete utility poles, prestressed concrete hollow slabs, prestressed concrete sleepers, express railway prestressed concrete sleeper plates, prestressed concrete water pipes and other components.
HDPE coated wire could be instead of galvanized wire and widely be used in agricultural greenhouses.

Plain Wire and HDPE coated Plain wire



| Type | Nominal Diameter (mm) | | Tensile Strength (Mpa) | Standard |
|---------------------------|-----------------------|-----|------------------------|----------|
| Plain PC Wire | 4.0 | 7.0 | 1570 | GB/T5223 |
| | 5.0 | 8.0 | 1670 | |
| | 6.0 | 9.0 | 1770 | |
| HDPE Coated Plain PC Wire | 4.0 | 7.0 | 1570 | GB/T5223 |
| | 5.0 | 8.0 | 1670 | |
| | 6.0 | 9.0 | 1770 | |

Spiral Rib Wire



| Type | Nominal Diameter (mm) | | | Tensile Strength (Mpa) | Standard |
|-------------|-----------------------|------|------|------------------------|----------|
| Spiral Ribs | 2.6 | 5.0 | 8.0 | 1470 | GB/T5223 |
| | 3.0 | 6.0 | 9.0 | | |
| | 3.2 | 6.25 | 9.4 | | |
| | 3.4 | 6.5 | 9.5 | | |
| | 3.8 | 7.0 | 10.0 | | |
| | 4.0 | 7.5 | 10.5 | | |
| | 4.8 | | | | |

Indented PC Wire



| Type | Nominal Diameter (mm) | Tensile Strength (Mpa) | Standard |
|---------------------|-----------------------|------------------------|------------|
| Two Side Indented | 4.0 | 1570 1670 1770 | ISO6934-2 |
| | 5.0 | | ASTM881 |
| | 6.0 | | TIS95-2540 |
| | 7.0 | | EN10138-2 |
| | 8.0 | | BS5896 |
| | 9.0 | | JISG3536 |
| Three Side Indented | 4.0 | 1570 1670 1770 | LNECE-452 |
| | 5.0 | | SS141757 |
| | 6.0 | | NEN3868 |
| | 6.5 | | ISO6934-2 |
| | 7.0 | | ASTM881 |
| | 8.0 | | TIS95-2540 |
| Four Sides Indented | 4.0 | 1570 1670 1770 | EN10138-2 |
| | 5.0 | | BS5896 |
| | 6.0 | | JISG3536 |
| | 6.5 | | LNECE-452 |
| | 7.0 | | SS141757 |
| | 8.0 | | NEN3868 |

Table 1 Two-faced oval indent pc wire

| d _s (mm) | a (mm) | b (min)/mm | L (min)/mm |
|---------------------|-----------|------------|------------|
| ≤ 5.00 | 0.12±0.05 | 3.5 | 5.5 |
| 5.00~8.00 | 0.16±0.05 | 5.0 | 8.0 |
| 8.00~14.00 | 0.22±0.05 | 5.0 | 8.0 |

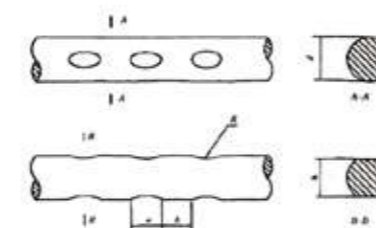


Table 2 Three-sided deformed (chevron) pc wire

| d _s (mm) | a (mm) | b (min)/mm | L (min)/mm |
|---------------------|-----------|------------|------------|
| ≤ 5.00 | 0.12±0.05 | 3.5 | 5.5 |
| > 5 | 0.15±0.05 | 5.0 | 8.0 |

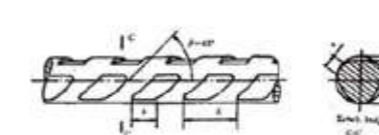
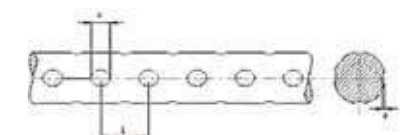


Table 3 Four-faced oval indent pc wire

| d _s (mm) | a (mm) | b (min)/mm | L (min)/mm |
|---------------------|-----------|------------|------------|
| ≤ 5.00 | 0.12±0.05 | 3.5 | 5.5 |
| 5.00~8.00 | 0.16±0.05 | 5.0 | 8.0 |
| 8.00~14.00 | 0.22±0.05 | 5.0 | 8.0 |

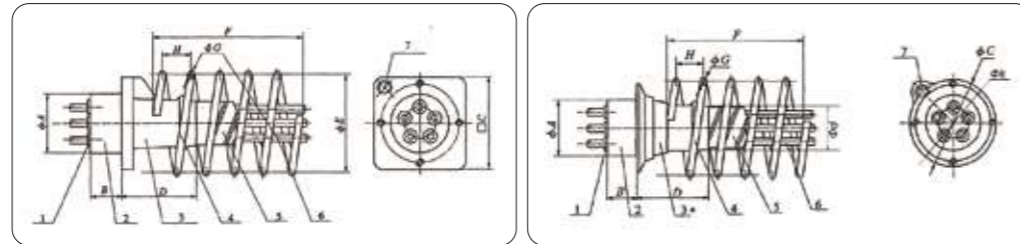




PRODUCTS INTRODUCTION

» Anchorage

- ◆ 1. Working Wedge
- ◆ 2. Round Anchor Head
- ◆ 3. Square Bearing Plate
- ◆ 3*.Round Bearing Plate
- ◆ 4. Spiral Reinforcement
- ◆ 5. Duct
- ◆ 6. Steel Strand



YMP Type Dead-end anchorage

- ◆ 1.Duct
- ◆ 2.Spiral Reinforcement
- ◆ 3.Clamp ring
- ◆ 4.Grouting Tube
- ◆ 5.Steel Strand
- ◆ 6.Anchor Plate
- ◆ 7.Swaged End

