



Marine & Offshore

Certificate number: 71371/A0 BV File number: MPA2201541 Product code: 2584H

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

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## TYPE APPROVAL CERTIFICATE

This certificate is issued to Wuxi Original Mechanical & Electrical Co., Ltd. WUXI - CHINA

### for the type of product **ASYNCHRONOUS MACHINES (Power below 100kW)** OMD and OMT series

**Requirements:** 

Bureau Veritas Rules for the Classification of Steel Ships and Offshore Units. IEC 60034-1 (2022)

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: 30 Jun 2027

For Bureau Veritas Marine & Offshore, At BV SHANGHAI, on 30 Jun 2022, Jennifer Zhang

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.

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# THE SCHEDULE OF APPROVAL

## **<u>1. PRODUCT DESCRIPTION :</u>**

OMD and OMT are three phases asynchronous motors.

## **<u>1.1.1 - OMD Specifications:</u>**

| Degree of protection: | IP 23              |
|-----------------------|--------------------|
| Number of poles:      | 2 - 4 - 6 - 8      |
| Rated voltage:        | 380V up to 690V    |
| Frequence:            | 50Hz or 60Hz       |
| Duty type:            | S1 to S2           |
| Insulation class:     | F or H             |
| Temperature rise:     | Class B or Class F |

#### 1.1.2 - OMD Maximum rated power at S1 (kW):

|       | 2 Poles |      | 4 Poles |      | 6 Poles |      | 8 Poles |      |
|-------|---------|------|---------|------|---------|------|---------|------|
| FRAME | 50Hz    | 60Hz | 50Hz    | 60Hz | 50Hz    | 60Hz | 50Hz    | 60Hz |
| 250 S | 90      |      | 75      | 90   | 45      | 54   | 37      | 44.4 |
| 250M  |         |      | 90      |      | 55      | 66   | 45      | 54   |
| 280 S |         |      |         |      | 75      | 90   | 55      | 66   |
| 280 M |         |      |         |      | 90      |      | 75      | 90   |
| 315 S |         |      | _       |      |         |      | 90      |      |

#### **<u>1.2.1 - OMT Specifications:</u>**

| Degree of protection: | IP 55 or IP56      |
|-----------------------|--------------------|
| Number of poles:      | 2 - 4 - 6 - 8      |
| Rated voltage:        | 220V up to 690V    |
| Frequence:            | 50Hz or 60Hz       |
| Duty type:            | S1 to S2           |
| Insulation class:     | F or H             |
| Temperature rise:     | Class B or Class F |

