

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Class A and B Penetration**with type designation(s)
WR & WRS series (AI)

Issued to

WallMax Srl
Milano (MI), Italy

is found to comply with

DNV GL rules for classification – Ships**DNV GL offshore standards****DNV GL statutory interpretations DNVGL-SI-0364 – SOLAS interpretations****Application :****Approved for use as cable penetration system for approved ship cables in class A-60 aluminium bulkheads and decks.****This certificate is recognized by Transport Canada.****For further details see Application/Limitations on page 2 of this certificate.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Høvik** on **2019-06-04**This Certificate is valid until **2024-06-03**.DNV GL local station: **Milan**for **DNV GL**Approval Engineer: **Karolina Kusmider**

Mårten Schei-Nilsson
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

"WR series" (AI)

is a single cable penetration system. WallMax Round (WR) frames are a two-part structure is pre-assembled with a special, single-opening round module that accommodates and seals the passage of one cable only. The WR frame is installed in an aluminium sleeve welded symmetrically into the structural aluminium core.

"WRS series" (AI)

is a multi-cable penetration system. WallMax Round Squared (WRS) frames are round structures with an inner, squared packing space that accommodates modules of the WMR series. The WRS frame is installed in an aluminium sleeve welded symmetrically into the structural aluminium core.

The interstices between the cables and modules and between the modules are lubricated with "WallMax Lubricant".

The transits are fully insulated, on both sides, with two layers of mineral wool type SeaRox SL 620 or PAROC Fire Slab 100, having density of 100kg/m³ and, each thickness of 60mm; the mineral wool panels having dimensions ranging from 240x240 mm up to 420x420 mm, are fixed to the bulkhead or deck plate by means of bi-metallic pins and washers welded with pitch ranging from 150 up to 200 mm.

The products are manufactured at the premises of WallMax India Enterprise Limited, Faridabad Haryana, India.

For further details see drawings listed under Type Approval documentation below.

Application/Limitation

Approved for use as a cable penetration system in class A-60 aluminium bulkheads and decks. Other applications are subject to case-by-case approval.

Class A-0, A-15 and A-30 shall be insulated as class A-60 and in addition the division shall be insulated at least 200 mm around the penetration.

Approved sizes:

Penetration system	Application	Diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Max. cables dia. [mm]	Class
WR	Bulkhead	25 - 125	37 - 65	4,25 - 7,0	81	A-60
WR	Deck	25 - 125	37 - 65	4,25 - 7,0	81	A-60
WRS	Bulkhead	75 - 200	55	6,5	53	A-60
WRS	Deck	75 - 200	55	6,5	53	A-60

Type WR approved for water tightness up to a design pressure of 0.4 MPa (4 bar), test pressure - 0.6 MPa (6 bar) and air tightness up to a design pressure of 0.27 MPa (2.67 bar), test pressure 0.4 MPa (4 bar).

Type WRS (except WRS 75) approved for water tightness up to a design pressure of 0.2 MPa (2 bar), test pressure - 0.3 MPa (3 bar). WRS 75 approved for water tightness up to a design pressure of 0.4 MPa (4 bar), test pressure 0.6 MPa (6 bar).

Type WRS (except WRS 75) approved for air tightness up to a design pressure of 0.13 MPa (1.33 bar), testing pressure 0.2 MPa (2 bar). WRS 75 approved for air tightness up to a design pressure of 0.27 MPa (2.67 bar), test pressure 0.4 MPa (4 bar).

Penetration systems are not to be used for penetrating boundaries of tanks.

Each product is to be supplied with its manual for installation, use and maintenance.

Job Id: **262.1-031271-1**
Certificate No: **TAF000017N**

Type Approval documentation

Certification in accordance with Class Programmes DNVGL-CP-0338, September 2018 and DNVGL-CP-0165, October 2017.

Fire test report no. 2017CS01761/1 dated 2017-05-03 from RINA test laboratory, Italy.
Fire test report no. 2017CS01761/2 dated 2017-04-27 from RINA test laboratory, Italy.
Fire test report no. 2017CS01761/4 dated 2017-04-27 from RINA test laboratory, Italy.

Pressure test report summary dated 2017-12-21, stamped by DNVGL Mumbai.
Pressure test report, 18 pages dated 2018-09-21, stamped by DNVGL Mumbai.

Drawing no. 5500001003 dated 2017-04-25 from the manufacturer.
Drawing no. 5500002002 dated 2017-04-25 from the manufacturer.
Drawing no. 5500001004 dated 2017-04-25 from the manufacturer.

Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3.

Pressure tests with water and air according to Class Programme DNVGL-CP-0165.

Marking of product

The product or packing shall be marked with the name of the manufacturer, type designation and fire technical rating, as applicable.

Transport Canada Approval

Based on the procedures laid down in the Transport Canada Publication entitled "Approval Procedures for, Life Saving Equipment and Structural Fire Protection Products (TP 14612)", DNV GL confirms that the products listed in this certificate are in accordance with Transport Canada's requirements.

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in DNVGL-CP-0338 Section 4.