



Certificate No:
TAS00003SW

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Lifting Gear

with type designation(s)
G3-02572, G3-02573 & G3-02574

Issued to
GOSAN, S.A.
Ortuella, 48, Spain

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

Application :

Offshore cranes

Issued at **Høvik** on **2023-03-01**

This Certificate is valid until **2028-02-29**.

DNV local unit: **Area NB/CMC Iberia**

for **DNV**

Approval Engineer: **Luisa Brites**

Per Esvall
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.

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.



Form code: TA 251

Revision: 2022-12

www.dnv.com

Page 1 of 2

Product description

Sheave	G3-02572	G3-02573	G3-02574
Design temperature [°C]	-20	-20	-20
Sheave pitch diameter [mm]	1050	714	966
Wire rope diameter [mm]	50	34	46
F.E.M. 1.001 component group	E5	E5	E5
Load condition			
Maximum static line pull [mT]	38.5	15.4	34.6
Dynamic factor (DAF)	1.3	1.3	1.3
Maximum fleet angle [deg]	1.5	1.5	1.5
Maximum wrap angle [deg]	180	90	180

For crane applications, the maximum static load shall include effects such as the weight of the hook/block, the weight of the wire rope and the sheave friction.

The maximum dynamic load shall include effects such as the weight of the hook/block, the weight of the wire rope and the crane's design dynamic factor.

Application/Limitation

1. All materials are to be delivered with 3.1 certificates, documenting mechanical properties and chemical composition in accordance with the Type Approval documentation.
2. Welding and NDT as specified in the Type Approval Documentation are to be carried out by certified personnel.
3. The sheave bearings are not covered by this Type Approval.
4. It is the responsibility of the Holder of the Certificate to ensure that both design and production comply with the Rules, Standards and/or Regulations listed on page 1 of this Type Approval Certificate.

Type Approval documentation

Tests carried out

If a CG3 is requested, each sheave is to be load tested in accordance with DNV-ST-0378 Table 14-2. For sheaves to be installed permanently on a crane, load test in accordance with DNV-ST-0378 Table 14-1 to be carried out.

Marking of product

Each sheave shall be marked according to DNV-ST-0378 Section 14.

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

END OF CERTIFICATE