



High Pressure Engineering

Product Summary

High Pressure Engineering



ALTA OIL EQUIPMENT (JIANGSU) CO.,LTD.

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PRODUCT RANGE

Valve Type	Valve Description	Size(Inch)	Pressure	Temperature	Material	Performance	Specification	Certificate	Working Medium
Gate Valves	Expanding Gate Valve	2-1/16" ~ 7-1/16"	2,000 ~ 5,000psi	L, N, P, S, T, U, V,X, Y	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, CE-PED	
	Slab Gate Valve	1-13/16" ~ 7-1/16"	2,000 ~ 20,000psi	K, L, N, P, S, T, U, V,X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, FIRE-SAFE, CE-PED	
	Mud Valve	1-13/16" ~ 5-1/8"	2,000 ~ 10,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	ABS, CE-PED	
	Safety Valve	1-13/16" ~ 7-1/16"	2,000 ~ 20,000psi	K, L, N, P, S, T, U, V,X	DD、EE、FF、HH	PR2	PSL2 ~ PSL4		mud, oil, natural gas
	Hydraulic Slab Gate Valve	1-13/16" ~ 9"	2,000 ~ 20,000psi	K, L, N, P, S, T, U, V,X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		mud, oil, natural gas
Choke Valves	Positive Choke Valve	2-1/16" ~ 7-1/16"	3,000 ~ 20,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, CE-PED	
	Multiple Orifice Choke Valve	3-1/16" ~ 4-1/16"	10,000 ~ 20,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, CE-PED	
	External Sleeve Control Choke Valve	2-1/16" ~ 5-1/8"	3,000 ~ 20,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, CE-PED	
	Adjustable Needle Choke Valve	2-1/16" ~ 7-1/16"	3,000 ~ 20,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, CE-PED	
	Plug & Cage Control Choke Valve	2-1/16" ~ 5-1/8"	3,000 ~ 20,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	PR2, CE-PED	
Ball Valves	Floating Ball Valve	1-13/16" ~ 4-1/16"	2,000 ~ 10,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	CE-PED	
	Trunnion Ball Valve	1-13/16" ~ 7-1/16"	2,000 ~ 10,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	FIRE-SAFE, CE-PED	
Plug Valve	Plug Valve	2-1/16" ~ 4-1/16"	10,000 ~ 15,000psi	K, L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1	PSL1 ~ PSL3		mud, fracture fluid, acidizing fluid etc.
Check Valves	Lift Check Valve	1-13/16" ~ 7-1/16"	2,000 ~ 15,000psi	K, L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	CE-PED, FIRE-SAFE	
	Swing Check Valve	2-1/16" ~ 4-1/16"	5,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	CE-PED, FIRE-SAFE	
Globe Valve	Globe Valve	2-1/16" ~ 4-1/16"	3,000 ~ 10,000psi	L, N, P, S, T, U, V, X	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4	CE-PED	
Wellhead & Christmas Tree	Christmas Tree		Max 20,000psi	K, L, N, P, S, T, U, V, X, Y	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		
	Gas Wells' Christmas Tree		Max 20,000psi	K, L, N, P, S, T, U, V, X, Y	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		
	Monolithic Christmas Tree		Max 20,000psi	LX(-46℃~180℃)	DD-NL/HH-NL	PR1, PR2	PSL2 ~ PSL4		mud, oil, natural gas
	Surface Test Tree	3-1/16" ~ 5-1/8"	3,000 ~ 20,000psi	K, L, N, P, S, T, U, V, X, Y	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL3~PSL4		
	Multi-Lateral Sim Twin Wellhead	Maximum column size: Casing 13-3/8" × Tubing 4-1/2"	Maximum rated pressure: Casing 5,000psi × Tubing 15,000psi	K, L, N, P, S, T, U, V, X, Y	DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		mud, oil, natural gas
Subsea Valves	Subsea Ball Valve	1/2" ~ 48"	Class150 ~ Class2500	-46℃ ~ 150℃			QL1 ~ QL2		
	Subsea Gate Valve	2" ~ 9"	≤15000psi	-46℃ ~ 150℃			PSL1 ~ PSL4		
Manifold	Well Testing Manifold	1-13/16" ~ 7-1/16"	3,000 ~ 20,000psi	K, L, N, P, S, T, U, V, X	DD, EE, FF, HH	PR1, PR2	PSL3~PSL4		mud, oil, natural gas
	Mud Manifold	1-13/16" ~ 7-1/16"	2,000 ~ 15,000psi	LU(-46℃ ~ 121℃)	DD, EE, FF	PR1	PSL1 ~ PSL4		mud, drilling fluid
	Choke Manifold	2-1/16" ~ 7-1/16"	3,000 ~ 20,000psi	A, B, K, P, V, X	EE, FF, HH		PSL3 ~ PSL4		mud, oil, gas
	Kill Manifold	2-1/16" ~ 7-1/16"	3,000 ~ 20,000psi	A, B, K, P, V, X	EE, FF, HH		PSL3 ~ PSL4		mud, oil, gas
	Subsea 3D Manifold	2-1/16" ~ 4-1/16"	2,000 ~ 20,000psi	LU(-46℃ ~ 121℃)					mud, oil, gas
	Special Choke Manifold		20,000psi	LU(-46℃ ~ 121℃)	EE, FF, HH	PR1, PR2	PSL3 ~ PSL4		mud, oil, gas
Actuator & Control System	Hydraulic-Single action		Maximum Operating Control Pressure: 3,000psi	P(-29℃ ~ 82℃)	AA, BB, CC	PR1, PR2	PSL1 ~ PSL3		
	Hydraulic-Compact design		Maximum Operating Control Pressure: 3,000psi	P(-29℃ ~ 82℃)	AA, BB, CC	PR1, PR2	PSL1 ~ PSL3		
	Hydraulic-Double action		Maximum Operating Control Pressure: 3,000psi	P(-29℃ ~ 82℃)	AA, BB, CC	PR1, PR2	PSL1 ~ PSL3		
	Pneumatic-Diaphragm		Maximum Operating Control Pressure: 170psi	P(-29℃ ~ 82℃)	AA, BB, CC	PR1, PR2	PSL1 ~ PSL3		
	Pneumatic-Piston		Maximum Operating Control Pressure: 170psi	P(-29℃ ~ 82℃)	AA, BB, CC	PR1, PR2	PSL1 ~ PSL3		
	Emergency Shut Down System		The Max pressure of main loop pipeline: 3,000psi The Max pressure of pilot pipeline: 145psi						
Separator	Two-Phase Liquid-Gas Separator		Operating Pressure: 15MPa Design Pressure: 15.6MPa	Operating Temperature: -20℃~100℃ Design Temperature: -20℃~120℃					Natural gas, water, oil, with H ₂ S partial pressure < 0.3 kPa (sour service)
	Three-Phase Liquid-Gas Separator		Operating Pressure: 15MPa Design Pressure: 15.6MPa	Operating Temperature: -20℃~100℃ Design Temperature: -20℃~120℃					Natural gas, water, oil, with H ₂ S partial pressure < 0.3 kPa (sour service)
Other	Fracturing Diverter Head	Main bore:4-1/16" ~ 13-5/8" Bypass bore:2-1/16" ~ 3-1/16"	5,000~20,000psi	LU(-46℃~121℃)	DD, EE, FF, HH		PSL1 ~ PSL4		mud, oil, gas, drilling fluid
	Catch Basket		2,000~20,000psi	LU(-46℃~121℃)	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		mud, oil, gas, drilling fluid
	Cyclone Desander		2,000~20,000psi	LU(-46℃~121℃)	AA, BB, CC, DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		mud, oil, gas, drilling fluid
Tee/Cross	Tee/Cross	2-1/16" ~ 5-1/8"	2,000~20,000psi	LU(-46℃~121℃)	DD, EE, FF, HH	PR1, PR2	PSL1 ~ PSL4		mud, oil, gas
Tools	VR Plug		Max 20,000psi	K, L, N, P, S, T, U	DD, FF, HH				
	VR Plug Lubricator								
	Back Pressure Valve	Thread Diameter Size: 2-1/2" ~ 6-5/16"		K, L, N, P, S, T, U, V, X	DD, FF, HH				
	BPV Lubricator								
	Wear Bushing	7-1/16" , 9" , 11" , 13-5/8" , 16-3/4" , 20"							
	Combination Tool	7-1/16" , 9" , 11"、13-5/8" , 16-3/4" , 20"	2,000 ~ 15,000psi						



