Certificate No:
TAS00003F7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the lifting set component for offshore containers and portable offshore units

with type designation(s)
Master links - GPMLDNVXX
Sub assemblies - GPMLADNVXX

Issued to
Van Beest B.V.
Sliedrecht, Zuid-Holland, Netherlands

is found to comply with
DNV standard DNV-ST-E271 – 2.7-1 Offshore containers, January 2021 (Amended October 2021)
DNV standard DNV-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended October 2021)
ISO 10855-2:2018 Offshore containers and associated liftings sets – Part 2: Design, manufacture and testing of lifting sets
IMO/MSC Circular 860
EN 1677-4 Components for slings – Safety – Part 4: Links, Grade 8

Application :

Grade 8 links for lifting sets for offshore containers and portable offshore units

Issued at **Aberdeen** on **2022-06-14**
This Certificate is valid until **2026-06-30** .
DNV local unit: **Rotterdam**

Approval Engineer: **Elisabeth Legg**

for **DNV**

Satya Shyamala Kuppili
Team Lead - Containers

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.

Manufactured by

DNV Id No.: 10698797

Responsibility

Van Beest B.V. takes responsibility that both design and production at all places of manufacture are in compliance with the Rules, Standards and/or Regulations listed on page 1 of this type approval certificate.

Product description

This approval covers master links, intermediate links and master link assemblies for use in lifting sets for units certified in accordance with DNV-ST-E271 or DNV-ST-E273.

Detailed product information of certified products covered by this type approval are listed in Appendix 1 of this type approval certificate.

DNV has accepted some components with internal dimensions smaller than those specified in EN 1677-4 Table 2. These are marked with * in Appendix 1.

Application/Limitation

Design temperature: - 40°C

- Master links: GPMLDNV16 (16 mm) to GPMLDNV50 (50 mm)
- Sub-assemblies: GPMLADNV16 (16 mm / 14.5 mm) to GPMLADNV50 (50 mm / 45 mm)

Design temperature: - 20°C

- Master links: GPMLDNV65 (65 mm) to GPMLDNV75 (75 mm)
- Sub-assemblies: GPMLADNV65 (65 mm / 50 mm) to GPMLADNV75 (75 mm / 65 mm)

Selection of the correct dimensions of lifting sets and/or lifting set components shall be carried out in accordance with the requirements for lifting sets of offshore containers in DNV-ST-E271 section 8.

Tests to be carried out:

- Production testing: in accordance with DNV-ST-E271 and EN 1677-4, in agreement with the DNV surveyor.
- Material to be impact tested by Charpy impact method in accordance with DNV-ST-E271 section 8.4.

Van Beest B.V. shall issue product certificates in accordance with DNV-ST-E271 section 8.5, using the certificate form KF-10-690A Issue 01.05.2022. This certificate form shall only be used for links certified in accordance with this type approval.

For links manufactured in accordance with DNV-ST-E271

The required Working Load Limit (WLL) for a given container rating should be determined in accordance with DNV-ST-E271 Table 8-1 and Van Beest B.V. procedure. In no case should an offshore container lifting set WLL be less than 7.0 tonnes.

For links manufactured in accordance with DNV-ST-E273

Prior to selection of links, the minimum required working load limit (WLL) shall be determined in accordance with the strength requirements for lifting sets on portable offshore units as given in DNV-ST-E273 section 7.3.5 and must be approved by DNV. Resultant sling force (RSF) can be found in the design verification report (DVR) issued by DNV for the portable offshore unit.

Type Approval documentation

Tests carried out
Prototype testing shall be carried out in accordance with DNV-ST-E271.

Marking of product
Components shall be marked in accordance with EN 1677-4 chapter 7.1, DNV-ST-E271 section 8 or DNV-ST-E273 section 7, as appropriate.

Periodical assessment
In order to maintain the validity of the type approval certificate, periodical assessments should be carried out by a DNV surveyor every 12 months.

END OF CERTIFICATE

Appendix 1

Product description and details:

The values of the working load limit (WLL) specified below are nominal for each component and the correct selection shall be made in accordance with DNV-ST-E271 section 8.

Master links:

Type	Description	Diameter [mm]	Working Load Limit (WLL) [t]	Manufacturing Proof Force (MPF) [kN]	Minimum Breaking Force (BF) [kN]
GPMLDNV16 **	GP 8 MLDNV16-5/8	16	4.1	101	201
GPMLDNV22	GP 8 MLDNV22-7/8	22	7.0	172	343
GPMLDNV26	GP 8 MLDNV26-1	25.5	9.3	229	456
GPMLDNV28	GP 8 MLDNV28-1 1/8	28	14.5	356	711
GPMLDNV28S *	GP 8 MLDNV28S-1 1/8	28	19.5	479	956
GPMLDNV32	GP 8 MLDNV32-1 1/4	32	19.0	466	932
GPMLDNV36	GP 8 MLDNV36-1 3/8	36	26.0	638	1275
GPMLDNV40	GP 8 MLDNV40-1 9/16	40	30.5	749	1496
GPMLDNV45	GP 8 MLDNV45-1 3/4	45	40.0	981	1962
GPMLDNV50	GP 8 MLDNV50-2	50	51.0	1251	2502
GPMLDNV65	GP 8 MLDNV65-2 9/16	65	75.0	1840	3679
GPMLDNV75	GP 8 MLDNV75-3	75	100.0	2453	4905

*) Non-standard sizes, see comment under Product description.
**) This size shall only be used for portable offshore units.

Sub assemblies:

Type	Description	Diameter [mm]	Working Load Limit (WLL) [t]	Manufacturing Proof Force (MPF) [kN]	Minimum Breaking Force (BF) [kN]
GPMLADNV16 **	GP 8 MLADNV16-14-5/8	16 / 14.5	4.1	101	201
GPMLADNV22	GP 8 MLADNV22-22-7/8	22 / 22	7.0	172	343
GPMLADNV26	GP 8 MLADNV26-22-1	25.5 / 22	9.3	229	456
GPMLADNV28	GP 8 MLADNV28-22-1 1/8	28 / 22	14.5	356	711
GPMLADNV32	GP 8 MLADNV32-28-1 1/4	32 / 28	19.0	466	932
GPMLADNV36	GP 8 MLADNV36-28-1 3/8	36 / 28	26.0	638	1275
GPMLADNV40	GP 8 MLADNV40-32-1 9/16	40 / 32	30.5	749	1496
GPMLADNV45	GP 8 MLADNV45-36-1 3/4	45 / 36	40.0	981	1962
GPMLADNV50	GP 8 MLADNV50-45-2	50 / 45	51.0	1251	2502
GPMLADNV65	GP 8 MLADNV65-50-2 9/16	65 / 50	75.0	1840	3679
GPMLADNV75	GP 8 MLADNV75-65-3	75 / 65	100.0	2453	4905

**) This size shall only be used for portable offshore units.