



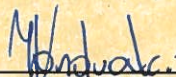
TYPE APPROVAL CERTIFICATE
No. ELE092420XP

This is to certify that the product below is found to be in compliance with the applicable requirement of the RINA type approval system.

<i>Description</i>	Low Voltage Electric Motor
<i>Type</i>	Types MS & Y2E2; HMA2 & HMC2; HMA3 & HMC3
<i>Applicant</i>	SVEND HOYER A/S OVER HADSTENVEJ 42 DK-8370 HADSTEN DENMARK
<i>Manufacturer</i>	SVEND HOYER A/S
<i>Place of manufacture</i>	SEE ATTACHMENT
<i>Reference standards</i>	IEC 60034-1; RINA Rules Part C, Chapter 2, Section 4.

Issued in **Gdańsk** on **October 7, 2020**. *This Certificate is valid until* **October 6, 2025**





RINA Services S.p.A.
Jaroslaw Kondracki

This certificate consists of this page and 1 enclosure



TYPE APPROVAL CERTIFICATE

No. ELE092420XP

Enclosure - Page 1 of 1

Types MS & Y2E2

HMA2 & HMC2

HMA3 & HMC3

Product Description:

Asynchronous Low-Voltage IEC-Motor platform for marine and offshore applications.

Types of Product:

ALUMINUM CASE

Three phase Cage Induction Marine Motors IE1- Type MS
Three phase Cage Induction Marine Motors IE2- Type HMA2
Three phase Cage Induction Marine Motors IE3- Type HMA3

CAST IRON CASE

Three phase Cage Induction Marine Motors IE1- Type Y2E2
Three phase Cage Induction Marine Motors IE2- Type HMC2
Three phase Cage Induction Marine Motors IE3- Type HMC3

Technical Data:

Frame Material:	Aluminium
Number of poles:	2 to 8
Height of frame	56, 63, 71, 80, 90, 100, 112, 132, 160, 180
Power supply	230V to 690V at 50-60Hz
Enclosure	IP55, IP56, IP65, IP66
Cooling	IC 411, IC410, IC416
Ambient temperature	40 deg C to 60 deg C
Duty type	S1 to S9
Insulation class	F or H
Temperature rise	B or F

Frame Material	Cast Iron
Number of poles	2 to 8
Height of frame	63,71,80,90,100,112,132,180,200,225,250,280,315, 355, 400
Power supply	230V to 690V at 50-60Hz
Enclosure	IP55, IP56, IP65, IP66
Cooling	IC 411, IC410, IC416
Ambient temperature	40 deg C to 60 deg C
Duty type	S1 to S9
Insulation class	F or H
Temperature rise	B or F



TYPE APPROVAL CERTIFICATE

No. **ELE 092420XP**

Enclosure - Page 2 of 2

Types MS & Y2E2

HMA2 & HMC2

HMA3 & HMC3

Documents:

Test reports filed by RINA with No. PLFP/430

- MS90L-2 - 2.2kW
- TTR2IC23151Q2SL
- TTR3IA10900A1SL
- TTR3IA20900A1SL
- TTR3IC23151A2SL
- Y2E2-315M-4

Drawings/Lists etc filed by RINA with No. PLFP/429

- HMA2_HMC2_motor type item table
- HMA3_HMC3_motor type item table
- MS_Y2E2_motor type item table
- SH063048-03 Marine Motors Classification INTERNAL

Places of Production:

- See Production sites_Hoyer.

Second Applicant:

Svend Hoyer Power Transmission (Ningbo) Co., Ltd
No 19 Middle Jingwu Road, Beilun District
Ningbo
China

Remarks:

- This approval is given on the understanding that the society reserves the right to require check tests to be carried out on the units at any time and Hoyer – which includes two companies Svend Hoyer A/S Denmark and Svend Hoyer Power Transmission in China will accept full responsibility for informing shipbuilders, ship-owners or their subcontractors of the proper methods of use and general maintenance of the units and the conditions of this approval.
- Raw material of shaft is to be supplied by approved manufacturers of RINA or to be satisfactory to the surveyor.
- All motors having rated power of 100 kW and above, intended for essential services are to be surveyed by the society during testing and, if appropriate, during manufacturing.(An alternative inspection scheme may be agreed by the society with the manufacturer whereby the attendance of the surveyor will not be required as indicated above.) See RINA rules, part C, chapter 2, section 4 paragraph 3.

This certificate has replaced the previous certificate no. ELE106815XG.

Gdańsk October 7, 2020

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