

# Portable Ventilators for Hazardous Locations Rated:

## Applicable Models:

UB20xx	EFi150xx
EFi75xx	EFi120xx



**II 2 G Ex d e IIB T6 Gb**  
CE0539 Demko 09 ATEX 0926969X  
IECEX UL 13.0062X

The Portable Ventilators described here in are intended for use in Explosive Atmospheres in accordance with the limitations of the rating. It is the user's responsibility to determine the suitability of equipment for the intended purpose.

### TECHNICAL INFORMATION & INSTALLATION INSTRUCTIONS



**UB20xx**



**EFi75xx**



**EFi120xx/  
EFi150xx**

**WARNING!**

These units are intended for Explosive Atmospheres use in accordance with ATEX Directive 94/9/EC. It is the user's responsibility to determine the suitability of this equipment for the intended purpose.

**CAUTION! THESE FANS ARE NOT INTENDED FOR USE IN MINES SUSCEPTIBLE TO FIREDAMP.****Explosion Proof Fan Rated: II 2 G Ex d e IIB T6 Gb**

Euramco Safety hereby declares that the equipment listed in this manual conforms to the relevant Essential Health and Safety Requirements of the European Machinery Directive and standards listed below.

**Council of European Communities Directives:**

89/392/EEC as amended by 91/368/EEC and 93/44/EEC. Also EC Directives 93/68/EEC, 2014/34/EU, and 76/117/EEC.

**Standards to which conformity is declared:** See Declaration of Conformity (last page).

**Category, Group and Zone Classifications**

\*According to ATEX Directive (2014/34/EU)



**II 2 G Ex d e IIB T6 Gb**  
**CE 0539 Demko 09 ATEX 0926969X**  
**IECEX UL 13.0062X**

**Special Conditions for Safe Use**

The letter "X" at the end of the ATEX, IECEX, and INMETRO certificate numbers indicates a special condition for safe use. This special condition of safe use refers to the fact that the Hazardous Locations Fans referenced herein are supplied without an AC power plug termination for the power cable.

The un-terminated power cable, (flying leads), must be terminated by the end user in the field according to installation standards, IEC/EN/ABNT NBR IEC 60079-14, to a suitable safe power location, or under one apparatus or enclosure in one of the protection concepts for use in hazardous locations.

**T6 Temperature Classification**

\*According to IEC 60079-0 Ed.6 / EN60079-0:2012 + A11: 2013 / ABNT NBR IEC 60079-0:2008 + Errata 1:2011. 85°C T6

To ensure that there is no risk of ignition due to hot surfaces, the equipment is classified with regard to the maximum surface temperature of any part of the equipment while in operation based on the ambient temperature of 40°C. Equipment must be selected with a suitable temperature classification for the gases and vapors present where the equipment is to be installed. Ensure that the maximum surface temperature of any parts of the equipment are below the ignition temperature of the explosive atmosphere concerned.

This equipment is intended for use in ambient temperatures ranging between -20°C and +40°C.

**Classification: Ex de**

\* According to IEC 60079-1 Ed. 6 / EN 60079-1:2007 / ABNT NBR IEC 60079-1:2009 + Errata 1:2011  
 Flame Proof Enclosures with Increased Safety Components IEC 60079-7 Ed. 4 / EN 60079-7:2007 /  
 ABNT NBR IEC 60079-7:2008 + Errata 1:2010.

EURAMCO SAFETY VENTILATORS ELECTRICAL RATING				
Model No.	Euramco Part No.	Input Voltage	Frequency	Current
UB20XX	EF7002XX	115 VAC	50/60 HZ	2.3 A
	EF8002XX	230 VAC	50/60 HZ	1.2 A
EFi75XX	EB7201XX	115 VAC	50/60 HZ	8.8 A
	EB7201XX-230	230 VAC	50/60 HZ	4.4 A
EFi120XX	EA8120XX-110	110 VAC	50 HZ	10.8 A
	EA8120XX	240 VAC	50 HZ	5.5 A
EFi150XX	EG8200XX	115 VAC	50/60 HZ	15 A
	EG8200XX-230	230 VAC	50/60 HZ	8.1 A

**Description of Apparatus**

The Portable Ventilator assemblies represented herein consist of an Approved Explosion Proof Electric Motor Rated: **Ex d IIB** by Bluffton Motor Works (Formerly Franklin Electric) as listed below and are covered by Certificate No. DEMKO 03 ATEX 134885U.

