



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **M-11547**

This is to certify that the
Elastic Couplings

with type designation(s)
REVOLEX KX and KX-D

Manufactured by
KTR Kupplungstechnik GmbH
RHEINE, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft

Application
The couplings are approved for auxiliary purpose not including reciprocating machinery.

Høvik, 2010-10-15
for Det Norske Veritas AS

Tomas Heber Tronstad
Head of Section



DNV local office:
Essen

This Certificate is valid until
2014-12-31

Hans-Kristian Eriksen
Surveyor

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.
If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: M-11547
File No.: 714.30
Job Id.: 262.1-009915-1

Product description

Flexible rubber coupling

Application/Limitation

Production tolerance on torsional stiffness: $\pm 20\%$

Technical data according to Technical Data , page 59 – 67 in Revolex part of KTR catalogue.

Operating factor for thruster application S_b : 1.8

Coupling hub material to be either nodular cast iron or steel.

Type Approval documentation

KTR company catalogue page 59 -67 REVOLEX

Tests carried out

Versuch Nr. 90506036 – Revolex KX 120
Versuch Nr. 90506010 – Revolex KX 170
Versuch Nr. 90506084 – Revolex KX 240

Marking of product

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

Certificate retention survey

For retention of the Type Approval, DNV surveyor shall perform a survey every second year and before expiry date of this certificate to verify that the conditions of the type approval are complied with.

Other conditions

DNV product certificate is not required for power ratings up to 500 kW or rated torque less than 5 kNm for auxiliary duty where torsional vibration calculations is not required.

The type approval does not cover connection to external shaft.

END OF CERTIFICATE