



Certificate no.:  
**TAS00004X1**

# TYPE APPROVAL CERTIFICATE

**This is to certify:**  
**that the Slewing Bearing**

with type designation(s)  
**V82-2200-001-COMM**

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 **2025-06-24**  
This Certificate is valid until **2030-06-23**.  
DNV local unit: **Italy/Malta CMC**  
Approval Engineer: **Peder Bendik Møll**

for **DNV**

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

Two row ball Slewing bearing for offshore gangway

## Application/Limitation

Minimum design temperature: -20°C

Slewing bearing is approved for the loads specified below which are to including all dynamic factors and additional offshore safety factors SF1 as specified in DNV-ST-0378 Sec.8 if applicable.

|     | Time | Speed  | Axial Force | Radial Force | Tilting Moment |
|-----|------|--------|-------------|--------------|----------------|
|     | %    | rpm    | kN          | kN           | kNm            |
| LC1 | 5    | 0.19   | 330         | 70           | 3015           |
| LC2 | 45   | 0.19   | 330         | 35           | 2665           |
| LC3 | 40   | 0.19   | 330         | 0            | 2505           |
| LC4 | 10   | 0.19   | 330         | 0            | 2080           |
| LC5 | -    | Static | 490         | 170          | 5800           |
| LC6 | -    | Static | 480         | 195          | 5190           |

Calculated lifetime for rolling elements: 146100 revolutions

### Slewing gears

|     | Time | Speed  | Slewing* Moment | Cycles** |
|-----|------|--------|-----------------|----------|
|     | %    | rpm    | kNm             | -        |
| LC1 | 11.2 | 0.2    | 740             | 183859   |
| LC2 | 88.8 | 0.2    | 315             | 1457741  |
| LC3 | -    | Static | 2240            | -        |

\*) Total slewing moment on slewing bearing, to be divided equally on 4 pinions

\*\*) For a given tooth in the geared ring, each contact with a pinion counts as a cycle.

Number of teeth in slewing bearing -109

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1. Flanges and adjacent structure have not been evaluated nor covered by this approval.
2. Slewing Bearing Mounting bolts M30 to be class 10.9 in both inner and outer ring.
3. Slewing Bearing Mounting bolts shall be permanently pretensioned to 80% of yield strength.
4. The slewing ring and slewing ring fastener material needs to be delivered with 3.2 material certificate, documenting compliance with DNV material requirements.

## Type Approval documentation

### Tests carried out

Separate test of slewing bearing is not required. The slewing bearing is to be tested together with the crane/offshore gangway.

### Marking of product

Each slewing bearing is to be marked according to DNV-ST-0378 Sec.14.5

### 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.

### Manufactured by:

Galperti Tech Forged Products S.p.A.  
Via Ombriano 14  
23823 Colico LC  
ITALY