

## Type Approval Certificate Extension

This is to certify that Certificate No. 03/20022 for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

**PRODUCER** ELAFLEX – Gummi Ehlers GmbH  
Schnackenburgallee 121  
D-22525 Hamburg  
Germany

**DESCRIPTION** Rubber expansion joints consisting of:

	<u>Gelbring</u>	<u>Rotring</u>	<u>ROTEX</u>
Tube	: NBR	Butyl/EPDM	EPDM
Reinforcement	: Nylon text.cord	Nylon text.cord	Poymer text.cord
Cover	: Chloroprene CR	EPDM	EPDM
Flanges	: carbon steel, zinc plated and yellow chromated		

**TYPE** ERV- Gelbring (Yellow Band)  
ERV- Rotring (Red Band)  
ERV- ROTEX

**APPLICATION** Marine and offshore, viz.: Fresh and sea\* water lines; ballast lines in machinery spaces, duct keels and double bottom water ballast tanks; bilge lines inside duct keels only; sanitary discharge and cargo lines (NBR only) inside the cargo oil tanks of tankers.

\*Where fitted in sea water lines in machinery compartments, guards are to be provided which will effectively enclose, but not interfere with the action of the expansion joint and which will reduce to the minimum practicable any flow of water in the event of failure of the flexible element

The expansion joints are to be installed in well visible and accessible locations and protected against over extension and compression and against mechanical damage. The adjoining pipes are to be suitably aligned, supported, guided and anchored. The producer's instructions and recommendations are to be considered.

**Certificate No.** 03/20022 (E1)  
**Issue Date** 27 June 2008  
**Expiry Date** 24 February 2013  
**Sheet** 1 of 2

  
Olaf Schmidt  
Hamburg Design Support Centre  
Lloyd's Register EMEA

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**STANDARD** Lloyd's Register Rules and Regulations for the Classification of Ships, Ed. 2007

**RATINGS** Gelbring: PN 16 for DN 25 to DN 350, PN 10 for DN 400 to DN 1000 at 90°C max.  
Rotring : PN 16 for DN 25 to DN 350, PN 10 for DN 400 to DN 1000 at 90°C max.  
ROTEX : PN 6 at 110°C max., PN 10 at 100°C max. for DN 25 to DN 1000

*"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."*

*The attached Design Appraisal Document No. HMD 9957-03, Issue No. 1 dated 27.06.08 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 03/20022 to which this extension should be attached.

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