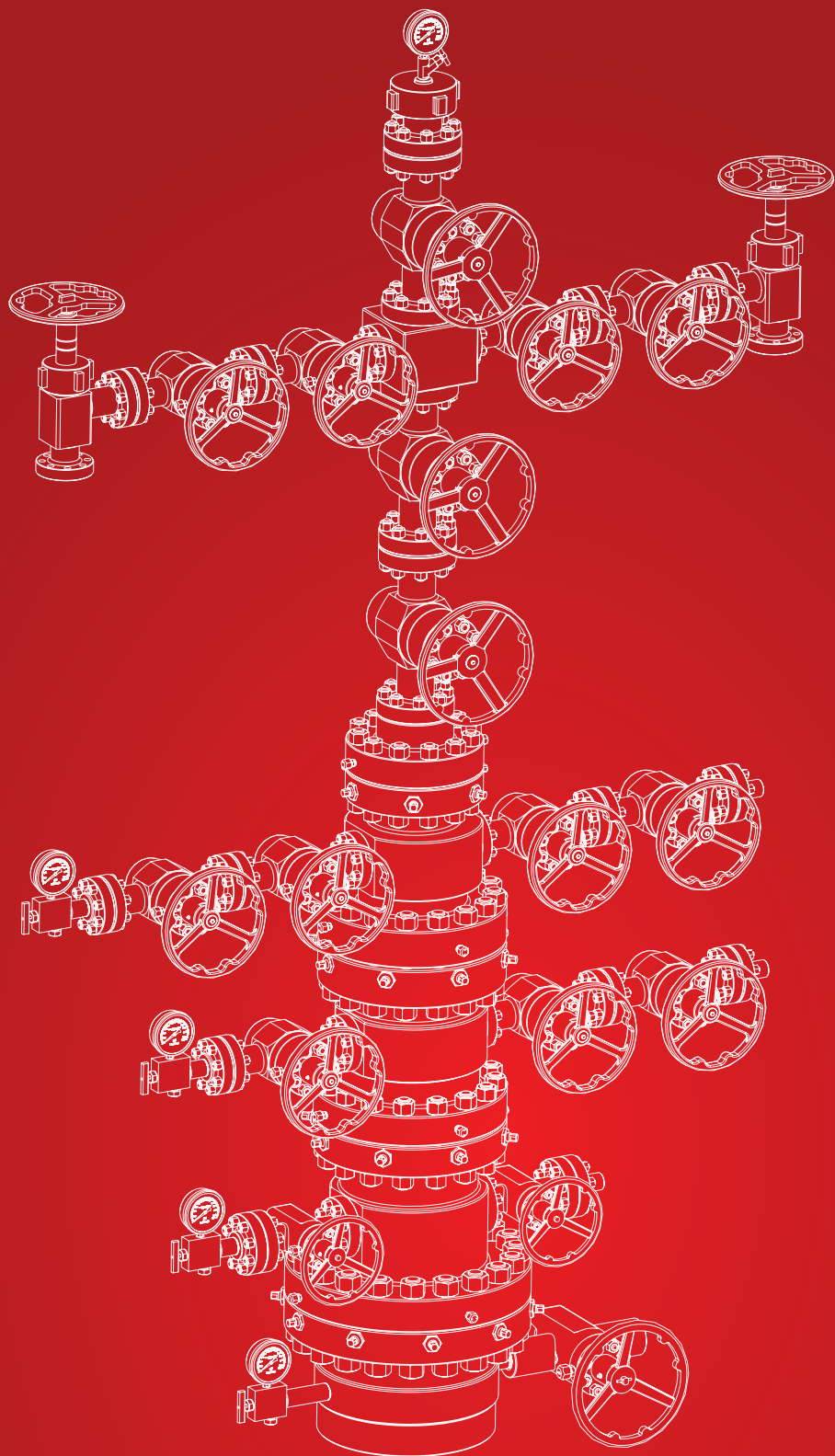


SHANGHAI YUYING MACHINERY TECHNOLOGY



# API 6A & API 16C Series Products

WELLHEAD EQUIPMENT / VALVES / MANIFOL / SWIVEL JOINTS / UNION



WELLHEAD  
CHRISTMAS TREE  
MANIFOL  
API6A VALVES  
SWIVEL JOINTS  
UNION



## COMPANY PROFILE

Shanghai yuying machinery technology Co.,Ltd is a modern enterprise specializing in the research manufacturing and distribution of valve equipment. The company had passed ISO9001 International Quality System Certification and obtained API 6D, API6A, API 16C Certificates.

The mainly products of Shanghai Yuying are gate valve, globe valve, check valve, ball valve, plug valve, butterfly valve, control valve, and valve spare parts. The scope of nominal pressure :1.0 Mpa -76.0Mpa, nominal diameter DN15-DN2500, and working pressure from -196 to +650 ., the Valve adopts different material according to different operating conditions, such as carbon steel, stainless steel, casting steel corrosion resistance steel and hot resistance steel, alloy steel and other materials. The operation includes manual, gear, electric, pneumatic, hydraulic. Products are produce according to international standard of GB, API, JIS, DIN, BS, and ANSI.

With powerful strength and good reputation , we always provide you high-quality products and best service!



# Wellhead Equipment&Christmas Tree



- Fix drilled wellhead, connect wellhead casing string, seal and control the annular of casing, suspend tubing, control wellhead pressure and adjust flow rate, also include oil into outlet pipeline, shut off oil well when necessary, and apply to acid fracturing, water injection and test service.
- Consist of casing head, tubing head and Christmas tree.
- Apply to all kinds of casing, tubing programs and connection forms.
- Feature reliable running, simple and convenient operating and repairing.
- Can be equipped with (pneumatic) hydraulic safety valve.
- Working pressure: 2000PSI ~ 20000PSI
- Working medium: oil, natural gas, mud ,including H<sub>2</sub>S,CO<sub>2</sub>
- Working temperature: -46° C ~ 121° C ( Class LU )
- Material class: AA、BB、CC、DD、EE、FF
- Specification level: PSL 1-4
- Performance level: PR 1-2