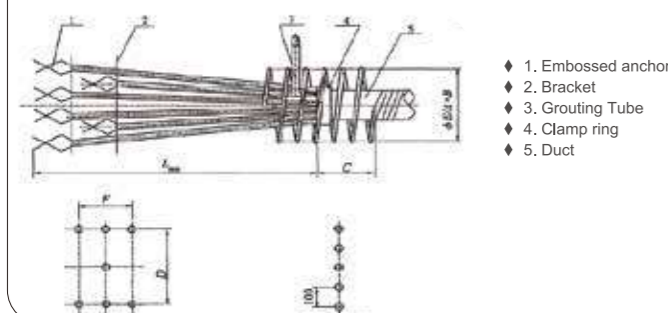
YMH Type

| Size | A | L | C | F | ΦB |
|-----------|-------|-----|-----|-----|------|
| YMP13-1 | □ 80 | 120 | 110 | 200 | Φ80 |
| YMP13-3 | □ 100 | 180 | 110 | 200 | Φ120 |
| YMP13-4 | □ 120 | 240 | 110 | 200 | Φ150 |
| YMP13-5 | □ 130 | 300 | 120 | 250 | Φ170 |
| YMP13-6,7 | □ 150 | 360 | 120 | 250 | Φ190 |
| YMP13-8 | □ 165 | 380 | 120 | 250 | Φ210 |
| YMP13-9 | □ 170 | 460 | 120 | 250 | Φ210 |
| YMP13-10 | □ 200 | 460 | 135 | 250 | Φ210 |
| YMP13-12 | □ 200 | 500 | 135 | 300 | Φ240 |
| YMP13-15 | □ 250 | 550 | 135 | 300 | Φ240 |
| YMP13-19 | □ 250 | 600 | 135 | 300 | Φ240 |
| YMP13-22 | □ 280 | 720 | 135 | 360 | Φ250 |
| YMP13-27 | □ 300 | | | | |

| Size | Numbers of Strands | Anchor Head | | Bearing Plate | | | | Spiral Reinforcement | | | | Stressing Jack | |
|-----------------|--------------------|-------------|----|---------------|-----|------|-----|----------------------|-----|-----|----|----------------|--|
| | | ΦA | B | C | D | ΦC | D | ΦE | F | ΦG | H | | |
| YXXKJ-YM13-1* | 1 | Φ40 | 40 | | | Φ80 | 90 | Φ6 | 30 | | | | |
| YXXKJ-YM13-3 * | 3 | Φ80 | 45 | 120 | 130 | Φ132 | 80 | Φ120 | 120 | Φ10 | 40 | | |
| YXXKJ-YM13-4 * | 4 | Φ85 | 48 | 135 | 130 | Φ135 | 102 | Φ135 | 150 | Φ10 | 50 | | |
| YXXKJ-YM13-5* | 5 | Φ100 | 48 | 145 | 130 | Φ140 | 125 | Φ140 | 200 | Φ10 | 50 | | |
| YXXKJ-YM13-6* | 6 | Φ105 | 48 | 165 | 130 | Φ155 | 130 | Φ160 | 200 | Φ12 | 50 | | |
| YXXKJ-YM13-7* | 7 | Φ105 | 50 | 165 | 130 | Φ155 | 130 | Φ160 | 200 | Φ12 | 50 | | |
| YXXKJ-YM13-8 | 8 | Φ116 | 52 | 175 | 150 | Φ170 | 160 | Φ170 | 200 | Φ12 | 50 | | |
| YXXKJ-YM13-9* | 9 | Φ126 | 53 | 185 | 150 | Φ175 | 160 | Φ180 | 200 | Φ12 | 50 | | |
| YXXKJ-YM13-10 | 10 | Φ136 | 53 | 195 | 160 | Φ200 | 180 | Φ200 | 200 | Φ14 | 50 | | |
| YXXKJ-YM13-11 | 11 | Φ136 | 53 | 195 | 160 | Φ200 | 180 | Φ200 | 200 | Φ14 | 50 | | |
| YXXKJ-YM13-12* | 12 | Φ146 | 55 | 215 | 180 | Φ210 | 190 | Φ210 | 250 | Φ14 | 50 | | |
| YXXKJ-YM13-13 | 13 | Φ146 | 55 | 230 | 180 | Φ210 | 190 | Φ210 | 250 | Φ14 | 50 | | |
| YXXKJ-YM13-14 | 14 | Φ156 | 57 | 230 | 180 | Φ210 | 210 | Φ220 | 250 | Φ14 | 50 | | |
| YXXKJ-YM13-15* | 15 | Φ166 | 60 | 240 | 220 | Φ215 | 230 | Φ220 | 250 | Φ14 | 50 | | |
| YXXKJ-YM13-16 | 16 | Φ176 | 62 | 240 | 220 | Φ245 | 240 | Φ240 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-17 | 17 | Φ176 | 62 | 240 | 220 | Φ245 | 240 | Φ240 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-18 | 18 | Φ176 | 65 | 270 | 245 | Φ245 | 240 | Φ260 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-19* | 19 | Φ176 | 65 | 270 | 245 | Φ245 | 240 | Φ260 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-20 | 20 | Φ196 | 68 | 290 | 270 | Φ260 | 270 | Φ270 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-21 | 21 | Φ196 | 70 | 290 | 270 | Φ260 | 270 | Φ270 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-22* | 22 | Φ196 | 70 | 290 | 270 | Φ260 | 270 | Φ270 | 300 | Φ16 | 60 | | |
| YXXKJ-YM13-23 | 23 | Φ216 | 73 | 300 | 290 | Φ275 | 290 | Φ280 | 360 | Φ18 | 60 | | |
| YXXKJ-YM13-24 | 24 | Φ216 | 73 | 300 | 290 | Φ275 | 290 | Φ280 | 360 | Φ18 | 60 | | |
| YXXKJ-YM13-25 | 25 | Φ216 | 75 | 300 | 290 | Φ275 | 290 | Φ280 | 360 | Φ18 | 60 | | |
| YXXKJ-YM13-26 | 26 | Φ216 | 75 | 300 | 290 | Φ275 | 290 | Φ280 | 360 | Φ18 | 60 | | |
| YXXKJ-YM13-27* | 27 | Φ216 | 75 | 300 | 290 | Φ275 | 290 | Φ280 | 360 | Φ18 | 60 | | |
| YXXKJ-YM13-31* | 31 | Φ224 | 80 | 315 | 330 | Φ300 | 330 | Φ310 | 420 | Φ18 | 60 | | |
| YXXKJ-YM13-37 * | 37 | Φ244 | 85 | 370 | 350 | Φ330 | 350 | Φ350 | 420 | Φ20 | 60 | | |

Dead-end Anchorage for Stressing-end Round Anchorage System YXXKJ-YM13(Ref.Standard JT/T329-2010)

YMH Type Dead-end anchorage

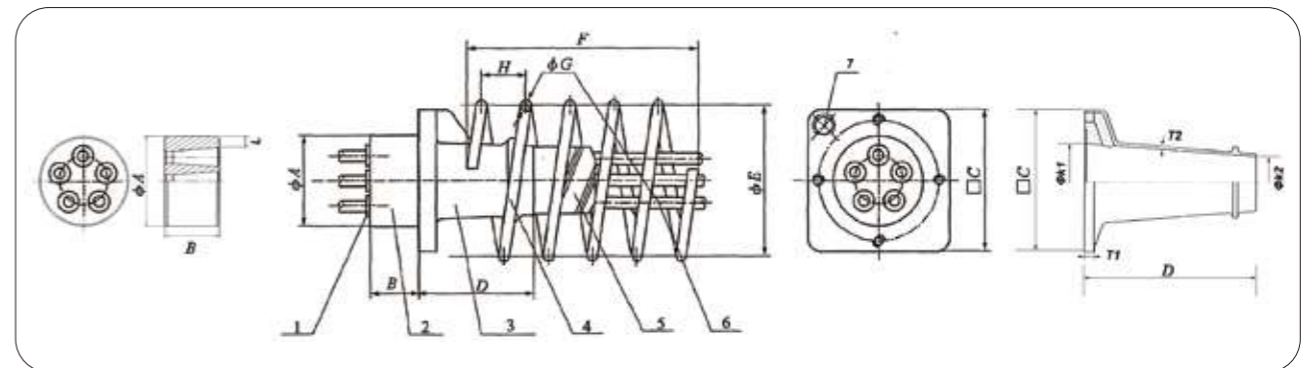


- ◆ 1. Embossed anchor
- ◆ 2. Bracket
- ◆ 3. Grouting Tube
- ◆ 4. Clamp ring
- ◆ 5. Duct

