



**ANEKO**  
Industrial Company



# Product Catalog

Oil and Gas  
Wellhead Equipment

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# COMPANY OVERVIEW

ANEKO Industrial Company LLC" is a specialty manufacturer of wellhead equipment for drilling, maintenance and operation of oil and gas wells.

## Key Features

- Location: Russia, Chelyabinsk
- Founded in 2014
- Over 150 employees
- Production site over 4,000 sq.m.
- Imported CNC metalworking machinery
- Proprietary engineering and design department
- Advanced quality assurance procedures for each production stage
- Shipments all over Russia and CIS countries

## Key Product Lines

- X-mas trees and injection trees
- Casing string piping
- Shutoff and control valves
- Blowout prevention equipment
- Hydraulic fracture treatment and coil tubing wellhead equipment
- Design and manufacture of custom equipment
- Import substitution

## Our Values

- Finding innovative solutions for complex technical problems
- Customer focus
- Teamwork
- Commercializing new product types as soon as possible

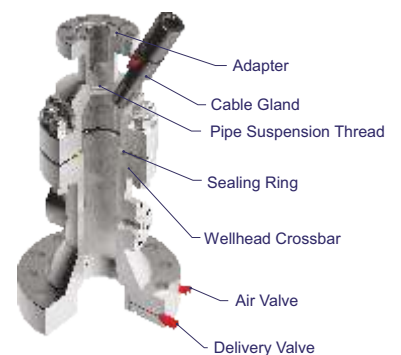
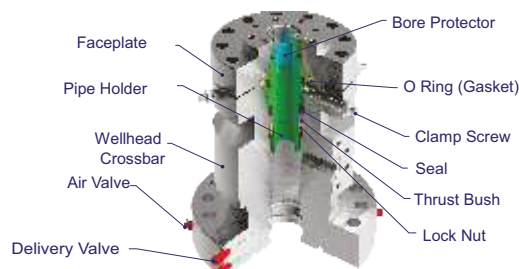
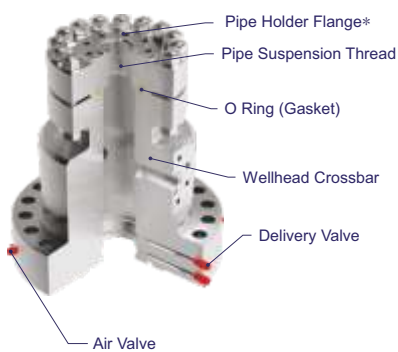
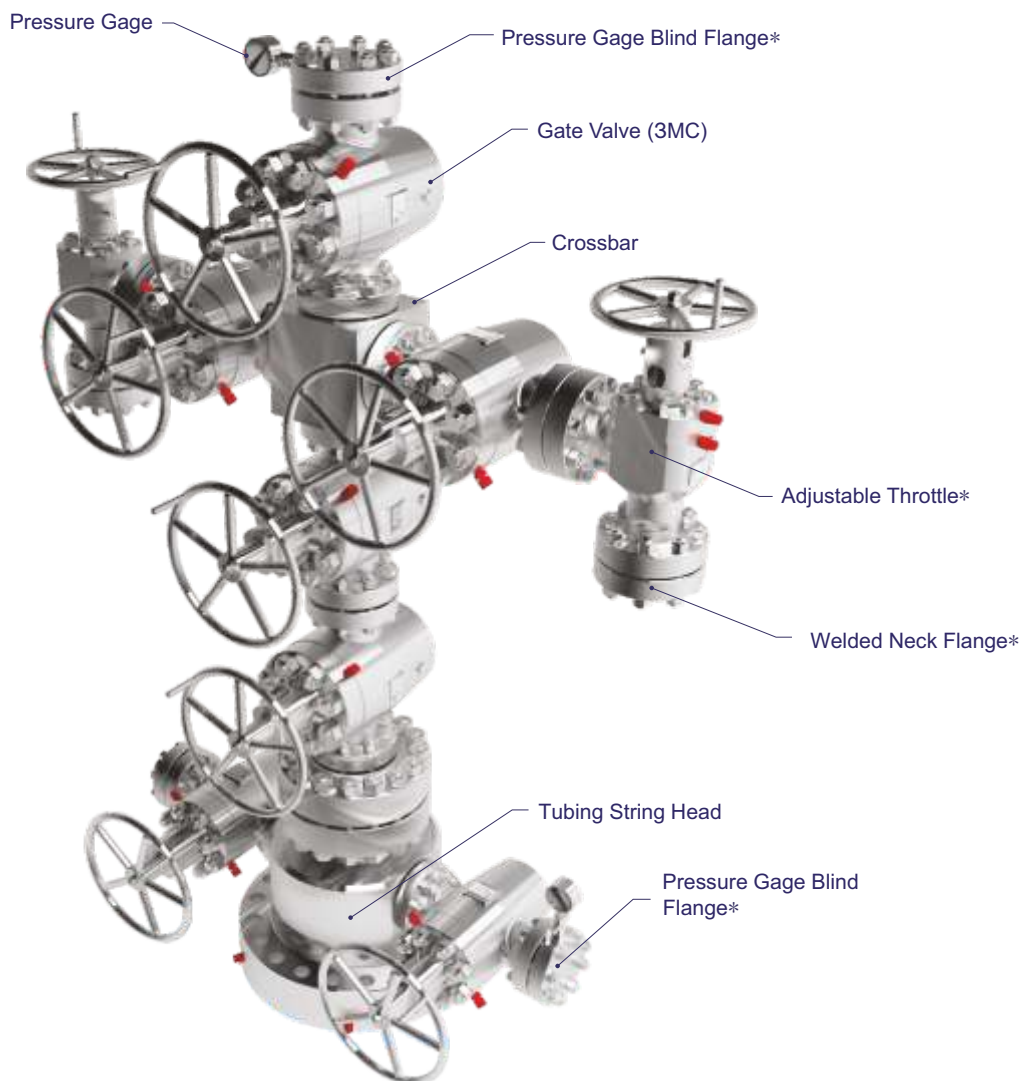
## Our Guarantees

- Reliability and high quality of equipment supplies
- Timely and proper discharge of our contractual obligations
- Customized terms and conditions of cooperation

## Our Clients



# X-mas Tree (АФ, АФК, АФКЭ) AND INJECTION TREE (АHK, АHKЭ)



\* Replaceable with other product types

## ! Use:

X-mas trees АФ (АФК, АФКЭ) control fluid flows in well pipelines and annular spaces for piping of casing strings and suspension of tubing strings, sealing natural flow (gas lift) wells, performing process operations, and shutting fluid flows.

Injection trees (АHK) and (АHKЭ) control fluid flows in injection lines and annular spaces for sealing injection wells and isolating string spaces.

X-mas trees (АФ) have threaded pipe holders for suspension of tubing pipes to allow pressurization of tubing strings, and to prevent well blowouts. X-mas trees (АФК, АHK, АФКЭ, АHKЭ) have tubing head spools or suspension flanges in wellhead crossbars for suspension of tubing pipes. X-mas trees АФКЭ and АHKЭ have cable glands for connecting electric submersible pumps for improving well performance, or for lowering heating cables off.

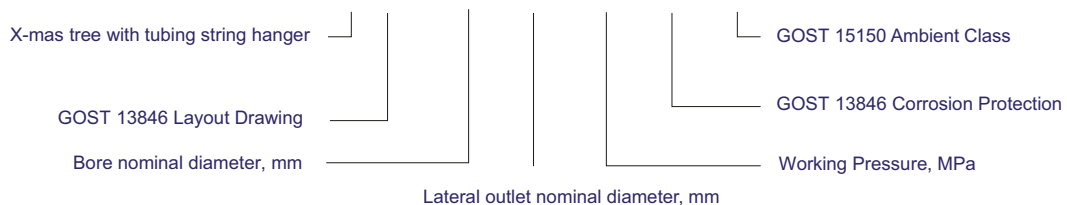
## ▶ Key Specifications:

- Motherbore Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16);
- Lateral Outlet Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16);
- Tubing String Head Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16); 80 (3 1/16); 100 (4 1/16);
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

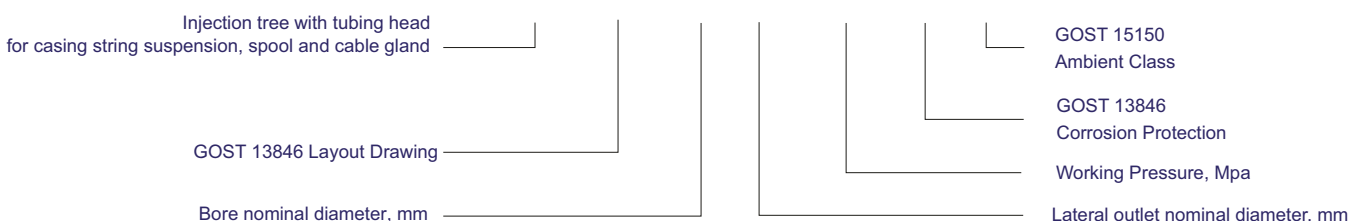
X-mas trees may be manufactured under generic GOST 13846 layout drawings, or custom -made.

## \* Sample Designation:

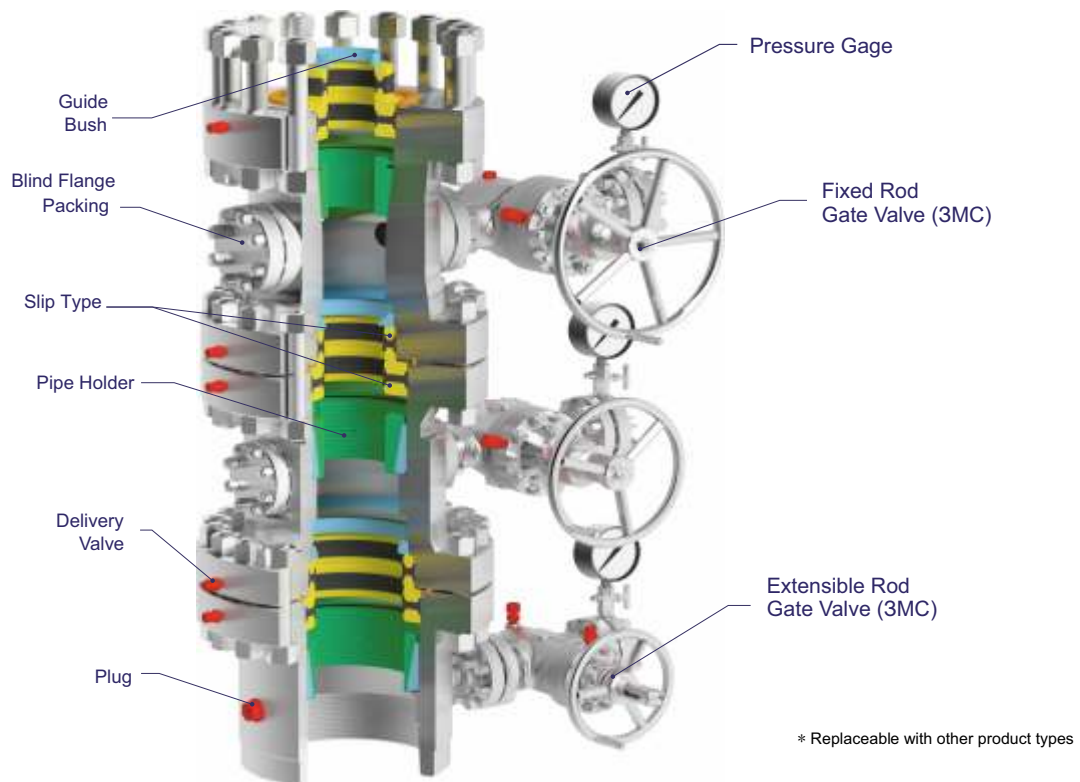
### АФ 6 - 80/65x70 К1 ХЛ



### АHKЭ 5 - 80/65x105 К1 ХЛ



# SLIP-TYPE CASING Head (OKK)



## ! Use:

Slip-type casing heads fix casing strings to slip-type pipe holder for pressurization of annular spaces using top and bottom packing (devices for isolating string spaces and insulating production string interiors from well fluids).

## ▶ Key Specifications:

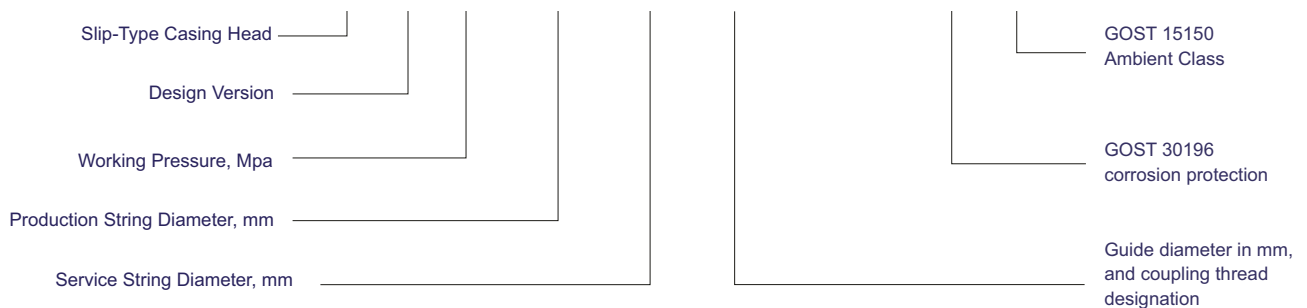
- Well fluids include oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water, inhibitor muds, cement and clay muds;
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

Casing heads may be manufactured under generic GOST 30196 layout drawings, or custom-made.

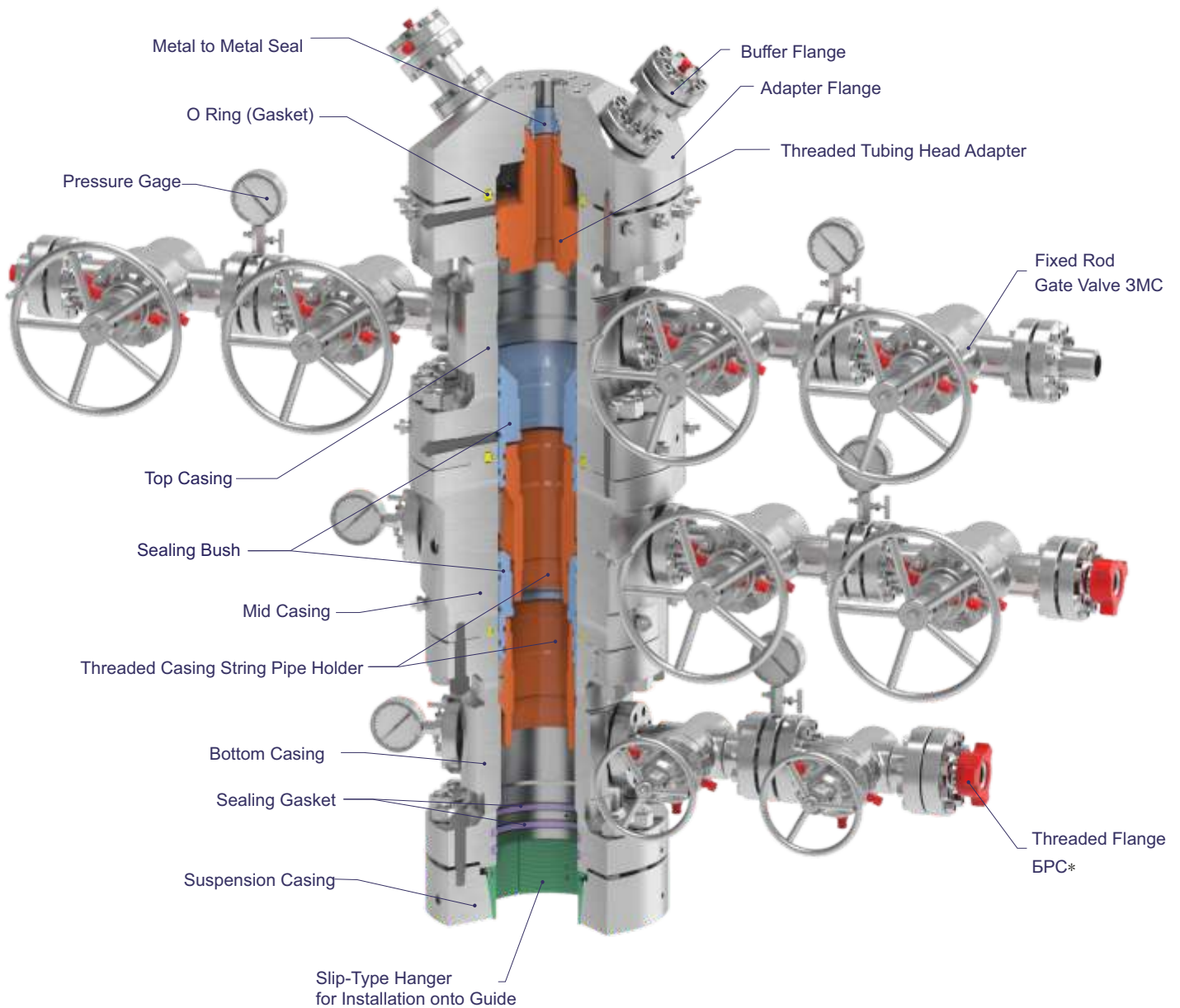
Parameter and Dimension Names		Values			
		Casing Head Designation			
		OKK 1	OKK 2	OKK 3	OKK 4
GOST 632 and GOST 633 string pipe nominal diameter, mm	D	102...219			
	D1	146...273			
	D2	-	194...426		
	D3	-	-	299...508	
	D4	-	-	-	324...630
Head Layout		Single-train, single-bore	Double-train, single-bore	Triple-train, single-bore	Four-train, single-bore
Max Working Pressure, Mpa		14, 21, 35, 70, 105			
Casing Head Type		Slip-Type			
Pipeline Connection Type		GOST 28919 flange, GOST 632 thread, GOST 633, GOST 34057, or GOST 5264 welding			
Guide Connection Method		GOST 632 thread, GOST 5264 or API 6A welding			
Locking Device Type		3MC type straight-flow oil-filled slide gate valve ЗД or ЗДШ type, disc gate valve КШ type ball valve			
Locking Device Control System		All-Hydraulic			

