



Marine & Offshore

Certificate number: 42679/B0 BV

File number: ACM 135/2760/1

Product code: 2106H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Uni-Coupling B.V.**

Sint-Oedenrode - NETHERLANDS

*for the type of product*

**MECHANICAL JOINTS - SLIP-ON JOINTS - GRIP TYPE**

UNI-Grip axially restrained pipe couplings

### Requirements:

- BUREAU VERITAS Rules for the Classification of Steel Ships
- BUREAU VERITAS Rules for the Classification of Offshore Units
- BUREAU VERITAS Rules for the Classification of Naval Ships
- BUREAU VERITAS Rules for the Classification of Yachts

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 04 Nov 2027**

**For Bureau Veritas Marine & Offshore,**

At BV GRONINGEN, on 04 Nov 2022,

Olaf RUITER

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=gxlrn0gw5d>

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This certificate consists of 4 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION

#### UNI-Grip axially restrained pipe couplings

##### 1.1 Design

**UNI-GRIP:** Axially restraint pipe couplings for detachable sealing and anchoring plain-ended pipes of Carbon steel, Stainless steel, Cu and CuNiFe.

##### 1.2 Rating

UNI-Grip Type	Diameter Size (mm)	Version	Pipe OD (mm)	Nominal Pressure (bar)
UNI-Grip L	20.5 - 172	L	21.3 - 168.3	16
UNI-Grip S	20.5 - 172	S	21.3 - 168.3	16
UNI-Grip	180.0 - 609.6	SG	219.1 - 273.0*	16
		SG	323.9 - 355.6*	10
		SG	406.4* - 508.0	6
		SG	558.8 - 711.2	2.5
UNI-Grip LE	64 - 172	LE	66.6 - 168.3	10
UNI-Grip SE	64 - 172	SE	66.6 - 168.3	10
UNI-Grip	180.0 - 406.4	SC	219.1 - 273.0*	10
		SC	323.9* - 355.6*	6
		SC	406.4*	2.5
UNI-Grip	180.0 - 355.6	SB	219.1 - 273.0*	6
		SB	323.9* - 355.6*	2.5

\* For CuNiFe pipes with wall thickness of 4 mm or less maximum PN is 2.5 bar.

The maximum working pressure is not to exceed one quarter of the burst pressure at the service temperature.

- Lock bars S-Type: Standard massive lock bars

- Lock bars L-Type: Light hollow lock bars

##### 1.3 Materials

The pipe couplings are available in two material composites w5 and w2

Steel material	Material w2	Material w5
Casing	1.4016 (301)	1.4404 (316L), 1.4571 (316Ti), 1.4462 (318LN), 1.4162 (Lean Duplex)
Bolts	A4-80	A4-80, A4-70
Lock bars	1.0760 (1141)	1.4404 (316L), 1.4571 (316Ti), 1.4462 (318LN), 1.4162 (Lean Duplex)
Anchoring rings	/	1.4310 (301), 1.4404 (316L), 1.4571 (316Ti), 1.4462 (318LN), 1.4162 (Lean Duplex)

When other choices of materials are used per manufacturer's recommendations, the BV agreement is to be obtained.

##### 1.4 Temperature range in dependance of the elastomer material

Rubber material	Temperature Range (°C)
EPDM sleeve	- 30 up to + 125 for version L and S
	- 30 up to + 125 for version LE and SE
	- 20 up to + 80 for version SG
	- 20 up to + 80 for version SC and SB
NBR sleeve	- 20 up to + 80 for all versions

## **2. DOCUMENTS AND DRAWINGS**

- Uni Coupling Technical Manual version 3.30
- Uni Coupling Technical Manual version 2.70

*No departure from the above documentation shall be made without the prior consent of the Society. The manufacturer must inform the Society of any modification or changes to these documents and drawings.*

## **3. TEST REPORTS**

3.1 Type tests carried out under supervision of Society's Surveyors : Tightness test, Vibration endurance test, Burst pressure test, Pull-out test, Vacuum test and Repeated assembly test :

- Test reports N°1a and 1b-1-L-G-W5-E dated 24/07/2014
- Test reports N°2a to 2c-1-L-G-W5-E dated 29/07/2014, 05/08/2014
- Test reports N°3a to 3c-1-L-G-W5-E dated 29/07/2014, 14/08/2014
- Test reports N°4a and 4b-1-L-G-W5-E dated 23/07/2014
- Test reports N°5a and 5b-1-L-G-E-W5-E dated 13/08/2014, 29/07/2014
- Test reports N°6a and 6b-1-L-G-E-W5-E dated 25/07/2014
- Test reports N°7a and 7b-1-L-G-E-W5-E dated 30/07/2014
- Test report N°7d-1-L-G-E-W5-E dated 05/08/2014
- Test report N°8a-2-S-G-B-W5-E dated 04/09/2014
- Test reports N°9a and 9b-2-S-G-C-W5-E dated 29/07/2014
- Test reports N°10a and 10b-2-S-G-G-W5-E dated 25/07/2014
- Test report N°10c-2-S-G-G-W5-E dated 28/07/2014
- Test reports N°13a and 13b-2-S-G-C-W5-E dated 17/09/2014
- Test report N°13c-2-S-G-C-W5-E dated 02/09/2014
- Test reports N°14a and 14b-S-G-G-W5-E dated 30/07/2014
- Test report N°14c-2-S-G-G-W5-E dated 20/08/2014
- Test report N°15a-2-G-G-W5-E dated 04/09/2014
- Test report N°15c-2-S-G-G-W5-E dated 18/09/2014
- Test report N°1-1-L-G-W5-E dated 21/07/2014
- Test report N°4-1-L-G-W5-E dated 21/07/2014