GATE VALVES



Mud Valve

Size(Inch)	1-13/16" ~ 5-1/8"
Pressure	2,000 ~ 10,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	ABS, CE-PED



Expanding Gate Valve

Size(Inch)	2-1/16" ~ 7-1/16"
Pressure	2,000 ~ 5,000psi
Temperature	L, N, P, S, T, U, V, X, Y
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, CE-PED

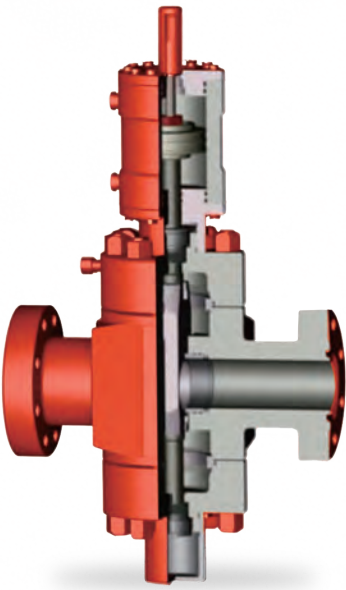
Safety Valve

Size(Inch)	1-13/16" ~ 7-1/16"
Pressure	2,000 ~ 20,000psi
Temperature	K, L, N, P, S, T, U, V,X
Material	DD, EE, FF, HH
Performance	PR2
Specification	PSL2 ~ PSL4
Working Medium	Mud, Oil, Natural Gas



Slab Gate Valve

Size(Inch)	1-13/16" ~ 7-1/16"
Pressure	2,000 ~ 20,000psi
Temperature	K, L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, FIRE-SAFE, CE-PED



Hydraulic Slab Gate Valve

Size(Inch)	1-13/16" ~ 9"
Pressure	2,000 ~ 20,000psi
Temperature	K, L, N, P, S, T, U, V,X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Working Medium	Mud, Oil, Natural Gas



CHOKE VALVES



Adjustable Needle Choke Valve

Size(Inch)	2-1/16" ~ 7-1/16"
Pressure	3,000 ~ 20,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, CE-PED

