

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Cargo Securing Devices**with type designation(s)  
**D-Ring AL-C1**

Issued to

**General Lashing System (China) Co., Ltd.**  
**2113, Ningheng South Road Hengxi, Yinzhou, Ningbo , China**is found to comply with  
**DNV GL rules for classification – Ships****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****SWL, tension (kN) 180**  
**SWL, shear (kN) -**  
**SWL, compr. (kN) -**Issued at **Hamburg** on **2018-08-01**for **DNV GL**This Certificate is valid until **2023-07-31**.DNV GL local station: **Ningbo**Approval Engineer: **Mark-Oliver Wobig**.....  
**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.



## Product description

D-Ring

## Application/Limitation

<u>Load</u>	<u>Tension [kN]</u>
Test Load	270
Breaking Load	360

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 DNVGL-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

<u>Drawing No.</u>	<u>Rev.</u>	<u>Title</u>
AL-C1		D-Ring
AL-C1/02		Block
AL-C1/01		D-Ring

Drawing Approval: Ref. No. 12-019610 dated 2012-05-14

## Tests carried out

The prototype test was carried out in Ningbo, P.R. China, dated 2018-06-14 in accordance with the DNVGL-CP-0068.

## Marking of product

Each item shall be marked by manufacturer for traceability.

## Periodical Assessment

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