



CERTIFICATE NUMBER	22-2237137-PDA
EFFECTIVE DATE	06-Apr-2022
EXPIRY DATE	05-Apr-2027
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

WOUTER WITZEL EUROVALVE B.V.

located at

**INDUSTRIETERREIN DE POL 12, P.O. BOX 54, LOSSER,
Netherlands, 7581 CZ**

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: Econaxe W201, Econaxe L201, and Econaxe VG
Endorsements:
Tier: 2 - PDA Issued

This Product Design Assessment (PDA) Certificate remains valid until 05/Apr/2027 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

Yongjin Lee

Yongjin Lee, Engineer/Consultant

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)

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Web: www.wouterwitzel.nl

Tier: 2 - PDA Issued

Product: Valve, Butterfly
Model: Econaxe W201, Econaxe L201, and Econaxe VG

Endorsements:

Intended Service:
Marine & Offshore Applications - various piping systems

Description:
Econaxe W201
Flangeless Wafer Type with centring lugs
High performance double eccentric butterfly valve
Bi-directional
Flow velocity 5 m/s for liquids, 50 m/s for gases

Econaxe L201
Lugged Wafer Type
High performance double eccentric butterfly valve
Bi-directional
Flow velocity 5 m/s for liquids, 50 m/s for gases

Econaxe VG
Flangeless Wafer Type with centring lugs
High Performance double eccentric butterfly valve
Bi-directional
Flow velocity 5 m/s for liquids, 50 m/s for gases

Rating:
Econaxe W201
Size: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14" 16" 18," 20", 24"
Pressure: 20 bar
Temperature: -40degrees C (-40 degrees F) to +300degrees C (572 degrees F)

Econaxe L201
Size: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12", 14" 16" 18," 20", 24"
Pressure: 20 bar
Temperature: -40degrees C (-40 degrees F) to +300degrees C (572 degrees F)

Econaxe VG
Size: 2", 2-1/2", 3", 4", 5", 6", 8", 10", 12"
Pressure: 20 bar
Temperature: -10 degrees C (14 degrees F) to +200 degrees C (392 degrees F)

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. As per MVR 4-6-2/5.11.3 (c), "Resilient materials, where used, are subject to service limitations as specified by the manufacturers. Use of resilient materials in valves intended for fire mains is to be specifically approved based on submittal of certified fire endurance tests conforming to a recognized standard." No fire endurance test is conducted and hence these valves cannot be used in Fire main, Fire-fighting and other systems where fire testing is required. The

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Econaxe VG is not fire tested.

3. Valves are not suitable for Class I and II piping systems having nominal diameters exceeding 50 mm (2in). See 4-6-2/5.11.3(d) of MVR.

4. Wafer-type butterfly valves are not acceptable as shell valves. See 4-6-2/9.13.2 ii of the MVR.

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 manufacturer's name or trademark, standard of compliance, material identity, pressure rating, etc., as required by the standard of compliance or the manufacturer's specification. 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. See 4-6-1/7.1.4 of the MVR and 4-2-2/9.5 of the MOU.
3. All 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. Test pressure & holding time are to comply with 4-6-2/7.3.2 of the MVR. Also see 4-2-2/9.1.2 of the MOU.
4. Wafer-style valves with non-conductive gaskets seals are to be earthed (grounded) to the hull such that the resistance between any point on the piping and the hull (across joints, pipe to hull) does not exceed 1 mega-ohm. See 4-6-2/7.5 of the MVR.

Notes/Drawing/Documentation:

Drawing No. Correspondence, PDA Application, Revision: -, Pages 4

Drawing No. DDAAA017-F, GA Drawing Econaxe W201-L201, Revision: F, Pages: 1

Drawing No. DDAGA001-B, GA Drawing Econaxe VG, Revision: B, Pages: 1

Drawing No. DGA02-DGA24, Calculations W201, Revision: C, Pages 60

Drawing No. DGB02-DGB24, Calculations L201, Revision: C, Pages: 70

Drawing No. DGG02-DGG10, Calculations VG, Revision: C, Pages: 45

Drawing No. Flyer_VG, Revision: -, Pages: 1

Drawing No. IBB-1268, IBB-1268 - Certificate+report SS body+Inconel - DN200 seat inlet (2014-08-18), Revision: 1, Pages: 6

