Certificate no.:
TAS000045H

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Lifting Gear

with type designation(s)
FH-STD (I) 1/1, FH-STD (II) 1/1, FH-STD (III) 1/1, FH-STD (IV) 1/1, FH-STD (V) 1/1, FH-STD (I) 2/1, FH-STD (II) 2/1, FH-STD (III) 2/1, FH-STD (IV) 2/1, FH-STD (V) 2/1

issued to
FUCHS Fördertechnik GmbH
Oststeinbek, Schleswig-Holstein, Germany

is found to comply with
DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances
DNV standard DNV-ST-0378 – Offshore and platform lifting appliances

Application:

Product(s) approved by this certificate is/are accepted for DNV product certification.

Issued at **Hamburg** on **2024-05-02**
This Certificate is valid until **2029-05-01**.
DNV local unit: **Hamburg – CMC North/East**

Approval Engineer: **Stefan Heuer**

for **DNV**

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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

Bottom hook blocks with 1 and 2-chain reeving in closed and open environment.

Application/Limitation

1. Working conditions:
- Design temperature: -20°C
- Hoist load coefficient ≤ 1,33
- 1-fall reeving and 2-fall reeving
- Max. 20000 load cycles

Type designation	SWL	Chain	Hook	Product type (DE)	Product type (EN)
FH-STD (I) 1/1	320 kg	4x12	GSN 012	Hakengeschirr (1/1)	Bottom hook block (1/1)
FH-STD (II) 1/1	500 kg	5x16	GSN 012	Hakengeschirr (1/1)	Bottom hook block (1/1)
FH-STD (III) 1/1	1.000 kg	7x21,9	GSN 025	Hakengeschirr (1/1)	Bottom hook block (1/1)
FH-STD (IV) 1/1	1.600 kg	9x27	GSN 05	Hakengeschirr (1/1)	Bottom hook block (1/1)
FH-STD (V) 1/1	2.500 kg	11,3x31	GSN 08	Hakengeschirr (1/1)	Bottom hook block (1/1)
FH-STD (I) 2/1	500 kg	4x12	GSN 012	Hakenflasche (2/1)	Bottom hook block (2/1)
FH-STD (II) 2/1	1.000 kg	5x16	GSN 025	Hakenflasche (2/1)	Bottom hook block (2/1)
FH-STD (III) 2/1	2.000 kg	7x21,9	GSN 05	Hakenflasche (2/1)	Bottom hook block (2/1)
FH-STD (IV) 2/1	3.200 kg	9x27	GSN 08	Hakenflasche (2/1)	Bottom hook block (2/1)
FH-STD (V) 2/1	6.300 kg	11,3x31	GSN 1.6	Hakenflasche (2/1)	Bottom hook block (2/1)

2. All materials are to be delivered with 3.1 certificates acc. to EN 10204 (or ISO 10474), documenting mechanical properties and chemical composition in compliance with DNV-ST-0377, Section 3.

3. Product certification:
To obtain a DNV Product Certificate, each lifting gear shall be tested with:
- Lpstat: 2.0 x SWL [DNV-ST-0377, Table 7-4]

4. Maintenance:
Each lifting gear shall be inspected by a qualified person before every use, subject to an examination by the Society´s surveyor every 12 month, as well as to a thorough examination every five (5) years [DNV-ST-0377, 7.3.5.2]. Manufacturer requirements shall be overserved in addition.

Type Approval documentation

Tests carried out

Test report 2024/0173 dated 2024-04-25 witnessed by DNV
Test report 2024/0174 dated 2024-04-25 witnessed by DNV

Marking of product

Each lifting gear shall be marked by the manufacturer with at least [DNV-ST-0377, 7.4]:
- Manufacturers name or trademark
- Type designation of loose gear
- Serial number
- Year of construction
- Nominal load “SWL” in t or kg

Periodical assessment

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

END OF CERTIFICATE