



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEX CNEX 21.0006X	Page 1 of 5	<u>Certificate history:</u>
Status:	Current	Issue No: 3	Issue 2 (2021-12-23)
Date of Issue:	2022-07-01		Issue 1 (2021-09-08)
Applicant:	Svend Hoyer A/S Over Hadstensevej 42 DK-8370 Hadsten Denmark		Issue 0 (2021-03-26)
Equipment:	Explosion proof three-phase induction motors model HMCX-400H.-.		
Optional accessory:			
Type of Protection:	db, eb, tb		
Marking:	Ex db IIB T4 Gb		
	Ex db eb IIB T4 Gb		
	Ex tb IIIB/IIIC T130°C Db		

Approved for issue on behalf of the IECEx
Certification Body:

Hou Yandong

Position:

Certification Officer

Signature:
(for printed version)

Date:
(for printed version)

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Certificate issued by:

CNEX-Global B.V.
Utrechtseweg 310-B42,
6812 AR ARNHEM
Netherlands





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Manufacturer: **Svend Hoyer A/S**
Over Hadstenvvej 42
DK-8370 Hadsten
Denmark

Manufacturing locations: **Svend Hoyer A/S**
Over Hadstenvvej 42
DK-8370 Hadsten
Denmark

**Svend Hoyer Power Transmission
Ningbo Co., LTD.**
No. 19, JingWu Middle Road, Beilun
District
Ningbo Zhejiang 315821
China

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[NL/CNEX/ExTR21.0006/00](#)
[NL/CNEX/ExTR21.0006/03](#)

[NL/CNEX/ExTR21.0006/01](#)

[NL/CNEX/ExTR21.0006/02](#)

Quality Assessment Reports:

[IT/CES/QAR14.0004/04](#)

[NL/CNEX/QAR20.0004/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Explosion proof three-phase induction motor models HMCX-400H.-., with self-ventilated, squirrel-cage rotor and seated with ball bearings or roller bearings. The enclosure of the motors is made of cast iron and terminal box is made of cast iron. The enclosure of the motor is constructed in type of protection 'db' for explosive gas atmospheres. The terminal box can be constructed in type of explosion protection 'db' or 'eb', for explosive gas atmospheres. The motor enclosure and terminal box can also be constructed in type of explosion protection 'tb', for use in explosive dust environments. The motors shall be operated direct-on-line (DOL).

For nomenclature, electrical parameters and other information see the Annex to this certificate.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The ambient temperature range is limited to -25 °C ... +45 °C/+50 °C, see Annex A.

For repair of the flameproof joints due regard must be given to the structural specifications provided by the manufacturer. Repair in compliance with the values in Tables 1 and 2 of EN 60079-1 is not allowed.

All electrical connections shall be tightened with the tightening torques specified in the manufacturer's instructions.

For Ex 'e' terminal boxes, special care must be taken to ensure the minimum creepage and clearance distances between the connections and to enclosure.

Suitable heat-resisting cables rated minimum +120 °C, must be applied for mains supply and for auxiliary connections.

The working duty can be S1 or S2~S7. For S2~S7, the motor temperature shall be monitored by PTC- thermistors in the stator windings. These devices have to be connected to suitable tripping units that have been functionally tested for this purpose.

All fasteners used for connecting parts of the flameproof motor enclosure together shall have a minimum yield stress of 640 N/mm².

(this includes: end-shields to frame, cover plate to frame, main terminal box adapter to frame, auxiliary terminal box base to frame, inner/ external bearing cover to end-shields, main terminal box adapter to terminal box base).

All other fasteners shall have a minimum yield stress of 320 N/mm².



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Changes for issue 1:

Additional manufacturing location:

Svend Hoyer Power Transmission Ningbo Co., LTD.

No. 19, JingWu Middle Road, Beilun District, Ningbo Zhejiang (315821), P.R. China

Changes for issue 2:

Addition of motor model HMCX-400H8-10, rated 450kW, 440V, 60Hz.

Changes for issue 3:

Extension of ambient temperature range to -25 °C~+50 °C.

Addition of an optional copper busbar structure in the terminal box.



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Additional information:

The enclosure of the Explosion proof three-phase induction motor models HMCX-400H.-. successfully passed the tests for the Ingress Protection Levels IP55, IP56, IP65, IP66 (depending on the type of shaft seal applied) to IEC 60529.

