



**TYPE APPROVAL CERTIFICATE**  
No. **MAC005121XG**

**This is to certify** that the product identified below is in compliance with the regulations herewith specified.

<i>Description</i>	<b>MECHANICAL JOINTS FOR PIPES</b>
<i>Type</i>	<b>UNI-FLEX SLIP-ON JOINT - SLIP TYPE AXIALLY NOT RESTRAINED</b>
<i>Applicant</i>	<b>UNI-Coupling bv KERKDIJK-ZUID 11A 5492 HW SINT-OEDENRODE NETHERLANDS</b>
<i>Manufacturer</i>	<b>UNI-Coupling bv</b>
<i>Place of manufacture</i>	<b>KERKDIJK-ZUID 11A 5492 HW SINT-OEDENRODE NETHERLANDS</b>
<i>Reference standards</i>	<b>Part C, Chapter 1, Section 10 of RINA Rules</b>
<i>Reference documents</i>	<b>RINA Type approval system</b>

*Issued in* **HAMBURG** on **January 19, 2021**. *This Certificate is valid until* **January 18, 2026**

  
\_\_\_\_\_  
**RINA Services S.p.A.**  
**Giuseppe Russo**

This certificate consists of this page and 1 enclosure

## TYPE APPROVAL CERTIFICATE

No. **MAC005121XG**

Enclosure - Page 1 of 1

**UNI-FLEX (F)**

### Reference Documents:

- Housing, Gasket, Trunions, Washers, Gripping & Bolts Assembly drawings
- Uni-Coupling Technical Manual issued on 24.9.2014
- Burst Test, Tightness Test, Vacuum Test & Fire Endurance Test Reports according to Final Test Plan dated 18.9.2014 as per IACS UR P2.11.5
- ISO-9001 & ISO14001 Quality Certificates
- Uni-coupling asbestos free material statement
- Approved Drawing HMMC-18495

### Materials/Components:

	W2		W5	
	DIN	AS	DIN	AS
Casing	1.4016	301	1.4571-1.4404-1.4462-1.4162	316Ti-316L-318LN-Lean Duplex
Lock Bars S-Type	1.0760	-	1.4571-1.4404-1.4462-1.4162	316Ti-316L-318LN-Lean Duplex
Lock Bars L-Type	1.4571	-	-	-
Bolts	1.0760	-	A4-80	316
Anchor Ring	1.4310 / 301			
Rubber Sleeve	NBR / EPDM			
Pipe Material	carbon steel, stainless steel, Cu, CuNiFe			

Flame protection consists of housing made of stainless steel sheet according to drawing no. 1-W5-VB-xx-xx & 2-W5-VB-xx-xx and intumescent material covered by type approved tape.

Technical Characteristics

Design Pressure	
Size Range OD (mm)	PN(bar)
from 45 up to 110	16
from 140 up to 206	16 to 2.5
from 280 up to 420	16 to 2.5

Design Temperature	
Rubber Material / Size Range OD (mm)	Temperature Range
NBR	-20°C up to 80°C
EPDM / 21 up to 172	-30°C up to 125°C
EPDM / 180 up to 406.4	-20°C up to 80°C

### Fields of Application:

The slip on joints slip type are acceptable for the applications/locations shown in the Table 16 of Part C, Chap. 1, Section 10 of RINA Rules, also where fire resistant coupling type is required and with the limitations as per Paragraph 2.4.5 Part C, Chap. 1, Section 10 of RINA Rules.

### Acceptance Conditions:

- The gasket material must be resistant to the fluid conveyed in the pipe and also to the surrounding fluid if the coupling is installed inside a tank.
- The couplings are to be installed in locations where leakage would not create a hazard by way of damage to electrical systems or otherwise create a hazard to the vessel, equipment or personnel onboard.
- The acceptance of the a.m. products on board ship classed with RINA is subject to the satisfactory outcome of testing as per RINA Rules applicable.
- The installation on board is to be carried out in accordance with the Manufacturer's instructions.
- This Certificate annuls and replaces the Certificate No. **MAC098415XG/002**.

**HAMBURG January 19, 2021**

RINA Services S.p.A.  
Via Corsica, 12 - 16128 Genova  
Tel +39 010 53851  
Fax +39 010 5351000