EURAMCO SAFETY VENTILATOR				BLUFFTON MOTOR
Model No.	Euramco Part No.	Input Voltage/Frequency	Impeller	Motor Part No.
UB20XX	EF7002XX	115 VAC, 50/60 HZ	Plastic	1933007415
	EF8002XX	230 VAC, 50/60 HZ		1933007419
EFi75XX	EB7201XX	115 VAC, 50/60 HZ	Metal	1133007405
	EB7201XX-230	230 VAC, 50/60 HZ		
EFi120XX	EA8120XX-110	110 VAC, 50HZ	Plastic	1223007401
	EA8120XX	240 VAC, 50HZ		
EFi150XX	EG8200XX	115 VAC, 50/60 HZ	Plastic	1133007417
	EG8200XX-230	230 VAC, 50/60 HZ		

**The Flame Proof Electric Motor**

Power Requirements: See chart above.

**Ambient Temperature Range:** -20°C < T<sub>amb</sub> < +40°C

**Ingress Protection to IEC 529: IP55**

Marked: (“Bluffton Motor Works”) Electric Motor for Hazardous Locations.

**Flame Proof Enclosure:** Ex d IIB

The electric motor consists of one flameproof enclosure, which contains less than 6% magnesium by weight. The on/off switch is housed within the motor enclosure, and is operated by a shaft, extending out from the rear end bell to a lever. The lever is accessible via an attached push rod.

Motor connections are made through a non-detachable cable, secured to the motor with an approved Flame Proof cable gland from the company Hawke, Model 501/421/0/M20 and complies with International Standards EN 60079-0:2012, EN 60079-1:2007, EN 60079-7:2007.

The electric motor drives an aluminum or plastic fan blade containing less than 6% Magnesium by weight which is enclosed in a plastic, statically conductive housing with a conductivity rating of <1 giga ohms. Connection to the motor is facilitated by a Terminal Block mounted in an Increased Safety/Flame Proof Enclosure rated II 2 G Ex e II T6, from the company Rose Industries, Part No. 05080806, and covered under the certificate No. PTB 00ATEX1063. This box was designed to conform to International Standards EN 60079-0:2012 + A11:2013, EN 60079-1:2007, EN 60079-7:2007, EN 61241-02006, EN 61241-1:2004. The enclosure features stainless steel grounding lugs, with a high heat silicon gasket.

The Flame Proof enclosure has attached, approved, explosion proof cable glands

**Rated:** II GD Ex e II.

**Type:** Polyamide Ex metric conforms to International Standards EN 60079-0:2012 + A11:2013, EN 60079-1:2007, EN 60079-7:2007, EN 61241-02006, EN 61241-1:2004.

**Material:** Polyamide

**Color:** Black/Blue

**Grommet:** NBR

**Protection classification:** IP68

**Temperature range:** -4°F to +212°F

**Approval:** PTB 00 ATEX 1063

The power cables are not terminated with power plugs. See Special Conditions for safe use.

## INSTRUCTION & CARE

The fans are assembled with both Inlet and Outlet Safety Guards that conform to the safety standards to prevent danger zones being reached by upper limbs in the BS EN 294:1992 Guards Standard.

### INSTALLATION & START-UP

During the installation and start-up of the Euramco Safety blowers in areas where there is a risk of explosion:

- Design of the electrical installations must be in accordance with EN/IEC/ABNT NBR IEC 60079-14.
- Ensure power source is providing an electrical ground.
- Blowers must be integrated into a system in a way to support accessibility for regular maintenance.
- Perform careful inspection of each blower system to ensure ducting is securely attached to blower. All components of the blower system are made of electrically conductive material. It

is very important to properly and securely attach each piece to maintain a ground path.

- Ensure set-up, installation, operation, and maintenance are performed only by properly trained personnel.
- Operation after a faulty installation or maintenance shall be considered as unintended use.

### **Before STARTING the FIRST Time**

DO NOT start operation if there are signs of shipping damage to blade, guards, or housing. STOP, call your dealer. USE Ex-Rated receptacles for this equipment. IT IS NOT recommended to use extension cords for high amperage load. (See power rating label on limit.)