**Ordinary christmas tree**

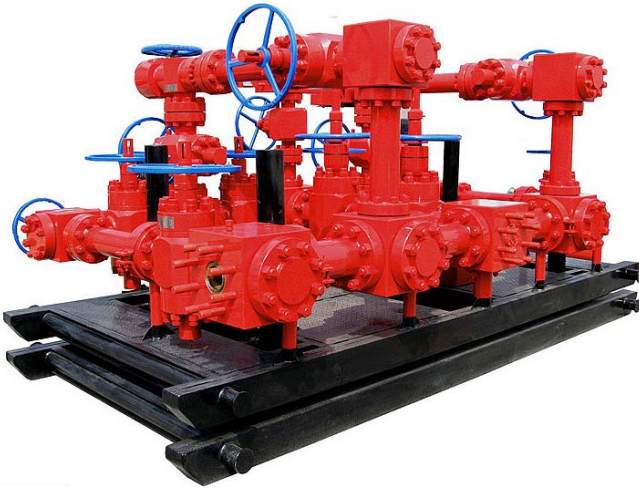


**Water injection wellhead**



**Block Tree**

# Manifold



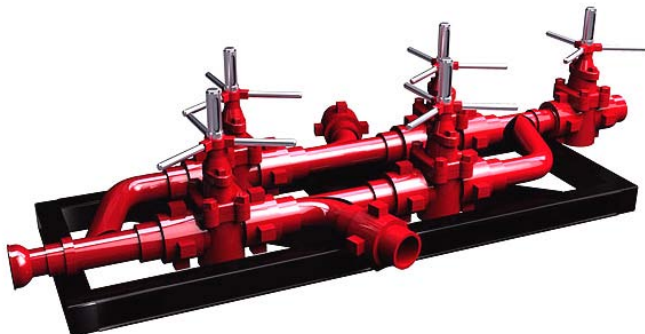
## Choke Manifold

- The choke manifold is support equipment of hydraulic BOP for controlling well blow out and well pressure. Through the choke valve, perform well killing, replacing polluted slurry in well.
- Control wellhead pressure of casing and standpipe, restoring mud to control pressure at well bottom to stop overflow.
- Through relief pressure, decrease wellhead pressure to perform "Flexibility Shut Off Well".
- Through drain valve, decrease casing pressure of wellhead to protect BOP stack.
- Furnished with hydraulic control pod to achieve the function of remote control.
- Working pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 2.1/16" ~ 4.1/16"(46mm ~ 103mm)
- Working Medium: oil, natural gas, mud
- Working Temperature: -46°C ~ 121°C ( Class LU )



## Kill Manifold

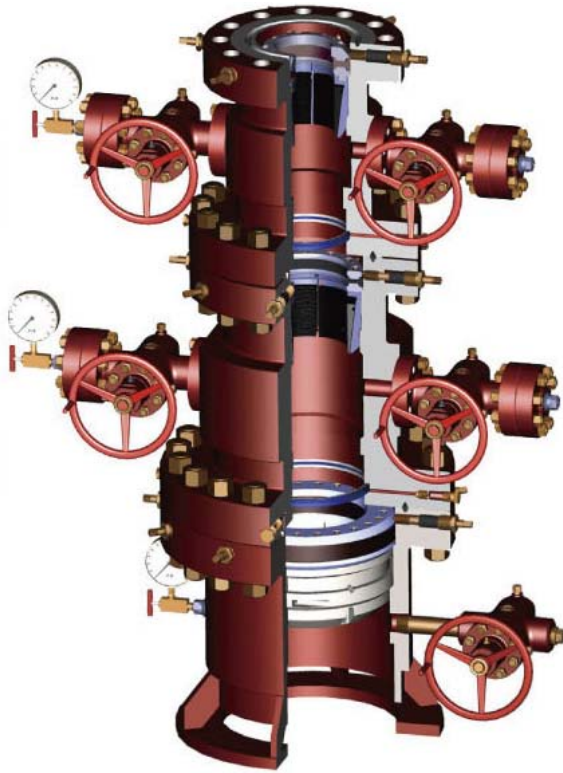
- When full ram seals well, inject weighted mud into well bore to perform well killing.
- When well blowout occurred, inject water into well through kill manifold to prevent be on fire.
- When the well is on fire, inject extinguishing agent into well bore through kill manifold to put out fire.
- Working pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 2.1/16" ~ 4.1/16"(46mm ~ 103mm)
- Working Medium: oil, natural gas, mud
- Working Temperature: -46°C ~ 121°C ( Class LU )



## MUD Manifold

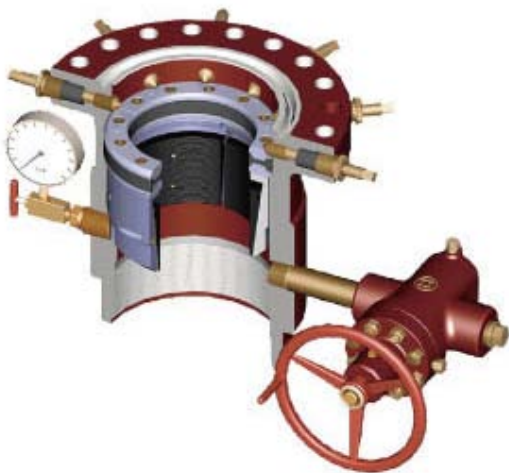
- Mud manifold unites and divides mud during drilling, in order to have enough mud to drill through top drive.
- Working pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 2.1/16" ~ 4.1/16"(46mm ~ 103mm)
- Working Medium: oil, natural gas, mud
- Working Temperature: -46°C ~ 121°C ( Class LU )

# Casing Head



The casing head is a kind of part connecting casings and wellheads. It is used as supporting the weight of technical casing and production casing, sealing the annular space between the casings, and installing BOP stacks. It provides a transition joint for the tubing head, Christmas tree and other wellheads. It can also supply, monitor & control well's sinking, and inject balance liquids etc by the two side outlets on the casing head housing.

The casing head manufactured by our company is a standard structure, the casing hanger produced fits well with the casing housing, and the casing hanger of different sizes are available according to the casing procedure and the change of well head conditions. The standard casing head's top connection is API 6B or API 6BX flange.



**Thread type casing head housing**

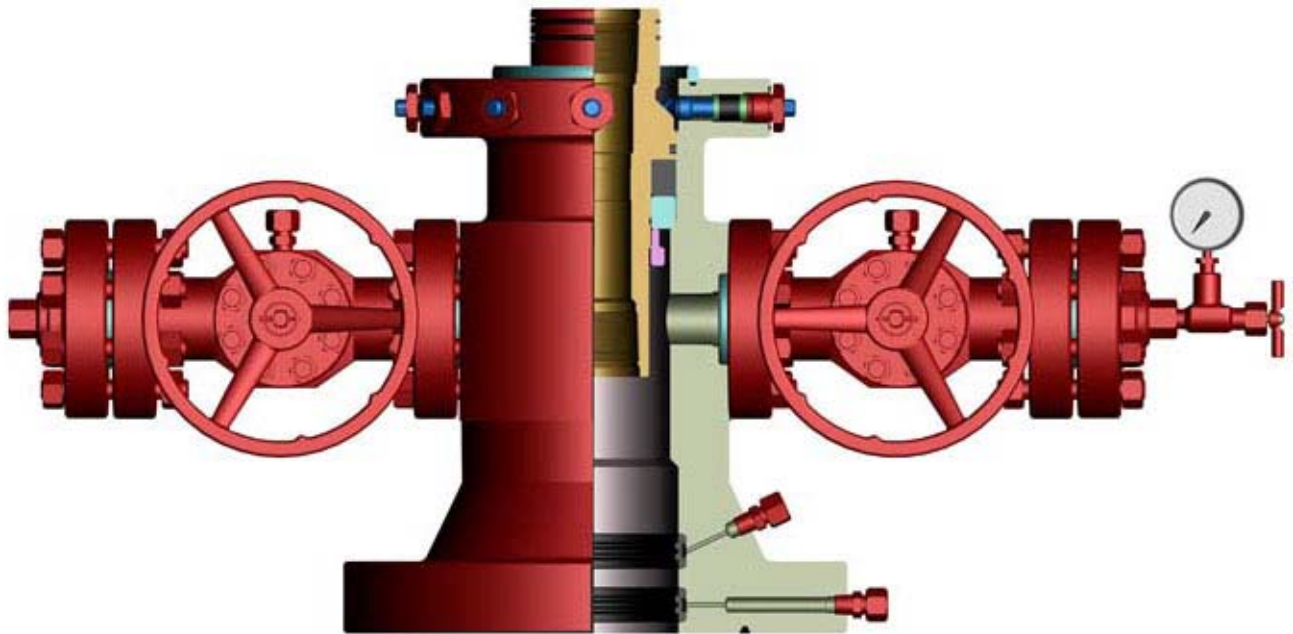


**Weld type casing head housing**



**Slip type casing head housing**

# Tubing Head



## 1. Tubing head structure

Tubing head is usually a spool with both flanged ends, which is set on the top flange of casing head to hang tubing hanger and seal the annular space between the tubing string and oil-layer casing and which consists of tubing head spool and tubing hanger.

