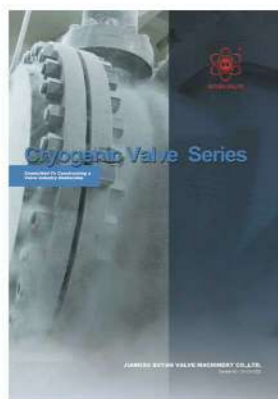
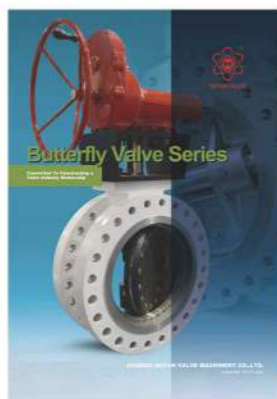


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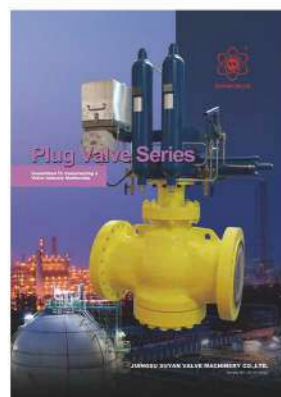
Sample NO: SY-CV-2022



Sample NO: SY-BV-2022



Sample NO: SY-CF-2022



Sample NO: SY-PV-2022



Sample NO: SY-JKZZ-2016

JIANGSU SUYAN VALVE MACHINERY CO.,LTD.

ADD: No. 28, Century Avenue, North District, Binhai County Industrial Park,
Yancheng City, Jiangsu Province
TEL: 0515-84194555 FAX: 0515-84199808 E-mail:hai977@126.com

www.suyangroup.com

Committed To Constructing a Valve Industry Mothership



Wellhead Equipment Series

Committed To Constructing a
Valve Industry Mothership



JIANGSU SUYAN VALVE MACHINERY CO.,LTD.

Sample NO.: SY-JKZZ-2016



Chairman: Mr. ZhengHai Han
 Delegates in Jiangsu Peoples Congress
 Party representative in Jiangsu Province
 Jiangsu Model Worker
 Vice-Chairman of China General Machinery Industry Association
 Executive Vice president of Jiangsu Valve Industry Association
 President of Yancheng Petroleum Machinery Industry Association
 Committee Member of National Valve Standardization Technical Committee

Comprehensive Fluid Control Solutions



DIRECTORY

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COMPANY PROFILE



SUYAN VALVE



The Registered Capital is 310 million RMB,
Total assets of 5 billion RMB,
Covering an area of 80 hectares,
The building area is 320,000 square meters,
Existing staff of 1300 people.



National high-tech enterprise, National special special new "little giant" enterprise
National Postdoctoral Research Station,
National intellectual property advantage enterprise
Provincial Enterprise Technology Center,
Provincial Engineering Research Center
Provincial Graduate Workstation
Jiangsu boutique enterprise
Qualified Supplier of CNNC

More than 1,000 sets of sophisticated manufacturing equipment
520 sets of testing equipment
Set up a national laboratory

Developed more than 300 new products
65 national invention patents
310 utility model patents
Participated in the drafting and revision of 43 standards

since 1991



The sales market covers China End Users PetroChina, Sinopec, CNOOC and global customers. Provide fast after-sales service, distributed all over the country and around the world.



Tel:400-633-5118

QUALITY ASSURANCE



SUYAN VALVE



Detection test project is complete

SUYAN sequent imported production line such as most advanced digital control workstation, touchable induction three-coordinate digital instrument (made in USA), portable spectrum analyzer, ultra-low temperature detecting system, vacuum & micro-leakage detecting system and NDT instrument including ultrasonic detector etc. the advanced equipment and professional QC inspector jointly guarantee the high quality of product.



送审稿

Tel:400-633-5118

CAST&FORGED WORKSHOP



As one of the pressure-bearing equipment for fluid control pipelines, the quality of valve body is the most important for the life and personnel environmental safety, especially in the conditions of high temperature and pressure. Therefore, valves are always critical. The customer needs to pre-quality the first certified material before approving the valve manufacturer as a cooperative supplier.



Casting production line

Coated sand production line



Tel:400-633-5118

DATA MANAGEMENT



Automatic
Production
Line



The advanced hard facilities ensure
SUYAN to be at best position during
market competition.

MES
Management
System



送审稿

Tel:400-633-5118



SUYAN is fitted with precise numerical control machine tools and processing center, advanced equipments testing instruments, superior technology, consummate quality control system, professional elite and outstanding scientific research team. We fully use wtechnology, new workmanship and new materials to ensure the dependability of products.

MACHINING CENTER



PRODUCTION EQUIPMENT



Fully CNC Automation

Fully CNC, automatic production process to bring high precision, high quality stable and reliable products High-tech equipment, professional team, to ensure excellent product quality

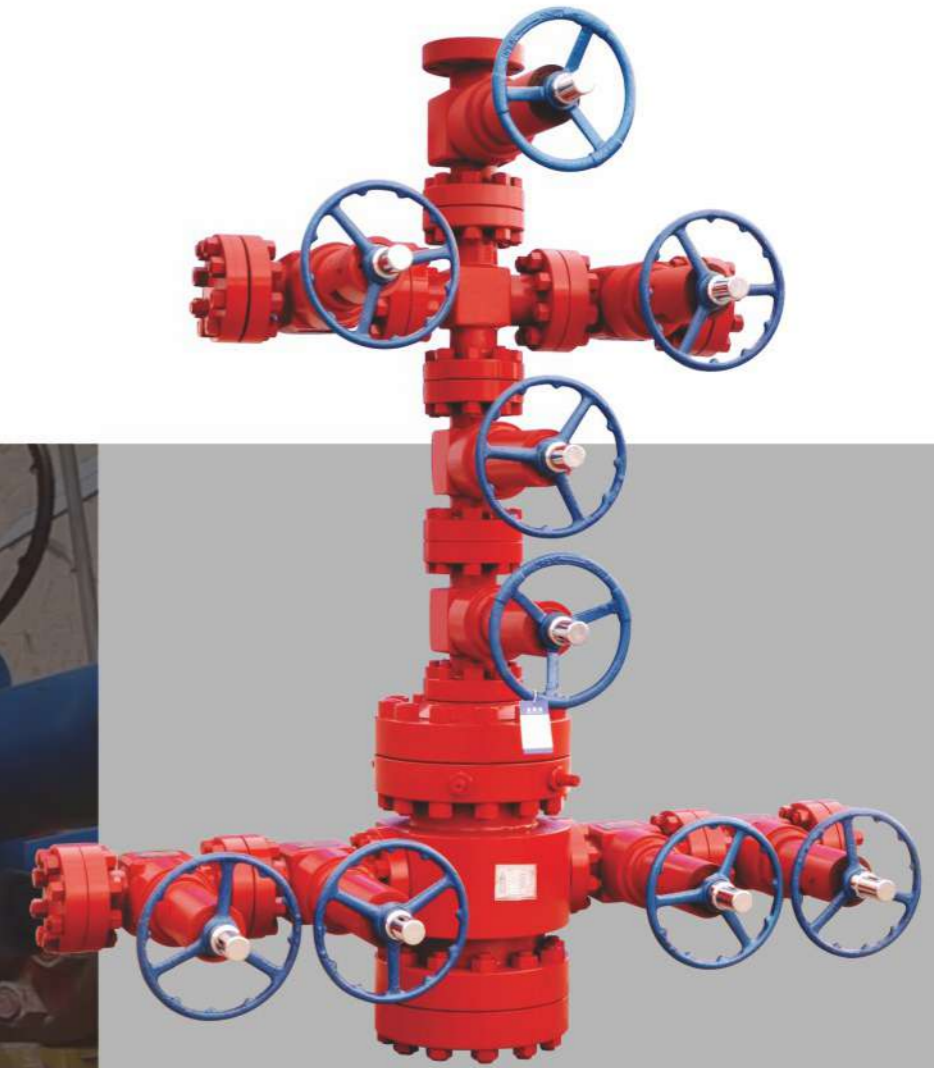


送审稿
Tel:400-633-5118



Committed to providing customers with quality products and services

SuYan triple offset butterfly are designed, manufactured and testing in accordance with API 609, ASME B16.34. Available to offer fire safe tested design when required, which is certified to API 607. Size range is from 3 to 60inch, pressure rating is from 150LB to 900LB. Operation temperature -46-450 °C .



送审稿

Tel:400-633-5118

VALUED CUSTOMERS






























 RESOURCES GAS	 TIANLI GAS	 PETROBRAS	 SINIPEC ENGINEERING
 WISON	 ENERGAS	 SHAANGU	 WISON
 XINHUA CHEMICAL	 FURUI SE	 CNMIC	 HGMRI
 TCC	 DATANG ENERGY	 CTCI	 SABIC
 BAYER	 LIAHERD	 CNWG	 ZJ UNIVERSITY

We Have Provided Matching Service For Many National And Foreign Stress Projects



Quality engineering long-lasting quality

Under many years brand operating and aborative exercising, the strength and credit of company are increasing steadily, at present Su Yan has been China petrifaction group material equipment company; China petrol & natural gas group company; China Aluminum Group company and the pointing member unit of China Sea Petroleum, metallurgy and steel-making, electricity system. SuYan brand series valves are sold to such over 10 countries and areas, welcomed by vast customers.

 SINOPEC	 CNPC	 SNPTC	 CNOOC	 SINOCHEM	 CHEMCHINA	
 CSSC	 CGDC	 CRECG	 CHALCO	 CHINA XD	 SHENHUA GROUP	 CHINAGAS
 CMCC	 SINOPHARM	 BAOSTEEL	 BAOGANG GROUP	 ANGANG STEEL	 SHOUGANG STEEL	 BEIJING GAS
 BEIJING GAS	 XINAO GAS	 TOWNGAS	 GUANGZHOU GAS	 SHANGHAI GAS	 XINJIANG GAS	 SHENYANG GAS



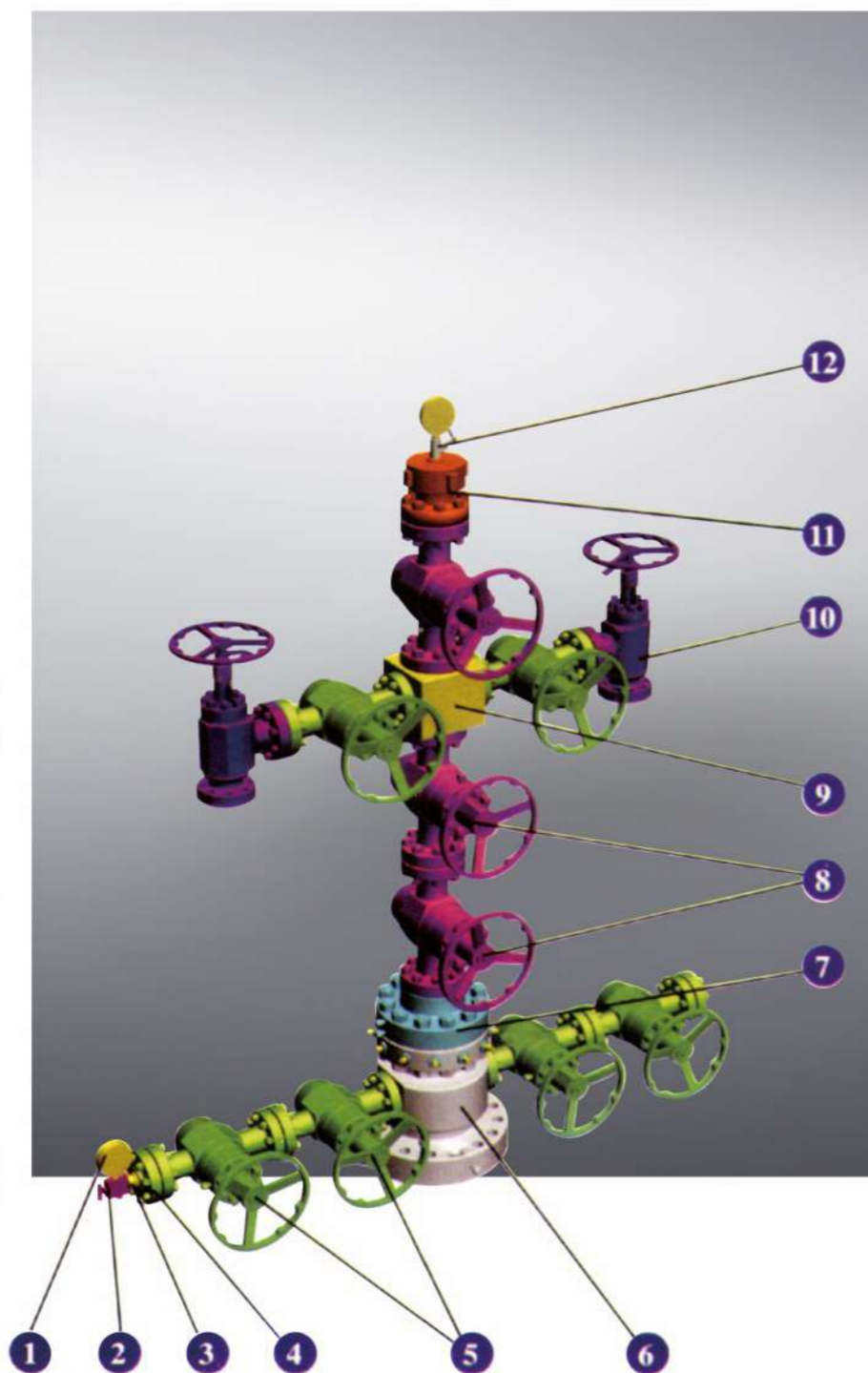
Christmas Tree

Christmas Tree and Tubing Head

The Christmas tree is the assembly of valves and accessories, which is applied for fluid control of oil/gas well and providing the inlet for tubing string in production. It refers to all equipment above the tubing head flange. The Christmas tree could be assembled in many ways so as to satisfy the requirements of any special use. And in light of different functions, Christmas tree also could be so rted in to special wellhead equipment for oil production (flowing well and artificial lifting well), gas production (natural gas acid gases), water injection, thermal recovery, fracturing, acidizing, etc and they are divided into different series based on working pressure grades.

Gas well Christmas tree and tubing head are mainly applied to gas production and adding. Due to low relative density of natural gas and the low gas column pressure, both gas production well gas injection well have high wellhead pressure and high flow velocity, besides, gases are easily to leak and sometimes with such corrosive medium as H₂S, CO₂ and the like, thus, the sealing and material of the Christmas tree is strictly required. Sometimes for the safety purpose, double valves method is adopted in both tubing and casing, and the valves for some high pressure and ultra-high pressure wells are manufactured by solid forge with high quality steel.

The main bearing part of the oil production tree and the tubing head of our company is the forging.



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Pressure Meter	2		Standard
2	Globe Valve	1		See the section concerning globe valve for details
3	Joint of Globe Valve	1	35CrMo	
4	Meter Flange	2	35CrMo	
5	Flat Valve	6		See the section concerning gate valve for details
6	Oil Pipe Head Cross	1	35CrMo	See the section concerning christmas tree for details
7	Upper Flange	1	35CrMo	
8	Flat Valve	3		See the section concerning gate valve for details
9	Small Corss	1		
10	Choke Valve	1		See the section concerning choke valve for details
11	Cap of Christmas tree	1	35CrMo	
12	Globe Valve	1		See the section concerning globe valve for details

TUBING HEAD CROSS

1. Structure of Tubing head

In normal conditions, tubing head is a major connected with flanges both on top and at bottom; it is installed on the upper flange of casing head to hang the tubing string and to seal up the annular clearance between the tubing string and production casing. The tubing head consists of tubing head cross and tubing hanger.

2. Functions of Tubing head

- 1) Hanging borehole tubing string
- 2) Sealing up the annular clearance between tubing and casing
- 3) Providing the transition for connecting the casing head on the under joint and the Christmas tree on the upper joint.
- 4) Finishing the injection and flushing operation through two side ports in the body of tubing head cross.

3. Tubing hanger

Tubing hanger is a equipment for supporting the tubing string and sealing the annular clearance between tubing and casing. The sea method of the tubing hanger is to make the tubing sink into the tubing hanger major cross, and then they are sealed automatically thanks to the effect of gravity. This method is easy to operate, and it is safe and fast to change wellhead with this method which, thus, is a widespread method employed by conventional wells and middle-deep wells.

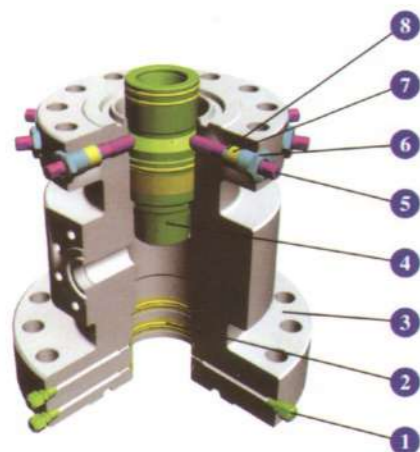
The tubing head cross produced by our company fully satisfies the requirements of API6A, and it is forging or is made of specially smelted forging, with the advantages of high bearing capacity, safety and reliability, thereby, is able to bear high pressure, safe and reliable. The side outlets are LP threaded or Studded. The studded side outlet contains R1 1/2" valve removal threads.

