



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 10.0019X issue No.: 0 Certificate history:

Status: **Current**

Date of Issue: 2010-10-08 Page 1 of 4

Applicant: **Rototech Pty Ltd**
34-36 Kinkaid Avenue
North Plympton
South Australia
5037
Australia

Electrical Apparatus: **High Voltage Explosion Proof Three phase motors. Type YB2-355**
Optional accessory:

Type of Protection: **Flameproof**

Marking: **Ex d IIB T4**
IECEX ITA 10.0019X

Approved for issue on behalf of the IECEx
Certification Body:

David Gray

Position:

Certification Authority

Signature:
(for printed version)

Date:

8TH 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



IECEX Certificate of Conformity

Certificate No.: IECEX ITA 10.0019X

Date of Issue: 2010-10-08

Issue No.: 0

Page 2 of 4

Manufacturer: **Shandong Huali Group Ltd.**
89 Mingzhu Road & 89 Fuyuannan Road
Rongcheng City
Shandong Province
264300
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 : 2007-10 Explosive atmospheres - Part 0: Equipment - General requirements
Edition: 5

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/ExTR10.0018/00
CN/CQM/ExTR09.0013/00
CN/CQM/ExTR09.0013/01

Quality Assessment Report:

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



IECEX Certificate of Conformity

Certificate No.: IECEx ITA 10.0019X

Date of Issue: 2010-10-08

Issue No.: 0

Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The series YB2 flameproof three-phase induction motors (hereafter called motors) are 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 a total enclosed structure and insulation class F or H. The code of cooling is IC411.

The motor comprises a main body, main terminal box and two auxiliary terminal boxes (one is the heater junction box and the other one is stator temperature terminal box). There are two bearing temperature measuring junction boxes mounted on the frame. The sensor (PT100) and leads of the bearing temperature measuring junction box is encapsulated in a probe conduit and screwed in the outer bearing cover though a M10x1 threaded bolt.

The motor has an external cooling fan manufactured from Q235-A steel. A compression gland entry with rubber sealing ring is utilised in the main terminal box.

Model Ratings and References include:

Model	Power	Model	Power	Model	Power
YB2-355 ₁ -2	185kW	YB2-355 ₁ -4	185kW	YB2-355 ₁ -6	160kW
YB2-355 ₂ -2	200kW	YB2-355 ₂ -4	200kW	YB2-355 ₂ -6	185kW
YB2-355 ₃ -2	220kW	YB2-355 ₃ -4	220kW	YB2-355 ₃ -6	200kW
YB2-355 ₄ -2	250kW	YB2-355 ₄ -4	250kW	YB2-355 ₄ -6	220kW
YB2-355 ₅ -2	280kW	YB2-355 ₅ -4	280kW	YB2-355 ₅ -6	250kW
YB2-355 ₆ -2	315kW	YB2-355 ₆ -4	315kW	YB2-355 ₆ -6	280kW

CONDITIONS OF CERTIFICATION: YES as shown below:

The conditions of safe use are as follows:

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



IECEX Certificate of Conformity

Certificate No.: IECEX ITA 10.0019X

Date of Issue: 2010-10-08

Issue No.: 0

Page 4 of 4

EQUIPMENT(continued):

The equipment may include one or more of the following options:

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

Note: At least 1 set of thermistors or RTD's are fitted.

It is a requirement of certification that all production units satisfactorily pass a routine pressure test in accordance with clause 15.1.3 of IEC 60079-1 as follows:

- o Main body chamber: 940kPa
- o Main (M16) terminal box: 810kPa
- o Auxiliary (M5) auxiliary terminal boxes: 500kPa
- o Temperature (Bearing) junction boxes: 470kPa

The flamepaths dimensions must also be made available to the end user, in addition to the instructions.

Refer to the attachment to this on-line certificate for a list of Drawings.



