

TYPE APPROVAL CERTIFICATE

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the DNV GL Type Approval System.

Certificate No.	11 562 - 14 HH
Company	UNI-Coupling B.V. Kerkdijk-Zuid 11a 5492 HW Sint-Oedenrode, NETHERLANDS
Product Description	Pipe Couplings Slip-on joint - fire resistant
Type	UNI-GRIP (G) Axially restrained
Environmental Category	None
Technical Data / Range of Application	TECHNICAL DATA The pipe couplings are available in two material composites W5 and W2 Casing W5: 1.4571 / 316 Ti W2: 1.4016/301 Lock bar types Solid type: Standard (S), Hollow type: Light (L) Lock bars W5: S-Type 1.4571 / 316 Ti W2: S-Type 1.0760, L-Type: 1.4571 Bolts W5: A4-80 / 316 W2: 1.0760, A4-80 Anchor ring 1.4310 / 301 Equivalent material compositions/designations may be accepted. Rubber sleeve NBR, EPDM Size range [mm] / PN 21 - 276 / 16, 64 - 364 / 10, 318 - 412 / 6 318 - 412 / 2,5 Temperature range NBR -20°C up to +80°C EPDM -30°C up to + 125°C (OD 21-172) -20°C up to +80°C (OD 180-406,4) Pipe material Carbon steel, Stainless steel, Cu, CuNiFe RANGE OF APPLICATION: Refer to page 2
Test Standard	VI-7-8: Test Requirements for Components and Systems of Mechanical Engineering and Offshore Technology :2013
Documents	- Product test reports according to final test plan dated 2014-09-18 - Audit report dated 2014-10-17 - Drawings refer to page 3 - GL Approval Ref.No.: 14 - 089324
Remarks	Limitations refer to page 3

Valid until **2019-11-03**
Page **1 of 4**
File No. **II.C.06**
Hamburg, 2014-11-04

Type Approval Symbol




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Range of Application

The pipe coupling of type UNI-GRIP (G) is type approved for the use in piping systems as follows:

Reference:

Rules for Machinery Installations, Sec. 11D, Table 11.14, Slip-on joints – grip type.

For application where flame resistance capability is requested, the pipe couplings are to be provided with a flame protection as specified on page 3.

System

Flammable fluids (Flash point <60°C)

Cargo oil, Crude oil washing (Note 5)

Vent (Note 3)

Inert gas

Water seal effluent, Scrubber effluent

Main (Note 2, 5)

Distributions (Note 5)

Flammable fluids (Flash point >60°C)

Cargo oil (Note 5)

Fuel oil, Lubricating oil, Hydraulic oil (Note 2, 3)

Sea water

Bilge, Ballast, Cooling water (Note 1)

Fire main and water spray, Foam, Sprinkler (Note 3)

Tank cleaning, Non-essential sea water systems

Fresh water

Cooling water, Condensate returns (Note 1)

Non-essential fresh water system

Sanitary / Drains / Scuppers:

Deck drains (internal) (Note 4)

Sanitary drains

Sounding / Vent

Water tanks / Dry spaces

Oil tanks (media with flash point > 60°C) (Note 2,3)

Miscellaneous

Service air (non - essential)

Brine

Note 1

Inside machinery spaces of category A – only approved flame resistant types

Note 2

Not inside machinery spaces of category A or accommodation spaces.

The pipe couplings may be accepted in other machinery spaces provided the couplings are installed at easily visible and accessible locations.

Note 3

Approved flame resistant types

Note 4

Above freeboard deck only

Valid until **2019-11-03**

Page **2** of **4**

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Certificate No. **11 562 - 14 HH**

Note 5

In pump rooms and open decks only approved flame resistant types

LIMITATIONS

The use of pipe coupling is not approved for application in:

- bilge lines inside ballast and fuel tanks
- sea water and ballast lines including air and overflow pipes inside cargo holds and fuel tanks
- fuel and oil lines including air and overflow pipes arranged inside machinery spaces of category A, accommodation spaces, cargo holds and ballast tanks (Refer to Note 2)
- fire extinguishing systems which are not permanently water filled (dry pipe system)
- inside of tanks which contains media of different nature to the pipes
- piping systems with impulse pressure load other than water hammer

Product tests

Tightness test, Burst test, Vibration test, Pull out test, Fire resistance test acc. to ISO19921/22, Vacuum test, Repeat assembly test.

