



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE

Certificate No. TA19595M

**This is to certify** that the undernoted products have been approved in accordance with the requirements 12.3.4, Chapt.12, Part D of the “Rules for the Survey and Construction of Steel Ships” and Chapt.2, Part 6 of the “Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use”.

This certificate is issued to

Manufacturer :	<b>ELAFLEX-Gummi Ehlers GmbH</b>
Product description :	<b>Rubber Expansion Joints</b>
Type designations :	<b>ERV-GS / ERV-GS HNBR</b> <b>ERV-G, ERV-R, ERV-ROTEX</b>
Approval No. :	<b>99FV401B</b>
Valid until :	<b>15 December 2024</b>

This certificate is subject to the conditions specified in the attached sheets.

Issued at Tokyo on 11 November 2019.



T. Shimada  
General Manager  
Machinery Department

**•Particulars and conditions :**

The joints are accepted as flame resistant rubber joints and can be used for short joint of the piping systems in engine room.

Type : ERV-GS / ERV-GS HNBR  
 Nominal Diameter (DN) : 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350 and 400  
 Max. Working Pressure : 1.0 MPa  
 Max. Operating Temp : ERV-GS : 90°C / ERV-GS HNBR : 100°C  
 Kind of fluid : Fuel oil, Lubricating oil, Sea water, Fresh water, Air,  
 Hydraulic oil, Waste oil, Mist gas  
 Material : Liner ERV-GS: NBR / ERV-GS HNBR: HNBR  
 Reinforcement : Steel wire cord, CR rubberized  
 Cover : CR  
 Flanges : Carbon steel, zinc plated or hot galvanized;  
 Stainless steel

Type : ERV-G  
 Nominal Diameter (DN) : 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400,  
 450, 500, 600, 700, 800, 900 and 1000  
 Max. Working Pressure : 1.6 MPa (DN25 – 400), 1.0MPa (DN450 – 1000)  
 Max. Operating Temp : 90°C  
 Kind of fluid : Fuel oil, Lubricating oil, Hydraulic oil, Thermal oil  
 Material : Liner NBR  
 Reinforcement : PA textile cord  
 Cover : CR  
 Flanges : Swiveling, carbon steel, zinc plated or  
 hot galvanized; Stainless steel

Type : ERV-R  
 Nominal Diameter (DN) : 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400,  
 450, 500, 600, 700, 800, 900 and 1000  
 Max. Working Pressure : 1.6 MPa (DN25 – 400), 1.0MPa (DN450 – 1000)  
 Max. Operating Temp : 100°C  
 Kind of fluid : Fresh water, Sea water, Waste water, Drinking water  
 Material : Liner Butyl (IIR) / EPDM  
 Reinforcement : PA textile cord  
 Cover : EPDM  
 Flanges : Swiveling, carbon steel, zinc plated or  
 hot galvanized; Stainless steel

Type : ERV-ROTEX  
Nominal Diameter (DN) : 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900 and 1000  
Max. Working Pressure : 1.6 MPa (DN 25 – 400), 1.0 MPa (DN450 – 1000)  
Max. Operating Temp : 130°C  
Kind of fluid : Fresh water, Sea water, Heating water, Cooling water, Hot air  
Material : Liner EPDM  
Reinforcement : Polymer textile cord  
Cover : EPDM  
Flanges : Swiveling, carbon steel, zinc plated or hot galvanized; Stainless steel

**•Test**

The joints used for piping belonging to Group II defined by the requirements 12.1.3, Chapt.12, Part D of the Rules are to be subjected to hydraulic test in the presence of the Society's surveyor in accordance with the requirements 12.6.1, Chapt.12, Part D of the Rules.

**•Notice**

Any significant changes in design or construction of the above items may render this certificate invalid.

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