



Certificate no.:
TAS000052N

TYPE APPROVAL CERTIFICATE

This is to certify:

that the **Cargo Securing Devices**

with type designation(s)
Fully Automatic Twistlock TL-FA/GSL

issued to

SEC Ship's Equipment Centre Bremen GmbH & Co. KG
Bremen, Germany

is found to comply with

DNV class programme DNV-CP-0068 – General – Certification of container securing devices

Application:

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

SWL, tension (kN) 250
SWL, shear (kN) 210
SWL, compr. (kN) 1200

Issued at **Hamburg** on **2025-11-24**

This Certificate is valid until **2030-11-23**.

for **DNV**

DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Aadil Wafdi**

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 USD 300 000.

Product description

Fully Automatic Twistlock

Application/Limitation

Load	Tension [kN]	Shear [kN]	Compression [kN]
Test Load	313	263	1500
Breaking Load	750	630	2400

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 issued by the society.

Type Approval documentation

Drawing No.	Rev.	Title
P – TL 9203 D	D	Fully Automatic Twistlock
P – TL 9202 D	D	Body for TL-FA/GSL (pg.1 – 4)

Drawing approval: Ref.No. 262.1-044199-1, dated 2025-09-18

Test Report of SEC dated 2025-09-24 in Zarrentin and Test report of SEC, dated 2025-10-17 in Shanghai

Tests carried out

The prototype test was carried out in Shanghai, P.R. China, dated 2025-10-17 in accordance with the DNV-CP-0068. The operational test was carried out in Zarrentin, Germany, dated 2025-09-24 in accordance with the DNV-CP-0068.

Additional to requirements of the DNV-CP-0068 the operational test was extended by a pull test with a pull-out force of 500 kN. Under this pull-out force the tested twistlocks remained in their positions. After the test no recipient cracks nor permanent deformations could be found at the tested specimen.

The topplate of the container corner, which was subjected to pull-out force by the twistlock's latch was largely deformed due to the pull-out force. In the operational test a twistlock opening of 10.5 mm under a pull-out force of 250 kN was measured. The applicable vertical twistlock clearance in container lashing calculation according to DNV-rules Pt.5 Ch.2 Sec.8 is 12mm.

Marking of product

Each item shall be marked by manufacturer for traceability.

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.

Manufactured by

Shanghai SEC Machinery & Equipment Co.,Ltd.