



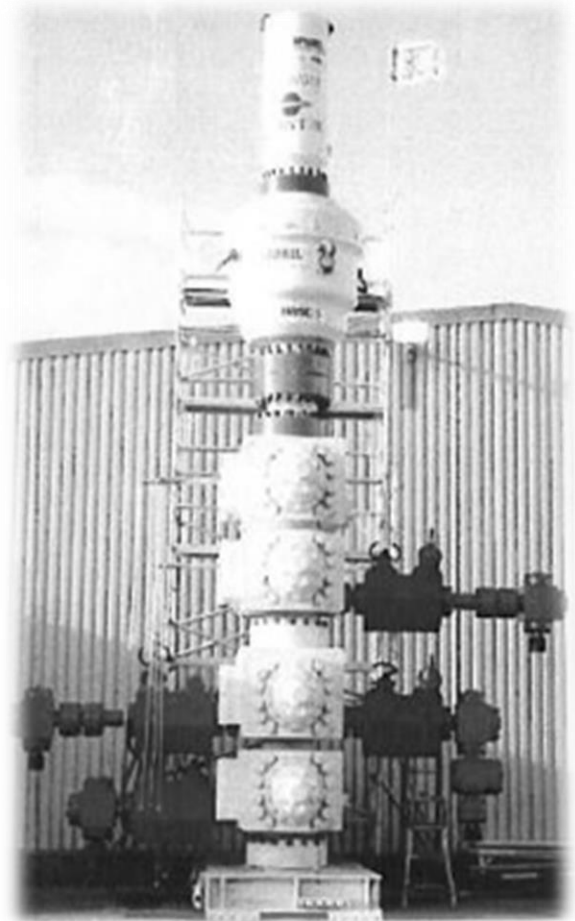
Hydril 11" 20,000 PSI HP/HT BOP System

Proven reliability for Ultra High Pressure/High Temperature

The Hydril 11" 20,000 psi HP/ HT BOP System delivers unique and proven reliability for Ultra High Pressure/High Temperature (uHP/HT) drilling, well testing, completion and intervention operations both on- and offshore. This industry leading BOP system has set the performance expectations for pressure control equipment in the world. It offers significant advantages such as working with larger tools and drill pipe sizes and better resistance to buckling forces.

Key Features

- 11" 15,000 psi Hydril Annular.
- 11" 20,000 psi identical Hydril Dual Ram BOPs with proven shear capacity and Hydril's innovative Multi-Position lock system.
- 20,000 psi Hydraulic Choke and Kill Manifold.
- All equipment is manufactured in accordance with API 16A and NACE MR-01-75 standards.
- Fully OEM certified complete with IRC, COC and ABS (CDS Standard) until Q3 2020.
- API monogrammed.
- Complete 20,000 psi FMC / NOV flow iron package available which is specifically developed for uHP/HT and sour service operations.
- A selection of fixed rams is available for both tubing and drillpipe in sizes between 1 3/8" to 7 5/8".
- Hydrostatic Shell pressure tested to 30,000 psi.
- Can be custom configured for emergency response applications such as capping and snubbing operations.
- Bespoke higher specification elastomers can be delivered upon demand.



HYDRIL PRESSURE CONTROL
a GE Oil & Gas business



ABS
TYPE APPROVED PRODUCT



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Benefits

- The Hydril 11" 20,000 psi uHP/HT BOP System delivers proven reliability with a successful track record – it was the first ever successful deployment of such a BOP System in the Norwegian sector of the North Sea on the Ultra High Pressure/High Temperature 1/5-5 Solaris gas exploration well.
- Helix Oilfield Solutions provides in-house well control engineering, training, risk prevention evaluations, well control equipment audits and operational support (including health and safety related activities) for each uHP/HT project with a team of subsea engineers, pressure control equipment technicians and world class drilling, completion and intervention experts which has proven to reduce and prevent risks in the planning and operational phases.
- Bespoke, flexible service offered.

