

 Emirates
DuSense

دبي لحلول الاستشعار

Prestressing & Post Tensioning Systems

Middle East's Sole Agent for China

Anchorage Products



Sensing Safety for the Middle East



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As one of the first anchorage producers that have passed ISO 9001 certification, Kaifeng Zhongqiao Prestressed Equipment Co., Ltd. is a professional company which is engaged in the production of prestressing anchorages, wedges, coupler and stressing equipments as well as prestressing construction.

Quality Principle: Provide high-quality products and top-class services to satisfy the demands of customers.

Quality Target: Ex-work qualification rate is 100%.

Main products of our company: YJM and BJM anchoring system, Freyssinet cone anchorage, precision-rolled rebar anchorage, pre-tensioning and post-tensioning products, stressing equipments and its accessories, etc. All of our products meet the demands of GB/T14370-2007 as well as the requirements of FIP- Recommendations for Acceptance and Application of Post-tensioning Systems. The products of our company are sampled and inspected by authorities such as Xi'an Changda Testing Center for Highway Engineering, Xi'an Highway Research Institution Highway Engineering Testing Center, Shanxi Highway and Waterway Engineering Testing CO., Ltd, Shanxi Tongyu Highway Research Institution Testing CO., Ltd, Shanxi Hairong Engineering Testing CO., Ltd, Shanxi Transportation Research Institute, National Center for Quality Supervision & Test of Building Engineering, National Quality Supervision and Inspection Center for Metal Products, Henan Transportation Institute Engineering Testing and Reinforcing CO., Ltd, China Academy of Railway Sciences, Test Center of Transportation Engineering of Fujian Province, Test Center of Civil Engineering and Water Conservancy Dept. of Shandong University, Test Center of Transportation Engineering of Ministry of Transportation and Nanjing Municipal Utility Engineering Quality Testing Center. And the results show that the performances of our products have satisfied all the technical criteria of GB/T14370-2007, no matter the samples are delivered by ourselves or by our customers. Our products have widely applied in projects of railway, highway, water conservancy project, high-rise building, overpass and slope and land protection, such as Huangyan Highway, Shitian Highway, Yujia Highway, Yanwu Highway, Yanyan Highway, Najing West Road Reconstruction Project, Light Railway around Beijing and Cross the Yellow River Subproject in "South-North Water Diversion Project", Qinglin Expressway, Anshao Expressway in Hunan Province, Wuyu Highway, Punan Highway, Longpu Highway, Ningwu Highway, Shenhai Double Track Project, Quansan Highway, Zhongyong Highway, etc. Our products are perfect combinations of safety, reliability and practicability of pre-stress technology.

In addition to pre-stressing products and engineering technologies, our company also offers customers other services such as consultation, new product design, non-standard product design, construction plan, material supply and construction of pre-stressing projects. Friends from engineering, scientific research department and colleges are welcomed to visit our company.

Main Products

Anchorage

YJM 15(13) Series Group Anchorage
YJL 15(13) Series Couplers
BJM 15(13) Series Slab Anchorage
JYM15(13) Dead-end Group Anchorage Type P
YJM15(13) Dead-end Anchorage Type P
BHM 15(13) Dead-end Slab Anchorage Type H
BJL 15 (13) Slab Anchorage Coupler
BYM 15(13) Dead-end Slab Anchorage Type P
GZM 15(13) Steel Push Plug Anchorage

DM Steel Wire Button Heading Machine
EL Cone Screw-rod Anchorage
YGM Precision-rolled Rebar Anchorage
YJM 15(13) XZ Pre-Tensioning Anchoring System
HM Ring Anchorage
LM Screw End Bar Anchorage
YLM 15Y Rock/Soil Anchorage
Various Metal Ducts
Various PVC Ducts



Equipments

YDC Series Center Hole Jacks
QYC Series Fore-cramp Jacks
YDD Series Top-pushing Jacks
YDT Series Supporting Block Jacks
YL Series Rod Jacks
YZ Series Cone Anchor Jacks
YJ500A Extruder
YYH Embosser

MBV80 Water Ring Vacuum Pump
LD Series Button Heading Machine
YDY Top-pressing Machine
JW180 Blender
KJ130 Pipe-Making Machine
BGJ90 Flat Pipe Machine
YBZ Electric Oil Pump
SF(Z)-A Diverter Valve (Globe Valve)

