



Type Approval Certificate Extension

This is to certify that Certificate No. 12/20009 (E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER	Georg Fischer JRG AG Hauptstrasse 130 4450 Sissach Switzerland
PLACE OF PRODUCTION	Hewing GmbH Uponor GmbH Georg Fischer PfcI Srl Waldstrasse 3 Am Köhlersgehäu 17 Via degli Imprenditori 24/26 48607 Ochtrup 98544 Zella-Mehlis 37067 Valeggio sul Mincio Germany Germany Italy
DESCRIPTION	Plastic pipes (Multilayer) with plastic and metal fittings and valves Pipes : PE-X/AL/PE-X Fittings d16 – d63 : PPSU/PA-GF Adapter d16 – d63 : Gunmetal acc. to DIN EN 1982 Valve Bodies : Gunmetal, CuSn5Zn5Pb2C (CC499K)
TYPE	JRG SANIPEX MT
APPLICATION	Non-essential hot water, cold water and service air piping systems on board ships, where fire endurance is not a requirement, according to the Rules, Part 5, Chapter 12, Table 12.5.3.
STANDARD	Lloyd's Register Rules and Regulations for the Classification of Ships, 2013. Flame spread test according to ASTM D635
Certificate No.	12/20009 (E2)
Issue Date	16 December 2013
Expiry Date	28 March 2017
Sheet	1 of 3



Olaf Schmidt
Hamburg Technical Support Office
Lloyd's Register EMEA

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71 Fenchurch Street, London EC3M 4BS

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RATINGS

Pipes and Fittings

Size Range : d16 mm to d63 mm outside diameter

Design Pressure, d16 mm to d32 mm : 16 bar

Design Pressure, d40 mm to d63 mm : 13 bar

Design Temperature : 70 °C

Valves


Type	Design Pressure [bar]	Design Temperature [°C]	Seal Material
1025	16	95	EPDM
1300 - 1363	13/16	70	NBR
1610 - 1615	13/16	90	EPDM
1830 - 1846	13/16	70	EPDM
3400, 3410	13/16	90	none
5200 - 5225	13/16	90	EPDM
5262 - 5281	13/16	90	EPDM
5350 - 5371	13/16	90	EPDM
6320	16	70	EPDM

OTHER CONDITIONS

The use of plastic pipes may be restricted by statutory requirements of the National Authority of the country in which the ship is to be registered

Not for use in systems subject to any external pressure

Certificate No. 12/20009 (E2)
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"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. ENS 27735-12, Issue 2 dated 16.12.2013 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 12/20009 (E1) to which this extension should be attached.

Certificate No.	12/20009 (E2)
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Marine Design Appraisal Document

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E-mail: hamburg-technical-support@lr.org

Date
16 December 2013

Please quote this reference number on all future communications
HPC 1110141/30165-13/OS/hu

**THE LLOYD'S REGISTER'S TYPE APPROVAL SYSTEM, 2002
ISSUED TO: GEORG FISCHER JRG AG
FOR: JRG SANIPEX MT
TYPE APPROVAL CERTIFICATE NO. 12/20009 (E2)**

**This Marine Design Appraisal Document supersedes and cancels document number
ENS 27735-12, Issue No. 1, dated 05.07.2013**

The undernoted documents have been reviewed for compliance with the requirements of the Lloyd's Register's Type Approval System, 2002 and this Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Form LR2571	Application for Type Approval and/or Marine Equipment	01.10.2013
-	Directive Certification from Lloyd's Register EMEA (LR)	2008
-	JRG SANIPEX MT® Technical Documentation	2011
-	JRG Fittings Catalogue	2011

TEST REPORTS

HPC 1110141	Lloyd's Register Stuttgart Visit Report	12.09.2011
DTM 1109578/1	Lloyd's Register Dortmund Visit Report	16.01.2012
DTM 1109579	Lloyd's Register Dortmund Visit Report	06.03.2012
VEN 1391366	Lloyd's Register Venice Visit Report	06.03.2012
96069/10	Test report – ASTM D635-06	26.07.2010
-	Burst test report for JRG valves	17.02.2010
-	Burst test report for JRG pipes and fittings	02.02.2010
-	Burst test report for JRG pipes and fittings	16.09.2009
K-4549 and K-4550	Leak and Burst test report for JRG pipes and fittings	04.09.2013


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FINAL ACCEPTANCE OF ACTUAL ITEM(S) DEPEND(S) ON SATISFACTORY SURVEY AND TESTING

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Supplementary Type Approval Terms and Conditions

Type Approval certifies that a representative sample of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein. It does not mean or imply approval for any other use, nor approval of any product(s) designed or manufactured otherwise than in strict conformity with the said representative sample.

Type Approval is based on the understanding that the manufacturer's recommendations and instructions and any relevant requirements of the Rules and Regulations are complied with.

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

Lloyd's Register EMEA reserves the right to cancel or withdraw this Type Approval Certificate in accordance with the LR Type Approval System Procedure.

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Part 1A
Subject: Pipe and Pipe Couplings
Product: Plastic Pipes

Producer / Licence No.		Description of Product			Cert. No.																														
Type	Details of Approval	Application	Remarks																																
<p>Georg Fischer, JRG AG Hauptstrasse 130 4450 Sissach Switzerland</p>	<p>JRG SANIPEX MT</p>	<p>Plastic pipes (Multilayer) with plastic and metal fittings and valves Pipes : PE-X/AL/PE-X Fittings d16 - d63 : PPSU/PA-GF Adapter d16 - d63 : Gunmetal acc. to DIN EN 1982 Valve Bodies : Gunmetal, Cu5n5Zn5Pb2C (CC499K) Ratings: <u>Pipes and Fittings</u> Size Range : d16 mm to d63 mm outside diameter Design Pressure, d16 mm to d32 mm : 16 bar Design Pressure, d40 mm to d63 mm : 13 bar Design Temperature : 70 °C <u>Valves</u> <table border="1"> <thead> <tr> <th>Type</th> <th>Design Pressure [bar]</th> <th>Design Temperature [°C]</th> </tr> </thead> <tbody> <tr> <td>1025</td> <td>16</td> <td>95</td> </tr> <tr> <td>1300 - 1363</td> <td>13/16</td> <td>70</td> </tr> <tr> <td>1610 - 1615</td> <td>13/16</td> <td>90</td> </tr> <tr> <td>1830 - 1846</td> <td>13/16</td> <td>70</td> </tr> <tr> <td>3400, 3410</td> <td>13/16</td> <td>90</td> </tr> <tr> <td>5200 - 5225</td> <td>13/16</td> <td>90</td> </tr> <tr> <td>5262 - 5281</td> <td>13/16</td> <td>90</td> </tr> <tr> <td>5350 - 5371</td> <td>13/16</td> <td>90</td> </tr> <tr> <td>6320</td> <td>16</td> <td>70</td> </tr> </tbody> </table> </p>	Type	Design Pressure [bar]	Design Temperature [°C]	1025	16	95	1300 - 1363	13/16	70	1610 - 1615	13/16	90	1830 - 1846	13/16	70	3400, 3410	13/16	90	5200 - 5225	13/16	90	5262 - 5281	13/16	90	5350 - 5371	13/16	90	6320	16	70	<p>Non-essential hot water, cold water and service air piping systems on board ships, where fire endurance is not a requirement, according to the Rules, Part 5, Chapter 12, Table 12.5.3.</p>	<p>Expires: 28 March 2017 The use of plastic pipes may be restricted by statutory requirements of the National Authority of the country in which the ship is to be registered Not for use in systems subject to any external pressure</p>	<p>12/20009 (E2)</p>
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