

MARINE DIVISION

67/71 Boulevard du Château
92200 Neuilly-sur-Seine - France

Tel. 33 1 55 24 70 00
Fax. 33 1 55 24 70 45
www.veristar.com



Certificate number: 02965/F0 BV

File number : ACM 103/270/002

Product code : 0620I

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

TYPE APPROVAL CERTIFICATE

This certificate is issued to

KTR KUPPLUNGSTECHNIK GmbH

Rheine - GERMANY

for the type of product

FLEXIBLE SHAFT COUPLINGS WITH RUBBER ELEMENTS

ROTEX

Regulations and standards :

BUREAU VERITAS Rules for the Classification of Steel Ships.

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements of the Regulations and standards mentioned above.

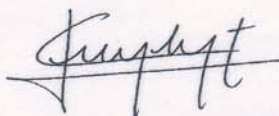
This certificate is valid until : 09 Feb 2014

At Neuilly, on : 09 Feb 2009

For BUREAU VERITAS,
By order of the Secretary

Approval office

Local office : BV HAMBURG
Surveyor : A. Diene


L.COURREGELONGUE



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. 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 Division. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS 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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

"ROTEX"

Designs : No.001, GS, DKM No.018, ZS-DKM No. 078, AFN No.002, BFN No.004, CF No.005, DF No.006, ZWN No.017, ZR No. 037, SD No. 015, BTAN No. 011, SBAN No. 013.

Spider in	polyurethane 64 Shore D-F	Spider in	polyurethane 92 Shore A	Spider in to size 55: from size 65 :	polyurethane 98 Shore A 95 Shore A
SIZE	Nominal Torque (Nm)	SIZE	Nominal Torque (Nm)	SIZE	Nominal Torque (Nm)
14	16	14	7.5	14	12.5
19	21	19	10	19	17
24	75	24	35	24	60
28	200	28	95	28	160
38	405	38	190	38	325
42	560	42	265	42	450
48	655	48	310	48	525
55	825	55	410	55	685
65	1175	65	625	65	940
75	2400	75	1280	75	1920
90	4500	90	2400	90	3600
100	6185	100	3300	100	4950
110	9000	110	4800	110	7200
125	12500	125	6650	125	10000
140	16000	140	8550	140	12800
160	24000	160	12800	160	19200
180	35000	180	18650	180	28000

2. DOCUMENTS AND DRAWINGS :

According to catalogue: K.08-01-GB.

3. TEST REPORTS :

Nil.

4. APPLICATION / LIMITATION :

- 4.1 - These couplings may be used for propulsive plants only if arrangements are made to deal with the propeller thrust.
- 4.2 - Technical characteristics of the couplings to be considered are those mentioned in the below mentioned catalogue.
- 4.3 - Technical characteristics of the couplings to be considered are those mentioned in the above mentioned data sheet and catalogue.
- 4.4 - Fail safe device is not allowed.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The couplings are to be manufactured, examined and tested by **KTR KUPPLUNGSTECHNIK GmbH** in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - Arrangements shall be made for a Society's Surveyor to attend the relevant tests and examinations at manufacturer's works or to perform the relevant audits when an alternative survey scheme (BV Mode I) has been agreed. Relevant Bureau Veritas certificate will be issued after satisfactory completion of the procedure.

6. MARKING OF PRODUCT :

- Serial number
- Nominal torque and maximum speed
- Date of workshop trial
- Bureau Veritas' Marks
- Size.

7. OTHERS :

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **KTR KUPPLUNGSTECHNIK GmbH**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate 02965/E0 BV issued on 06 November 2002 by the Society.

*** END OF CERTIFICATE ***