Main Products



**KJ130 Pipe Making
Machine**



YDC Center Hole Jack



YBZ Electric Oil Pump



QYC Fore-cramp Jack



HB Mortar Pumps



**YDTT50-180/170 Two-stage
Jack**



YBZ Multi-functional



YDRT60 -50 Jack



Barrel and Wedges

YJM Anchor System

It is composed of stressing-end YJM15 (13) and BJM15 (13) slab anchorages, HM ring anchor, dead-end anchorages type H & P, JYL15 (13) couplers as well as the ducts. The anchorages can be categorized into groups such as YJM8, YJM9, YJM11, YJM13, YJM15, YJM18, HM13 and HM15 by diameters of the strand. The characteristics of YJM anchors are as the following:

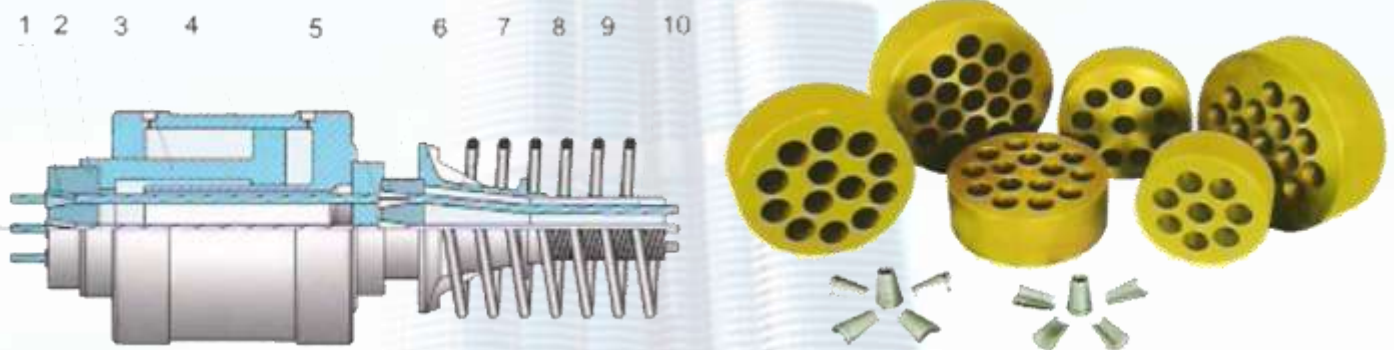
Wide application: it is adaptable for stand with diameters of $\Phi'8$, $\Phi'9$, $\Phi'11$, $\Phi'12.7$, $\Phi'15.2$ and $\Phi'18$ with various strength from 1570Mpa to 2000Mpa as well as for high tensile steel wires with diameters of $\Phi'5$, $\Phi'7$, $\Phi'9$, $\Phi'10$ with the standard strength from 1570Mpa to 1860 Mpa.

YJM anchoring system is available for full range of tendon sizes (1-55 strands). In addition, our company can produce anchorages of any type of arbitrary holes in accordance with demands of customers.

Good in terms of self-anchoring and easy operation;

High anchoring efficiency factor, stable and reliable;

Be capable of repetitive stretching and strong in terms of anti-interface capability.



YJM Anchorage

YJM15 (13) Series Stressing-end Anchorage

It includes YJM15 and YJM13 anchoring systems, equipped with YBZ2X2-50 or YBZ2x1.5-63 electric oil pump and YDC center hole jack for stretching prestressing tendon. The anchorages can be replace all similar anchoring systems home and abroad. It can also be used as dead-end anchorages in all conditions.

Generally, the prestressing tendon in continuous beam is of multiple waveforms, so a coupler is used to stretch in different sections so as to reduce the loss of PC components and to guarantee sufficient pre-stress. There are two kinds of couplers: single-piece and multiple-piece.

The coupler is the system for connecting the prestressed. It can be divided into rod-rod coupler(for Finishing rebar), line-rod coupler(for strand and Finishing rebar), line-line coupler (for strand) and prestressing tendon coupler (for strand tendon) by its function. The prestressing tendon coupler is used for sectional stressing in the continuous beam. See in the following picture:



BJM 15(13) Stressing-end Slab Anchorage

YJL Coupler

Prestressing concrete is mainly applied in areas of structural material such as highway, bridges, railway, viaduct, frame of roof, high-rise building, nuclear power station, etc. Before the component bearing the external load, the pressure applied on the concrete in the tensioning section in advance is usually called prestress. Prestressing anchorage is a kind of permanent anchoring system applied in the post tensioning prestressing concrete structure, which can keep the stress of the prestressing reinforcement and transfer it to the concrete. Prestressing anchorage is also a tool to transfer the prestressed which permanently anchoring in the prestressing concrete structure. Prestressing anchorage must have reliable anchoring performance, sufficient bearing capacity and rigidity. Prestressing anchorage includes anchor ring, wedges, bearing plate and spiral reinforcement. It is first connected with the stressing equipments, then stress the prestressing tendons, and finally anchoring the prestressing tendons in the structure.

It is suitable for $\Phi'12.7, \Phi'15.2$ strands. It gets rid of the advantages of over concentrated prestress and large sizes in two directions in group anchor. The stress distribution is reasonable and the thickness of the components can be further reduced. The anchorages can work with YBZ2x1.5-63 electric oil pump and QYC 270 jack.



BJM Slab Anchorage

JYM 15(13) Dead-end Group Anchorage Type P

The dead end anchorage is installed at the dead end of the prestressing tendons, it is not used for stressing.

The dead end anchorage includes: extruding anchorage, embossing anchorage and the looped anchorage. The extruding anchorage can be buried into the concrete structure, and also can be installed outside the concrete structure. The embossing anchorage can only be used in the concrete structure with enough space and bond length at the dead end, its cost is the minimum one. The looped anchorage can be only used in the thin-slab structure, large building wall and pier, etc.

JYM15 (13) Dead-end Group Anchorage Type P

JYM15(13) and JYM18 dead-end anchorages are suitable for anchors with big designed stress at the end of the component or limited space at the end, and post-tensioning stress is needed to be transmitted to the end face of the beam.



JYM Dead-end

YHM 15(13) Dead-end Group Anchorage Type H

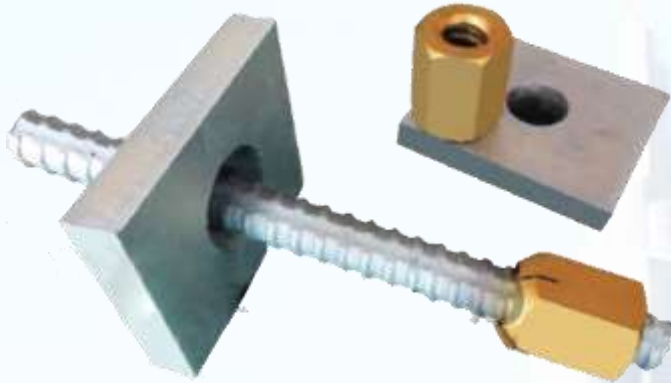
These anchorage use the binding force of concrete upon strands to transmit the post-tensioning stress to the concrete component. The ends of the strands are pressed into bulb by the embosser, and the ends are adhered with the concrete. They can be arranged into shapes such as square and rectangle.

HM Ring Anchorage System

This kind of anchorage is used in the prestressing concrete lining structure of hydraulic power station, pressure diversion tunnel and sediment tunnel as well as the ring prestressing structure of the large and medium waste water treatment tank.

HM series anchorages can be matched with YBZ2x2-50 or YBZ2x1.5-63 electric oil pump and YDC series jack.

YGM/ YGL Precision-rolled Rebar Anchorage



YGM/ YGL anchorages are mainly applied to stress and anchor precision rolled rebar with diameters of 25mm and 32mm, and can work together with YDC jacks, YBZ2x2-50 electric oil pump and special stressing equipments.

Post Tensioning Barrels & Wedges



Prestressing concrete is mainly applied in areas of structural material such as highway, bridges, railway, viaduct, frame of roof, high-rise building, nuclear power station, etc. Before the component bearing the external load, the pressure applied on the concrete in the tensioning section in advance is usually called prestress.

Single-hole Steel Wire Anchors

Prestressing anchorage is a kind of permanent anchoring system applied in the post tensioning prestressing concrete structure, which can

keep the stress of the prestressing reinforcement and transfer it to the concrete. Prestressing anchorage is also a tool to transfer the prestress which permanently anchoring in the prestressing concrete structure. Prestressing anchorage must have reliable anchoring performance, sufficient bearing capacity and rigidity. Barrel and wedge: It is mainly used in anchoring high tensile wire with Dia. of $\Phi 5$, $\Phi 7$, $\Phi 9$, etc.

Pre-tensioning Anchorage (Grip)

The devices produced by our company include line-rod coupler, line-line coupler and rod-rod coupler. These devices connect with material such as $\Phi 25$ precision rolled rebar as well as $\Phi 12.7$ and $\Phi 15.2$ strands, saving a large amount of pre-stressed tendons for construction companies. These devices are safe, reliable, efficient and material-saving.



PC Strand



Specifications

Steel Strand twisted by round steel wire used for prestressed concrete structure, rock or earth anchorage, etc.

Features:

- (1) Construction: 1 X 7
- (2) Diameter: 9.53mm, 12.7mm, 15.24mm

Note:

According to different uses, we can supply PC stranded wire with the other tensile strength and diameter through negotiation by both parties.

Metal Duct

There are round and slab ducts, all made by bending low carbon galvanized or non-galvanized steel belt. The pipes are mainly used for hole-making in post-tensioning prestressing concrete structures or components.



KJ130 Pipe-making Machine

As a machine to produce metal ducts for making pre-arranged holes in prestressing concrete, it can produce single-ripple and double ripple metal ducts with diameters between $\Phi 35\text{mm}$ and $\Phi 130\text{mm}$. The machine suitable for both on-site and in-factory constructions. In addition, our company also produces KBJ Flat Pipe-making Machine, which is an auxiliary device for KJ130 and is used for slab anchors.



BGJ Flat-Pipe-Making



KJ130-W Pipe Bender

KJ130-W Pipe Bender can be bend the molded metal ducts into arc according to the designing requirements which is easy to arrange the ducts within a limited place. It can also get rid of the advantage of death bends made by hand which may affect the quality of the project.



YDC (QYC) Center Hole Jacks

The jacks are general hydraulic jacks which are mainly applied in group anchor stretching and pushing. With different accessories, the jacks can be applied to YJM15Y Clip group anchor, DM Button-head anchor, YGM Precision Rolled Rebar Anchor, LM Screw Bar Anchor and LZM Chill-cast Anchor for stretching of prestressing components in bridge, slope, high-rise building and waste water treatment facilities.

The fore-cramp jacks are used for mono stress, included $\Phi 5$ - $\Phi 10$ strand, one-by-one stress for group anchorage. It can also be used for elimination of breakdown, anchorage exit as well as stressing supplement, which is suitable for operation in high place as well as small place.



QYC Fore-cramp Jack



YDC Center hole Jack

YBZ Electric Oil Pump



YDD Pushing Jack

This jack has pedestal-type and standing-type. It is widely adopted in pushing and lifting in constructions of bridge, high-rise building and hydro-power station, and it can be also used to move buildings.

LD Button Heading Machine

This is a special device for prestressing projects. It is adopted to make button head for high-strength steel wire tendon in post-tensioning prestressing projects as well as pre-tensioning processing in precast plants. The cutter with it can be used to cut high-strength steel wires (tendons)



HB Mortar Pumps

HB3 and 2HB6 are the two types of these piston-type pumps. The pumps are adopted in hole-grouting of pre-castor cast-in-place components in pre-stress constructions. The pumps can be also used in grouting reinforcement and coating support in constructions of bridge, culvert, mine, tunnel and deep foundation.

JW180 standing blender is the specific blender working together with HB3 and 2HB6 mortar pumps.

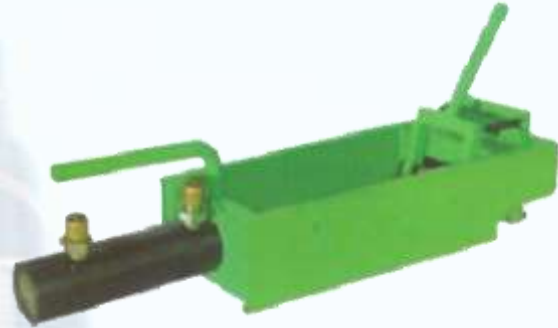




Water Ring Vacuum Pump

YYH Embosser

As a specific embossing machine for dead-end anchor type H, this embosser is capable of processing $\Phi'12.7$ and



YJ500A Extruder

As a specific extruding machine for dead-end anchor type P, this extruder is capable of pressing anchor type P (swaged end), which is usually equipped with $\Phi'12.7$ and $\Phi'15.2$ strands.