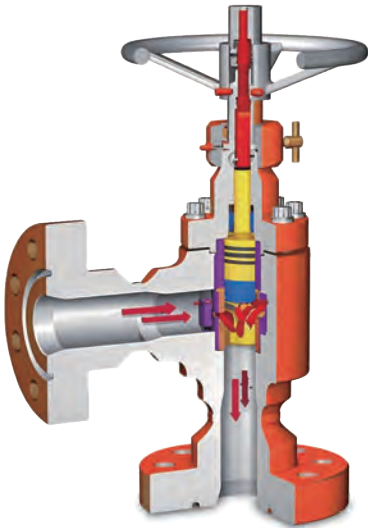


Positive Choke Valve

Size(Inch)	2-1/16" ~ 7-1/16"
Pressure	3,000 ~ 20,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, CE-PED

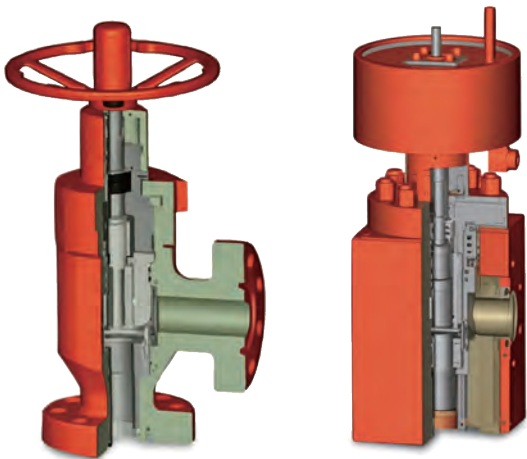
External Sleeve Control Choke Valve

Size(Inch)	2-1/16" ~ 5-1/8"
Pressure	3,000 ~ 20,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, CE-PED



Multiple Orifice Choke Valve

Size(Inch)	3-1/16" ~ 4-1/16"
Pressure	10,000 ~ 20,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, CE-PED

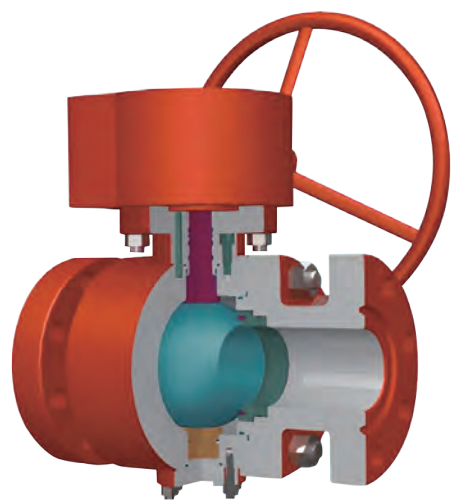


Plug & Cage Control Choke Valve

Size(Inch)	2-1/16" ~ 5-1/8"
Pressure	3,000 ~ 20,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	PR2, CE-PED

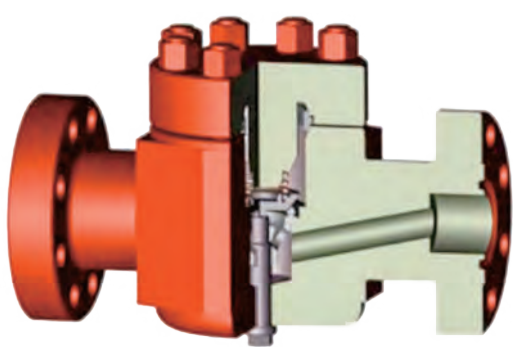
BALL & PLUG VALVES

CHECK & GLOBE VALVES



Floating Ball Valve

Size(Inch)	1-13/16" ~ 4-1/16"
Pressure	2,000 ~ 10,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	CE-PED



Lift Check Valve

Size(Inch)	1-13/16" ~ 7-1/16"
Pressure	2,000 ~ 15,000psi
Temperature	K, L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	CE-PED, FIRE-SAFE

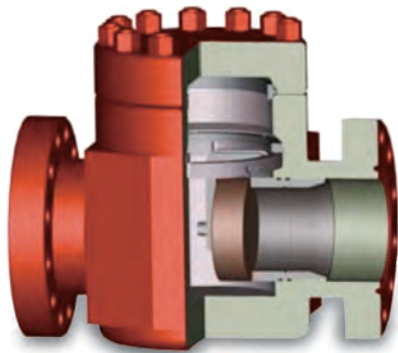
Trunnion Ball Valve

Size(Inch)	1-13/16" ~ 7-1/16"
Pressure	2,000 ~ 10,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	FIRE-SAFE, CE-PED



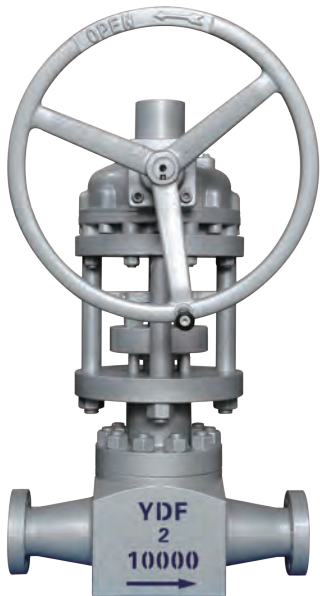
Swing Check Valve

Size(Inch)	2-1/16" ~ 4-1/16"
Pressure	5,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	CE-PED, FIRE-SAFE



Plug Valve

Size(Inch)	2-1/16" ~ 4-1/16"
Pressure	10,000 ~ 15,000psi
Temperature	K, L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1
Specification	PSL1 ~ PSL3
Working Medium	Mud, Fracture Fluid, Acidizing Fluid etc.

