



## *Confirmation of Product Type Approval*

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 07-DEC-2022. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

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.

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.

**Product Name:** Valve, Butterfly  
**Model Name(s):** Series GRW / GRL

**Presented to:**  
EMERSON AUTOMATION SOLUTIONS FINAL CONTROL US LP  
3950 GREENBRIAR DR.  
TX 77477  
United States

**Intended Service:** Marine & Offshore Applications - Fresh Water, Seawater, Water Ballast, Bilge, Fuel Oil, Lube Oil, Hydraulic Oil and Sanitary Systems.

**Description:** Sizes: 2" thru 36" (51 mm thru 914 mm); Shut-Off Ratings (USCG): Category A; Body Material: Ductile Iron; Disc Material: Super Duplex, 316 Stainless, 304 Stainless Steel, Aluminum Bronze, Nickel Aluminum Bronze, Ductile Iron CTD (Nickel Plated); Stem Material: 316 Stainless Steel, 431 Stainless Steel, Super Duplex; Seat Material: EPDM, NBR, White NBR, FKM;

**Tier:** 3

**Ratings:** Pressure Rating: 232 psi for NPS 2"-12"; 150 psi for NPS 14"-36"; Temperature range: -40 °C to +160 °C (-40 °F to +320 °F);

**Service Restrictions:** 1. Unit certification is not required for this product. If the manufacturer or purchaser requests an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. 2. Wafer Type Butterfly Valves are not to be used for any connections to the Vessel's Shell; Lug or Flanged Valves may be used for Shell connections only if Fire Tested and are to be hydrostatically tested in presence of the Surveyor in accordance with Steel Vessels Rules 4-6-2/7.3.2. 3. The Butterfly Valves are not to be used on Oil Tanks (including Cargo Oil Tanks) having a static head of flammable oil unless the valves are subjected to the applicable Fire Test. 4. Ductile Iron will be accepted provided the material has an elongation not less

than 12% in 50mm (2 in) as indicated in Steel Vessels Rules 4-6-2/3.1.4. 5. EPDM shall not be used for Hydrocarbon Services. 6. The use of Butterfly Valve as Collision Bulkhead Valve in lieu of Screwdown Valve as required by SOLAS II-1/12.5.1 is to have approval of Vessel's Flag Administration. 7. Resilient Seated Valves are not to be used in Fire Mains unless submittal of Certified Fire Endurance Test conforming to a recognized Standard is acceptable to ABS. 8. Category "A" Valves are not to be used as Fuel Oil Tanks Shut Off Valves which will be subject to a Head of Oil.

**Comments:**

Duplicate PDA resides with Emerson Automation Solutions Final Control US LP - PASADENA. 1. The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 2. All Valves are to maintain a minimum 4:1 Burst Test Ratio. 3. All valves are to bear permanent identification, such as the manufacturer's name or trademark, material identification, pressure rating, etc. at which the manufacturer guarantees the valves to meet the requirements of the manufacturer's standards. Such markings may be cast or forged integral with, stamped on, or securely affixed by nameplate on the component, and are to serve as a permanent means of identification of the component throughout its service life in accordance with 4-6-1/7.1.3 and 4-6-1/7.1.4 of Steel Vessels Rules.

**Notes / Documentation:**

BOM 300 GRW Valve Parts List, dated 12-5-2017; Dwg. No. 06-62W-09, Rev. C, Body 300 F62W; Dwg. No. 06-62L-09, Rev. E, Body 300 F62L Machine Detail; BOM 300 GRL Valve Parts List, dated 12-5-2017; Dwg. No. 07-62W-09, Rev. D, Disc 300mm F62W Hex Drive Machining; Dwg. No. 09-GRW-25, Rev. C, Shaft 300mm GRW Hex Upper Machining; Dwg. No. 09-GRW-27, Rev. A, Shaft 300mm GRW Lower Machining; Dwg. No. 206.120.014.021, Rev. 10, Seat 300mm Fig. 14; Dwg. No. 207-120-320-000, Rev. -, Upper Bushing, 250mm & 300mm Fig. 320; Dwg. No. 06-GRW-05, Rev. B, Body 600 GRW Machining Detail; Dwg. No. 06-GRL-14, Rev. B, Body 600 GRL Machining Detail 20 Lug; Dwg. No. 204-240-015-021, Rev. 05, Disc Machined/ Buffed Fig. 15 600mm; Dwg. No. 205-240-GRF-021, Rev. 02, Shaft Machined 60mm GRF; Dwg. No. 206-240-015-021, Rev. 07, Fig. 15 Seat 600mm; Dwg. No. 207-240-GRF-021, Rev. 00, BOP Bushing 600mm GRF; Product Brochure GRW/GRL Series; Doc. No. PFCS.QF7.5-01-01K-01, Rev. 0, Hydraulic Test Record, dated 29-Nov-2017; Calculations, Rev. -, dated 20 August 2012;

**Term of Validity:**

This Product Design Assessment (PDA) Certificate 17-HS1693377-PDA, dated 08/Dec/2017 remains valid until 07/Dec/2022 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

**ABS Rules:**

Rules for Conditions of Classification, Part 1 – 2017 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: 2017 Steel Vessels Rules 4-6-2/5.11.1, 4-6-2/5.17, 4-6-2/9.13.2 i) ii), 4-6-4/13.5.3; Rules for Conditions of Classification, Part 1 – 2017 Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 2017 Mobile Offshore Drilling Units Rules 4-2-2/9.1.1, 4-2-2/9.5, 4-2-2/21.3;

**National Standards:**

API STD 609 - Butterfly Valves: Double-flanged, Lug- and Wafer-type, 8th Edition, 2016; ASTM A536-84 (R2009) - Standard Specification for Ductile Iron Castings; ASTM A395 (R2009) - Standard Specification for Ferritic Ductile Iron Pressure-Retaining Castings for Use at Elevated Temperatures; ASME B16.34:2017- Valves—Flanged, Threaded, and Welding End;

**International Standards:**

EN 12516-2:2014 - Industrial valves. Shell design strength. Calculation method for steel valve shells;

**Government Authority:**

46 CFR §56.20-15:2016

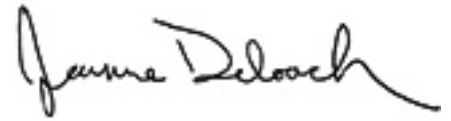
**EUMED:****Others:****Model Certificate****Model Certificate No****Issue Date****Expiry Date**

PDA

17-HS1693377-PDA

12-DEC-2017

07-DEC-2022



ABS Programs

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 was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. 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.