




TYPE APPROVAL CERTIFICATE
No. MAC053216XG/002

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

<i>Description</i>	BUTTERFLY VALVES
<i>Type</i>	ECV-EVS - EVCS - EVBS - EVML - EVMS - EVFS - EVFL - EVTLS - EVUS
<i>Applicant</i>	WOUTER WITZEL EUROVALVE B.V. P.O. BOX 54 7580 AB LOSSER NETHERLANDS
<i>Manufacturer</i>	WOUTER WITZEL EUROVALVE B.V.
<i>Place of manufacture</i>	INDUSTRIETERREIN DE POL 12 7581 CZ LOSSER NETHERLANDS
<i>Reference standards</i>	Part C, Chapter 1, Section 10 of RINA Rules

Issued in **Hamburg** on **March 22, 2016**. *This Certificate is valid until* **March 21, 2021**



RINA Services S.p.A.
Giuseppe Russo

This certificate consists of this page and 1 enclosure



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Reference documents

Wouter Witzel Product data sheet 02.01.001 for ECV butterfly valves.
Wouter Witzel Product data sheet 01.01.001 for EVS butterfly valves.
Wouter Witzel Product data sheet 01.04.001 for EVBS butterfly valves.
Wouter Witzel Product data sheet 01.09.001 for EVML butterfly valves.
Wouter Witzel Product data sheet 01.08.001 for EVMS butterfly valves.
Wouter Witzel Product data sheet 01.10.001 for EVFS butterfly valves.
Wouter Witzel Product data sheet 01.11.001 for EVFL butterfly valves.
Wouter Witzel Product data sheet 01.06.001 for EVTLS butterfly valves.
Wouter Witzel Product data sheet 01.07.001 for EVUS butterfly valves.
Wouter Witzel Product data sheet 01.03.001 for EVCS butterfly valves.

Materials/Components

As per a.m. product data sheets.

Technical characteristics

Type designation	Type	Size DN [mm]	Maximum working pressure [bar]
ECV	Wafer	50 - 600	16
EVS	Wafer	50 - 1400	16
EVCS	Wafer with centering lugs	50 - 300	16
EVBS	Wafer with centering lugs	50 - 300	16
EVML	Wafer with mono flange	80 - 800	16
EVMS	Wafer with mono flange	350 - 1000	16
EVFS	Double flanged	40 - 2000	16
EVFL	Double flanged	50 - 1500	16
EVTLS	Tapped lug	50 - 1200	16
EVUS	U-section wafer short	700 - 2200	16



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ECV - EVS - EVCS - EVBS - EVML - EVMS - EVFS - EVFL - EVTLS - EVUS

Fields of application

- Ship's side or bottom and sea chest;
- Salt and fresh cooling water systems;
- Ballast water and fresh water transfer systems;
- Bilge suctions in association with a non return valve;
- Cargo oil lines (oil tanker);
- Fuel oil transfer systems;
- Fire main isolating valve.

Grey cast iron valves are not permitted to be installed on:

- piping system of first class;
- piping system of second class when the design pressure exceeds 13 bar;
- fuel oil lines with design pressure above 7 bar or design temperature above 60°C;
- ship's side or bottom sea chest and fittings;
- the collision bulkhead;
- bilge lines in tanks;
- the external wall of fuel oil and lubricating oil tanks, when under static head;
- piping subject to hydraulic hammering, excessive strains and vibrations.

Types EVS and EVCS valves are not permitted to be installed on:

- ship's side or bottom and sea chest;
- the collision bulkhead;
- the external wall of fuel oil and lubricating oil tanks, when under static head.

The lining material is to be suitable for the medium conveyed in the piping.

Remarks

The present Type Approval Certificate annuls and replaces the previous one no. MAC098811XG/002.

Hamburg March 22, 2016

