



## Confirmation of Product Type Approval

**Company Name:** IVG COLBACHINI SPA

**Address:** VIA FOSSONA 132 CERVARESE S.CROCE (PADOVA) 35030 Italy

**Product:** Flexible Hose

**Model(s):** PL ABRASIVE 20 - PL ABRASIVE SD 20 - PL EFESTO SD 25 - PL FUEL 20 - PL FUEL 27 - PL FUEL SD 20 - PL FUEL SD 27 - PL FUEL SD 35 - PL FUEL SD FLOATING D1 - PL POTABLE 20 - PL POTABLE SD 20 - PL POTABLE SD FLOATING D1

### Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	23-2375199-PDA	26-MAY-2023	25-MAY-2028
Manufacturing Assessment (MA)	20-4423293	16-OCT-2020	29-OCT-2025
Product Quality Assurance (PQA)	NA	NA	NA

### Tier

3 - Type Approved, unit certification not required

### Intended Service

“ABRASIVE” Hoses: Convey barite, bentonite and other abrasive materials from ship to oil rig. “EFESTO” Hoses: Suction and delivery of seawater, mud oil and petroleum products with maximum aromatic content up to 30%. “FUEL” Hoses: Suction (SD only) and delivery of petroleum products with aromatic content up to 50% and drilling mud mixed with oil. “POTABLE” Hoses: Suction (SD only) and delivery of drinking water from ship to oil rig. For additional details, see Attachment.

### Description

“ABRASIVE” Hoses: NR/SBR rubber tube with high strength synthetic cord, antistatic copper wires and EPDM rubber cover. Electrically continuous.

“EFESTO” Hose: NBR rubber tube with high strength synthetic cord and flame retardant CR rubber cover. Electrically discontinuous.

“FUEL” Hoses: PVC/NBR rubber tube with high strength synthetic cord, antistatic copper wires and CR rubber cover. Electrically continuous.

“POTABLE” Hoses: IIR rubber tube with high strength synthetic cord and EPDM rubber cover. Electrically discontinuous.

Vacuum resistant hoses (SD types) are additionally reinforced with embedded steel helix wires.

All flexible hoses are provided with permanently fitted steel threaded nipple end connections and/or fixed flange end connections and/or swivel flange end connections.

For additional details, see Attachment.

**Ratings**

Maximum Working Pressure: from 20 to 35 bar.

Minimum Vacuum Pressure (SD only): 0.9 bar.

Temperature rating: "ABRASIVE" from -25°C to +70°C

"EFESTO" from -30°C to +90°C

"FUEL" from -20°C to +90° C

"POTABLE" from -40°C to +100°C

For additional details, see Attachment.

**Service Restrictions**

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

**Comments**

- 1) Routine tests as per Annex H and production acceptance tests as per Annex I of reference Standard to be carried out, as applicable.
- 2) PL EFESTO SD 25 flexible hoses have been satisfactorily tested for fire resistance as per ISO 15540 and ISO 15541 Standards.
- 3) Flexible hoses are to be permanently marked by the Manufacturer as per 4-6-2/5.7.6 of ABS Marine Vessel Rules.
- 4) Electrically discontinuous hose assemblies (EFESTO and POTABLES) shall have, in addition, the words "ELECTRICALLY DISCONTINUOUS" in legible characters at least 10 mm permanently vulcanized onto the body of the hose.
- 5) Flexible hoses intended to be used as cargo transfer hoses are to have the maximum expected service pressure of the cargo transfer system not exceeding 1/5 of the burst pressure.
- 6) Flexible hoses are not suitable for the transfer of limited amounts of hazardous and noxious liquid substances as listed in 5D-2-3/Table 1 of ABS Marine Vessel.
- 7) Flexible hoses are not to be used for installations in piping systems where pressure pulse and/or high levels of vibrations are expected to occur in service as per Par. 4-6-2/5.7.3 (d) of ABS Marine Vessels Rules.
- 8) Flexible hoses intended to be used for transfer of flammable media and not certified as fire resistant (PL FUEL 20, PL FUEL 27, PL FUEL SD 20, PL FUEL SD 27, PL FUEL SD 35 and PL FUEL SD FLOATING D1) are not to be installed in onboard piping system.
- 9) Flexible hoses are to be completed with factory-assembled end fittings or factory-supplied end fittings installed in accordance with Manufacturer's specifications as per Par. 4-6-2/5.7.3(b) of Marine Steel Vessels.
- 10) The Manufacturer has provided a declaration about the lack of Asbestos in this product.