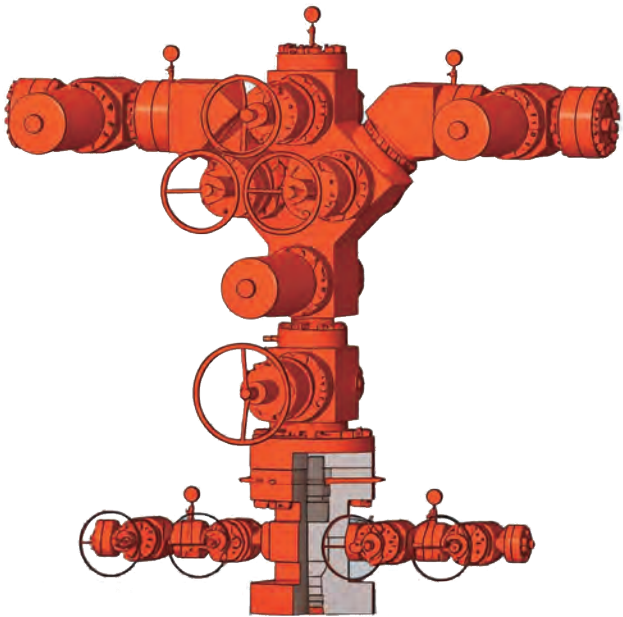


Globe Valve

Size(Inch)	2-1/16" ~ 4-1/16"
Pressure	3,000 ~ 10,000psi
Temperature	L, N, P, S, T, U, V, X
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Certificate	CE-PED

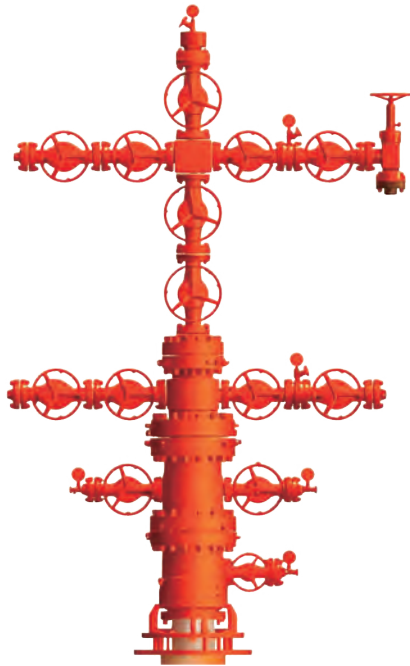


WELLHEAD & CHRISTMAS TREE



Monolithic Christmas Tree

Pressure	Max 20,000psi
Temperature	LX(-46 C ~180 C)
Material	DD-NL/HH-NL
Performance	PR1, PR2
Specification	PSL2 ~ PSL4
Working Medium	Mud, Oil, Natural Gas



Christmas Tree

Pressure	Max 20,000psi
Temperature	K, L, N, P, S, T, U, V, X, Y
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4

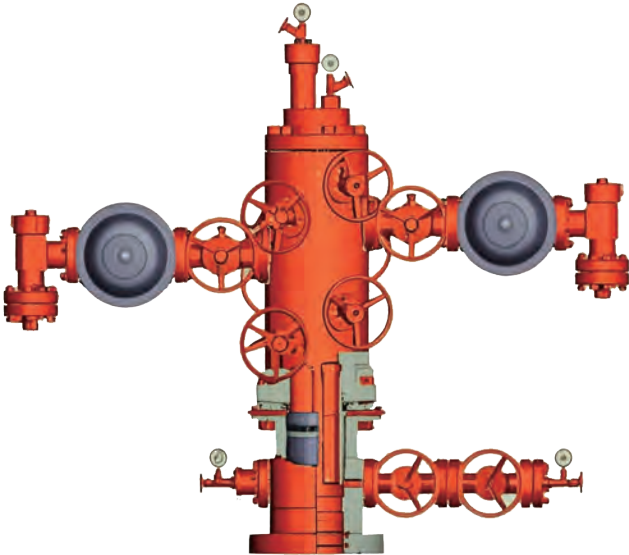
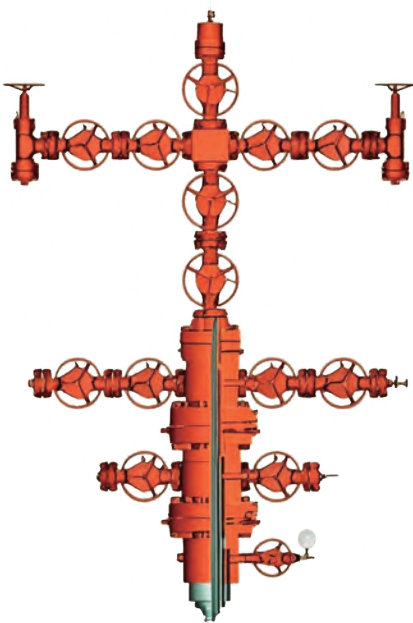
Surface Test Tree

Size(Inch)	3-1/16" ~ 5-1/8"
Pressure	3,000 ~ 20,000psi
Temperature	K, L, N, P, S, T, U, V, X, Y
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL3 ~ PSL4