Annex:

[P22041IA-CCA certificate IECEx CNEX21.0006X issue 3 Annex_1.pdf](#)



Annex to Certificate IECEx CNEX 21.0006X Issue 3

Equipment or Protective System: **Explosion proof three-phase induction motors
Model HMCX-400H.-.**

Applicant: **Svend Hoyer A/S**

Address: **Over Hadstenvej 42, DK-8370 Hadsten, Denmark**

Nomenclature for motor model HMCX-400Ha-b

HM	-	Hoyer Motor
C	-	Cast Iron
X	-	Explosion proof
400	-	shaft height 400
H	-	Frame number letter for B-dimension
a	-	Core length: 1, 2, 3, 4, 5, 6, 7 or 8
b	-	Number of poles: 2, 4, 6, 8, 10, 12, 14, 16

Motor models covered:

The motor models that are covered by this certificate are detailed in the Test Report Cover document. (P22041IA-CS).

Electrical Data:

Rated power : 100 kW to 550 kW
Rated voltage: 380 V to 1000 V
Rated frequency ...: 50 Hz / 60 Hz
For details per motor model, see Annex A.

Descriptive Documents:

Detailed in the Test Report Cover document. (P22041IA-CS).

Mounting Instructions:

See manufacturer's instructions.

Installation Instructions:

All cable entry devices and blanking elements shall be certified to valid standards for use in explosive gas or dust atmospheres (as applicable), with the same IP rating as the motor, suitable for the conditions of use and correctly installed.

All parts installed in the Ex e terminal box shall be certified to valid standards for use in explosive gas atmospheres, suitable for the conditions of use and correctly installed.

Unused apertures shall be closed with suitable certified blanking elements. See manufacturer's instructions.

Routine tests:

Routine overpressure tests on enclosure parts are detailed in the Test Report Cover Sheet. (ref. P22041IA-CS).

Certification Body: CNEX-Global B.V., Utrechtseweg 310-B42, 6812 AR, Arnhem, the Netherlands

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Annex to Certificate IECEx CNEX 21.0006X Issue 3

Annex A – Motor models covered by this certificate:

Model numbers	Frame + Core length code	No. of poles	Max. Power at 50Hz/60Hz duty S1 [kW]	Voltage / Frequency	T- amb. [°C]
HMCX-400H1-2	400H1	2	355/426	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-2	400H2		400/480		
HMCX-400H3-2	400H3		450/540		
HMCX-400H4-2	400H4		500/550	400-1000V / 50Hz/60Hz	-25 ...+45
HMCX-400H1-4	400H1	4	355/426	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-4	400H2		400/480		
HMCX-400H3-4	400H3		450/540		
HMCX-400H4-4	400H4		500/550	400-1000V / 50Hz/60Hz	-25 ...+45
HMCX-400H1-6	400H1	6	280/336	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-6	400H2		315/378		
HMCX-400H3-6	400H3		355/426		
HMCX-400H4-6	400H4		400/480		
HMCX-400H5-6	400H5		450/540		
HMCX-400H6-6	400H6		500/550	400-1000V / 50Hz/60Hz	-25 ...+45
HMCX-400H1-8	400H1	8	250/300	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-8	400H2		280/336		
HMCX-400H3-8	400H3		315/378		
HMCX-400H4-8	400H4		355/426		
HMCX-400H5-8	400H5		400/480		
HMCX-400H6-8	400H6		450/540	400-1000V / 50Hz/60Hz	-25 ...+45
HMCX-400H1-10	400H1	10	200/240	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-10	400H2		220/264		

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HMCX-400H3-10	400H3		250/300		
HMCX-400H4-10	400H4		280/336		
HMCX-400H5-10	400H5		315/378		
HMCX-400H6-10	400H6		355/426		
HMCX-400H7-10	400H7		400/440		
HMCX-400H8-10	400H8		-/450	440V-1000V, 60Hz	
HMCX-400H1-12	400H1	12	185/222	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-12	400H1		200/240		
HMCX-400H3-12	400H3		220/264		
HMCX-400H4-12	400H4		250/300		
HMCX-400H5-12	400H5		280/336		
HMCX-400H1-14	400H1	14	100/120	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-14	400H2		132/158		
HMCX-400H3-14	400H3		160/192		
HMCX-400H4-14	400H4		185/222		
HMCX-400H5-14	400H5		200/240		
HMCX-400H6-14	400H6		220/264		
HMCX-400H7-14	400H7		250/300		
HMCX-400H1-16	400H1	16	132/158	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-16	400H2		160/192		
HMCX-400H3-16	400H3		185/222		
HMCX-400H4-16	400H4		200/240		
HMCX-400H5-16	400H5		220/264		

Important Notes:

The above stated powers are the maximum power per motor model.

Lower powers per motor model are covered by this certificate.

The power varies with the applied frequency.