



Marine & Offshore

Certificate number: 02966/H0 BV

File number: ACM 103/270/1 - 4

Product code: 0630I

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

KTR Systems GmbH

Rheine - GERMANY

for the type of product

TOOTHED SHAFT COUPLINGS

Series BOWEX

Requirements:

BUREAU VERITAS Rules for the Classification of Steel Ships

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 14 May 2025

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 14 May 2020,

Adama Diene



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 5 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Toothed shaft couplings, series: BoWex

Types: junior, junior-M, M, I, AS, Spec.I, SG, SSR, Spec.I/CD, SD/SD-D, SD1, M...C, GT, ZR, HEW Compact, ELASTIC HE, FLE-PA and FLE-PAC.

1.1 BoWex ELASTIC – HE / File Number: ACM 103/270/1:

Size	Shore	Nominal torque [Nm]
42 HE	40	130
	50	150
	65	180
48 HE	40	200
	50	230
	65	280
65 HE	40	350
	50	400
	65	500
G65 HE	40	430
	50	500
	65	620
GG65 HE	40	600
	50	700
	65	850
80 HE	40	750
	50	950
	65	1200
G80 HE	40	1250
	50	1600
	65	2000
GG80 HE	40	1550
	50	2000
	65	2500
100 HE	40	2000
	50	2500
	65	3200
125 HE	50	4300
	70	7500
G125 HE	50	6100
	70	9750
150 HE	50	8000
	70	14000
150 HE-D	50	16000
	70	28000
G150 HE	50	10000
	70	18000
G150 HE-D	50	20000
	70	36000
200 HE	50	14500
	70	25000
200 HE-D	50	29000
	70	50000
G200 HE	50	17500
	70	30000
G200 HE-D	50	35000
	70	60000
240 HE	50	29000
	70	49000

Size	Shore	Nominal torque [Nm]
275 HE	50	42000
	70	70000

1.2 BoWex M, I, AS, Special I, SG, SSR, CD, SD, ZR / File Number: ACM 103/270/2:

Size	Nominal torque [Nm]
14	10
19	16
24	20
28	45
32	60
38	80
42	100
45 / 48	140
65	380
80	700
100	1200
125	2500

1.3 BoWex junior plug-in coupling and junior M / File Number: ACM 103/270/3:

Size	Nominal torque [Nm]
Junior 14 / M-14	5
Junior 19 / M-19	8
Junior 24 / M-24	12

1.4 BoWex M...C / File Number: ACM 103/270/2:

Size	Nominal torque [Nm]
M-14C	15
M-19C	24
M-24C	30
M-28C	70
M-32C	90
M-38C	120
M-48C	200
M-65C	560
M-80C	1000

1.5 BoWex GT / File Number: ACM 103/270/2:

Size	Nominal torque [Nm]
28	70
38	120
48	200
65	560

1.1 BoWex HEW Compact / File Number: ACM 103/270/1:

Size	Shore	Nominal torque [Nm]
42 HEW Compact	T50	200
	T65	270
	T70	320
65 HEW Compact	T50	550
	T65	740
	T70	860
80 HEW Compact	T50	1250
	T65	1600
	T70	1900

Size	Shore	Nominal torque [Nm]
100 HEW Compact	T50	2750
	T65	3900
	T70	4500
125 HEW Compact	T50	5500
	T65	7500
	T70	8400

1.6 BoWex FLE-PA / File Number: ACM 103/270/4:

Size	Nominal torque [Nm]
48	240
T 48	300
T 55	450
65	650
T 65	800
T 70	1000
80	1200
T 80	1500
100	2050
T 100	2500
125	4250
T 125	5300

1.7 BoWex FLE-PAC / File Number: ACM 103/270/4:

Size	Nominal torque [Nm]
48	300
T 48	370
T 55	550
65	800
T 65	1000
80	1500
T 80	1850
100	2550
T 100	3100
125	5350
T 125	6600

2. DOCUMENTS AND DRAWINGS:

According to following documents:

Designation	Rev.
Manufacturer's catalogue: Antriebstechnik (page 86 – 107)	04/2020
Manufacturer's catalogue: Antriebstechnik (page 202 – 227)	04/2020

3. TEST REPORTS:

Not applicable.

4. APPLICATION / LIMITATION:

- 4.1 On board installation and maintenance requirements have to be in accordance with Society's Rules requirements and manufacturer's recommendations.
- 4.2 These types of couplings will be admitted for the propulsive plant, only if arrangements are made to deal with the propeller thrust.

- 4.3 The allowable misalignment has to be according to the manufacturer's catalogue.
- 4.4 If the flexible couplings are used for the transmission of propulsion power on ships having only one propulsion plant, the flexible coupling is to be fitted with a torsional limit device or other suitable means to lock the coupling should the flexible component break.
- 4.5 Coupling connections to external shafts, flanges or flywheels have to comply with the applicable requirements of BUREAU VERITAS.
- 4.6 For the use in propulsion systems of vessels with an additional ice class notation, the applicable requirements of BUREAU VERITAS have to be considered.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 The couplings are to be supplied by **KTR Systems GmbH** in compliance with the type and the requirements described in this certificate.
- 5.2 This type of product is within the category IBV of BUREAU VERITAS Rule Note NR320.
- 5.3 BUREAU VERITAS product certificate is required.
- 5.4 For information, **KTR Systems GmbH** has declared to BUREAU VERITAS the following production site:
KTR Systems GmbH, Rheine / GERMANY
- 5.5 The inspection made at the manufacturer premises does not prejudice of any additional equipment, which may be required for some specific applications, in order to comply with the related Rules of the Society.
- 5.6 If required by the Rules, each attached piece of equipment is to be individually inspected at workshops by Society Surveyors.

6. MARKING OF PRODUCT:

Each coupling should be marked with:

- Manufacturer's name or logo
- Size
- Serial number
- Nominal torque
- Maximum allowable speed
- BUREAU VERITAS' marks

7. OTHERS:

- 7.1 It is **KTR Systems GmbH**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
- 7.2 This certificate supersedes the Type Approval Certificate N° 02966/G0 BV issued on 02 Jul 2015 by the Society.

*** END OF CERTIFICATE ***