## 2. Functions:

- 1) Hang the tubing string inside well;
- 2) Seal the annular space between tubing and casing;
- 3) Give a crossover to connect casing head downwards and to connect x'mas tree upwards;
- 4) Provide both side outlets in tubing head spool body through which to execute injection and wellwash operation.

## 3. Tubing hanger

Tubing hanger is an assembly to support tubing string and seal the annular space between tubing and casing, which is connected with tubing and seated into tubing hanger spool by tubing gravity. It is convenient to operate and replace wellhead so that it is widely used for intermediate depth well and common well.

## Design features:

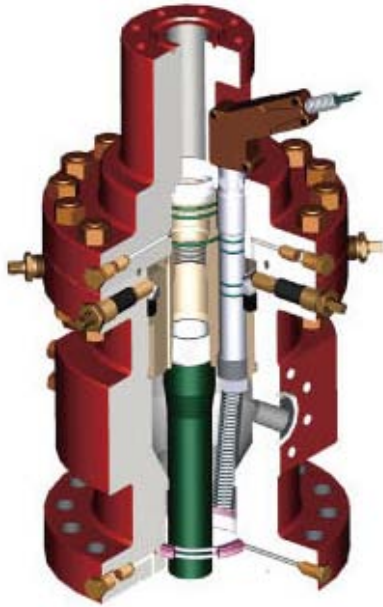
Fabricated with BT secondary seal, and could be field mounted by cutting casing pipe to accommodate the seal height.

Tubing hanger and top flange are designed to run cable through.

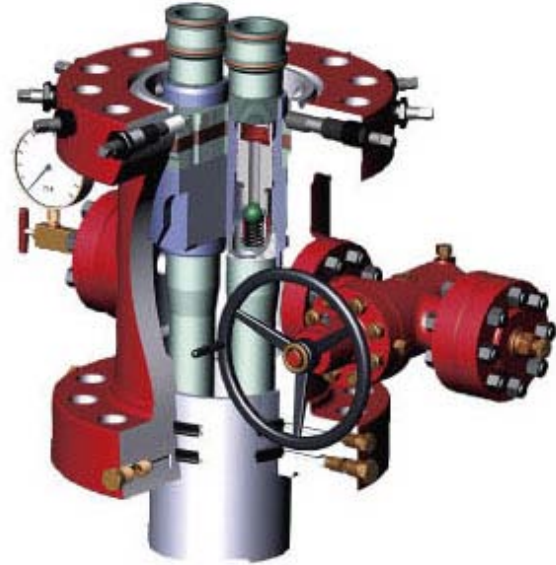
Several control ports are available for connecting pipeline.

Sanyi manufactures tubing head spool in full accordance with API 6A, the body is made of forged or special smelt steel, providing high bearing strength, safety and reliability. Side outlets could be line pipe thread or studded, studded side outlet is machined with 1.1/2" female thread.

# Tubing Head



**Tubing head with cable penetration**



**Tubing head with dual tube**

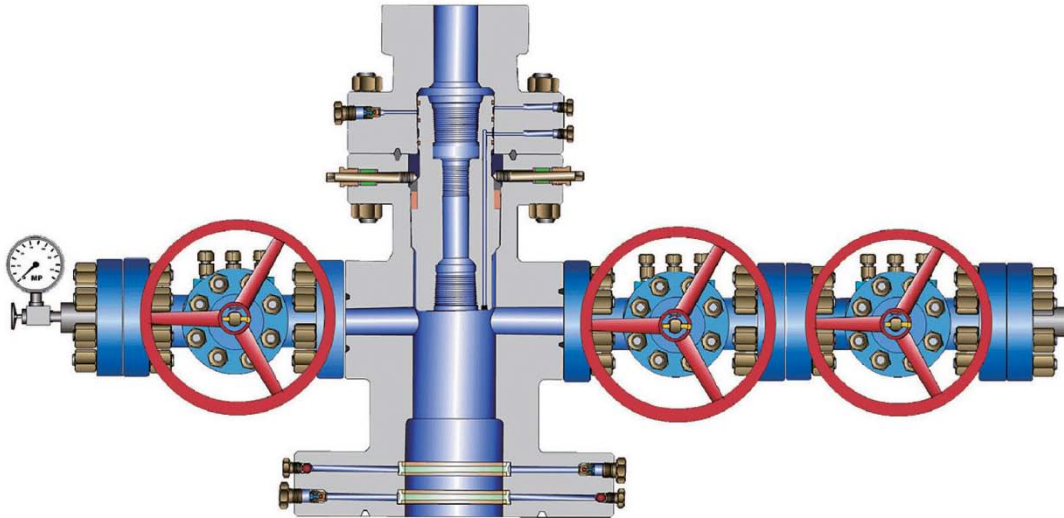
Work pressure:3000PSI~10000PSI

Tubing hanger seal:rubber,Metal-metal

Top&bottom thread:API thread or other special gas seal thread, with under well control lin



# Tubing Spool



## 1. Tubing head structure

Tubing head is usually a spool with both flanged ends, which is set on the top flange of casing head to hang tubing hanger and seal the annular space between the tubing string and oil-layer casing and which consists of tubing head spool and tubing hanger.

## 2. Functions:

- 1) Hang the tubing string inside well;
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## Design features:

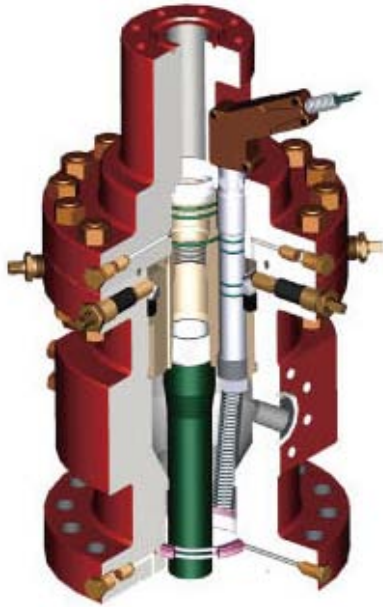
Fabricated with BT secondary seal, and could be field mounted by cutting casing pipe to accommodate the seal height.

Tubing hanger and top flange are designed to run cable through.

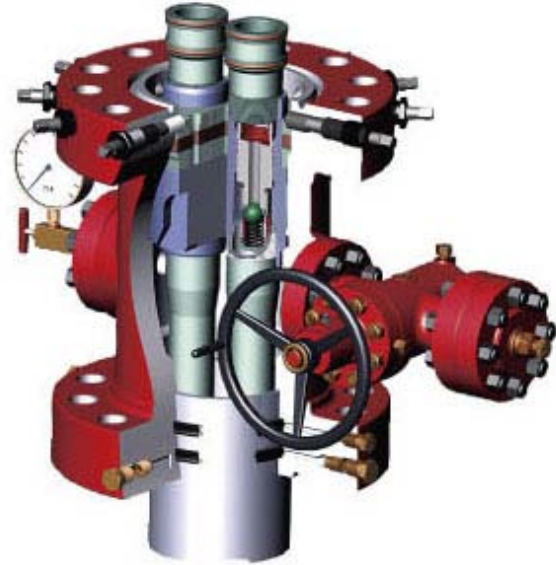
Several control ports are available for connecting pipeline.

