



Certificate No:
TAD00001KR

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Accumulators

with type designation(s)

Accumulator, Stainless Steel Piston Type, 0.5 Gallon Capacity, Dwg. No. 3.3A-7085, Rev. 05

Issued to

Tobul Accumulator Incorporated
Houston, TX, USA

is found to comply with

DNV-OS-E101 – Drilling facilities, Edition July 2021

DNV statutory interpretations DNV-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2021

Application :

See Page 2.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Houston** on **2023-10-19**

This Certificate is valid until **2028-10-18**.

for **DNV**

DNV local unit: **Houston Offshore Services**

Approval Engineer: **M. Kevin Mandeville Jr.**

Brandon D Caraway
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2022-12

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The following design codes and standards were used as a reference:

ASME Boiler and Pressure Vessel Code, Section VIII, Division 1, 2021 Edition

Product description

Accumulator, 0.5 Gallon Capacity, Stainless Steel body, Piston Style

Application/Limitation

Design Parameter	Value	Experience
Maximum Allowable Working Pressure	6,000 psi	413.7 bar
Hydrostatic Test Pressure	9,000 psi	620.5 bar
Maximum External Working Pressure	Not Rated†	
Minimum Design Metal Temperature	-20F	-29C
Design Temperature	200F	93F
Corrosion Allowance	0 in	0mm
Service	Standard	
ASME "U" Stamp	Yes	

†NB: Pressure vessel is not rated for external gage pressure. This does not, however, prevent use in subsea applications.

Type Approval documentation

Tests carried out

Type Testing carried out on 2023-10-24 on Serial Number 402570-402572.

Marking of product

For traceability, the following marking is to be carried out on each product:

1. Serial No.
2. Manufacturer's Name or Trademark
3. Additional marking at the manufacturer's discretion

Periodical assessment

For retention of the Type Approval Certificate, DNV's surveyor shall perform a survey after two and three-and-a-half years, in accordance with DNV's Class Programme for Type Approval, DNV-CP-0338.

Other conditions/comments

- Cylinder Castings are to be processed per ASME BPVC Section VIII, Division 1, appendix 7 and 8, for a quality factor of 90%.
- DNV Ref. Project Nos. A1419057

END OF CERTIFICATE