CHRISTMAS TREE



SUYAN VALVE

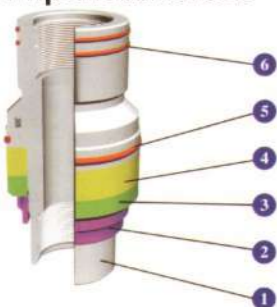
Structure Diagram of Oil Pipehead Cross



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Resin Injection Valve	6		Assembled
2	Bt Sealing Ring	2	NBR	
3	Oil Pipe Head Cross	1	35CrMo	
4	Oil Pipe Hanger	1		
5	Jack Bolt	12	35CrMo	
6	Cap Of Jack Bolt	12	40Cr	
7	Filler	60	HNBR	
8	Filler Gasket	24	2Cr13	

Structure Diagram of Oil Pipehead Cross



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Oil Pipe Hanger Body	1	35CrMo 12Cr13 718	
2	Lock Nut	1	35CrMo	
3	Gasket	1	35CrMo	
4	Sealing Ring	1	HNBR	
5	"O" ring	1	HNBR	
6	"O" ring	2	HNBR	

How to order(e. g. : KQ78/65-70)

XX		XX		XX		XX	
Product Code		Main Path		Working Pressure		Side Diameter	
Product Name	Code	Main Path	Code	Side Diameter	Code	Working Pressure	Code
Oil Extraction Wellhead	KY	52mm	52	52mm	52	3000psi	21
Gas Extraction Wellhead	KQ	65mm	65	65mm	65	5000ps	35
Water Injection Wellhead	KZ	78mm	78	65mm	65	10000psl	70
Thermal Extraction Wellhead	KR	103mm	103	65mm	65	15000psi	105

Technical Parameters of Oil(gas) Extraction Wellhead

Parameters	Model	
	KY65-25	KQ65-70
Rated Pressure	3500psi(24.5MPa)	10000psi(70MPa)
Inside Normal Diameter	29/16in.(65mm)	29/16in.(65mm)
Working Temperature	LU(-46~121°C)	LU(-46~121°C)
Applicable Media	crude oil,water	crude oil,water
Connection Mode	Clamp	Flange
Grade Of Materials	AA-DD	AA—FF
Grade Of Spec	PSLI-2	PSLI-4
Grade Of Property	PRL-2	PRI-2

CHRISTMAS TREE



SUYAN VALVE

Structure Diagram of Reducer Flange



Structure Diagram of Bolt Type Cross



Structure Diagram of Flange Type Cross



Structure Diagram of Adapter Flange



Technical Parameters of Oil(gas)Christmas Tree and Oil Pipe Wellhead

Parameters	Model							
	KQ65-21	KQ65-35	KQ80/65-35	KQ65-70	KQ78/65-70	KQ65-105	KQ78/65-105	
Rated Pressure	21Mpa	35Mpa	70Mpa	70Mpa	70Mpa	105Mpa	105Mpa	
Inside Nominal Diameter	Main	65mm	65mm	80mm	65mm	78mm	65mm	78mm
	Side	65mm	65mm	65mm	65mm	65mm	65mm	65mm
Working Temperature	LU	LU	LU	LU	LU	LU	LU	
Applicable Media	Crude Oil, Natural Gas	Crude Oil, Natural Gas	Crude Oil, Natural Gas	Crude Oil, Natural Gas	Crude Oil, Natural Gas	Crude Oil, Natural Gas	Crude Oil, Natural Gas	
Grade of Spec	PSL1-3	PSL1-3	PSL1-3	PSL1-4	PSL1-4	PSL1-4	PSL1-4	
Grade of Materials	AA-FF	AA-FF	AA-FF	AA-FF	AA-FF	AA-FF	AA-FF	
Grade of Property	PRI-2	PRI-2	PRI-2	PRI-2	PRI-2	PRI-2	PRI-2	
Connection Mode	Clamp or Flange	Clamp or Flange	Clamp or Flange	Flange	Flange	Flange	Flange	

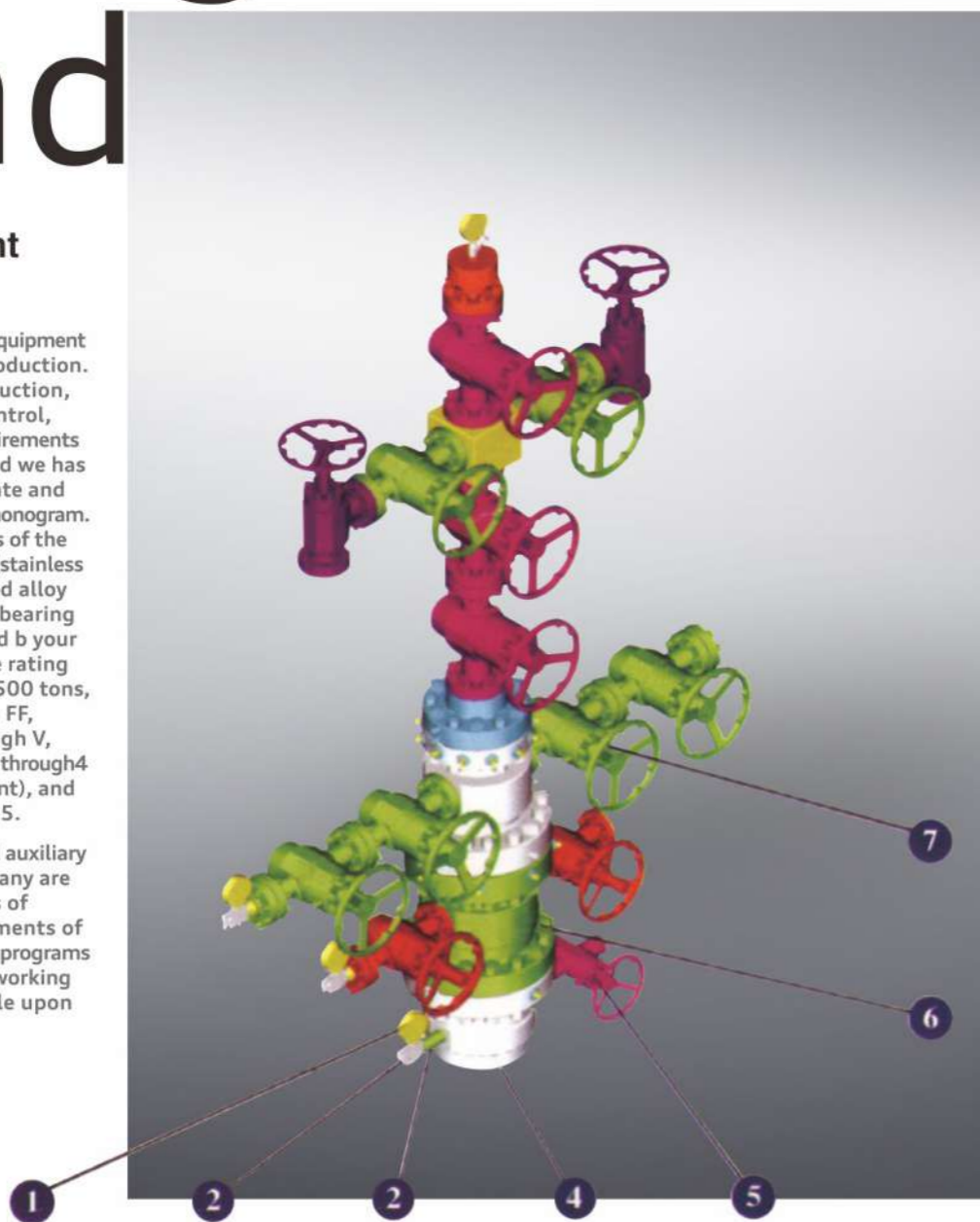


Casing Head

Wellhead Equipment

Our company can provide wellhead equipment exploration, development and production. In terms of product design, production, manufacture, test and quality control, these products fully satisfy the requirements in the latest version of API 6A, and we have acquired the API Spec 6A certificate and has been authorized to use the API monogram. All main pressure-containing parts of the product are made of low alloy steel (stainless steel) forgings or specially smelted alloy steel forgings, which have a high bearing capacity. Wellheads manufactured by your company are available in pressure rating up to 105MPa, load rating up to 500 tons, material classes from AA through FF, temperature classes from L through V, product specification levels from I through 4 and PRI-2 (performance requirement), and also meet NACE Standard MR0175.

The wellheads, Christmas trees and auxiliary equipments supplied by our company are available in many different kinds of configurations, meeting requirements of all kinds of bore frames and casing programs and providing service in different working conditions. They are also available upon customer request.



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Pressure Meter	4		Standard
2	Pressure Meter Stop Valve	4		See the section concerning Stop valve for details
3	Pipe Plug	1	35CrMo	
4	Casing Head Body	1		See the section concerning Wellhead equipment for details
5	Screw Connected Flat Valve	1		See the section concerning Gate valve for details
6	Casing Head Cross	1		See the section concerning Wellhead equipment for details
7	Flange Connected Nat Valve	11		See the section concerning Gate valve for details

CASING HEAD

The casing head is a kind of component that connects the casings and wellheads. It is used to sustain the intermediate casings and protection casings, to seal up the annular clearances between the casings. It provides transition connection for installing upper wellhead equipments such as blowout preventers, tubing heads and Christmas tree. And it also can be used in supplementing cement squeezing, monitoring well sedimentation, injecting equilibrium liquid, etc.

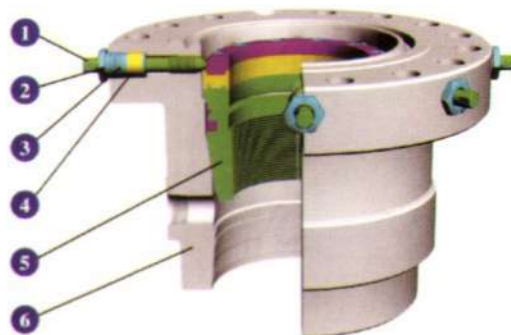
Casing head made by our company is standard configuration, in which the casing hanger of our company is installed, and these casing hangers can be available in different sizes according to the casing procedure and the change of well head condition. The upper parts of this casing head are all API 6B flange or API 6BX flange.

OPTIONS FOR CASING HEAD

It is available with such bottom preparations as API CSG female threaded, API BTC female threaded, slip-on weld and slips. It can be provided with weld-group supporting base plate.

The side outlets are LP threaded or Studded, The studded side outlet contains R1 1/2" valve removal threads.

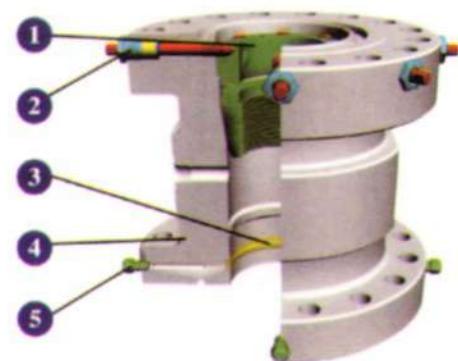
Structure Diagram of Casing Head



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Jack Bolt	16	CrMo	
2	Cap Ofjack Bolt	1	42CrMo	
3	sealingring	1	HNBR	
4	Shim	1	42CrMo	
5	Slip Hanger Assembly	1		Please refer to the structural diagram of the slip hanger for details
6	Casing Head	1	35CrMo	

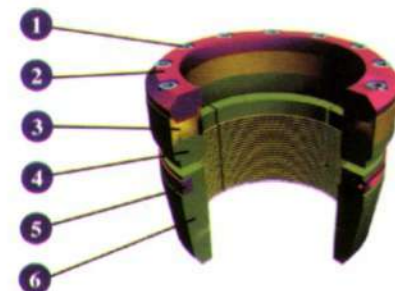
Structure Diagram of Casing Head Cross



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Slip-type Hanger Assembly	1		
2	Jack Bolt Assembly	12		
3	Bt Sealing Ring	1	HNBR	
4	Casing Head Cross	1	35CrMo	
5	Resin Injection Valve	4		

Structure Diagram of Slip-type Hanger



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Gland	12	35CrMo	
2	Compression Screw	12	42CrMo	
3	Sleeve Sealing Ring	1	HNBR	
4	Guide	60	20	
5	Slip	4	20CrMo	
6	Hanger Housing	1	35CrMo	

TF133/8"X95/8"X7-35(70)ASERIESO FCASING HEADS

The TFZ35-70A series of casing-heads for oil and gas well is the newest patented series of products which our company developed on the basis of various casing heads for drilling and oil-producing used at home and abroad meanwhile integrating the actual well-drilling process to simplify the installation procedures and to further elevate the safety and reliability of hanging the casings.

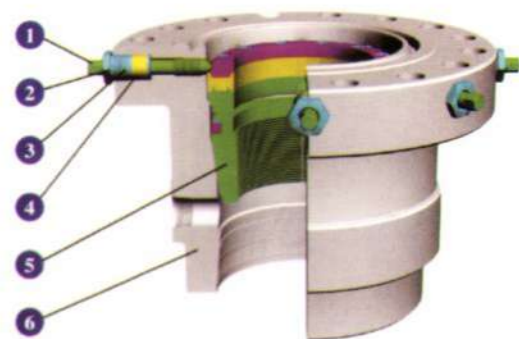
MAIN TECHNICAL PARAMETERS

Casing program : 20"X 133/ 8"x95/ 8"x7"或51/ 2"
 Connection mode :
 Upper: 135/ 8"x5000psi(10000psi)flange, flange mentle ring; BXI60(BXI59)
 llower: 133/ 8"CSG casing standard whorl
 Spec of side flange: 65-35 R2j(65-70 BXI53)
 Load: 5000KN
 Spec of hanger: 4", 4 1/ 2", 51/ 2", 7", 95/ 8"
 Working pressure: 35Mpa(70Mpa)
 Applicable well depth: 5000-7000m
 Working temperature: P U class
 Working media: petroleum, natural gas, slurry
 Minimum inside nominal diameter: Φ3 16mm

CASING HEAD



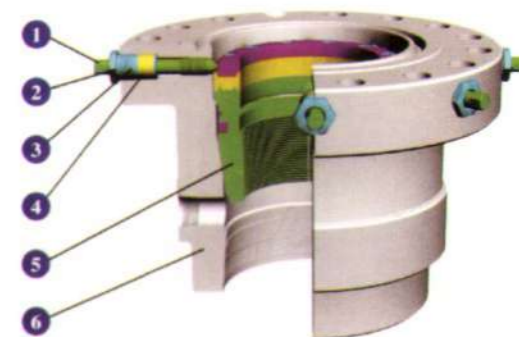
Tf133/8"x95/8"x7-35(70) Structure Diagram of Tfz35—70a Series Casing Head



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Top Wire Packing	25	PTFE	
2	Filler Gasket	10	2Cr13	
3	Jack Bolt	5	35CrMo	
4	Cap Ofjack Bolt	5	40Cr	
5	7 Inch Hanger	1		
6	95/8inch Hanger	1		
7	Casing Head	1	35CrMo	

Tf133/8"x95/8"x7-35(70) Structure Diagram of Tfz35—70a For—casing —head Hanger



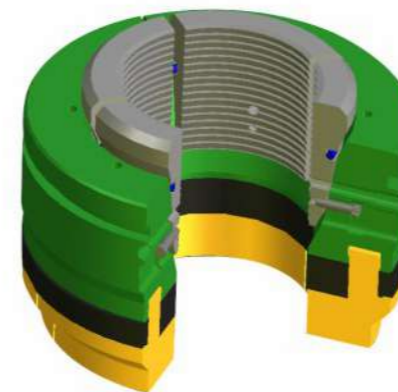
List of Product Parts

No.	Name	Quantity	Material	Remark
1	Lock Sleeve	1	35CrMO	
2	Bolt	4		Standard
3	Slip Teeth	4	20CrMo	
4	Inner Sliding Bush	1	35CrMo	
5	Inner Sealing Ring	1	HNBR	
6	"O"ring	1	HNBR	
7	Outer Sealing Ring	1	HNBR	
8	Outer Sliding Bush	1	35CrMo	
9	Block Ring	1	35CrMo	
10	"O"ring	2	HNBR	
11	Hanger Body	1	35CrMo	

CASING HEAD

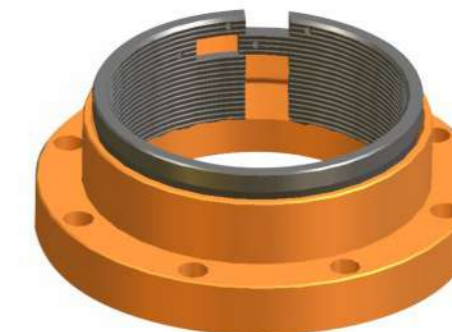


"W" Type Casing Hanger



- 1.Seal hanger by nitrile rubber, slip teeth, slip housing, supporting seat are made with low alloy steel API SPEC 6A specification is made.
- 2.Hanger is sealed by the self weight, and is excited by the weight of the casing.
- 3.Single cone casing hanger
- 4.To provide self excitation ring seal
- 5.Is suitable for all kinds of JMP type of casing head and casing four links
- 6.It can be suspended, "133/8 103/4", 95/8 ", 7", 51/2 "

"WD" Type Casing Hanger



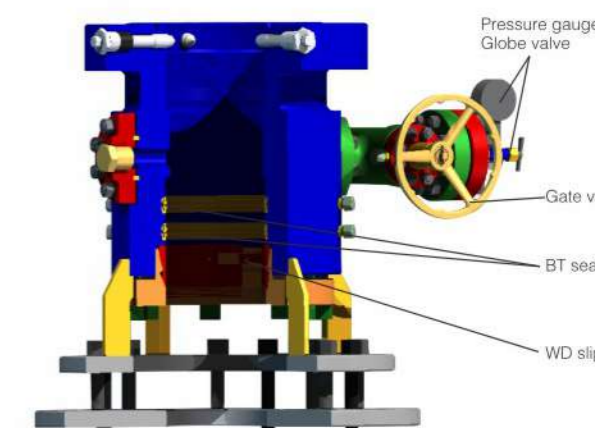
- 1.The retractable structure has the advantages of convenient installation, installation, as long as the casing is sheathed in the surface casing in place, tighten the screws at the bottom.
- 2.In the WD type slip hanger upper part is provided with a two "BT" seal ring used for sealing surface casing, casing string to prevent pressure ring. 20 ", 13-3/8", 9-5/8"

Matching Tool



A variety of specifications into and out of the tool
Various specifications of anti wear
Specification test plug

At The Bottom of The Slip Connection



Gate Valve

Rising Stem Flat Valve

The rated value of the temperature of the non-rising stem flat valve produced by our company could be type L, P, R, S, T and U in API Spec 6A. The flat valves with the maximum service temperature of 345 °F or 650° F can provide on request. And we also can provide refractory gate valve in line with API Spec 6A. The working pressure grades of our company's gate valves range from 2000,3000, 5000, 10000 to 15000psi. The material grades are API 6A AA—FF, PSL (product specification level)1-3, and PR a requirement).The gate valve of our company possesses the features listed below:

Simple structure and renewable gate and seat assembly

One-piece and double-acting gate with long service life.

Both thrust bearings with large load capacity and composite rubber-plastic stem lip packing minimize operational torque.

Bearing cap is provided with a grease cup to make it easy to inject lubricating grease in the field.

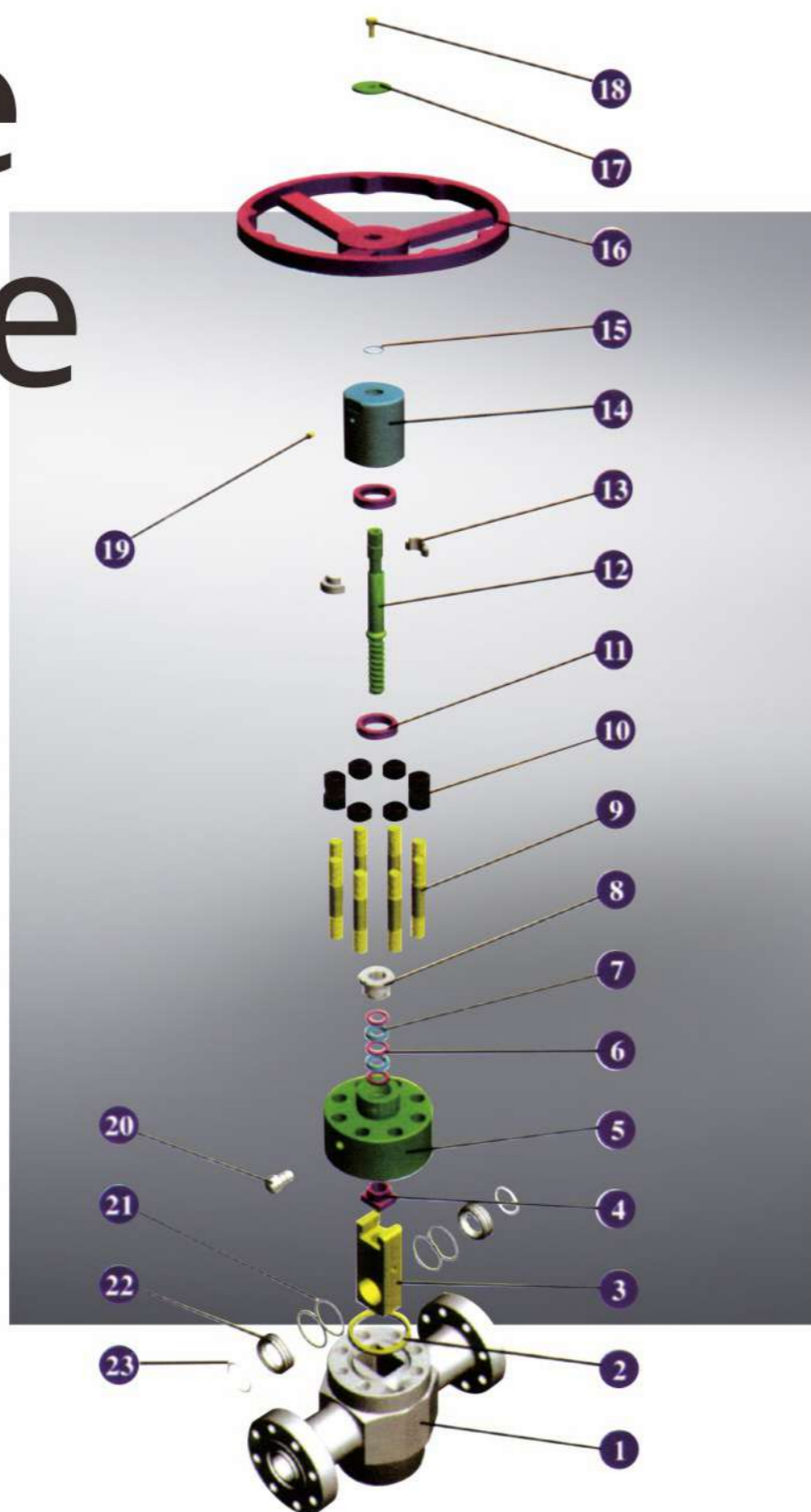
Threaded packing gland allows removal of bearings and stem packing under line pressure.

