

TYPE APPROVAL CERTIFICATE

Certificate no.:
TAP0000276
Revision No:
1

This is to certify:

that the **Pipe Couplings**

with type designation(s)
UNI-FLEX (F) - Axially not restraint

issued to

UNI-Coupling B.V.
Sint-Oedenrode, Netherlands

is found to comply with

DNV rules for classification – Ships Pt.4 Ch.6 Piping systems
DNV class programme DNV-CP-0185 – Type approval – Mechanical joints

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Temperature range: -30°C to +125°C
Max. working pressure: 16 bar
Sizes: Pipe O.D. 19 mm to 412 mm

Issued at **Hamburg** on **2026-01-13**

This Certificate is valid until **2031-01-12**.

DNV local unit: **Netherlands CMC**

Approval Engineer: **Christian Kaemmer**

for **DNV**



Digitally Signed By:
Sven Klinger
Location: DNV Hamburg,
Germany

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to USD 300 000.

Product description

UNI-Flex (F) pipe couplings are used for connecting restrained pipes. The housing includes 2 bridges tightened by 2 locking bolts. Rubber-insert gaskets of EPDM or NBR provide the sealing.

UNI-Flex (F) couplings are fire resistant in combination with flame protection housing of type UNI-FIRE.

Technical Data

UNI-Flex (F)		
Components	Material combination	
	W2	W5
Housing with bridge	1.4016, 1.4301	1.4571, 1.4404, 1.4462, 1.4162
Rubber insert	EPDM / NBR	
Strip insert (optional)	1.4571, 1.4404, 1.4462, 1.4162	
Anchoring ring	1.4310	
Lock bar solid Standard (S)	1.0760	1.4571, 1.4404, 1.4462, 1.4162
Locking bolts	1.0760, 10.9, 12.9	A4-80, A4-70
Washer	200HV	200HV/A4

Flame protection UNI-FIRE, optional		
Components	Materials	Reference
Housing	1.4571, 1.4404, 1.4462, 1.4162	Drawing 1-W5-VB
Fire protection material	Aluminium tape	Drawing 1-FP-VM

Pipe outer diameter (O.D) and Nominal pressure range (PN)

Pipe size O.D. mm	Nominal Pressure PN (bar)	Type designation
19 – 172	16	Group 1
185 - 412		Group 2
185 - 412	10	Group 2
277 - 412	6	Group 2

Temperature range

Sealing	Temperature	Pipe O.D. range
EPDM ¹	-30°C to +125°C	21mm up to 172mm
	-20°C to +80°C	180mm up to 406,4mm
NBR	-20°C to +80°C	All diameters

Notes

¹ EPDM is not to be used for hydrocarbon applications.

Application/Limitation

UNI-Flex (F) is type-approved for application for pipe classes II and III in piping systems as specified in DNV-Rules – “Ships” Pt.4, Ch. 6, Sec. 9, Table 8, 9 and 10 and classified as: Slip-on joint, “Slip type”.

Fire resistance

For pipe systems requiring fire endurance, the UNI-Flex (F) pipe coupling is to be installed with a flame protection of type UNI-FIRE. UNI-Flex (F) pipe coupling is type-approved and tested for fire endurance test condition “wet” and “fire endurance test not required”. Fire endurance classification according to DNV-Rules “Ships” Pt. 4, Ch. 6, Sec. 9 Table 9.

UNI-Flex (F) pipe coupling is not type-approved for:

- Piping arranged in cargo holds, tanks and other spaces which are not easily accessible.
- Piping sections directly connected to the ship’s side below the bulkhead deck of passenger ships and freeboard deck of cargo ships or tanks containing flammable fluids:
if: An event of damage could cause fire or flooding.
- Fuel Oil and lube oil systems inside machinery spaces of category A or accommodation spaces.
- Piping systems with impulse pressure load other than water hammer, e.g. pressure lines of hydraulic piping systems.

Application of this pipe coupling joint inside tanks is only permitted for the same media in the tank. Rubber parts shall be replaced by new parts in case of repeated installation or use.

Type Approval documentation

Assembly drawings pipe couplings Group 1 and 2, Individual parts drawings of pipe couplings, Flame protection housing drawing, Type designations list.
 Burst pressure test report, 2020-10-14; UNI Coupling - Technical Manual, version 3.30
 DNVGL Assessment report of production place Netherlands, 2020-03-05
 Previous certificate: Type approval certificate 11 563 – 14 HH; GL Approval Ref. No.: 14-089324

TAP0000276 Rev.1 : Burst pressure test dated 2025-12-30; Type Approval Assessment Report dated 2025-11-07.

Tests carried out

Visual inspection, Repeated assembly test, Tightness test, Burst test, Vacuum test, Pull out test, Vibration test, Fire resistance test acc. to ISO 19921/19922 (in combination with flame protection).

Marking of product

For traceability of the product to this certificate each pipe coupling, flame protection respectively shall be marked with at least as follows:

Pipe coupling		Gasket		Flame protection	
Scope	Example	Scope	Example	Scope	Example
Manufacturer's mark	UNICOUPLING	Manufacturer's short cut "X"	Manufacturer name	Manufacturer's mark	UNICOUPLING
Coupling type	1-S-F-W5-E-33-36	Production lot	Number Code	Article part number	Number code
Pipe O.D. size range mm	33-36	Article part number	Number code	Type	UNI-FIRE
PN Marine application	PN 16 plus ship symbol	Colour EPDM, NBR	Black	Size range	64-80
PN Industrial application	PN 25 plus factory symbol				
Gasket material	EPDM				
Bar code					
Bolt torque	20 Nm				

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment to verify that the conditions for the Type Approval are complied with. Refer to the Class Programme DNV - CP-0338, Section 4.
 In addition, burst pressure testing on selected sizes to be carried out in the course of renewal of the certificate. To check the validity of this certificate, please look it up in <https://approvalfinder.dnv.com>.