

ULTRALONG LIFETIME SERIES **COMPENSATOR 5 L** PRODUCT SHEETS

The ultralong lifetime series:
a compensator range designed for
20 years uninterrupted seafloor
performance.



OPTION LIST

A. Applied materials

The compensator housing material of the standard version consists of anodized aluminum. For (semi-) permanent subsea usage, Seatools recommends other housing materials such as 316L and (Super) Duplex. Furthermore, surface treatments (e.g. NORSOK M-501) and polymer (e.g. O-rings) selection can be adapted to meet specific client requirements.

B. Mounting bracket

The compensator can be delivered with standard as well as custom-made mounting brackets.

C. Pressure relief valve

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

D. 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 an MMI.

E. Empty detection

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

F. Volume indicator plate

As an alternative or addition to the precise oil level measurement and the empty detection, the compensator can be delivered with a volume indicator plate.

G. Strain relief

Protects the connectors of the level measurement / empty detection sensors from mechanical strain on the cable.

B Standard mounting bracket



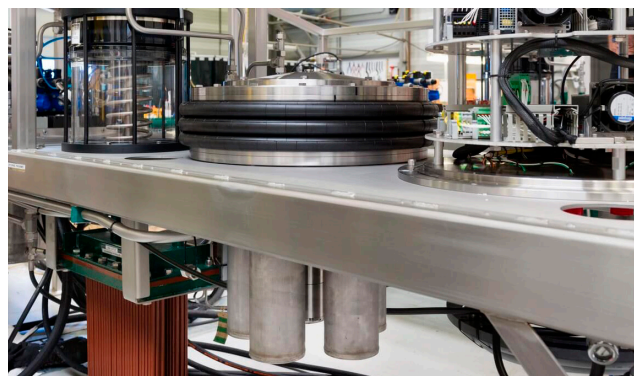
F Volume indicator plate



TYPICAL APPLICATIONS

This compensator is specifically designed for pressure compensation of permanently installed subsea equipment, including:

- Subsea mining vehicles
- Subsea HPUs
- Underwater instrumentation
- Suction tube pump motors



ULTRALONG LIFETIME SERIES 5L SPECIFICATIONS

GENERAL

	METRIC	IMPERIAL
Compensation volume ¹	5 liters	1.3 US gallons
Main dimensions ²	See detailed drawings	
Weight in air excl. oil (approx.) ³	17 kg	37.5 lbs
Housing material	Either anodized aluminium, 316, or Super Duplex	
Design lifetime ⁴	20 years	
CE compliant ⁵	Yes	

¹ The ultralong lifetime compensator range is also available in 0.7, 10, 60, 100, and 250 liters versions.

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

³ Please note this value applies only when the compensator housing is made from Aluminium.

⁴ Please note that the specified lifetime is only valid in case the housing material is Super Duplex.

⁵ As the compensator represents partly completed machinery the declaration concerns a "Declaration of Incorporation".

OPERATIONAL

	METRIC	IMPERIAL
Maximum operating depth	5000 m	16404 feet
Operating temperature range (water)	-10°C – +50°C	14°F – 122°F
Storage temperature range (air)	-25°C – +60 °C	-13°F – 140°F
Pre pressure (min. stroke)	0.3 bar (+/- 0.1 bar)	4.35 psi (+/- 1.45 psi)
Pre pressure (max. stroke)	0.9 bar (+/- 0.1 bar)	13.05 psi (+/- 1.45 psi)
Maximum safety valve setting	2 bar	29 psi
Pressure relief valve accuracy	±20%	
Polymers in contact with hydraulic fluid ⁶	Viton, NBR, POM	

⁶ Please consult our sales engineers in case the applied fluid demands for the usage of other polymers.

