



Certificate number: 78304/A0 BV

File number: MPA2402326

Product code: 2596H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

www.veristar.com

## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**Precima Magnettechnik GmbH**  
Bückerburg - GERMANY

*for the type of product*

**MAGNETIC BRAKES**

Spring-Applied Brakes  
FDX 40, FDX 50

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 29 May 2031**

**For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 29 May 2026,

Dirk Hoepfner

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <https://www.veristarnb.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=ynll45dycb>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

The **FDX 40** and **FDX 50** are electromagnetic spring-applied brakes for the use as holding brake.

#### **Main characteristics:**

	FDX 40	FDX 50
Nominal torques [Nm]:	500 - 1500	1000 - 4000
Number of springs:	6 - 18	6 - 24
Housing material:	GGG40	GGG40: 1000 - 2500 Nm S355: 2670 - 4000 Nm
Coil voltage [VDC]:	103, 110, 180, 205, 230	110, 180, 205, 230
Duty cycle:	S1-100% (Rectifier PMG500-S) S3-60% (110VDC direct)	S1-100% (Rectifier PMG500-S) S3-60% (110VDC direct)
Manual release:	yes	no
Protection class:	IP 67	IP 67

#### **Variants:**

Brake Type: FDX **aa b c dddd eeee ff gggg hhh**

<b>aa:</b>	Brake size	40; 50
<b>b:</b>	Brake design	N; K; A
<b>c:</b>	Manual release	H
<b>dddd:</b>	Flange [mm]	any characters
<b>eeee:</b>	Sealing flange	any characters
<b>ff:</b>	Micro switch / Sensor	N; I; MI; MM
<b>gggg:</b>	Hub bore [mm]	any characters
<b>hhh:</b>	Coil voltage [VDC]	see above

### 2. DOCUMENTS AND DRAWINGS :

- Operating Instruction dated 02.2024
- FDX 040.0177.001 dated 08.10.2024; FDX 050.0102.001 dated 17.07.2024; FDX 050.0103.001 dated 26.08.2024

### 3. TEST REPORTS :

- Test program of a spring applied brake dated 13.03.2025
- Test Report of Switching Times dated 13.03.2025

### 4. APPLICATION / LIMITATION :

- 4.1 - Bureau Veritas Rules for the Classification of Steel Ships.
- 4.2 - The inspection and the replacement of the wearing parts are to be carried out in accordance with Manufacturer's instructions.

### 5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The above products are to be supplied by **Precima Magnettechnik GmbH** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **Precima Magnettechnik GmbH** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **Precima Magnettechnik GmbH** has declared to Bureau Veritas the following production site:

**Precima Magnettechnik GmbH**  
**Scheier Str. 27**  
**31675 Bückeburg**  
**GERMANY**

**6. MARKING OF PRODUCT :**

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number

**7. OTHERS :**

7.1 - It is **Precima Magnettechnik GmbH**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

**\*\*\* END OF CERTIFICATE \*\*\***