Documents

Drawings

Flame protection consisting of:

- Flame protection housing made of stainless steel metal sheet acc. to drawing 1-W5-VB-xx-xx, 2-W5-VB-xx-xx
- Intumescent material covered by type approved aluminium tape

Pipe coupling housing

- Housing Group 1-W5-F-G-R
- Housing Group 1-F-G-R
- Housing Group 2-W5-F-R-A/B/C
- Housing Group 2-W5-G
- Housing Group 2-F-R-A/B/C
- Housing Group 2-G

Bridge plates

- Brug Group 1-W5-G-F-R
- Brug Group 1-G-F-R
- Brug Group 2-W5-G-F-R-A-B-C
- Brug Group 2-G-F-R-A-B-C

Grip ring

- Grip ring 1-G
- Grip ring 2-G

Gasket

- Rubber Group 1-2-G - EPDM
- Rubber Group 1-2-N-G - NBR
- Rubber Group 1-2-F-R - EPDM
- Rubber Group 1-2-N-F-R - NBR
- Rubber Group 2-2-G - EPDM

Valid until **2019-11-03**

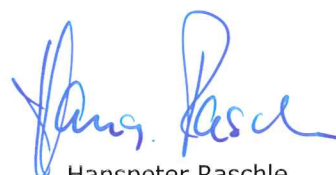
Page **3 of 4**

File No. **II.C.06**

Hamburg, 2014-11-04

Type Approval Symbol




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Certificate No. **11 562 - 14 HH**

- Rubber Group 2-2-G-200-750 – EPDM
- Rubber Group 2-2-N-G - NBR
- Rubber Group 2-2-N-G-200-750 – NBR
- Rubber Group 2-2-F-R - EPDM
- Rubber Group 2-2-F-R-200-2150 – EPDM
- Rubber Group 2-2-N-F-R - NBR
- Rubber Group 2-2-N-F-R-200-2150 – NBR

Product specification

- Article Code dated 2014-11-04
- Technical Manual United Pipeline Products – UNI-Coupling, dated 2014-10-28

MARKING

Housing

Each coupling housing will be marked with a name plate containing the following details:

- Manufacturer's name and logo

UNICOUPLING

- Bar code
- Type designation. Example: 1- L-G- W5-E- 33-36
- Pipe outer diameter size range: 33-36
- Gasket material: EPDM (E)
- Bolt torque
- PN Marine application (ship symbol)
- WP Industrial application (factory symbol)

Gasket

- Manufacturer short cut "X"
- UNI COUPLING
- Production lot
- Coupling type

Valid until **2019-11-03**

Page **4** of **4**

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Certificate No.	11 563 - 14 HH
Company	UNI-Coupling B.V. Kerkdijk-Zuid 11a 5492 HW Sint-Oedenrode, NETHERLANDS
Product Description	Pipe Couplings Slip-on joint - fire resistant
Type	UNI-FLEX (F) Axially not restrained
Environmental Category	None
Technical Data / Range of Application	TECHNICAL DATA The pipe couplings are available in two material composites W5 and W2 Casing W5: 1.4571 / 316 Ti W2: 1.4016/301 Lock bar types Solid type: Standard (S), Hollow type: Light (L) Lock bars W5: S-Type 1.4571 / 316 Ti W2: S-Type 1.0760, L-Type: 1.4571 Bolts W5: A4-80 / 316 W2: 1.0760, A4-80 Anchor ring 1.4310 / 301 Equivalent material compositions/designations may be accepted. Rubber sleeve NBR, EPDM Size range [mm] / PN 21 - 412 / 16, 210 - 412 / 10 263 - 412 / 6 Temperature range NBR -20°C up to +80°C EPDM -30°C up to + 125°C (OD 21-172) -20°C up to + 80°C (OD 180-406,4) Pipe material Carbon steel, Stainless steel, Cu, CuNiFe RANGE OF APPLICATION: Refer to page 2
Test Standard	VI-7-8: Test Requirements for Components and Systems of Mechanical Engineering and Offshore Technology :2013
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Remarks	Limitations refer to page 3

Valid until **2019-11-03**

Page **1** of **4**

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Certificate No. **11 563 - 14 HH**

Range of Application

The pipe coupling of type UNI-Flex (F) is type approved for the use in piping systems as follows:

Reference:

Rules for Machinery Installations, Sec. 11D, Table 11.14, Slip-on joints - slip type.

For application where flame resistance capability is requested, the pipe couplings are to be provided with a flame protection as specified on page 3.

