



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 4 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2021-03-26

Applicant: **Svend Hoyer A/S**
Over Hadstensevej 42
DK-8370 Hadsten
Denmark

Equipment: **Explosion proof three-phase induction motors model HMCX-400H**

Optional accessory:

Type of Protection: **db, eb, tb, tc**

Marking: Ex db IIB T4 Gb
Ex db eb IIB T4 Gb
Ex tb IIIB/IIIC T130°C Db
Ex tc IIIB/IIIC T130°C Dc

Approved for issue on behalf of the IECEx
Certification Body:

Hou Yandong

Position:

Certification Officer

Signature:
(for printed version)

Date:

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

CNEX-Global B.V.
Utrechtseweg 310-B38
6812AR, Arnhem
Netherlands





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Certificate No.: **IECEX CNEX 21.0006X**

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Date of issue: 2021-03-26

Issue No: 0

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

Additional
manufacturing
locations:

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 Report:

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

Quality Assessment Report:

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



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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 or stainless steel. 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/tc', 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 -40 °C ... +50 °C:

- for 2P/4P/6P motors \leq 450 kW and for 8P/10P/12P/14P/16P motors \leq 400 kW.

The ambient temperature range is limited to -40 °C ... +45 °C:

- for 2P/4P/6P motors \geq 451 kW and for 8P/10P/12P/14P/16P motors \geq 401 kW.

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 IEC 60079-1 is not allowed.

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

Suitable heat-resisting cables must be applied for mains supply and for auxiliary connections.

The working duty can be S1 or S2~S10. For S2~S10, 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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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:

[P21010IA-CCA certificate IECEx CNEX21.0006X Annex_1.pdf](#)



Annex to Certificate IECEx CNEX 21.0006X Issue 0

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-400H1-4

HM - Hoyer Motor
 C - Cast Iron
 X - Explosion proof
 400 - shaft height 400
 H - Frame number letter for B-dimension
 1 - Core length: non, 1, 2, 3, 4, 5 or 6
 4 - 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. (P21010IAC-CS).

Electrical Data:

Rated voltage for 2P/4P/6P motors \leq 450 kW and for 8P/10P/12P/14P/16P motors \leq 400 kW:
 380V, 400V, 415V, 440V, 460V, 480V, 500V, 525V, 550V, 575V, 660V, 690V, 720V, 1000V, 1140V,
 380/660V, 400/690V, 415/720V, 550/950V, 660/1140V.

Rated voltage for 2P/4P/6P motors \geq 451 kW and for 8P/10P/12P/14P/16P motors \geq 401 kW:
 400V, 415V, 440V, 460V, 480V, 500V, 525V, 550V, 575V, 660V, 690V, 720V, 1000V, 1140V,
 400/690V, 415/720V, 550/950V, 660/1140V.

Rated power : 110 kW to 500 kW
 Rated frequency ...: 50 Hz / 60 Hz

Note:

The motors are originally designed for 400 VAC, 50 Hz. When used with 60Hz and voltages different from 400V, the rated power can be multiplied by the following factors:

- for 2P/4P/6P \leq 450kW and for 8P/10P/12P/14P/16P \leq 400kW:

Rated voltage (V)	380	400	415	440	460	480
Multiplication factor	1.0	1.0	1.05	1.1	1.15	1.2

- for 2P/4P/6P \geq 451kW and for 8P/10P/12P/14P/16P \geq 401kW:

Rated voltage (V)	415	440
Multiplication factor	1.0	1.0

See the Test Report Cover Sheet (ref. P21010IA-CS), for the electrical data per motor model.

Certification Body: CNEX-Global B.V., Utrechtseweg 310-B38, 6812 AR, Arnhem, the Netherlands

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Annex to Certificate IECEx CNEX 21.0006X Issue 0

Descriptive Documents:

Detailed in the Test Report Cover document. (P21010IA-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. P21010IA-CS).

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Annex to Certificate IECEx CNEX 21.0006X Issue 0

Annex A – Motor models covered by this certificate:

Frame+A46: E63 core size:	No. of poles	Power [kW]	Frequency [Hz]	Model numbers
400	2	355	50/60	HMCX-400H-2
	4	355	50/60	HMCX-400H-4
	6	280	50/60	HMCX-400H-6
	8	250(220)	50/60	HMCX-400H-8
	10	200	50/60	HMCX-400H-10
	12	185(160)	50/60	HMCX-400H-12
	14	160(132)	50/60	HMCX-400H-14
	16	132(110)	50/60	HMCX-400H-16
400 1	2	400	50/60	HMCX-400H1-2
	4	400	50/60	HMCX-400H1-4
	6	315	50/60	HMCX-400H1-6
	8	280	50/60	HMCX-400H1-8
	10	220	50/60	HMCX-400H1-10
	12	200	50/60	HMCX-400H1-12
	14	185	50/60	HMCX-400H1-14
	16	160	50/60	HMCX-400H1-16
400 2	2	450	50/60	HMCX-400H2-2
	4	450	50/60	HMCX-400H2-4
	6	355	50/60	HMCX-400H2-6
	8	315	50/60	HMCX-400H2-8

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	10	250	50/60	HMCX-400H2-10
	12	220	50/60	HMCX-400H2-12
	14	200	50/60	HMCX-400H2-14
	16	185	50/60	HMCX-400H2-16
400 3	2	500	50/60	HMCX-400H3-2
	4	500	50/60	HMCX-400H3-4
	6	400	50/60	HMCX-400H3-6
	8	355	50/60	HMCX-400H3-8
	10	280	50/60	HMCX-400H3-10
	12	250	50/60	HMCX-400H3-12
	14	220	50/60	HMCX-400H3-14
	16	200	50/60	HMCX-400H3-16
400 4	6	450	50/60	HMCX-400H4-6
	8	400	50/60	HMCX-400H4-8
	10	315	50/60	HMCX-400H4-10
	12	280	50/60	HMCX-400H4-12
	14	250	50/60	HMCX-400H4-14
	16	220	50/60	HMCX-400H4-16
400 5	6	500	50/60	HMCX-400H5-6
	8	450	50/60	HMCX-400H5-8
	10	355	50/60	HMCX-400H5-10
400 6	10	400	50/60	HMCX-400H6-10

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