Sanyi manufactures tubing head spool in full accordance with API 6A, the body is made of forged or special smelt steel, providing high bearing strength, safety and reliability. Side outlets could be line pipe thread or studded, studded side outlet is machined with 1.1/2" female thread.

# Tubing Spool



**Tubing head with cable penetration**



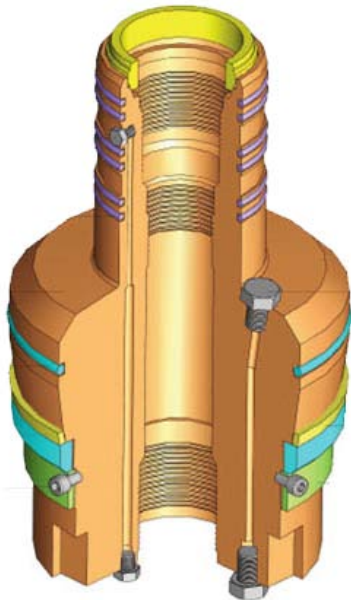
**Tubing head with dual tube**

Work pressure:3000PSI~10000PSI

Tubing hanger seal:rubber,Metal-metal

Top&bottom thread:API thread or ohter special gas seal thread, with under well control lin

## Tubing hanger & Tubing Spool



### **Tubing hanger has various structure forms:**

- Taper type and straight type
- Metal-to-metal seal and non-metal seal
- Back pressure valve thread
- Various cable penetrator channel, control pipeline channel of subsurface safety valve.
- Chemical reagent injection channel and capillary channel.
- The upper and lower threads may be API tubing threads and VAM threads.

### **Product Features:**

- Adopt metal-metal seal structure
- Reliable neck second seal
- Maximum working pressure is 15000PSI

## Tubing Spool

### **Features**

- With valve remove-reinstall "VR" thread
- With locking Screw Down, which can strengthen the tubing hanger seal performance
- Second seal of pack-off casing can be sealed by "Y" type seal ring or metal-metal seal according to the requirement
- Test Plug, injection plug adopts metal-metal seal

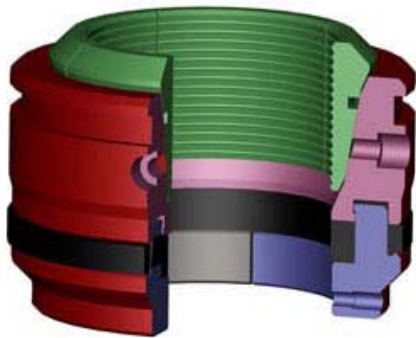
### **Main technical specification**

- Working pressure: 3000PSI~2000PSI
- Material class: AA BB DD EE FF
- Temperature Class : K L P R S T U
- PSL: PSL1 PSL2 PSL3
- PR: PR1 PR2

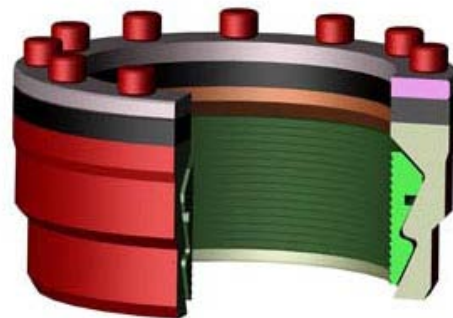


# Casing Hanger

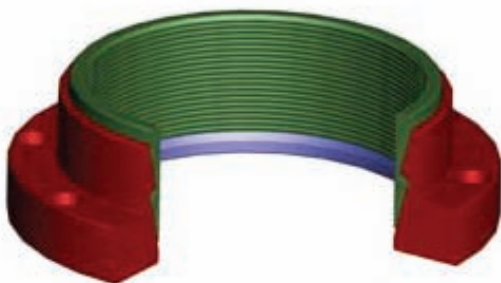
- The material of seals is hydrogenated Buna-N, and the slip bowl, slip and support base are made of low alloy steel
- Pack-off is automatically energized with casing weight.
- Casing hanger with slip design has high load capacity.
- It's applicable to all casing heads and casing spools.



**W Type Hanger**



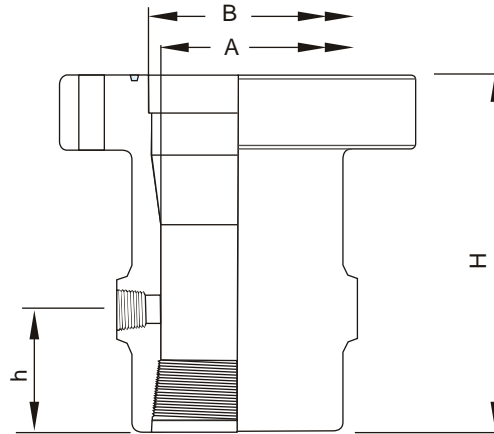
**WE Type Hanger**



**WD Type Hanger**



# Casing head body



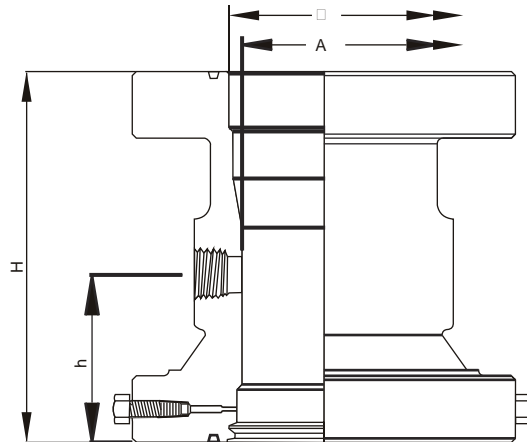
## CASING HEAD DIMENSIONS

Rating	Top Flange Size	Casing Size	Total Height (H)	Height Of Side Outlets (h)	Thru Bore (Min □A)	Bore Top Flange (□B)
2000 PSI *	11	8 5/8	19	6 1/2	8 1/6	10 31/32
	11	9 5/8	19	6 1/2	9 1/8	10 31/32
	11	10 3/4	19	6 1/2	9 15/16	10 31/32
	13 5/8	11 3/4	19	6 1/2	9 15/16	10 31/32
	13 5/8	13 3/8	19	6 1/2	12 1/2	13 19/32
	16 3/4	16	18 1/8	6 1/2	15 3/8	16 11/16
	21 1/4	20	15 11/16	5	18 15/16	20 1/4
3000 PSI *	11	8 5/8	19	6 1/2	8 1/16	10 31/32
	11	9 5/8	19	6 1/2	9 1/8	10 31/32
	11	10 3/4	19	6 1/2	9 15/16	10 31/32
	13 5/8	11 3/4	19	6 1/2	11 3/8	13 19/32
	13 5/8	13 3/8	19	6 1/2	12 1/2	13 19/32
	16 3/4	16	18	6 1/2	15 3/8	16 11/16
	20 3/4	20	15 11/16	6 1/2	18 15/16	20 1/4
5000 PSI *	11	8 5/8	19	6 1/2	8 1/16	10 31/32
	11	9 5/8	19	6 1/2	9 1/8	10 31/32
	11	10 3/4	19	6 1/2	9 15/16	10 31/32
	13 5/8	13 3/8	19	6 1/2	12 1/2	13 19/32

NOTE :

All Dimensions are in Inches.

