



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: **IECEX ITA 10.0025X** issue No.: **0** Certificate history:

Status: **Current**

Date of Issue: **2010-10-04** Page 1 of 4

Applicant: **Rototech Pty Ltd**
34-36 Kinkaid Avenue NORTH PLYMTON South Australia 5037
Australia

Electrical Apparatus: **Three-phase Induction Motor YB2 series**
Optional accessory:

Type of Protection: **Flameproof**

Marking: **Ex d IIB T4/T5 (according to Power Rating) IP55/IP56/IP66**
IECEX ITA 10.0025X

Approved for issue on behalf of the IECEX Certification Body: **D Gray**

Position: **Certification Authority**

Signature:
(for printed version)

Date:

4TH OCTOBER 2010

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEX Website.

Certificate issued by:

International Testing and Certification Services Pty. Ltd
4 - 6 Second Street
Bowden SA 5007
Australia



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Manufacturer: **SHAN DONG HUALI ELECTRIC MOTOR GROUP CO., LTD**
No.89 Mingzhu Road,
Rongcheng,
Shandong
China

Manufacturing location(s):

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 electrical apparatus 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 : 2004 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition: 4.0

IEC 60079-1 : 2007-04 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition: 6

*This Certificate **does not** indicate compliance with electrical 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:

AU/ITA/ExTR10.0020/00
CN/CQM/ExTR10.0032/00

Quality Assessment Report:

AU/ITA/QAR09.0003/01
CN/CQM/QAR09.0004/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The series YB2 flameproof three-phase induction motor is intended for use in potentially explosive atmospheres. They can adopt foot mounting, flange mounting & foot/flange mounting. The duty is S1, continuous rating. The motors are adopted with total enclosed structure and insulation class F or H. The code of cooling is IC411.

The Motor comprises a main body, M10 main terminal box and optional four auxiliary terminal boxes (one heater junction box, one stator temperature terminal box, two bearing temperature junction boxes.) Terminal bushings are utilized between the main body and terminal boxes.

There are two kinds of construction of the M10 main terminal box. One is with two cable entries and a threaded cemented bush (M30x2) screwed in the terminal box base. The cemented bush contains the leads for the winding temperature sensor and heater. The other is with one cable entry and there is no threaded cemented bush screwed on the terminal box base.

The material of the inner bearing cover and N-drive end shield is gray cast iron HT250, the material of the D-drive end shield is Q235-A steel (the material of the flange end shield for the YB2 -280 is gray cast iron HT250, for the YB2 -250 is Q235-A steel) and the enclosure main body is made from Q235-A steel

The model reference numbers of YB2-280S-2, 4, 6, 8P, YB2-280M-2, 4, 6, 8P, YB2-250M-2, 4, 6, 8P, YB2-280M2-2, 4, 6, 8P, YB2-250M2-2,4P are identified as follows:

YB = flameproof motor

2 = second design

280 = shaft height, can be 250 or 280

S = Code of frame, can be S, M, M2

2, 4, 6, 8 = Number of poles

CONDITIONS OF CERTIFICATION: YES as shown below:

The conditions of safe use are as follows:

1. The external and internal earthing shall be effected during installation.
2. The temperature measuring system shall be connected / monitored by an effective motor protection circuit.
3. The motor shall be installed according to the manufacturer's instructions



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EQUIPMENT(continued):

The electrical ratings are 380~720V 1000V, 1140V 575/1000V 660/1140V, 50/60Hz, and the following Power ratings:

Model	Power Rating (KW)		Model	Power Rating (KW)	
	T4	T5		T4	T5
YB2-280S-2	75	56	YB2-280M2-4	110	82
YB2-280S-4	75	56	YB2-280M2-6	75	56
YB2-280S-6	45	33	YB2-280M2-8	55	41
YB2-280S-8	37	27	YB2-250M-2	55	41
YB2-280M-2	90	90	YB2-250M-4	55	41
YB2-280M-4	90	90	YB2-250M-6	37	27
YB2-280M-6	55	55	YB2-250M-8	30	22
YB2-280M-8	45	45	YB2-250M2-2	75	56
YB2-280M2-2	110	82	YB2-250M2-4	75	56