Gas Wells' Christmas Tree

Pressure	Max 20,000psi
Temperature	K, L, N, P, S, T, U, V, X, Y
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4



Multi-Lateral Sim Twin Wellhead

Size(Inch)	Maximum column size: Casing 13-3/8" × Tubing 4-1/2"
Pressure	Maximum rated pressure: Casing 5,000psi × Tubing 15,000psi
Temperature	K, L, N, P, S, T, U, V, X, Y
Material	DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1 ~ PSL4
Working Medium	Mud, Oil, Natural Gas

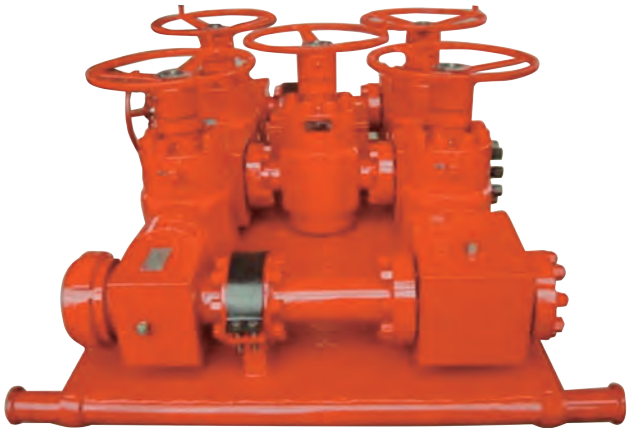


SUBSEA VALVES



Subsea Ball Valve

Size(Inch)	1/2" ~ 48"
Pressure	Class150 ~ Class2500
Temperature	-46 C ~ 150 C
Water Depth	≤3,000m
QL Level	QL1~ QL2
Type	Side-entry type, Top-entry type
Actuator	Gearbox, Hydraulic Actuator etc

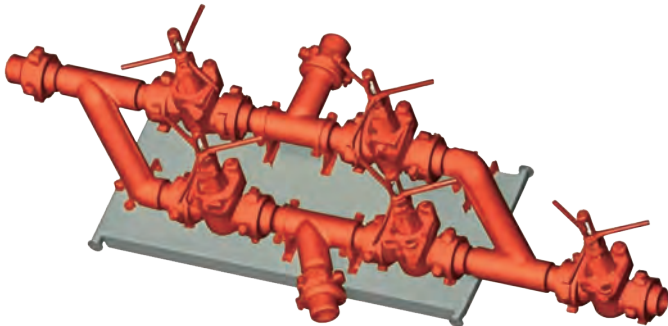


Well Testing Manifold

Size(Inch)	1-13/16" ~ 7-1/16"
Pressure	3,000 ~ 20,000psi
Temperature	K, L, N, P, S, T, U, V, X
Material	DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL3 ~ PSL4
Working Medium	Mud, Oil, Natural Gas

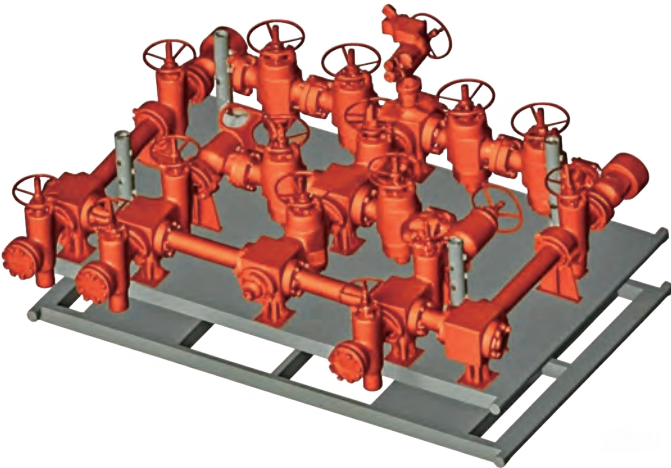
Mud Manifold

Size(Inch)	1-13/16" ~ 7-1/16"
Pressure	2,000 ~ 15,000psi
Temperature	LU(-46 C ~ 121 C)
Material	DD, EE, FF
Performance	PR1
Specification	PSL1 ~ PSL4
Working Medium	Mud, Drilling Fluid



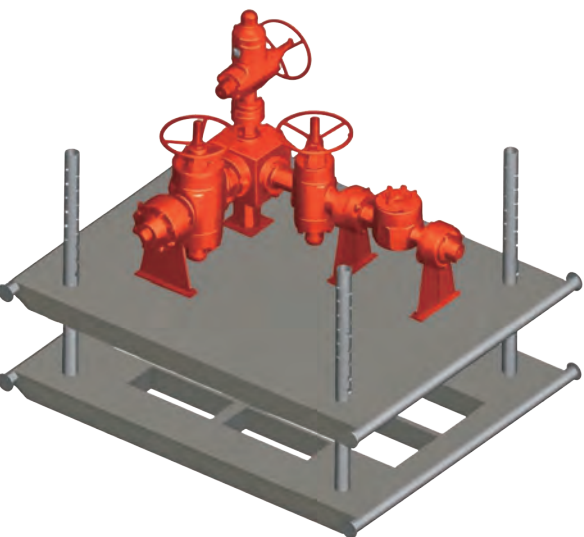
Subsea Gate Valve

Size(Inch)	2" ~ 9"
Pressure	≤15000psi
Temperature	-46 C ~ 150 C
Water Depth	≤3,000m
Specification	PSL1 ~ PSL4
Type	Slab Gate
Actuator	Linear Type Actuator, Hydraulic Actuator