# Casing Head spool



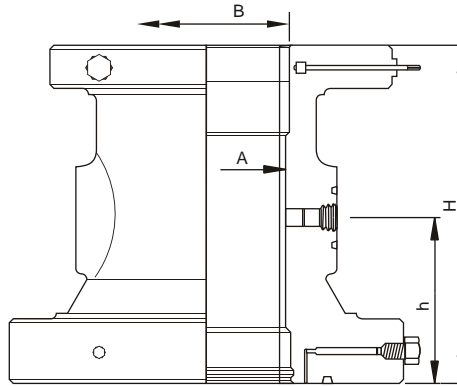
## CASING HEAD SPOOL DIMENSIONS

Flange Sizes		Dimensions			
Bottom	Top	Overall Height(H)	Height Of Side Outlets (h)	Minimum Bore (□ A)	Top Flange Bore (□ B)
11 X 2000	11 X 2000	20 1/8	10 1/16	8	10 31/32
11 X 2000	11 X 3000	20 5/8	10 1/16	8	10 31/32
11 X 3000	11 X 3000	21	10 1/2	8	10 31/32
11 X 3000	11 X 5000	23 3/4	10 5/8	8	10 31/32
11 X 5000	11 X 5000	25 1/2	12 3/8	8	10 31/32
13 5/8 X 2000	11 X 2000	20 1/4	10 3/16	9 15/16	10 31/32
13 5/8 X 2000	11 X 3000	20 3/4	10 3/16	9 15/16	10 31/32
13 5/8 X 3000	11 X 3000	21 1/2	11	9 15/16	10 31/32
13 5/8 X 3000	11 X 5000	25 1/8	12	9 15/16	10 31/32
13 5/8 X 5000	11 X 10000	25 1/2	12 3/8	9 15/16	10 31/32
16 3/4 X 2000	11 X 2000	21 1/8	11 1/16	9 15/16	10 31/32
16 3/4 X 2000	11 X 3000	22 3/4	10 3/4	9 15/16	10 31/32
16 3/4 X 3000	11 X 3000	24 5/16	12 5/16	9 15/16	10 31/32
16 3/4 X 3000	11 X 5000	26	12 3/8	9 15/16	10 31/32
16 3/4 X 2000	13 5/8 X 2000	21 1/4	11 1/16	12 1/2	13 19/32
16 3/4 X 3000	13 5/8 X 3000	22 7/8	11 15/16	12 1/2	13 19/32
16 3/4 X 3000	13 5/8 X 5000	27 1/16	11 15/16	12 1/2	13 19/32
21 1/4 X 2000	13 5/8 X 2000	22 1/16	11 7/8	12 1/2	13 19/32

NOTE :

All Dimensions are in Inches.

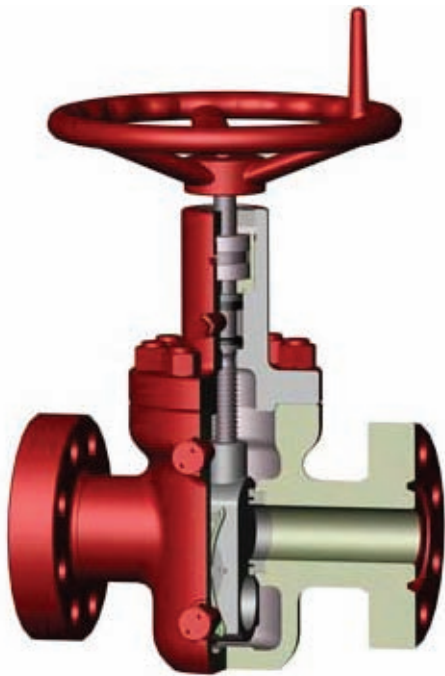
# Tubing head Spool



**Tubing Head Spool Dimension.(unit:in)**

Flange Sizes		Overall Height(H)	Height Of Side Outlets (h)		Minimum Bore (□ A)	Top Flange Bore (□ B)
Bottom	Top					
9 X 2000	7 1/16 X 2000	16	7 15/16	6 1/2	7 1/32	
9 X 2000	7 1/16 X 3000	16	7 15/16	6 1/2	7 1/32	
9 X 2000	7 1/16 X 3000	16	7 15/16	6 13/16		7 1/32
9 X 3000	7 1/16 X 5000	16	8 1/16	6 13/16		7 1/32
11 X 2000	7 1/16 X 2000	16	8 1/16	6 13/16		7 1/32
11 X 2000	7 1/16 X 3000	16	8 1/16	6 13/16		7 1/32
11 X 3000	7 1/16 X 3000	19 1/2	10 1/2	6 13/16		7 1/32
11 X 3000	7 1/16 X 5000	22 7/8	12 3/8	6 13/16		7 1/32
11 X 5000	7 1/16 X 5000	23 1/2	10 3/4	6 13/16		7 1/32
11 X 2000	9 X 2000	16	8 1/16	8 1/16	8 3/4	
11 X 2000	9 X 3000	16	8 1/16	8 1/16	8 3/4	
11 X 3000	9 X 3000	19 1/2	10 1/2	8 1/16	8 3/4	
11 X 3000	9 X 5000	22 7/8	12 3/8	8 1/16	8 3/4	
11 X 5000	9 X 5000	25	12 3/4	8 1/16	8 3/4	
11 X 5000	7 1/16 X 10000	25	12 3/4	6 9/16	7 1/32	
11 X 5000	9 X 10000	25	12 3/4	8 1/16	8 3/4	
11 X 10000	7 1/16 X 10000	26 3/8	12 3/4	6 3/8	7 1/32	
11 X 10000	7 1/16 X 15000	27 3/8	12 3/4	6 3/8	7 1/32	
11 X 2000	7 1/16 X 2000	20 1/2	10	6 3/8	6 61/64	
11 X 3000	7 1/16 X 3000	20 1/2	10	6 3/8	6 61/64	
11 X 3000	7 1/16 X 5000	22	11 1/2	6 3/8		6 61/64
11 X 5000	7 1/16 X 5000	23 3/4	11 11/16	6 3/8		6 61/64
11 X 5000	7 1/16 X 10000	25	12 3/4	6 3/8		6 61/64
11 X 3000	9 X 3000	22 1/4	11 5/8	6 13/16		8 59/64
11 X 3000	9 X 5000	23 3/8	12 3/4	6 13/16		8 59/64
11 X 5000	9 X 5000	25	12 3/4	6 13/16		8 59/64
11 X 5000	9 X 10000	27 3/8	14 3/8	6 13/16		8 59/64
13 5/8 X 3000	9 X 3000	22 3/4	11 5/8	8 1/16	8 59/64	
13 5/8 X 3000	9 X 5000	23 7/8	12 3/4	8 1/16	8 59/64	
13 5/8 X 5000	9 X 5000	24 7/8	12 3/4	8 1/16	8 59/64	
13 5/8 X 3000	7 1/16 X 3000	22 1/2	10	6 3/8	6 61/64	
13 5/8 X 3000	7 1/16 X 5000	23 5/8	11 1/8	6 3/8	6 61/64	
11 X 10000	7 1/16 X 10000	28 1/2	12 3/4	6 3/8	6 61/64	
11 X 10000	7 1/16 X 15000	29 1/8	13 3/8	6 3/8	6 61/64	
11 X 10000	9 X 10000	30 3/4	15	6 13/16	8 59/64	