The equipment may include one or more of the following options, as provided by the Certificate Holder:

- a) Fitting of Auxiliary terminal boxes.
- b) Fitting of Anti-condensation heaters.
- c) Fitting of winding & bearing RTD's..
- d) Fitting of Thermistors.
- e) Fitting of stainless steel fasteners (Identical grade or better).
- f) Use with Soft starter.
- g) Cooling by forced ventilation (Additionally certified fan motor).



**ATTACHMENT To IECEX CERTIFICATE
IECEX ITA 10.0025X**

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**Additional Information concerning the YB2 series Three Phase
Induction Motors**

**The following List of Drawings are included in the IECEX ITA
10.0025X Certification**

Description;	Drawing No.:	Rev. Level:	Date:
YB2-280 Product drawings			
General assembly drawing	1HL.070.377~384(B2) 1HL.070.377.1~384.1(B2) 1HL.070.378.2~384.2(B2) 1HL.070.377.4~384.4(B2) 1HL.070.378.3~384.3(B2)	Original	2010-5-10
Bearing outer cap	8HL.317.319-320(B2) 8HL.317.323(B2)	Original	2010-5-10
Inner bearing cap	8HL.317.024(B2) 8HL.317.022 (B2)	Original	2010-5-10
End shield (D)	8HL.013.253/.255(B2)	Original	2010-5-19
End shield (N)	8HL.013.254(B2)	Original	2010-5-19
Flange	8HL.013.256-257(B2)	Original	2010-5-19
Stator	5HL.670.377.1~384.1(B2) 5HL.670.378.2~384.2(B2) 5HL.670.378.3~384.3(B2) 5HL.670.377.4~384.4(B2)	Original	2010-5-10
Frame	8HL.034.235M/236M(B2) 8HL.034.235/236(B2) 8HL.034.236.2(B2) 8HL.034.236M.2(B2)	Original	2010-5-10
Rotor	5HL.674.377~384(B2) 5HL.674.378.2~384.2(B2)	Original	2010-5-19
Shaft	8HL.200.224~225(B2) 8HL.200.225.2(B2) 8HL.200.226~227(B2) 8HL.200.227.2 (B2)	Original	2010-5-10 2010-5-19 2010-5-19 2010-5-10
Fan	8HL.435.018 (B2) 8HL.435.019 (B2)	Original	2010-5-10 2010-5-19



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Description:	Drawing No.:	Rev. Level:	Date:
Fan housing	8HL.306.015 (B2) 8HL.306.016 (B2)	Original	2010-5-19 2010-5-10
YB2-250 Product drawings			
General assembly drawing	1HL.070.373~376(B2) 1HL.070.373.1~374.1(B2) 1HL.070.373.4~376.4(B2) 1HL.070.373.6~374.6(B2) 1HL.070.373.2~376.2(B2) 1HL.070.373.3~374.3(B2) 1HL.070.373.5~376.5(B2) 1HL.070.373.7~374.7(B2)	Original	2010-5-10
Bearing outer cap	8HL.317.317-318(B2□ 8HL.317.227(B2) 8HL.317.319-320(B2□	Original	2010-5-10 2010-5-19 2010-5-10
Inner bearing cap	8HL.317.022.1□B2□ 8HL.317.021 (B2) 8HL.317.022 (B2)	Original	2010-5-10
End shield (D)	8HL.013.350/348(B2)	Original	2010-5-19
Flange	8HL.013.252(B2)	Original	2010-5-19
End shield (N)	8HL.013.349(B2)	Original	2010-5-19
Stator	5HL.670.073-076(B2) 5HL.670.073.1~074.1(B2) 5HL.670.073.2~076.2(B2) 5HL.670.073.3~074.3(B2)	Original	2010-5-10
Frame	8HL.034.033(B2) 8HL.034.033.1(B2) 8HL.034.233(B2) 8HL.034.233.1(B2)	Original	2010-5-10
Rotor	5HL.674.373.1-374.1(B2) 5HL.674.073-076(B2)	Original	2010-5-19
Shaft	8HL.200.022(B2) 8HL.200.023(B2) 8HL.200.222(B2) 8HL.200.221 (B2)	Original	2010-5-19
Fan	8HL.435.016 (B2) 8HL.435.017 (B2)	Original	2010-5-10 2010-5-19