### \* Legend Example:

OKK 3-70-146x245x324 OTTM K1 ХЛ



# Monobloc Wellhead Equipment (МБУ)



\*Replaceable with other product types

## ! Use:

Monobloc wellhead equipment (МБУ) is designed for sealing wellheads, suspending production and tubing strings, pressurizing annular spaces between them and monitoring pressure inside them, monitoring well operating conditions, capping and guiding extracted products into manifolds, and for performing various process operations.

Unlike conventional casing heads, monobloc wellhead equipment allows for simultaneously installing a preventor unit inside blowout prevention equipment (BPE) for well development purposes.

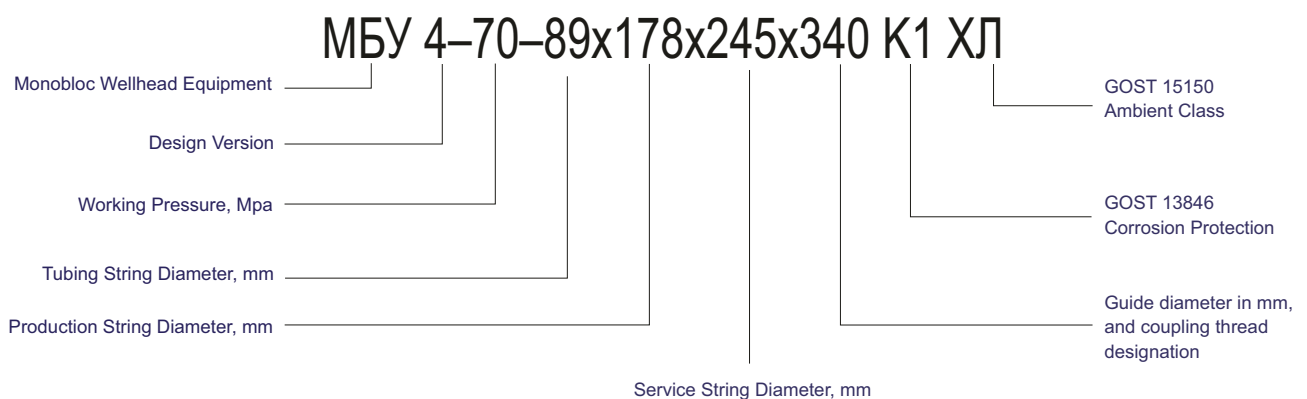
Slip-type heads in bottom suspension casings are fixed to surface casing strings and support the bottom, mid and top head casings. The top head casing supports the BPE (preventor) system.

This design of monobloc wellhead equipment (МБУ) allows for installing two/three casing strings (schedules one, two and three), and one tubing string. This reduces well drilling duration for each string by several times given that there is no need to remove BPE after well plugging (cementing).

## ▶ Key Specifications:

- Motherbore Nominal Diameter, mm (in): 350 (13 5/8), 425 (16 3/4);
- Lateral Outlet Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/8), 100 (4 1/16);
- Working Pressure, MPa (psi): 21 (3000), 35 (5000), 70 (10000), 105 (15000)
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water, inhibitor muds, cement and clay muds
- GOST 15150 Ambient Class (U)KhL
- GOST 15150 Environmental Class I
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:



# HYDRAULIC FRACTURE TREATMENT EQUIPMENT (АГРП)



\* Replaceable with other product types

## ! Use:

Frac equipment is designed for pressurizing well heads and annular spaces, suspending tubing strings and packer assemblies as well as for ensuring the fluid or mixture piping process during hydraulic fracture treatment operations.

ГРП frac equipment is designed and manufactured according to custom specifications.

## + Benefits:

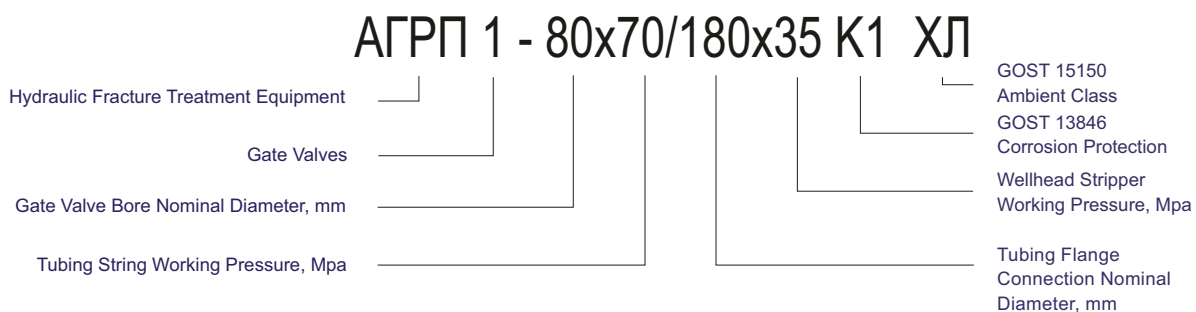
- Compactness, simple design, and high reliability.
- Guaranteed run life per operation equals 1200 tons of proppant.

## ▶ Key Specifications:

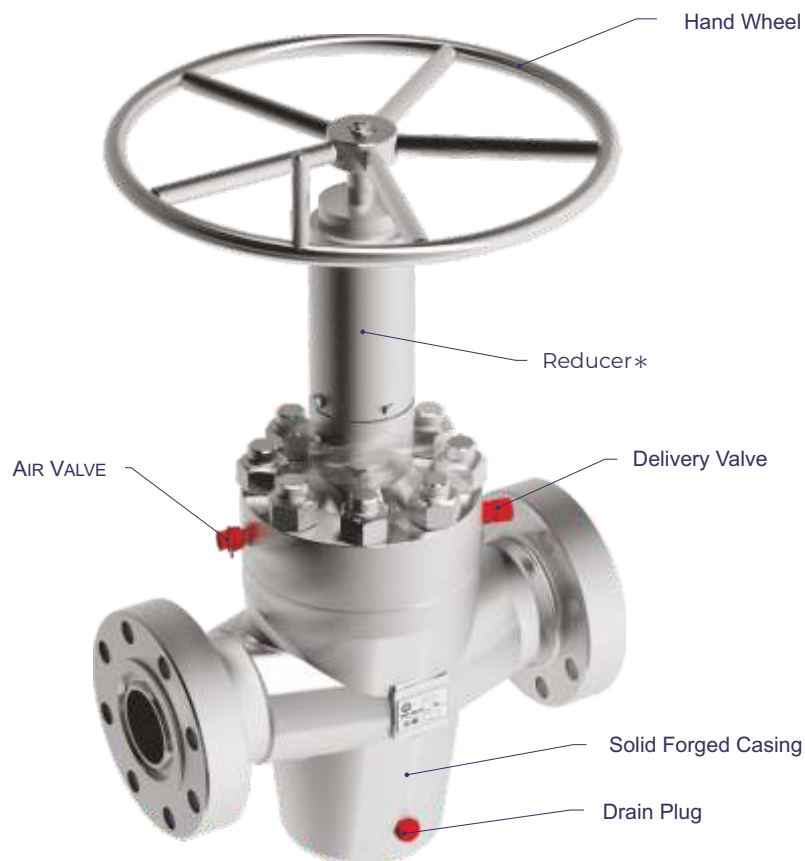
- Fluids: water, oil, petroleum products, alkalis, inhibitor acid solutions, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

Parameter Name	Locking Device Schedule									
	3MC ГРП 65x70	3MC ГРП 80x70	3MC ГРП 100x70	3MC ГРП 130x70	3MC ГРП 180x70	3MC ГРП 65x105	3MC ГРП 80x105	3MC ГРП 100x105	3MC ГРП 130x105	3MC ГРП 180x105
Max Working Pressure, MPa	70					105				
Nominal Diameter, mm	65	80	100	130	180	65	80	100	130	180
GOST 633-80 Pipeline Suspension Thread	НКТ 73 НКТ В 73 HKM 73	НКТ 89 НКТ В 89 HKM 89	НКТ 114 НКТ В 114 HKM 114	НКТ 127 НКТ В 127 HKM 127	НКТ 140 НКТ В 140 HKM 140	НКТ 73 НКТ В 73 HKM 73	НКТ 89 НКТ В 89 HKM89	НКТ 114 НКТ В 114 HKM 114	НКТ 127 НКТ В 127 HKM 127	НКТ140 НКТ В 140 HKM 140
Top Flange Connection Type	GOST 633 thread, GOST 28919 flange									
Bottom Flange Connection Dimensions	180x21; 180x35; 230x21; 230x35			230x21; 230x35		180x21; 180x35; 230x21; 230x35			230x21; 230x35	

## \* Legend Example:



# ГРП SLIDE GATE VALVE



## ! Use:

\* Customer-approved reducer installation

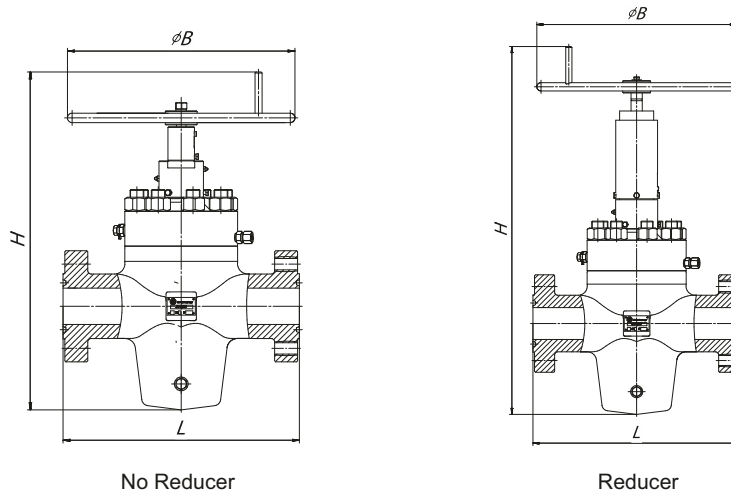
3MC ГРП slide gate valves are designed for use in wellhead equipment during hydraulic fracture treatment operations. These gate valves feature innovative reinforcement technologies for casings and slide to seat locking devices to increase service lives of isolating devices in the course of ГРП operations.

## + Benefits:

- Guaranteed run life per operation equals 1200 tons of proppant
- Gate valve design minimizes proppant penetration into the casing cavity during ГРП operations
- Solid forged casings of gate valves ensure high reliability and usability
- Gate valves have slide position indicators to rule flushing of locking devices with proppant
- Double-stage reducers minimize hand wheel force when opening gate valves.

## ▶ Key Specifications:

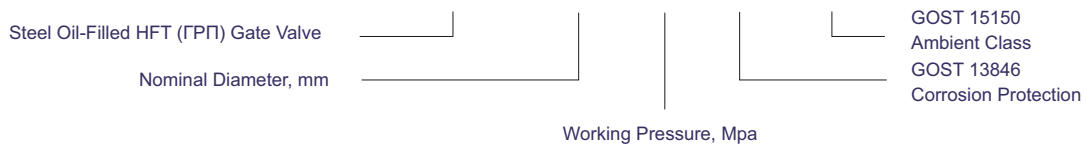
- Fluids: water, oil, petroleum products, alkalis, inhibitor acid solutions, proppant, cement and clay muds
- 3MC 80x105, 100x70 and 100x105 gate valves may have double-stage reducers with the following reduction factors: 4:1 for stage 1, and 1:1 for stage 2
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- GOST 9544 Gate Leakage Class A
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.



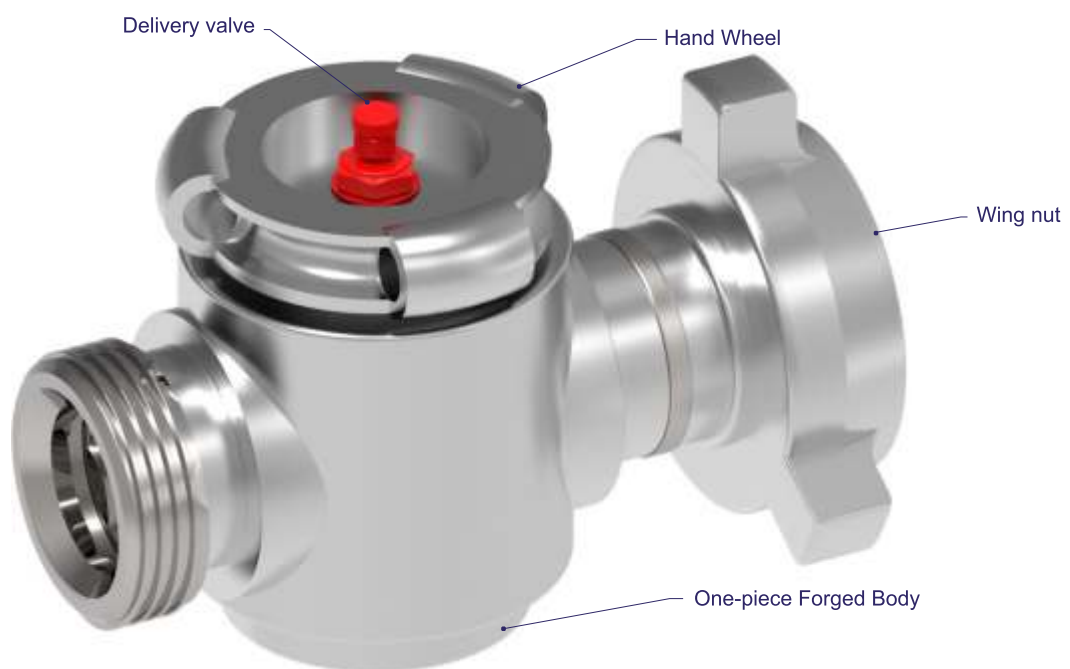
Legend	Nominal Diameter, mm (inch)	Working Pressure, MPa (psi)	Max Overall Dimensions, mm		
			H	L	B
3MC ГРП-65x70	65 (2 9/16)	70 (10000)	775	565	500
3MC ГРП-65x105		105 (15000)	750	533	
3MC ГРП-80x70	80 (3 1/8)	70 (10000)	830	620	500
3MC ГРП-80x105		105 (15000)	900	598	
3MC ГРП-80x105 with reducer		105 (15000)	1150	598	
3MC ГРП-100x70	100 (4 1/16)	70 (10000)	950	670	645
3MC ГРП-100x70 with reducer		70 (10000)	1200	670	
3MC ГРП-100x105		105 (15000)	960	737	
3MC ГРП-100x105 with reducer	105 (15000)	1210	737	645	
3MC ГРП-130x70 with reducer	130 (5 1/8)	70 (10000)	1095	737	560
3MC ГРП-130x105 with reducer		105 (15000)	1240	737	
3MC ГРП-180x70 with reducer	180 (7 1/15)	70 (10000)	1120	505	560
3MC ГРП-180x105 with reducer		105 (15000)	1370	505	

## \* Legend Example:

**3MC ГРП 80x70 K1 ХЛ**



# HIGH-PRESSURE PLUG VALVE



## ! Use:

The high-pressure plug valve is designed to shut off channels of wellhead fittings, manifold systems, flow, oil, and injection wells operated in moderate and cold macroclimatic regions according to GOST 16350.