Choke Manifold

Size(Inch)	2-13/16" ~ 7-1/16"
Pressure	3,000 ~ 20,000psi
Temperature	A, B, K, P, V, X
Material	EE, FF, HH
Specification	PSL3 ~ PSL4
Working Medium	Mud, Oil, Gas



Kill Manifold

Size(Inch)	2-1/16" ~ 7-1/16"
Pressure	3,000 ~ 20,000psi
Temperature	A, B, K, P, V, X
Material	EE, FF, HH
Specification	PSL3 ~ PSL4
Working Medium	Mud, Oil, Gas

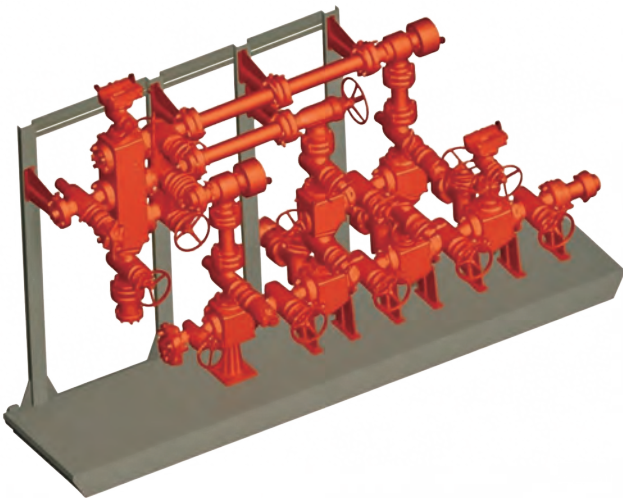


Hydraulic-Single action

Pressure	Maximum Operating Control Pressure: 3,000psi
Temperature	P(-29°C ~ 82°C)
Material	AA, BB, CC
Performance	PR1, PR2
Specification	PSL1 ~ PSL3

Subsea 3D Manifold

Size(Inch)	2-1/16" ~ 4-1/16"
Pressure	2,000 ~ 20,000psi
Temperature	LU(-46°C ~ 121°C)
Working Medium	Mud, Oil, Gas



Hydraulic-Compact design

Pressure	Maximum Operating Control Pressure: 3,000psi
Temperature	P(-29°C ~ 82°C)
Material	AA, BB, CC
Performance	PR1, PR2
Specification	PSL1 ~ PSL3



Hydraulic-Double action

Pressure	Maximum Operating Control Pressure: 3,000psi
Temperature	P(-29°C ~ 82°C)
Material	AA, BB, CC
Performance	PR1, PR2
Specification	PSL1 ~ PSL3



Special Choke Manifold

Pressure	20,000psi
Temperature	LU(-46°C ~ 121°C)
Material	EE, FF, HH
Performance	PR1, PR2
Specification	PSL3 ~ PSL4
Working Medium	Mud, Oil, Gas



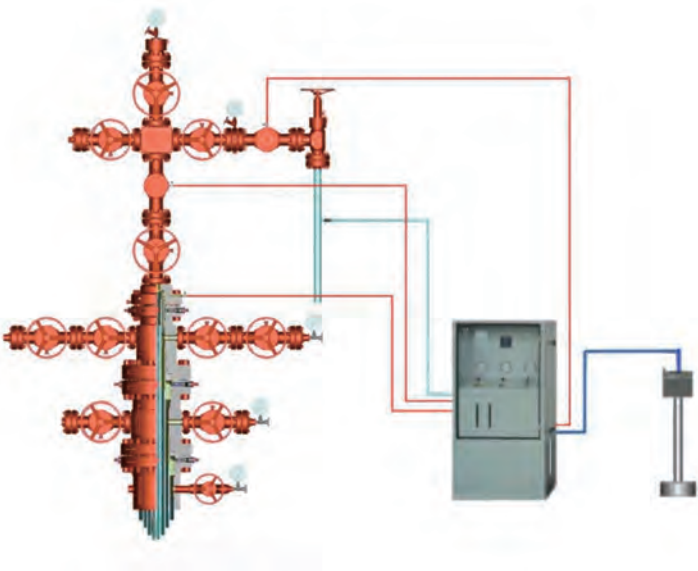
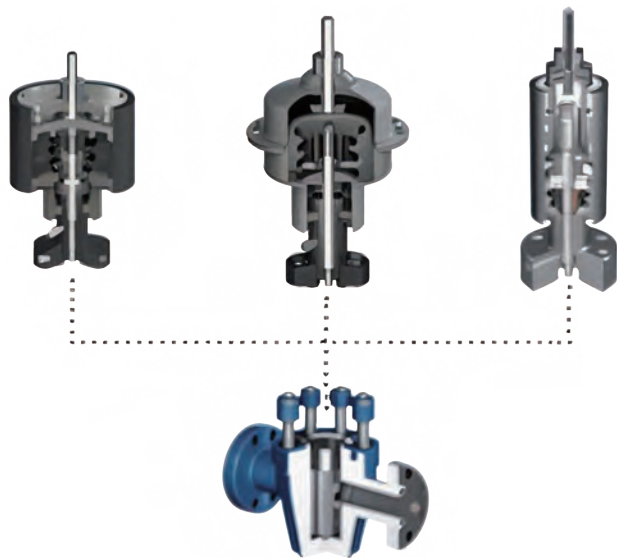