### **OPERATION**

Always ensure the switch is in the OFF position prior to connecting a ventilator to a power source.

Stop the blower if mechanical noise, vibration, or other abnormal conditions occur. Any noise other than turbine-type pitch is not normal.

To protect the user, this unit is equipped with thermal overload protection with automatic reset. Motor will restart without warning after protector trips. If motor thermal protector trips, disconnect unit and determine cause.

Conductive RAMFAN Portable Ventilators are made with statically conductive materials. When ducting is required to remote the ventilator from the point of application in a potentially explosive environment, the ducting must be statically conductive and properly secured to ventilator to minimize the potential fan static electricity build up.

### **MAINTENANCE**

Disconnect power before disassembly or cleaning. Never immerse or directly spray motor with liquids. Clean ventilator with commercially available biodegradable cleaning solutions. Do not use solvents containing hydrocarbons (i.e. MEK, Acetone).

 **Clean fan periodically to remove accumulated dust or debris.**

There are no user serviceable parts. Contact factory for replacement part applicability.

Do not change make or model number of motor for any reason!

### **CAUTIONS**

Do not move ventilator while fan is in operation. Use good lifting practices when moving ventilator to prevent bodily injury.

Blower should be operated and repaired by trained personnel only.  
Do not operate if there is any physical damage to cord, plug or receptacle.

Keep fingers and hands clear of fan blade. Keep fan guard securely in place. Do not operate with damaged or missing fan guards.

Use properly grounded power receptacle in potentially explosive atmospheres, and for operation safety. Ensure continuity to the earth.

Fatal electrical shock may result if motor frame and adjacent metal are not grounded in compliance with electrical code.

Keep area clear of rock and debris.

Keep away from children.

### WARRANTY

Positive Pressure Ventilators and Turbo Ventilators, excluding engine and wear items, are warranted for one year from date of original purchase, to be free of defects in material and workmanship. Electric motors are warranted by their respective manufacturers. Wear items include feet, fasteners, handles, wheels, and paint, and are not covered under the warranty. Fan impellers and shrouds are warranted to be free of defects in material and workmanship for five years. Components exposed to salt water service are warranted for a period of one year from date of original purchase.\*

### Portable Blowers:

Portable Blowers are warranted against defects in material and workmanship for a period of one year from the date of original purchase. Duct is not warranted due to its intended use.

**\*Authorization for warranty repairs must be obtained from the factory. There are no other warranties expressed or implied.**

## ACCESSORIES FOR ATEX, IECEx & INMETRO HAZARDOUS LOCATION FANS

Euramco Safety has a number of optional antistatic / conductive airflow duct accessories designed explicitly for use with our Hazardous Location Fans to support various end user applications as identified in the list below.

### ACCESSORY LIST

Fan Model	Accessory P/N	Description
UB20xx	EF7004CS	Quick-Couple Canister with 8" x 15' Duct, Antistatic
	EF7004CL/DS	Quick-Couple Canister with 8" x 5' & 8" x 15' Duct, Antistatic
	EF7004CL/DL	Quick-Couple Canister with 8" x 5' & 8" x 25' Duct, Antistatic

EF7004CL	Quick-Couple Canister with 8" x 25' Duct, Antistatic
FDT-0815CBB	Duct, 8" x 15', Antistatic with Belt and Belt
FDT-0825CBB	Duct, 8" x 25', Antistatic with Belt and Belt
EF0304X	Duct Adapter, 8" / 20cm
DC8	Duct Coupler, 8", Stainless Steel
MED189XX	Manhole Entry Device, Conductive
MED90XX	MED 90° Elbow, Conductive
MED5100XX	Manhole Entry Device (MED), Conductive, Assembly
MEDUM	MED Universal Mount