YMH Type

| Size | D | F | L | C | ΦE |
|----------|-----|-----|------|-----|------|
| YMH13-3 | 190 | 90 | 800 | 145 | Φ120 |
| YMH13-4 | 190 | 210 | 800 | 145 | Φ140 |
| YMH13-5 | 200 | 220 | 800 | 145 | Φ150 |
| YMH13-6 | 210 | 230 | 1100 | 155 | Φ170 |
| YMH13-7 | 210 | 230 | 1100 | 155 | Φ190 |
| YMH13-8 | 270 | 310 | 1100 | 155 | Φ190 |
| YMH13-9 | 270 | 310 | 1100 | 155 | Φ210 |
| YMH13-12 | 330 | 390 | 1100 | 155 | Φ210 |
| YMH13-15 | 360 | 420 | 1100 | 155 | Φ240 |
| YMH13-19 | 390 | 470 | 1100 | 155 | Φ240 |
| YMH13-27 | 450 | 520 | 1400 | 155 | Φ250 |

Stressing-end Round Anchorage System YXXKT-YM15 (Ref.Standard TB/T3193)



- ◆ 1. Working Wedge
- ◆ 2. Round Anchor Head
- ◆ 3. Square Bearing Plate
- ◆ 3*.Round Bearing Plate
- ◆ 4. Spiral Reinforcement
- ◆ 5. Duct
- ◆ 6. Steel Strand
- ◆ 7.Grouting Hole

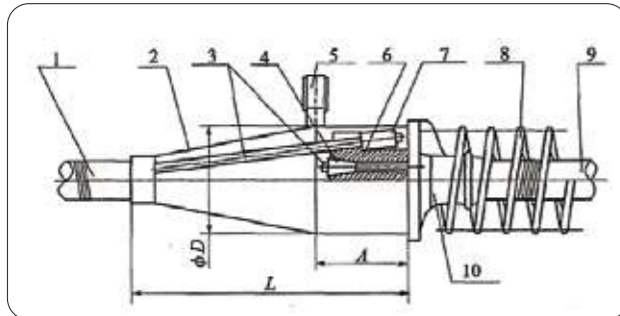
| Size | Numbers of Strands | Anchor Head | | | Bearing Plate | | | | | | Spiral Reinforcement | | | | Stressing Jack | | |
|---------------|--------------------|-------------|-----|----|---------------|-----|-----|-----|----|----|----------------------|-----|----|----|----------------|---------|---------|
| | | ΦA | B | L | C | D | Φk1 | Φk2 | T1 | T2 | Weight | ΦE | H | ΦG | | Circles | |
| YXXKT-YM15-1 | 1 | 48 | 48 | 11 | | | | | | | | | | | | | YDC260Q |
| YXXKT-YM15-2 | 2 | 86 | 50 | 11 | | | | | | | | | | | | | YCW100C |
| YXXKT-YM15-3 | 3 | 91 | 50 | 11 | 140 | 80 | 65 | 60 | 18 | 9 | 3.3 | 180 | 40 | 10 | 3 | | YCW100C |
| YXXKT-YM15-4 | 4 | 102 | 50 | 11 | 160 | 95 | 76 | 65 | 20 | 9 | 4.3 | 195 | 40 | 10 | 4 | | YCW100C |
| YXXKT-YM15-5 | 5 | 112 | 50 | 11 | 180 | 120 | 81 | 70 | 20 | 9 | 5.5 | 215 | 50 | 12 | 4 | | YCW150C |
| YXXKT-YM15-6 | 6 | 126 | 52 | 13 | 195 | 130 | 91 | 75 | 20 | 10 | 7.1 | 230 | 50 | 12 | 4 | | YCW150C |
| YXXKT-YM15-7 | 7 | 126 | 53 | 13 | 210 | 130 | 91 | 75 | 22 | 10 | 8.5 | 250 | 50 | 12 | 4 | | YCW150C |
| YXXKT-YM15-8 | 8 | 136 | 55 | 13 | 225 | 140 | 103 | 85 | 25 | 10 | 9.5 | 265 | 55 | 16 | 5 | | YCW250C |
| YXXKT-YM15-9 | 9 | 146 | 55 | 13 | 240 | 155 | 110 | 90 | 25 | 10 | 10.9 | 275 | 55 | 16 | 5 | | YCW250C |
| YXXKT-YM15-10 | 10 | 156 | 58 | 13 | 250 | 195 | 122 | 95 | 30 | 10 | 13.1 | 275 | 55 | 16 | 5 | | YCW250C |
| YXXKT-YM15-11 | 11 | 166 | 58 | 13 | 265 | 255 | 130 | 95 | 30 | 11 | 16.6 | 300 | 55 | 16 | 5 | | YCW250C |
| YXXKT-YM15-12 | 12 | 166 | 60 | 13 | 275 | 255 | 130 | 95 | 30 | 11 | 17.5 | 300 | 55 | 16 | 6 | | YCW250C |
| YXXKT-YM15-13 | 13 | 170 | 63 | 15 | 285 | 255 | 130 | 100 | 32 | 11 | 18.8 | 310 | 55 | 16 | 6 | | YCW400C |
| YXXKT-YM15-14 | 14 | 176 | 65 | 15 | 300 | 260 | 151 | 105 | 32 | 11 | 20.8 | 335 | 55 | 16 | 6 | | YCW400C |
| YXXKT-YM15-15 | 15 | 186 | 68 | 15 | 310 | 280 | 151 | 105 | 32 | 11 | 22.2 | 335 | 60 | 20 | 6 | | YCW400C |
| YXXKT-YM15-16 | 16 | 196 | 70 | 15 | 320 | 295 | 155 | 115 | 35 | 11 | 25.5 | 360 | 60 | 20 | 6 | | YCW400C |
| YXXKT-YM15-17 | 17 | 196 | 73 | 15 | 330 | 295 | 155 | 115 | 35 | 11 | 26.9 | 360 | 60 | 20 | 6 | | YCW400C |
| YXXKT-YM15-18 | 18 | 206 | 75 | 17 | 340 | 300 | 162 | 125 | 38 | 11 | 30.8 | 380 | 60 | 20 | 6 | | YCW400C |
| YXXKT-YM15-19 | 19 | 206 | 75 | 17 | 345 | 300 | 162 | 125 | 38 | 11 | 31.3 | 380 | 60 | 20 | 6 | | YCW400C |
| YXXKT-YM15-20 | 20 | 226 | 80 | 17 | 355 | 330 | 175 | 125 | 40 | 12 | 36.1 | 400 | 60 | 20 | 7 | | YCW500C |
| YXXKT-YM15-21 | 21 | 226 | 80 | 17 | 365 | 380 | 175 | 125 | 40 | 12 | 38.6 | 400 | 60 | 20 | 7 | | YCW500C |
| YXXKT-YM15-22 | 22 | 230 | 85 | 20 | 365 | 382 | 176 | 125 | 40 | 12 | 39.2 | 400 | 60 | 20 | 7 | | YCW500C |
| YXXKT-YM15-23 | 23 | 246 | 90 | 20 | 370 | 440 | 188 | 130 | 42 | 12 | 44.6 | 400 | 60 | 20 | 7 | | YCW500C |
| YXXKT-YM15-24 | 24 | 246 | 90 | 20 | 375 | 465 | 192 | 130 | 42 | 12 | 46.8 | 405 | 65 | 22 | 7 | | YCW500C |
| YXXKT-YM15-25 | 25 | 252 | 100 | 20 | 375 | 465 | 192 | 130 | 42 | 12 | 46.8 | 405 | 65 | 22 | 7 | | YCW500C |
| YXXKT-YM15-26 | 26 | 252 | 100 | 20 | 380 | 475 | 197 | 135 | 45 | 12 | 51.1 | 410 | 65 | 22 | 7 | | YCW650C |
| YXXKT-YM15-27 | 27 | 252 | 100 | 20 | 380 | 475 | 197 | 135 | 45 | 12 | 51.1 | 410 | 65 | 22 | 7 | | YCW650C |