## **1.2.2 - OMT Maximum rated power at S1 (kW):**

|        | 2 Pc | 2 Poles |      | 4 Poles |      | 6 Poles |      | 8 Poles |  |
|--------|------|---------|------|---------|------|---------|------|---------|--|
| FRAME  | 50Hz | 60Hz    | 50Hz | 60Hz    | 50Hz | 60Hz    | 50Hz | 60Hz    |  |
| 80 K   | 0.75 | 0.9     |      |         |      |         |      |         |  |
| 80 G   | 1.1  | 1.32    | 0.75 | 0.9     |      |         |      |         |  |
| 90 S   | 1.5  | 1.8     | 1.1  | 1.32    | 0.75 | 0.9     | —    |         |  |
| 90 L   | 2.2  | 2.64    | 1.5  | 1.8     | 1.1  | 1.32    |      |         |  |
| 100 L  | 3    | 3.6     | 2.2  | 2.64    | 1.5  | 1.8     | —    |         |  |
| 100 LX | —    | —       | 3    | 3.6     |      |         | —    |         |  |
| 112 M  | 4    | 4.8     | 4    | 4.8     | 2.2  | 2.64    | 1.5  | 1.8     |  |
| 132 S  | 5.5  | 6.6     | 5.5  | 6.6     | 3    | 3.6     | 2.2  | 2.64    |  |
| 132 SX | 7.5  | 9       |      |         |      |         |      |         |  |
| 132 M  |      |         | 7.5  | 9       | 4    | 4.8     | 3    | 3.6     |  |
| 132 MX | —    | —       |      |         | 5.5  | 6.6     | —    |         |  |
| 160 M  | 11   | 13.2    | 11   | 13.2    | 7.5  | 9       | 4    | 4.8     |  |
| 160 MX | 15   | 18      |      |         |      |         | 5.5  | 6.6     |  |
| 160 L  | 18.5 | 22.2    | 15   | 18      | 11   | 13.2    | 7.5  | 9       |  |
| 180 M  | 22   | 26.4    | 18.5 | 22.2    |      |         |      |         |  |
| 180 L  | —    | —       | 22   | 26.4    | 15   | 18      | 11   | 13.2    |  |
| 200 L  | 30   | 36      | 30   | 36      | 18.5 | 22.2    | 15   | 18      |  |
| 200 LX | 37   | 44.4    |      |         | 22   | 26.4    |      |         |  |
| 225 S  | —    | —       | 37   | 44.4    |      | —       | 18.5 | 22.2    |  |
| 225 M  | 45   | 54      | 45   | 54      | 30   | 36      | 22   | 26.4    |  |
| 250 M  | 55   | 66      | 55   | 66      | 37   | 44.4    | 30   | 36      |  |
| 280 S  | 75   | 90      | 75   | 90      | 45   | 54      | 37   | 44.4    |  |
| 280 M  | 90   |         | 90   |         | 55   | 66      | 45   | 54      |  |
| 315 S  | —    |         |      |         | 75   | 90      | 55   | 66      |  |
| 315 M  | —    | —       | —    | —       | 90   | —       | 75   | 90      |  |
| 315 L  | —    |         |      |         |      |         | 90   |         |  |

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#### **2. DOCUMENTS AND DRAWINGS :**

Specification N° OMEC-00-MA02, version 1.0 Specification N° OMEC-00-MA03, version 1.0 Drawing N° 8200280058, dated 04 Jun 2010. Drawing N° 8200280158002, dated 18 Jun 2010. Drawing N° 8200250033, dated 10 Aug 2010. Drawing N° 8200315AC, dated 03 Dec 2010. Quality certificate N° B20180310046, dated 10 Mar 2018. Quality certificate N° B20180314135, dated 14 Mar 2018.

#### 3. TEST REPORTS :

Wuxi Original Mechanical & Electrical Co., Ltd.:

Test report N° 20220211002, dated 25 Feb 2022.

Test report N° 20220211004, dated 25 Feb 2022.

Test report N° 20220222002, dated 25 Feb 2022.

Test report N° 20220225004, dated 25 Feb 2022. Test report N° 20220228002, dated 25 Feb 2022.

Shanghai Testing & Inspection Institute for Electrical Equipment:

Test report N° 22IAP08D32-00013.1, dated 27 May 2022.

Test report N° 22IAP08D32-00013.2, dated 27 May 2022.

## 4. APPLICATION / LIMITATION :

4.1 - BV Rules for the Classification of Steel Ships and Offshore Units.

4.2 - Electrical motors are intended for auxiliary equipment.

#### **5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 - The above products are to be supplied by **Wuxi Original Mechanical & Electrical Co., Ltd.** 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 - Wuxi Original Mechanical & Electrical Co., Ltd. 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, **Wuxi Original Mechanical & Electrical Co., Ltd.** has declared to Bureau Veritas the following production site:

#### Wuxi Original Mechanical & Electrical Co., Ltd. No.8, Ludai Road, YangShan Industrial Park, Huishan Economic Development Zone, Wuxi,China WUXI CHINA

#### 6. MARKING OF PRODUCT :

Name plate according to IEC 60034-1.

### 7. OTHERS :

It is **Wuxi Original Mechanical & Electrical Co., Ltd.**'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 \*\*\*