

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Accumulators**

with type designation(s)
Accumulator, 0.5 Gallon, Piston Style, Dwg. No. A25LX52

Issued to

Parker Hannifin Corp. dba Accumulator & Cooler Division
Machesney Park, IL, USA

is found to comply with
DNVGL-OS-E101 – Drilling facilities, Edition January 2018
DNVGL-SI-0166 - Verification for Compliance with Norwegian shelf regulations - Ch.2 Sec.7
DRILL(N), July 2015

Application :

See Page 2

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

This Type approval Certificate is 3 pages long and replaces D-5621, as issued on 2014-06-06.

Issued at **Houston** on **2018-07-27**

This Certificate is valid until **2023-07-26**.

for **DNV GL**

DNV GL local station: **Houston, Approval CMC**

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

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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.



Job Id: **262.1-017582-2**
Certificate No: **TAD00000XS**

The following design codes and standards were used as reference:

ASME Boiler and Pressure Vessel Code, Section VIII, Division 1, 2017 Edition

Product description

Accumulator A2.5L0116X53K, 0.5 Gallon capacity, Piston style body with threaded end caps.

Application/Limitation

<u>Design Parameter</u>	<u>Value</u>	<u>Equivalent</u>
Max Internal Working Pressure	7,500 psi	517.1 bar
Hydrostatic Internal Test Pressure	11,250 psi	775.7 bar
Min Design Temperature	-4 °F	-20°C
Max Design Temperature	200 °F	93 °C
Corrosion Allowance	0in	0mm

Type Approval Documentation

- Drawings

**Note: Other part numbers or updated revisions may be acceptable under this Certificate provided critical aspects of the design remain the same. Changes shall be documented and approved (via Engineering Change Notice or similar) by the Manufacturer's Engineering and/or Quality department as appropriate. DNV GL's local surveyor shall verify the change before issuance of Product Certificate.*

- Calculations
- Materials

Tests carried out

Type Testing waived for this renewal. Renewal audit was carried out on 2018-07-25.

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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

Certificate Retention Survey

For retention of the Type Approval Certificate, DNV GL's surveyor shall perform a retention survey after 2 and 3.5 years in accordance with DNV GL's Class Program DNVGL-CP-0338, *Type Approval Scheme*.

Other conditions/comments

- Examination of castings to be in accordance with the requirements of ASME 2017 BPVC Section VIII, Division 1, Mandatory Appendix 7 & 8 for magnetic particle or liquid penetrant testing.
- DNV GL Ref. Project No. A0512870

END OF CERTIFICATE