**ATTACHMENT To IECEX CERTIFICATE
IECEX ITA 10.0019X**

**This Attachment forms an Integral Part of the IECEX Certificate and all pages
MUST be presented and read whenever the IECEX ITA 10.0019X Certificate is
presented**

**Additional Information concerning the YB2-355 series Three Phase
Induction Motors**

**The following List of Drawings are included in the IECEX ITA
10.0019X Certification**

Title	Drawing number	Issue	DATE
YB2-355 Product drawings			
YB2-355 General assembly	1HL.050.473.1D	original	2010/07/09
General assembly	1HL.050.474.1D	original	2010/07/09
YB2-355-4 Bearing outer cap	8HL.317.467D	original	2009/05/17
YB2-355 Inner bearing cap	8HL.317.041.1~2(B2)	original	2009/05/17
YB2-355 Endshield (D) (Exd D)	8HL.013.479.1D	original	2010/07/09
YB2-355 End shield(N)	8HL.013.480D	original	2009/05/17
YB2-355 Stator	5HL.670.464~465D	original	2009/05/17
YB2-355 Stator Frame	8HL.034.470D	original	2009/05/17
YB2-355 Rotor	5HL.674.474D	original	2009/05/17
YB2-355 Shaft	8HL.200.469D	original	2009/05/17
YB2-355 Outside Fan	5HL.435.461D	original	2009/05/17
YB2-355 Fan housing	5HL.306.464D	original	2009/05/17
YB2-355 Stand Junction Box Seat	8HL.180.468D	original	2009/05/17
YB2-355 Endshield (D) with shrouding ring	5HL.013.479.1D	original	2010/07/09
YB2-355 D.E. Endshield bolt shrouding	8HL.912.001(B2)	original	2010/07/09
Rototech Exd I/IIB T4 label	D001958	D	2010/08/18
Rototech YB2-355 (Exd I/IIB T4) rating list	D002063	B	2010/08/18
Diagram label	D002064	A	2010/05/03
M16 Main terminal box drawings			
YB2-355 Terminal Box	5HL.354.474.1D	original	2010/07/09
YB2-355 Terminal box base	8HL.354.472D	original	2009/05/17
YB2-355 Terminal box lid	8HL.354.473.2D	original	2010/07/09
YB2-355 Insulating sleeve	8HL.750.001G	original	2009/05/17
YB2-355 Connection bolt	8HL.570.001G	original	2009/05/17
Sealing ring	8HL.371.016G	original	2009/05/17



**ATTACHMENT To IECEx CERTIFICATE
IECEX ITA 10.0019X**

Page 2 of 2

**This Attachment forms an Integral Part of the IECEx Certificate and all pages
MUST be presented and read whenever the IECEx ITA 10.0019X Certificate is
presented**

YB2-355 T/box lid (with counterbore ring)	5HL.354.473.2D	original	2010/07/09
YB2-355 T/box lid counterbore ring	8HL.354.473.1D	original	2010/07/09
Stator temperature junction box			
Stator temperature junction box	5HL.354.702.2(B2)	original	2010/07/09
Stator temperature junction box seat	8HL.354.702.2(B2)	original	2009/05/17
YB2-355 Aux. T/Box lid	8HL.354.602(B2)	original	2010/07/09
Sealing ring	8HL.370.002(B2)	original	2009/05/17
M5 Connection bolt	8HL.516.021(B2)	original	2009/05/17
M5 Terminal block	8HL.772.002(B2)	original	2009/05/17
M5 Thread sheath	8HL.215.002(B2)	original	2009/05/17
Heater junction box			
Heater junction box	5HL.354.702.3(B2)	original	2010/07/09
Heater Stand junction box Seat	8HL.354.702.1(B2)	original	2009/05/17
Terminal box lid (Exd I/IIB T4)	8HL.354.602(B2)	original	2010/07/09
M5 ring	8HL.370.002(B2)	original	2009/05/17
Bearing temperature measuring junction box		original	
T/Box Assy.	FBH001	original	2010/05/10
YB2-355 Bearing RTD T/Box lid	8HL.354.601(B2)	original	2009/12/17
Bearing RTD Terminal box base	FBHD001	original	2009/12/17
Bearing RTD Sealing ring	MFT-16-21	original	2009/12/17
Bearing RTD Connection bolt	BLJ-M12X1	original	2009/12/17
Bearing RTD Sealing bolt hexagon	MF-M20X1.5-6g	original	2009/12/17
Bearing RTD Sensor probe conduit part	FBH002	original	2010/05/10
M16 Junction box bucket	8HL.354.007.1G	original	2009/05/17
M5 Platen	8HL.140.002(B2)	original	2009/05/17
M16 Terminal entry	8HL.354.007.2G	original	2009/05/17
YB2-355 Aux. Junction Box Seat	8HL.180.471D	original	2009/05/17