



CERTIFICATE NUMBER	21-2147791-PDA
EFFECTIVE DATE	10-Aug-2021
EXPIRY DATE	09-Aug-2026
ABS TECHNICAL OFFICE	Hamburg Engineering Department

CERTIFICATE OF Product Design Assessment

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

DELLNER BUBENZER GERMANY GMBH

located at

**FRIEDRICHSHUETTENSTR. 1, D-57548 KIRCHEN-WEHBACH,
Germany**

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: Brake, Hydraulic Disc
Model: SF 10, SF 15 and SF 24
Endorsements:
Tier: 5 - Unit Certification Required

This Product Design Assessment (PDA) Certificate remains valid until 09/Aug/2026 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

Efstratios Maliatsos, 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)

DELLNER BUBENZER GERMANY GMBH

FRIEDRICHSHUETTENSTR. 1
D-57548 KIRCHEN-WEHBACH
Germany
Telephone: +49-2741-9488-0
Fax: +49-2741-9488-44
Email: info@dellnerbubenzler.com
Web: www.dellnerbubenzler.com

Tier: 5 - Unit Certification Required

Product: Brake, Hydraulic Disc
Model: SF 10, SF 15 and SF 24
Endorsements:

Intended Service:

Brakes for holding and emergency stopping of hoisting and pulling machinery, as component of the crane.

Description:

Hydraulically spring-set disk brakes of fail safe design, closed by spring forces, operated (opened) hydraulically whereby provisions are not made at the brake for manual release.

Rating:

Ambient temperature: -25°C to +45°C,
For approved ratings and brake disc data, see attachment.

Service Restriction:

- Unit Certification is required in accordance with 2-1/Table 3 of the Lifting Appliances Guide for hoisting winches having a rated power 100kW and over.
- Unit Certification is not required for hoisting winches having a rated power less than 100 kW. 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.
- The present certificate does not cover Jacking Gear applications.
- A safety valve is to be provided in the hydraulic control system with set pressure of not more than listed under approved ratings.
- For CRC Class Notation the material is to be certified by the attending Surveyor for vessels operating at ambient temperature below -10°C. The materials of the components of the brake are to be impact tested using Charpy V-notch specimens as per 2/3.3.1 of the ABS Guide for Vessels Operating in Low Temperature Environments.
- Brakes of fail-safe type are to be provided for all winches and are to be effective in stopping and holding the test load. The operation of the brakes is to be demonstrated under simulated loss of power conditions. Refer to 2-6/15 of the ABS Guide for Certification of Lifting Appliances.
- The brakes are to be operated in line with manufacturer's recommendations/manuals.

Comments:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
The brakes are to be operated in line with manufacturer's recommendations.

Notes/Drawing/Documentation:

See Attachment.

Terms of Validity:

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STANDARDS

ABS Rules:

2021 Rules for Conditions of Classification - Offshore Units and Structures: 1-1-4/9.7, 1-1-A2, 1-1-A3 which covers the following:

2021 Guide for Classification of Drilling Systems: 2-4/9.1.viii), 2-4/9.1.x), 2-6/3.3.iii), 2-6/3.3.vi)

2021 Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:

2020 Guide for Certification of Lifting Appliances: 2-3/7, 2-6/3, 2-6/15, 2-6/19.5, 2-6/21.3, 2-7/5.7, 2-7/7, 2-9/7, 2-10/5, 2-10/7.

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA