



CERTIFICATE NUMBER	20-2016723-PDA
EFFECTIVE DATE	14-Aug-2020
EXPIRY DATE	13-Aug-2025
ABS TECHNICAL OFFICE	Hamburg Engineering Department

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

VOSS FLUID GMBH

located at

**LUEDENSCHIEDER STR. 52-54, D-51688 WIPPERFUERTH,
Germany**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product Bite Type Tube Fittings

Model VossRingM cutting ring couplings

This Product Design Assessment (PDA) Certificate remains valid until 13/Aug/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

Efstratios Maliatsos, Engineer/Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

VOSS FLUID GMBH

LUEDENSCHIEDER STR. 52-54

D-51688 WIPPERFUERTH

Germany

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Email: fluid@voss.net

Web: www.voss.net

Tier: 2 - PDA Issued

Product: Bite Type Tube Fittings

Model: VossRingM cutting ring couplings

Intended Service:

For use in steel piping systems.

Description:

Materials: Steel/stainless Steel.

VOSSRingM, union nuts, straight male stud couplings (sealing with seal edge, PEFLEX profile seal ring), straight male stud couplings UN/UNF, straight male stud couplings ISO 6149, straight couplings, straight reducing couplings, elbow couplings, T couplings, T reducing couplings, Cross couplings, straight bulkhead couplings, elbow bulkhead couplings, adjustable elbow couplings, adjustable T couplings, adjustable L couplings, straight stud standpipe adapters (sealing with seal edge, PEFLEX profile seal ring), reducing inserts with hexagon for locking, straight couplings (DKO), straight reducing couplings (DKO), cross couplings (DKO), adjustable elbow couplings (DKO), adjustable 45° elbow couplings (DKO), adjustable T couplings (DKO), adjustable L couplings (DKO), straight stud standpipe adapters (DKO), sealed with PEFLEX profile seal ring), reducing couplings (DKO), distance adapters (DKO), adjustable elbow couplings with lock nut (sealing with PEFLEX profile seal ring), adjustable elbow couplings with lock nut ISO 6149 (sealing with O-ring), adjustable 45° elbow couplings with lock nut ISO 6149 (sealing with O-ring), adjustable L couplings with lock nut ISO 6149 (sealing with O-ring), adjustable T couplings with lock nut ISO 6149 (sealing with O-ring), straight welding couplings, welding bulkhead couplings, welding nipples with O-ring seal, gauge couplings with internal thread, gauge couplings with internal thread (tube socket pre-assembled), gauge couplings with internal thread (DKO), thread reducing couplings, straight adapter ISO 6149 / DIN 3852, blanking screws, blanking plugs, tube blanking screws, hexagonal nuts, reinforcing sleeves, sealing rings. Sealing for DKO made of FPM/FKM; sealing for PEFLEX, UN/UNF made of NBR. Nuts, clamping ring, elbows, adjustable elbows DKO, tees, adjustable tees DKO, stud barrel tees, stud branch tees, straight couplings, equal elbows, equal tees, male stud couplings UN/UNF, male stud couplings PEFLEX. Sealing for DKO made of FPM or FKM; sealing for UN/UNF made of NBR.

Rating:

Series L (light): 6 to 10 mm OD for 500 bar, 12 to 18 mm OD for 400 bar, 22 to 42 mm OD for 250 bar.

Series S (heavy): 6 to 10 mm OD for 800 bar, 12 to 16 mm OD for 630 bar, 20 to 38 mm OD for 420 bar.

Operating temperatures depending on coupling and sealing materials, as per manufacturer's specification (see also under Comments).

Service Restriction:

1. Unit Certification is not required for this product.
2. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.
3. Coupling types with tapered pipe threads are not to be used for toxic and corrosive fluid services and for all services of temperature exceeding 495°C.
4. In Classes I and II piping systems, in general, for joining sections of hydraulic pipes and for steering gear-, controllable pitch propeller- and propulsion related hydraulic systems coupling's use is limited to the following restrictions: 6 mm to 20 mm OD for 103 bar; 22 mm to 25 mm OD for 82.8 bar; 28 mm to 42 mm OD for 41.4 bar.
5. In other hydraulic oil systems the couplings may be used without these pressure limitation only for connection to equipment, such as pumps, valves, cylinders, accumulators, gauges and hoses.
6. Straight-thread O-ring type fittings may be used for connection to equipment in hydraulic oil piping, without these pressure and service limitation, but are not to be used for joining sections of pipes.
7. This product is not approved for piping penetrations through watertight, fire tight and smoke tight bulkheads.

Comments:

1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
2. The above maximum working pressures are to be less than or equal to 1/4 burst pressure. In order to retain this safety factor of four (4), the specified maximum working pressures may be reduced depending on operating temperatures, high pressure surges etc.

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3. The application and installation of the couplings is to be in accordance with manufacturer's specifications and instructions and is to be approved in conjunction with the relevant piping systems.

4. Where this product is used for piping systems designed for temperature lower than -18 Deg.C, all fittings are to comply with the requirements in 2-3-13 of the Marine Vessel Rules.

5. Type testings were carried out in the presence of ABS Surveyors

Notes/Drawing/Documentation:

Drawing No. 2020-06-17, Declaration of conformity, Revision: -, Pages: 1

Drawing No. Correspondence, email of July 10th, Revision: -, Pages: 1

Drawing No. PDA request, PDA request, Revision: -, Pages: 3

Terms of Validity:

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STANDARDS

ABS Rules:

2020 Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2020 Rules for Building and Classing Marine Vessels: 4-6-2/5.9, 4-6-2/Table 10, 4-6-2/Table 11, 4-6-2/Table 12

National:

NA

International:

ISO 8434-1 :2016-10, ISO 6149-1 :2019-9, ISO 6149-3: 2007-05

Government:

NA

EUMED:

NA

OTHERS:

NA