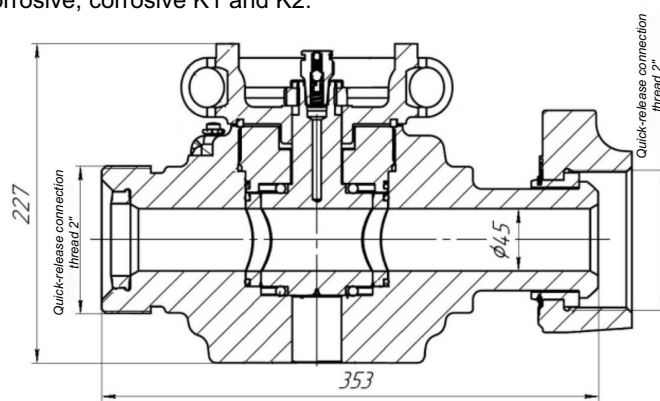
The valve is opened/closed by turning the plug by 90° using the hand wheel. The hand wheel is fixed in the extreme positions with a spring. If necessary, use a lever no longer than 500 mm to rotate the hand wheel.

## + Benefits:

- The one-piece forged body of the plug valve ensures high reliability, stability, and air-tightness;
- Interchangeable spare parts kit with plug valves manufactured by SPM;
- UIs used in environments containing abrasive particles, petroleum products, drilling and cement solutions, 12-24% hydrochloric acid, or salty formation water.

## ▶ Key Specifications:

- Working environment: oil, gas, gas condensate with mechanical impurities content up to 0.05% and temperature up to +120 °C; service water up to 95% by volume; washing liquid and its mixtures; proppant agent; solutions of CaCl, NaCl acids and chemical additives with temperature up to +120 °C; water-based drilling mud up to 98% by volume with oil admixture not exceeding 15% by volume, density not exceeding 2.8 g/cm<sup>3</sup>, temperature from 0 to +80 °C; formation or Cenomanian water with mechanical impurities content up to 3 g/l and temperature up to +100 °C;
- Climatic category “ХЛ (F)” (cold climate), “УХЛ (NF)” (moderately cold climate) according to GOST 15150;
- Environmental class I according to GOST 15150; Ambient air temperature from -60°C to +45 °C;
- Operating medium temperature up to +120 °C;
- Gate leakage class A according to GOST 9544;
- Corrosion protection: non-corrosive, corrosive K1 and K2.



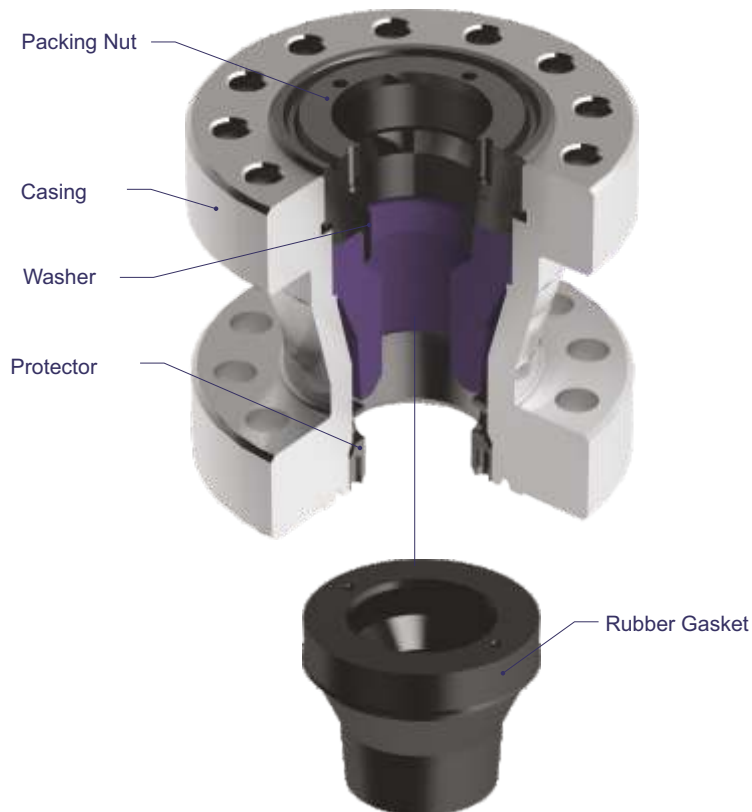
Legend	Key Parameters КПp(КШ)					
	50X70 ХЛ	50X105 ХЛ	50x70 K1 ХЛ	50x105 K1 ХЛ	50x70 K2 ХЛ	50x105 K2 ХЛ
Operating pressure Pp, MPa (PSI), not exceeding	70 (10 000)	105 (15 000)	70 (10 000)	105 (15 000)	70 (10 000)	105 (15 000)
Nominal diameter Dy, mm	50					
Feedthrough hole diameter d, mm	45					
Valve control	Manual					
Operating medium	Non-corrosive		K1		K2	
Operating medium temperature, °C, max	+ 120					
Leakage class in accordance with GOST 9544	A					
For connection dimensions see Fig. 1	БРС 2" fig 1502					
Overall dimensions, mm	Length, L		380			
	Width, W		205			
	Height, H		227			
Weight, kg, not more than		46				

## \* Legend Example:

КПp(КШ) 50x105 K1 ХЛ



# WELLHEAD STRIPPER (WASHING UNION COIL)

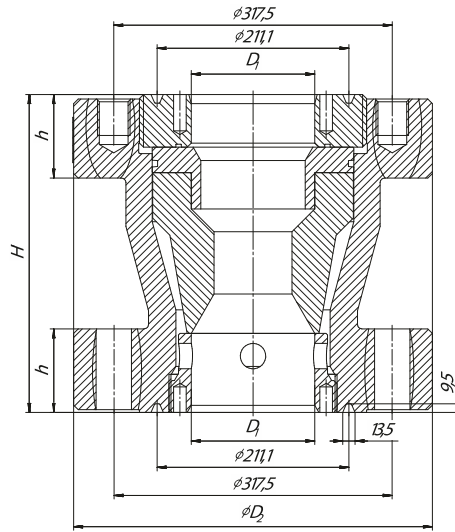


## ! Use:

Wellhead strippers are designed for pressurizing wellhead annular spaces during various process operations. Strippers allow pipe axial movements and rotations as well as sliding of couplings through pressurizing elements under top to bottom and bottom to top pressures.

## ▶ Key Specifications:

- Fluids: water, oil, petroleum products, alkalis, inhibitor acid solutions, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.



Key Parameters	ГУ 180x21-НКТ 73	ГУ 180x35(21)-НКТ 73	ГУ 180x35-НКТ 73	ГУ 180x21-НКТ 89	ГУ 180x35(21)-НКТ 89	ГУ 180x35-НКТ 89	ГУ 180x21-НКТ 114	ГУ 180x35(21)-НКТ 114	ГУ 180x35-НКТ 114	ГУ 230x21-НКТ 127	ГУ 230x35-НКТ 127
Max Working Pressure (WP) of Washing Union Coil, Mpa	21	21/35	35	21	21/35	35	21	21/35	35	21	35
Max Gasket Working Pressure during Tubing Sliding or HFT (ГРП) Operations, Mpa	12										
Outer Diameter (D), mm	380	380	395	380	380	395	380	380	395	470	482
Height (H), mm	300	300	350	300	300	350	340	340	352	340	350
Total Flange Thickness (h), mm	64	64	92	64	64	92	64	64	92	72	103
Max Sliding Coupling Diameter (D1), mm	93.2		114.3			141.3			146		
Pin Holes	12										
Pin Hole Diameter, mm	32	32/28*	39**	32	32/28*	39**	32	32/28*	39**	39	45
Pressurized Tubing Diameter, mm	73			89			114			127	
Gasket Groove Width, mm	12	12	13,5	12	12	13,5	12	12	13,5	12	16,7
GOST 28919 Gasket	П45	П45	П46	П45	П45	П46	П45	П45	П46	П49	П50

\* Bottom flange design features allow installation onto GOST 28919 180x21 and 180x14 flanges using relevant fixtures.

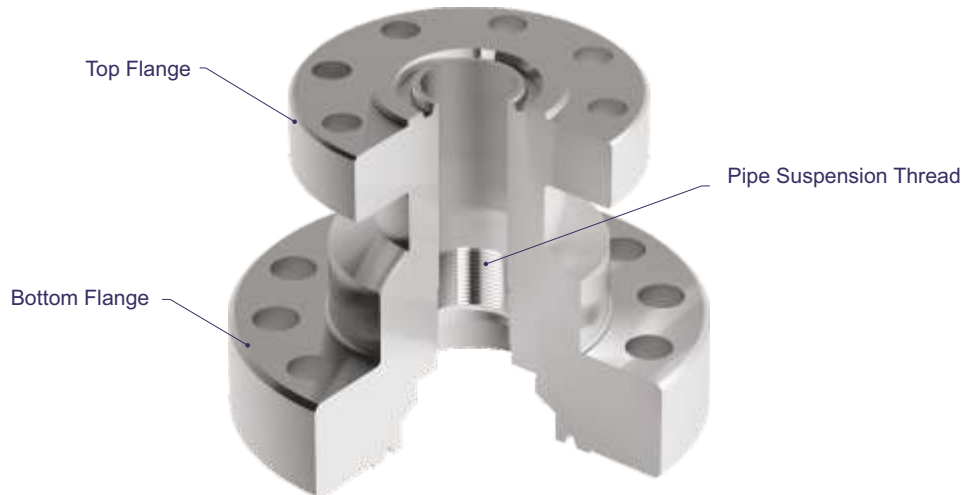
\*\* 180x35 stripper bottom flange connection dimensions allow installation onto 180x21 casing heads provided that special adapter gaskets and fixtures are used

### \* Legend Example:

## ГУ 180x35-НКТ89 К1 ХЛ

Wellhead Stripper		GOST 15150
Nominal Diameter, mm		Ambient Class
Working Pressure, Mpa		GOST 13846
		Corrosion Protection
		Coupling Thread
		Designation

# TUBING HEAD SPOOLS (КТД)



## ! Use:

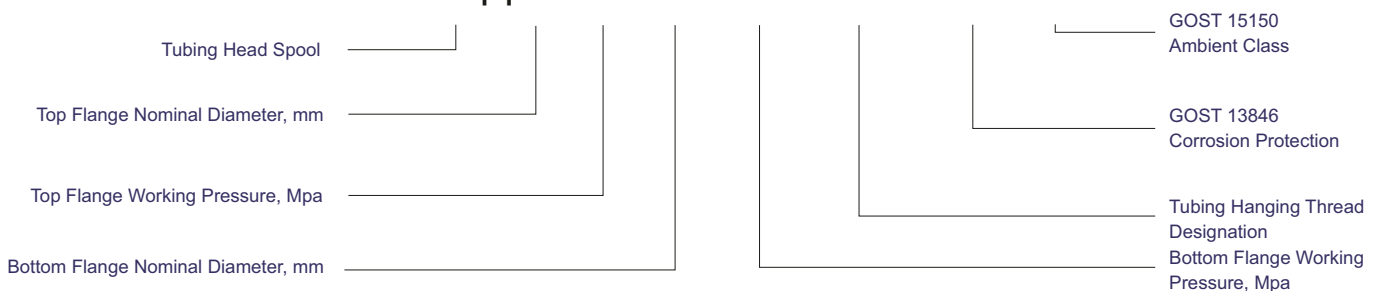
Tubing head spools are designed for installing wellhead equipment with GOST 28919 or API 6A flange connections, and for suspending tubing strings.

## ▶ Key Specifications:

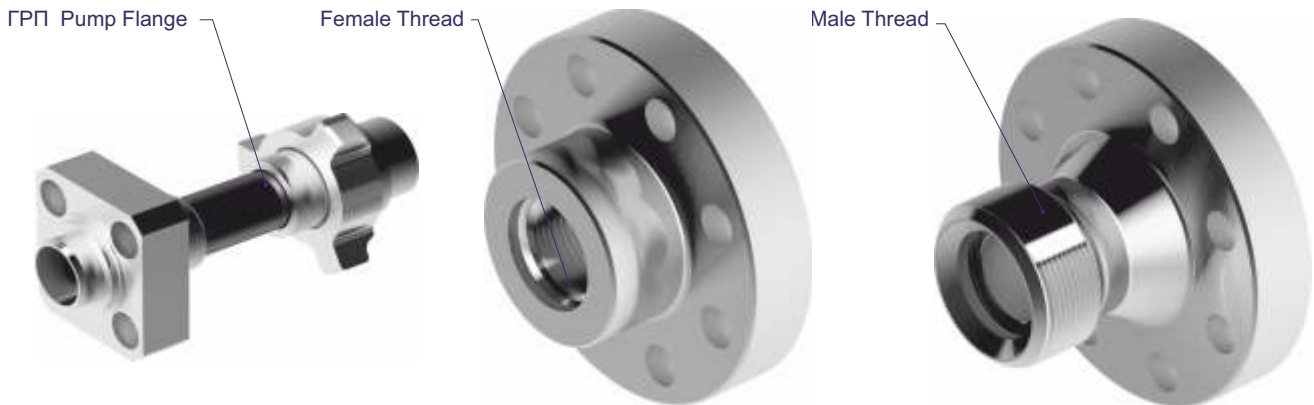
- Top and Bottom Flange Nominal Diameter Options, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16), 150 (6 3/25), 180 (7 1/16), 230 (9), 280 (11), 350 (13 5/8), 425 (16 3/4), 540 (21 1/4);
- Pipe Hanging Thread Types: Tubing (EUE Tubing, Metal to Metal Seal Tubing): 48, 60, 73, 89, 114;
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Fluids: water, oil, petroleum products, alkalis, inhibitor acid solutions, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:

**КТД 80x70/180x35 НКТ89 К1 ХЛ**



# ГРП EQUIPMENT AND PUMP FLANGES



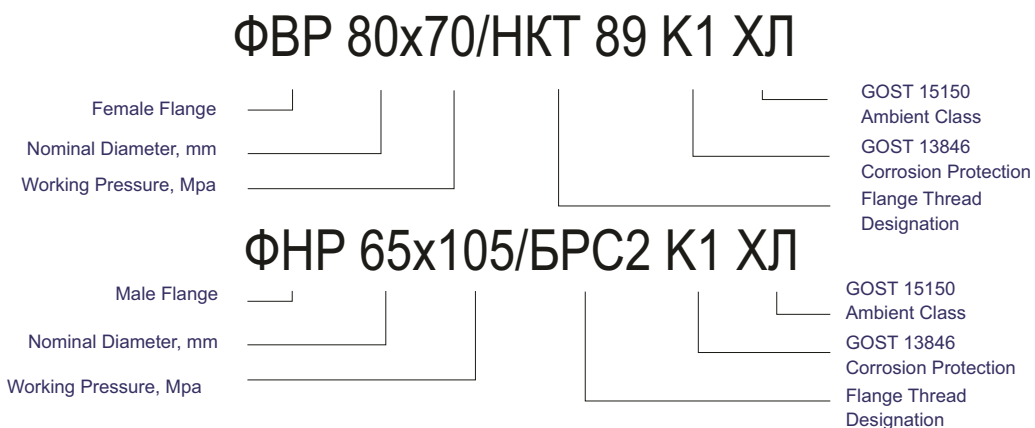
## ! Use:

Flanges connect wellhead equipment and process equipment with threaded connections including quick release (EPC) ones. Flanges have HKT, HKTB, ACME or other Russian and foreign thread types.

