



CERTIFICATE NUMBER	23-2442134-PDA
EFFECTIVE DATE	05-Oct-2023
EXPIRY DATE	04-Oct-2028
ABS TECHNICAL OFFICE	Houston ESD - Piping

CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

CAM VALVES AND AUTOMATION, LLC D.B.A. PRATT INDUSTRIAL

located at

3700 OAKES DRIVE, , EMPORIA, KS, United States, 66801

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

Product: Valve, Butterfly
Model: BF1, BF2, HE1, HE2, HP1, HP2, SB2, TE1, TE2, OS1, OS2
Endorsements:
Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 04/Oct/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.

American Bureau Of Shipping

John Vincent Ulep
John Vincent Bog-Acon Ulep, Senior Principal Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

CAM VALVES AND AUTOMATION, LLC D.B.A. PRATT INDUSTRIAL

3700 OAKES DRIVE

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Tier: 2 - PDA Issued

Product: Valve, Butterfly

Model: BF1, BF2, HE1, HE2, HP1, HP2, SB2, TE1, TE2, OS1, OS2

Endorsements:

Intended Service:

Marine and Offshore Applications - Fresh Water, Seawater, Bilge and Ballast, Sanitary, Fuel Oil, Lube Oil, Cargo Oil, Hydraulic Oil, Air, Inert Gas Systems, etc.

Description:

Resilient Seated Wafer & Lug Butterfly Valve Series- BF, HE, HP, SB, TE, OS

Rating:

BF1(Wafer) & BF2 (Lug) Series

Body - Ductile Iron (ASTM A536); Disc - Ductile iron (ASTM A-536 Grade 65-45-12 with ENP plating or Nylon 11 coating), Stainless Steel (ASTM A351 CF8M), Aluminum Bronze (ASTM B148 C95400); Stem-Stainless Steel (ASTM A582 SS416, ASTM A276 SS316); Seat - EPDM, Buna-N, Viton

Pressure rating - Size 2"-12": 230psi; Size 14"-24": 150psi

Temperature rating - Buna-N: -18°C-100°C (0°F-212°F), EPDM: -30°C-120°C (0°F-250°F), Viton: -18°C-200°C(0°F-400°F)

HE1 (Wafer) & HE2 (Lug) Series

Body - Carbon Steel (ASTM 216 WCB), Stainless Steel (ASTM A351 CF8M); Disc -Stainless Steel (ASTM A351 CF8M); Stem -Stainless Steel (ASTM A564-630 H1025); Seat -RMTFE

Pressure rating - Size 2"-1 2": 275psi (CF8M), 285 psi (WCB), 720psi (CF8M), 740 psi (WCB)

Temperature rating - 150#: -18°C-232°C(0°F-450°F), 300#:120°C - 232°C (250°F- 450°F)

HP1(Wafer) & HP2 (Lug) Series - Double Offset

Body - Carbon Steel (ASTM 216 WCB), Stainless Steel (ASTM A351 CF8M); Disc -Stainless Steel (ASTM A351 CF8M); Stem -Stainless Steel (ASTM A564-630 H1025); Seat -PTFE (150# & 300#) / PTFE (150# & 300#) / MTFE (150# & 300#)

Pressure rating - Size 2"- 48": 285psi, 740psi; Size 3"- 24": 1480psi

Temperature rating- 150# :PTFE 38°C-200°C (100°F-400°F), PTFE 149°C-232°C (300°F-450°F) MTFE 120°C-232°C (250°F-450°F), 300#:PTFE 66°C-200°C (150°F-400°F), PTFE 38°C-232°C (100°F-450°F) MTFE -18°C-232°C (0°F-450°F), 600# MPFE 66°C-232°C (150°F-450°F)

SB (Lug) Series

Body - Ductile Iron (ASTM A536); Disc - Ductile iron (ASTM A-536 Grade 65-45-12 with ENP plating or Nylon 11 coating), Stainless Steel (ASTM A351 CF8M), Aluminum Bronze (ASTM B148 C95400); Stem - Stainless Steel (ASTM A582 SS416 , ASTM A276 SS316); Seat - EPDM, NBR, Viton, PTFE

Pressure rating - Size 2"-12": 150psi

Temperature rating - Buna-N: -18°C-100°C (0°F-212°F), EPDM: -30°C-120°C (0°F-250°F), Viton: -18°C-200°C(0°F-400°F)

TE1 (Wafer) & TE2 (Lug) Series - Triple Offset

Body - Carbon Steel (ASTM 216 WCB) Stainless Steel (ASTM A351 CF8M); Disc - Carbon Steel (ASTM 216 WCB) Stainless Steel (ASTM A351 CF8M); Stem - Stainless Steel (ASTM A564-630 17-4PH);Disc Seat - Stainless Steel (ASTM A240 316), Graphite; Body Seat - Stainless Steel (ASTM A240 316)

Pressure rating - Size 3" - 24": 285psi, 740psi; Size 4" - 24": 1480psi

Temperature rating- -18°C-100°C (0°F-212°F)

OS1 (Wafer) & OS2 (Lug) Series

Body - Ductile Iron (ASTM A536); Disc - Ductile iron (ASTM A-536 Grade 65-45-12 with ENP plating) Stainless Steel (ASTM A351 CF8M); Stem - Stainless Steel (ASTM A582 SS416 , ASTM A276 SS410); Seat - EPDM, Buna-

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N, Viton

Pressure rating - Size 2"-48" :165psi

Temperature rating - Buna-N: 0°C-90°C (32°F-194°F), EPDM: 0°C-110°C (32°F-230°F), Viton: 0°C-160°C(32°F-320°F)

Reference to the PDF document

Service Restriction:

- 1) 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.
- 2) Wafer type Butterfly valves are not to be used for any connections to the vessel's shell; Lug or Flanged type valves may be used for shell connections only if fire tested.
- 3) Nodular iron or ductile iron will be accepted provided the material has an elongation not less than 12" in 50mm as indicated in Marine Vessel Rules 4-6-2/3.1.4
- 4) Resilient seated valves may be considered for use on fire main and flammable services, provided the proposed valves are capable of passing an appropriate fire test acceptable to ABS.
- 5) Valves intended for installation on the side shell at or below the deepest load waterline, including those at the sea chests, are to be hydrostatically tested in the presence of the Surveyor, before installation, to a pressure of at least 5bar.

Comments:

- 1) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- 2) All valves are to bear permanent identification, such as the manufacturer's name or trademark, material identify, 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 Marine Vessel Rules.

Notes/Drawing/Documentation:

Drawing No., PDA Application, Revision: -, Pages: -

Terms of Validity:

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STANDARDS

ABS Rules:

2023 Rules for Conditions of Classification, 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2023 Rules for Building and Classing Marine Vessels: 4-6-1/ Table 2, 4-6-1/7.5.2, 4-6-2/3, 4-6-2/5.11,4-6-2/7.3.2, 4-6-2/9.13.2, 4-6-4/7.5.1;

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2023 The Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:

2023 Rules for Building and Classing Mobile Offshore Units: 4-2-2/9, 4-2-2/17, 4-2-2/21;

National:

API 609 (2021);

API 598 (February 2023);

ASME B16.34 (2020);

ASME B16.5 (2020);

ASME B16.10 (2022);

ANSI/MSS SP-44 (2019);

ANSI/MSS SP-68 (2021);

ISO 5752 (2021);

International:

N/A

Government:

N/A

EUMED:

N/A

OTHERS:

N/A