

ADVANCED SERIES **COMPENSATOR 15 L** PRODUCT SHEETS

The advanced series: a highly reliable subsea compensator range that incorporates 15 years of field feedback and is based on a solid mechanical design.



OPTION LIST

A Mounting brackets

Several standard mounting brackets are available including angled, straight and welded. Custom-made mounting brackets can be delivered as well.

B Hydraulic connections

Standard hydraulic connections are G $\frac{3}{4}$ ". The compensator can be delivered with all other kinds of connector threads as well.

C Tool for safe (dis-) assembly

Tool allowing for controlled and safe (dis-) assembly of the spring loaded compensator.

D Strain relief

The compensator can be equipped with a strain relief for protecting the underwater connector or penetrator.

E Pressure relief valve

The compensator can be equipped with a safety valve for protection against internal pressure peaks.

F Oil discharge collector

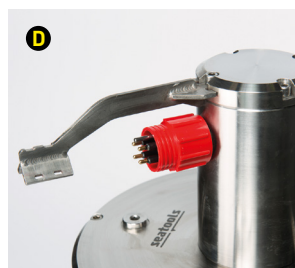
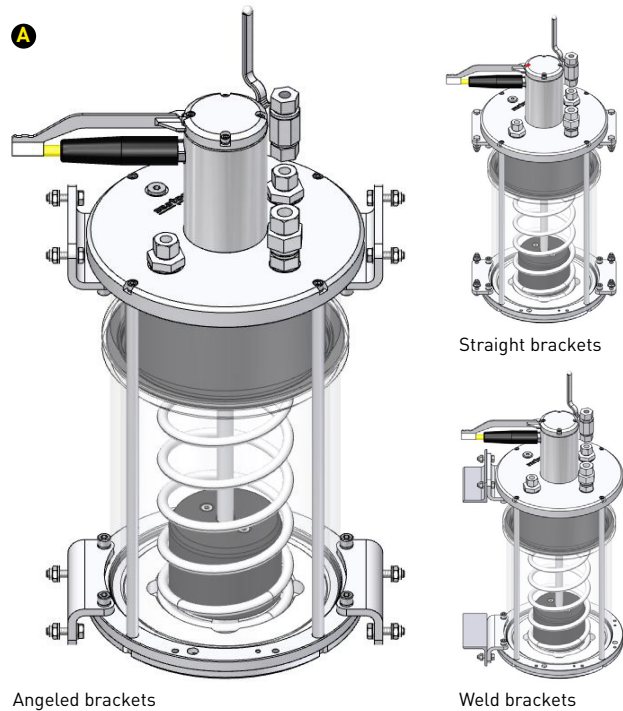
The safety valve can be connected to an oil discharge collector. This collector avoids hydraulic emissions to the environment.

G Precise oil level measurement

Precise level measurement provides accurate oil levels with an accuracy of 0.1 liters. This measurement can be interfaced with a control system and MMI.

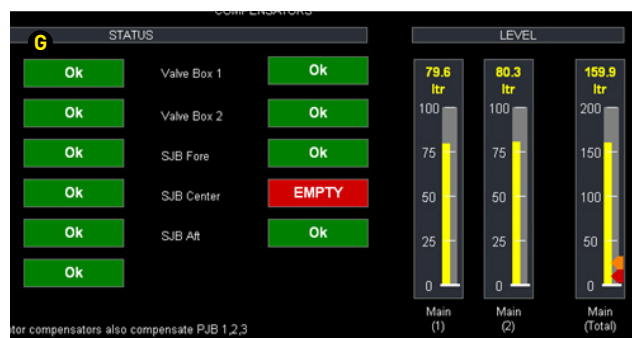
H Empty detection

Signals that the compensator is (close to) empty. Cost effective alternative for the precise oil level measurement option.



TYPICAL APPLICATIONS

- Remotely operated vehicles
- Subsea trenchers
- Subsea cleaning machines
- Submerged hydraulic dredging equipment
- Pressure compensated oil-filled electronics cabinets
- Large stroke hydraulic cylinder compensation



ADVANCED SERIES COMPENSATOR 15 LITRES SPECIFICATIONS

GENERAL

	METRIC	IMPERIAL
Compensation volume ¹	15.6 liters	4.1 US gallons
Main dimensions ²	See detailed drawings	
Maximum working depth	3000 m	10000 feet
Weight in air excl. oil & mounting brackets	69 kg	152 lbs
Materials	Duplex, AISI316, POM, PMMA, NBR	
Operational temperature range:	-10°C – +50 °C	14°F – 122 °F

¹ The advanced compensator range is also available in 0.6, 1.1, 2.4, 4.2, 6, and 10.9 liters versions.

² Please note these dimensions deviate in case an end-switch is mounted.