## ▶ Key Specifications:

- Flange Nominal Diameter Options: 46 (1 13/16), 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16), 130 (5 1/8);
- Working Pressure, MPa (psi): 14 (2000), 21(3000), 35 (5000), 70 (10000), 105 (15000);
- Fluids: water, oil, petroleum products, alkalis, inhibitor acid solutions, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

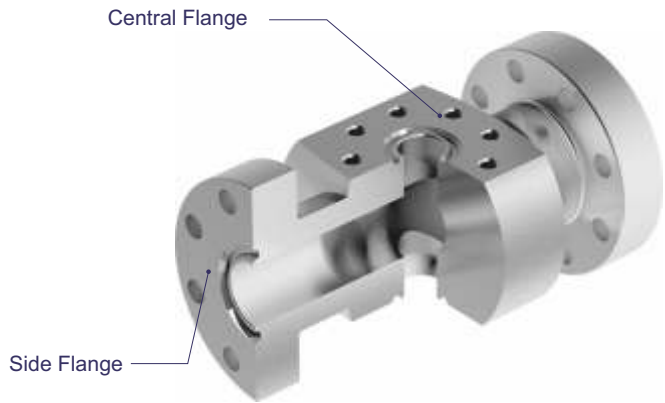
## \* Legend Example:



# FLANGED WASHING TEE AND FLANGED WASHING CROSSBAR (ТРФП, КРФП)



Flanged Tee



Flanged Crossbar

## ! Use:

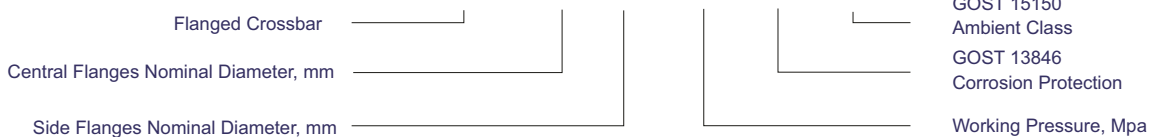
The equipment connects GOST 28919 or API 6A flanged wellhead equipment. It is used mainly in coil tubing plant operations.

## ▶ Key Specifications:

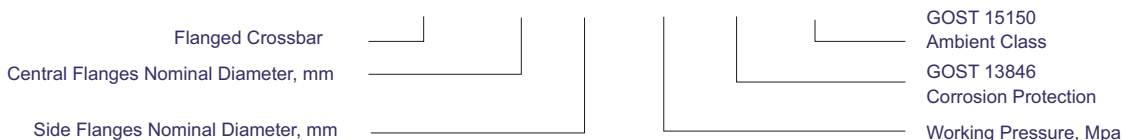
- Central Flanges Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16), 130 (5 1/8);
- Side Flanges Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16);
- Working Pressure, MPa (psi): 35(5000), 70(10000), 105 (15000);
- GOST 15150 Ambient Class (U)KhL
- GOST 15150 Environmental Class I
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:

**КРФП 80/50x70 K1 ХЛ**



**ТРФП 65/50x70 K1 ХЛ**



# WASHING CROSSBARS FOR COILED TUBING LOWERING (КРП ГНКТ)

## ! Use:

Washing crossbars are designed for performing well washing operations and proppant well injection using 2 to 4 pumping units.

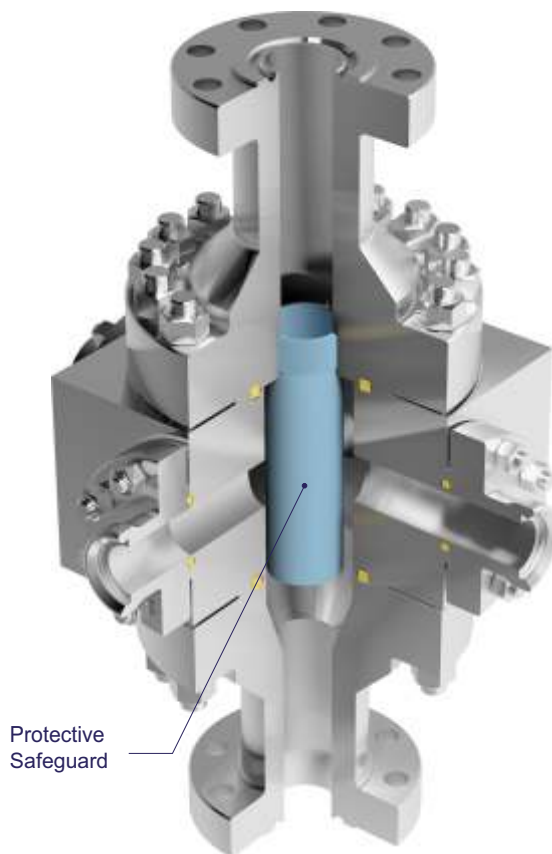
Idle ports are plugged where less pumping units are used.

## + Benefits:

Protectors safeguard coiled tubing against abrasive effects of proppant and prevent coiled tubing tearing ГНКТ

## ▶ Key Specifications:

- Top Flange Nominal Diameter, mm (in): 80 (3 1/16), 100 (4 1/16), 130 (5 1/8);
- Side Flanges Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16);
- Working Pressure, MPa (psi): 35 (5000), 70 (10000), 105(15000)
- Fluids: water, oil, petroleum products, alkalis inhibitor acid muds, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.



## \* Legend Example:

КРП ГНКТ 80x70/100x70 - 89 K1 ХЛ

Washing Crossbar	_____	_____	_____	GOST 15150 Ambient Class
Top Flange Nominal Diameter, mm	_____	_____	_____	GOST 13846 Corrosion Protection
Top Flange Working Pressure, Mpa	_____	_____	_____	Slacked-off Coil Tubing Outer Diameter, mm
Bottom Flange Nominal Diameter, mm	_____	_____	_____	Bottom Flange Working Pressure, Mpa



# LEASE, MAINTENANCE, SPARES

## ↔ ГРП Frac Equipment Lease

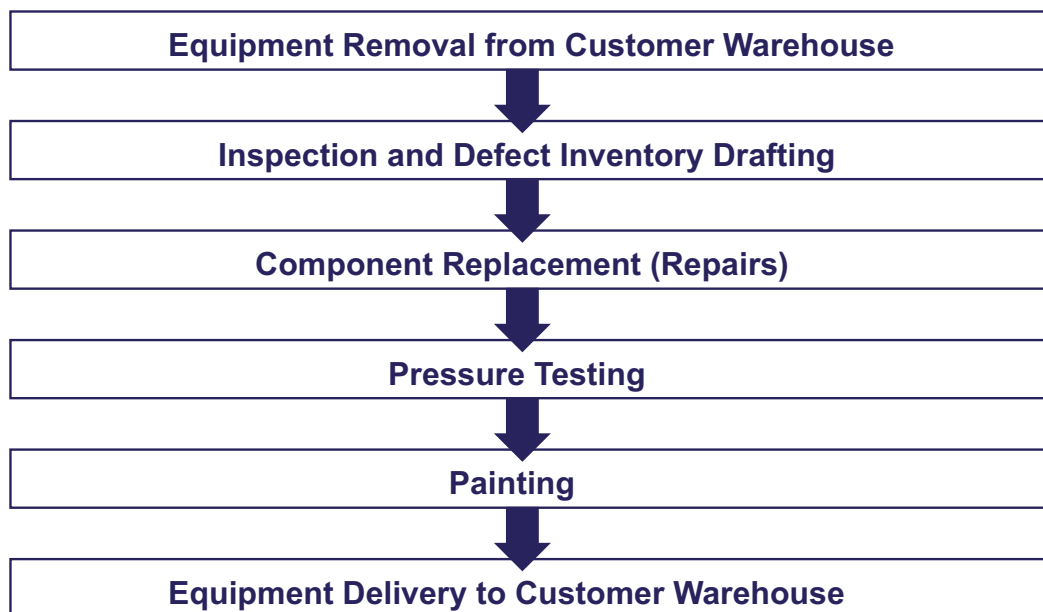
We lease out ГРП wellhead equipment  
•70 and 105 MPa ГРП frac equipment

## ⚙ Maintenance, Inspection, and Repairs of Wellhead Equipment

We provide warranty maintenance, inspection and repair services for our ГРП wellhead equipment and for ГРП wellhead equipment of numerous Russian and foreign manufacturers.



### Equipment Maintenance Flowchart:

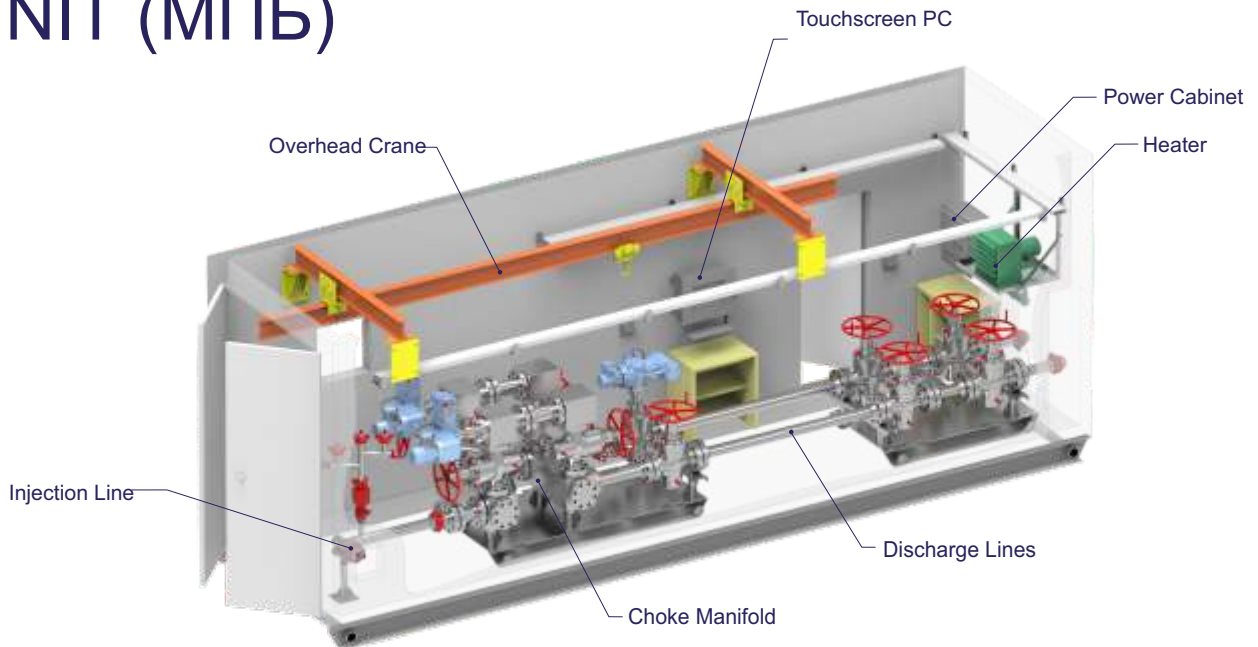


## ⚙ Spare Parts for Imported and Russian-Made Gate Valves

We manufacture spare parts for repairing imported and Russian-made 14, 21, 35, 70 and 105 MPa gate valves.



# BLOWOUT PREVENTION MANIFOLD UNIT (МПБ)



## ! Use:

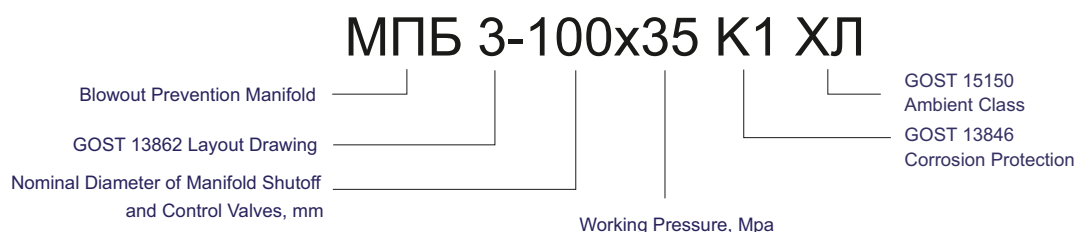
Blowout prevention manifolds ensure circulation of muds in oil and gas wells in the course of drilling or repairs to ensure safe work, maintain required wellhead pressures, prevent blowouts and uncontrolled flows, as well as to protect subsoil and environment.

Custom-made manifold units are supplied in boxes with automated shutoff and control valve control systems, monitoring and measuring instruments, rigging devices, heating and air conditioning systems.

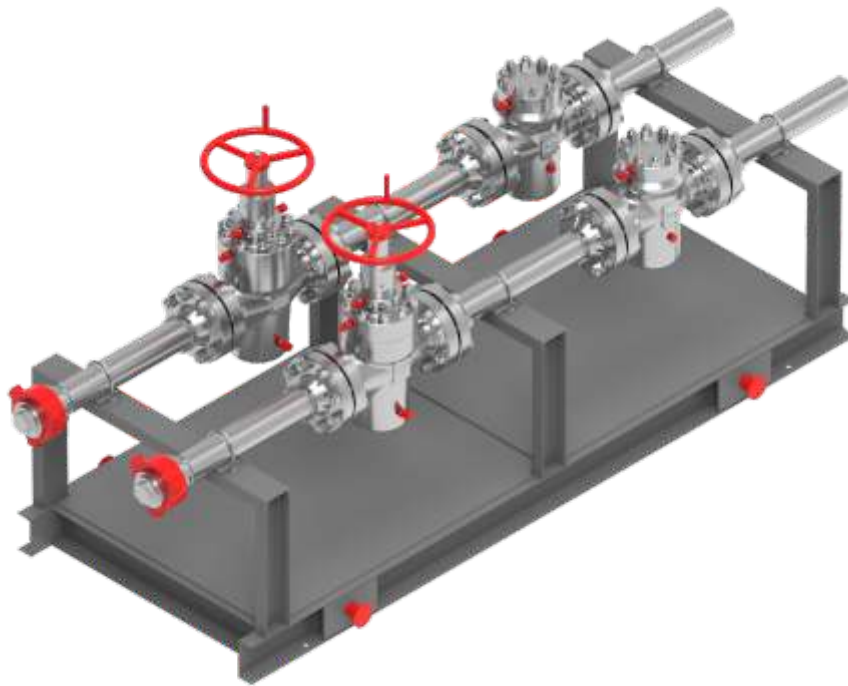
## ▶ Key Specifications:

- Pipeline Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16);
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Choke Element Bore Diameter, mm: 2 to 78
- Fluids: water, oil, petroleum products, alkalis, inhibitor acid solutions, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:



# CHOKE AND KILL LINE ASSEMBLIES (УЗЛ)



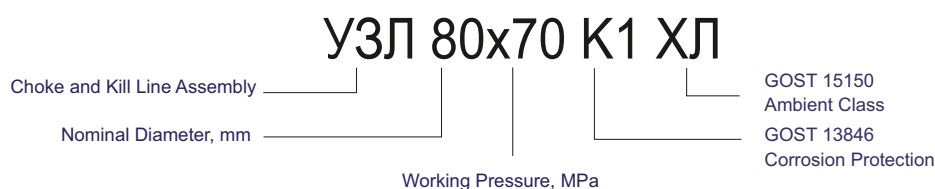
## ! Use:

Choke and kill assemblies (УЗЛ) are open-ended assemblies of shutoff and control valves and pipelines.. The choke and kill line assemblies are designed for choking and killing oil and gas production wells as well as for performing process operations affecting drill string and annular well spaces.