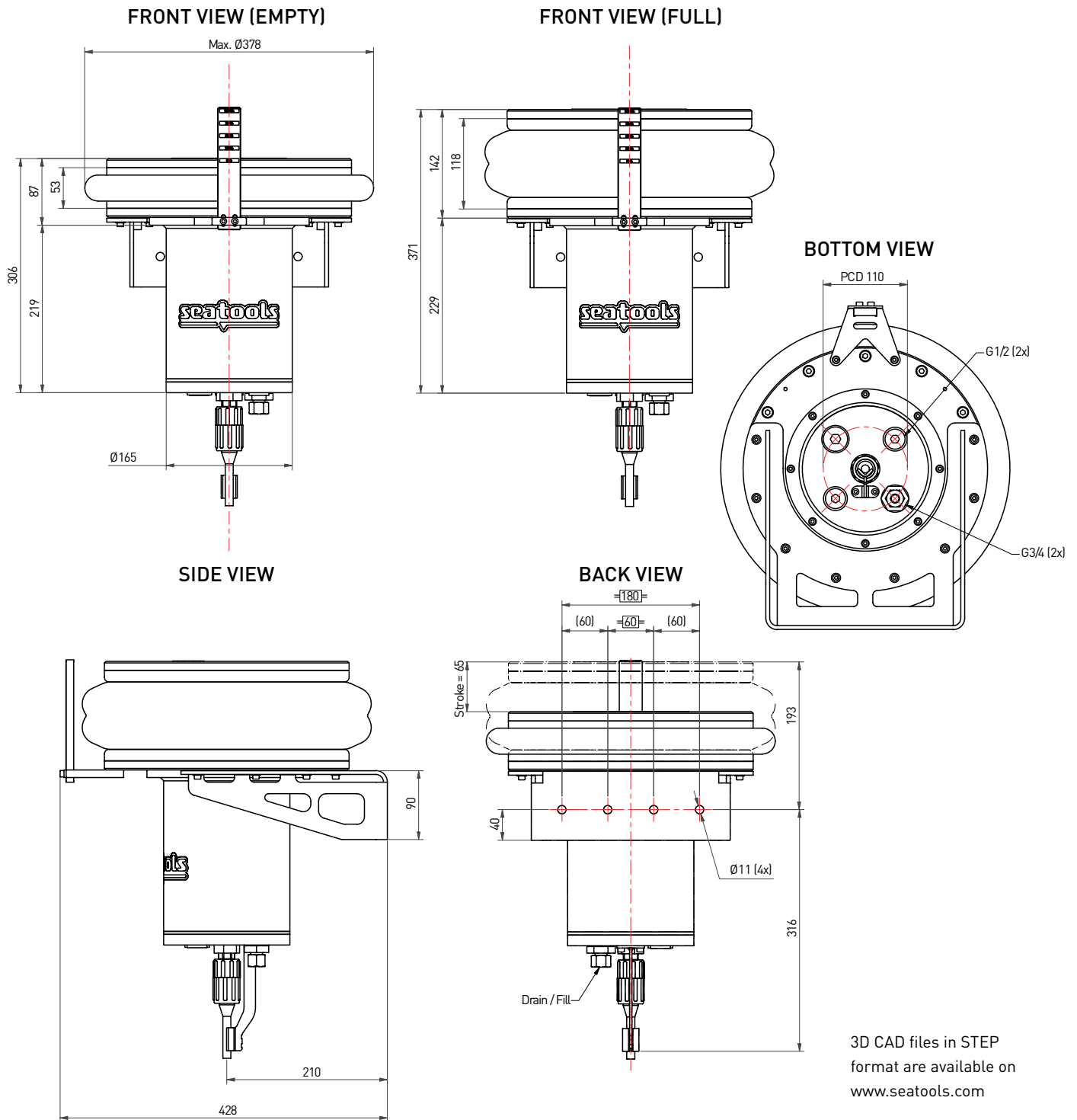
HYDRAULIC CONNECTIONS

Hydraulic connections fill, drain, hydraulic system, safety valve	2 x (internal) G 3/4" + 2 x (internal) G 1/2"
Hydraulic connection for air bleed	1 x (internal) G 1/2"

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	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

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