

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Portable Offshore Units

with type designation(s)

100T Dry Bulk Cement Silo - Horizontal

100T Dry Bulk Cement Silo - Vertical

Issued to

Suretank Ltd

Dunleer, Co. Louth, Ireland

is found to comply with

DNV GL standard DNVGL-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended January 2020)

Application :

DNV GL 2.7-3 Type A R30

Max. significant wave height during offshore lift: 3.0 m

Only certified lifting equipment shall be used.

Type	Max. gross mass (kg)	Max. payload (kg)	Max. sling leg angle
100T Dry Bulk Cement Silo - Horizontal	22 350	0	30
100T Dry Bulk Cement Silo - Vertical	122 350	100000	30

Issued at **Høvik** on **2021-09-17**

This Certificate is valid until **2026-09-16** .

DNV local unit: **Manchester**

for **DNV**

Approval Engineer: **Steinar Hernes**

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Stig Johannes Johannesen
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.



Holder of certificate

Suretank Limited, Shamrock Hill, Dunleer, Louth, Ireland

Manufactured by

Probe Oil Tools Ltd., Unit 1 Gawain Road, Beacon Park, Great Yarmouth, UK

Responsability

The Holder of the Certificate takes responsibility that both design and production are in compliance with the Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

Product description

POU TYPE / CLASS : DNV 2.7-3 Type A R30
TARE WEIGHT : 22 350 kg
POU external dimensions (LxWxH) : 11 497 x 3 919 x 3 919 [mm]

Application/Limitation

This Type Approval Certificate is not valid for designs, components, equipment, systems or products which are subject to classification by DNV.

Maximum Gross Weigth (MGW) : 22 350 kg Horizontal lift
: 100 000 kg Vertical lift
Max Hs during offshore lift : 3.0 m
Min. temperature : -20 °C
Max. sling angle from vertical : 30°
Shackles, horizontal lift (WLL) : 13.5 mT (Min Øpin= 38 mm)
Shackles, vertical lift (WLL) : 42.5 mT (Min Øpin= 65 mm)
Lifting procedure required : CGS-SOP-003-00
Stacking during transport at sea : not allowed

Lifting:

Lifting of these units should be carried out as planned operations. Specific lifting procedure, doc.no CGS-SOP-003-00, must be available. The procedure shall include all relevant information required to ensure safe handling of the unit (DNVGL-ST-E273 Sec. 1.2.2).

The certificates are valid only when the units are fitted with certified lifting set.

Sea transport:

The transport contractor shall before each single transport, by performing appropriate analysis taking into consideration the actual vessel particulars, position of POU, transport route and expected weather conditions, assess the requirements for seafastening and ensure that the below stated accelerations are not exceeded.

Max. accel. during transport : 1.34 m/s² Roll : 20.0°, 10 sec.
: 0.68 m/s² Pitch : 12.5°, 10 sec.
: 1.97 m/s² Heave : 5 m, 10 sec.

These limitations shall be explicitly stated in the Product Certificate for each single POU.

Fabrication/inspection/testing:

DNV surveyor to witness important production and test events and issue no. MOP 201, "Certificate for Portable Offshore Unit" for each unit.

Production strength tests to be carried out according to DNVGL-ST-E273 and after agreement with DNV Surveyor.

Type Approval documentation

Tests carried out

Prototyping testing according to DNVGL-ST-E273, Sec. 5.

All point lift test according sec. 5.2.3, total load (table 5-2): 165 t (Vertical lift)

Tested unit 1 marked: CGS-CS-100T-01.

Tested unit 2 marked: CGS-CS-100T-02.

All point lift test according sec. 5.2.3, total load (table 5-2): 44.7 t (Horizontal lift)

Tested unit 3 marked: CGS-CS-100T-03.
Tested unit 4 marked: CGS-CS-100T-04.

Marking of product

Each unit to be marked with:

- Safety marking according to DNVGL-ST-E273 (January 2020), sec. 6 including
 - Operational Class Identification
 - "OPERATIONAL RESTRICTIONS"
- Data plates according to DNVGL-ST-E273 (January 2020), sec. 6
- Reference to operational procedure shall be clearly stated on information plate
- The general DNV hard stamp "VL" shall be hard stamped on frame
- Manufacturer's serial number to be welded on frame
- DNV emblem for Portable Offshore Units

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out according to DNVGL-CP-0338 at 2- and 3.5-year intervals. Periodical assessments will, when possible, be harmonized with other surveys and audits carried out

This certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>