## ▶ Key Specifications:

- Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16)
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water, alkalis, inhibitor muds, proppant, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:





# KILL MANIFOLD (БГ)



## ! Use:

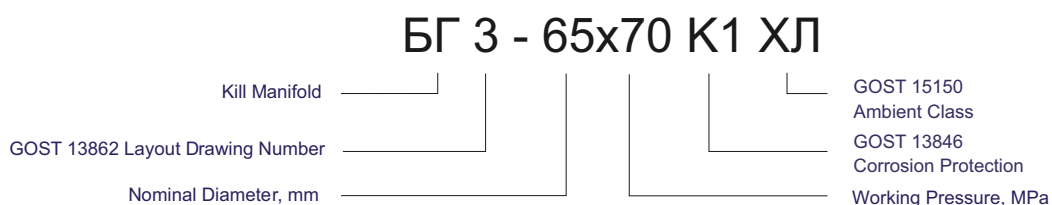
Kill manifolds of drilling manifolds are connected to drilling pumps for injecting wells with weighted fluids via annular spaces (well killing). If required, kill manifolds are used for draining gas cut muds into degassing chambers of drilling rig circulation systems.

Kill manifolds may be manufactured under generic GOST 13862, Blowout Prevention Equipment, layout drawings or custom made.

## ▶ Key Specifications:

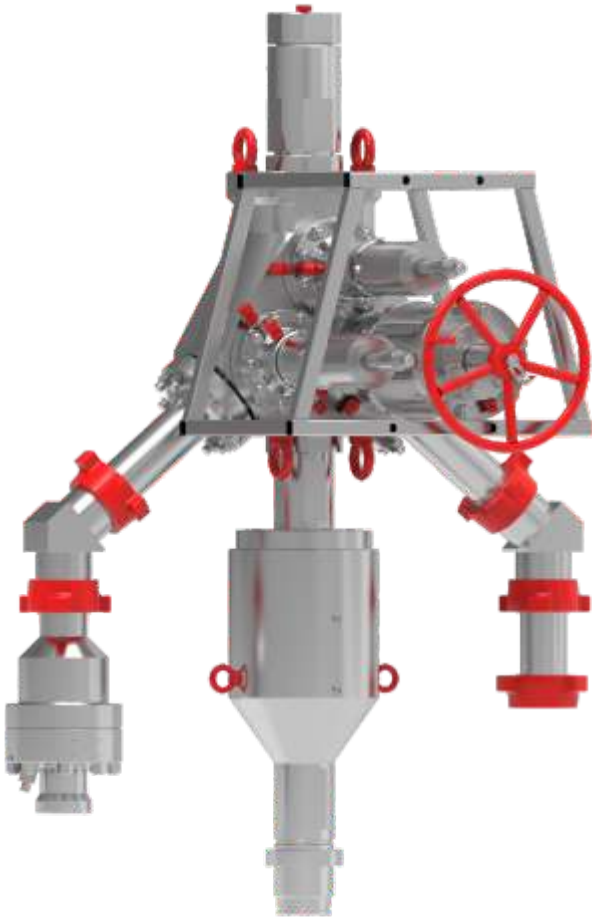
- Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/8), 100 (4 1/16)
- Working Pressure, MPa (psi): 21 (3000), 35 (5000), 70 (10000), 105 (15000)
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water, clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:

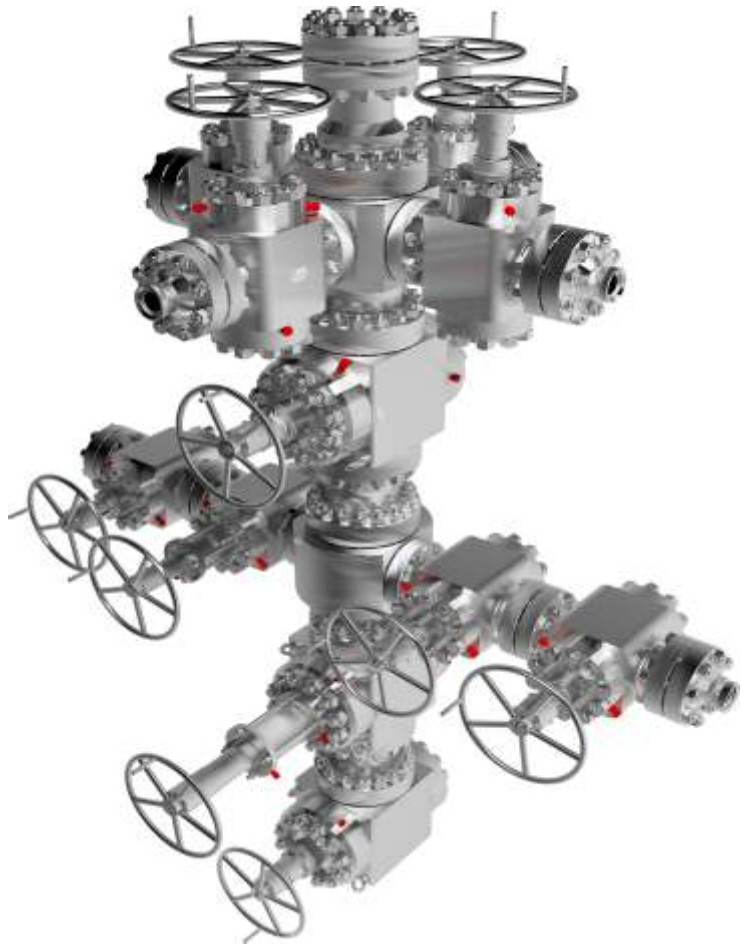




# IMPORT SUBSTITUTION OF WELLHEAD EQUIPMENT



Test X-mas Tree  
УИФА 3-80x70 K2



Multistage hydraulic fracturing treatment piping  
ОМКГРП 180x105/100x105 K2

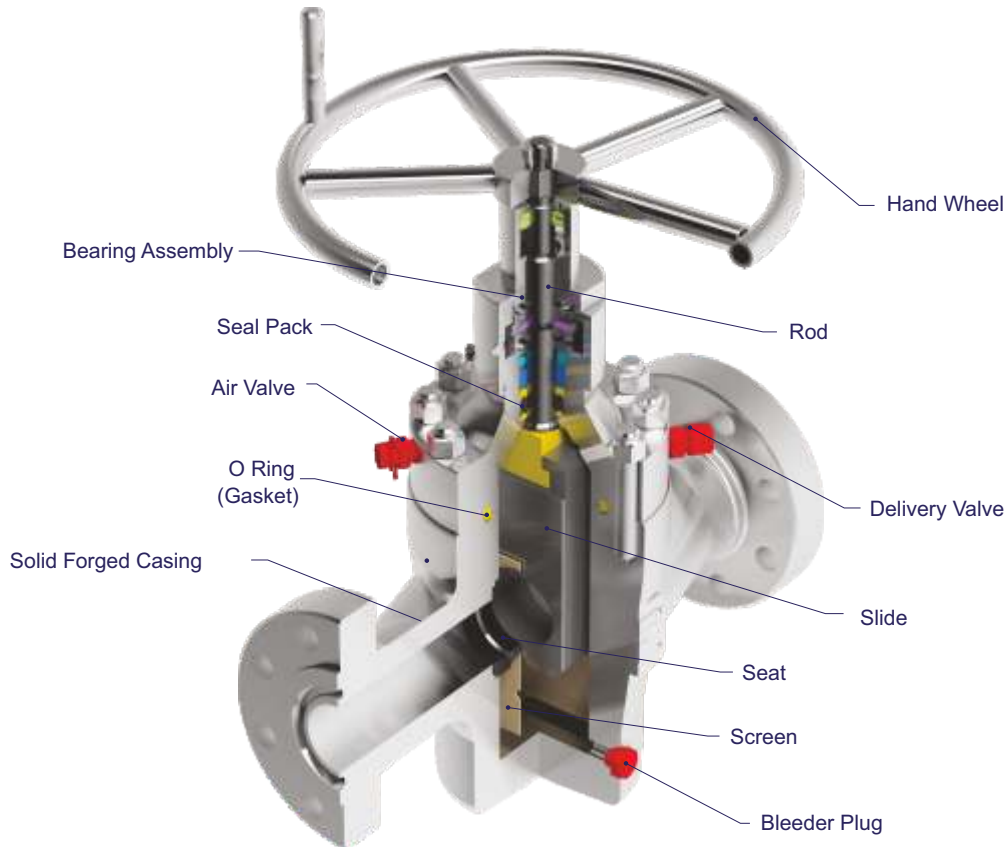
## ! Use:

**Basic versions of Test X-mas Trees (УИФА)** include three or four gate valves being the central one, the kill line gate valve on the check valve side, and the all-hydraulic discharge line gate valve. The system also includes the swivel ensuring pipe rotation during downhole tool operations without rotating test heads of natural flow and injection wells. The check valve and shutoff valve control fluid flow.

**Multistage hydraulic fracturing treatment piping (ОМКГРП)** is designed for pressuring wellheads and annular spaces, suspending tubing and for ensuring injection of fluids and mixtures usable during hydraulic fracturing operations.

The equipment may have all-hydraulic gate valves for controlling fluid flow with Christmas tree control stations (CTCS's)

# SLIDE GATE VALVES (3MC, 3MCP)



## ! Use:

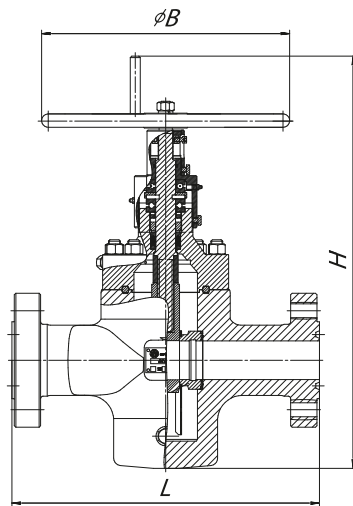
Metal to metal seal slide gate valves are used as locking devices in blowout prevention equipment and wellhead equipment of natural flow and injection wells.

## + Benefits:

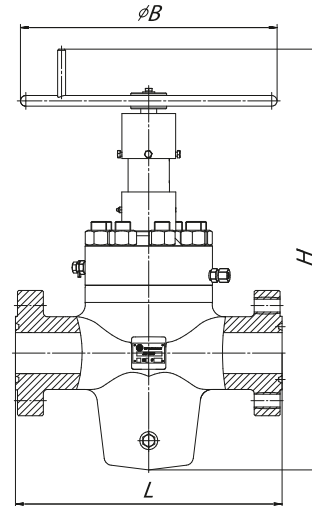
- Solid forgings casing ensure high reliability and compactness
- Continuous seat tightening ensures gate leak tightness at low pressures
- Gate valves have open and close slide position indicators

## ▶ Key Specifications:

- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- GOST 9544 Gate Leakage Class A
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.



No Reducer

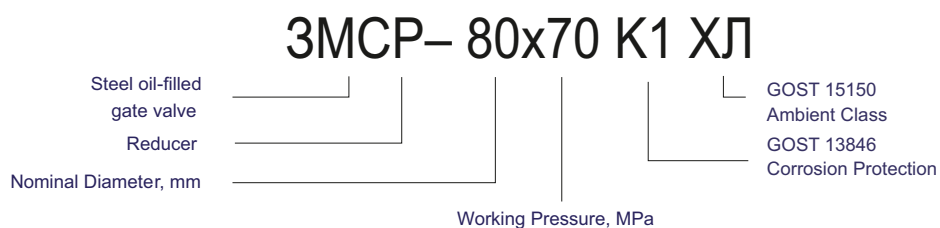


Reducer

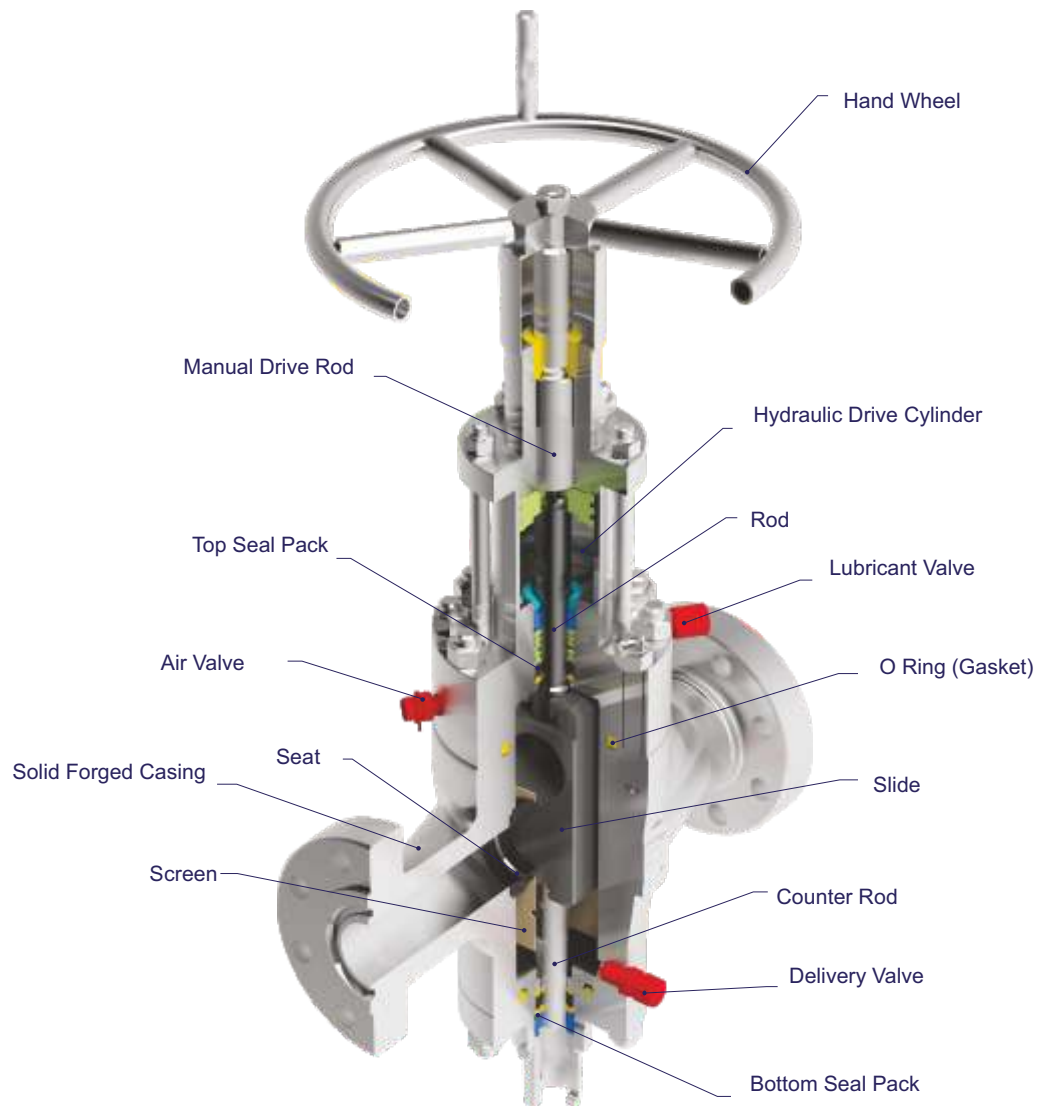
Legend	Nominal Diameter, mm (inch)	Working Pressure, MPa (psi)	Overall Dimensions, mm Max			
			H	L	B	
3MC-50x35	50 (2 1/16)	35 (5000)	525	371	320	
3MC-50x70		70 (10000)	700	520	400	
3MC-50x105		105 (15000)	720	483	500	
3MC-65x21φ	65 (2 9/16)	21 (3000)	535	350	320	
3MC-65x21		21 (3000)		422		
3MC-65x35φ		35 (5000)		350		
3MC-65x35		35 (5000)		422		
3MC-65x70	65 (2 9/16)	70 (10000)	775	565	500	
3MC-65x105		105 (15000)	750	533		
3MC-80x14		14 (2000)	740	359		
3MC-80x21	80 (3 1/8)	21 (3000)	782	435	400	
3MC-80x35		35 (5000)		473		
3MC(P)-80x70*		70 (10000)		830		620
3MC(P)-80x105*	80 (3 1/8)	105 (15000)	900	598	500	
3MC-100x14	100 (4 1/16)	14 (2000)	810	435	400	
3MC-100x21		21 (3000)		513		
3MC-100x35		35 (5000)		930	549	500
3MC(P)-100x70*		70 (10000)		1060	670	
3MCP-100x105	100 (4 1/16)	105 (15000)	1085	737	560	
3MCP-130x70	130 (5 1/8)	70 (10000)	1095	737	560	
3MCP-130x105		105 (15000)	1236			
3MCP-180x70	180 (7 1/15)	70 (10000)	1230	505	500	
3MCP-180x105		105 (15000)	1370			

\* Gate valves may have 4:1 reducers

### \* Legend Example:



# ALL-HYDRAULIC SLIDE GATE VALVE (3MCF)



## ! Use:

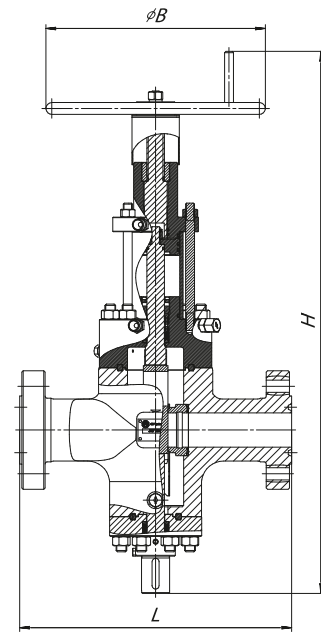
All-hydraulic slide gate valves are designed for remotely controlling of wellhead fluid flows via the automated hydraulic system, and are used as locking devices in blowout prevention equipment and wellhead equipment of natural flow and injection wells.

