



TYPE APPROVAL CERTIFICATE
No. **MAC356522XG**

This is to certify that the product identified below satisfies the requirements of the standard quoted under "Reference standard"

<i>Description</i>	MECHANICAL JOINTS FOR PIPES
<i>Type</i>	Bite Type Compression Couplings
<i>Applicant</i>	Volz Gruppe GmbH Gartenstraße 6 78586 Deilingen GERMANY
<i>Manufacturer</i>	Volz Gruppe GmbH
<i>Place of manufacture</i>	Gartenstraße 6 78586 Deilingen GERMANY
<i>Reference standards</i>	RINA Rules

Issued in **HAMBURG** on **January 12, 2023**. *This Certificate is valid until* **January 11, 2028**

RINA Services S.p.A.
Giuseppe Russo

This certificate consists of this page and 2 enclosures.

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Reference documents:

- Volz Fittings Carbon Steel Catalogue Ed. 08/2014 filed under RINA dwg no. HMMC-9836.
- Volz Fittings Stainless Steel Catalogue Ed. 04/2015 filed under RINA dwg no. HMMC-9865.

Technical characteristics:

Couplings are made of Carbon or Stainless Steel, respectively.

Sealing rings are made of FPM, PTFE or NBR, respectively.

Couplings covered by this Certificate and shown in the above mentioned Catalogues are following:

- Cutting Ring Fittings
- Male Connectors
- 24° Swivel Connectors
- Standpipe Connectors
- Bulkhead Couplings
- Reducers
- Weld Connectors
- Diagnostic Equipment
- Banjo and Swivel Couplings Equipment
- Blanking Plugs

Maximum (nominal) working pressure at 20°C is as follows:

Product Line	Tube outer diameter (mm)	Nominal Pressure [PN] (bar)
LL	4 - 8	100
L	6 - 10	500
	12 - 18	400
	22 - 42	250
S	6 - 10	800
	12 - 16	630
	20 - 38	420

The maximum (nominal) pressure is to be reduced at temperatures higher than 20°C, according to Manufacturer's instruction.

The nominal pressure represents the maximum allowable working pressure inclusive of pressure peaks.

Temperature range depends on the sealing ring materials as follows:

FPM (Viton): -25 to 200°C

PTFE (teflon): -60 to 200°C

NBR: -30 to 120°C

Fields of application:

This product is intended for use in shipboard steel and stainless steel piping systems handling the following liquids and gases:

Hydraulic oil, Lubrication oil, Fuel oil, Compressed air, Steam and Condensate, Oxygen, Fresh and Sea water, and High Fog Fire Extinguishing systems.

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Acceptance conditions:

This product of series L and S is allowed to be used for gases having an oxygen content exceeding 21% at working pressure 250 bar and 360 bar, respectively.

This product is only allowed to be used for low temperature gas for accessory lines and instrumentation lines with external diameters of 25 mm and less.

Threaded bulkhead couplings type GSV and WSV are not allowed to be used on watertight bulkheads.

This product with non-metallic components (sealing rings) are not to be used for fire safe applications.

This product is to be used for pipes of a correct temper and tolerance as recommended by the Manufacturer and not to be used on pipes in cold fabricated (hard temper) conditions.

Remarks:

The selection of the compression couplings for the corresponding service is to be in accordance with the instructions of the Manufacturer.

The installation on board is to be made in accordance with the Manufacturer's assembly instructions.

This Certificate has been issued on the basis of DNV Type Approval Certificates TAP000018E and TAP00000HU, where is also stated that, the following tests have been carried out: leakage test, burst pressure test, vacuum test, pull-out test, repeated assembly test, vibration test, pressure pulsation test, oxygen shock test.

HAMBURG January 12, 2023