**Notes, Drawings and Documentation**

Drawing No. 10V-159-14, PL Fuel SD 20, Revision: 04

Drawing No. 10V-160-14, PL Fuel SD 27, Revision: 04

Drawing No. 10V-161-14, PL Fuel SD 35, Revision: 04

Drawing No. 10V-162-14, PL Potable SD 20, Revision: 05

Drawing No. 10V-163-14, PL Abrasive SD 20, Revision: 04

Drawing No. 10V-164-14, PL Fuel SD Floating D1, Revision: 04

Drawing No. 10V-165-14, PL Potable SD Floating D1, Revision: 05

Drawing No. 10V-166-14, PL Efesto SD 25, Revision: 05

Drawing No. 10V-167-14, PL Fuel 20, Revision: 04

Drawing No. 10V-168-14, PL Fuel 27, Revision: 04

Drawing No. 10V-169-14, PL Abrasive 20, Revision: 04

Drawing No. 10V-170-14, PL Potable 20, Revision: 04

Drawing No. FD-09-16-INT, Project drawing: Rubber hose with crimping fittings, Revision: 00

Drawing No. FD-10-16-INT, Threaded types, Revision: 00

Drawing No. FD-11-16-INT, Fixed flange types, Revision: 00

Drawing No. FD-12-16-INT, Swivel flange types, Revision: 00

Technical data sheet, PL ABRASIVE 20, Revision: 00

Technical data sheet, PL ABRASIVE SD 20, Revision: 00

Technical data sheet, PL EFESTO SD 25, Revision: 00

Technical data sheet, PL FUEL 20, Revision: 00

Technical data sheet, PL FUEL 27, Revision: 00

Technical data sheet, PL FUEL SD 20, Revision: 00

Technical data sheet, PL FUEL SD 27, Revision: 00

Technical data sheet, PL FUEL SD 35, Revision: 00

Technical data sheet, PL FUEL SD FLOATING D1, Revision: 00

Technical data sheet, PL POTABLE 20, Revision: 00

Technical data sheet, PL POTABLE SD 20, Revision: 00

Technical data sheet, PL POTABLE SD FLOATING D1, Revision: 00

WPQR Table, Welding procedure qualification record

Material Properties Certificates ABS job No. VE2957668 dated 30 July 2015 - Physical properties of rubber compounds and finished hose assemblies as per Table 3 and 4 of BS EN 1765 Standard dated 30 July 2015 at IVG COLBACHINI,

Test Reports No. from 1799 to 1809 dated 27 July 2015 at IVG COLBACHINI - Physical properties of finished hose assemblies as per Table 4 of BS EN 1765 Standard,

Fire Resistance Test Report No. 1491.0IS0110/14 dated 30 Sept 2014 at LAPI – PL EFESTO Diam. 19 mm,

Fire Resistance Test Report No. 1492.0IS0110/14 dated 30 Sept 2014 at LAPI – PL EFESTO Diam. 76 mm,

Fire Resistance Test Report No. 262.0IS0110/15 dated 09 March 2015 at LAPI- PL EFESTO Diam. 203 mm.

Drawing No. Correspondence, TARF, Revision: 0, Pages: 1

Drawing No. Type Approval Declaration of Conformity\_signed, Type approval declaration of conformity - signed, Revision: 0, Pages: 1

Product Data Sheet 2023

**Term of Validity**

This Product Design Assessment (PDA) Certificate remains valid until 25/May/2028 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

**ABS Rules**

Rules for Conditions of Classification 1-1-4/7.7, 1-1-Appendix 3 and 1-1-Appendix 4, which covers the following :

2023 Marine Vessels Rules: 4-6-2/5.7

Rules for Conditions of Classification - Offshore Units and Structures: 1-1-4/9.7, 1-1-Appendix 2 and 1-1-Appendix 3, which covers the following:

2023 Mobile Offshore Units Rules 4-2-1/11.29

**International Standards**

NA

**EU-MED Standards**

NA

**National Standards**

NA

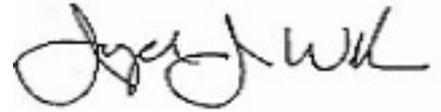
**Government Standards**

NA

**Other Standards**

NA





Corporate ABS Programs  
American Bureau of Shipping  
Print Date and Time: 19-Jul-2023 4:26

ABS has used due diligence in the preparation of this certificate, and it represents the information on the product in the ABS Records as of the date and time the certificate is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.