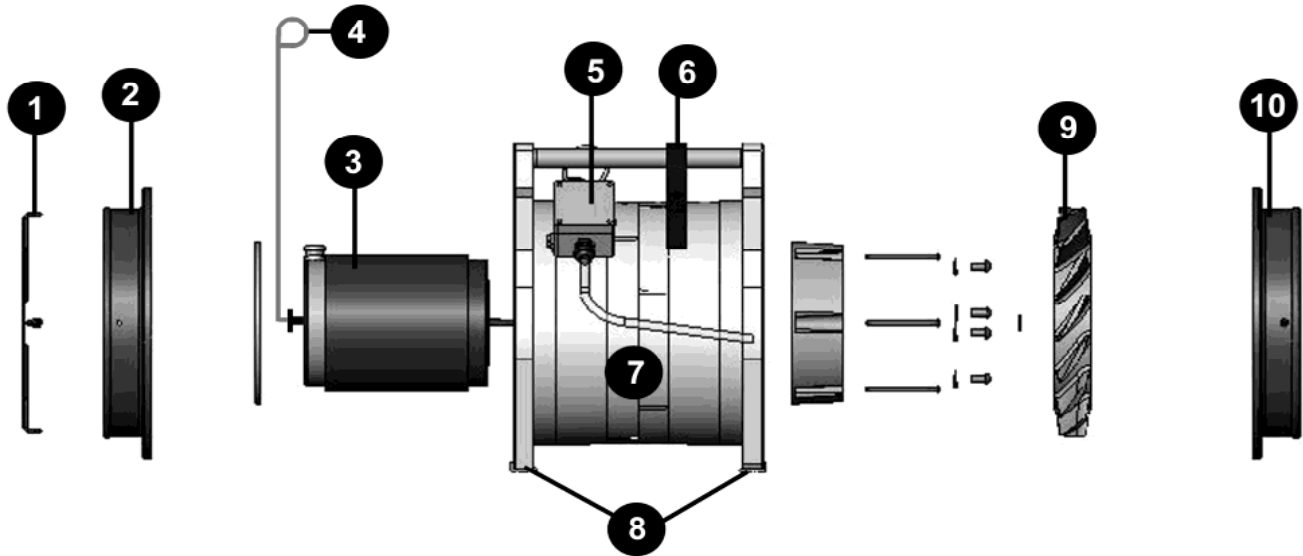
**EFi75xx**

FDT-1215CBB	Duct, 12" x 15', Antistatic with Belt and Belt
FDT-1225CBB	Duct, 12" x 25', Antistatic with Belt and Belt
EC0301	Duct Adapter, 12"/30cm to 8"/20cm
DC12	Duct Coupler, Stainless Steel

**EFi120xx & EFi150xx**

FDT-1615CBR	Duct, 16" x 15', Antistatic with Belt and Ring
FDT-1625CBR	Duct, 16" x 25', Antistatic with Belt and Ring
FDT-1625CBB	Duct, 16" x 25', Antistatic with Belt and Belt
EA7106	Duct Adapter, 16" / 40cm
DC16	Duct Coupler, Stainless Steel