Engineering Data - 11" 15,000 psi Hydril Annular BOP

Application	:	Offshore (subsea and surface) and onshore
Bore size	:	11 in / 279 mm
Working Pressure	:	15,000 psi / 1035 Bar
BOP Type	:	Spherical Annular Hydril GX Style
Head Type	:	Latched
Top Connection	:	11 in 15,000 API Type 6BX Studded API BX-158 Stainless Steel Ring Groove
Bottom Connection	:	13 5/8 in 15,000 API Type 6BX Flange API BX-159 Stainless Steel Ring Groove
Height	:	74.38 in / 1,890 mm
Body Diameter	:	67.13 in / 1705 mm
Weight (approximate)		
	BOP Assembly	: 35,500 lb / 16,100 kg
	Head	: 7,540 lb / 3,420 kg
	Piston	: 4,490 lb / 2,040 kg
Certification	:	ABS & OEM in accordance with API 6A, API 16A, NACE MR-01-75
Hydrostatic Shell Test Pressure	:	22,500 psi / 1550 Bar
Hydrostatic Chamber Test Pressure	:	15,000 psi / 1035 Bar
Recommended hydraulic operating pressure	:	1,500 psi / 103 Bar
Maximum Hydraulic Operating Pressure	:	3,000 psi / 207 Bar
Gal. (US Gal)/L to open	:	30 / 114
Gal. (US. Gal)/L to close	:	30 / 114





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Engineering Data – Annular Adapter

Adapter Style	:	Flanged top x Flanged bottom 11 in 15,000 psi x 13 5/8 in 15,000 psi
Length	:	26.50 in / 673 mm
Weight	:	1,000 lbs / 2,200 kg

Engineering Data - 11" 20,000 psi Hydril Dual RAM BOP

Application	:	Offshore (subsea and surface) and onshore
Bore size	:	11 in / 279 mm
Working Pressure	:	20,000 psi / 1379 Bar
BOP Type	:	Dual Ram
Top Connection	:	11 in 20,000 API Type 6BX Stud API BX-158 Inconel Ring Groove
Bottom Connection	:	11 in 20,000 API Type 6BX Flange API BX-158 Inconel Ring Groove
Side Outlets	:	Upper (2) 2 9/16 in 20,000 API Type 6BX Stud API BX-153 Inconel Ring Groove Lower (2) 2 9/16 in 20,000 API Type 6BX Flange API BX-153 Inconel Ring Groove
Cylinder Bore (Pipe/Blind/Shear Ram – in)	:	14.25
Lock types	:	14 ¼ Hydraulic Multi-Position Lock
Height	:	84 in / 2,134 mm
Length – Dual Ram	:	133.16 in / 3,382 mm
BOP Assembly Weight (approximate)	:	58,000 lb / 26,308 kg
Certification	:	ABS & OEM in accordance with API 6A, API 16A, NACE MR-01-75
Centralizing Shear Rams	:	Yes
Tubing Rams (Multiple sizes - in)	:	1.315; 1.9; 2.06; 2.375; 2.875
Pipe Rams (Multiple sizes - in) *Hanging	:	3.5*; 4.0*; 4.5*; 5.0*; 5.5*; 6.0*; 6.625*; 7.0; 7.625
Lock types	:	14 ¼ Hydraulic Multi-Position Lock
Hydrostatic Shell Test Pressure	:	30,000 psi / 2,068 Bar
Hydrostatic Chamber Test Pressure	:	4,500 psi / 310 Bar
Recommended hydraulic operating pressure	:	1,500 psi / 103 Bar
Maximum Hydraulic Operating Pressure	:	3,000 psi / 207 Bar
Gal. (US Gal)/L to open	:	11.5 / 43.5
Gal. (US. Gal)/L to close	:	12.5 / 47.3
Closing ratio	:	12.69
Opening ratio	:	2.06





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