

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Brakes**with type designation(s)
NFF 2 up to NFF 1000

Issued to

Stromag Dessau GmbH
Dessau-Roßlau, Germany

is found to comply with

GL Rules for Classification and Construction I - Ship Technology**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**Issued at **Hamburg** on **2014-01-15**This Certificate is valid until **2018-03-06**.DNV GL local station: **Magdeburg**for **DNV GL**Approval Engineer: **Andreas Andrecht**

Oliver Darley
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.



Job Id: **262.1-025800-1**
Certificate No: **TAS00001A5**

Technical Data / Range of Application

Type and nominal torque (Nm)

	(Nm)		(Nm)		(Nm)
NFF 2	20	NFF 4	40	NFF 6.3	63
NFF 10	100	NFF 16	160	NFF 25	250
NFF 40	400	NFF 63	630	NFF 100	1000
NFF 160	1600	NFF 250	2500	NFF 400	4000
NFF 630	6300	NFF 1000	10000		

Voltage: 24 V DC up to 240 V DC
Duty type: S1, S4-40 %
Torque: 20 Nm up to 10000 Nm
Ambient temp.: 45 °C
Degree of protection: IP 00 up to IP 66
Thermal class: F

Environmental Category H

Test Standard

Guidelines for the Performance of Type Approvals, VI-7-2, edition 2003
DIN VDE 0580:2000-07; PV Q 210 / 14.03.2001+Bedien. Anl. 4 BZFM / 2.7.09

Type Approval documentation

Data sheet: 227-90400 NFF 100 dated 13.11.2007
Drawing: 277-90400(1) dated 18.10.0598 and 401-00378(1) dated 30.03.98
Test report: K-Fi dated 09.11.2007, PA 98/07 dated 8.10.2007
Fertigungsvorschrift PV-Nr. 00361 dated 03.12.2007

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE