DNV·GL

Certificate No:
TAM0000075

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Toothed Coupling

with type designation(s)
MT, MTD, MTV, MTDFD, MTCO, MTS, MTAE, MTLI, MTXLE, MTG, MTX, MTP, MTT

Issued to
REGAL BELOIT SPAIN, S.A. (JAURE)
Zizurkil, **Spain**

is found to comply with
DNV GL rules for classification – High speed and light craft
DNV GL rules for classification – Ships

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Nominal torque

This Certificate is valid until **2021-05-12**.

Issued at **Høvik** on **2016-05-13**

for **DNV GL**

DNV GL local station: **Bilbao**

Approval Engineer: **Kristine Prøsch**

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.

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Product description
Crowned tooth gear couplings

Place of production

Jaure Regal Beloit Spain, S.A.

Regal Beloit Power Transmission (Zhangzhou) CO.LTD

Application/Limitation
Approved torques are nominal catalogue torques (ref. table below) divided with actual service application factor (service factor) as given by Jaure in catalogue no. Nº MCC15002E-Form #9916.

I.e for commercial marine use the following service factors apply:

2.25 for diesel drive
1.80 for electric/turbine drive

Size	Nominal Catalogue Torque (Nm)	Max rotational speed (RPM) (1)	Size	Nominal Catalogue Torque (Nm)	Max rotational speed (RPM) (1)
42	1200	8600	185	61400	2580
55	2600	6600	205	80800	2320
70	5000	5600	230	105500	2200
90	8600	4700	260	161000	2000
100	14000	4200	280	220000	1800
125	20600	3600	310	250000	1600
145	33000	3150	345	320000	1500
165	45600	2860			

(1) Maximum rotational speeds for the coupling types MTX, MTD, ref.catalogue Nº MCC15002E.

The nominal catalogue torques are approved for 0,1 degrees angular misalignment per gear mesh. Nominal rating to be reduced according to curve in Jaure coupling catalogue for greater angular misalignment.

Couplings made of material 42CrMo4 are approved for the following torques:
- Quenched and tempered: 1.65 x Nominal catalogue torque.
- Quenched and tempered and nitrided: 2.25 x Nominal catalogue torque

Couplings made of carbon steel (C45N/C55N or similar):
- Induction hardened: 1.8 x Nominal catalogue torque.

Type MTX, MTVX
For couplings where the spacer is welded or made of one piece only, the a.m. ratings apply.
For couplings where the spacer consist of two flanges bolted to a tube, the following ratings apply (service factors included):

Type	Bolt, class 12.9	No. of Bolts:	Bolt Pitch Diameter	Approved torques (Nm)
MTX-42	M6	13	63	298
MTX-55	M6	19	84	580
MTX-70	M8	18	98	1185
Type	Bolt, class 12.9	No. of Bolts:	Bolt Pitch Diameter	Approved torques (Nm)

MTX-90	M10	16	113	1930
MTX-100	M14	14	132	3940
MTX-125	M14	17	150	5440
MTX-145	M14	20	175	7460
MTX-165	M16	20	214	12690
MTX-185	M16	22	242	15780
MTX-205	M16	24	270	19200
MTX-230	M16	28	294	24400
MTX-260	M20	26	328	39470
MTX-280	M20	29	368	49360
MTX-310	M22	29	405	67660
MTX-345	M24	30	430	85820

Type Approval documentation

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 a survey every second year and before the expiry of this certificate to verify that the conditions for the Type Approval are complied with.