PRODUCTS INTRODUCTION

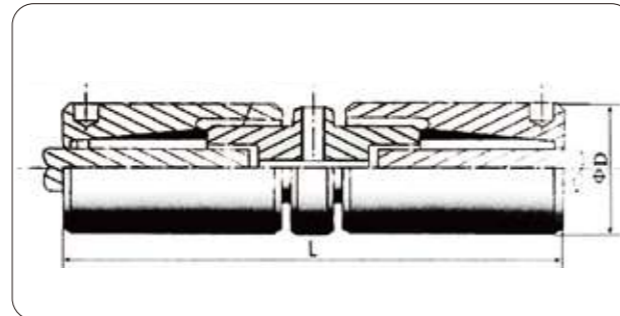
» Anchorage

YXXK-YML Series Couplers



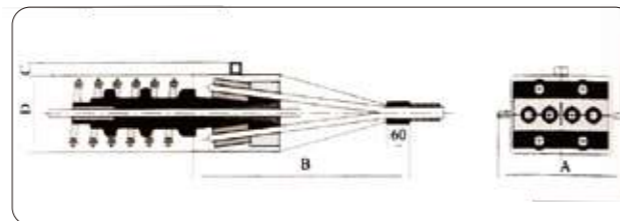
YXXK-YML Coupler for Multi strands

| SIZE | L | A | ΦD |
|----------------|------|-----|-----|
| YXXK-YML15-3 | 375 | 160 | 160 |
| YXXK-YML15-4 | 375 | 160 | 175 |
| YXXK-YML15-5 | 375 | 160 | 185 |
| YXXK-YML15-6,7 | 450 | 160 | 180 |
| YXXK-YML15-8 | 450 | 160 | 210 |
| YXXK-YML15-9 | 450 | 160 | 220 |
| YXXK-YML15-10 | 470 | 160 | 230 |
| YXXK-YML15-12 | 500 | 160 | 240 |
| YXXK-YML15-14 | 525 | 165 | 250 |
| YXXK-YML15-15 | 550 | 165 | 260 |
| YXXK-YML15-16 | 550 | 165 | 270 |
| YXXK-YML15-19 | 575 | 165 | 280 |
| YXXK-YML15-22 | 600 | 170 | 300 |
| YXXK-YML15-27 | 1050 | 185 | 370 |
| YXXK-YML13-3 | 360 | 140 | 145 |
| YXXK-YML13-4 | 360 | 140 | 150 |
| YXXK-YML13-5 | 360 | 140 | 165 |
| YXXK-YML13-6,7 | 400 | 140 | 170 |
| YXXK-YML13-8 | 400 | 140 | 180 |
| YXXK-YML13-9 | 400 | 140 | 190 |
| YXXK-YML13-10 | 470 | 140 | 200 |
| YXXK-YML13-12 | 500 | 140 | 210 |
| YXXK-YML13-14 | 500 | 140 | 220 |
| YXXK-YML13-15 | 550 | 140 | 230 |
| YXXK-YML13-16 | 550 | 150 | 240 |
| YXXK-YML13-19 | 550 | 150 | 240 |
| YXXK-YML13-22 | 600 | 160 | 260 |
| YXXK-YML13-27 | 1000 | 160 | 280 |



YXXK-YML Coupler for Mono strand

| SIZE | STRAND DIA | L | ΦD |
|--------------|------------|----|-----|
| YXXK-YML15-1 | 15.24 | 53 | 190 |
| YXXK-YML13-1 | 12.7 | 53 | 180 |



YXXK-YML Coupler for Mono strand

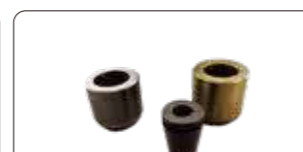
| SIZE | A | B | C | D | DUCT |
|---------|------|-----|----|-----|-------|
| BM15-2L | 1128 | 566 | 20 | 116 | 50x19 |
| BM15-3L | 162 | 566 | 20 | 116 | 60x19 |
| BM15-4L | 197 | 566 | 20 | 116 | 70x19 |
| BM15-5L | 232 | 566 | 20 | 116 | 90x19 |

