Drilling Well Control

Intelligent and integrated well control facilities for special and complex working conditions

29 1/2" 500psi and 30" 1000psi Diverter Products

Reference standards: API 16A、GB/T 20174

Product Applicability: It is mainly used for shallow gas control in surface borehole. Th diverter system is a control device that guides the fluid from the well to a place have saf distance, and its purpose is to reduce the wellhead back pressure. It is also called th diversion system.

Product Features

- The design and manufacture of the diverter comply with API 16A, and the flange specifications meet the requirements of Large Diameter Steel Flanges (ASME B16.47)
- The upper and lower connection specifications for 29 1/2"-500psi Diverter is class 300 B16/A NPS30 R95
- The upper and lower connection specifications for 30"-1000ps Diverter is class 600 B16/A NPS30 R95
- Appropriate surface treatment methods are adopted for key sealing parts, which can meet the requirements for using in highly corrosive environments
- Diverter should closed within 45s (Note: Need applicable closing unit to control)

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30″	1000psi	NACE MR0175
Bore Size	Rated Working Pressure	Sulfur resistance level

Technical parameter	
Bore Size	749.3mm (29 1/2"), 762mm (30")
Rated Working Pressure	3.45MPa (500psi), 6.9MPa (1000psi)
Metal material temperature level	T-20/250
Sulfur resistance level	符合NACE MR0175
Temperature Level	Highest 250°F (121°C)

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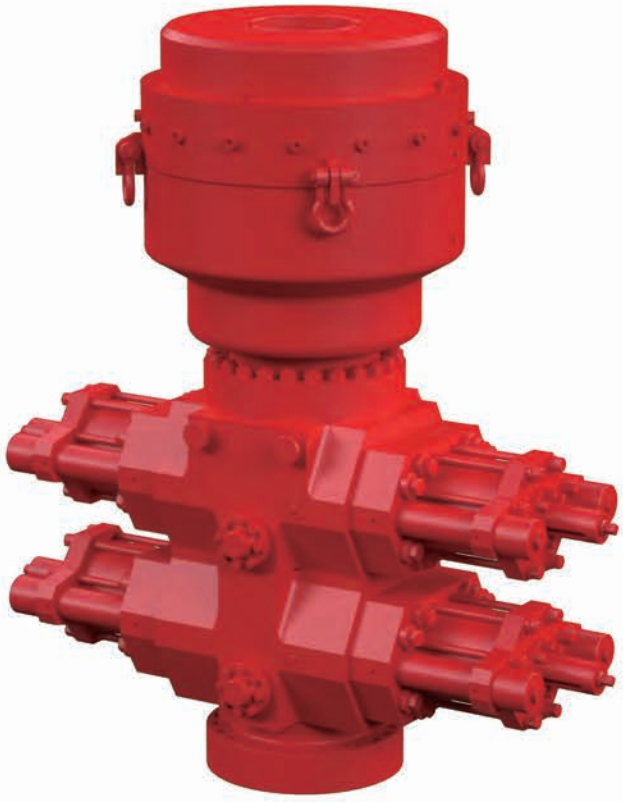
54-70 Large bore size High-pressure BOP Stack

Manufacturing Standards:API 16A、GB/T 20174

Product Applicability: For high-yield oil and gas fields and superdeep well operations under high formation pressure that require drilling wellbore with large drift diameter, corresponding large-diameter and ultra-high-pressure BOPs shall be equipped.



Product Features

- High level shearing capacity: Single cylinders have extremely high shearing capacity, and can directly cut off 5 7/8", 23.4lb/ft, S-135-grade high-performance drill pipes and achieve reliable sealing performance at a rated working pressure of 70MPa after the cutting
- Ram hang-on capacity: It can ensure sealing at the rated working pressure while hanging the drilling tool, and the hanging weight can reach up to 600000lbs (272t)
- Side door and cylinder structure: The simple structural design reduces the labor intensity and difficulty in ram replacement
- Surface treatment: Different parts are subject to corresponding advanced surface treatment to improve their anti-corrosion and the reliability of the BOP
- Can realize the gas sealing

Application Cases:High-pressure oil and gas fields in Xinjiang and Southwest of China, as well as in Pakistan and other regions

21 1/4″	10000psi	177°C
Bore size	Rated working pressure	Max temperature level

Technical Parameters	
Nominal diameter	539.45mm (21 1/4")
Rated working pressure: ram preventer	ram preventer 69MPa (10000psi) annular preventer 34.5MPa (5000psi)
Hydrostatic test pressure of the body	ram preventer 103.5MPa (15000psi) annular preventer 51.75MPa (7500psi)
Rated working pressure of hydraulic control system	20.7MPa (3000psi)
Recommended operating pressure	10.5MPa (1500psi)
Temperature level	Max 350°F (177°C)
Sulfur resistance level	NACE MR0175

