



**TYPE APPROVAL CERTIFICATE**  
**No. MAC242716CS**

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

<i>Description</i>	<b>BUTTERFLY VALVES</b>
<i>Type</i>	<b>WAFFER/LUG TYPE</b>
<i>Applicant</i>	<b>OMAL S.P.A</b> <b>SAN LORENZO, 70</b> <b>25069 VILLA CARCINA (BS)</b> <b>ITALY</b>
<i>Manufacturer</i>	<b>OMAL S.P.A</b>
<i>Place of manufacture</i>	<b>SAN LORENZO, 70</b> <b>25069 VILLA CARCINA (BS)</b> <b>ITALY</b>
<i>Reference standards</i>	<b>Part C, Chapter 1, Section 10 of RINA Rules</b>

Issued in **Genoa** on **August 5, 2016**. This Certificate is valid until **August 4, 2021**

  
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**RINA Services S.p.A.**  
**Francesco Sciacca**

This Certificate annuls and replace the previous one No. MAC420810CS dated 17 February 2011.  
This Certificate consists of this page and 1 enclosure





# TYPE APPROVAL CERTIFICATE

No. **MAC242716CS**

Enclosure - Page 1 of 2

**WAFER/LUG TYPE**

## Reference documents

Catalogue "**OMAL butterfly valves**" ref. no. 200500

## Reference standard

**UNI EN593**

## Materials/Components

### Body :

Nodular cast iron according to the following standards:  
JS1040 (EN 1563)

### Disc:

Nodular cast iron or Stainless steel or Copper alloy according to the following standards:  
1.4408 (EN 10088), 1.4404 (EN 10088), ASTM B148 9C

### Liner :

EPDM, NBR, FKM.

Upper and lower shaft parts :

Stainless steel

1.4021 (EN 10088),

Material combinations will be as per Manufacturer's Instructions.

## Type and dimension

Flangeless Wafer Lug type Butterfly Valve

Size Range: DN 40 - 300 mm

Flangeless Wafer type Butterfly Valve

Size Range: DN 350 - 600 mm

## Working Pressure

Type	Mounting between flanges,
Wafer or Lug (DN40 to DN300)	16 bar (10 bar *)
Wafer (DN350 to DN600)	10 bar

(\*) The maximum working pressure is to be reduced as per the Manufacturer's instructions, according to working temperature, service (e.g. Fuel oil and lubricating oil) and type of connection.





**TYPE APPROVAL CERTIFICATE**

**No. MAC242716CS**

**Enclosure - Page 2 of 2**

**WAFER TYPE,**

**LUG TYPE**

**Working temperature:**

EPDM

ambient temperature to + 135 °C

NBR

ambient temperature to + 120 °C

FKM

ambient temperature to + 190°C

**Fields of application**

- Ballast and bilge system
- Sea and fresh water system
- Domestic and Sanitary system
- Potable water system
- Fuel oil and lubricating oil
- Washing and fire extinguishing

**Remarks**

The butterfly valve body, disc and sealing should be suitable for the foreseen service.

Final acceptance of valves to be installed on board ships classed with RINA, is subject to satisfactory outcome of testing as per RINA Rules.

Evidence of what follows is to be given on the test certificate:

- butterfly valves not fitted with flanges are not to be used for sea chest and overboard discharges unless provisions are made to allow disassembling at sea of the pipes served by these valves without any risk of flooding.
- bilge valves will be fitted in association with a non return valve.

The maximum working pressure is to be reduced as per the Manufacturer's instructions, according to working temperature,

service (e.g. Fuel oil and lubricating oil) and type of connection.

This certificate does not cover any appropriate system for remote control valve.

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**Genoa 05/08/2016**