# Gate valves

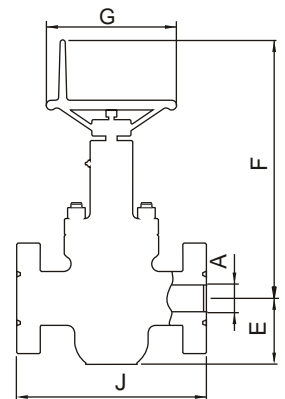


## Expanding Gate Valve

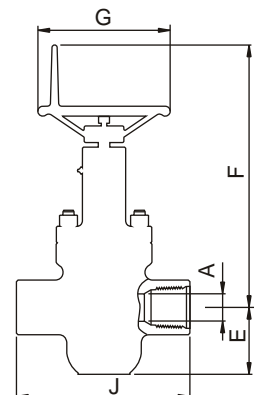
- Full bore design eliminates efficiently pressure drop and vortex, and eliminates washing by solids in fluid.
- Gate use expanding type structure.
- Achieve low torque operation and low wastage during open and close.
- Metal seal is used between bonnet and body.
- Soft seal or metal seal is used between gate and seat.
- Inject sealant through injection valve to improve seal performance.
- Working Pressure: 2000PSI ~ 10000PSI
- Nominal Bore: 1.13/16" ~ 7.1/16" (46mm ~ 180mm)
- Working Medium: oil、 natural gas、 mud and gas containing H2S、 CO2
- Working Temperature: -46° C ~ 121° C ( Class LU )
- Material Class: AA、 BB、 CC、 DD、 EE、 FF、 HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2

## FLANGED GATE VALVES DIMENSIONS

Size	Working Pressure (PSI)	A	E	F	G	J	N	Wt (lbsf)
2 1/16	2000	2 1/16	4 13/16	19 1/4	11	11 5/8	13	91
	3000/5000		5 1/16	19 7/16	13	14 5/8		150
2 9/16	2000	2 9/16	5 5/8	20 3/16	13	13 1/8	15 1/2	125
	3000/5000		5 15/16	20 7/16	16	16 5/8		205
3 1/8	2000	3 1/8	6 15/16	22 1/2	13	14 1/8	20	181
	3000		7 5/16	22 3/4	16	17 1/8		265
	5000		7 5/16	22 3/4	16	18 5/8		296
4 1/16	2000	4 1/16	8 5/8	25 15/16	16	17 1/8	24 1/2	345
	3000		9 1/16	26 3/8	20	20 1/8		515
	5000		9 1/16	26 3/8	20	21 5/8		530



Size	Working Pressure (PSI)	A	E	F	G	J	N	Wt (lbsf)
2 1/16	2000	2 1/16	4 13/16	19 1/4	11	9 5/8	13	71
	3000/5000		5 1/16	19 7/16	13			99
2 9/16	2000	2 9/16	5 5/8	20 3/16	13	10 1/4	15 1/2	92
	3000/5000		5 15/16	20 7/16	16			125
3 1/8	2000	3 1/8	6 15/16	22 1/2	13	11 3/8	20	152
	3000/5000		7 5/16	22 3/4	16			195
4 1/16	2000	4 1/16	8 5/8	25 15/16	16	13	24 1/2	265
	3000/5000		9 1/16	26 3/8	20			379





# Gate valves

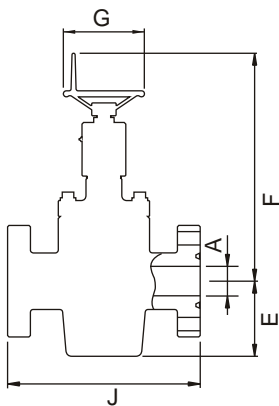


## Slab Flanged Gate Valves

### Main features:

- Full bore through conduit
- Block and Bleed Mechanism
- Floating seat with self relief function
- In-line maintenance
- Metal to Metal sealing
- Metal to Metal stem back seat
- Heavy duty bearing for Low torque and easy operation
- Non-Rising and Non-Balanced Stem
- Forged Body and Bonnet Construction

- Working Pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 1.13/16" ~ 9" (46mm ~ 230mm)
- Working Medium: oil, natural gas, mud and gas containing H2S, CO2
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2



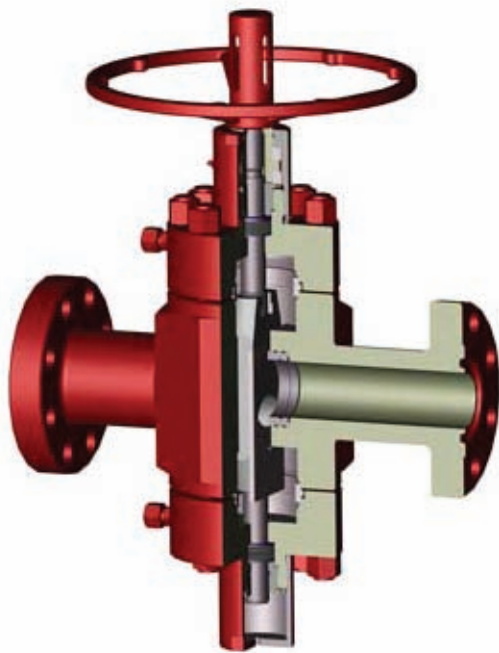
## FLANGED GATE VALVE DIMENSIONS

Size	Working Pressure (PSI)	A	E	F	G	J	N	Wt (lbsf)
2 1/16	2000	2 1/16	5 5/8	21 1/8	14	11 5/8	12 1/2	110
	3000/5000					14 5/8		182
2 9/16	2000	2 9/16	6 1/2	21 7/8	14	13 1/8	15 1/4	137
	3000/5000					16 5/8		255
3 1/8	2000	3 1/8	7 3/8	22 13/16	14	14 1/8	18 1/4	193
	3000				14	17 1/8		282
	5000				18 1/2	18 5/8		360
4 1/16	2000	4 1/16	9 1/8	24 7/16	16	17 1/8	23 1/2	395
	3000				18 1/2	20 1/8		450
	5000				18 1/2	21 5/8		545
1 13/16	10,000	1 13/16	5 3/4	21 1/8	14	18 1/4	12 1/2	270
2 1/16	10,000	2 1/16	5 7/8	21 1/8	18 1/2	20 1/2	12 1/2	275
2 9/16	10,000	2 9/16	6 13/16	21 7/8	18 1/2	22 1/4	15 1/4	485
3 1/16	10,000	3 1/16	8 1/16	21 13/16	24	24 3/8	18 1/4	680
4 1/16	10,000	4 1/16	10 1/16	24 11/16	24	26 3/8	23 1/2	1050

### NOTE:

Standard Temperature Rating: - 20° F to + 250° F. N = Numbers of Turn open.