Both the bolted bonnet and modern bonnet seal ring provide simple structure and reliable sealing.

The sealing surfaces of the gate and seat are overlaid with hard alloy for wear and corrosion resistance.

Wave springs are installed between the body and seat and between the gate and seat. The gate and seat still remain a positive metal to metal sealing under low pressure.

Floating gate design requests the hand wheel to be backed off 1/4 turn after its rotation can go no further



Gate Valve

List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valvebody	1	35CrMo	
2	Middle—hoie sealingring	1	304	
3	Flashboard	1	12CR13+HF	
4	Valve Stemnut	1	ZCuAl1oFes	
5	Valve Cover	1	35CrMo+ A132	
6	Filer	2	RPTFE+ EIGILOY	
7	Filler Gasket	3	12Ct13	
8	Filler Gland	1	35CrMo	
9	Boit	8	42CrMo	
10	Nut	8	45	
11	Shaft	2		Standard
12	Valve Stem	1	12Cr13 or 718	
13	Ferrule	1	40Cr	
14	Support	1	45	
15	"O"ring	1	Rubbor	
16	Hand Wheel	1	ZG270-500	
17	Cushion diagram	1	Q235	
18	Boit	1		Standard
19	Oil cup	1		Standard
20	Resin Injection Valve	1		Assembled
21	"O"ring	4	HNBR	
22	Valve Seat	2	12Cr13HF	
23	Wave Spring	2	3YC7	

INTRODUCTION TO RISING STEM FLAT VALVE

The rated value of the temperature of the rising stem flat valve produced by our company could be type L, P, R, S, T and U in API Spec 6A. Gate valves to be used in the 350~F or high temperature can be supplied on request. Fire—proof gate valves also can be supplied according to API 6A. Gate valves manufactured by our company are available in 2000psi, 3000psi, 5000psi, 10000psi and 15000psi working pressure, material classes from AA through FF, product specification levels(PSL)from 1 through 3 and performance requirement(PR)1. The rising stem slab gate valves manufactured by our company have the same characters as the non—rising stem slab gate valves. Thanks to the rising stem design, the close and open of the valves is completely controlled. Note: when the valve is under pressure, it is impermissible at any rate to let valve be between ON and OFF. This will enormously damage the flashboard of the valve, thereby greatly cut the service life of the valve.



Gate Valve

Rising Stem Flat Valve

The rated value of the temperature of the non-rising stem flat valve produced by our company could be type L, P, R, S, T and U in API Spec 6A. The flat valves with the maximum service temperature of 345 °F or 650° F can provide on request. And we also can provide refractory gate valve in line with API Spec 6A. The working pressure grades of our company'S gate valves range from 2000,3000, 5000, 10000 to 15000psi. The material grades are API 6A AA—FF, PSL (product specification level)1-3, and PR a requirement).The gate valve of our company possesses the features listed below:

Simple structure and renewable gate and seat assembly

One-piece and double-acting gate with long service life.

Both thrust bearings with large load capacity and composite rubber-plastic stem lip packing minimize operational torque.

Bearing cap is provided with a grease cup to make it easy to inject lubricating grease in the field.

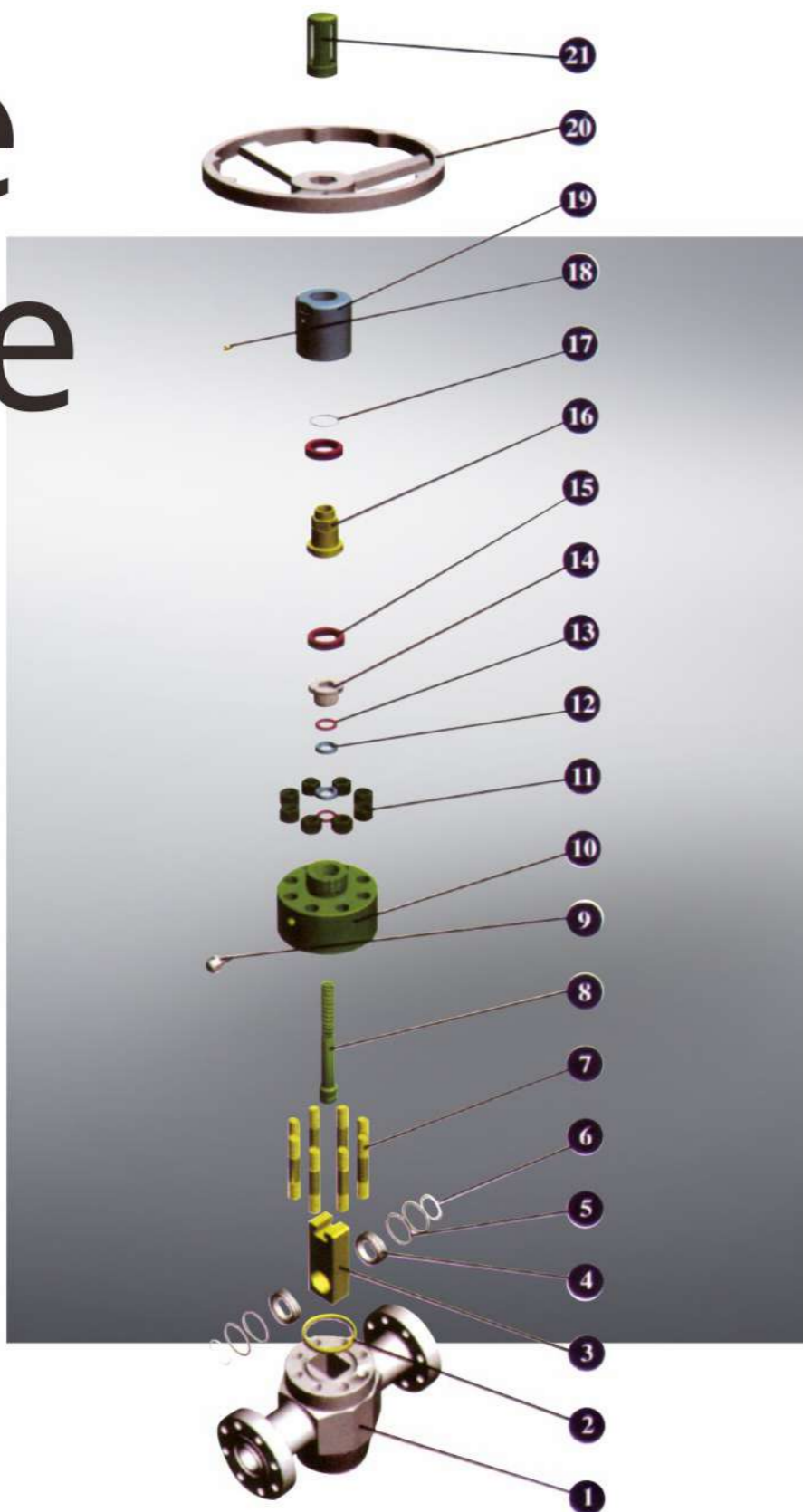
Threaded packing gland allows removal of bearings and stem packing under line pressure.

Both the bolted bonnet and modern bonnet seal ring provide simple structure and reliable sealing.

The sealing surfaces of the gate and seat are overlaid with hard alloy for wear and corrosion resistance.

Wave springs are installed between the body and seat and between the gate and seat. The gate and seat still remain a positive metal to metal sealing under low pressure.

Floating gate design requests the hand wheel to be backed off 1/4 turn after its rotation can go no further



Gate Valve

List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valve Body	1	35CFMO	
2	Middle-hole Sealingring	1	304	
3	Flashboard	1	12Cr13HF	
4	Valve Seat	2	12Cr13HF	
5	"O"Ring	4	HNBR	
6	Wave Spring	2	3YC7	
7	Valve Cover Bolt	8	42CrMo	
8	Valve Stem	1	12Cr13 or 718	
9	Resin Injection Valh	1		Assembied
10	Valve Cover	1	35CrMO	
11	Valve Cover Nut	8	45	
12	Filler	2	HNBR	
13	Filler Gasket	3	12Cr13	
14	Filler Gland	1	35CrMO	
15	Shaft	2		Standard
16	Valve Stem Nut	1		
17	"O"Ring	1	NBR	
18	Support	1	45	
19	Handwheel	1	ZG270-500	
20	Valve Shield	1	Q235A	

Gate Valve

Hydraulic Flat Valve

Thanks to taking hydraulic control as the open and C10 Se mechanism, the hydraulic operated flat valve produced by our company is stable and easy to operate, thus, widely applied in automatic control system and remote control.

Rated pressure:14-105Mpa(2000-15000psi)

Inside nominal diameter:46-103mm(113/16-41/16in.)

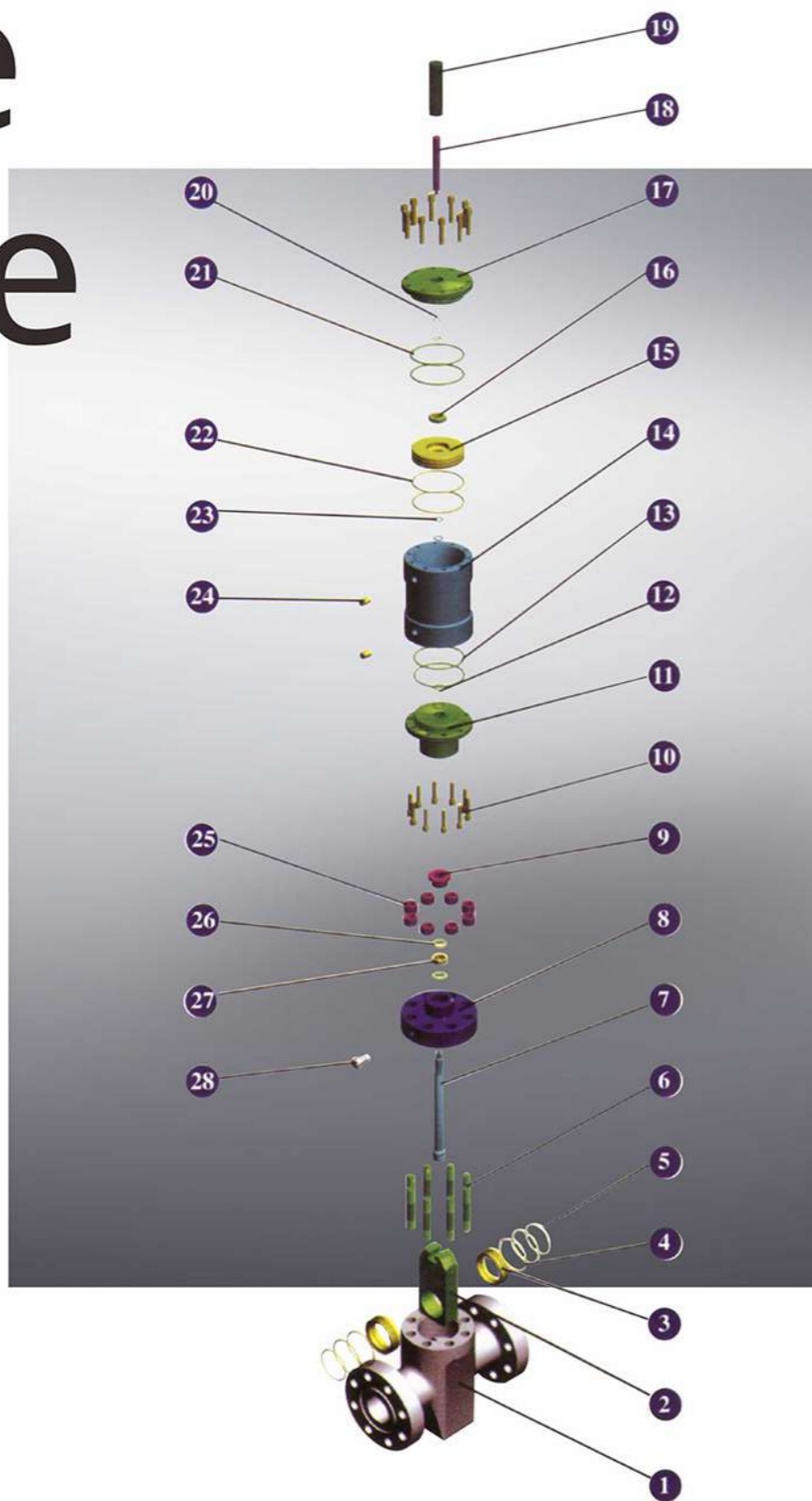
Working temperature: L U

Grade of property: PRI-2

Grade of spec: PSLI-4

Grade of materials: AA-FF

Operating pressure:7.5-10.5Mpa(107-1500psi)



Gate Valve

List of Product Parts

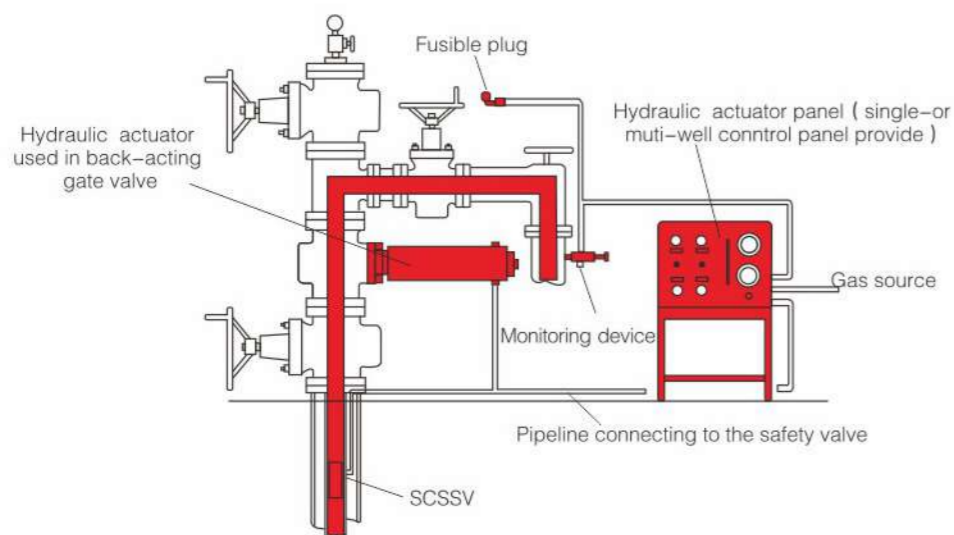
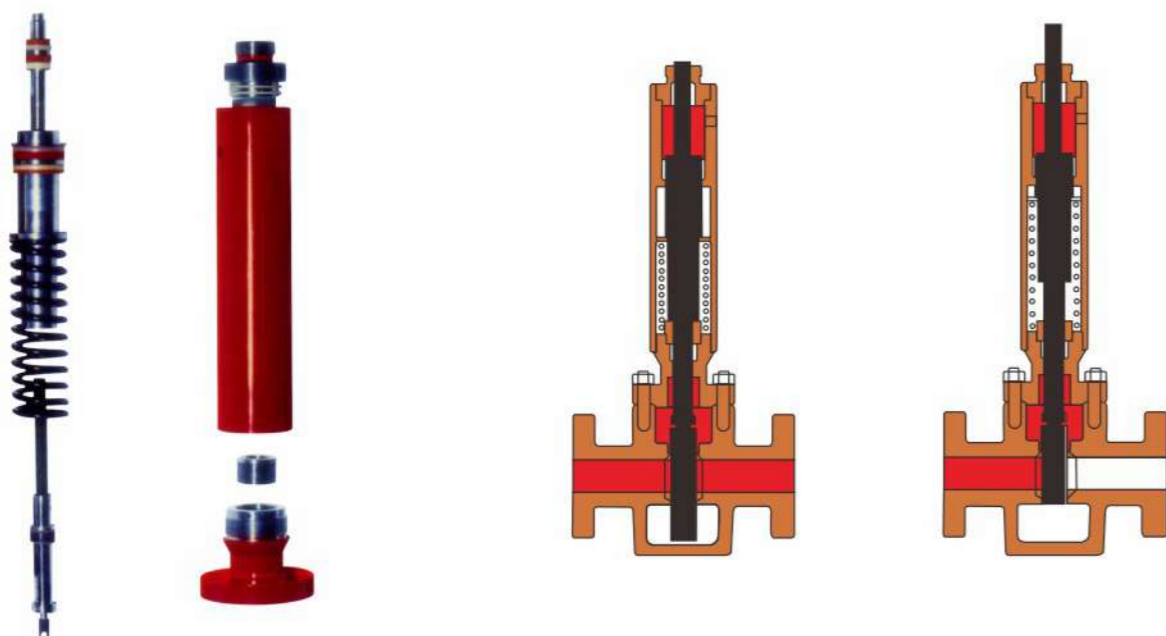
No.	Name	Quantity	Material	Remark
1	Valyebody	1	35CrMC	
2	Fiashboard	1	12Cr13HF	
3	Valve Seat	2	12Cr13HF	
4	Wave Spring	2	3YC7	
5	"O" Ring	4	HNBR	
6	Valve Covarbolt	8	42CrMo	
7	Valve Stem	1	12Cr13 or718	
8	Valve Cover	1	35CrM0	
9	Filler Gland	1	35CrM0	
10	Cylinder Head Screw	20		Standard
11	Lower Gland	1	35CrM0	
12	"O" Ring	2	HNBR	
13	"O" Ring	2	HNBR	
14	Dil Cylinder	1	35CrM0	
15	Piston	1	12Cr13	
16	Locking Nut	1	35CrM0	
17	Uppergland	1	35CrM0	
18	Indicating Stem	1	12Cr13	
19	Valve Shield	1	O235A	
20	"O" Ring	2	HNBR	
21	"O" Ring	2	HNBR	
22	"O" Ring	2	HNBR	
23	"O" Ring	2	HNBR	
24	Serew Plug	2	45	
25	Valve Stemnut	8	45	
26	Filler Gasket	2	12Cr13	
27	Filler	5	HNBR	
28	Resin Injection Valve	1		



HYDRAULIC DRIVING SAFETY VALVE

The hydraulic driving safety valve consists mainly of two parts, namely, safety preparing valve and hydraulic driver, and it is the execution unit of the aboveground safety system. Specifically, the high-pressure oil goes into the cavity of the upper part of the driver, which compresses the spring under the cavity to open the valve. When the wellhead equipment is under dangerous pressure, on the signal transmitted by the sensor the controlling mechanism, then, releases the pressure inside of the hydraulic cylinder, which makes the spring push the valve stem to close the valve and the Wellhead equipment to ensure the safety of the equipments of the processing line.