System

Flammable fluids (Flash point <60°C)

Cargo oil, Crude oil washing (Note 5)

Vent (Note 3)

Inert gas

Water seal effluent, Scrubber effluent

Main (Note 2, 5)

Distributions (Note 5)

Flammable fluids (Flash point >60°C)

Cargo oil (Note 5)

Fuel oil, Lubricating oil, Hydraulic oil (Note 2, 3)

Sea water

Bilge, Ballast, Cooling water (Note 1)

Fire main and water spray, Foam, Sprinkler (Note 3)

Tank cleaning, Non-essential sea water systems

Fresh water

Cooling water, Condensate returns (Note 1)

Non-essential fresh water system

Sanitary / Drains / Scuppers:

Deck drains (internal) (Note 4)

Sanitary drains

Sounding / Vent

Water tanks / Dry spaces

Oil tanks (media with flash point > 60°C) (Note 2,3)

Miscellaneous

Service air (non - essential)

Brine

Note 1

Inside machinery spaces of category A – only approved flame resistant types

Note 2

Not inside machinery spaces of category A or accommodation spaces.

The pipe couplings may be accepted in other machinery spaces provided the couplings are installed at easily visible and accessible locations.

Note 3

Approved flame resistant types

Note 4

Above freeboard deck only

Valid until **2019-11-03**

Page **2 of 4**

File No. **II.C.06**

Hamburg, 2014-11-04

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Note 5

In pump rooms and open decks only approved flame resistant types

LIMITATIONS

The use of pipe couplings is not approved for application in:

- bilge lines inside ballast and fuel tanks
- sea water and ballast lines including air and overflow pipes inside cargo holds and fuel tanks
- fuel and oil lines including air and overflow pipes arranged inside machinery spaces of category A, accommodation spaces, cargo holds and ballast tanks (Refer to Note 2)
- fire extinguishing systems which are not permanently water filled (dry pipe system)
- inside of tanks which contains media of different nature to the pipes
- piping systems with impulse pressure load other than water hammer

UNI FLEX pipe coupling are to be used only in cases where compensation of axial pipe movement is necessary. Usage of these joints as the main means of pipe connection is not permitted.

Product tests

Tightness test, Burst test, Fire resistance test acc. to ISO19921/22, Vacuum test

Documents

Drawings

Flame protection consisting of:

- Flame protection housing made of stainless steel metal sheet acc. to drawing 1-W5-VB-xx-xx, 2-W5-VB-xx-xx
- Intumescent material covered by type approved aluminium tape

Pipe coupling housing

- Housing Group 1-W5-F-G-R
- Housing Group 1-F-G-R
- Housing Group 2-W5-F-R-A/B/C
- Housing Group 2-W5-G
- Housing Group 2-F-R-A/B/C
- Housing Group 2-G

Bridge plates

- Brug Group 1-W5-G-F-R
- Brug Group 1-G-F-R
- Brug Group 2-W5-G-F-R-A-B-C
- Brug Group 2-G-F-R-A-B-C

Grip ring

- Grip ring 1-G
- Grip ring 2-G

Gasket

- Rubber Group 1-2-G – EPDM
- Rubber Group 1-2-N-G – NBR

Valid until **2019-11-03**

Page **3** of **4**

File No. **II.C.06**

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Certificate No. **11 563 - 14 HH**

- Rubber Group 1-2-F-R – EPDM
- Rubber Group 1-2-N-F-R – NBR
- Rubber Group 2-2-G - EPDM
- Rubber Group 2-2-G-200-750 – EPDM

- Rubber Group 2-2-N-G - NBR
- Rubber Group 2-2-N-G-200-750 – NBR
- Rubber Group 2-2-F-R - EPDM
- Rubber Group 2-2-F-R-200-2150 – EPDM
- Rubber Group 2-2-N-F-R - NBR
- Rubber Group 2-2-N-F-R-200-2150 – NBR

Product specification

- Article Code dated 2014-11-04
- Technical Manual United Pipeline Products – UNI-Coupling, dated 2014-10-28

MARKING

Housing

Each coupling housing will be marked with a name plate containing the following details:

- Manufacturer's name and logo

UNI 

- Bar code
- Type designation. Example: 1- L-G- W5-E- 33-36
- Pipe outer diameter size range: 33-36
- Gasket material: EPDM (E)
- Bolt torque
- PN Marine application (ship symbol)
- WP Industrial application (factory symbol)

Gasket

- Manufacturer short cut "X"
- UNI COUPLING
- Production lot
- Coupling type

Valid until **2019-11-03**

Page **4** of **4**

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