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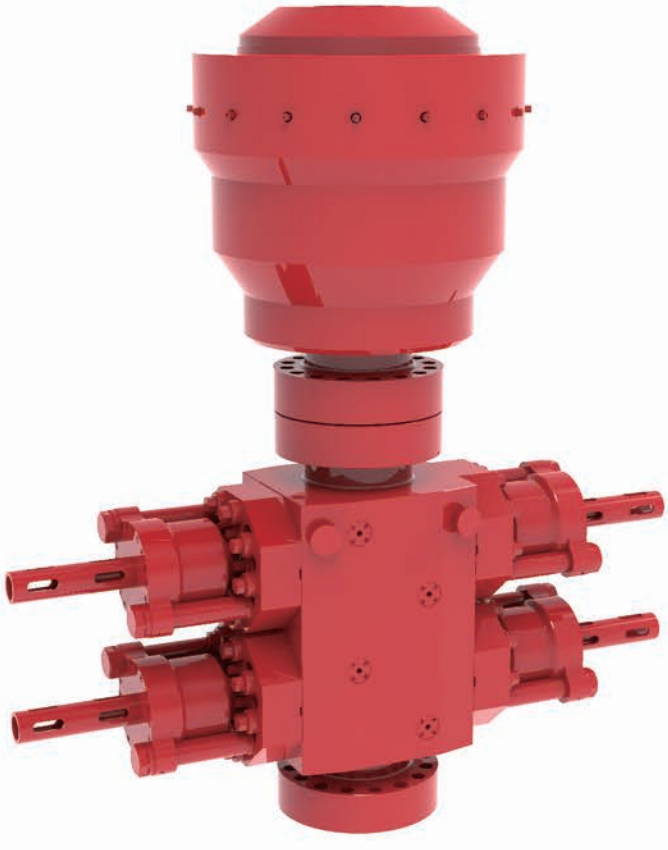
20000PSI Ultra-high-pressure BOP Stack

Manufacturing Standards: API 16A, GB/T 20174

Product Applicability: Deep, Ultra-deep wells are mined with high formation pressure, should use ultra-high pressure BOP stack to ensure well control safety

Product Features

- The floating sealing structure is adopted between the intermediate flange and the shell, which ensures stable sealing performance and reduces the tightening torque of the side door bolts
- The ram is replaced by taking out from the side, and reducing the overall height of the BOP stack, which easier to replace the ram
- Fewer parts improve the reliability of the product, simplify after-sales maintenance procedures, reduce maintenance costs, and also make the product simple and beautiful
- The shell, intermediate flange, hydraulic cylinder, piston rod, cylinder sleeve, and ram shaft are subject to corresponding advanced surface treatment to improve the anti-corrosion of the parts and the reliability of the BOP
- FHZ28-105/140 annular preventer is mainly composed of shell, piston, bonnet and other main parts. The bonnet is connected with the shell by jaw chunk, the packing element is taper type, and the sealing parts are exchangeable with imported products



Application Cases:XIN JIANG, SOUTHWEST high pressure oil field, Russia high pressure oil field

20000psi	177°C	PR1 PR2
Ultra high pressure	Highest temperature level	Performance level

Technical Parameters	
Nominal diameter	279.4mm (11")
Rated working pressure	ram preventer 138MPa (20000psi) annular preventer 103.5MPa (15000psi)
The pressure of hydrostatic proof test	ram preventer 207MPa (30000psi) annular preventer 155.25MPa (22500psi)
Rated working pressure of hydraulic control system	20.7Mpa(3000psi)
Recommended operating pressure	10.5Mpa(1500psi)
Temperature grade	Ram BOP max 350°F (177°C) Annular BOP max 250°F (121°C)
Sulfur resistance standard	NACE MR0175
Performance level	PR1、PR2

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Electrically Controlled Surface BOP Control System

Reference Standards: API 16D, SY/T5053.2

Product Applicability: temperature range: - 20~60°C; widely used in high-temperature, extremely low temperature and sandy, high-salt and humid, and other onshore and offshore environments

Product Features

- Advanced profibus technology and PLC technology are applied
- It is equipped with UPS to ensure normal operation of the control part for 2 hours in case of power failure at the well site
- Driller communication distance is ⩾ 200 meters and the response efficiency is 200 ms
- Mechanical and electrical dual fail-safes are set to prevent misoperation
- Visual touch screen is provided for driller, and UI development can be customized
- With the datalog function, it can save the operation records of the device within 60 days
- It has one-key emergency shut-in function

Application Cases:Kuwait, Iraq, Oman, etc. in the Middle East, Southwest China, Xinjiang, Northeast China, North America, South America, etc., Azerbaijan, etc. around the Caspian Sea

21MPa	31.5MPa	200ms
System rated pressure	Maximum system working pressure	Reaction efficiency

Technical Parameters	
System rated pressure	21MPa (3000psi)
Maximum system working pressure	31.5MPa (4550psi)
System pressure regulation range	0-14MPa (0-2000psi)
Power supply	380V~660V,50/60Hz
Reaction efficiency	200ms
Explosion-proof certification	CNEx/ATEX/IECEx
CCS	CCS/DNV