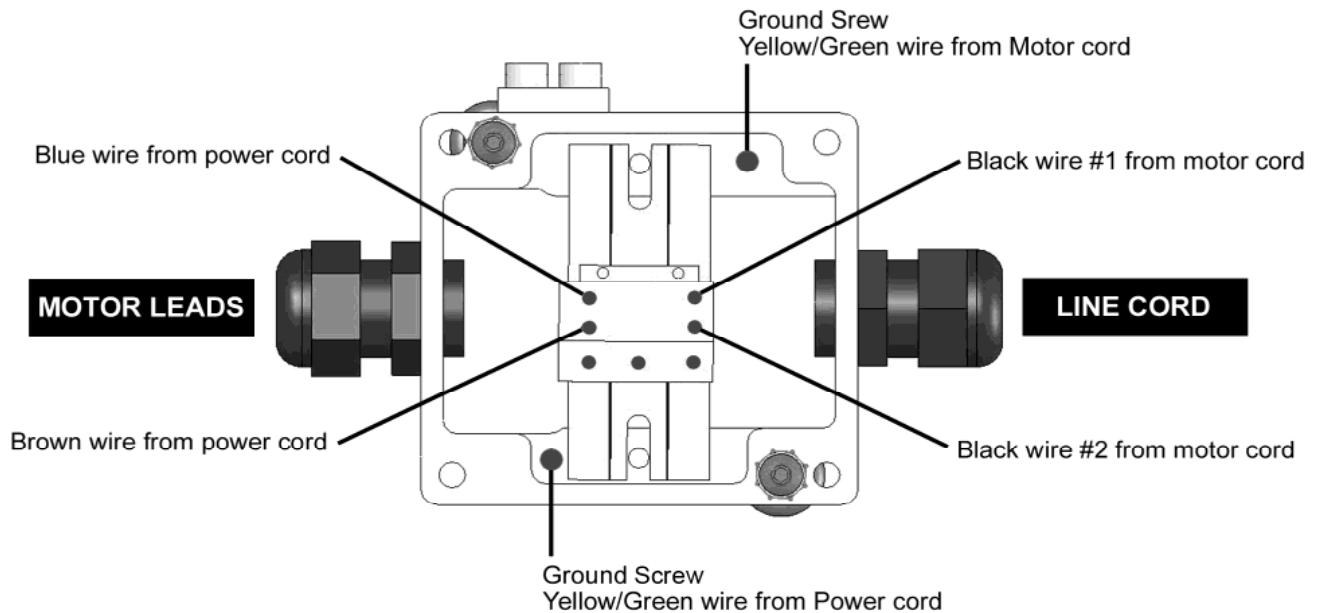
**TYPICAL VENTILATOR EXPLODED VIEW**



- 1. Discharge Guard
- 2. Duct Adapter
- 3. Motor
- 4. Switch Rod
- 5. Junction Box/Cord

- 6. Handle/Cord Strap
- 7. Housing
- 8. Housing Feet
- 9. Impeller
- 10. Inlet Guard/Duct Adapter

**WIRING DIAGRAM**








# 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](http://www.iecex.com)

Certificate No.:	IECEX UL 13.0062X	issue No.:1	<b>Certificate history:</b> Issue No. 1 (2015-8-20) Issue No. 0 (2013-9-26)
Status:	Current		
Date of Issue:	2015-08-20	Page 1 of 4	
Applicant:	<b>Euramco Safety Inc.</b> 2746 Via Orange Way Spring Valley, CA 91978 United States of America		
Electrical Apparatus: Optional accessory:	Portable Fan, types UB20xx, EFi75xx, EFi120xx and EFi150xx		
Type of Protection:	Flameproof Enclosures "d" and Increased Safety "e"		
Marking:	Ex d e IIB T6 Gb  -20 °C to + 40 °C		
Approved for issue on behalf of the IECEx Certification Body:	Paul T. Kelly		
Position:	Principal Engineer, Global Hazardous Locations		
Signature: (for printed version)			
Date:	2015-08-20		

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:

**UL LLC**  
333 Pfingsten Road  
Northbrook IL 60062-2096  
United States of America





# IECEX Certificate of Conformity

Certificate No.: IECEx UL 13.0062X

Date of Issue: 2015-08-20

Issue No.: 1

Page 2 of 4

Manufacturer: **Euramco Saftey Inc.**  
2746 Via Orange Way  
Spring Valley, CA 91978  
United States of America

Additional 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:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-7 : 2006-07</b> Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*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:

US/UL/ExTR13.0063/00

US/UL/ExTR13.0063/01

#### Quality Assessment Report:

US/UL/QAR12.0011/01



# IECEX Certificate of Conformity

Certificate No.: IECEx UL 13.0062X

Date of Issue: 2015-08-20

Issue No.: 1

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The fans are intended to be used for ventilation purposes and are constructed of an IECEx Ex d IIB Motor, a plastic cover, an IECEx Ex d e IIC junction box (including cable glands).

Models UB20xx, EFi75xx, EFi120xx and EFi150xx are similar in construction. The Model UB20xx uses separately approved increased safety cable glands rather than the ones that come with the outlet box.

Please see Annex for additional information.

### CONDITIONS OF CERTIFICATION: YES as shown below:

The equipment is provided with supply connection flying leads to be connected on the field. The connection of the flying leads must be done following installation instructions provided on installation standards such as IEC 60079-14 and the manufacturer's recommendation.



# IECEX Certificate of Conformity

Certificate No.: IECEx UL 13.0062X

Date of Issue: 2015-08-20

Issue No.: 1

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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

Issue 1: Updated drawings and standards to current editions.