## + Benefits:

- Hydraulic drives ensure high performance and low inertia
- High gate speed during open and closing
- Manual drives control gate valves manually in hydraulic system emergencies
- Gate valves have open and close slide position indicators

## ▶ Key Specifications:

- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- GOST 9544 Gate Leakage Class A
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.



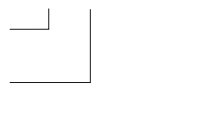
Legend	Nominal Diameter, mm (inch)	Working Pressure, MPa (psi)	Overall Dimensions, mm Max		
			H	L	B
3MCF-50x70	50 (2 1/16)	70 (10000)	1100	520	400
3MCF-50x105		105 (15000)	1150	483	
3MCF-65x35φ	65 (2 9/16)	35 (5000)	930	350	320
3MCF-65x70		70 (10000)	1170	565	500
3MCF-65x105		105 (15000)	1150	533	
3MCF-80x35	80 (3 1/8)	35 (5000)	1195	473	400
3MCF-80x70		70 (10000)	1235	620	500
3MCF-80x105		105 (15000)	1300	598	
3MCF-100x35	100 (4 1/16)	35 (5000)	1350	549	560
3MCF-100x70		70 (10000)	1470	670	
3MCF-100x105		105 (15000)	1505	737	
3MCF-130x70	130 (5 1/8)	70 (10000)	1545		
3MCF-130x105		105 (15000)	1685		
3MCF-180x70	180 (7 1/15)	70 (10000)	1730	505	500
3MCF-180x105		105 (15000)	1870		

## \* Legend Example:

3MCF – 100x35 K1 ХЛ

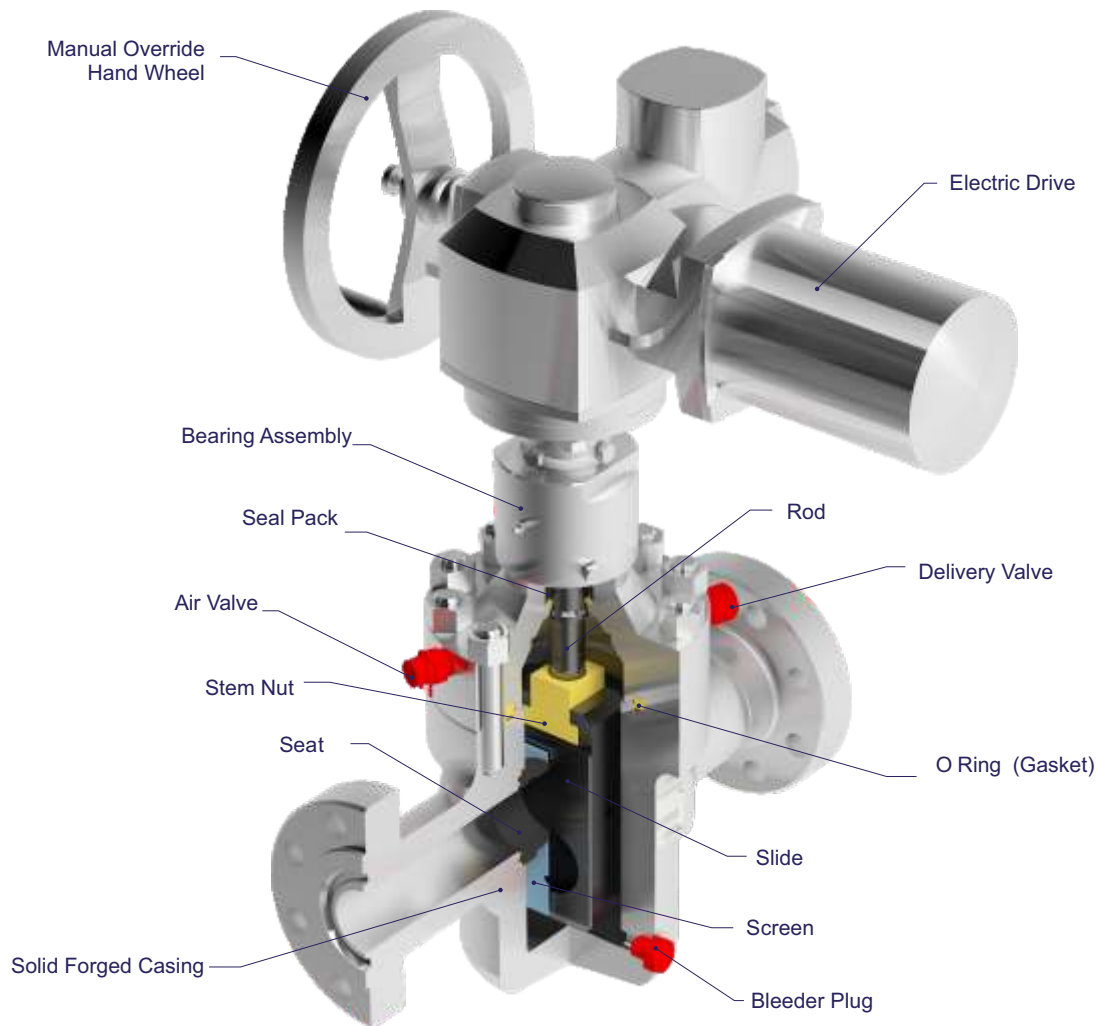
All-electric steel oil-filled gate valve

Nominal Diameter, mm



GOST 15150  
Ambient Class  
GOST 13846  
Corrosion Protection  
Working Pressure, MPa

# ALL-ELECTRIC SLIDE GATE VALVE (3MCЭ)



## ! Use:

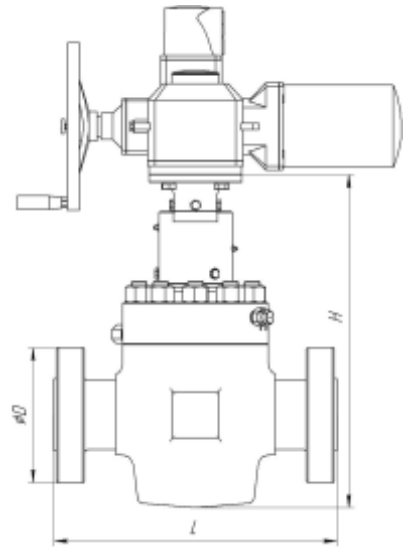
All-electric slide gate valves are designed for remotely controlling wellhead fluid flows from central operator stations via automatic control systems, and are used as locking devices in blowout prevention equipment and wellhead equipment of natural flow and injection wells.

## + Benefits:

- Electric drives ensure long-term reliable failsafe equipment operation, precise positioning and smooth gate position control
- Electric drives consume power only when moving, which makes them especially energy efficient
- Manual overrides control gate valves manually in electric system emergencies

## ▶ Key Specifications:

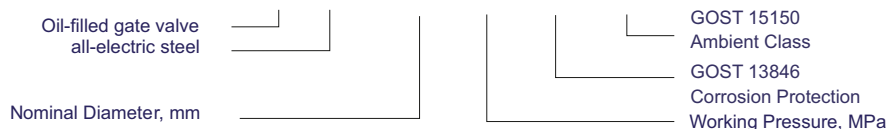
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- GOST 9544 Gate Leakage Class A
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.



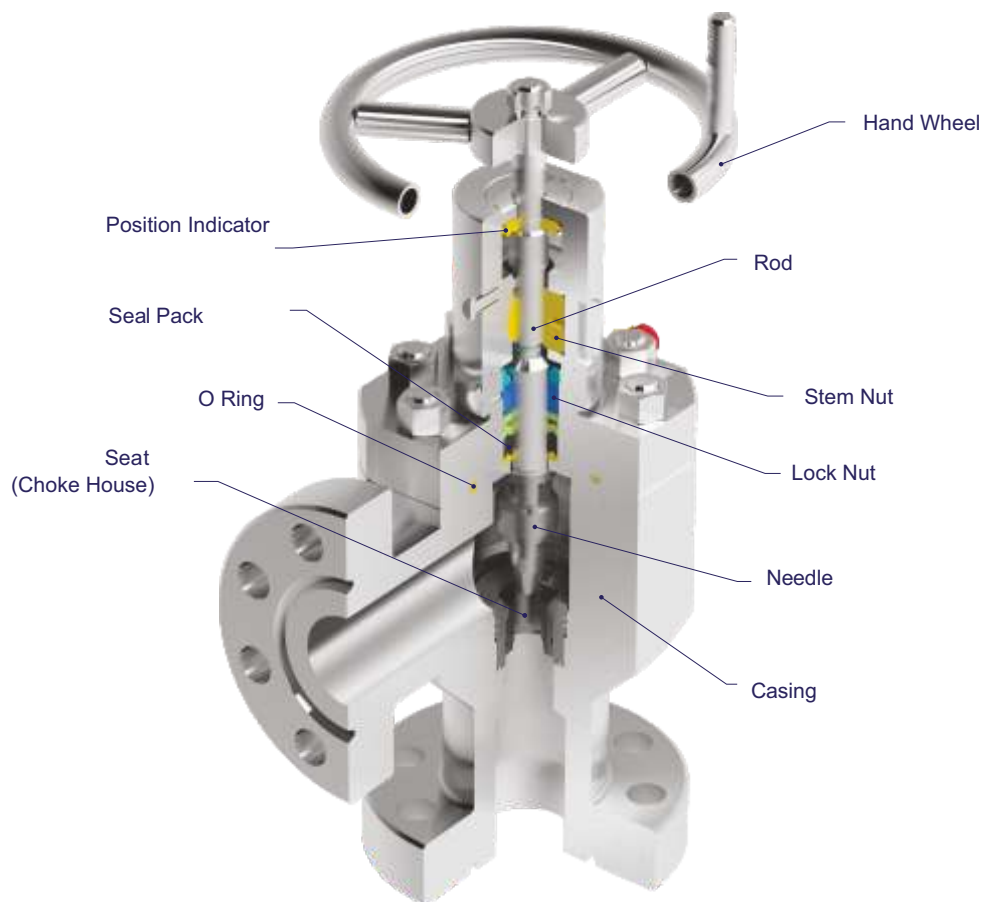
Legend	Nominal Diameter, mm (inch)	Working Pressure, MPa (psi)	Overall Dimensions, mm Max		
			H	L	D
3MCЭ-50x35	50 (2 1/16)	35 (5000)	675	371	215
3MCЭ-50x70		70 (10000)	850	520	200
3MCЭ-50x105		105 (15000)	870	483	222
3MCЭ-65x21φ	65 (2 9/16)	21 (3000)	685	350	195
3MCЭ-65x21		21 (3000)		422	245
3MCЭ-65x35φ		35 (5000)		350	195
3MCЭ-65x35		35 (5000)	422	245	
3MCЭ-65x70		70 (10000)	925	565	230
3MCЭ-65x105		105 (15000)	900	533	255
3MCЭ-80x14	80 (3 1/8)	14 (2000)	890	359	210
3MCЭ-80x21		21 (3000)	932	435	242
3MCЭ-80x35		35 (5000)		473	265
3MCЭ-80x70		70 (10000)	980	620	270
3MCЭ-80x105		105 (15000)	950	598	288
3MCЭ-100x14	100 (4 1/16)	14 (2000)	960	435	275
3MCЭ-100x21		21 (3000)		513	292
3MCЭ-100x35		35 (5000)	1080	549	310
3MCЭ-100x70		70 (10000)	1110	670	315
3MCЭ-100x105		105 (15000)	1135	737	360
3MCЭ-130x70	130 (5 1/8)	70 (10000)	1145		420
3MCЭ-130x105		105 (15000)	1285	505	480
3MCЭ-180x70	180 (7 1/15)	70 (10000)	1280		505
3MCЭ-180x105		105 (15000)	1420	505	

## \* Legend Example:

3MCЭ – 80x70 K1 XЛ



# ADJUSTABLE ANGULAR THROTTLE (ДРУ)



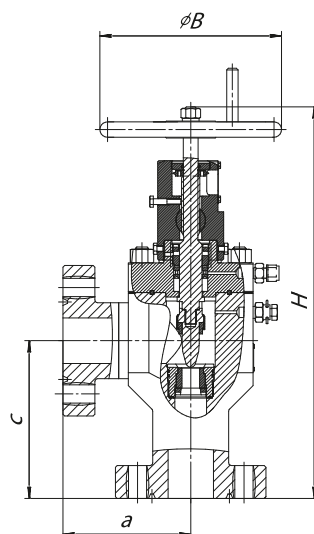
## ! Use:

Adjustable angular throttles are designed for smooth control of fluid flows by changing the radial gap area between the needle and the seat during reciprocal hand wheel driven movement of the tip.

They are used where controlling fluid flows is required in X-mas trees, blowout prevention equipment, trunk pipelines, and pumping units.

## + Benefits:

- All throttles have needle position indicators
- Seat and needle pairs are manufactured of durable alloy BK6.

