

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Cargo Securing Devices**with type designation(s)
Remote Container Lock (RCL C) / PRO-168Issued to
LOX Container Technology AB
Stockholm, Stockholms Län, Swedenis found to comply with
DNV rules for classification – Ships

Application :**Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.****SWL, tension (kN) 150**
SWL, shear (kN) 210
SWL, compr. (kN) 1000Issued at **Hamburg** on **2022-04-19**This Certificate is valid until **2027-04-18**.DNV local station: **Sweden CMC**Approval Engineer: **Mark-Oliver Wobig**for **DNV**

Andree Orth
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.



Product description

The Remote Container Lock (RCL C) is remotely locked and unlocked through user application and wireless communication. Locking and unlocking can only be performed in the locking/unlocking station with LOX encrypted control system (onshore). The lock is in sleep mode outside the locking/unlocking station (offshore).

Place of manufacture

Lox Container Technology AB
Frihamngatan 30, 115 56 Stockholm, Sweden

Application/Limitation

This Type Approval covers the mechanical parts of RCL C. The electric and electronic parts of RCL C are covered by separate type approval certificate TAA000034T.
The RCL C is intended to be used on board of RORO vessels and combined RORO / CONTAINER vessels (CONRO vessel).

Load	Tension [kN]	Shear [kN]	Compression [kN]
Test Load	188	263	1250
Breaking Load	300	420	2000

Tests to be carried out:

- Production testing: At least 2% of the items delivered are to be selected and subjected to the test load.
- Material tests are to be included energy testing at -20°C, with the impact energy requirements acc. to DNV CP-0068. The material shall be according to the approved drawings. Material certificates shall be 3.1 acc. to ISO 10474:2013.

Type Approval documentation

Tests carried out

The prototype test for compression and shear, was carried out in Stockholm, Sweden, dated 2021-12-01 in accordance with the DNV CP-0068.

The prototype tensile test was carried out in Stockholm, Sweden, dated 2021-05-25 in accordance with the DNV CP-0068.

Marking of product

Each item shall be marked by manufacturer for traceability.

The products to be marked with:

- manufacturer name
- model name
- serial number

Periodical Assessment

For retention of the Type Approval, a DNV surveyor shall perform a survey after 2 and 3.5 years, to verify that the Type Approval is complied with.

END OF CERTIFICATE