



Certificate No:
TAS00003WV

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Brakes

with type designation(s)
Type KMB 32D

Issued to

Stromag GmbH
Unna, Nordrhein-Westfalen, Germany

is found to comply with

DNV rules for classification – Ships
DNV rules for classification – High speed and light craft
DNV standard DNV-ST-0377 – Standard for shipboard lifting appliances
DNV standard DNV-ST-0378 – Offshore and platform lifting appliances

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Issued at **Høvik** on **2023-06-26**

This Certificate is valid until **2028-06-25**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Stanislav Avanesov**

Oddvar Deinboll
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2022-12

www.dnv.com

Page 1 of 2

Product description

Hydraulically released spring applied multi-disc brake

Application/Limitation

The brake is approved for shipboard devices and lifting appliances, based on the maximum oil operating pressure of 210 bar.

Drawing/type	Td (Nm)	Ts (Nm)	Max. rpm	DNV-ST-0377	DNV-ST-0378
777-02724	375	550		Yes	Yes

Type Approval documentation

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform a survey after 2 and 3,5 years after issue of this certificate to verify that the conditions of the type approval are complied with.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued. The main scope of the Periodical Assessment will normally include:

- Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
- Review of the Type Approval documentation and that this is still used as basis for the production
- Review of possible changes to the design, the material and the performance of the product
- Verification of the product marking.

In cases where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

When a Type Approved product is manufactured at other companies, the Type Approval applicant takes the sole responsibility for the conformity of the product to the applicable requirements.

Other conditions

The connection of the brake to adjacent parts is not included in the type approval.
The type approval is also valid for versions with tapered shrink fit between hub and shaft.

END OF CERTIFICATE