Structure Diagram of Hydraulic Driver

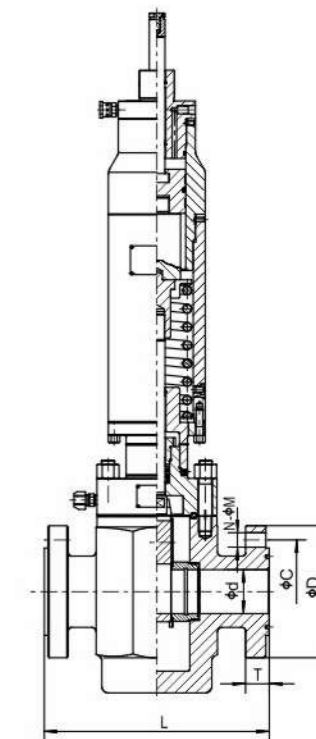


How to order (taking PFFA65-70 for example)

XXXX		XX		XX	
Product Model		Inside Nominal Diameter		Working Pressure	
Product Model	Code	Inside Nominal Diameter	Code	Working Pressure	Code
Flange Connecting Rising Stem Flat Valve	PFFA	1-13/ 16"	46	3,000psi	21
Clamp Connecting Rising Stem Flat Valve	PFFA	2-1/16"	52	5, 000psi	35
Whorl Connecting Rising Stem Flat Valve	PFLA	2-9/ 16"	65	10, 000psi	70

Basic technical parameters(unit: mm)

Inside nominal diameter	L	d	RTJ	C	D	T	N	M
3,000psi								
2-1/16	371	52.4	R24	165.1	216	46.0	8	25
2-9/16	422	65.1	R27	190.5	244	49.2	8	30
3-1/8	435	79.4	R31	190.5	241	46.0	8	25
4-1/ 16	511	103.2	R37	235.0	241	46.0	8	25
5,000psi								
2-1/16	371	52.4	R24	165.1	216	46.0	8	25
2-9/16	422	65.1	R27	190.5	244	49.2	8	30
3-1/8	478	79.4	R35	203.2	267	55.6	8	33
4-1/16	549	103.2	R39	241.3	311	61.9	8	36
10,000psi								
1-13/16	464	46.0	BX-151	146.1	187	42.1	8	23
2-1/16	521	52.4	BX-152	158.8	200	44.1	8	23
2-9/16	565	65.1	BX-153	184.2	230	51.2	8	25
3-1/ 16	619	78.6	BX-154	215.9	270	58.3	8	30
4-1/ 16	670	103.2	BX-155	258.8	316	70.2	8	33
15,000psi								
1-13/16	457	46.0	BX-151	160.3	187	45.2	8	25
2-1/ 16	483	52.4	BX-152	174.6	200	50.8	8	25
2-9/16	533	65.1	BX-153	200.0	230	57.2	8	30
3-1/ 16	598	78.6	BX-154	230.2	270	64.3	8	33
4-1/ 16	737	103.2	BX-155	290.5	316	78.6	8	39



Note: The models and sizes listed above in the table are our company's conventional products, and we can also design gate valve of special specifications upon client's specific requirement.



Check Valve

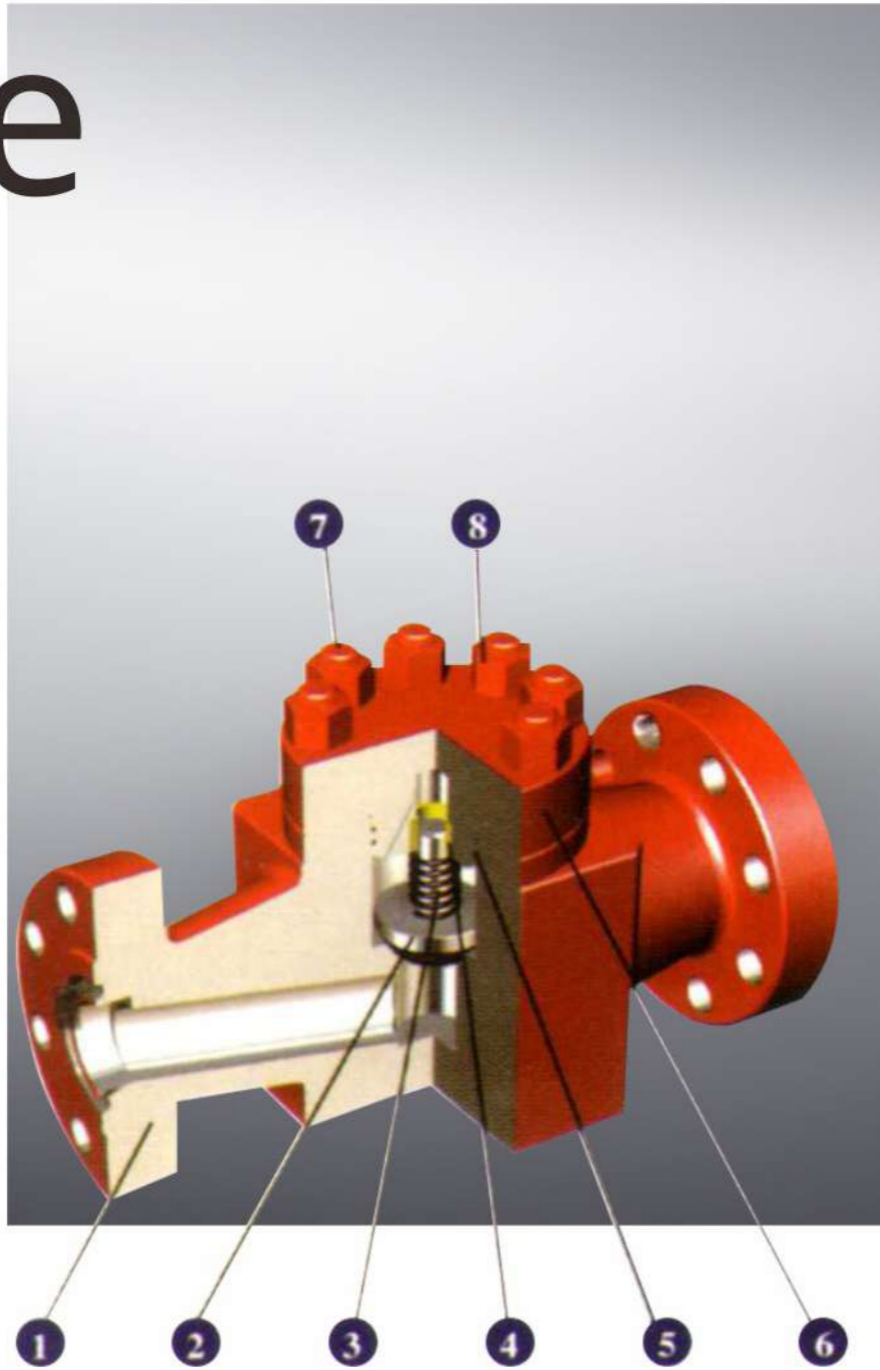
The design and manufacture of this product fully satisfy the requirement in Specification for Wellhead and Christmas Tree Equipment of the API Spec 6A, SO the product along with equipments abroad satisfying API Spec 6A standard could be used to form a set or be substituted for each other.

This valve is check valve. It achieves metal-to-metal seal by the medium pressure between valve core and valve body, SO the sealing performance is directly proportional to the medium pressure. The valve chamber could bear the pipeline pressure at any time.

This valve body is made out of alloy steel forging after further processing and has higher mechanical properties, thus, possess high capacity of pressure bearing and safe and reliable performance.

The valve cover and valve body are using bolt connection; the seal mechanism is the sealing ring on the vane cover which seals up the valve with its inner wall and can provide a dependable sealing performance. It minimizes the assembly clearance between valve cover and valve body (designed clearance: 0), thereby, reduces the corrosion to the bolts and screw holes by the corrosive and decreases bolt load.

On the surfaces of valve core and valve body, surfacing welding is welded with cemented carbide, which makes them well wearing- and corrosion-resistant. Valve core is made of anti-sulfur steel, and hardness of other components is limited, and as a result, this valve could be working in H₂S environment.



Check Valve

Structure Diagram of Check Valve Flap



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valve Body	1	35CrMo+STL	
2	Valveflap	1	12Cr13HF	
3	Spring	1	X-750	
4	"O"ring	2	HNBR	
5	Valve Cover	1	35CrMO	
6	Valve Cover Bolt	8	42CrMo	
7	Valve Cover Nut	8	45	

MAINTENANCE INSTRUCTION

Replace valve core and seal.
 Release the pressure in the valve chamber, remove bolt of valve cover, and take out the valve cover.
 Take out valve core and replace it with new one. When replacing, make sure to grind valve core together with sealing surface of valve body.
 Examine whether sealing ring of the valve core is in good condition. And if damaged, replace it immediately.

OPERATING INSTRUCTION

Install the valve body onto the pipeline according to the flow direction on the valve body.
 The upflow and downflow pressure causes the valve core to move and seal. Thus, do not lock the valve core.

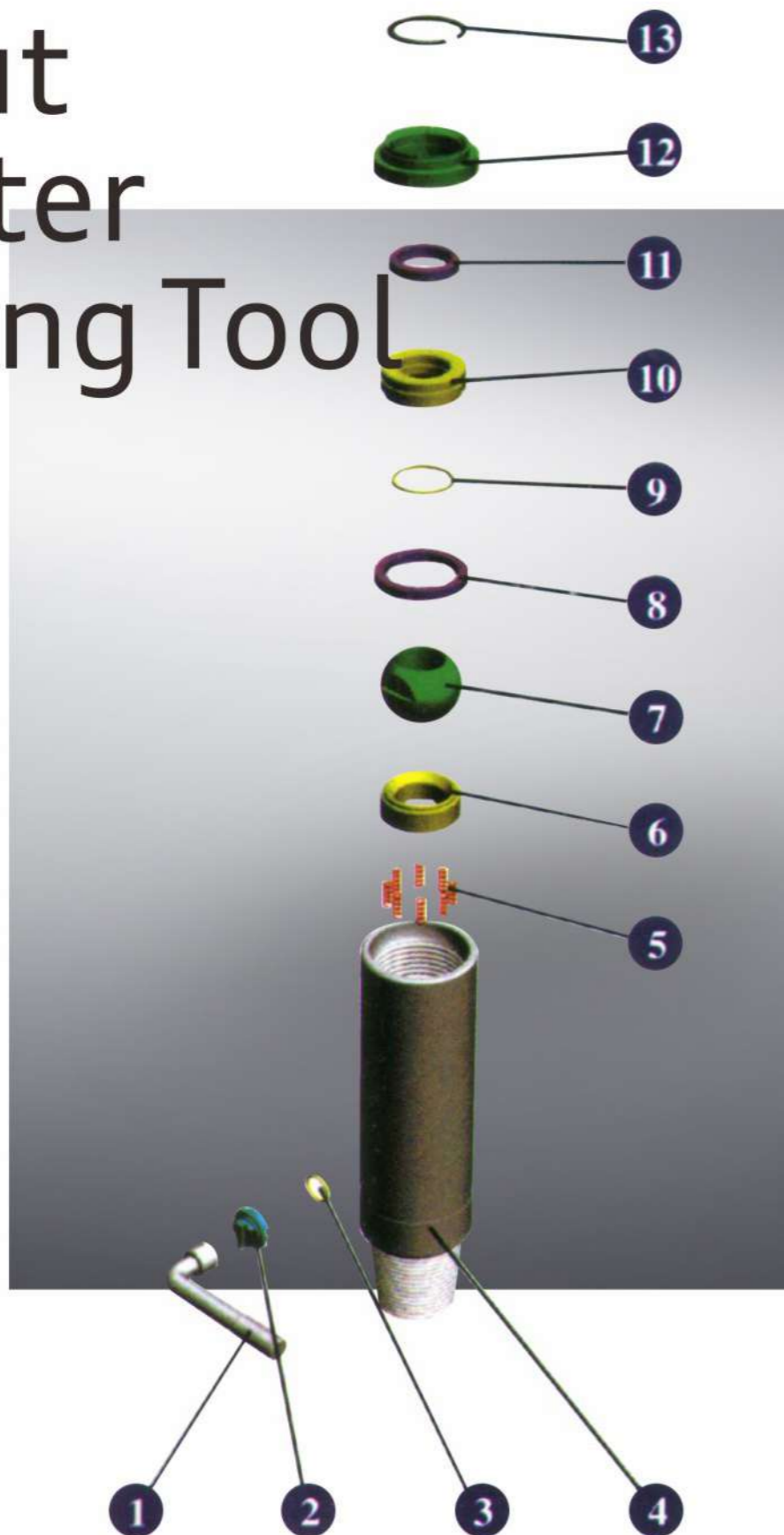
Blowout Preventer in Drilling Tool

Kelly Cock Valve

Kelly cock valve is a constant-open type blowout protection assembly in drilling tool. As well kick happens, it can be closed to prevent fluid underground from gushing up through the water hole in drilling column. In well control operation, if hose and high-pressure manifold is damaged, it can be replaced in safety under the valve being closed. Upper cock adopts left hand thread but the lower adopts right hand thread, and they are identical in structure of ball valve.

Requirements for Appliances The rated working pressure of Kelly cock valve should be equal to the rated pressure of BOP-the ID of cock should be larger than(or equal to)the ID of Kelly rod. Max working pressure and test pressure should be tested according the requirement listed in the below table. Holding pressure for 3 minutes without leakage is considered as a qualified sealing test. appliance for cock is up to 82°C and the cock wrench should stay the available/ usable position.

Features of Structure Upper cock valve consists of valve body, upper/ lower seat, ball body, rotary-block, retainer, spring and non-metal seals etc. Valve body is ASTM4140 forging, and the machinery properties after heat treatment can meet the requirement of API Spec 7. Valve seat and ball body are made of heat-resistant stainless steel with abrasion and corrosion resistance. The valve is single direction seal, as the valve is closed, under the co-reaction of fluid pressure under well and pre-load spring pressure, the ball body approaches to the back-seat quickly SO as to create a seal. As for the sealing face of back-seat adds a PTFE non-metal ring and reduce the compact of ball body to valve seat, So that it should have more reliable performance. The surface of the valve body stamped with visible sign of "open" or "close" indicates the open/ close station of cock valve obviously.



Blowout Preventer in Drilling Tool

List of Product Parts

No.	Name	Quantity	Material	Remark
1	Handle	1	45	
2	Spin Block	1	35CrMO	
3	"O"ring	1	NBR	
4	Valvebody	1	40CrMnMe	
5	Spring	1	65Mn	
6	Lower Valve Seat	1	2Cr13	
7	Ball	1	2Cr13	
8	Lower Clamp Ring	1	2Cr13	
9	"O"ring	1	NBR	
10	Upper Valve Seat	1	2Cr13	
11	Gasket	1	35CrMo	
12	Upper Clamp Ring	1	2Cr13	
13	Snap Spring	1	65Mn	Standard

List of Product Parts

	Sealing Test Pressure MPa	Test Pressure MPa
35	≥35	70
70	≥70	105
105	≥105	157.5



ARROW CHECK VALVE

The arrow check valve is one of inner blowout prevent tools that are commonly used in gas drill and repairing well, and it is a constant-open type of in-string blowout prevent back pressure valve accompanying the drill entering well. Once well-leakage and well blowout happen, it can automatically and quickly shut the bore of valve by the upper inverse circulation pressure and plug the water-way of string so as to avoid the blowout and ensure the safety of drilling equipment and person-life.

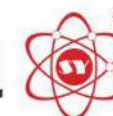
In addition, it can meet the normal kill requirement; also provide inner sealing operation condition for some particular operations, such as retrieving tool and drilling gas blowout without kill or repairing well.

DROP-IN CHECK VALVE

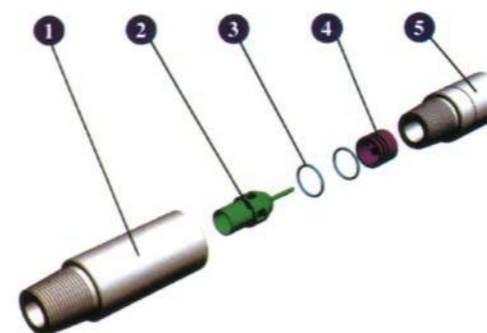
Drop—in check valve, as an important toll to prevent well kick and a BOP inside drilling string, which is dropped into well and prevent well kick and blowout just as necessary, is used to control the inner pressure of drilling rod as running/ retrieving drill is forced under well kick or a certain pressure. For it is not connected with drilling rod, it is convenient to execute various drilling operation.

WORKING PRINCIPLES

As overflow happens underground, the check valves dropped or pumped into the water hole of the Kelly, and moves to be held against the shoulder of the string connected with the bottom of the on-station connector, the cone of the valve moves up, some hackle lock-teeth of on-station connector and the teeth-block in the top of the check valve are locked each other, the cone moving up forces packer to dilate so as to seal the bore-wall, in the bottom hole sets steel ball and spring, the spring can load the steel ball into the sealing seat of the valve body, SO that a strict seal mechanism is formed, here the on-station connector and check valve assembly composes a set of internal-BOP assembly.