Drawing No. IBB-1270, IBB-1270 - Certificate+report SS body+Inconel - DN125 seat inlet (2014-08-18), Revision: 1, Pages: 6

Drawing No. IBB-1272, IBB-1272 - Certificate+report SS body+Inconel - DN200 seat outlet (2014-08-18), Revision: 1, Pages: 6

Drawing No. IBB-1276, IBB-1276 - Certificate+report SS body+Inconel - DN125 seat outlet (2014-08-19), Revision: 1, Pages: 6

Drawing No. IBB-1278, IBB-1278 - Certificate+report SS body+Inconel - DN200 dry (2014-08-19, Revision: 1, Pages: 6

Drawing No. IBB-1280, IBB-1280 - Certificate+report SS body+Inconel - DN050 seat inlet (2014-08-19), Revision: 1, Pages: 6

Drawing No. IBB-1282, IBB-1282 - Certificate+report SS body+Inconel - DN050 seat outlet (2014-08-19), Revision: 1, Pages: 6

Drawing No. IBB-1286, IBB-1286 - Certificate+report SS body+Inconel - DN050 dry (2014-08-12), Revision: 1, Pages: 6

Drawing No. IBB-1288, IBB-1288 - Certificate+report SS body+Inconel - DN125 dry (2014-08-20), Revision: 1, Pages: 6

Drawing No. IBB-1476, IBB-1476 - Test report CS body+SS ring - DN200 seat outlet (2015-12-01), Revision: 1, Pages: 5

Drawing No. IBB-1478, IBB-1478 - Test report CS body+SS ring - DN125 seat inlet (2015-12-01), Revision: 1, Pages: 5

Drawing No. IBB-1480, IBB-1480 - Test report CS body+SS ring - DN200 seat inlet (2015-12-01), Revision: 1, Pages: 5

Drawing No. IBB-1482, IBB-1482 - Test report CS body+SS ring - DN125 seat outlet (2015-12-01), Revision: 1,

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Drawing No. IBB-1484, IBB-1484 - Test report CS body+SS ring - DN050 seat outlet (2015-12-01), Revision: 1, Pages: 5

Drawing No. IBB-1486, IBB-1486 - Test report CS body+SS ring - DN050 seat inlet (2015-12-02), Revision: 1, Pages: 5

Drawing No. IBB-1488, IBB-1488 - Test report SS body+SS ring - DN080 seat inlet (2015-12-02), Revision: 1, Pages: 5

Drawing No. IBB-1490, IBB-1490 - Test report SS body+SS ring - DN080 seat outlet (2015-12-02), Revision: 1, Pages: 5

Drawing No. IBB-1492, IBB-1492 - Test report SS body+SS ring - DN080 dry (2015-12-02), Revision: 1, Pages: 5

Drawing No. IBB-1496, IBB-1496 - Test report CS body+SS ring - DN125 dry (2015-12-03), Revision: 1, Pages: 5

Drawing No. IBB-1498, IBB-1498 - Test report CS body+SS ring - DN200 dry (2015-12-03), Revision: 1, Pages: 5

Drawing No. IBB-1500, IBB-1500 - Test report CS body+SS ring - DN050 dry (2015-12-03), Revision: 1, Pages: 5

Drawing No. PDS03.11.001, PDS03.11.001 - Econaxe - W201, Revision: I, Pages: 3

Drawing No. PDS03.12.001, PDS.03.12.001 - Econaxe - L201, Revision: I, Pages: 3

Drawing No. PDS03.13.001, PDS03.13.001 - Econaxe - VG, Revision: A, Pages: 3

Terms of Validity:

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STANDARDS

ABS Rules:

Rules for Conditions of Classification, Part 1 - 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:
2022 Marine Vessel Rules: 4-6-2/5.11, 4-6-2/5.15;

Rules for Conditions of Classification, Part 1- 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following:
2022 Mobile Offshore Unit Rules: 4-2-2/9

National:

EN 593 Industrial valves (2017) (Applicable to valves W201, L201, VG)
API 609 Butterfly Valves, Ninth Edition (2021) (Applicable to valves W201, L201)

International:

VG 85053 (2015) (Applicable to valve VG)

Government:

NA

EUMED:

NA

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OTHERS:

NA