



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	VOSS Fluid GmbH
Address	Luedenscheider Str.52-54, Wipperfueth, 51688, Germany
Type	Flare Flanges
Description	<p>ZAKO-flange coupling system consists of:</p> <ul style="list-style-type: none">- ZAKO-flange- ZAKO-ring (with O-ring groove)- O-ring- 4 cylindr. screws DIN 912-10.9 <p>Sealing on the pipe side by high specific surface pressure between the ZAKO-ring and the internal surface of the pipe. Sealing on the flange side by an O-ring.</p>
Trade Name	VOSS Zako Flange Couplings
Application	<p>General use in marine, offshore and industrial piping systems.</p> <p><u>Restrictions (not to use):</u></p> <ol style="list-style-type: none">1. starting/control air and CO2 systems.2. inside machinery spaces of category A or accommodation spaces for inert gas main lines3. fire extinguishing systems which are not always filled with water
Specified Standard	LR Rules and Regulations for the Classification of Ships, July 2024

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Ratings	Series	Flange type	Flange size	Pipe outside (mm)	Nom. pressure (bar)
	Normal	SAE	1/2 to 3"	16 to 18	250
	High press.	SAE	1/2 to 2"	16 to 65 *	400
	High press.	Square	DN11 to DN49	16 to 65 *	400

*) only up to OD 60.3 mm if intended for Class I and II - piping systems

Additional Tests Repeated assembly, leakage, burst pressure, hydraulic impulse and vibration, flame resistance tests conducted.

Other Conditions Trade mark "VOSS" to be shown on each coupling. The pipe couplings to be selected and installed as per producer's recommendations and instructions.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: 93/20052(E5)

The Design Appraisal Document TSO/24-017822, prev. HMD 13340-04, Rev. 3 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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