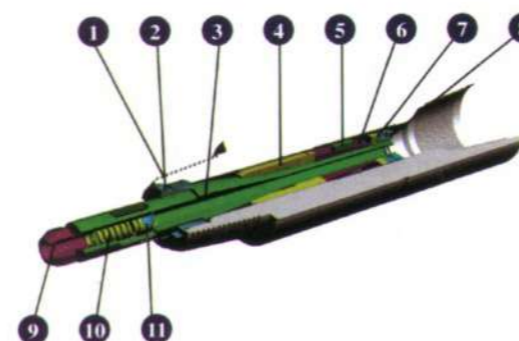
Structure Diagram of Arrow Check Valve



List of Product Parts

No.	Name	Quantity	Material
1	Valve Body	1	36CrNiM04
2	Valve Core	1	2Cr13
3	"O"ring	2	NBR
4	Valve Seat	1	1Cr8Ni9Ti
5	Joint Body	1	36CrNiM04

Structure Diagram of Input Typeback Pressure Valve



List of Product Parts

No.	Name	Quantity	Material
1	Joint Body	1	36CrP4iM04
2	Anti-thrust Pressure Sleeve	1	35CrMo
3	Spindle	1	35CrMo
4	Sealing Bush	1	NBR
5	Slip Insert	3	35CrMo
6	Slip Body	1	35CrMo
7	Blocking	2	45
8	Lockcap	1	35CrMo
9	Pressure Cap	1	35CrMo
10	Spring	1	65Mn
11	Steel Ball	1	9Cr18MO

Wellhead Valve SZJH Serize



Suitable Conditions for Main Material

Material Level	The Lowest Requirement Of Material	
	Valve Body/ Valve Cover	Flashboard/ Valve Lever/ Lve Seat
Aa Commonly Use	Carbon Steel/low Alloy Steel	Carbon Steel/low Alloy Steel
Bb Commonly Use	Carbon Steel/low Alloy Steel	Stainless Steel
Cc Commonly Use	Stainless Steel	Stainless Steel
Dd The Acid Environment	Carbon Steel/low Alloy Steel	Carbon Steel/low Alloy Steel
Ee The Acid Environment	Carbon Steel/low Alloy Steel	Stainless Steel
Ff The Acid Environment	Stainless Steel	Stainless Steel
Hh The Acid Environment	Counter-erode Alloy	Counter-erode Alloy

Main Parameters of The Products

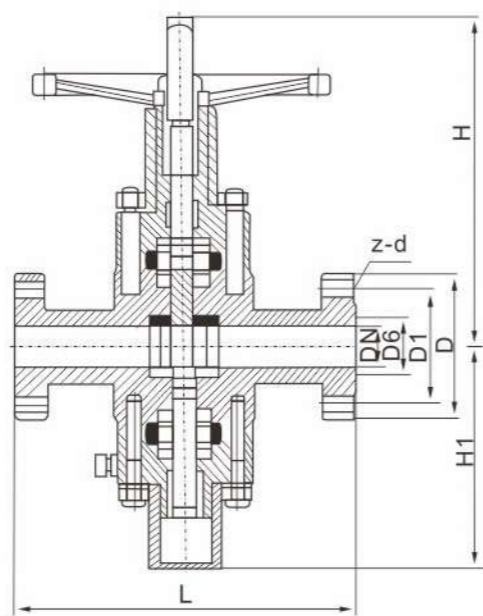
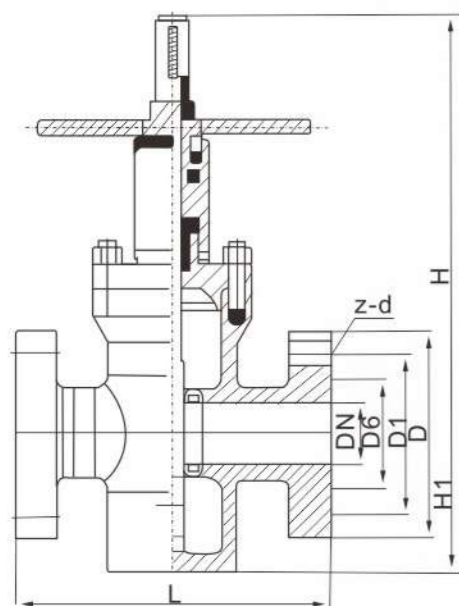
Main Parameter	Suitable Medium	Suitable Temperature	The Requirement For Capability	The Level of Material	The Criterion of Product	Product Standard
113/16-71/ 13	Water, Gas, Oil	-46°C-121°C	PR1, PR2	AA,BB, CC, DD, EE, FF, HH	PSL1-4	API Spec 6A

Wellhead Valve SZJH Serize



Main Size of Outside Connection

PN	Dimension								PN	Dimension							
	DN (mm)	21/16	29/16	31/8	41/16	51/8	51/8	71/16		DN (mm)	113/16	21/16	29/16	31/8	41/16	51/8	71/16
2000psi (13.8MPa)	L	295	333	359	435	562	562	664	5000psi (34.5MPa)	L		371	422	473	549	727	813
	H	379	405	475	482	498	498	580		H		395	418	485	498	512	580
	H1	120	135	160	198	235	235	305		H1		132	142	173	205	248	315
	(kg)	430	62	89	105	132	132	169		(kg)		58	76	102	124	142	201
3000psi (20.7MPa)	L	371	422	435	511	613	613	714	10000psi (69.0MPa)	L	464	521	565	619	670	737	889
	H	380	405	475	485	495	495	585		H	362	408	426	502	516	532	605
	H1	126	142	162	201	239	239	310		H1	105	135	148	124	215	265	324
	(kg)	45	62	95	115	138	138	190		(kg)	48	62	85	179	146	172	242



Specifications

Rating of Wetking Pr-ssure	The Static Hydraulic Pressure of Valve Body		The Static Hydraulic Pressure of Valve Body
	The Size of Flange		
	135/8in(346mm)	135/8in(346mm)	
2.000(13.8)	4.000 (27.6)	4.000 (27.6)	2.000 (13.8)
3.000 (20.7)	6.000(41.4)	6.000(41.4)	3.000 (20.7)
5.000(34.5)	7500 (51.7)	7500 (51.7)	5.000 (34.5)
10.000 (69.0)	15.000(103.4)	15.000(103.4)	10.000(69.0)

Throttle Valve

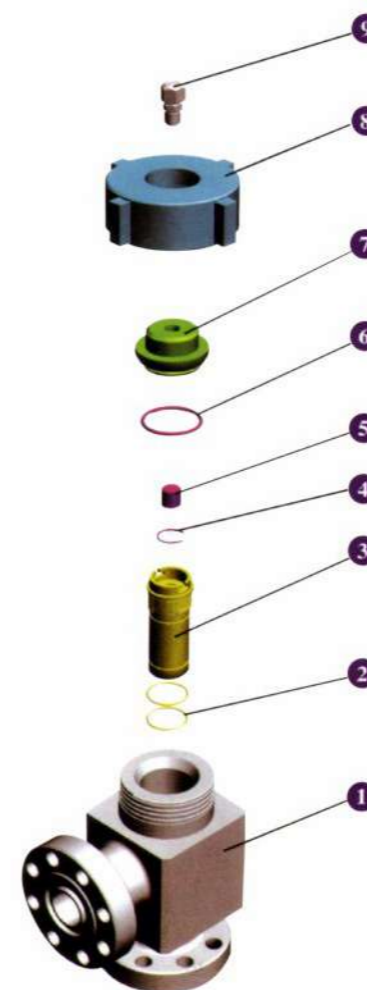


Fixed Choke Valve

The choke valve is used to be matched with Christmas tree or wellhead assembly, which is applicable for flow- rate adjustment, that is, to replace the choke is help for alternation of flow- way cross- area and flow- rate control.

Rated pressure: 2000psi-15000psi Working temperature: L U Working media: petroleum, natural gas Oil nozzle diameter: Φ3-Φ12.

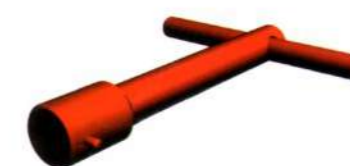
All pressing parts are made of alloy steel and have enough tensile strength, which ensures the valve safe and reliable at rated working pressure. Choke is made of carbide with fine grind and erosion resistance properties.



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valvebody	1	35CrMO	
2	"o"ring	2	HNBR	
3	Valve Core	1	35CrMo	
4	Elastic Block Ring	1	65Mn	
5	Oil Nozzle	1	YG8	
6	"o"ring	1	HNBR	
7	Valve Cover	1	35CrMo	
8	Locking Cap	1	45	
9	Resin Injection Valve	1		Standard

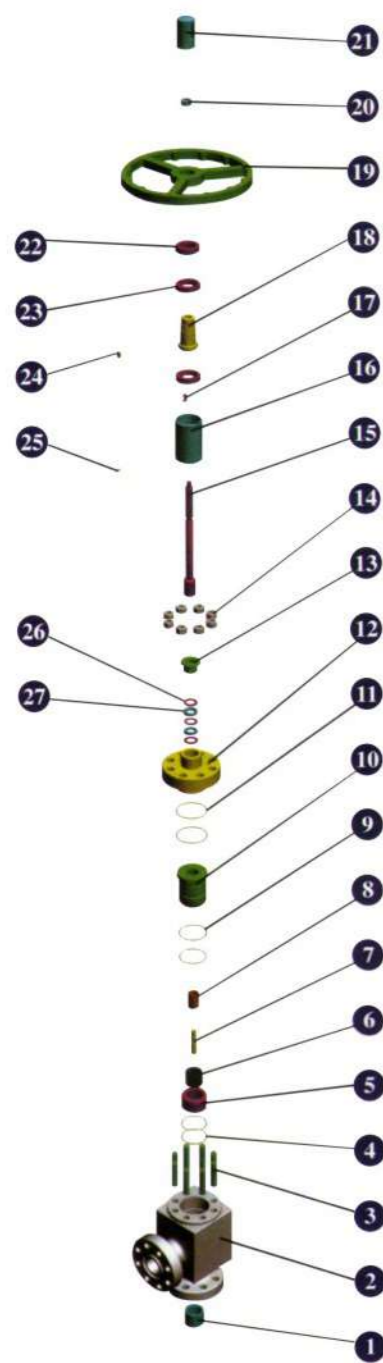
Tool For Taking Out Fixed Choke Valve Oil Nozzle



Throttle Valve



SUYAN VALVE



Manual Check Valve

The choke valve, a main component of Christmas tree, is design to control production rate of the oil well, with working pressure up to 10000psi. Choke valves can be classified as follows: adjustable choke valves and positive choke valves. By rotating hand

wheel to drive the stem, the adjustable choke valve is designed to adjust the efective area available for the flow to accomplish control of production rate. The positive choke valve is design to accomplish control of production rate by changing flow beans.

Features: The coupling nut used for connecting the bonnet and body allows fast make-up and break-out. Stem tip and bean adaptor are fabricated from special carbide alloys for corrosion and abrasion resistance.

Indicator lens with scale marks allows the operator to know stem' S position and actual orifice area. Turn hand wheel counter-clockwise and the valve will open; turn hand wheel clockwise and the valve will close.

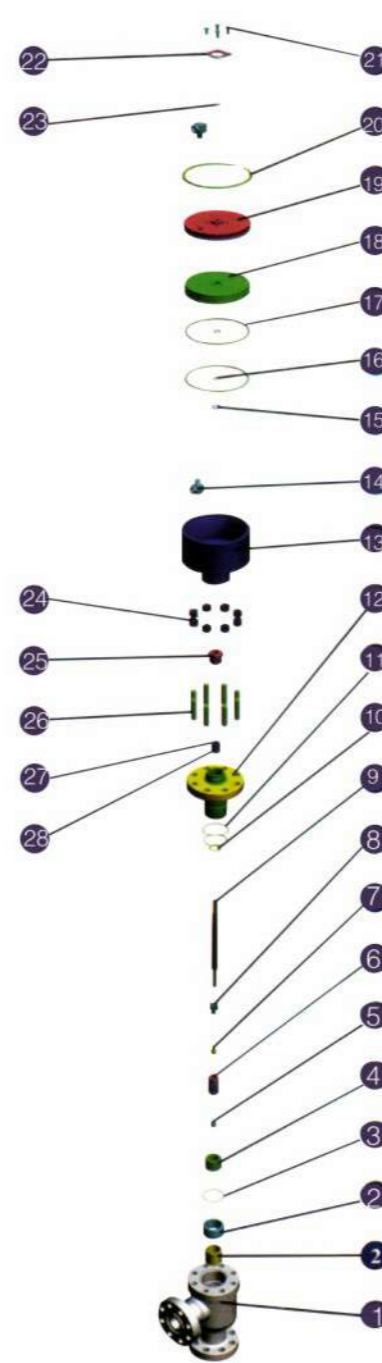
List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valve Body	1	35CrMo	
2	Valve Cover Bolt	8	35CrMo	
3	"O"ring	2	HNBR	
4	Valve Seat Bush	1	35CrMo	
5	Vlvalve Seat	1	YG8	
6	Valve Stem Joint	1	35CrMo	
7	Valve Core	1	YG8	
8	"O"ring	2	HNBR	
9	填料压帽	1	35CrMo	
10	"O"ring	2	HNER	
11	Valve Cover	1	35CrMo	
12	Filet Gland	1	35CrMo	
13	Valve Cover Nut	8	45	
14	Valve Stom	1	12Cr13 or 718	
15	Support	1	45	
16	Sadole Key	1	45	
17	Valve Steminut	1	ZCuA19-4	
18	Hand Wheel	1	2G270-500	
19	Indicating Ring	1	12Cr19	
20	Valve Shield	1	Q235A	
21	Shalt Cover	1	40Gt	
22	Shalt	2		Standard
23	Ratkey	1		Standard
24	Oit Injection Ring	1		Standard
25	Filler Gasket	2	2GH3	
26	Fidler	5	HNBR	

Throttle Valve



SUYAN VALVE



Hydraulic Choke Valve

The hydraulic choke valve is used to be matched with manifold and other assemblies, which is applicable for flow-rate adjustment, that is, to raise or reduce the valve core location is help for alternation of flow-way cross-area and flow-rate control.

Rated pressure: 2000-15000psi

Working temperature: P U

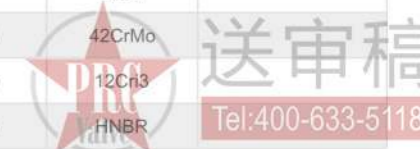
Working media: petroleum, natural gas

Oil nozzle diamete: Φ3-Φ12

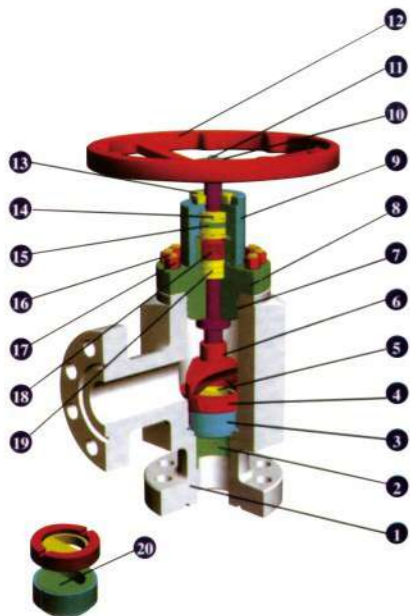
Features of Structure: All pressing parts are made of alloy steel and have enough tensile strength, which ensures the valve safe and reliable at rated working pressure. Choke is made of carbide with fine grind and erosion resistance properties

List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valve Body	1	35CrMo	
2	Valve Seat Bush	1	35CrMo	
3	"O"ting	1	HNBR	
4	Valve Seat	1	YG8	
5	Lock Nut	1	45	
6	Valve Core	1	YG8	
7	Downfiow Sleeve	1	2Cr13	
8	Up Fiow Sleeve	1	2Cr13	
9	Valve Stem	1	12Cr13 or 718	
10	"O"ring	1	HNBR	
11	"O"ring	2	HNBR	
12	Valve Cover	1	35CrMo	
13	Oil Cylinder	1	35CrMo	
14	Oit Cylinde Joint	2	35CrMo	
15	"O"ring	2	HNBR	
16	"O"ring	2	HNBR	
17	"O"ring	2	HNBR	
18	Piston	1	12Cr13	
19	Cylinder Cover	1	35CrMo	
20	Ctamp Spring	1	65Mn	
21	Boit	4	35CrMo	
22	Gasket	1	35CrMo	
23	"O"ring	2	rubber	
24	Valve Cover Nut	8	45	
25	Filier Gland	1	40Cr	
26	Valve Cover Bolt	8	42CrMo	
27	Filler Gasket	2	12Cr13	
28	Fier	5	HNBR	



Throttle Valve



Manual Hole—plate Choke Valve

Orifice choke valve is molded of two pieces of special carbon tungsten plates with rather ability of erosion resistance, one of which rotates to alter the concentricity between the upper orifice and lower orifice of two plates so as to adjust the flow- rate of fluid or gas.

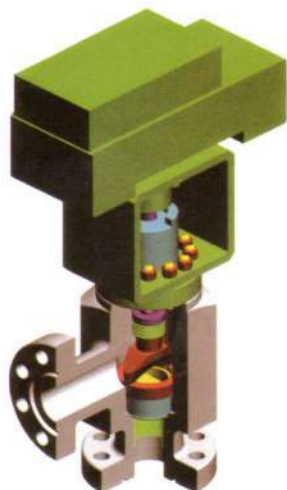
The valve is used for manifold such as drilling, fracture, mud circuit, ground high- pressure gas injection production, it has a outstanding feature that the pressure difference between inlet and out let, as closing, can press both of the plates fast together so as to put into effect of sealing cutting, especially in the case that the pressure suddenly rises or falls the preset sign- rate of high/low pressure sensor can be helpful for automatic closing/shut so as to avoid heavy accident.

It also has outstanding advantage that it has long working life and ability of erosion corrosion resistance in comparing with other choke valves.

List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valve Body	1	35CrMo	
2	Lower Valve Seat Sleeve	1	35CrMo	
3	Upper Valve Seat Sleeve	1	35CrMo	
4	Upper Valve Seat	1	YG8	
5	Valve Stem	1	12Cr13 or 718	
6	Butterfly Spring	10	17-7PH	
7	"o"ring	2	HNBR	
8	Valve Cover	1	35CrMa	
9	Support	1	40Cr	
10	Bame	1	Q235	
11	Bolt	1	45	Standard
12	Hand Wheel	1	ZG270-500	
13	Indicating Ring	1	12Cr13	
14	Shaft	2		Standard
15	Clamp Sleeve	1	40Cr	
16	Bolt	12	42CrMo	
17	Nut	12	45	
18	Filler Gland	1	40Cr	
19	Filler	3	HNBR	
20	Lower Valve Seat	1	YG8	

Structural Features of Orifice Choke Valve



Throttle Manifold



Choke Manifold

1.Application

Choke manifold is necessary device to control the well kick successfully and execute the pressure control technology on oil/ gaswell in the course of drilling, as it is, the device is adopted to execute new drilling-wells technique of balance pressure, which can avoid pollution of oil-layer, improve the speed of drilling and control blowout effectively. One end of the device connects with the side flange of BOP spool. When BOP closes, it can control the finite pressure from casing by adjusting the choke valve' sopening, so balanced drilling can work under minimum pressure-difference.

2.Assembly and structure

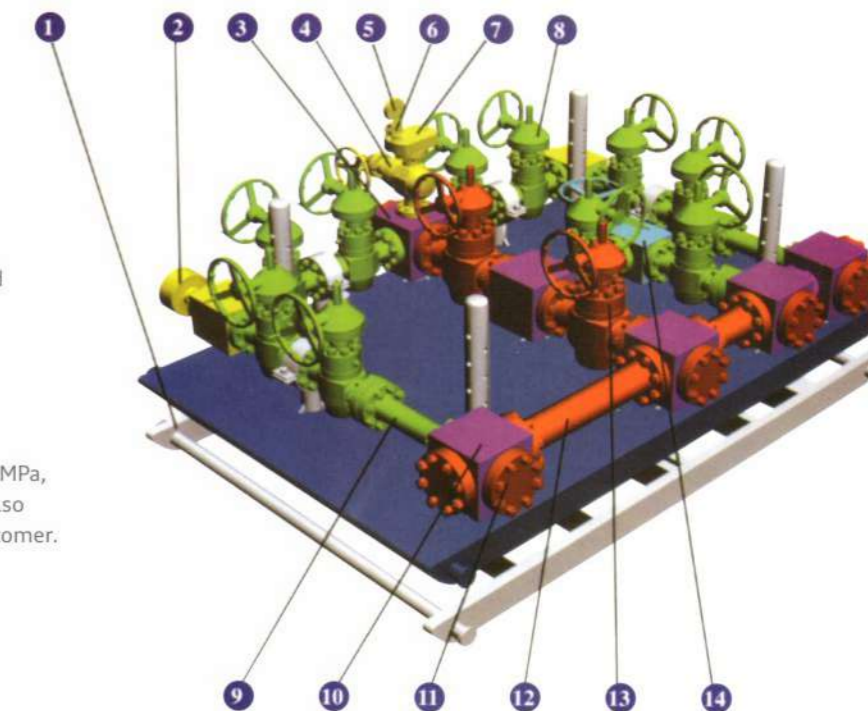
Choke manifold consists of choke valve, gate valve, pipeline, fittings and pressure gauge etc, seegate valve part and choke valve part in the above drawing.