3.2 Fire resistance test according to ISO 19921/ 19922 witnessed by Society's Surveyors :

- Test report N°1d-1-L-G-W5-E dated 25/07/2014
- Test report N°2-1-L-G-W5-E- dated 23/07/2014
- Test report N°3-1-L-G-W5-E dated 24/07/2015
- Test report N°6e-1-L-G-E-W5-E dated 25/07/2014
- Test report N°5F-1-L-G-E-W5-E dated 30/07/2014
- Test report N°8e-2-S-G-B-W5-E dated 04/09/2014
- Test report N°9C-2-S-G-C-W5-E dated 13/08/2014
- Test report N°14e-2-S-G-G-W5-E dated 13/08/2014
- Test report N°15e-2-S-G-G-W5-E dated 17/09/2014

## **4. APPLICATION / LIMITATION**

4.1 May be used on board for services of class II and class III piping systems:

- **Flammable fluids (flash point  $\leq 60^{\circ}\text{C}$ )** - cargo oil (4), crude oil washing (4), vent lines (3)
- **Inert gas** - water seal/scrubber effluent, main lines (2+4), distributions lines (4)
- **Flammable fluids (flash point  $> 60^{\circ}\text{C}$ )** - cargo oil (4), fuel oil (2+3), lubricating oil (2+3), hydraulic oil (2+3), thermal oil lines (2+3)
- **Sea water** - bilge/ballast/cooling water (1), water/non-water filled fire extinguishing systems (3), fire main, tank cleaning/non-essential lines
- **Fresh water** - cooling water (1), condensate return (1), non-essential lines
- **Deck drains (internal)** (6), sanitary drains

- **Sounding and venting** - water tanks/dry spaces, oil tanks (flash point > 60°C) (2+3)
- **Miscellaneous** - service air (non-essential), brine, steam (5)

(1)- *Inside machinery spaces of category A – only approved fire resistant types.*

(2)- *Not inside machinery spaces of category A or accommodation spaces. May be accepted in other machinery space provided the joints are located in easily visible and accessible positions.*

(3)- *Approved fire resistant types except in cases where such mechanical joints are installed on exposed open decks, as defined in SOLAS II-2/Reg. 9.2.3.3.2.2 (10) and not used for fuel oil lines.*

(4)- *Only in pump rooms and open decks – only approved fire resistant types.*

(5)- *May be used for pipes on deck with a design pressure of 10 bar or less.*

(6)- *Only above bulkhead deck of passenger ships and freeboard deck of cargo ships.*

4.2 Not to be used for scuppers and discharge (overboard), starting/control air and CO2 system.

4.3 The packing material must be compatible with the fluid to be conveyed and the maximum working temperature.

4.4 Assembly instructions given by the manufacturer are to be complied with the manufacturer's recommendations.

4.5 In all cases, the associated pipes are to be suitably supported and anchored. The joints are to be at any time accessible, excepting inside tanks where permitted by the BUREAU VERITAS Rules.

4.6 The wall thickness and the material of the tubes are to be in accordance with the applicable Society Rules.

4.7 The use of stainless steel is to be restricted as per the requirements of the Bureau Veritas Rules.

4.8 Not to be used where pressure impulses may occur.

## **5. PRODUCTION SURVEY REQUIREMENTS**

5.1 The products are to be supplied by **Uni-Coupling B.V.** in compliance with the type and the requirements described in this certificate.

5.2 This type of product is within the category HBV of Bureau Veritas Rule Note NR 320.

5.3 BV product certificate is not required.

5.4 **Uni-Coupling B.V.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR 320 for HBV products.

5.5 For information, **Uni-Coupling B.V.** has declared to Bureau Veritas the following production site :

**Uni-Coupling B.V.**  
**Kerkdijk-Zuid 11A**  
**5492 HW Sint-Oedenrode**  
**5492 Sint-Oedenrode**  
**NETHERLANDS**

## **6. MARKING OF PRODUCT**

The product shall be marked with at least:

- Manufacturer's name or logo
- Type designation
- Maximum working pressure
- Size

## **7. OTHERS**

It is **Uni-Coupling B.V.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*This certificate supersedes the Type Approval Certificates N° 42679/A0 BV issued by the Society.*

\*\*\* END OF CERTIFICATE \*\*\*