

Product Data Sheet

5-1/8" Subsea Compact Shear & Seal (CSS) Valve



Following on from the Success of our Surface Compact shear and seal Unity have now developed the CSS system for Subsea use. Retaining the proven single ram BOP valve configuration used to shear various conveyance systems offshore, during well intervention operations. This includes: Slickline, E-line Cables, SIS Hollow Rod and Coiled Tubing. The equipment consists of two hydraulically operated shear and seal rams, that can be pumped closed to form a seal against wellbore pressure. By incorporating pistons inside ram cylinders, preventer rams can be operated in much smaller envelope than conventional BOP valves.



Benefits:

- Compact design to permit use in tight spaces
- Can be fitted through majority of rig hatches
- 50% lighter than conventional BOP design
- Technology platform for Triple/Quad BOP
- Capable of shearing high loads
- Suitable for shearing slickline, E-line cables, coil tubing and SIS hollow rods
- Easy in-field ram access without using a crane
- Replaceable rams for varying applications
- Replaceable cutting blades for low cost replacement parts
- Surface cost efficiencies applied to subsea application
- Full marine grade components, fasteners and fittings
- Collision protection added to critical areas

Specification:

Valve Type	Compact Shear and Seal – Single Ram
Valve Size	5-1/8"
Height	21.25"
Length	43.75." (Max over pin guards)
Width	23.73"
Weight	2,235 [lbs]
Max. Wellbore Pressure (MWP)	5,000 [psi]
Max. Operating Pressure (MOP)	6,000 [psi] to close; 2,000 [psi] to open
Operating Temperature	Temp Class U (-18°C to +121°C)
Trim Level	EE, other trims AOR
Water depth	300m
Service	H2S, Sour Service
Interface	5-1/8" 6BX 10K Face/Flange Mount

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Shear rating	100,000 [lbf]
Shear Ram Position Indicator	Yes, Through Indicator Pins
Control	Surface panel via umbilical
Ram Locking Device	Yes, Mechanical
Applicable Standards	API 6A: 21st Edition
	API 16A: 4th Edition
	API 16ST: 2nd Edition
	API 16D: 3rd Edition
Qualification Level	Nace MR0175: 2015
	API 16A PR1

Example of Cutting Capabilities:
Non exhaustive list. Additional Cutting
Capabilities are Available on Request

Unity SIS Hollow Rod	1.75" OD x 0.325" WT (80 ksi min. yield)
Coil Tubing	2.875" OD x 0.156" WT (100 ksi min yield)
	2.875" OD x 0.204" WT (100 ksi min yield)
	2.875" OD x 0.275" WT (100 ksi min yield)
	2.875" OD x 0.156" WT (130 ksi min yield)
	0.125" OD (220 ksi min yield)
Slickline	0.160" OD (220 ksi min yield)