3.Working principle

When the pressure rising in well, fluid in well can be released in utilization of the choke valve opening/ closing in choke manifold to control casing pressure, which can directly blow out through gate valve as the casing pressure is quite high.

4.Specification

Pressure level is divided into five levels, i. e. 14MPa, 21MPa, 35MPa, 70MPa and 105MPa, it can be also designed according to the requirement of customer.



List of Product Parts

No.	Name	Quantity	Material	Remark
1	lfttype Base	1		
2	Hydraulic Choke Valve	2		See The Section Concerning Choke Valve Tor Details
3	Five-way	1	35CrMo	
4	Flat Valve	1		See The Section Concerning Choke Valve Tor Details
5	Pressure Meter	1		
6	Stop Valve	1		
8	Flat Valve	10		See The Section Concerning Choke Valve Tor Details
9	Flange Sub	2		
10	Cross	5	35CrMo	
11	Blind Flange	7	35CrMo	
12	Flange Sub	1		
13	Flat Valve	2		See The Section Concerning Choke Valve Tor Details
14	Manilai Choke Valve	1		See The Section Concerning Choke Valve Tor Details

OPERATION REQUIREMENT

5.Operation requirement

- (1)All the working pressures of parts in choke manifold should be matched with the working pressure of the BOP stack used;
- (2)Choke manifold should be installed at the place where operator approach it conveniently, pressure test should be executed as installation, while the sealing test pressure should be equal to the rated working pressure;
- (3)Pipeline should be 50 smooth and straight as possible, the corner of the pipeline should be made of 120° shaped forged steelbent pipe, which should have adequately large bore;
- (4)The working pressure gauge should be installed;
- (5)In winter, the choke manifold should be able to work under a low temp condition.



Choke Manifold

1.Application

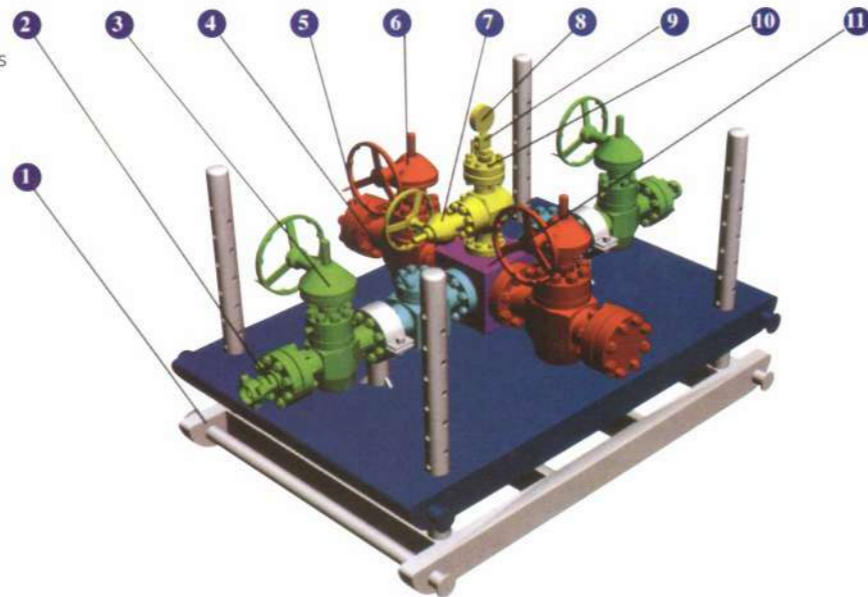
In case of increase of the well head pressure, the kill manifold can provide a means of pumping heavy drilling fluid into the well to balance bottom hole pressure so that well kick and blowout can be prevented. In this case, by using blow down lines connected to the kill manifold, the increasing well head pressure also can be released directly for bottom hole pressure release, or water and extinguishing agent can be injected into the well by means of the kill manifold. The check valves on the kill manifold only allow injection of kill fluid or other fluids into the well bore through themselves, but do not allow any back flow so as to perform the kill operation or other operations.

2.Structure

The kill manifold consists of check valves, gate valves, pressure gauges and pipelines. The one end of the kill manifold is connected to the cross blowout preventer and the other end is connected to the pump. The kill manifold and choke manifold are both designed to API 16C and can be used together. The kill manifold is available for pressure ratings of 14MPa, 21MPa, 35MPa and 70MPa.

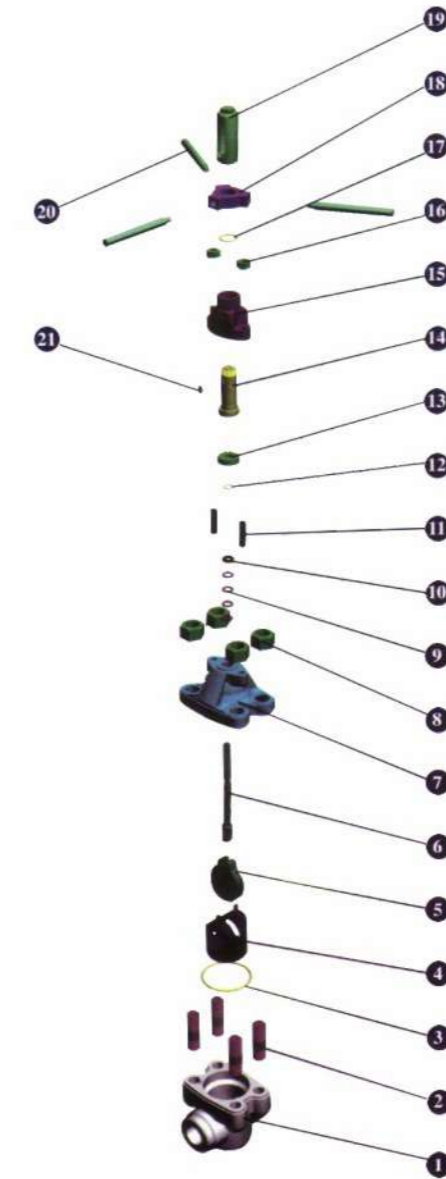
3.Operating Requirements

- (1) Working pressure of all pipelines, gate valves and check valves shall be compatible with that of the BOP stack used.
- (2) The kill manifold is not intended to be used as common lines for pouring drilling fluid.



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Lifttype Base	1		
2	Flange Union	2	35CrMo	
3	Flat Valve	2		see the section concerning gate valve for details
4	Check Valve	2		see the section concerning gate valve for details
5	Blind Flange	2	35CrMo	
6	Flat Valve	2		see the section concerning gate valve for details
7	Flat Valve	1		see the section concerning gate valve for details
8	Pressure Meter	1		
9	Stop Valve	1		
10	Meter Flange	1	35CrMo	
11	Five-way	1	35CrMo	



ZJGH-100-35S drilling mud manifold consists of the Z23Y100-5000PSI and Z23Y50-5000PSI mud valve, high pressure spherical union, high pressure core union, tee, high pressure hose elbow, pressure gauge, and pup joint etc.

Ground valve-group adopts gooseneck type tee with compact structure, little fluid resistance and large power effectuality.

Adaptor cross adopted on drill block valve-group can be directly used as single pipe on site.

The high pressure unions are made from high-strength alloy steels and heat treated, featuring tightmake-up and easy break-out. The special machine tool is used for the manufacture of the unions. The fine machined sphere and core work together with O-rings to provide sealing.

The sealing surfaces of both the gate and seat of the Z23Y-5000psi mud valve are built up using hard alloy overlays for erosion and corrosion resistance, which prolongs the mud valve's service life, reduces the operating torques and makes the operation easy.

With the walls thickened as applicable and heat treated, the elbow, reducing pipe, tee and cross are made from high strength alloy steels and can fully meet the strength and corrosion requirements.

In order to ensure the product quality, the parts that require high precision are manufactured using special technology and all pressure-containing parts are hydrostatically tested prior to assembly.

List of Product Parts

No.	Name	Quantity	Material	Remark
1	Valve Body	1	Zgormo	
2	Valve Coverbolt	4	42crmo	
3	"o"ring	1	Hnbr	
4	Valve Seat	1	Hnbr	
5	Flashboard	1	40crhf	
6	Valve Stem	1	12cr13	
7	Valve Cover	1	Zg35cimo	
8	Valve Coverbolt	4	45	
9	Filler	3	Hnbr	
10	Filer Gasket	1	12cr13	
11	Suppo Boit	2	42ctmo	
12	"o"ring	1	Rubber	
13	Blockring	1	Zqai9-4	
14	Valve Stem Nut	1	40cr	
15	Suppott	1	Wcb	
16	Supportnut	2	45	
17	"o"ting	1	Rubbet	
18	Handie Core	1	Wcb	
19	Valve Shield	1	Wcb	
20	Handle	3	35	
21	Sem-circufarkey	1	45	

INSTALLATION

1. When installing, clean and grease both the sealing face and sealing groove of unions and clean the inside of the line pipe.
2. Check whether all connecting positions are fastened.
3. In relocating, disassemble all parts; clean the pipelines, grease joints and then pack up to prevent foreign substance and to avoid damaging screw thread and sealing face.

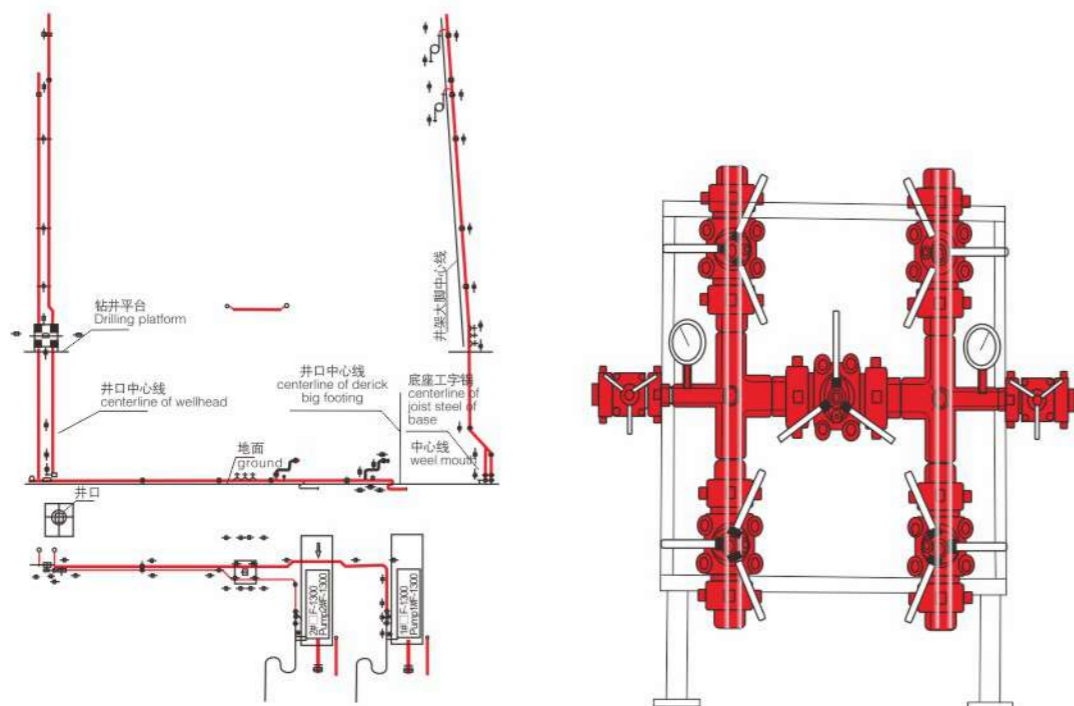
MAINTENANCE

1. Inject grease into the mud gate valve at specified intervals.
2. Check whether all connecting positions and fixing bolts are loose at specified intervals.
3. If the leakage around the sealing position occurs, the seal shall be replaced immediately.
4. Keep the outer surface of the manifold clean and do regular painting to prevent rust.

NOTE

aZ23Y 100-5000PSI metal seated mud gate valve is only used as a shutoff valve and can't be used as a choke valve, otherwise the sealing surface will be damaged.

Drilling Mud Manifold Valves



Z23Y50/80/100-35/70、Z23H50/80/100-35/70、Z23X50/80/100-35

Drilling mud manifold valves in:
Means of connecting in this gate valve: flange, union, welding, screw thread

Metal Seated Gate Valve



DEMCO Gate Valve



Ground Control Equipment

Drill Stand Pipe Parts

During the course of test, fluid should be controllably guided into separator and burner after flowing through drilling rod or tubing, the assembly is named as control assembly, which can control the pressure and flow-rate of the fluid safely and effectively.

1. Control Head

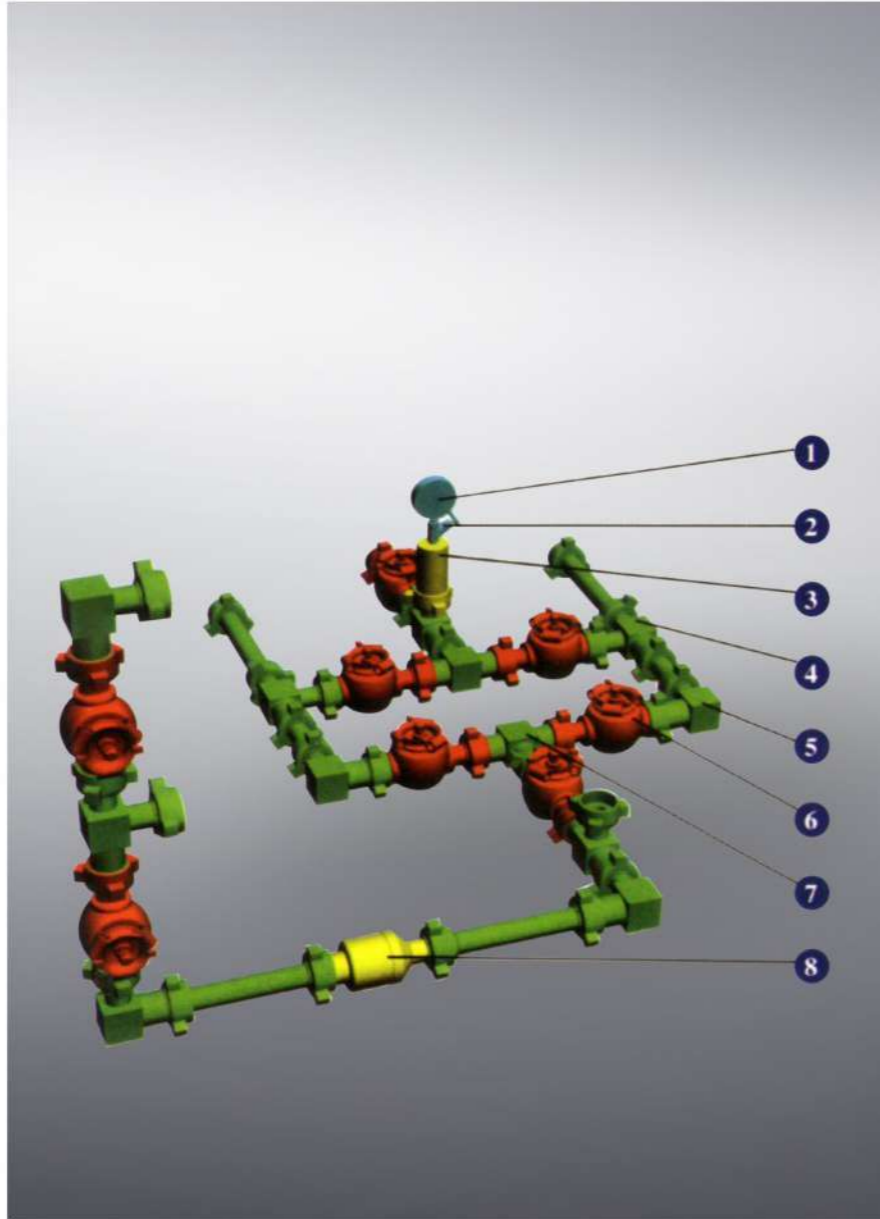
Jointed with the upper of the test string, control head is classified into rotary head and un rotary head of two kinds, and also into three kinds of 35MPa, 70MPa and 105MPa according to the bearing pressure, and it can let the high- pressure fluid flow out of string, but also pump fluid into well.

2. Rigid manifold

Used to control fluid pressure and flow-rate, rigid manifold is jointed with control head upwards and connected with separator and blowout pipeline downwards. The working pressure includes 35MPa, 70MPa and 105MPa with appropriate test pressure of 70MPa, 105MPa and 140MPa.

3. Active manifold

Used to joint the control head, rigid manifold and blowout pipeline, the manifold consists of special EUE seamless steel pipeline union and active elbow. The working pressure includes 35MPa, 70MPa and 105MPa with appropriate test pressure of 70MPa, 105MPa and 140MPa. The manifold should be regularly inspected and lubricated, sealing ring should be replaced and sealing tested to ensure safety in test.



