



# Type Approval Certificate

[ Flexible Rubber Couplings ]

**Initial Approval** 18 June 2024  
**Manufacturer** KTR Systems GmbH  
 Carl Zeiss Strasse 25 48432, Rheine, Germany

**Product Description** Type : ROTEX

- Kind : Torsionally flexible jaw coupling
- Dimension Group : 14 ~ 180
- Nominal torque range : 1 Nm ~ 35,000 Nm
- Design temperature : -40 ~ 120 °C
- Speed range : 60 m/s (Steel + cast EN-GJS)  
35 m/s (Cast EN-GJL)

“ See Appendix 1 ”

**Approval Condition** “ See Appendix 1 ”

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows.

Pt. 5, Ch. 3, Art. 406 of the Rules for Classification of Steel Ships.

This Certificate is valid until 17 June 2029

Issued at Busan, Korea on 18 June 2024



This certificate is signed electronically in accordance with IMO FAL.5/Circ.39/Rev.2. Validation and authentication of the certificate can be confirmed from "<http://e-cert.krs.co.kr>" by using the tracking No(ME24029513414) and certificate No.(HMB45578-MP001).



**KOREAN REGISTER**

*General Manager of  
Marine & Ocean Equipment Team*

- Note :**
1. This certificate will be valid subject to complying with the approval conditions described on the certificate and/or on the Rules of this Society.
  2. This certificate will be invalid from the expiry date aforementioned unless the extension or renewal has been granted to the applicant or the manufacturer.
  3. Any significant modifications or changes in design or construction to the above product without approval from this Society will render this certificate invalid.
  4. Should the specified rules, regulations or standards be amended during the validity of this certificate, the product is to be re-approved by this Society in accordance with the requirements as amended.

## Product Description and/or Approval Condition

Date of Issue : 18 June 2024

### A. Product Description

#### 1. Product Specification

1) 92 Shore A spinder made of T-PUR and PUR

Size	Nominal Torque Tkn(kNm)	Maximum Torque Tkmax. 1 (kNm)	Permissible Power Loss Pkw (W) *	Permissible Rotational Speed nKmax. (rpm) **	Dyn. Torsional Stiffness C dyn (kNm/rad) ***
14	7.5	15	-	10000	0.38 x 10 <sup>3</sup>
19	10	20	4.8	10000	1.28 x 10 <sup>3</sup>
24	35	70	6.6	10000	4.86 x 10 <sup>3</sup>
28	95	190	8.4	10000	10.9 x 10 <sup>3</sup>
38	190	380	10.2	9500	21.05 x 10 <sup>3</sup>
42	265	530	12.0	8000	23.74 x 10 <sup>3</sup>
48	310	620	13.8	7200	36.7 x 10 <sup>3</sup>
55	410	820	15.6	6300	50.7 x 10 <sup>3</sup>
65	625	1250	18.0	5600	97.1 x 10 <sup>3</sup>
75	1280	2560	21.6	4700	113.3 x 10 <sup>3</sup>
90	2400	4800	30.0	3800	190.1 x 10 <sup>3</sup>
100	3300	6600	36.0	3600	253.1 x 10 <sup>3</sup>
110	4800	9600	42.0	3000	415.5 x 10 <sup>3</sup>
125	6650	13300	48.0	2600	647.7 x 10 <sup>3</sup>
140	8550	17100	54.6	2400	813.4 x 10 <sup>3</sup>
160	12800	25600	75.0	2000	1298.0 x 10 <sup>3</sup>
180	18650	37300	78.0	1800	2327.0 x 10 <sup>3</sup>

