Certificate no.:
TAS00004EG

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Slewing Bearing

with type designation(s)
V41-1632-000 21 25 1490

issued to
Galperti Tech Forged Products S.p.A.
Colico LC, **Italy**

is found to comply with

DNV standard DNV-ST-0378 – Offshore and platform lifting appliances

Application:

See next page

Issued at **Høvik** on **2024-09-12**
This Certificate is valid until **2029-09-11**.
DNV local unit: **Italy/Malta CMC**

for **DNV**

Approval Engineer: **Peder Bendik Møll**

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

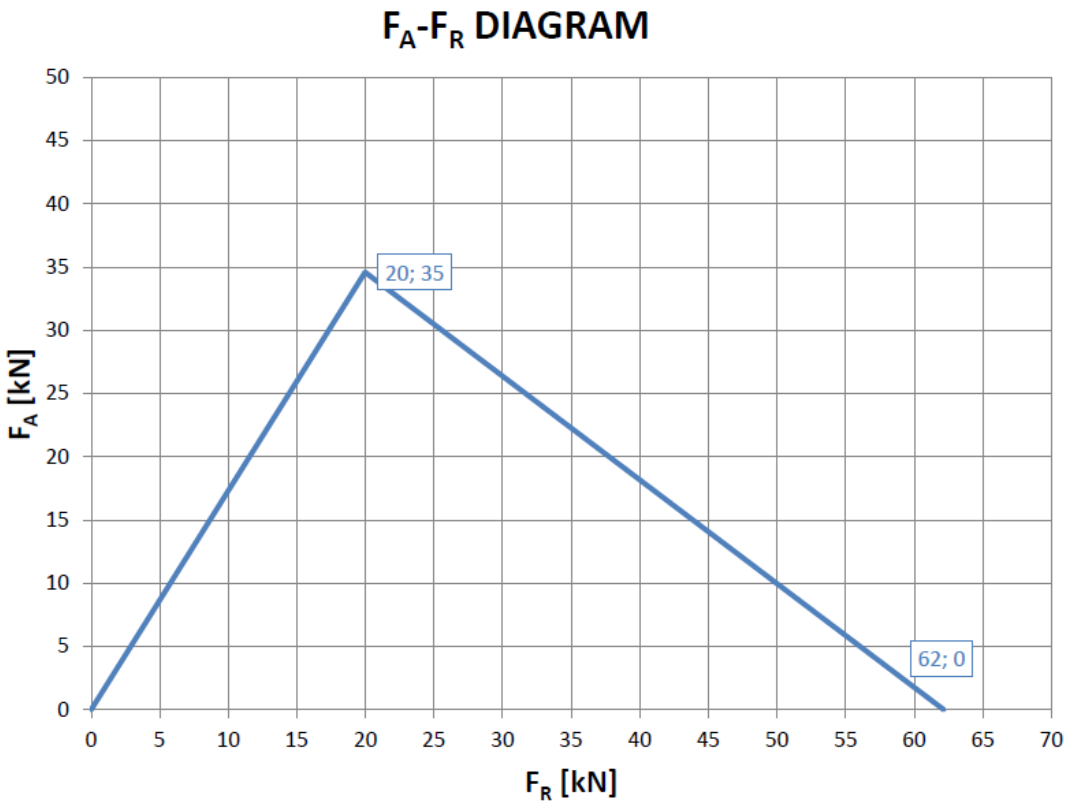
Slewing bearing for offshore gangway system:

Application/Limitation

The slewing bearing is approved for maximum loads, all factors included:

Axial load	80 kN
Radial load	65 kN
Tilting Moment	260 kNm

In addition load combination must give a FA and FR coordinated below limiting curve presented in below diagram, all factors included:



Design temperature	-20 degC
Slew ring material	42CrMo4 Q+T
Slew ring material minimum yield strength	635N/mm^2
Bolts outer ring	30x M16 grade 10.9
Bolts inner ring	30x M16 grade 10.9
Bolts minimum permanent pretension	70% of yield

The slewing bearing and bolts needs to be delivered with 3.2 material certificate, documenting compliance with DNV material requirements.

Each slewing bearing being marked/sold as “Type approved by DNV” is to be certified by DNV surveyors as outlined in DNV-ST-0378. A Product Certificate endorsed or issued by DNV surveyor is to accompany each slewing bearing/delivery.

The slewing gear has not been covered by this type approval.

Flanges and adjacent structure have not been evaluated nor covered by this type approval.

Type Approval documentation

Marking of product

Slewing bearings are to be marked with manufacturers' trademark, type designations and serial number.

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.