Drilling Mud Manifold

List of Product Parts

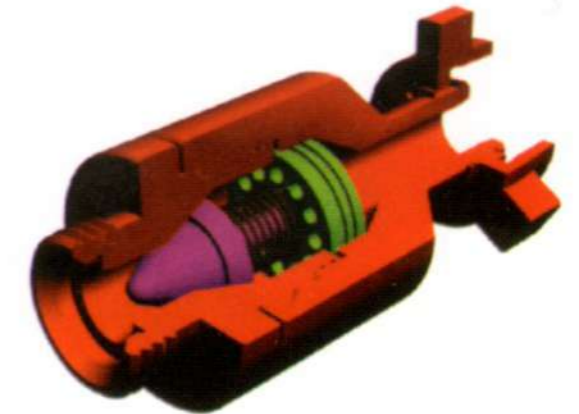
No.	Name	Quantity	Material	Remark
1	Pressure Meter	1		
2	Stop Valve	1		
3	Buffer	1		
4	Fixed Choke Valve	2		
5	Right-angle-bend	5	35CrMo	
6	Stopcock	6		
7	Tee	5	35CrMo	
8	Check Valve	1		

Structural Diagram for Drilling Mud Manifold Valves

Single-wing Wellhead Rotating Control Head



Check Valve



Running Pipe Parts



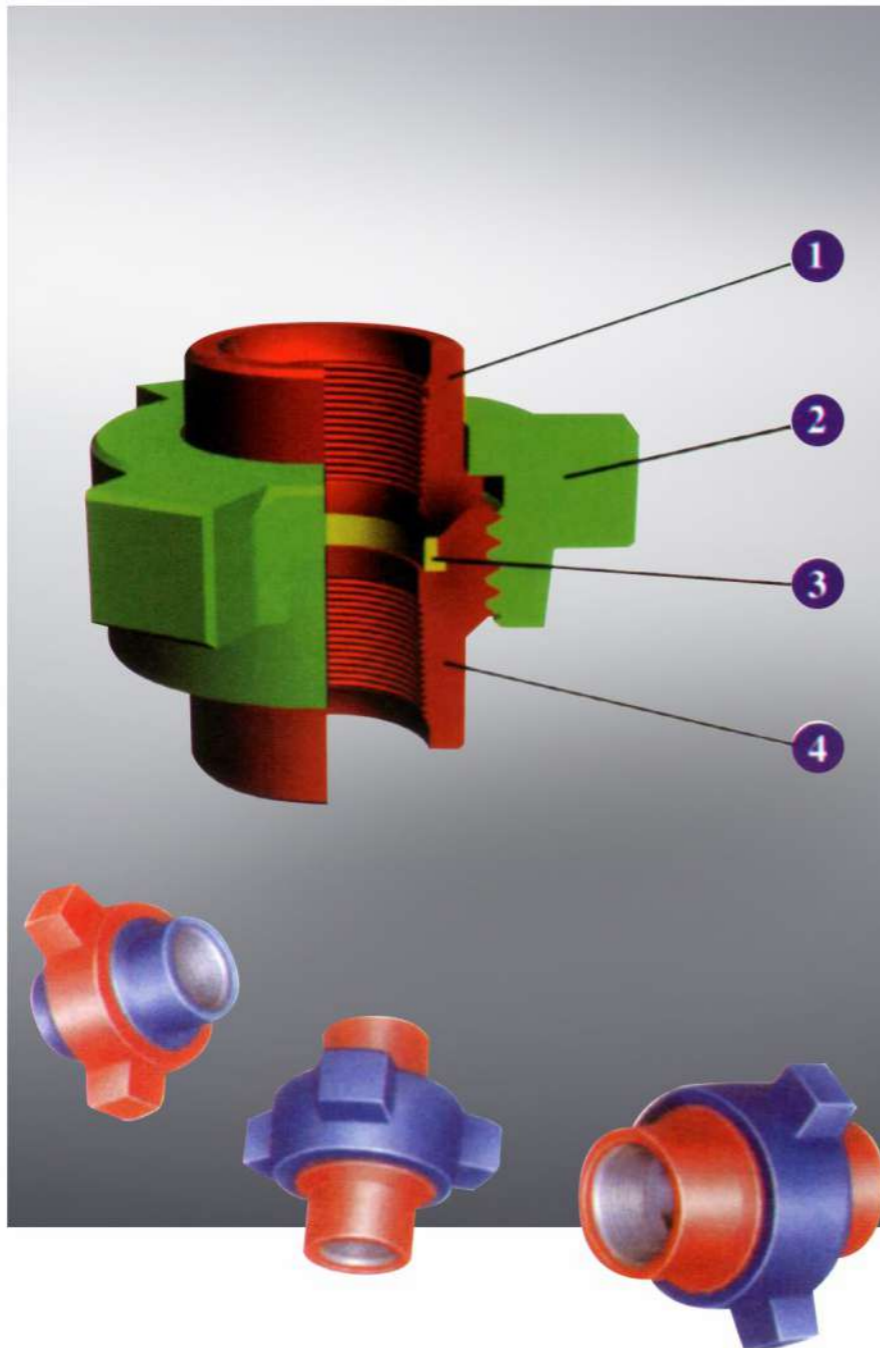
Ground Control Equipment



High-pressure Union

The high pressure unions are made from high strength alloy steel forgings using internationally advanced technology. Both the uniform metallurgical structure and bearing strength of the unions are ensured by the fine heat treatment. All raw materials meet ASTM and AISI requirements and all technical parameters meet API 6A requirements. Available with line pipe threaded, tubing threaded, butt-weld or pressure seal connections, the unions feature reliable sealing, tight make-up and easy break-out and good interchangeability.

Our unions mainly have the following models: 100, 200, 206, 207, 211, 300, 402, 600, 602, 1002, 1003, 1502, 2002 and 2202. During the cause of test, fluid should be controllably guided into separator and burner after flowing through drilling rod or tubing, the assembly is named as control assembly, which can control the pressure and flow-rate of the fluid safely and effectively.



SUYAN

Ground Control Equipment



List of Product Parts

No.	Name	Quantity	Material	Remark
1	Ball Head	1	35CrMO	
2	Locking Cap	1	35CrMO	
3	Sealing Ring	1	NBR	
4	Whorl Head	1	35CrMO	

GROUND CONTROL EQUIPMENT

1. Control Head

Jointed with the upper of the test string, control head is classified into rotary head and un rotary head of two kinds, and also into three kinds of 35MPa, 70MPa and 105MPa according to the bearing pressure, and it can let the high-pressure fluid flow out of string, but also pump fluid into well.

2. Rigid manifold

Used to control fluid pressure and flow-rate, rigid manifold is jointed with control head upwards and connected with separator and blowout pipeline downwards. The working pressure includes 35MPa, 70MPa and 105MPa with appropriate test pressure of 70MPa, 105MPa and 140MPa.

3. Active manifold

Used to joint the control head, rigid manifold and blowout pipeline, the manifold consists of special EUE seamless steel pipeline union and active elbow. The working pressure includes 35MPa, 70MPa and 105MPa with appropriate test pressure of 70MPa, 105MPa and 140MPa. The manifold should be regularly inspected and lubricated, sealing ring should be replaced and sealing tested to ensure safety in test.

Structure Diagram of High - Pressure Bend



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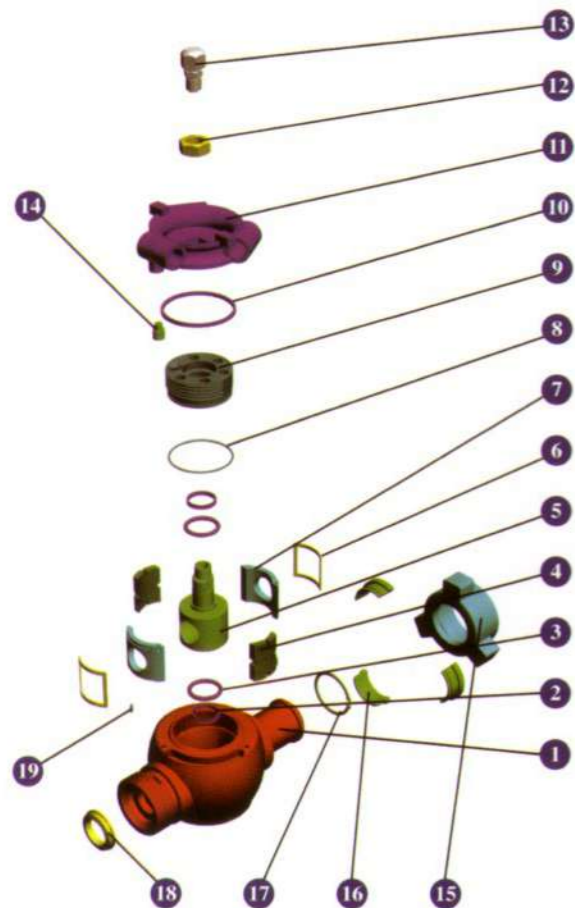
GROUND CONTROL EQUIPMENT



Structure diagram of high—pressure bend

List of Product Parts

No.	Name	Quantity	Material
1	Valvebody	1	35CrMo
2	Gasket	2	NYLoNi010
3	"O" ring	2	NBR
4	Sealing fining	22	12Cr13
5	Column plunger	1	35CrMo
6	Rectangular sealing ring	2	rubber
7	Liningtile	2	12Cr13HF
8	"O" ring	1	NBR
9	Valve cover	1	35CrMo
10	"O" ring	1	NBR
11	Hand wheel	1	WCC
12	Nut	1	40Cr
13	Resin injection valve	1	Assembled
14	Spacer pin	1	45
15	Locking cap	1	45
16	Slips	3	40Cr
17	Shaft—used spring	1	65Mn
18	Union sealing ring	1	NBR
19	Pin	1	2Cr13



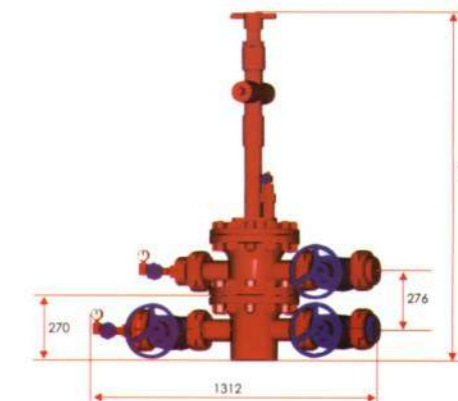
EXTRACTION WELLHEAD EQUIPMENT



KYJP-IV(F)16-65-25 Eccentric Wellhead Equipment

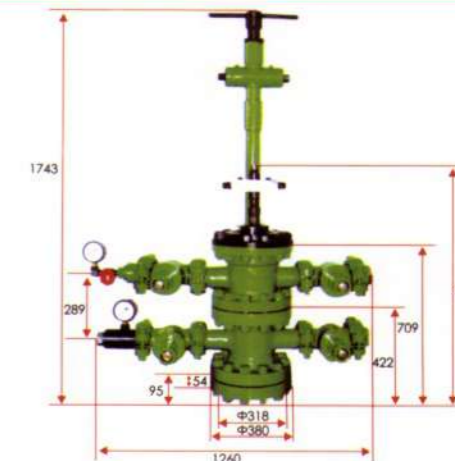
This equipment is used for oil pumping well; it can have annulus testing and non—kill operation. Upon customer' s demanding valve can be connected to the manometer nozzle on the oil pipe head.

- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Sealing pressure of rubber valve: 16MPa
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 6、 Casing connecting whorl: 5-1/2 STC.7" STC



KYP-IV(F)16-65-25 Eccentric Wellhead Equipment

- 1、 Sealing pressure: 24.5MPa
 - 2、 Inside nominal diameter: 65mm
 - 3、 Sealing pressure of rubber valve: 16MPa
 - 4、 Connection mode: clamp
 - 5、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
 - 6、 Casing connecting whorl: 5-1/2 STC.7" STC
- Note: this eccentric wellhead equipment is of double eccentric gear.



KYD(F)65-21 Eccentric Pump Oil Extraction Wellhead Equipment

This equipment is used for oil—submersible pump well extraction.

- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Side—opening of oil pipe head
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 6、 Casing connecting whorl: 5-1/2" STC, 7" STC



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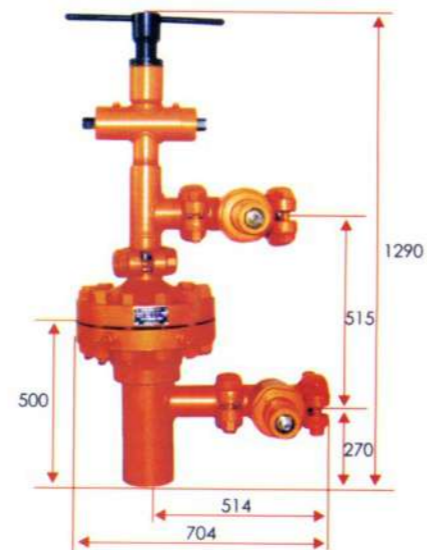
SIMPLIFIED WELLHEAD EQUIPMENT



KYJ(F)14-65-25 Simplified Wellhead Equipment

use: This wellhead equipment is used for oil pumping well and features simple structure and anti-theft.

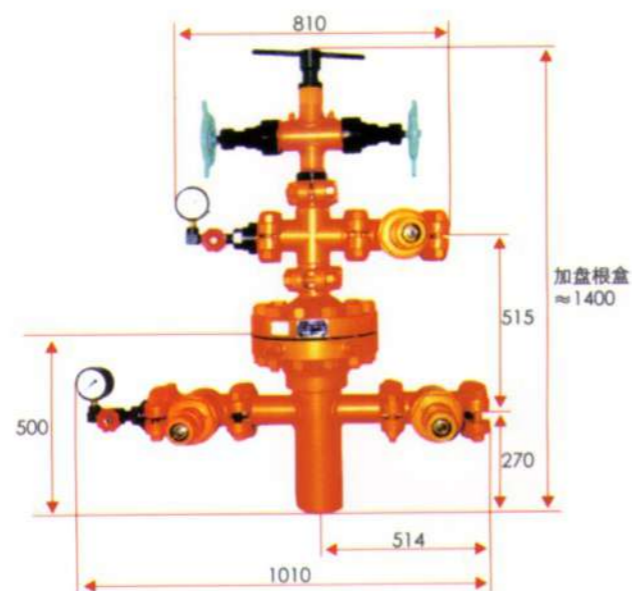
- 1、 Sealing pressure: 24.5MPa
- 2、 Sealing pressure of rubber valve: 14MPa
- 3、 Inside nominal diameter: 65mm
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 2-7/8" Nu or 2-7/8" Eu
- 6、 Casing connecting whorl: 5-1/2" STC



KYJ(F)16-65-25 Simplified Wellhead Equipment

use: This wellhead equipment is used for oil pumping well and features simple structure and anti-theft.

- 1、 Sealing pressure: 24.5MPa
- 2、 Sealing pressure of rubber valve: 16MPa
- 3、 Inside nominal diameter: 65mm
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 2-7/8" Nu or 2-7/8" Eu
- 6、 Casing connecting whorl: 5-1/2" STC



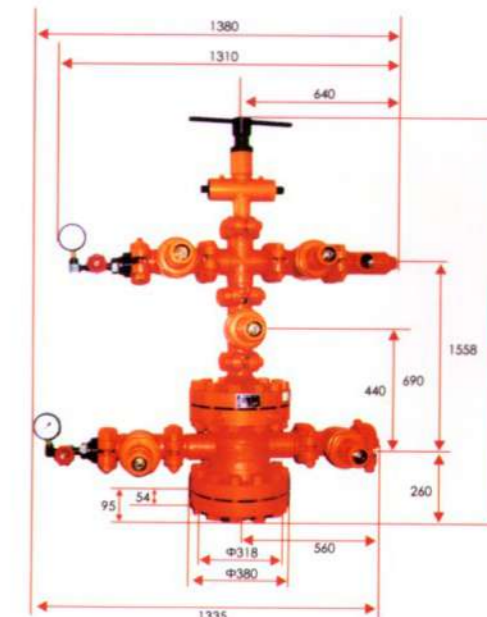
SIMPLIFIED WELLHEAD EQUIPMENT



KY65-25 Wellhead Equipment

This wellhead equipment is used for flowing well and pump recovery well.

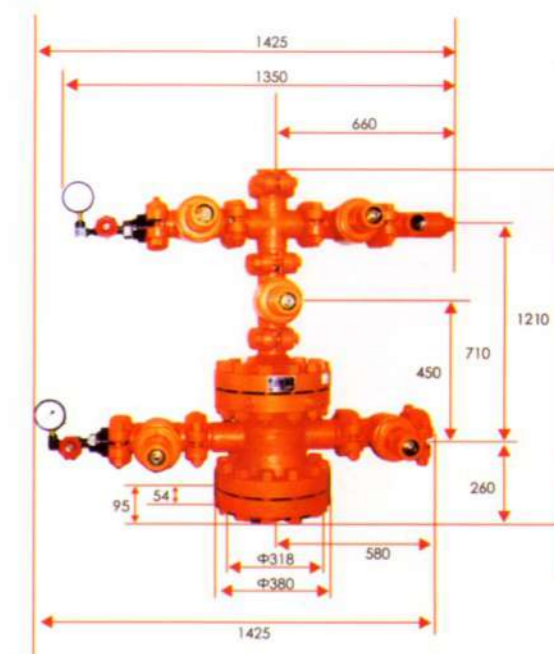
- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Sealing pressure of rubber valve: 16MPa
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 6、 Casing connecting whorl: 5-1/2 STC.7" STC
- 7、 Valve type: hand wheel valve or anti-theft valve can be installed



KY78-25 Wellhead Equipment

This wellhead equipment is used for flowing well and pump recovery well.

- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 78mm
- 3、 Sealing pressure of rubber valve: 16MPa
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 3-1/2" NU or 3-1/2" EU
- 6、 Casing connecting whorl: 5-1/2 STC.7" STC
- 7、 Valve type: hand wheel valve or anti-theft valve can be installed



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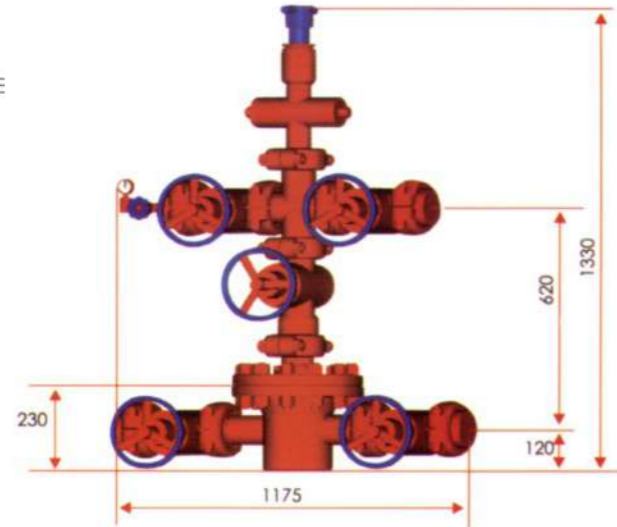
SIMPLIFIED WELLHEAD EQUIPMENT



KYJ(F)65-25 Simplified Wellhead Assembly

The Simplified Wellhead Assembly is used for the artificial liftwell, it is the characteristics of non-lift structure and simple maintenance.

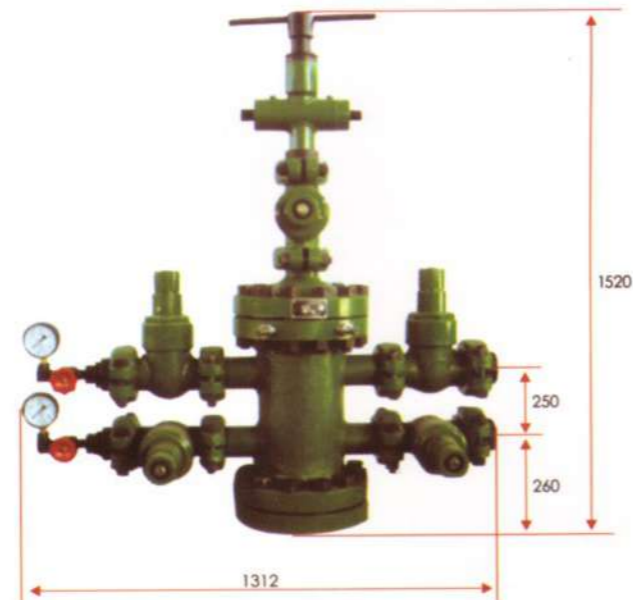
- 1、 Compacting pressure: 24.5MPa
- 2、 Drift diameter of the valve: 65mm
- 3、 Compacting pressure of rubber valve: 16MPa
- 4、 Collar clamp connection
- 5、 Thread diameter of the conjunctive tubing 2-7/8" NU or 2-7/8" E
- 6、 Thread diameter of the conjunctive cast ing5-1/2" STC
- 7、 May install hand wheel valve or ant l - theft valve



KYGJ65-25 Efficient Compact Wellhead Equipment

The wellhead equipment is used for flowing well and pump recovery well.