Other Anchorage For Single Tendon

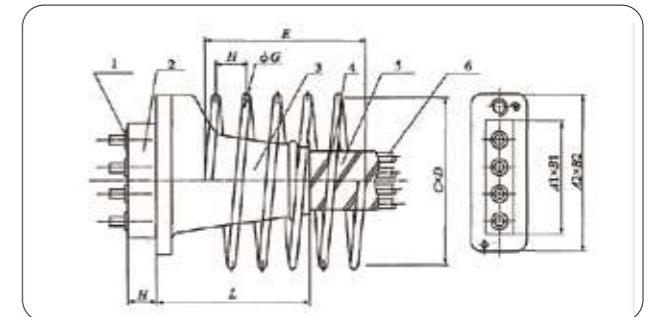
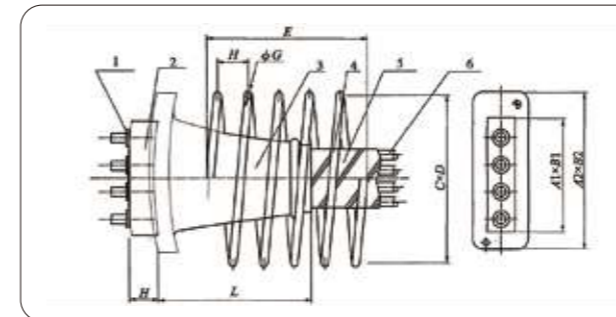
| Anchorage | Tendon Dia | | | | |
|------------------------|------------|-----------|-----------|-----------|-----------|
| | Φ4.0 | Φ5.0 | Φ6.0 | Φ7.0 | Φ8.5 |
| YOpen Anchor (Tooling) | Available | Available | Available | Available | Available |
| Open Anchor (Working) | Available | Available | Available | Available | Available |
| Enclose Anchor | Available | Available | Available | Available | Available |
| Swage Anchor | N/A | N/A | N/A | N/A | N/A |
| Spherical Open Anchor | N/A | N/A | N/A | N/A | N/A |



| Dia Anchorage | Tendon strand | | | | |
|------------------------|---------------|-----------|-----------|-----------|-----------|
| | Φ9-Φ9.6 | Φ10-Φ11.1 | Φ12-Φ13 | Φ15-Φ16 | Φ18-Φ28 |
| YOpen Anchor (Tooling) | Available | Available | Available | Available | Available |
| Open Anchor (Working) | Available | Available | Available | Available | Available |
| Enclose Anchor | Available | Available | Available | Available | Available |
| Swage Anchor | N/A | N/A | Available | Available | Available |
| Spherical Open Anchor | N/A | N/A | Available | Available | Available |



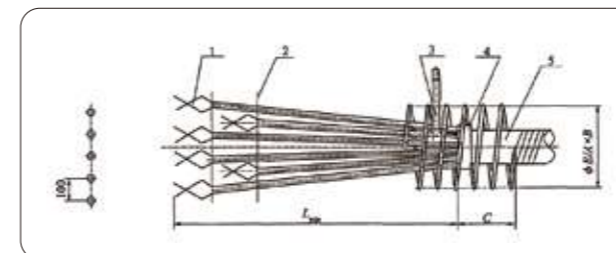
YStressing-end Flat Anchorage System YXXK-BM Series



| SIZE | ANCHOR HEAD | | | ANCHOR HEAD | | | SPIRAL REINFORCEMENT | | | | |
|---------|-------------|----|----|-------------|----|-----|----------------------|----|-----|----|----|
| | A1 | B1 | H | A2 | B2 | L | C | D | E | ΦG | H |
| BM15-2 | 80 | 48 | 50 | 142 | 70 | 140 | 140 | 70 | 200 | Φ8 | 50 |
| BM15-3 | 115 | 48 | 50 | 180 | 70 | 160 | 180 | 70 | 200 | Φ8 | 50 |
| BM15-4 | 150 | 48 | 50 | 220 | 70 | 210 | 220 | 70 | 250 | Φ8 | 50 |
| BM15-5 | 195 | 48 | 50 | 265 | 70 | 215 | 260 | 70 | 250 | Φ8 | 50 |
| BM13-2 | 77 | 48 | 50 | 120 | 70 | 130 | 120 | 70 | 200 | Φ8 | 50 |
| BM13-3 | 108 | 48 | 50 | 150 | 70 | 160 | 150 | 70 | 200 | Φ8 | 50 |
| BM13-4 | 140 | 48 | 50 | 190 | 70 | 180 | 190 | 70 | 250 | Φ8 | 50 |
| BM13-5 | 170 | 48 | 50 | 230 | 70 | 200 | 230 | 70 | 250 | Φ8 | 50 |
| HBM15-3 | 110 | 48 | 48 | 170 | 80 | 150 | 180 | 70 | 200 | Φ8 | 50 |
| HBM15-4 | 139 | 48 | 48 | 200 | 80 | 175 | 220 | 70 | 250 | Φ8 | 50 |
| HBM15-5 | 168 | 48 | 48 | 230 | 80 | 190 | 260 | 70 | 250 | Φ8 | 50 |
| HBM13-3 | 104 | 45 | 45 | 165 | 80 | 140 | 150 | 70 | 200 | Φ8 | 50 |
| HBM13-4 | 134 | 45 | 45 | 195 | 80 | 167 | 190 | 70 | 250 | Φ8 | 50 |
| HBM13-5 | 160 | 45 | 45 | 220 | 80 | 175 | 230 | 70 | 250 | Φ8 | 50 |

YDead-end Anchorage for Stressing-end Flat Anchorage System YXXK-BM series

YMH Type Dead-end anchorage

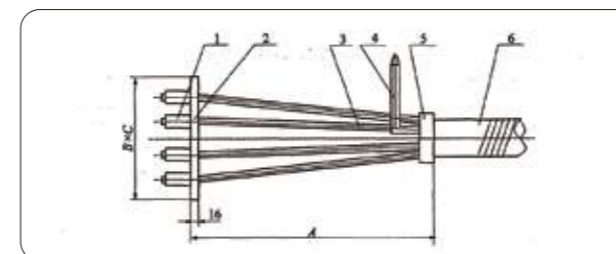


- ◆ 1. Embossed anchor
- ◆ 2. Bracket
- ◆ 3. Grouting Tube
- ◆ 4. Clamp ring
- ◆ 5. Duct

H-BM Type

| SIZE | L | C | AxB |
|----------|-----|-----|--------|
| H-BM15-2 | 950 | 145 | 120x65 |
| H-BM15-3 | 950 | 145 | 160x65 |
| H-BM15-4 | 950 | 145 | 200x65 |
| H-BM15-5 | 950 | 145 | 240x65 |
| H-BM13-2 | 800 | 145 | 120x65 |
| H-BM13-3 | 800 | 145 | 160x65 |
| H-BM13-4 | 800 | 145 | 200x65 |
| H-BM13-5 | 800 | 145 | 210x65 |

YMH Type Dead-end anchorage

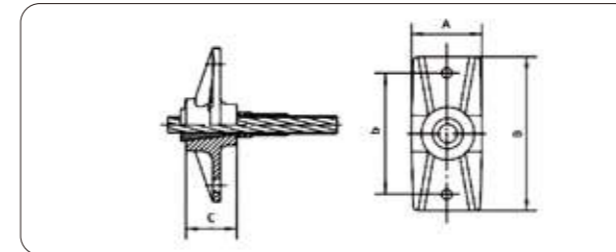


- ◆ 1. Duct
- ◆ 2. Spiral Reinforcement
- ◆ 3. Clamp ring
- ◆ 4. Grouting Tube
- ◆ 5. Steel Strand
- ◆ 6. Anchor Plate
- ◆ 7. Swaged End

