

TYPE APPROVAL CERTIFICATE

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No. **30 946 - 83 HH**

Company **Elaflex-Gummi Ehlers GmbH**

**Schnackenburgallee 121
22525 Hamburg, GERMANY**

Product Description **RUBBER COMPENSATORS**

Type **ERV
Optionally with fire sleeve type FSH**

Environmental Category **None**

Technical Data /
Range of Application **Size Range: DN 25 - 300 (fire sleeve applications)
up to DN 1000 (none fire resistant applications)**

Nominal Pressure: PN* 25, 16, 10

*** dependent on size according to product data sheets released by Elaflex**

**Types
Refer to page 2**

**Connections
Flange type: ERV
Material: Stainless steel, carbon steel, zinc plated or hot galvanized**

Test Standard **GL VI-7-8 Regulations for the Performance of Type Tests, Part 6 - Test
Requirements for Mechanical Components and Equipment:2008**

Documents **- Fire test report according to ISO 15540 issued by WTD 71 dated 2006-12-13
- Burst pressure test report dated 2008-10-08, 2014-09-17
- Product data sheets 404, 407-452, 464-480, Catalogue, Rev. 09.2014**

Remarks **Compensators are to be installed at visible and accessible positions.
For selection and installation the manufacturer instructions are to be observed.**

Valid until **2019-10-05**

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File No. **II.D.07**

Hamburg, 2014-12-15

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DNV GL


Olaf Drews


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Types	Liner	Reinforcement	Cover	M.A.W.T.*
ERV-YELLOW BAND	NBR	PA textile cord	CR	90°C
ERV-RED BAND	Butyl/EPDM		EPDM	100°C
ERV-CR	CR	PA textile cord	CR	90°C
ERV-BR	NR/BR	PES textile cord	NR/BR	70°C
ERV-ROTEX	EPDM	Polymer textile cord	EPDM	130°C
ERV-ORANGE BAND	NBR	PA textile cord	CR	90°C
ERV- GREEN BAND	Hypalon		Hypalon	100°C
ERV- WHITE BAND	NBR		CR	90°C
ERV- VITEX	FPM		ECO	110°C
RED SPOT	Butyl EPDM		EPDM	90°C

*appropriate service pressure according to product data sheets released by Elaflex

MARKING

Manufacturer sign on bellow



and/or **ELAFLEX**

RANGE of APPLICATION / LIMITATION

The compensators of type ERV are type approved as appropriate in the following piping systems:

Fuel-, lubricating oil-, hydraulic oil-, bilge-, ballast-, fresh water cooling-, sea water cooling-, water filled fire extinguishing-, compressed air systems as well as in ancillary piping systems.

For the use in fuel oil and lubricating oil systems, seawater cooling systems and bilge and ballast water systems arranged in machinery spaces each compensator is to be provided with a fire sleeve of type FSH. For the use in fire extinguishing systems the compensator is to be provided with a fire sleeve always.

For further information refer to the GL Rules I-1-2 Machinery Installations, Section 11 U.

LIMITATION

Compensators made of non-metallic materials are not permitted:

- In permanently pressurized starting air lines of diesel engines
- In cargo lines of tankers
- At the ship's side

PRODUCT INSPECTION

Prior to installation on board ship each batch of compensators is to be subjected at the manufacturer's works to a pressure test under the supervision of a DNVGL surveyor.

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