



TYPE APPROVAL CERTIFICATE
No. MAC240016CS

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

<i>Description</i>	Flexible hoses for gravity sewage systems
<i>Type</i>	FLEX-PRO-GRAVITY
<i>Applicant</i>	TUBIFLEX S.P.A. STRADA TORINO 25 10043 ORBASSANO (TO) ITALY
<i>Manufacturer</i>	TUBIFLEX S.P.A.
<i>Place of manufacture</i>	STRADA TORINO 25 10043 ORBASSANO (TO) ITALY
<i>Reference standards</i>	Part C, Chapter 1, Section 10 of RINA Rules

Issued in **Genoa** on **June 5, 2019**. This Certificate is valid until **June 4, 2024**


RINA Services S.p.A.
Marco Dardano

This certificate consists of this page and 1 enclosure



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FLEX-PRO-GRAVITY

Reference documents

Tubiflex drawing no. PS3801000 approved with no. PPVT-14960 on 13/08/2012.

Tubiflex drawing no. PS4212000 approved with no. PPVT-31596 on 03/06/2019 (FLEX-PRO-GRAVITY L.F.)

Typical mounting arrangement drawing.

Flexible assembly connection procedure and user instructions.

Qualification Test Program no. QTP PS3801000_01 dated 20/01/2012.

Qualification Test Reports nos. QTR PS3801000 and QTR PS4212000.

Materials/Components

Inner hose:	polyurethane reinforced with steel spiral
External protection:	stainless steel wire braid
Fittings:	austenitic stainless steel type 316, or multi-layer polypropylene, or thermo-weldable polypropylene (drwg. no. PS3801000 - factory assembled end fittings) screw collar in stainless steel (drwg. no. PS4212000 - user assembled end fittings)

Technical characteristics

Size:	ID 50 mm; OD 60 mm
Length:	250 - 2500 mm (PS3801000) supplied hose length in continuous reel (PS4212000)
Minimum bending radius:	80 mm
Pressure:	ambient pressure (gravity drain systems)
Temperature range:	10°C to 60°C

Fields of application

Gravity sewage systems.

Acceptance conditions

The installation on board is to be made in accordance with the Manufacturer's instructions.

The acceptance of the a.m. products on board ship and other units classed with RINA is subject to the satisfactory outcome of testing as per the RINA Rules.

Installation onboard can be accepted provided that there are no exposed parts in plastic material which are not covered by metallic coating.

Hoses are to be marked with Manufacturer name or trademark and design pressure.

Remarks

This Certificate annuls and replaces the previous one issued with no. MAC202911CS on 13/08/2012.

Genoa June 5, 2019

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