P-BM Type

| SIZE | A | B | C |
|----------|-----|-----|----|
| P-BM15-2 | 650 | 140 | 75 |
| P-BM15-3 | 650 | 180 | 75 |
| P-BM15-4 | 650 | 220 | 80 |
| P-BM15-5 | 650 | 260 | 80 |
| P-BM13-2 | 650 | 120 | 75 |
| P-BM13-3 | 650 | 150 | 75 |
| P-BM13-4 | 650 | 190 | 80 |
| P-BM13-5 | 650 | 230 | 80 |

Mono Strand Anchorage



| SIZE | Anchorage | | | |
|--------|-----------|-----|----|-----|
| | A | B | C | D |
| BM15-1 | 65 | 130 | 48 | 100 |
| BM13-1 | 58 | 127 | 40 | 100 |



PRODUCTS INTRODUCTION

» Post tension equipments

Jack



| Item | Nominal tensioning force | Nominal oil pressure | Tensile Area piston | Area of drawback piston | Return oil pressure | Diameter of center hole | Tensioning stroke | Weight of main unit | Overall dimension of main unit | Dimension of fixing nut seam allowance | Dimension of piston seam allowance |
|---------|--------------------------|----------------------|------------------------|-------------------------|---------------------|-------------------------|-------------------|---------------------|--------------------------------|--|------------------------------------|
| Model | KN | KG | m ² | m ² | mpa | mm | mm | kg | mm | mm | mm |
| YCW60B | 600 | 52 | 1.15×10 ⁻² | 0.41×10 ⁻² | ≤25 | Φ60 | 200 | 44 | Φ170×340 | Φ102 | Φ90 |
| YCW80A | 799 | 53 | 1.508×10 ⁻² | 0.471×10 ⁻² | ≤25 | Φ65 | 200 | 55 | Φ200×343 | Φ102 | Φ102 |
| YCW100C | 973 | 51 | 1.91×10 ⁻² | 0.78×10 ⁻² | ≤25 | Φ78 | 200 | 65 | Φ216×349 | Φ149 | Φ130 |
| YCW150C | 1511 | 50 | 3.02×10 ⁻² | 1.61×10 ⁻² | ≤25 | Φ102 | 200 | 111 | Φ280×366 | Φ170 | Φ156 |
| YCW200C | 1960 | 52 | 3.77×10 ⁻² | 1.84×10 ⁻² | ≤25 | Φ120 | 200 | 135 | Φ310×310 | Φ196 | Φ176 |
| YCW250C | 2479 | 54 | 4.59×10 ⁻² | 2.80×10 ⁻² | ≤25 | Φ140 | 200 | 183 | Φ350×369 | Φ210 | Φ186 |
| YCW300C | 3000 | 52 | 5.77×10 ⁻² | 3.13×10 ⁻² | ≤25 | Φ145 | 200 | 217 | Φ385×370 | Φ252 | Φ216 |
| YCW350C | 3497 | 54 | 6.480×10 ⁻² | 3.46×10 ⁻² | ≤25 | Φ175 | 200 | 268 | Φ415×390 | Φ252 | Φ252 |
| YCW400C | 3955 | 52 | 7.610×10 ⁻² | 4.60×10 ⁻² | ≤25 | Φ175 | 200 | 278 | Φ440×390 | Φ252 | Φ252 |
| YCW500C | 4924 | 49 | 10.05×10 ⁻² | 4.77×10 ⁻² | ≤25 | Φ196 | 200 | 385 | Φ490×423 | Φ302 | Φ302 |
| YCW600C | 6050 | 50 | 12.10×10 ⁻² | 6.83×10 ⁻² | ≤25 | Φ196 | 200 | 590 | Φ530×443 | Φ362 | Φ302 |
| YCW650C | 6500 | 46 | 14.33×10 ⁻² | 6.29×10 ⁻² | ≤25 | Φ215 | 200 | 617 | Φ575×465 | Φ362 | Φ362 |

| Item | Nominal tensioning force | Nominal oil pressure | Tensile Area piston | Area of drawback piston | Return oil pressure | Diameter of center hole | Tensioning stroke | Weight of main unit | Overall dimension of main unit | Dimension of fixing nut seam allowance | Dimension of piston seam allowance |
|----------|--------------------------|----------------------|-----------------------|-------------------------|---------------------|-------------------------|-------------------|---------------------|--------------------------------|--|------------------------------------|
| Model | KN | KG | m ² | m ² | mpa | mm | mm | kg | mm | mm | mm |
| YDC260QX | 260 | 52 | 4.77×10 ⁻³ | 1.355×10 ⁻³ | ≤25 | Φ18 | 200 | 21.5 | Φ114×474 | | |

Electric oil pump



| Size | Rated oil pressure | Rated displacement | Weight | Dimension |
|---------|--------------------|--------------------|--------|--------------|
| | Mpa | L/min | Kg | LxWxH,mm |
| ZB4-500 | 50 | 2X2 | 90 | 745x494x1052 |
| ZB4-600 | 60 | 4 | 90 | 745x494x1052 |

Swaging/Extrusion Machine



| Size | Extrusion | Rated oil pressure | Extrusion stroke | Extrusion piston area | Weight | Dimension |
|------|-----------|--------------------|------------------|-----------------------|--------|-------------|
| | KN | Mpa | mm | m ² | kg | LxWxH,mm |
| GYJA | 500 | 53 | 150 | 1.05×10 ⁻² | 76 | 701x253x253 |
| GYJB | 497 | 44 | 150 | 1.13×10 ⁻² | 47 | Φ148 x 554 |

Bulb Machine



| Size | Nominal jacking force | Theoretical jacking force | Nominal oil pressure | Tensioning piston area | Return piston area | Return mode | Top pressure stroke | Embossing diameter | Overall dimensions | Weight |
|------|-----------------------|---------------------------|----------------------|-------------------------|-------------------------|--------------------|---------------------|--------------------|--------------------|--------|
| | KN | KN | MPA | m ² | m ² | | mm | mm | mm | kg |
| YH3 | 34 | 35.3 | 50 | 0.7068×10 ⁻³ | 0.4521×10 ⁻³ | hydraulic pressure | 70 | Φ95 | 530x160x230 | 20 |

Screw grouting pump



| Size | Conveying capacity | working pressure | Motor power | High speed pulping speed | Low speed mixing speed | Overall dimensions | Weight |
|------------|----------------------|------------------|-------------|--------------------------|------------------------|--------------------|--------|
| | M ³ /h | MPa | KW | r/min | r/min | mm | kg |
| LGSTC-700B | 4.5m ³ /h | 2Mpa | 18KW | 1430 r/min | 45 r/min | 2800x1850 x220mm | 890kgs |