HYDRAULIC

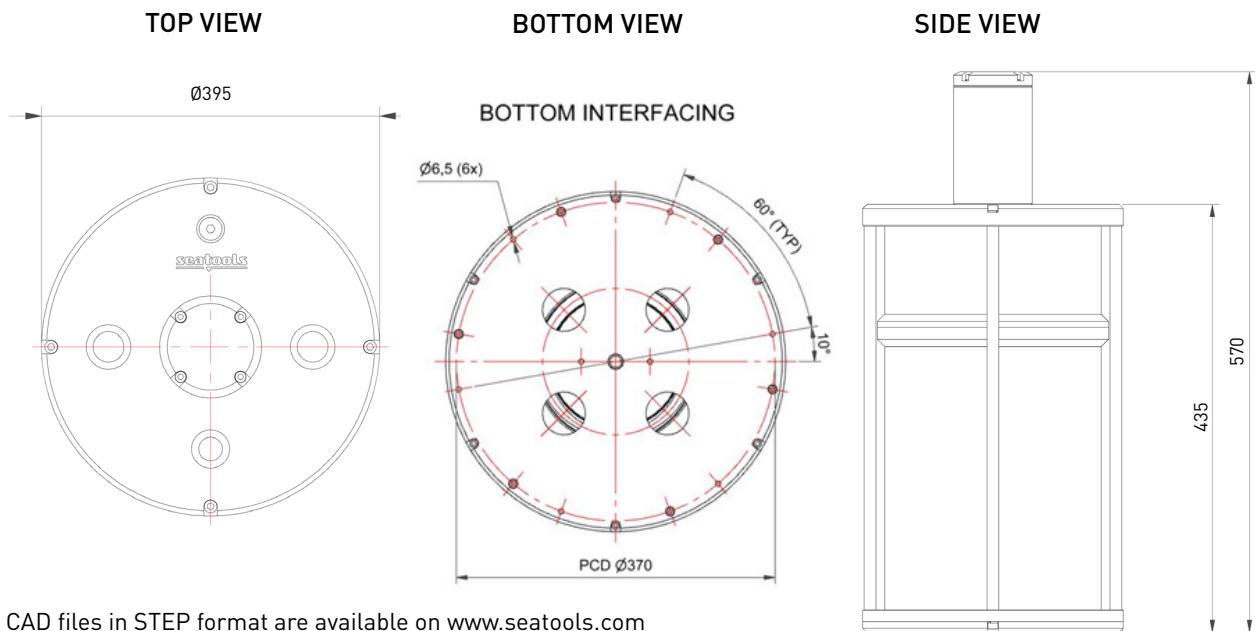
	METRIC	IMPERIAL
Hydraulic connections for hydraulic system ³	2 x (internal) G¾"	
Hydraulic connection for safety valve ³	1 x (internal) G½"	
Hydraulic connection for air bleed ³	1 x (internal) G¼"	
Pre-charge pressure	0.24 - 0.58 ± 0.05 bar	3.48 – 8.41 ± 0.73 psi
Pressure relief valve accuracy	20%	
Max. peak pressure	2.5 bar	36.2 psi

³ Compensator can be delivered in with other hydraulic connections including SAE

ELECTRICAL – OIL LEVEL SENSORS

			CONNECTOR TYPE
Industrial grade level sensor (option G)	Operating voltage	+21 Volt DC ... + 28 Volt DC	
	Max. current consumption	110 mA typical	
	Output signal	3 wires mode, analog 4 – 20 mA	3 pin Subconn connector or more
		CANbus	5 pin Subconn connector or more
		EtherCAT	6 pin Subconn connector or more
		Profibus	5 pin Subconn connector or more
		Profinet	6 pin Subconn connector or more
Empty detection (option H)	Operating voltage	+10 Volt DC ... + 30 Volt DC	
	Max. current consumption	30 mA typical	
	Output signal	Normally Closed 24VDC	3 pin Subconn micro connector or more

DIMENSIONS



3D CAD files in STEP format are available on www.seatools.com

RELATED SERVICES

Client advisory

To ensure that the right size and type of compensator is selected, we advise our clients during the selection process. We do so, taking temperature ranges, pressure ranges, filling levels, entrapped air, fluid behaviors, and other factors into account. In addition, we provide advice regarding the installation and use of a compensator in a subsea hydraulic system.

Advanced testing programs

Normal factory testing procedures include pressure testing (internal & external) and functional testing. In addition, we also offer more extensive factory testing and qualification programs including fatigue and life cycle testing, temperature range testing, and contamination testing.

Custom-made versions

Next to our standardized series, Seatools offers custom-made hydraulic compensators that are tailored to your specifications. Our made-to-order compensators can be designed in accordance with any specification, with variations in required pressure-volume characteristics, mechanical load, temperature levels, types of fluids, required redundancy, and quality standards.

Subsea hydraulic systems

Because of our subsea hydraulic engineering capabilities we are able to fully unburden our customers by delivering complete tailor-engineered subsea hydraulic systems. This includes all related systems such as mechanics, software, electronics, and controls.

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