

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Class A and B Penetration

with type designation(s)
WR and WRS

Issued to

WallMax Srl
Milano (MI), Italy

is found to comply with

DNV GL rules for classification – Ships

DNV GL offshore standards

DNV GL class programme DNVGL-CP-0165 – Type approval – Cable and pipe penetrations

Application :

Approved for use as cable penetration system for approved ship cables in class A-60 steel bulkheads and decks.

This certificate is recognized by Transport Canada.

For further details see Application/Limitations on page 3 of this certificate.

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Hamburg** on **2017-07-13**

This Certificate is valid until **2022-07-12**.

DNV GL local station: **Mumbai CMC**

for **DNV GL**

Approval Engineer: **Carsten Hunsalz**

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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 and WRS”

Cable penetration system consists of EPDM cylindrical body modules, stainless steel discs on the extremities and screws for expander mechanism, fitted inside a circular steel coaming welded in the middle, on both sides, to the deck or bulkhead plate. The interstices between the cables and modules and between the modules are lubricated with “Wallmax Lubricant”.

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

“WR”:

The coaming is welded symmetrically of the deck/bulkhead.

Insulation details: One layer of 30 mm and two layers of 60 mm thick mineral wool blankets of approved type, minimum density 100 kg/m³ is fitted around the coaming, over the EPDM modules and tightening system and between the cables. The size of the blankets is 240 x 240 up to 420 x 420 mm (w x h). The insulation is fitted on both sides of the bulkhead/deck.

Application	Diameter (mm)	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in deck/bulkhead	Cables-Minimum Diameter (mm)	Cables-Maximum Diameter (mm)
Bulkhead	25	10	16	symmetrically	8	10
Bulkhead	75	7.1	17	symmetrically	20	31
Deck	25	10	16	symmetrically	8	10
Deck	75	16	36	symmetrically	30	45

“WRS”:

The coaming is welded symmetrically of the deck/bulkhead.

Insulation details: One layer of 30 mm and two layers of 60 mm thick mineral wool blankets of approved type, minimum density 100 kg/m³ is fitted around the coaming, over the EPDM modules and tightening system and between the cables. The size of the blankets is 240 x 240 up to 420 x 420 mm (w x h). The insulation is fitted on both sides of the bulkhead/deck.

Application	Diameter (mm)	Minimum filling rate (%)	Maximum filling rate (%)	Coaming position in deck/bulkhead	Cables-Minimum Diameter (mm)	Cables-Maximum Diameter (mm)
Bulkhead	75	1.4	36	symmetrically	9	45
Bulkhead	200	0.25	6.5	symmetrically	10	39
Deck	75	1.7	7.1	symmetrically	10	20
Deck	200	0.25	6.5	symmetrically	10	40

Application/Limitation

Approved for use as a cable penetration system in class A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval. Approved for use in class A-0, A-15 and A-30 when the penetration system is insulated as A-60. In addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

Approved maximum cable diameter: 45 mm.

Approved for air tightness up to a design pressure of 0.07 MPa (0.7 bar), test pressure - 0.1 MPa (1 bar).

Job Id: **262.1-023700-1**
Certificate No: **TAF00000R2**

Type WR 75 approved for air tightness up to a design pressure of 0.13 MPa (1.3 bar),
test pressure - 0.2 MPa (2 bar).

Approved for water tightness up to a design pressure of 0.2 MPa (2 bar),
test pressure - 0.3 MPa (3.0 bar).

Type WR 75 approved for water tightness up to a design pressure of 0.47 MPa (4.7 bar),
test pressure - 0.7 MPa (7.0 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.

Type Approval documentation

Fire test report no. 2016CS01481/5 and no. 2016CS01481/6 dated 2017-01-19 from RINA test laboratory, Italy.

RINA MED Certificate no. MED999817CS/001

Pressure test report, 14 pages dated 2017-05-16, stamped by DNVGL Mumbai.

Insulation details:

Drawing no. WDVpc16A60SBHA01 Rev. 1 and WDVpc16A60SDA01 Rev. 1 dated 2016-12-16.

Tests carried out

Tested in accordance with IMO 2010 FTP Code Part 3.

Pressure tests with water and gas according to DNVGL-CP-0165 ch. 4.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation and fire-technical rating.

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.