



# TYPE APPROVAL CERTIFICATE

Certificate No:  
**TAM00000HS**  
Revision No:  
**1**

## This is to certify:

**That the Toothed Coupling**

with type designation(s)  
**GEARex**

Issued to

**KTR Systems GmbH**  
**Rheine, Germany**

is found to comply with

**DNV rules for classification – Ships**

**DNV rules for classification – High speed and light craft**

**DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021**

## Application :

**Products approved by this certificate are accepted for installation on all vessels classed by DNV.**

**The couplings are approved for auxiliary duty.**

**Nominal torque KTR main coupling catalogue**

Issued at **Høvik** on **2022-11-24**

This Certificate is valid until **2027-11-23**.

for **DNV**

DNV local station: **Essen**

Approval Engineer: **Christof Kotzmann-Bendrien**

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**Oddvar Deinboll**  
**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.



## Product description

All-steel gear couplings

## Application/Limitation

The couplings are approved for auxiliary duty with nominal torque as given in GEARex part of KTR main coupling catalogue 04/2022 (pages 108 to 121).

The nominal torque in the catalogue is valid for coupling material C45+N.

Nominal torque for coupling material 40Cr is 1.3 x torque for C45+N.

Nominal torque for coupling material 42CrMo4+QT is 1.69 x torque for C45+N.

Coupling selection to be done according to procedure in the GEARex catalogue.

Maximum permissible misalignment per hub: 0,5°.

## Type Approval documentation

### Tests carried out

Test report – No. 90308002 Original Sample Inspection BoWex ST10 / BoWex ST25.

## Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

## 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 Type Approval are complied with. Refer to DNV-CP-0338, Sec.4.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued.

The main scope of the Periodical Assessment will normally include:

- Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the Type Approval documentation and that this is still used as basis for the production
- Review of possible changes to the design, the material and the performance of the product
- Verification of the product marking.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

## Other conditions

DNV product certificate is not required for auxiliary machinery installation with power ratings up to 500 kW and rated torque less than 5 kNm.

Connection to driving and driven part is not included in this approval.

END OF CERTIFICATE