



Certificate no.:
TAS00004EB

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Slewing Bearing

with type designation(s)
KUD02166-070VJ11-003-000, KUD02166-070VJ11-001-000

issued to
Liebherr-Components Biberach GmbH
BIBERACH AN DER RIB, Germany

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

Application:
See next page

Issued at **Høvik** on **2024-09-10**
This Certificate is valid until **2029-09-09**.
DNV local unit: **Augsburg**
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.



Form code: TA 251

Revision: 2023-09

www.dnv.com

Page 1 of 2

Product description

One row slewing bearings with internal gear ring. Two technically identical variants

Application/Limitation

Design temperature: -20°C

Slewing bearings is approved for the loads specified below which are including all dynamic and safety factors as specified in DNV-ST-0378, Section 8.

Lifetime operating hours 4555hours (199495 revoulutions)

Loadcase	Axial load [kN]	Radial load [kN]	Overturning moment [kNm]	Speed [1/min]	Time [%]
1	-825	250	7265	0.2	3.6
2	-619	188	5449	0.75	23.4
3	-420	125	3633	0.75	24.3
2	-420	63	2000	0.75	48.7
Max Operational	-825	250	7265	-	Static
Max static	-750	500	5000	-	Static

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

Slewing Bearing foundation bolts to be M36 class 10.9 bolts, installed to ensure 80% permanent pretension

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.

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

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.

Marking of product

Slewing bearing is to be marked with manufacturers trademark, type designation and serial number. The surveyor shall stamp each unit with VL mark and with the DNV Product Certificate number or reference to Type approval.

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.