



Marine &amp; Offshore

Certificate number: 74747/A0 BV

File number: MPA2300561

Product code: 2583H

*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*  
**TRANSFLUID SpA**  
 Gallarate (VA) - ITALY

*for the type of product*  
**SYNCHRONOUS MACHINES (Power below 100kW)**  
 EM series

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Naval Ships, Yachts and Inland Navigation Vessels.  
 IEC 60034-1 (2022), IEC 60034-5 (2020)

**FOR information only**

*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: 27 Jun 2029**

**For Bureau Veritas Marine & Offshore,**  
 At BV NAPOLI, on 27 Jun 2024

***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 SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

Degree of protection:	IP 65
Duty type:	S1
Insulation class:	F

Type	Cooling method	Rated power (kW)	Peak power (kW)	Rated voltage (VAC)	Rated speed (rpm)
EM 180-4	Air cooled	1.5	2	34	1500
	Air cooled	3	4	68	3000
	Water cooled	2.5	3	37	1500
	Water cooled	4	5	62	3000
EM 180-8	Air cooled	4	5	35	1500
	Air cooled	6	8	68	3000
	Water cooled	5	7	37	1500
	Water cooled	8	10.5	60	3000
EM 180-12	Air cooled	5	7	29	1500
	Air cooled	6	8	30	1500
	Air cooled	8	12	57	3000
	Water cooled	8	10	32	1500
	Water cooled	12	15.5	60	3000
EM 220-20	Air cooled	8	10	39	1500
	Air cooled	10	15	59	1500
	Air cooled	15	20	77	3000
	Water cooled	10	15	39	1500
	Water cooled	15	20	34	1500
	Water cooled	20	25	38	3000
	Water cooled	30	35	79	3000
	Water cooled	30	35	79	3000
EM 220-35	Air cooled	20	25	78	1500
	Air cooled	28	35	158	3000
	Water cooled	25	30	78	1500
	Water cooled	35	45	159	3000
EM 300-50	Air cooled	30	35	103	1500
	Air cooled	40	50	199	3000
	Water cooled	35	45	105	1500
	Water cooled	50	35	178	3000
EM 300-75	Air cooled	40	50	122	1500
	Air cooled	60	75	242	3000
	Water cooled	45	55	123	1500
	Water cooled	75	100	242	3000
	Water cooled	100	130	252	3000

### 4. APPLICATION / LIMITATION :

4.1 - BV Rules for the Classification of Steel Ships, Naval Ships, Yachts and Inland Navigation Vessels.

4.2 - Electrical motors are intended for main propulsion of vessels/crafts. Integrated into pure electrical power system (EPS) or hybrid systems (diesel + electric).

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