



Composite Air Pressure Vessel

320 bars system

Increasing safety and reducing cost

A new generation of light weight, cost-competitive composite air pressure vessels (CAPV) are now being delivered. Its noncorrosive properties coupled with our new SmartTank system ensures reduced life cycle cost and increased safety.

Introduction

Umoe Advanced Composites has designed a 320 bars system CAPV according to DNV offshore standard OS-C501, both acknowledged by DNV and ABS. It is typically used on heave compensations system for risers in offshore riser tensioning systems where its noncorrosive properties excel.

Composite Pressure vessels offer a 40% weight reduction compared to equivalent steel vessels. They are also safer than steel as they have a higher burst pressure capacity and are designed according to the "leak before burst" principle.

Maintenance costs are reduced as composites do not corrode, resulting in lower life cycle cost than equivalent steel vessels. Further life cycle cost reductions are obtained through full integration with our new SmartTank system, an integrated life time monitoring system, ensuring full life utilization and even extending its 25 year service life.

CAPVs from Umoe Advanced Composites are now installed on several of the new drillships and semisubmersible rigs operating in the deep and ultra deep waters worldwide.



Vessel Specifications



Design data:

Area classification	SAFE
Design code / standard	DNV-OS-C501
Environment	Harsh offshore environment
Design temperature	- 25°C / +55°C
Volume	350 l- 2250 l
DNV type approval	P13323
Working	320 bars / 4650 psi
Design pressure	350 bars / 5080 psi
Burst pressure	> 920 bar / 1335 psi
Internal diameter	610 mm
Outer diameter	715 mm
Loa	7274 mm (2000 l)
Weight total (bare vessel)	1800 kg (2000 l)
Expansion at Δ temp 35 °C	\approx +5 mm with +55°C (2000 l)
Expansion at 230 bars pressure	+ 20 mm with 230 bar (2000 l)
Cleanness	NAS class 8 (standard)

Further Information

You can obtain further information (data sheets, instructions, etc.) via our internet address www.uac.no

Specifications and dimensions given in this leaflet represents the state of engineering at the time of printing. Modification may take place and materials specified may be replaced without prior notice.

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