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Description;	Drawing No.:	Rev. Level:	Date:
Fan housing	8HL.306.013/.014 (B2)	Original	2010-5-19
M10 Main terminal box drawings YB2-250-280			
General assembly drawing	5HL.354.346~347(B2) 5HL.354.344~345 (B2) 5HL.354.344.1~345.1(B2) 5HL.354.346.1~347.1(B2)	Original	2010-5-10
Terminal box base	8HL.354.208.1(B2) 8HL.354.208(B2)	Original	2010-5-10
Terminal box lid	8HL.354.907 (B2)	Original	2010-5-19
Insulating sleeve	8HL.772.009(B2)	Original	2010-5-10
Connection bolt	8HL.516.027~030 (B2)	Original	2010-5-10
Sealing ring	8HL.370.005(B2)	Original	2010-5-10
Screw thread block	8HL.215.207(B2)	Original	2010-5-19
Outlet device	8HL.215.209(B2)	Original	2010-5-19
Thread sheath	8HL.215.005(B2)	Original	2010-5-10
Cable gland	8HL.356.014(B2) 8HL.356.217(B2) 8HL.356.218(B2)	Original	2010-5-10 2010-5-19 2010-5-19
Stator temperature junction box YB2-250-280			
General assembly drawing	5HL.354.339/.340(B2)	Original	2010-5-22
Terminal box base	8HL.354.202 (B2)	Original	2010-5-10
Terminal box lid (for heater junction box too)	8HL.354.901 (B2)	Original	2010-5-10
Sealing ring (for heater junction box too)	8HL.370.002 (B2)	Original	2010-5-10
M5 outlet lead thread sheath (for heater junction box too)	8HL.215.202 (B2)	Original	2010-5-19
Screw thread block (for heater junction box too)	8HL.215.205(B2)	Original	2009-12-17
Cable gland (for heater junction box too)	8HL.356.208(B2) 8HL.356.209(B2)	Original	2010-5-19
Heater junction box (YB2-250-280)			



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Description;	Drawing No.:	Rev. Level:	Date:
General assembly drawing	5HL.354.337/.338(B2)	Original	2010-5-22
Terminal box base	8HL.354.203 (B2)	Original	2009-5-17
Terminal box lid	8HL.354.901 (B2)	Original	2010-5-10
Sealing ring	8HL.370.002 (B2)	Original	2010-5-10
M5 outlet lead thread sheath	8HL.215.202 (B2)	Original	2010-5-19
Screw thread block	8HL.215.205(B2)	Original	2009-12-17
Bearing temperature junction box (YB2-250-280)			
General assembly drawing	FBH001	Original	2010-5-10
Terminal box lid	8HL.354.601 (B2)	Original	2009-12-17
Terminal box base	FBHD001	Original	2009-12-17
Sealing ring	MFT-16-21	Original	2009-12-17
Connection bolt	BLJ-M12x1	Original	2009-12-17
Sealing bolt hexagon	MF-M20x1.5-6g	Original	2009-12-17
Sensor probe conduit	FBH002	Original	2010-5-10
Rototech Exd label	D002066	Issue A	2010-5-11
Rating list	D002067	Issue A	2010-5-11