



Certificate No:
TAD00001EN

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Accumulators

with type designation(s)

Piston Type Accumulator, 80 Gallon Capacity, Model No. 185A60-640-F290

Issued to

Tobul Accumulator Incorporated
Houston, TX, USA

is found to comply with

DNVGL-OS-E101 – Drilling facilities, Edition January 2018

DNVGL-SI-0166 – Verification for compliance with Norwegian shelf regulations, Edition July 2018

Application :

See Page 2

This TAC replaces D-4398.

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

Issued at **Houston** on **2021-06-18**

This Certificate is valid until **2026-06-17**.

for **DNV**

DNV local station: **Houston Offshore Services**

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

.....
Meindert van Mierlo
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: 2021-03

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

ASME Boiler and Pressure Vessel Code, Section VIII, Div. 1, 2019 Ed.

Product description

Piston Type Accumulator Type Accumulator, Stainless Steel Body, 80 Gallon Capacity, Model No. 185A60-640-F290

Application/Limitation

Design Parameter	Value	Equivalent
Max Internal Working Pressure	6,000 psi	413.7 bar
Max Internal Test Pressure	9,000 psi	620.5 bar
Min Design Temperature	-20 °F	-29 °C
Max Design Temperature	200 °F	93 °C
Corrosion Allowance	0in	0mm

Type Approval documentation

Tests carried out

Test Carried out on 2021-06-08 on Serial Number 396630.

Marking of product

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

1. Serial Number
2. Manufacturer's name and trademark
3. Additional marking at manufacturer's option

Periodical assessment

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

Other Comments and Conditions

- The product/model number for this design was previously 185145A60-640-SSA.
- Examination of castings to be in accordance with the requirements of ASME BPVC Section VIII, Div. 1, 2019 Edition, Mandatory Appendix 7.
- DNV GL Ref. Project. A1016837

END OF CERTIFICATE