



CNEX-GLOBAL

EU-TYPE EXAMINATION CERTIFICATE

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[2]

**Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 2014/34/EU**



[3]

EU-Type Examination Certificate Number: **CNEX 21 ATEX 0005 X Issue 3**

[4]

Equipment : **Explosion proof three-phase induction motor Models HMCX-400H.-.**

[5]

Manufacturer : **Svend Hoyer A/S**

[6]

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

[7]

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8]

CNEX-Global B.V., Notified Body number 2614, in accordance with Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **P22041IA-CS**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015

EN IEC 60079-7:2015/A1:2018 EN 60079-31:2014

except in respect of those requirements listed at item 18 of the Schedule.

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to specific conditions for use specified in the schedule to this certificate.

[11]

This EU – Type examination certificate relates only to the design of the specified equipment or protective system. Further requirements of the Directive apply to the manufacture and supply of this equipment or protective system. These are not covered by this certificate.

[12]

The marking of the equipment or protective system shall include the following:

II 2G Ex db eb IIB T4 Gb or II 2G Ex db IIB T4 Gb or

II 2D Ex tb IIIB/IIIC T130°C Db

Certification officer : Hou Yandong

Date of issue : 2022-07-01

Signature:

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

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[15] Description of equipment:

Explosion proof three-phase induction motor model 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).

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 code: 1, 2, 3, 4, 5, 6, 7, 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 Annex A of this certificate and in the Test Report Cover document. (ref. 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.

Mounting Instructions:

See manufacturer's instructions.

Installation Instructions:

All cable entry devices and blanking elements shall be certified 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. Unused apertures shall be closed with suitable certified blanking elements.
See manufacturer's instructions.

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.

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Routine tests:

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

[16] Descriptive Documents:

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

[17] Specific Conditions for Use:

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

[18] Essential Health and Safety Requirements:

The Essential Health and Safety Requirements are covered by the standards listed at item [9].

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.



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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 EN 60529.

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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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	
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	
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	
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	
HMCX-400H1-10	400H1	10	200/240	380-1000V / 50Hz/60Hz	-25 ...+50
HMCX-400H2-10	400H2		220/264		
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	

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Model numbers	Frame + Core length code	No. of poles	Max. Power at 50/60Hz duty S1 [kW]	Voltage / Frequency	T- amb. [°C]
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.