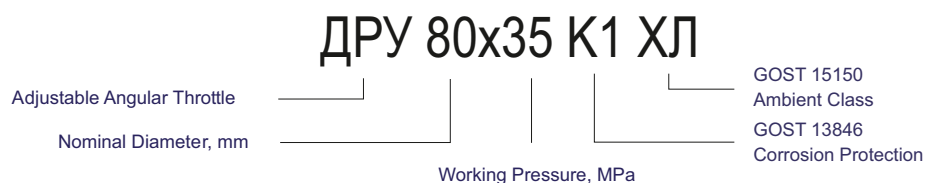


## ► Key Specifications:

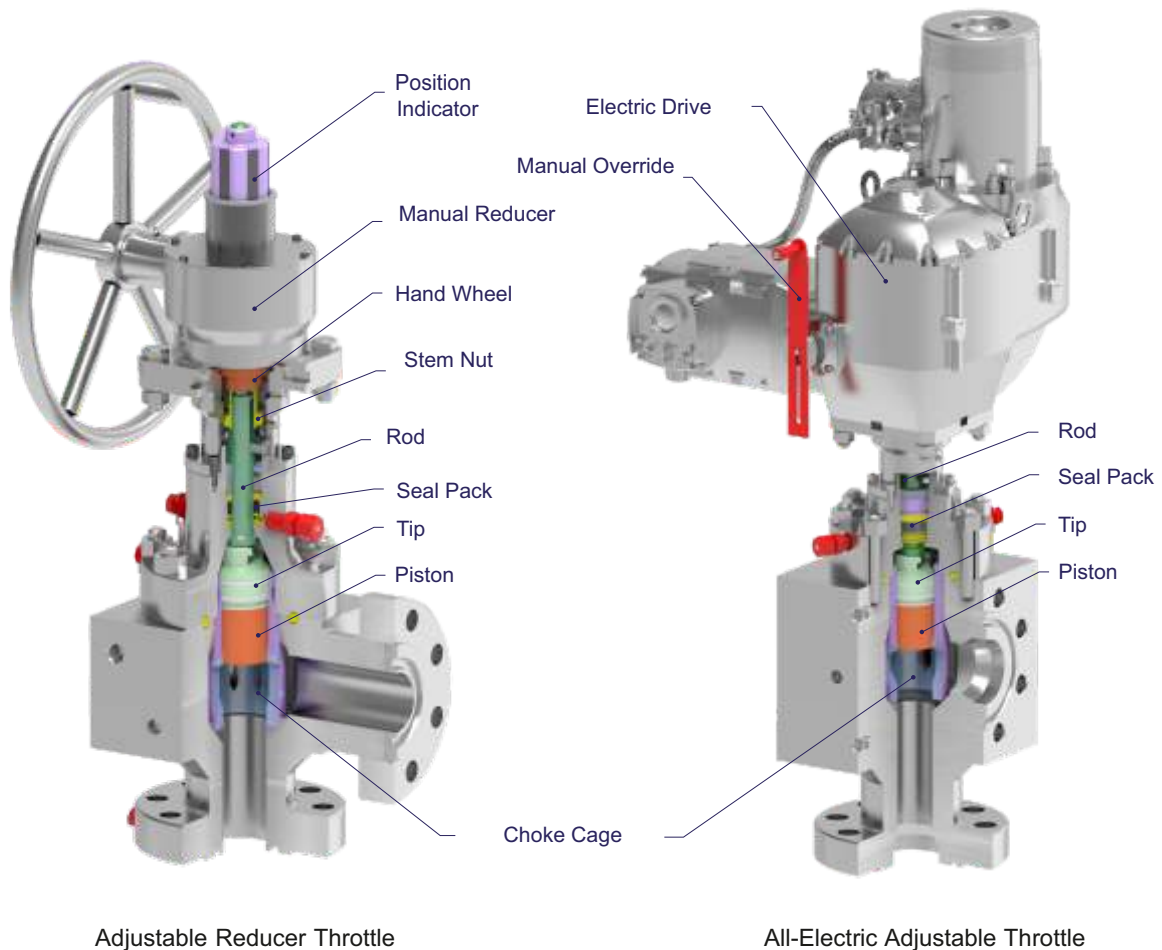
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

Legend	Nominal Diameter, mm (inch)	Working Pressure, Mpa (psi)	Overall Dimensions			
			H	B	a	c
ДРУ-50x70	50 (2 1/16)	70 (10000)	640	320	225	230
ДРУ-50x105	50 (2 1/16)	105 (15000)	640	320	225	230
ДРУ-65x21φ	65 (2 9/16)	21 (3000)	640	320	215	230
ДРУ-65x35φ	65 (2 9/16)	35 (5000)	640	320	215	230
ДРУ-65x70	65 (2 9/16)	70 (10000)	690	320	225	278
ДРУ-65x105	65 (2 9/16)	105 (15000)	690	320	225	278
ДРУ-80x21	80 (3 1/8)	21 (3000)	690	320	225	278
ДРУ-80x35	80 (3 1/8)	35 (5000)	690	320	225	278
ДРУ-80x70	78 (3 1/16)	70 (10000)	690	320	225	278
ДРУ-80x105	78 (3 1/16)	105 (15000)	710	320	260	298
ДРУ-100x21	100 (4 1/16)	21 (3000)	710	320	260	298
ДРУ-100x35	100 (4 1/16)	35 (5000)	710	320	260	298
ДРУ-100x70	100 (4 1/16)	70 (10000)	710	500	260	298
ДРУ-100x105	100 (4 1/16)	105 (15000)	760	645	350	350

## \* Legend Example:



# CAGE TYPE ADJUSTABLE ANGULAR THROTTLE (ДРУК, ДРУЭК)



Adjustable Reducer Throttle

All-Electric Adjustable Throttle

## ! Use:

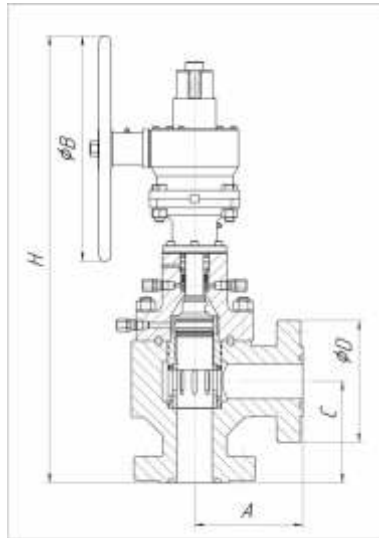
Adjustable angular throttles are designed for smoothly controlling fluid flows by changing bore section areas of cage slits during hand-wheel driven reciprocal tip movements.

They are used where controlling fluid flows is required in X-mas trees, blowout prevention equipment, trunk pipelines, and pumping units.

## + Benefits:

Cage type adjustable angular throttles (ДРУК) have increased service lives due to design of their throttling pairs in the form of cage and piston pairs.

All-electric cage type adjustable angular throttles (ДРУЭК) allow remotely controlling throttles for the purposes of controlling fluid flows.



## ▶ Key Specifications:

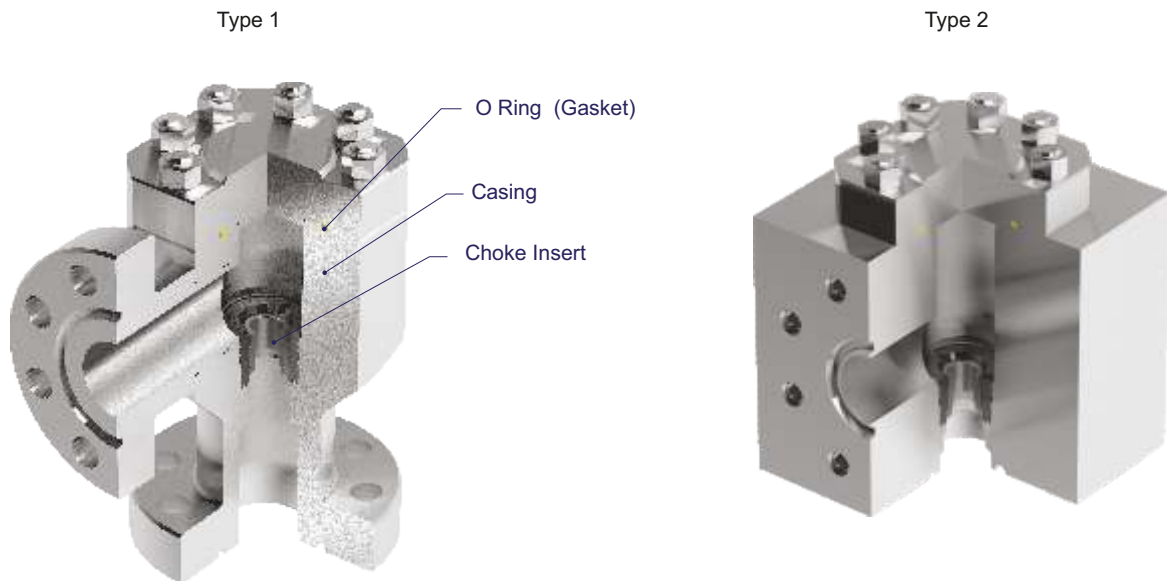
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water, inhibitor muds, cement and clay muds
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

Legend	Nominal Diameter, mm (inch)	Working Pressure, Mpa (psi)	Overall Dimensions				
			H	B	A	C	D
ДРУк-50x70	50 (2 1/16)	70 (10000)	1060	500	297	232	200
ДРУк-50x105	50 (2 1/16)	105 (15000)					222
ДРУк-50x21ф	65 (2 9/16)	21 (3000)					195
ДРУк-50x35ф	65 (2 9/16)	35 (5000)					195
ДРУк-65x70	65 (2 9/16)	70 (10000)					230
ДРУк-65x105	65 (2 9/16)	105 (15000)					255
ДРУк-80x21	80 (3 1/8)	21 (3000)	1000	500	240	225	242
ДРУк-80x35	80 (3 1/8)	35 (5000)					265
ДРУк-80x70	78 (3 1/16)	70 (10000)					270
ДРУк-80x105	78 (3 1/16)	105 (15000)					288
ДРУк-100x21	100 (4 1/16)	21 (3000)	1050	500	272	272	292
ДРУк-100x35	100 (4 1/16)	35 (5000)					310
ДРУк-100x70	100 (4 1/16)	70 (10000)					315
ДРУк-100x105	100 (4 1/16)	105 (15000)					360

## \* Legend Example:



# NON-ADJUSTABLE ANGULAR THROTTLE (ДНУ)



## ! Use:

Non-adjustable angular throttles are designed for staged operating mode control at oil and gas wells.

They are used where staged fluid flow control is required in X-mas trees, blowout prevention equipment, trunk pipelines, and pumping units.

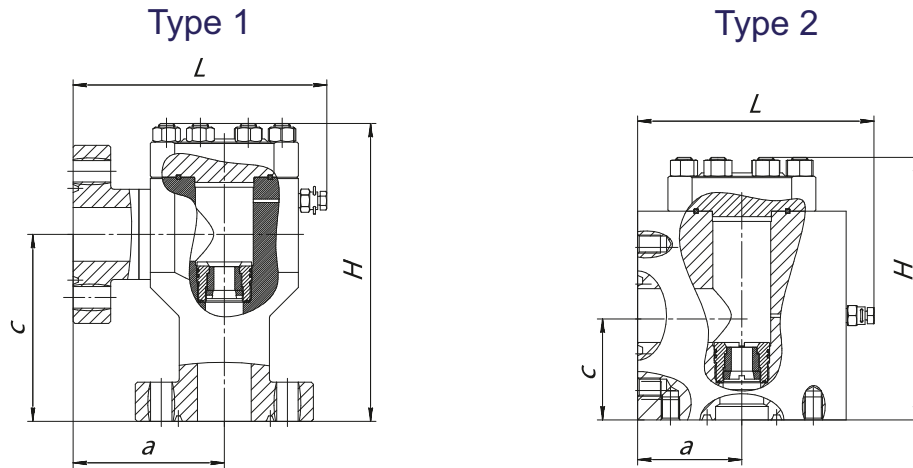
Choke inserts with various bore sizes are used for controlling fluid flows

## + Benefits:

- Throttle choke inserts are replaceable without removing the device from the well.

## ▶ Key Specifications:

- Choke Inserts Nominal Diameter: 2 to 32 mm in 1 mm intervals
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.



Legend	Nominal Diameter, mm (inch)	Working Pressure, Mpa (psi)	Throttle Type	Overall Dimensions			
				H	L	a	c
ДНУ-50x70	50 (2 1/16)	70 (10000)	1	395	380	225	230
			2	297	230	115	115
ДНУ-50x105	50 (2 1/16)	105 (15000)	1	395	380	225	230
			2	340	300	150	15
ДНУ-65x21ф	65 (2 9/16)	21 (3000)	1	395	370	215	230
			2	305	260	130	130
ДНУ-65x35ф	65 (2 9/16)	35 (5000)	1	395	370	215	230
			2	305	260	130	13
ДНУ-65x70	65 (2 9/16)	70 (10000)	1	445	380	225	278
			2	360	260	130	130
ДНУ-65x105	65 (2 9/16)	105 (15000)	1	445	380	225	278
			2	340	300	150	15
ДНУ-80x21	80 (3 1/8)	21 (3000)	1	445	380	225	278
			2	280	265	137,5	127,
ДНУ-80x35	80 (3 1/8)	35 (5000)	1	445	380	225	278
			2	315	285	142,5	142,5
ДНУ-80x70	78 (3 1/16)	70 (10000)	1	445	380	225	278
			2	300	290	145	145
ДНУ-80x105	78 (3 1/16)	105 (15000)	1	465	410	260	298
			2	330	300	150	150
ДНУ-100x21	100 (4 1/16)	21 (3000)	1	465	410	260	298
			2	330	300	150	150
ДНУ-100x35	100 (4 1/16)	35 (5000)	1	465	410	260	298
			2	340	320	160	160
ДНУ-100x70	100 (4 1/16)	70 (10000)	1	465	410	260	298
			2	350	320	160	160
ДНУ-100x105	100 (4 1/16)	105 (15000)	1	465	500	350	350
			2	370	380	190	190

### \* Legend Example:

ДНУ-2 100x70 К1 ХЛ

Non-Adjustable Angular Throttle

Throttle Type

Nominal Diameter, mm

GOST 15150

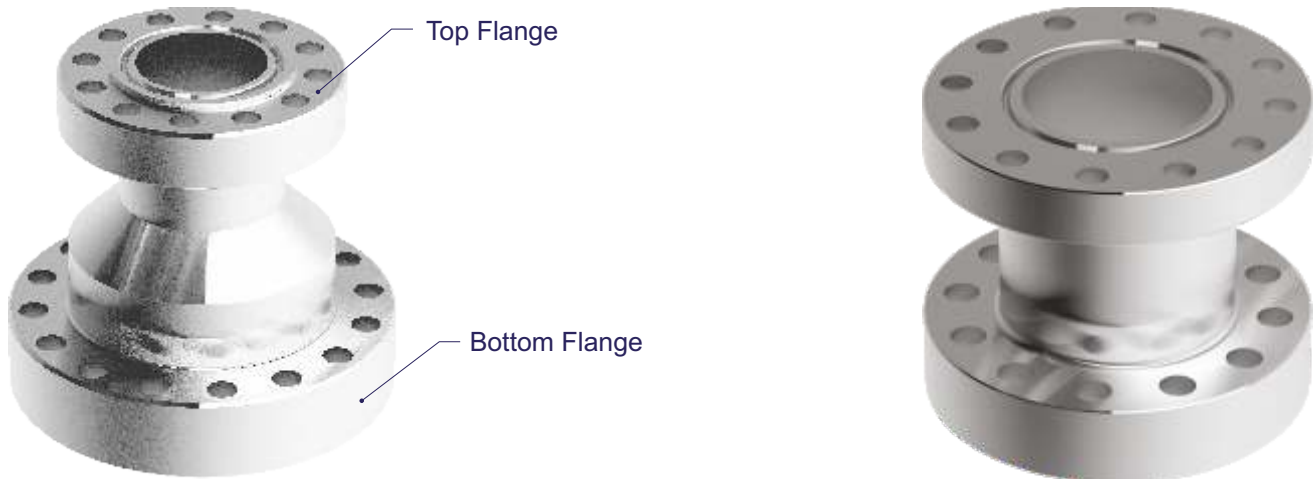
Ambient Class

GOST 13846

Corrosion Protection

Working Pressure, MPa

# DRILL SPOOL ADAPTER (КП)



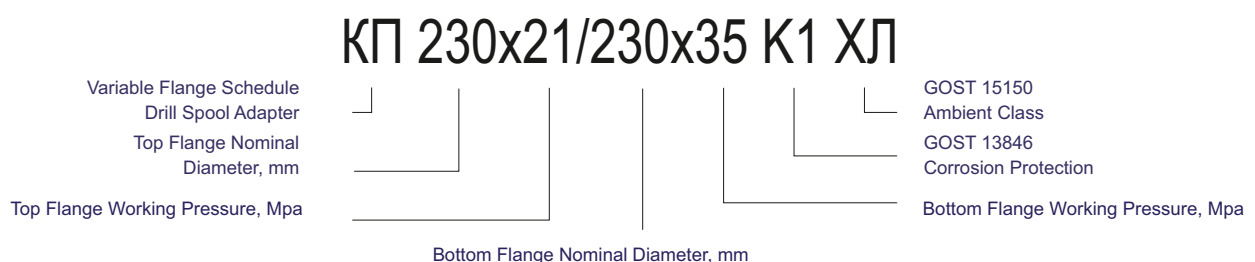
## ! Use:

The equipment connects GOST 28919 or API 6A flanged wellhead equipment. It is used mainly in coil tubing plant operations.