Water ring vacuum pump



| Size | Maximum air extraction capacity | Ultimate vacuum | Pump speed | Motor power | Make-up water | Noise | Weight |
|------|---------------------------------|-----------------|------------|-------------|---------------|-------|--------|
| | M ³ /h | -Mpa | r/min | KW | L/min | dbA | kg |
| SZ-2 | 120 | 0.097 | 2900 | 4 | 4 | 66 | 100 |

Mortar mixer



| Size | Capacity | Speed | Electric power | Mixing volume | Loading height | Overall dimensions | Weight |
|-------|----------|-------|----------------|-------------------|----------------|--------------------|--------|
| | L | r/min | KW | m ³ /h | mm | mm | kg |
| JW180 | 180 | 70 | 2.2 | 6 | 980 | Φ950x1285 | 200 |



| Size | Mixing volume | High speed impeller speed | High speed motor power | Low speed | Low speed motor power | Overall dimensions | Weight |
|-------|---------------|---------------------------|------------------------|-----------|-----------------------|--------------------|--------|
| | L | r/min | KW | r/min | KW | mm | kg |
| GS500 | 200 | 1440 | 5.5 | 70 | 2.2 | Φ1580x 910x1800 | 285 |

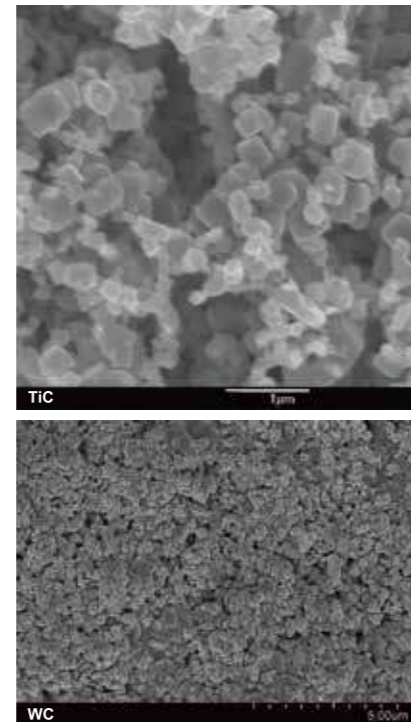


PRODUCTS INTRODUCTION

» CERMET (STEEL-BONDED CARBIDE)

Cermet is a structural material composed of a ceramic (hard) phase and a metal (or alloy) binder phase. Ceramic phases generally refer to high melting point oxides (such as alumina, beryllia, magnesia, zirconia, etc.) and refractory compounds (such as titanium carbide, tungsten carbide, tantalum carbide, boron carbide, zirconium diboride, titanium diboride and tantalum diboride, etc.). The metal phase is mainly transition elements (iron, cobalt, nickel, chromium, molybdenum, tungsten, vanadium, niobium, tantalum, etc.) or their alloys. Cermet not only has the advantages of toughness, high thermal conductivity and good thermal stability of metal, but also has the characteristics of high temperature resistance, corrosion resistance and wear resistance of ceramics.

Cermet (steel-bonded cemented carbide) is a composite material produced by powder metallurgy sintering and forging with steel as the binder phase and carbide (mainly titanium carbide and tungsten carbide) as the hard phase. It has the following characteristics: good process performance, machinability and heat treatability. In the annealed state, ordinary cutting equipment and tools can be used to carry out mechanical processing such as turning, milling, planing, grinding, and drilling. It can also be forged and welded. Compared with cemented carbide, it has lower cost and wider application range. Good physical and mechanical properties. Steel-bonded cemented carbide has high hardness in the hardened state. Because it contains a large amount of dispersed high-hardness hard phase, its wear resistance can be close to that of high-cobalt cemented carbide. Compared with high-alloy die steel, it has higher elastic modulus, wear resistance, compressive strength and bending strength. Compared with cemented carbide, it has better toughness. It has good self-lubrication, low friction coefficient and excellent chemical stability.



PRODUCTS:

CERMET RODS



| Size | Material | Application |
|-------------------------------------|----------|--|
| D12 x 50mm, D12 x 60mm, D14 x 40mm, | TM52 | Studs and inserts for crushing hammers |
| D14 x 50mm, D14 x 60mm, D16 x 90mm | TM60 | |
| | GB10 | |

Other shapes could be customized

We can produce products of other shapes according to customer requirements, such as plate shaped products, drill plate shaped products, ball teeth and special-shaped teeth products, which are applied to stud and insert blocks for breaking hammers, mining tools, ball teeth for construction and drilling teeth for drilling cones

GRADE OF CERMET (STEEL-BONDED CARBIDE)

| Grade | Hard Phase | Binder Phase | Density g/cm ³ | Hardness | | TRS Mpa | Impact toughness J/cm ² |
|--------|------------|--------------|------------------------------|-----------------------|------------------|------------|---------------------------------------|
| | | | | Annealing HRC | Hardening HRA | | |
| GT35 | TiC | Alloy steel | 6.40-6.60 | ≤48 | ≥86 | ≥1400 | ≥3.5 |
| R5 | TiC | Alloy steel | 6.30-6.50 | ≤48 | ≥86 | ≥1200 | ≥3.0 |
| TM52 | TiC | Alloy steel | 6.10-6.30 | sintered state:HRC≥60 | | ≥1500 | H2O toughing treatment ≥6.0 |
| TM60 | TiC | Alloy steel | 6.30-6.50 | sintered state:HRC≥56 | | ≥1500 | |
| GB10 | TiC | Alloy steel | 5.80-6.20 | sintered state:HRC≥65 | | ≥1500 | |
| GW1 | WC | Alloy steel | 10.45-10.65 | ≤48 | ≥83 | ≥1650 | Unforged≥6, Forged≥8 |
| TLMW50 | WC | Alloy steel | 10.21-10.37 | 35-40 | 66-68 | ≥2000 | ≥8 |
| GW50 | WC | Alloy steel | 10.30-10.35 | 41-44 | 67-71 | 1870 | 6.5 |
| GJW50 | WC | Alloy steel | ≥10.20 | 35-38 | 68-71 | 2070-5260 | 8.5 |
| GW40 | WC | Alloy steel | 9.7-10.0 | 34-40 | 68-70 | 2400-2600 | ≥20 |
| DT | WC | Alloy steel | 9.75-9.90 | 32-38 | 62-65 | 2500-3600 | 15-25 |





PRODUCTS INTRODUCTION

» CERMET (STEEL-BONDED CARBIDE)

GUIDE ROLLERS



| Size | Material | Application |
|---|----------|--|
| <p>Customized</p> <p>Guide rollers' size varies according to the different wire rods. The main dimensions and structures are: outer diameter and thickness, groove type and bearing hole</p> | GT35 | <p>Guide wheel (also known as guide wheel and guide wheel) is an indispensable part of wire rod in the rolling process of steel rolling plant. It requires high hardness, good wear resistance (matching the service life with high-quality bearings), good thermal conductivity, and a certain degree of red hardness, especially for high-speed wire rolling (the rolling speed is 80-120m/s).</p> |

