Certificate no.:
TAS00005JB

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Lifting set for offshore containers and portable offshore units

with type designation(s)
Green Pin Polar shackles

issued to
Royal Van Beest Group B.V.
Sliedrecht, **Netherlands**

is found to comply with
DNV standard DNV-ST-E271 – 2.7-1 Offshore containers, March 2023 (Amended December 2024)
DNV standard DNV-ST-E273 – 2.7-3 Portable offshore units, April 2016 (Amended May 2022)
ISO 10855-2:2024 Offshore containers and associated lifting sets – Part 2: Design, manufacture and marking of lifting sets
IMO/MSC Circular 860
ASME B30.26-2026 Rigging Hardware – Safety Standard for Cableways, Cranes, Derricks, Hoists, Hooks, Jacks, and Slings
ISO 2415:2022 Forged shackles for general lifting purposes – Dee shackles and bow shackles
Federal Specification Chains and Attachments, Carbon and Alloy Steel, RR-C-271H

Application:

grade 8 shackles for offshore container and portable offshore unit lifting sets

Issued at **Aberdeen** on **2026-11-03**
This Certificate is valid until **2031-11-02**.
DNV local unit: **Rotterdam**

Approval Engineer: **Elisabeth Legg**

for **DNV**

Digitally signed by Ward, Brendan
Location: DNV Aberdeen, UK
Reason: on behalf of Lukasz Soltysik
Contact Info: DNV UK Limited
Date: 2026.11.04 06:00:52Z00'00'

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

Manufacturing of the products is undertaken at the following locations:

Place of manufacture	Activities	Local DNV office
Royal Van Beest Group B.V. Sliedrecht, Netherlands	• forging of shackle bows • forging of shackle pins • machining of parts • quenching and tempering shackle bows and pins • coating the parts • assembly of parts • QC activities: inspection, testing and issuance of product certificates.	Rotterdam, Netherlands
	• forging of shackle bows (5 to 45 mm) • bending of shackle bows • machining of shackle bows • quenching and tempering shackle bows • coating the shackle bows • QC activities: inspection, testing of shackle bows	
	• forging of shackle pins (6 to 50 mm) • machining of shackle pins • quenching and tempering shackle pins • QC activities: inspection, testing of shackle pins	
	• Forging of shackle pins (42 to 83 mm) • machining of shackle pins • quenching and tempering shackle pins • QC activities: inspection, testing of shackle pins	

Responsibility

Royal Van Beest Group 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 type approval certificate replaces TAS000033J Revision No: 5 and older versions.

This type approval covers shackles for use in lifting sets for offshore containers certified in accordance with DNV-ST-E271 or portable offshore units certified in accordance with DNV-ST-E273:

Type	Grade	Bow shackle	Safety bolt	Safety bolt with fixed nut
G-5143	8	x		x
G-5163	8	x	x	

Implementation of RFID on Green pin shackles from 17 tonnes and upward.

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

Application/Limitation

Minimum design temperature: -60°C

The shackles are approved for use in lifting sets that comply with DNV-ST-E271 or DNV-ST-E273. The company performing the assembly of the lifting sets is considered to be the lifting set manufacturer.

The minimum shackle working load limit (WLL_s) 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 ISO 2415:2022 in agreement with the local DNV office.
- Material to be impact tested by Charpy impact method in accordance with DNV-ST-E271 section 8.4.

The manufacturer shall issue product certificates in accordance with DNV-ST-E271 section 8.5 and DNV-ST-E273 section 7.5, using the certificate form no. KF-10- 490D Issue: 02.07.2026. This certificate shall only be used for lifting sets certified in accordance with this type approval.

Application of shackles certified 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. In no case should an offshore container lifting set WLL be less than 7.0 tonnes.

Application of shackles certified in accordance with DNV-ST-E273
Prior to selection of shackles, 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 7.3.2 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.

Shackles that will experience significant out-of-plane loading, shall be derated in accordance with the guidance provided in DNV-ST-E273 section 7.3.3.

Type Approval documentation

Tests carried out

Prototype testing shall be carried out in accordance with DNV-ST-E271 and ISO 2415:2022.

Marking of product

Components shall be marked in accordance with DNV-ST-E271 section 8 and ISO 2415:2022.

Periodical assessment

In order to maintain the validity of the type approval certificate, periodical assessments should be carried out by a DNV surveyor at all manufacturing locations every **12 months** in accordance with DNV-SE-0284. Periodical assessments will, when possible, be harmonised 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

Appendix 1

Product description and details

Grade 8 Green Pin Polar Shackles:
- dee and bow with safety bolt
- dee and bow with safety bolt and fixed nut.

Type		Nominal size [mm]	Working Load Limit (WLL) [t]	Manufacturing Proof Force [2] (MPF) [kN]	Minimum Breaking Force [2] (BF) [kN]	Safety Factor [1]
G-5143	G-5163					
x	x	13.5	2.0 [3]	39.2	98.1	6
x	x	16	3.25	63.8	160	6
x	x	19	4.75	93.2	233	6
x	x	22	6.5	127.5	319	6
x	x	25	8.5	166.8	417	6
x	x	28	9.5	186.4	466	6
x	x	32	12.0	235.4	589	6
x	x	35	13.5	264.9	662	6
x	x	38	17.0	333.5	834	6
x	x	45	25.0	490.5	1226	6
x	x	50	35.0	686.8	1717	6
x	x	57	42.5	834.0	2085	6
x	x	65	55.0	1079.2	2698	6
x	x	75	85.0	1667.7	4169	6

1) Manufacturer's factor of safety against breaking. Minimum proof force and breaking force values meet or exceed those specified in ISO 2415:2022 Table 2
2) In accordance with ISO 2415:2022
3) This size is only suitable for portable offshore units. Shackles with WLL less than 3.25 tonnes shall not be used in lifting sets for offshore containers.