## ▶ Key Specifications:

- Top and Bottom Flange Nominal Diameter Options, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/8), 100 (4 1/16), 156 (6 3/25), 180 (7 1/16), 230 (9), 280 (11), 350 (13 5/8), 425 (16 3/4), 540 (21 1/4);
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Max Height 1200 mm
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

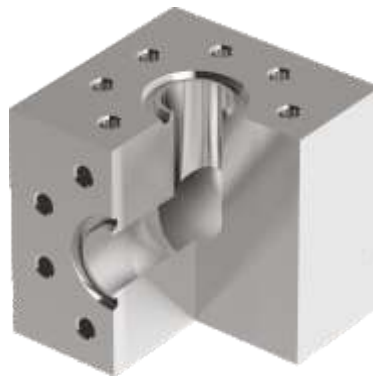
## \* Legend Example:



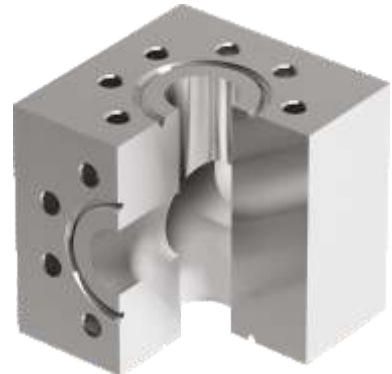
# ELBOW, TEE AND CROSSBAR



Elbow



Tee



Crossbar

## ! Use:

Elbows, tees, and crossbars are connecting parts of wellhead and blowout prevention equipment that join or separate fluid flows in various directions

Elbows, tees, and crossbars are equal (with all their sides having the same nominal diameters) and unequal (with their sides having various nominal diameters) They are manufactured in accordance with GOST 28919

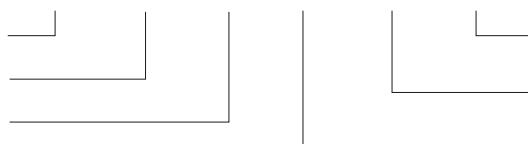
## ▶ Key Specifications:

- Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/8), 100 (4 1/16)
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- They may be manufactured with pressure gage bores K 1/2" or R 1/2" and M20x1.5
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Corrosion Protection: None, Corrosion Protection K1 and K2;
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:

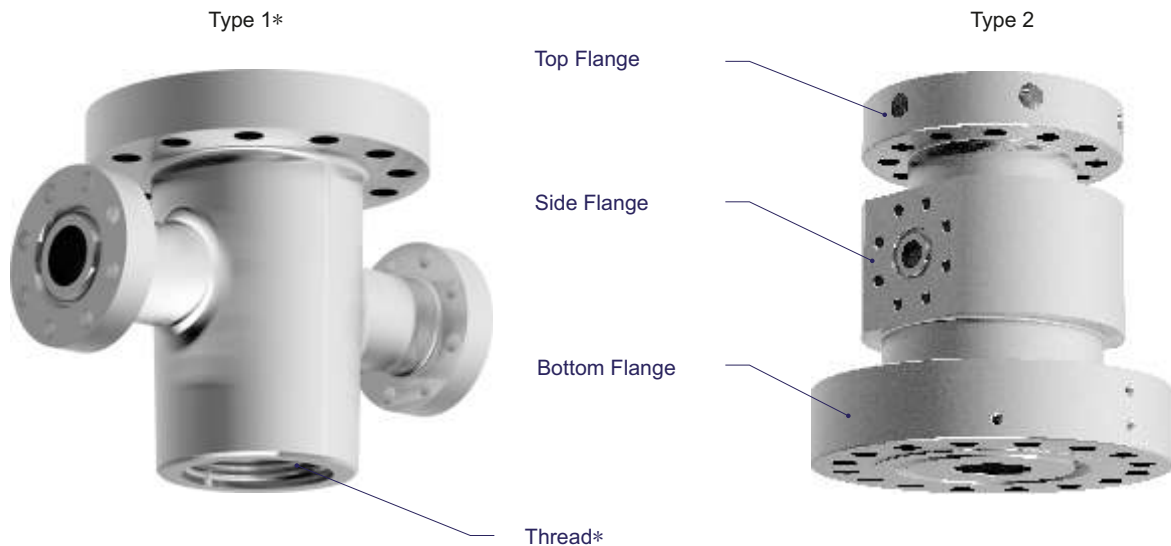
**КРΦ 80/65x70 К1 ХЛ**

Connecting Piece Type: C - Crossbar, T - Tee, E - flanged elbow  
 Central Bore Nominal Diameter, mm  
 Side Bore Nominal Diameter, mm



GOST 15150 Ambient Class  
 GOST 13846 Corrosion Protection  
 Working Pressure, MPa

# WELLHEAD CROSSBAR (KPY)



\* Bottom flange versions available

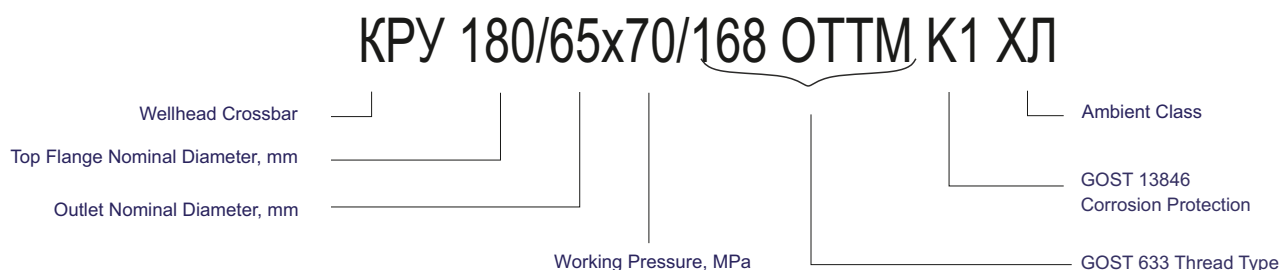
## ! Use:

Wellhead crossbars are designed for use in wellhead and blowout prevention equipment. They are manufactured in accordance with GOST 28919.

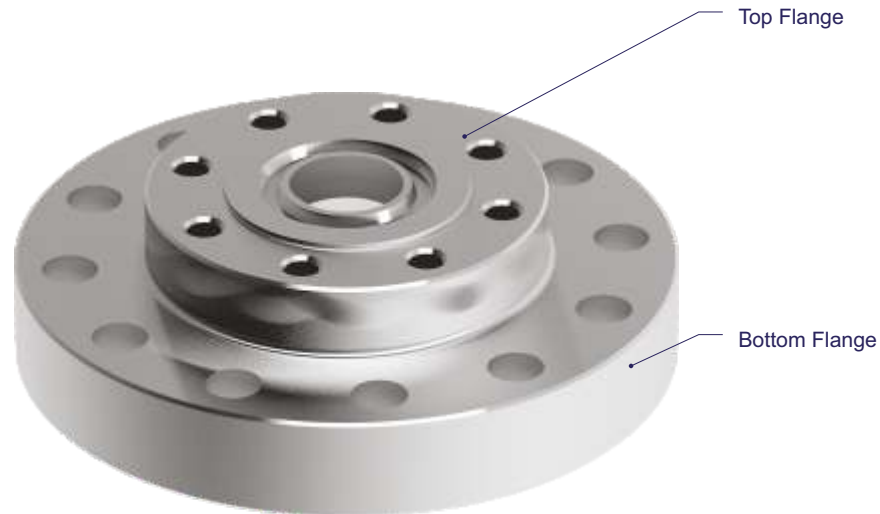
## ▶ Key Specifications:

- Top and Bottom Flange Nominal Diameter Options, mm (in): 156 (6 3/25), 180 (7 1/16), 230 (9), 280 (11), 350 (13 5/8), 425 (16 3/4), 540 (21 1/4);
- Lateral Outlet Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/8), 100 (4 1/16);
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

## \* Legend Example:



# ADAPTER (ADAPTER FLANGE)



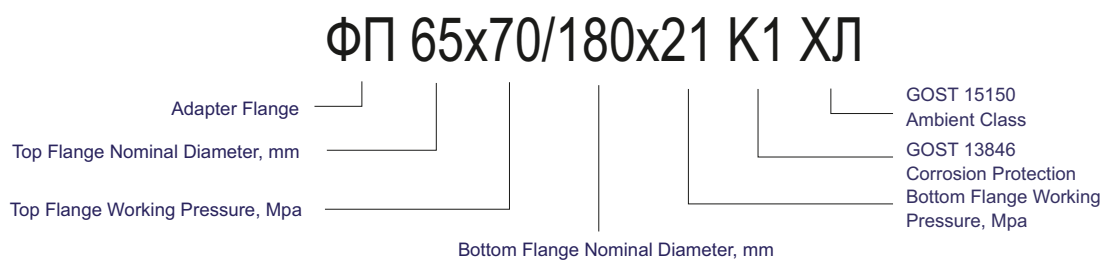
## ! Use:

Adapter flanges (adapters) are used for installing process equipment and transitioning from one flange schedule to another. They are used in wellhead and blowout prevention equipment. They are manufactured in accordance with GOST 28919.

## ▶ Key Specifications:

- Top and Bottom Flange Nominal Diameter Options, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/8), 100 (4 1/16), 156 (6 3/25), 180 (7 1/16), 230 (9), 280 (11), 350 (13 5/8), 425 (16 3/4), 540 (21 1/4);
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.
- 

## \* Legend Example:



# FLANGE



Threaded Flange



Welded Neck Flange



Instrumentation Flange

## ! Use:

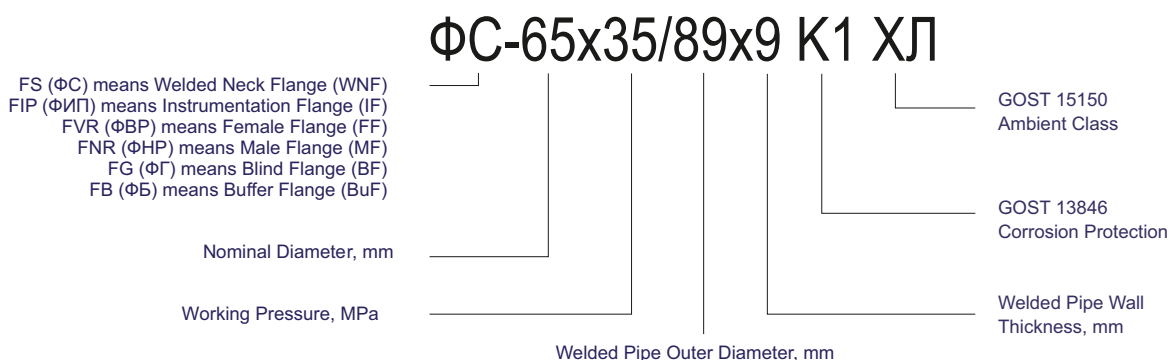
Steel instrumentation flanges, welded neck flanges, threaded flanges, blind flanges, and buffer flanges are used for connecting wellhead and blowout prevention equipment components

GOST 28919 flanged connections

## ▶ Key Specifications:

- Nominal Diameter, mm (in): 50 (2 1/16), 65 (2 9/16), 80 (3 1/16), 100 (4 1/16), 156 (6 3/25), 180 (7 1/16), 230 (9), 280 (11), 350 (13 5/8), 425 (16 3/4), 540 (21 1/4);
- Working Pressure, MPa (psi): 14 (2000), 21 (3000), 35 (5000), 70 (10000), 105 (15000);
- Well fluids: oil, gas, natural gas liquids at 25 mg/l max bottom sludge content or at 95% volume formation water
- GOST 15150 Ambient Class (U)KhL, M
- GOST 15150 Environmental Class I, II
- Ambient Temperature -60°C to +45°C
- Max Fluid Temperature +120°C
- Corrosion protection: None, Corrosion Protection K1 and K2
- API 6A Material Classes: AA, BB, CC, DD, EE.

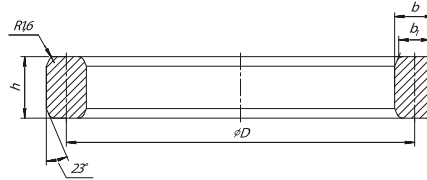
## \* Legend Example:



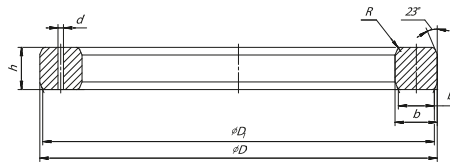
# GASKET (O RING)



Gasket П for type 1 flanged connections



Gasket EX for type 2 flanged connections



## ! Use:

Gaskets (O rings) are designed for sealing inter-flange joints of wellhead and blowout prevention equipment. They are manufactured in accordance with GOST 28919

## ► Key Specifications:

Gasket Designation	Mean Diameter, D, mm	Height, h, mm	Width, b, mm
П 23	82.5	16	11.1
П 24	95.2	16	11.1
П 26	101.6	16	11.1
П 27	107.9	16	11.1
П 31	123.8	16	11.1
П 35	136.5	16	11.1
П 37	149.2	16	11.1
П 39	161.9	16	11.1
П 45	211.1	16	11.1
П 46	211.1	18	12.7
П 49	269.9	16	11.1
П 50	269.9	21	15.9
П 53	323.8	16	11.1
П 54	323.8	21	15.9
П 57	381	16	11.1
П 65	469.9	16	11.1
П 66	469.9	21	15.9
П 73	584.2	18	12.7
П 74	584.2	24	19
Пф1	90	16	11.1
Пф2	92	18	9
Пф3	205	18	11.1
Пф4	228	16	11.1

Gasket Designation	Outer Diameter, D, mm	Width, b, mm	Height, h, mm
EX152	84.7	10.2	10.2
EX153	100.9	11.4	11.4
EX154	116.8	12.4	12.4
EX155	148	14.2	14.2
EX156	237.9	18.6	18.6
EX157	294.5	21	21
EX158	352	23.1	23.1
EX159	426.7	25.7	25.7
EX160	402.6	13.7	23.8
EX162	475.5	14.2	14.2
EX 163	556.1	17.37	30.1
EX164	570.5	24.58	30.1
EX165	624.7	18.5	32
EX166	640	26.1	32
EX167	759.4	13.1	35.9
EX168	765.2	16	35.9

Gasket Material	Steel Grade, Regulatory Technical Document Number
No corrosion protection	St 20 GOST 1050
K1	12Cr18Ni9Ti GOST 5632
K3	10Cr17Ni13Mo3Ti GOST 5632



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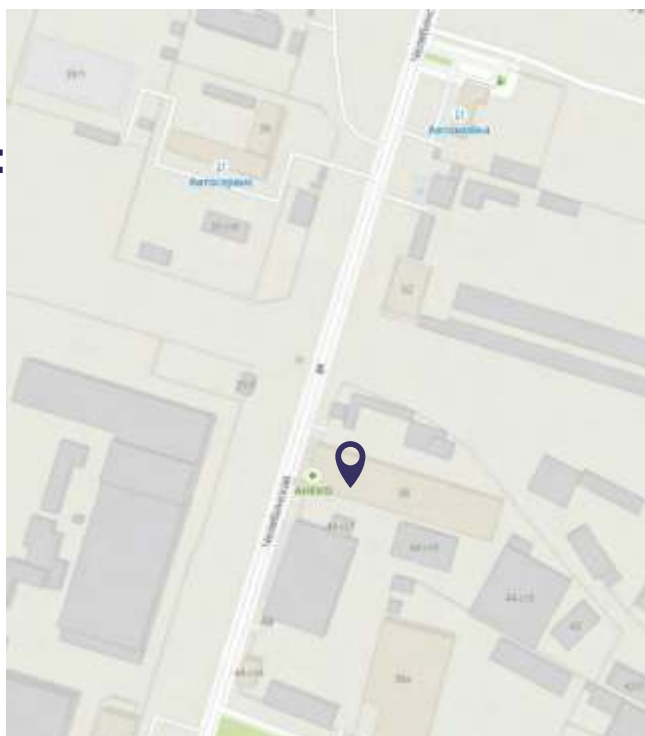
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