## Annex to IECEx UL 13.0062X Issue 1

<u>Model Number</u>	<u>Part Number Series</u>
UB20xx	EF7002
	EF8002
EFi75xx	EB7201XX
	EB7201XX-230
EFi120xx	EA8120XX
	EA8120XX-110
EFi150xx	EG8200XX
	EG8200XX-230

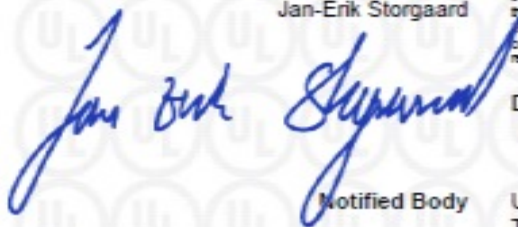
# EC-TYPE EXAMINATION CERTIFICATE



- [1]
- [2] **Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 94/9/EC**
- [3] EC-Type Examination Certificate Number: **DEMKO 09 ATEX 0926969X Rev. 1**
- [4] Equipment or Protective System: **Portable Fan, model numbers as indicated in the schedule**
- [5] Manufacturer: **Euramco Safety Inc.**
- [6] Address: **2746 Via Orange Way, Spring Valley, CA 91978 USA**
- [7] This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- [8] UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to 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. **4786973337**
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN 60079-0:2012 + A11:2013 EN 60079-1:2007 EN 60079-7:2007**
- [10] If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system.  
These are not covered by the certificate.
- [12] The marking of the equipment or protective system shall include the following:

 **II 2 G Ex d e IIB T6 Gb**

**Certification Manager**  
**Jan-Erik Storgaard**



This is to certify that the sample(s) of the Equipment described herein ("Certified Equipment") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Equipment Certification Program Requirements. This certificate and test results obtained apply only to the equipment sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured equipment. UL has not established Follow-Up Service or other surveillance of the equipment. The Manufacturer is solely and fully responsible for conformity of all equipment to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2009-10-01  
Re-issued: 2015-09-01



**Notified Body**

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark  
Tel. +45 44 85 65 65, [info.dk@ul.com](mailto:info.dk@ul.com), [www.ul.com](http://www.ul.com)

[13]

**Schedule**

[14]

**EC-TYPE EXAMINATION CERTIFICATE No.**

**DEMKO 09 ATEX 0926969X Rev. 1**

Report: 4786973337

[15]

Description of Equipment or protective system

The fans are intended to be used for ventilation purposes and are constructed of an ATEX Ex d IIB Motor, a plastic cover, an ATEX Ex d e IIC junction box (including cable glands).

Models UB20xx, EF175xx, EF1120xx and EF1150xx are similar in construction. All models consist of an ATEX Ex d IIB Motor, a plastic cover and an ATEX Ex d e IIC junction box (including cable glands). The Model UB20xx uses separately certified increased safety cable glands rather than the ones that come with the outlet box.

Model Number	Part Number Series
UB20xx	EF7002 EF8002
EF175xx	EB7201XX EB7201XX-230
EF1120xx	EA8120XX EA8120XX-110
EF1150xx	EG8200XX EG8200XX-230

Temperature range

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range	Temperature class
-20°C to +40 °C	T8

Electrical data

Model	Electrical Rating
UB20xx	115 / 230 VAC, 2.3 / 1.2 A, 50 / 60 Hz
EF175xx	115 / 230 VAC, 7.2 / 3 A, 50 / 60 Hz
EF1120xx	110 / 240 VAC, 10.8 / 5.5 A, 50 Hz
EF1150xx	115 / 230 VAC, 15 / 8.1 A, 50 / 60 Hz

Installation instructions

For ambient temperatures below -10 °C use field wiring suitable for the minimum ambient temperature.

Mounting instructions

Refer to "Instructions".

Routine tests

Routine tests are not required, as the enclosures have been tested successfully at each supplier's manufacturing facility.

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [ 8 ] on page 1 of this EC-Type Examination Certificate.

[17]

Specific conditions of use

The equipment is provided with supply connection flying leads to be connected on the field. The connection of the flying leads must be done following installation instructions provided on installation standards such as IEC/EN 60079-14 and the manufacturer's recommendation.

[18]

Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

Additional Information

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