- 1、 Sealing pressure: 24.5MPa
- 2、 Sealing pressure of rubber valve: 16MPa
- 3、 Inside nominal diameter: 65mm
- 4、 Connection mode: clamp
- 5、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 6、 Casing connecting whorl: 5-1/2" STC、 7" STC



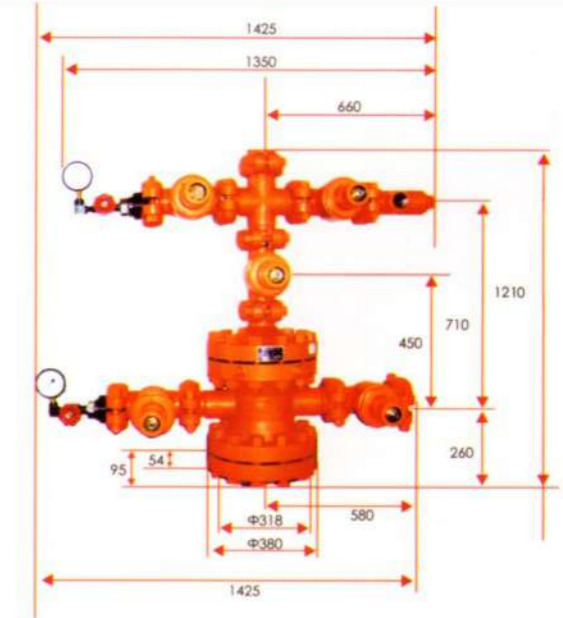
WATER INJECTION WELLHEAD DEVICE



KZ(F)78-25 Water Injection Wellhead Equipment

This wellhead equipment is used for water injection well.

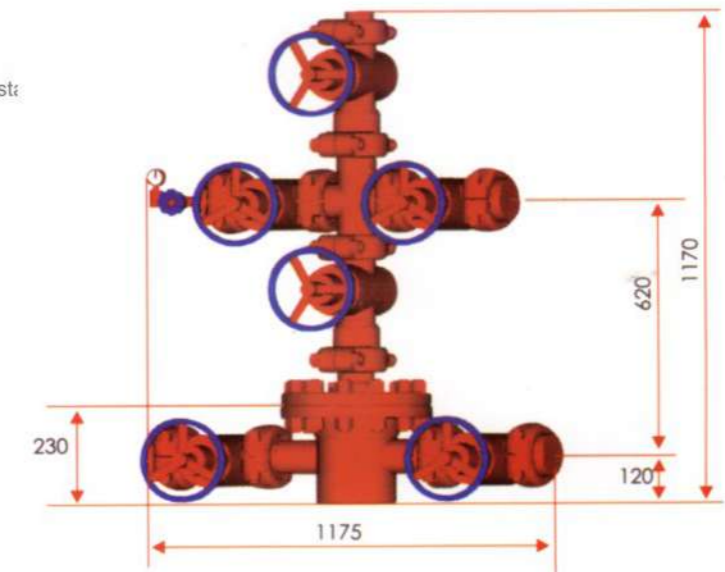
- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 78mm
- 3、 Connection mode: clamp
- 4、 Oil pipe connecting whorl: 3-1/2" NU or 3-1/2" EU
- 5、 Casing connecting whorl: 5-1/2" STC、 7"STC
- 6、 Valve type: hand wheel valve or anti—theft valve can be installed



KZJ(F)65-25 Water Injection Wellhead Equipment

This wellhead equipment is used for water injection well; hands free structure design is adopted simplifying maintenance.

- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Connection mode: clamp
- 4、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 5、 Casing connecting whorl: 5-1/2" STC
- 6、 Valve type: hand wheel valve or anti-theft valve can be inst:



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WATER INJECTION WELLHEAD DEVICE

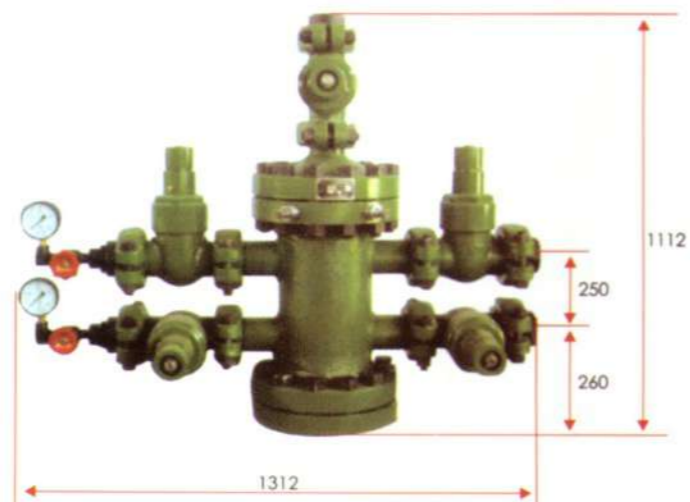


KYGJ65-25 Efficient Compact Wellhead Equipment

KYGJ24.5/65 Efficient Compact Type Water Injection Wellhead Equipment.

The wellhead equipment is used for water injection well.

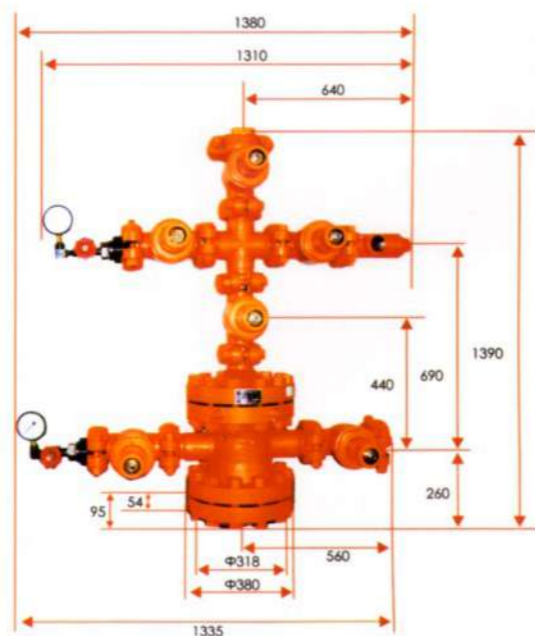
- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Connection mode: clamp
- 4、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 5、 Casing connecting whorl: 5-1/2" STC



KZ(f)65-25 Water Injection Wellhead Equipment

This wellhead equipment is used for water injection well.

- 1、 Sealing pressure: 24.5MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Connection mode: clamp
- 4、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 5、 Casing connecting whorl: 5-1/2" CSG, 7" STC
- 6、 Valve type: hand wheel valve or anti-theft valve can be installed



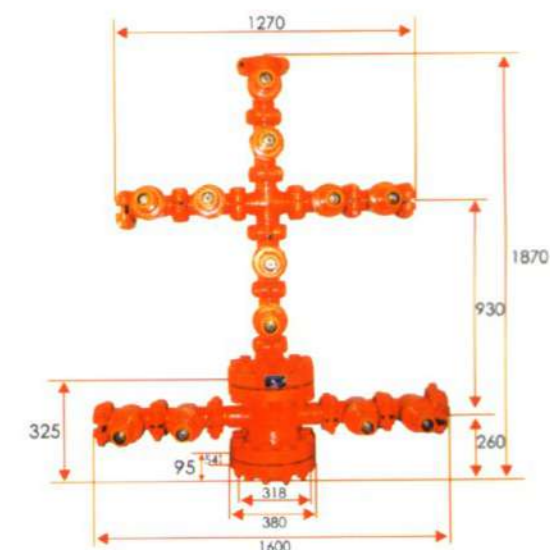
WATER INJECTION WELLHEAD DEVICE



KQ65-21 Gasextraction Wellhead Equipment

This equipment is used for gas extraction well.

- 1、 Sealing pressure: 20.7MPa
- 2、 Inside nominal diameter: 65mm
- 3、 Connection mode: clamp
- 4、 Oil pipe connecting whorl: 2-7/8" NU or 2-7/8" EU
- 5、 Casing connecting whorl: 5-1/2" CSG, 7" CSG



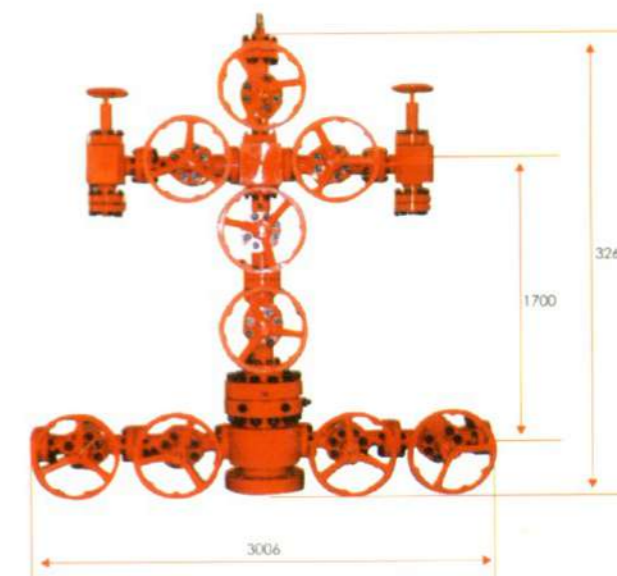
KQ78/65-35 Gas Extraction Wellhead Equipment

KQ78/65-70 Gas Extraction Wellhead Equipment

KZ65-35 Water Injection Wellhead Equipment

Bivalve of this wellhead equipment is used for gas extraction and Single valve is used for oil extraction and water injection well. It observes API SPEC 6A standard completely.

- 1、 Product Specification Level: PSL1-4
- 2、 Product Performance Level: PRI
- 3、 Main Inside Nominal Diameter: 2-9/16", 3-1/8"
- 4、 Side Inside Nominal Diameter: 2-1/16", 2-9/16"
- 5、 Pressure Level: 5000psi, 10000psi
- 6、 Temperature Level: L-U
- 7、 Materials Level: AA, BB, CC, DD, EE, FF



SIMPLIFIED THERMAL EXTRACTION WELLHEAD EQUIPMENT



KR80-14(21)-370 Simplified Thermal Extraction Wellhead Equipment

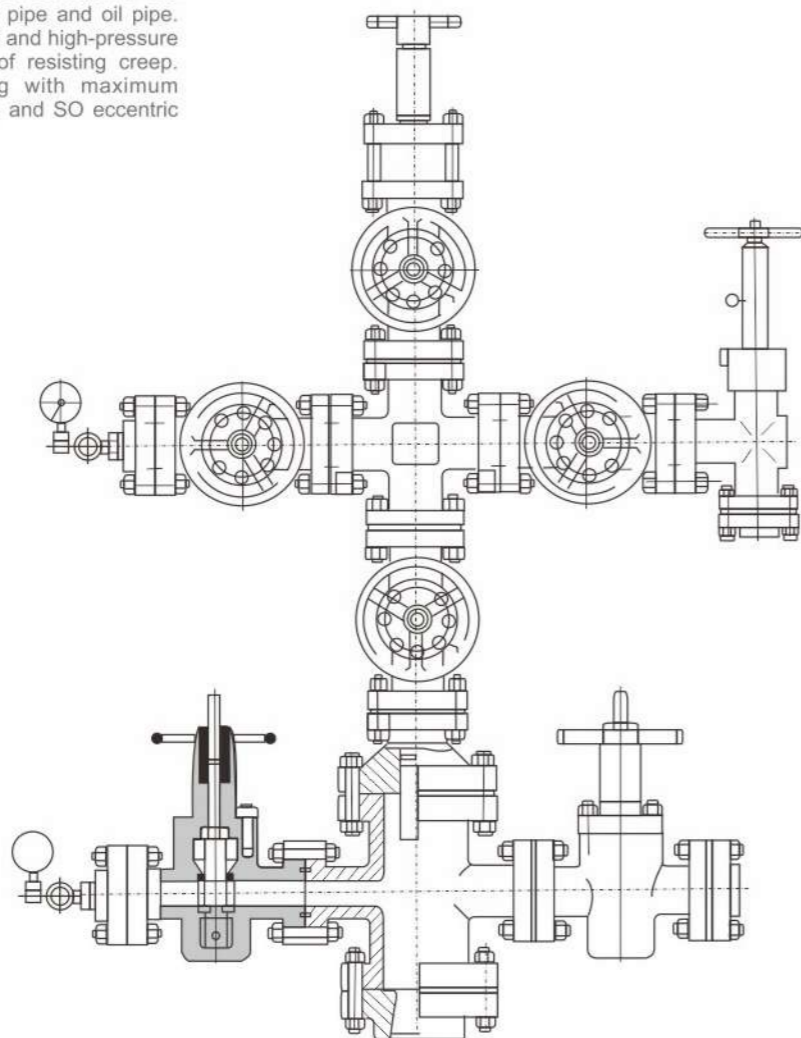
This equipment is used for extraction of thick oil and high-pour point oil.

1. Operating pressure: 13.8MPa, 20.7MPa
2. Inside nominal diameter: 80mm
3. Operating temperature: 370°C
4. Connection mode: clamp
5. Oil pipe connecting whorl: 3-1/2" EU
6. Casing connecting whorl: 5-1/2" STC

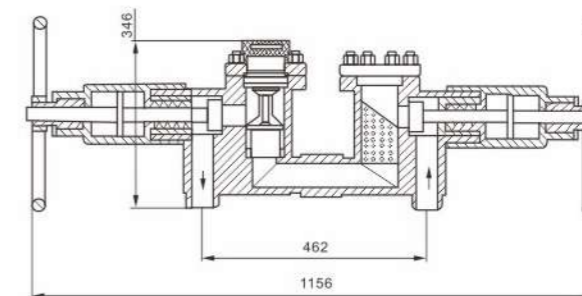


Double-Use Wellhead Equipment of Thermal Injecting and Pumping

It is a kind of effective and indispensable ground control equipment used in thick oil extraction by injecting steam or hot water. It has a steam injecting channel and can hang steam pipe and oil pipe. The wellhead materials are all high-temperature and high-pressure resistant alloy which has excellent property of resisting creep. The packing box has function of aligning with maximum in-plane self-alignment displacement of 12mm, and SO eccentric wear of polished rod can be prevented.



SYGPZ HIGH-PRESSURE WATER DISTRIBUTION DEVICE

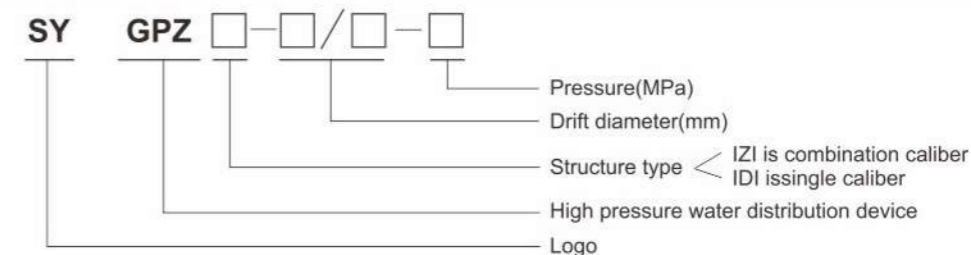


High Pressure Water Distribution Device

Descriptions

SYGPZ type high pressure water distribution device performs excellently in rejection allocation for single well outside in oilfield, with multifunction of liquid filtration, metering, pressure testing, freezing protection, guard against theft, shut-off and adjusting. Compared with its similar devices used in the fields, our product holds advantages of easy installation (only two strips of crater), safe and reliable in operation, etc., extremely fulfill the customers' requests of power saving and efficiency boost.

Model illustration



Example 1: Model of the high-pressure water distribution device with 50 caliber and 25Mp is SYGPZ-50-25.
 Example 2: Model of the high-pressure water distribution device with 50/25 caliber, 25Mp is SYGPZZ-25/50-25.

Specifications

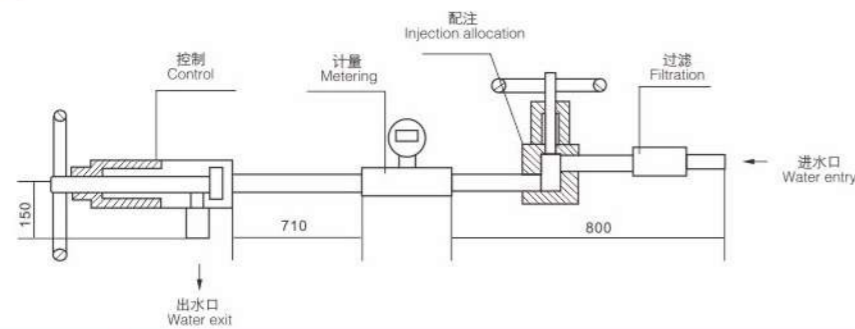
Nominal Pressure		16	25	42
Strength Test Pressure	MPa	24	37.5	64
Sealing Test Pressure		17.6	27.5	44.2
Service Medium		Water and oil - bearing sewage		
Medium Temperature		≤450°C		

Materials for main parts

Name Of part	Materials	Surface Treatment
Body	(Q235)Forged steel	Spray Painting
Bonnet		
Disc		
Seat	1Cr13	Spray-welding Carbide alloy Nitridation
Stem		



SYZJPYI POLYMER INJECTION AND LIQUID DISTRIBUTION DEVICE

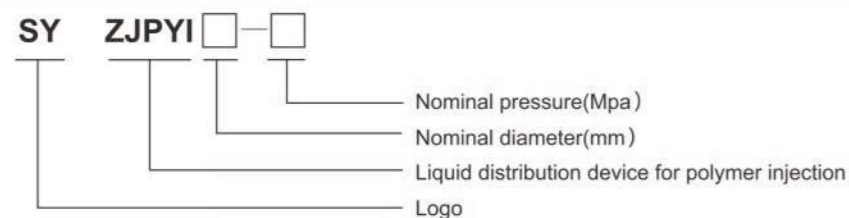


Liquid Distribution Device For Polymer Injection

Descriptions

The SYZJPYI type liquid distribution device for polymer injection performs excellently in water flooding and liquid distribution for polymer injection in oilfield, with the multifunction of metering, adjusting, filtration, and shut-off. It features the advantages of easy installation (only two strips of crater), safe and reliable in operation, etc., extremely fulfills the customers' requests of power saving and efficiency boost.

Model illustration



Specifications

Nominal Pressure		16	25	42
Strength Test Pressure	MPa	24	37.5	64
Sealing Test Pressure		17.6	27.5	44.2
Service Medium	Water and oil - bearing sewage			
Medium Temperature	≤450°C			

Materials for main parts

Name Of part	Materials	Surface Treatment
Body	Forged steel(Q235)	Spray Painting
Bonnet		
Disc	316L 1Cr18Ni9Ti 2Cr13	Spray-welding Carbide alloy Nitridation
Seat		
Stem		

SYGPZ HIGH-PRESSURE WATER DISTRIBUTION DEVICE



Structure characteristics

This wellhead device mainly consists of casing flange, cone-seat tubing head, upper flange, gate valve and throttle motor. It is applicable to the wellhead control devices served for onshore oil recovery, fieldflooding and oil well operation.



Specifications

Item / Productcode	Nominal pressure Mpa	Nominal Diameter Mm	Pressure Strength Test Mpa	Tubing	Casing
KZ 65-25	24.5	65	49	27/8NU	51/2STC
KZ 78-25	24.5	78	49	31/2NU	51/2STC



送审稿
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