Pneumatic-Diaphragm

Pressure	Maximum Operating Control Pressure: 170psi
Temperature	P(-29°C ~ 82°C)
Material	AA, BB, CC
Performance	PR1, PR2
Specification	PSL1 ~ PSL3

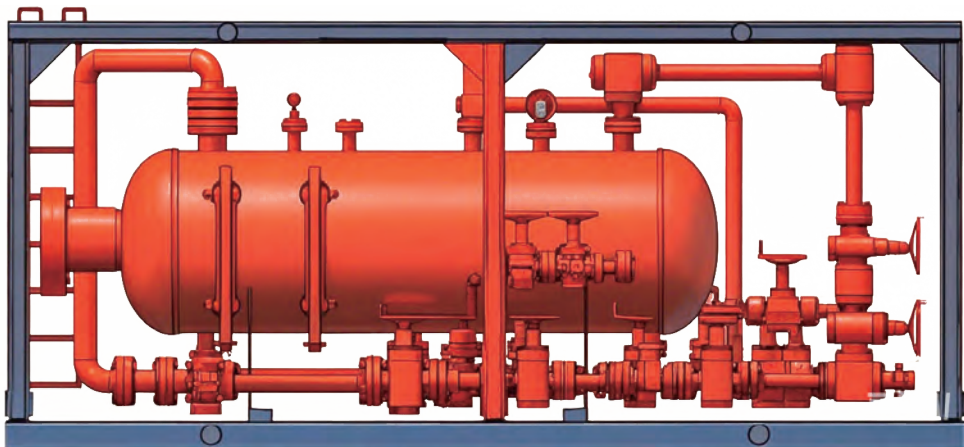
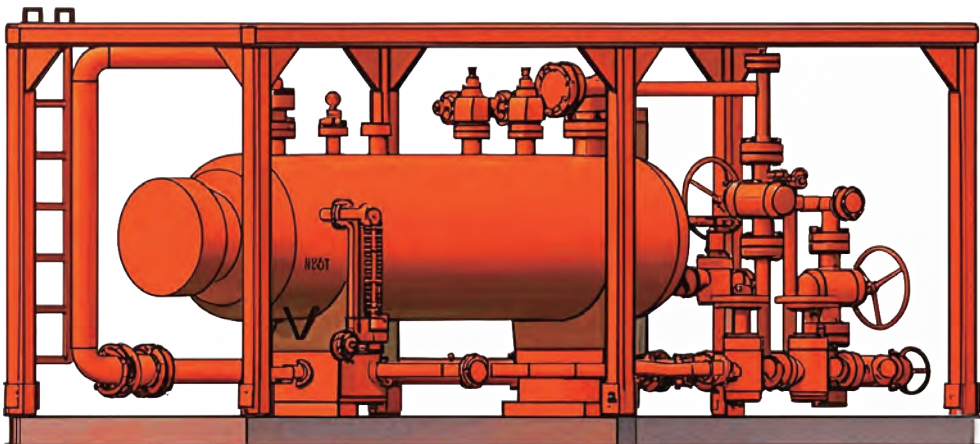
Pneumatic-Piston

Pressure	Maximum Operating Control Pressure: 170psi
Temperature	P(-29°C ~ 82°C)
Material	AA, BB, CC
Performance	PR1, PR2
Specification	PSL1 ~ PSL3



Emergency Shut Down System

Pressure	The Max pressure of main loop pipeline: 3,000psi The Max pressure of pilot pipeline: 145psi
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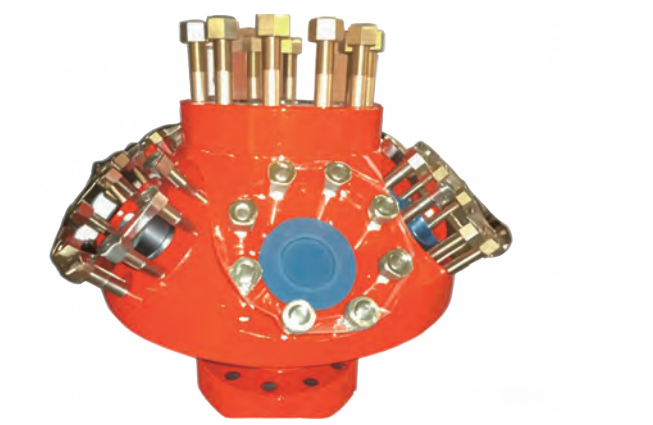


Two-Phase Liquid-Gas Separator

Operating Pressure	15MPa
Design Pressure	15.6MPa
Operating Temperature	-20 °C ~100 °C
Design Temperature	-20 °C ~120 °C
Gas Processing Capacity	250x10 ⁴ Nm ³ /d
Liquid Processing Capacity	1000m ³ /d
Working Medium	Natural gas, Water, Oil, with H ₂ S partial pressure < 0.3 kPa (sour service)

Three-Phase Liquid-Gas Separator

Operating Pressure	15MPa
Design Pressure	15.6MPa
Operating Temperature	-20 °C ~100 °C
Design Temperature	-20 °C ~120 °C
Gas Processing Capacity	250x10 ⁴ Nm ³ /d
Liquid Processing Capacity	1000m ³ /d
Working Medium	Natural gas, Water, Oil, with H ₂ S partial pressure < 0.3 kPa (sour service)

