



## TYPE APPROVAL CERTIFICATE

**Certificate No.** : HMB33980-PE001                      **Initial Approval** : 21st October, 2016  
**Product** : Mechanical Joints  
**Manufacturer** : VOSS Fluid GmbH  
Ludenscheider Str.52-54 D-51688 Wipperfurth , Germany

**Product Description** : Model : VOSSRingM Cutting Ring Couplings  
- Kind : Bite Type Compression Tube Couplings  
- Temperature Range  
- Carbon Steel : -20 °C ~ +120 °C  
- Stainless Steel : -60 °C ~ +200 °C  
- Max. Working Pressure : 250 bar ~ 800 bar (size and type dependent)  
- Size : 6 mm ~ 42 mm  
- Material  
- Fitting Body and Nut : Carbon Steel and Stainless Steel  
(DIN 3859-1 table 2 or higher grades)

" See Appendix 1 "

**Approval Condition** : " See Appendix 1 & 2 "

**THIS IS TO CERTIFY** that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt. 5, Ch. 6, Sec. 1 of the Rules for Classification, Steel Ships.

This Certificate is valid until 20th October, 2021

Issued at Busan, Korea on 21st October, 2016



**KOREAN REGISTER OF SHIPPING**

*General Manager of  
Marine & Ocean Equipment Team*

*Note : 1 : The approval will be automatically suspended and the Certificate become invalid from the expiry date of the Certificate in the event that the extension has not been granted or the renewal of the Certificate is not underway.*

*2 : The manufacturer should notify this Society of any modification or changes that may affect the validity of this Certificate.*

## Appendix 1

# Product Description and/or Approval Condition

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### 1. Product Description :

#### (1) Mechanical Joints Specification \* L series (Light)

Size range(OD) (mm)	Design Pressure (bar)
6 ~ 10	500
12 ~ 18	400
22 ~ 42	250

  

Size range(OD) (mm)	Design Pressure (bar)
6 ~ 10	800
12 ~ 16	630
20 ~ 38	420

#### (2) Reviewed Test Reports :

- Tightness test, Burst Pressure test, Repeat assembly test, Pull out test, Vacuum test :  
Report No. 2014\_466/1 issued by VOSS lab dated 12 June 2015
- Vibration test, Pressure pulsation test :  
Report No. K057/14 issued by IMA DRESDEN dated 5 December 2014
- Fire resistance test : Reports issued by Dr. Baumer test laboratory dated 22 October 2014

#### (3) Approved Drawing Numbers :

0019000000, 0019250000, 0019450000, 0019750000, 0019950000, 1758250080,  
1758450080, 1758750080, 1758950080, 1758520000, 0720250000, 0720450000,  
0720000000, 0720750000, 0720750000, 0720500000, 0784240000, 0784280000,  
1784080000, 0784340000, 0784380000, 0784290000, 0782900000, 0782400000,  
0782750000, 0782830000, 0782640000, 1760250080, 1760950080, 1760520000,  
0734450000, 0734006000, 0734750000, 0004250000, 0004450000, 0004000000,  
0004750000, 0004950000, 0004500000, 1758010000

### 2. Approval Condition :

#### (1) Intended for :

This mechanical joints can be used for the following pipeline lines in easily visible and accessible positions;

- 1) Flammable fluids(Flash point  $\leq 60$  °C)  
: Cargo oil lines, Crude oil washing lines and Vent lines
- 2) Inert gas  
: Water seal effluent lines and Scrubber effluent lines  
: Main lines and Distribution lines
- 3) Flammable fluids(Flash point  $> 60$  °C)  
: Cargo oil lines  
: Fuel oil lines, Lubricating oil lines, Hydraulic oil and Thermal oil
- 4) Sea water  
: Bilge lines, Ballast system and Cooling water system  
: Fire main and water spray, Foam system and Sprinkler system  
: Tank cleaning services and Non-essential system
- 5) Fresh water  
: Cooling water system and Condensate return  
: Non-essential system

- To be continued -

## Appendix 2

# Product Description and/or Approval Condition

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- 6) Sanitary/Drains/Scuppers
  - : Deck drains (internal)
  - : Sanitary drains
- 7) Sounding/Vent
  - : Water tanks/Dry spaces lines
  - : Oil tanks lines (flash point > 60 °C)
- 8) Miscellaneous
  - : Service air (non-essential) and Brine
  - : Steam

(2) Limitation :

- 1) These mechanical joints are not to be used for Class I piping system.
- 2) These mechanical joints are to be mounted in accordance with the manufacturer's instructions.
- 3) These mechanical joints are not to include any components which readily deteriorate in case of fire, they are to be of approved fire resistant type as required for slip-on joints.
- 4) These mechanical joints, which in the event of damage could cause fire or flooding, are not to be used in piping sections directly connected to the sea openings or tanks containing flammable fluids.
- 5) Piping in which these mechanical joints are fitted is to be adequately adjusted, aligned and supported. Supports or hangers are not to be used to force alignment of piping at the point of connection.
- 6) These mechanical joints are not used in those systems where pulsation other than water hammer is expected.
- 7) These mechanical joints are not to be used in pipelines in cargo holds, tanks, and other spaces which are not easily accessible. Application of these joints inside tanks may be permitted only for the same media that is in the tanks.
- 8) Individual Product Certification is required where the mechanical joints are intended to be used for Class II piping system.

<End of Certificate>