



Certificate no.:  
**TAM00001EU**

# TYPE APPROVAL CERTIFICATE

---

## This is to certify:

that the **Toothed Coupling**

with type designation(s)  
**ZAPEX ZWHV 230 drawing 8203800**

issued to

**Flender GmbH**  
**Bocholt, Nordrhein-Westfalen, Germany**

is found to comply with

**DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021**  
**DNV-OS-E101 – Drilling facilities, Edition July 2024**  
**DNV rules for classification – Ships**  
**DNV rules for classification – High speed and light craft**

## Application:

---

**Product approved by this certificate is accepted for installation on all vessels classed by DNV.**  
**Nominal torque 2605 Nm**

Issued at **Hamburg** on **2025-07-21**

This Certificate is valid until **2030-07-20**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Wolfgang Schütz**

---

---

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

Free floating gear coupling with crowned hub teeth, type ZWHV 230 drawing 8203800

## Application/Limitation

The approval is valid for drive shafts between motor and gearbox (drilling equipment MHWirth)

Max. angular misalignment per coupling half: 1°

Operating data:

Max. Speed: 2750 rpm

Nominal torque: 2605 Nm

## Type Approval documentation / tests carried out

## Marking of product

The product to be marked with the 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 certificate is only valid if required periodical assessments are carried out with satisfactory results. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>

## Other conditions:

The product certification may, for auxiliary duty, be waived for power ratings up to 500 kW and rated torque less than 5 kNm, under the condition that the product is marked with its type number identification.

END OF CERTIFICATE