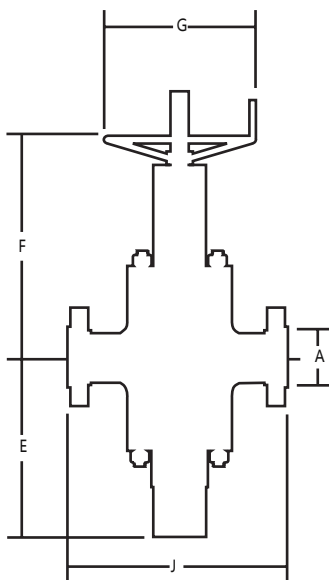
# Gate valves



**Manual Gate valve**

**Main features:**

- The surface of gate and seat is welding overlay with hard alloy, which has feature of corrosion resistance and washing resistance.
- The balanced stem can balance the stem load, reduce load of stem thread and bearing to decrease operating torque.
- The bonnet and stem are designed with back seal, which can replace stem sealing under pressure.
- One side of bonnet is designed with sealant injection valve.
- Rising stem structure can indicate open and close of valve.
- Complete with different pneumatic (hydraulic) actuator upon user' s requirements.
- Working Pressure: 10000PSI ~ 15000PSI
- Nominal Bore: 1.13/16" ~ 9" (46mm ~ 230mm)
- Working Medium: oil, natural gas, mud and gas containing H2S, CO2
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2



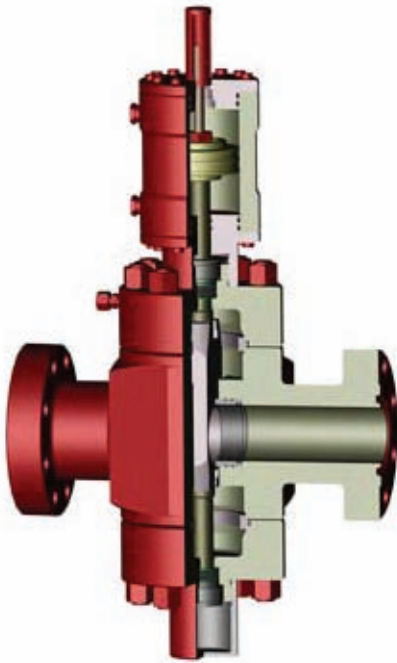
**10,000 PSI VALVES**

SIZE	J		A		E		F		G		WT	
	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs
1 <sup>3</sup> / <sub>16</sub>	18.25	463	1.81	46	14.5	368	21.50	546	12.00	305	280	127
2 <sup>1</sup> / <sub>16</sub>	20.50	520	2.06	52	16.00	406	23.00	584	14.00	356	490	222
2 <sup>9</sup> / <sub>16</sub>	22.25	565	2.56	65	18.00	635	25.00	635	20.00	508	570	258
3 <sup>1</sup> / <sub>16</sub>	24.37	619	3.06	77	21.00	533	29.00	736	22.00	559	850	385
4 <sup>1</sup> / <sub>16</sub>	26.37	670	4.06	103	26.50	673	36.00	914	26.00	660	1080	489

**15,000 PSI VALVES**

SIZE	J		A		E		F		G		WT	
	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kgs
1 <sup>3</sup> / <sub>16</sub>	18.00	457	1.81	46	14.75	374	22.00	558	14.00	356	380	172
2 <sup>1</sup> / <sub>16</sub>	19.00	482	2.06	52	16.25	412	23.80	603	18.00	457	520	235
2 <sup>9</sup> / <sub>16</sub>	21.00	533	2.56	65	19.00	482	26.50	673	20.00	508	760	344
3 <sup>1</sup> / <sub>16</sub>	23.56	598	3.06	77	21.00	539	29.00	762	22.00	584	850	458
4 <sup>1</sup> / <sub>16</sub>	29.00	736	4.06	103	26.75	679	36.30	920	26.00	660	1929	585

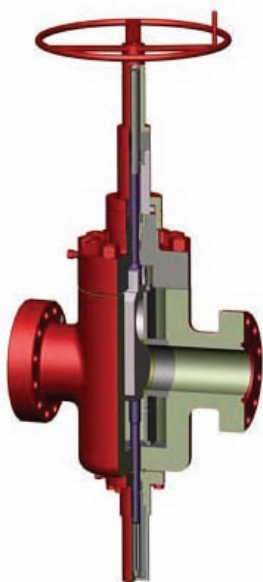
# Gate Valves



**Hydraulic Gate Valve**

**Main features:**

- The surface of gate and seat is welding overlay with hard alloy, which has feature of corrosion resistance and washing resistance.
- The balanced stem can balance the stem load, reduce load of stem thread and bearing to decrease operating torque.
- The bonnet and stem are designed with back seal, which can replace stem sealing under pressure.
- One side of bonnet is designed with sealant injection valve.
- Rising stem structure can indicate open and close of valve.
- Complete with different pneumatic (hydraulic) actuator upon user' s requirements.
- Working Pressure: 2000PSI ~ 15000PSI
- Nominal Bore: 1.13/16" ~ 9" (46mm ~ 230mm)
- Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2

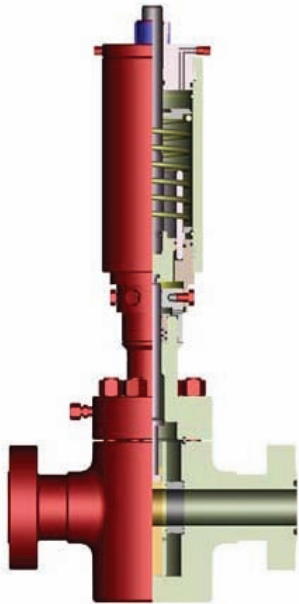


**Ball Screw Operator Valve**

**Main features:**

- Bore screw structure of switch driving effectively lower operating moment, and can achieve 1/3 of common valve.
- Gate valve structure.
- Stem structure has the function of pressure balance and switch indication.
- Apply to the structure of big bore high pressure valve.
- Working Pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 1.13/16" ~ 9" (46mm ~ 230mm)
- Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2

# Gate valves



**Hydraulic Safety Valve**

## Main features:

- When oil & gas is leaking or firing, used for security protect on well site.
  - Have hydraulic safety valve and pneumatic safety valve per different driving source.
  - With heat sensitive and high pressure explosion-proof equipment.
  - Have two parts of actuator and preparation valve, can replace and repair standard interface.
- 
- Working pressure: 2000PSI ~ 20000PSI
  - Nominal Bore: 1.13/16" ~ 7.1/16" (46mm ~ 180mm)
  - Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
  - Working Temperature: -46°C ~ 121°C ( Class LU )
  - Material Class: AA、 BB、 CC、 DD、 EE、 FF、 HH
  - Specification Level: PSL1-4
  - Performance Requirement: PR1-2



**Pneumatic Safety Valve**

# Mud gate Valves



## Metal seal mud valve features

- Long service time for carbide coated disc and seat
- Easy to check the status of valve due to rising stem structure
- Change stem packing without removal of bonnet
- Field maintenance design allows checking the situation of internal parts by opening bonnet and changing valve's parts without removing it from pipeline. Soft seal mud valve features
- All parts are interchangeable with DEMCO gate valve manufactured by Cameron.
- In line field repair ability

The bonnet is easily removed for internal parts inspection and/or replacement without removing the valve from the line; this design simplicity permits fast and easy service without the need for special tools.

- Floating slab gate design

A slab gate with T slot stem connection allows the gate to float to the seat providing a tighter pressure responsive seal.



