



TYPE APPROVAL CERTIFICATE
No. MAC332522CS

This is to certify that the product identified below is in compliance with the regulations herewith specified.

<i>Description</i>	Non metallic expansion joints
<i>Type</i>	J1 LUX - J2 LUX - J1 AS+ - J1 ASR
<i>Applicant</i>	ISOPREN S.r.l. VIA A. MERLI 6 20095 Cusano Milanino (MI) ITALY
<i>Manufacturer</i>	ISOPREN S.r.l.
<i>Place of manufacture</i>	VIA A. MERLI 6 20095 Cusano Milanino (MI) ITALY
<i>Reference standards</i>	Parte C, Cap. 1, Sez. 10 dei Regolamenti RINA

Issued in **GENOVA** on **March 29, 2023**. *This Certificate is valid until* **March 28, 2028**

RINA Services S.p.A.
Rosario Pitruzzo

This certificate consists of this page and 1 enclosure

TYPE APPROVAL CERTIFICATE
No. MAC332522CS
Enclosure - Page 1 of 2
J1 LUX - J2 LUX - J1 AS+ - J1 ASR

Reference documentation:

- *Constructional drawings and specification:*

Letter PPVT/2021/210/CAA
PPVT-35753 Fascicolo Compensatori T200120 - T200121 - T201009
PPVT-35754 Cuffia anti fiamma - FR LUX
PPVT-35755 Analisi dei rischi
Letter PPVT/2022/1011/CRLVA
PPVT-39886 Fascicolo tecnico Serie ASR

- *Test Report:*

Fire tests ISO 15540:2016 and ISO 15541:2016, dated 07/01/2021
reports no. 2020CS012534/001-002-003-004-005-006-007-008
RINA Laboratory - Calata Gadda Genova

Burst tests dated 01/10/2020
ISOPREN (RINA 2020/MI/01/510) J1 LUX - J2 LUX
Cusano Milanino (MI)

Burst tests dated 25/01/2021
ISOPREN (RINA 2021/MI/01/42) J1 AS+
Cusano Milanino (MI)

Additional burst test and Fire resistance test on J1 ASR series filed with dwg PPVT-41103 , Letter PPVT/2023/275/CRLVA

Technical characteristic

Diameters:

J1 LUX: DN40 - DN50 - DN65 - DN80 - DN100 - DN125 - DN150 - DN175 - DN200 - DN250;
J2 LUX: DN40 - DN50 - DN65 - DN80 - DN100 - DN125 - DN150 - DN200 - DN250;
J1 AS+: DN40 - DN50 - DN65 - DN80 - DN100 - DN125 - DN150 - DN175 - DN200 - DN250;
J1 ASR: DN32- DN40 - DN50 - DN65 - DN80 - DN100 - DN125 - DN150 - DN175 - DN200 - DN250;

Working pressure: 16 bar;

Working temperature: min -10°C, +90°C with peaks to +100°C;

Expansion joints material:

- Internal POLSPP, POGNTH, POLGNT, EPD174 and FK 70;
- External POLGNT, POGNTH, GS1123.

Flange: Galvanized Steel - Stainless Steel AISI 316.

Application

- Fresh water and sanitary systems, potable water;
 - Compressed air systems;
 - the installation of expansion joints with flame protection cap (FR LUX) in fuel oil and lubricating oil systems can be accepted, provided that:
1. for ships flying EC flag, they are also certified in compliance with Marine Equipment Directive (MED) 2014/90/EU as amended;
 2. for ships not flying EC flag, they are also approved by the flag Administration.
- Water fire systems, for expansion joints with flame protection cap (FR LUX).
 - Sea water systems, provided that they are arranged in compliance with Para. 2.6.3 of Pt C, Ch 1, Sec 10 of RINA Rules.

TYPE APPROVAL CERTIFICATE
N. MAC332522CS
Enclosure - Page 2 of 2
J1 LUX - J2 LUX - J1 AS+ -J1ASR

Remarks

The installation on board is to be carried out in accordance with Manufacturer's instructions and with requirements of Para 2.6.3 and 5.9.3 of Pt C, Ch 1, Sec 10 of RINA Rules.

Each product to be installed on board ships and other units classed by RINA is subject to the satisfactory outcome of testing according to RINA Rules (para. 20.4.6 of Pt C, Ch 1, Sec 10).

The products are to be permanently marked, for traceability, in compliance with para. 7.2 of RINA "Rules for the type approval of flexible hoses and expansion joints"

Validity of this Certificate is subject to positive outcome of periodical Audit as per Rules for Testing and Certification of Marine Materials and Equipment.

GENOVA March 29, 2023