Precision molds (cold stamping molds, wire drawing molds)

Used for cold heading, cold punching, cold extrusion, cold drawing, cold shearing, cold pressing and other molds, boring bars, rolling tools and measuring fixtures, and their parts, especially suitable for wear-resistant parts



RAW MATERIAL FOR CERMET (STEEL-BONDED CARBIDE)



| Name | T.C.,% | F.C.,% | Fe,% | O,% | N,% | FSSS,(μm) |
|-------|-----------|----------|----------|----------|----------|-------------------------------------|
| TiC | min 19.00 | max 0.40 | max 0.10 | max 1.20 | max 0.50 | 0-1.0,1.5-2.0,2.0-4.0 |
| NbC | 11.2±0.2 | max 0.30 | max 0.05 | max 0.50 | max 0.20 | 0-1.0,1.0-1.5,1.5-2.0 |
| VC | 17.6±0.5 | max 1.50 | max 0.10 | max 1.0 | max 0.40 | 0-1.0,1.0-1.5,1.5-2.0,2.0-4.0 |
| Mo2C | min 5.85 | max 0.20 | max 0.08 | max 0.8 | - | 1.5-2.0,2.0-3.5 |
| Cr3C2 | 13.2±0.2 | max 0.30 | max 0.20 | max 1.0 | max 0.10 | 0-1.0,1.0-1.5,1.5-2.0,2.5-3.5,3.5-6 |
| TaC | 6.2±0.15 | max 0.15 | max 0.05 | max 0.50 | max 0.20 | 0-1.0,1.0-1.5,1.5-2.0 |

| Name | T.C.,% | F.C.,% | Fe,% | O,% | N,% | FSSS,(μm) |
|------|----------|----------|----------|----------|----------|-----------------------|
| ZrC | min 11.2 | max 0.50 | max 0.05 | max 0.50 | max 0.05 | 0-1.0,1.0-1.5,1.5-2.0 |
| HfC | min 6.1 | max 0.50 | max 0.05 | max 0.50 | max 0.05 | 0-1.0,1.0-1.5,1.5-2.0 |

| Name | Ti,% | N,% | O,% | Fe,% | C,% | FSSS,(μm) |
|------|--------|--------|---------|----------|----------|-----------|
| TiN | min 78 | min 20 | max 0.8 | max 0.05 | max 0.04 | 1.0-5.0 |



| Name | Main element composition | | | | T.C. | F.C. | Fe | O | N | FSSS,(μm) |
|----------------------------|--------------------------|--------------|-----------|---|-----------|-----------|-----------|-----------|-----------|-----------|
| (W,Ti)C-CK24(70%WC+30%TiC) | W:65.5±1.0% | Ti:24.0±1.0% | - | - | 10.0±0.2% | max 0.3% | max 0.08% | max 0.30% | max 0.20% | 2.0-4.0 |
| (W,Ti)C-CK32(60%WC+40%TiC) | W:56.0±1.0% | Ti:32.0±0.5% | - | - | 11.2±0.2% | max 0.2% | max 0.10% | max 0.25% | max 0.20% | 2.0-4.0 |
| (W,Ti)C-CK40(50%WC+50%TiC) | W:47.0±1.0% | Ti:40.0±1.0% | - | - | 12.6±0.3% | max 0.3% | max 0.10% | max 0.35% | max 0.50% | 2.0-4.0 |
| (W,Ti)C-CK40(50%WC+50%TiC) | W:47.0±1.0% | Ti:40.0±1.0% | - | - | 12.6±0.3% | max 0.3% | max 0.10% | max 0.50% | max 0.20% | 0-1.5 |
| (Ta,Nb)C-(90%TaC+10%NbC) | Ta:84.0±1.0% | Nb:9.0±1.0% | - | - | 6.7±0.3% | max 0.15% | max 0.05% | max 0.25% | max 0.25% | 1.5-3.5 |
| (Ta,Nb)C-(90%TaC+10%NbC) | Ta:84.0±1.0% | Nb:9.0±1.0% | - | - | 6.7±0.3% | max 0.15% | max 0.05% | max 0.35% | max 0.10% | 0-1.5 |
| (Ta,Nb)C-(80%TaC+20%NbC) | Ta:73.0±1.0% | Nb:20.0±1.0% | - | - | 7.3±0.3% | max 0.15% | max 0.05% | max 0.25% | max 0.25% | 1.5-3.5 |
| (Ta,Nb)C-(80%TaC+20%NbC) | Ta:73.0±1.0% | Nb:20.0±1.0% | - | - | 7.3±0.3% | max 0.15% | max 0.05% | max 0.35% | max 0.10% | 0-1.5 |
| (Ta,Nb)C-(70%TaC+30%NbC) | Ta:65.0±1.0% | Nb:26.0±1.0% | - | - | 7.8±0.3% | max 0.15% | max 0.05% | max 0.25% | max 0.25% | 1.5-3.5 |
| (Ta,Nb)C-(70%TaC+30%NbC) | Ta:65.0±1.0% | Nb:26.0±1.0% | - | - | 7.8±0.3% | max 0.15% | max 0.05% | max 0.35% | max 0.10% | 0-1.5 |
| (Ta,Nb)C-(60%TaC+40%NbC) | Ta:56.0±1.0% | Nb:35.0±1.0% | - | - | 8.2±0.3% | max 0.15% | max 0.05% | max 0.25% | max 0.25% | 1.5-3.5 |
| (Ta,Nb)C-(60%TaC+40%NbC) | Ta:56.0±1.0% | Nb:35.0±1.0% | - | - | 8.2±0.3% | max 0.15% | max 0.05% | max 0.35% | max 0.10% | 0-1.5 |
| (Ta,Nb)C-(50%TaC+50%NbC) | Ta:47.0±1.0% | Nb:45.0±1.0% | - | - | 8.8±0.3% | max 0.15% | max 0.05% | max 0.25% | max 0.25% | 1.5-3.5 |
| (Ta,Nb)C-(50%TaC+50%NbC) | Ta:47.0±1.0% | Nb:45.0±1.0% | - | - | 8.8±0.3% | max 0.15% | max 0.05% | max 0.35% | max 0.10% | 0-1.5 |
| (Zr,Nb)C | Zr: min35% | Nb:min52% | - | - | min 11.2% | max 0.5% | max 0.05% | max 0.50% | max 0.05% | 0-3.5 |
| (Hf,Ta)C | Hf:min18% | Ta:min74% | - | - | min 6.1% | max 0.5% | max 0.05% | max 0.50% | max 0.05% | 0-3.5 |
| (Zr,Hf,Nb)C | Zr: min28% | Hf:min18% | Nb:min42% | - | min 10.1% | max 0.5% | max 0.05% | max 0.50% | max 0.05% | 0-3.5 |
| (W,Ta,Ti)C | | | | | | | | | | |
| (W,Ta,Nb,Ti)C | | | | | | | | | | |