**2000-5000PSI MUD GATE VALVE**

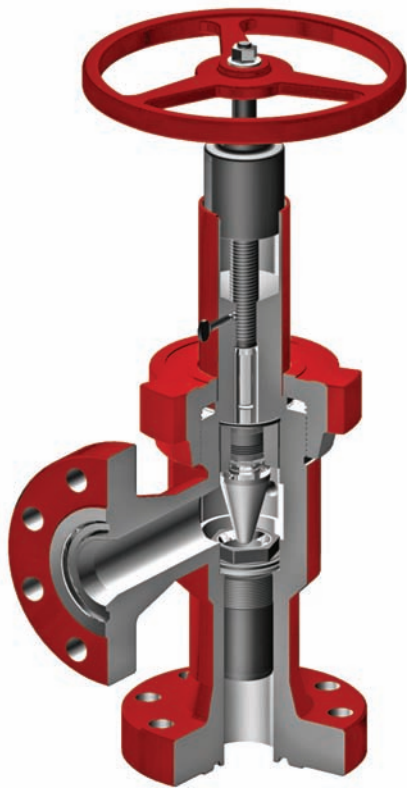


**7500PSI MUD GATE VALVE**



**10000PSI MUD GATE VALVE**

# Choke valves



**Needle Choke**

## Adjustable Choke Valve

- Choke valves for needle type and external sleeve type are available for Christmas tree.
- The needle and core are made of hard alloy, with performances of wearing resistance, washing resistance and corrosion resistance.
- The external sleeve choke valve has advantages of low switch torque, throttling and shutting fluid.
- Working Pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 1.13/16" ~ 7.1/16" (46mm ~ 180mm)
- Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2



## Positive Choke Valve

- The bean orifice is made of ceramics or hard alloy, with performance of wearing resistance and washing resistance.
- The bonnet connection form is union, which is more convenient to replace bean.
- Working Pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 1.13/16" ~ 7.1/16" (46mm ~ 180mm)
- Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2

# Choke Valves



## External Sleeve Choke

- External sleeve type are available for Christmas tree.
- The external sleeve choke valve has advantages of low switch torque, throttling and shutting fluid.
- Working Pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 1.13/16" ~ 7.1/16" (46mm ~ 180mm)
- Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2



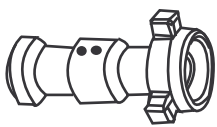
## Hydraulically Choke Valve

- The bean orifice is made of ceramics or hard alloy, with performance of wearing resistance and washing resistance.
- The bonnet connection form is union, which is more convenient to replace bean.
- Working Pressure: 2000PSI ~ 20000PSI
- Nominal Bore: 1.13/16" ~ 7.1/16" (46mm ~ 180mm)
- Working Medium: oil, natural gas, mud and gas containing H<sub>2</sub>S, CO<sub>2</sub>
- Working Temperature: -46°C ~ 121°C ( Class LU )
- Material Class: AA, BB, CC, DD, EE, FF, HH
- Specification level: PSL1-4
- Performance Requirement: PR1-2

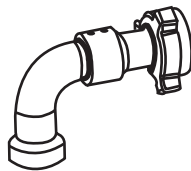
# Swivel joints

## Swivel Joints

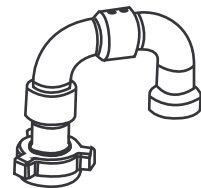
Swivel joints, with integral ball bearing, are manufactured on the basis of technologies from FMC, USA. Various models of swivel joints and their repair kits are available, suitable for normal or low temperature, or H2S environments, with sizes ranging from 1" to 4" and rated WP ranging from 2,000psi ~ 20,000psi. We can supply long and short radius swivel joints. Long radius swivel joints can minimize fluid shock, and has better performance of resistance for scouring and erosion. We also need to use short radius swivel joints for low pressure operation due to limited installation space.



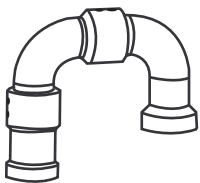
Style 20



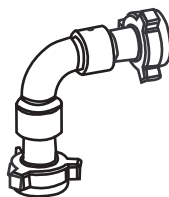
Style 30



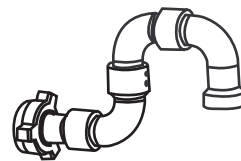
Style 50 F-M



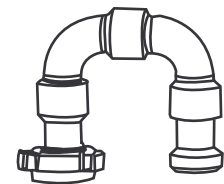
Style 50 F-F



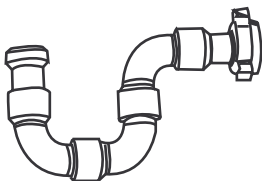
Style 50 M-M



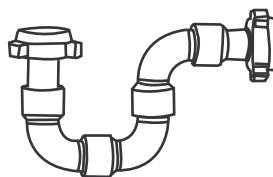
Style 80



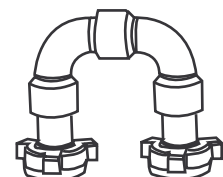
Style 10 F-M



Style 100 F-M



Style 100 M-M



Style 10 M-M



# Union

## Union

High-pressure union, importing international advanced technology, is forged with high-strength alloy steel, strict heat treatment process can ensure that the nipple have uniform metallurgical structure and pressing ability and the material meets ASTM and AISI Standard and the technology indexes conform to API Spec 6A, the product adopts some end connections of pipeline thread, tubing thread, butt-weld and compress-seal. The type mainly consists of: 100#, 200#, 206#, 207#, 211#, 400#, 600#, 602#, 1002#, 1003#, 1502# and 2002#.

Fig 100  
1,000 psi (69 bar) cold working pressure

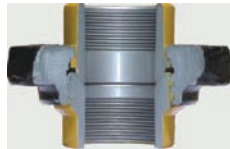


Fig 200  
2,000 psi (138 bar) cold working pressure

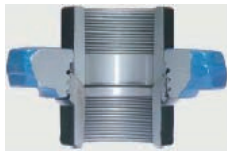


Fig 206  
2,000 psi (138 bar) cold working pressure



Fig 207  
2,000 psi (138 bar) cold working pressure

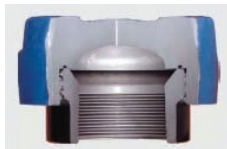


Fig 211  
2,000 psi (138 bar) cold working pressure



Fig 400  
4,000 psi (276 bar) cold working pressure through 4-inch sizes; 2,500 psi (172 bar) cold working pressure, 5-through 12-inch sizes

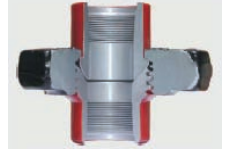


Fig 600  
6,000 psi (414 bar) cold working pressure

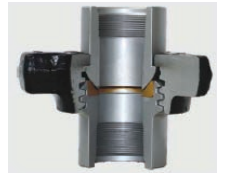


Fig 602  
6,000 psi (414 bar) cold working pressure

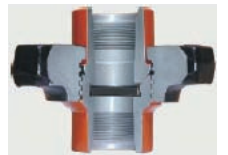


Fig 1002  
10,000 psi (690 bar) cold working pressure

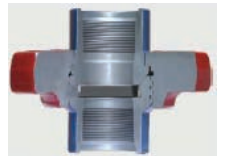


Fig 1003  
10,000 psi (690 bar) cold working pressure



Fig 1502  
15,000 psi (1034 bar) cold working pressure

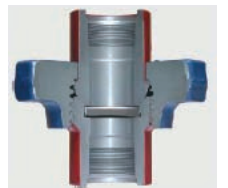
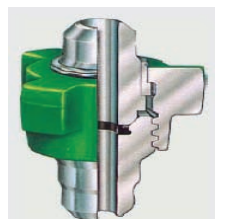


Fig 2002  
20,000 psi (1380 bar) cold working pressure





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