2) 98 Shore A spinder made of T-PUR and PUR

Size	Nominal Torque Tkn(kNm)	Maximum Torque Tkmax. 1 (kNm)	Permissible Power Loss Pkw (W) *	Permissible Rotational Speed nKmax. (rpm) **	Dyn. Torsional Stiffness C dyn (kNm/rad) ***
14	12.5	25	-	10000	0.56 x 10 <sup>3</sup>
19	17	34	4.8	10000	2.92 x 10 <sup>3</sup>
24	60	120	6.6	10000	9.93 x 10 <sup>3</sup>
28	160	320	8.4	10000	26.77 x 10 <sup>3</sup>
38	325	650	10.2	9500	48.57 x 10 <sup>3</sup>
42	450	900	12.0	8000	56.5 x 10 <sup>3</sup>
48	525	1050	13.8	7200	65.3 x 10 <sup>3</sup>
55	685	1370	15.6	6300	95.0 x 10 <sup>3</sup>
65	940	1880	18.0	5600	129.5 x 10 <sup>3</sup>
75	1920	3840	21.6	4700	197.5 x 10 <sup>3</sup>
90	3600	7200	30.0	3800	312.2 x 10 <sup>3</sup>
100	4950	9900	36.0	3600	383.3 x 10 <sup>3</sup>
110	7200	14400	42.0	3000	805.9 x 10 <sup>3</sup>
125	10000	20000	48.0	2600	1207.0 x 10 <sup>3</sup>
140	12800	25600	54.6	2400	1549.0 x 10 <sup>3</sup>
160	19200	38400	75.0	2000	2481.0 x 10 <sup>3</sup>
180	28000	56000	78.0	1800	4220.0 x 10 <sup>3</sup>

3) 64 Shore D spinder made of T-PUR

Size	Nominal Torque Tkn(kNm)	Maximum Torque Tkmax. 1 (kNm)	Permissible Power Loss Pkw (W) *	Permissible Rotational Speed nKmax. (rpm) **	Dyn. Torsional Stiffness C dyn (kNm/rad) ***
14	16	32	9.0	10000	0.76 x 10 <sup>3</sup>
19	21	42	7.2	10000	5.35 x 10 <sup>3</sup>
24	75	150	9.9	10000	15.11 x 10 <sup>3</sup>
28	200	400	12.6	10000	27.52 x 10 <sup>3</sup>
38	405	810	15.3	9500	70.15 x 10 <sup>3</sup>
42	560	1120	18.0	8000	79.9 x 10 <sup>3</sup>
48	655	1310	20.7	7200	95.5 x 10 <sup>3</sup>

## Product Description and/or Approval Condition

Date of Issue : 18 June 2024

Size	Nominal Torque Tkn (kNm)	Maximum Torque Tkmax. 1 (kNm)	Permissible Power Loss Pkw (W) *	Permissible Rotational Speed nKmax. (rpm) **	Dyn. Torsional Stiffness C dyn (kNm/rad) ***
55	825	1650	23.4	6300	107.9 x 10 <sup>3</sup>
65	1175	2350	27.0	5600	151.1 x 10 <sup>3</sup>
75	2400	4800	32.4	4700	248.2 x 10 <sup>3</sup>
90	4500	9000	45.0	3800	674.5 x 10 <sup>3</sup>
100	6185	12370	54.0	3600	861.2 x 10 <sup>3</sup>
110	9000	18000	63.0	3000	1230.0 x 10 <sup>3</sup>
125	12500	25000	72.0	2600	1749.0 x 10 <sup>3</sup>
140	16000	32000	81.9	2400	2312.0 x 10 <sup>3</sup>
160	24000	48000	112.5	2000	3415.0 x 10 <sup>3</sup>
180	35000	70000	117.0	1800	5670.0 x 10 <sup>3</sup>

\* With 30°C

\*\* Maximum speeds of Hub type with Steel, GJS, Al-H

\*\*\* Torsion spring stiffness C dyn with 1.0 Tkn

### 2. Approved Drawings and Documents

- 1) 611641 (Rev.1), 571882 (Rev.5), 416706 (Rev.1), 550097 (Rev.1), 550106 (Rev.2), 551511 (Rev.1), 550112 (Rev.1), 551534 (Rev.2), 551545 (Rev.1), 414423 (Rev.1), 448302 (Rev.5), 661470 (Rev.0), 892835 (Rev.1), 894375 (Rev.0), 416319 (Rev.2)
- 2) Technical data and catalogue at the [www.ktr.com](http://www.ktr.com)

### 3. Test Reports, etc.

- 1) Test report No. 90215003K dated on 30 October 2015
- 2) Test report No. 90215001K, 90215002K dated on 29 October 2015
- 3) Test report No. 90212034 dated on 27 June 2012
- 4) Test report No. 90212034-103, 108, 111, 003, 008, 011, 203, 208, 211 dated on 15 ~ 19 June 2012

## B. Approval Condition

### 1. Application & Limitation

- 1) The materials for the main components are to be certified by this Society or to be satisfactory to the Surveyor.

### 2. Individual Product Cert. and Drawing Approval Requirement

- 1) Individual Product Certification is required.

### 3. Marking

- 1) The product is to be marked with manufacturer' s name or trademark, a date of manufacture and type designation number.

### 4. Others

- N/A

&lt; End of Certificate &gt;