

Type Approval Certificate Extension

This is to certify that Certificate No. 93/20052 (E3) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

PRODUCER

VOSS Fluid GmbH
Lüdenscheider Straße 52-54
51688 Wipperfürth
Germany

DESCRIPTION

ZAKO-flange coupling system consists of:

- ZAKO-flange
- ZAKO-ring (with O-ring groove)
- O-ring
- 4 cylindr. screws DIN 912-10.9

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.

TYPE

VOSS ZAKO Flange Couplings

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

Certificate No.

93/20052 (E4)

Issue Date

04 December 2013

Expiry Date

31 July 2018

Sheet

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Torsten Schröder
Hamburg Technical Support Office
Lloyd's Register EMEA

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71 Fenchurch Street, London EC3M 4BS

APPLICATION	General use in marine, offshore and industrial piping systems. <u>Restrictions:</u> <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
STANDARD	Lloyd's Register Rules and Regulations for the Classification of Ships, July 2013
PERFORMANCE TESTS	Repeated assembly, leakage, burst pressure, hydraulic impulse and vibration, flame resistance.
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."

The attached Design Appraisal Document No. HMD 13340-04, Issue Number 2, dated 04.12.2013 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 93/20052 (E3) to which this extension should be attached.

Certificate No.	93/20052 (E4)
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