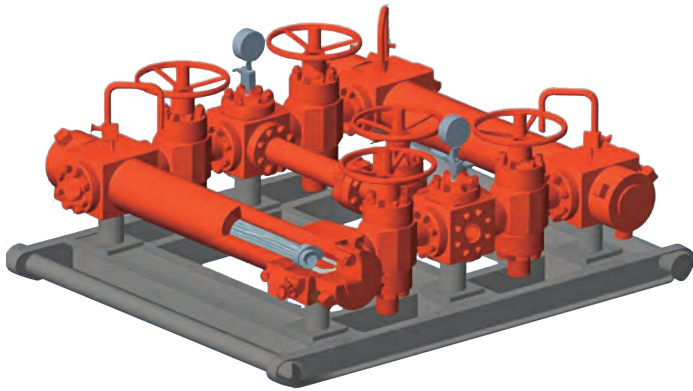


Fracturing Diverter Head

Size(Inch)	Main bore:4-1/16" ~ 13-5/8" Bypass bore:2-1/16" ~ 3-1/16"
Pressure	5,000 ~ 20,000psi
Temperature	LU(-46 C~121 C)
Material	DD, EE, FF, HH
Specification	PSL1~PSL4
Working Medium	Mud, Oil, Gas, Drilling Fluid

Catch Basket

Pressure	2,000 ~ 20,000psi
Temperature	LU(-46 C~121 C)
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1~PSL4
Working Medium	Mud, Oil, Gas, Drilling Fluid



Cyclone Desander

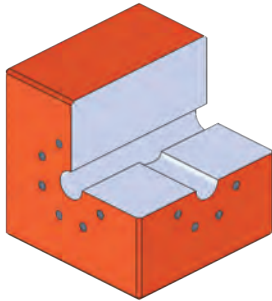
Pressure	2,000 ~ 20,000psi
Temperature	LU(-46 C~121 C)
Material	AA, BB, CC, DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1~PSL4
Working Medium	Mud, Oil, Gas, Drilling Fluid



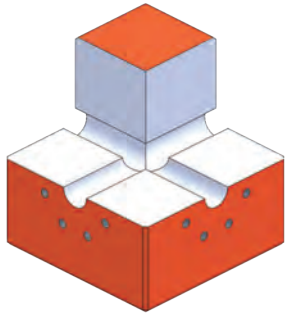
Flanged Tee



Flanged Cross



Stud-Type Tee



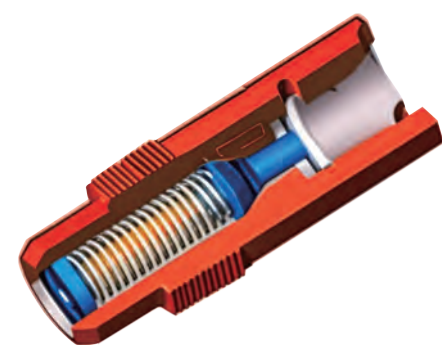
Stud-Type Cross

Tee

Size(Inch)	2-1/16" ~ 5-1/8"
Pressure	2,000 ~ 20,000psi
Temperature	LU(-46 C~121 C)
Material	DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1~PSL4
Working Medium	Mud, Oil, Gas

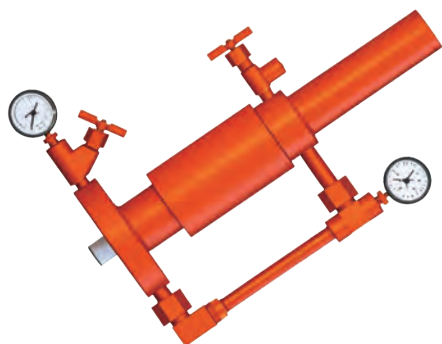
Cross

Size(Inch)	2-1/16" ~ 5-1/8"
Pressure	2,000 ~ 20,000psi
Temperature	LU(-46 C~121 C)
Material	DD, EE, FF, HH
Performance	PR1, PR2
Specification	PSL1~PSL4
Working Medium	Mud, Oil, Gas



VR Plug

Pressure	Max 20,000psi
Temperature	K, L, N, P, S, T, U
Material	DD, FF, HH
Performance	PR1, PR2



VR Plug Lubricator



Back Pressure Valve

Size(Inch)	Thread Diameter Size: 2-1/2" ~ 6-5/16"
Temperature	K, L, N, P, S, T, U, V, X
Material	DD, FF, HH



Back Pressure Valve Lubricator



Wear Bushing

Size(Inch)	7-1/16" , 9" , 11" , 13-5/8" , 16-3/4" , 20"
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Combination Tool

Size(Inch)	7-1/16" , 9" , 11" , 13-5/8" , 16-3/4" , 20"
Pressure	2,000 ~ 15,000psi

PRODUCT WARRANTY

Seller will replace without charge or refund the purchase price of products provided by seller which prove to be defective in material or workmanship, provided in each case that the product is proper installed and is used in the service for which Seller recommends it and that written claim, specifying the alleged defect, is presented to the seller within 18 months from the date of shipment or 12 months after installation, whichever occurs first. Seller shall in no event bear any labor, equipment, engineering or other costs incurred in connection with repair of replacement.

The warranty stated in this paragraph is in lieu of all other warranties, either expressed or implied. With respect to warranties, this paragraph states Buyer's exclusive remedy and seller's exclusive liability.