Pre-tensioning Anchorage (Grip) Devices

The devices produced by our company include line-rod coupler, line-line coupler and rod-rod coupler. These devices connect with materials such as $\Phi 25$ precision rolled rebar as well as $\Phi'12.7$ and $\Phi'15.2$ strands, saving a large amount of prestressing tendons for construction companies. These devices are safe, reliable, efficient and material saving.

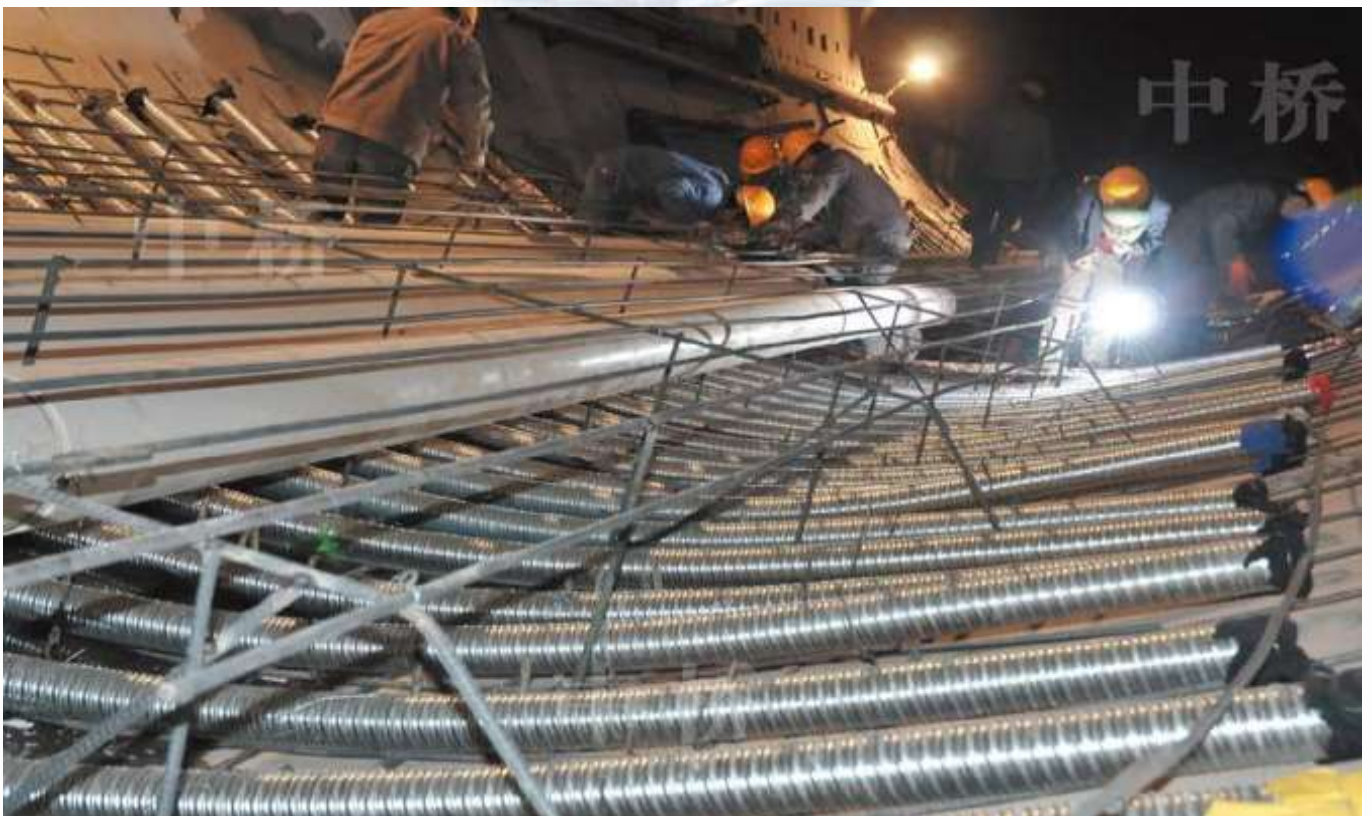


Key Projects

Shitian highway of China Railway 5th Bureau Group



The Yellow River Subproject in “South-North” Water Diversion



Tianjin Beach road of China Railway 15th Bureau Group



Qingdao bay Bridge of China Railway 15th Bureau Group



Shitian highway No.31 Subproject of Eastern Alliance Construction Engineering Co.



Longpu highway of China Railway 15th Bureau Group Co.



Puxiu highway of China Road and Bridge Corporation



Nandeng highway of China Railway 5th Bureau Group

