



**Explosion proof high velocity  
warehouse fan  
Operation & maintenance Manual**



# 1. General

## 1.1. Scope

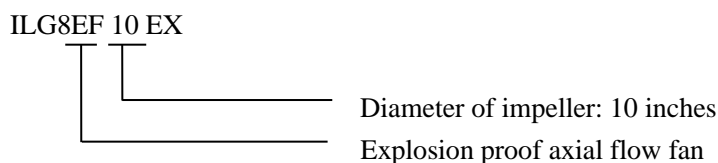
Explosion proof high velocity warehouse fan is manufactured as a flameproof equipment according to requirements of EN60079-0:2012 *Explosive atmospheres Part 1: Equipment-General requirements* and EN60079-1:2014 *Explosive atmospheres Part 2: Equipment protection by flameproof enclosures "d"*. It is available for use in Zone 1 and Zone 2 area that explosive mixture of group IIA and IIB T1~T4 gases, vapour and air exists, the rated voltage 120V, frequency 60Hz.

## 1.2. Model of axial flow fan and explanations:

The protection type of the axial fan should be protected by flameproof enclosure "d" according to EN60079-0:2012 and EN60079-1:2014, the Ex marking is  $\text{Ex}$  II2G Ex d IIB T4 Gb.

The fan consists of enclosure, impeller, impeller shield, explosion proof motor (hereinafter referred to as "Ex motor") and flame-proof switch (hereinafter referred to as "Ex switch"). The IP code is IP54. Installation of all Ex components shall comply with the local safety requirements.

Model of axial flow fan and explanations:



2: 2poles;

See table 1 for the basic parameters of fan.

Table 1: Basic parameters of fan

Model	Impeller size (inch)	Rated volt. (V)	Rated freq. (Hz)	Rated rotating speed (r/min)	Rated power (W)	Air volume (CFM)	Air pressure (Pa)	Noise level dB(A)
ILG8EF10EX	10	120	60	3300	350	1943	350	66
ILG8EF12EX	12			3300	550	2720	450	69
ILG8EF16EX	16			3300	1100	4240	780	79
ILG8EF20EX	20			1720	900	5830	460	72

Ex marking explanations:

$\text{Ex}$  II2G Ex d IIB T4 Gb

Ex: Explosion proof product

D: protection by flameproof enclosure "d"

IIB: used in IIB group gases

T4: temperature class

Gb: equipment protection level

See Figure 1 and 2 for the diagram of the fan.

The main dimensions of the fan see Table 2.

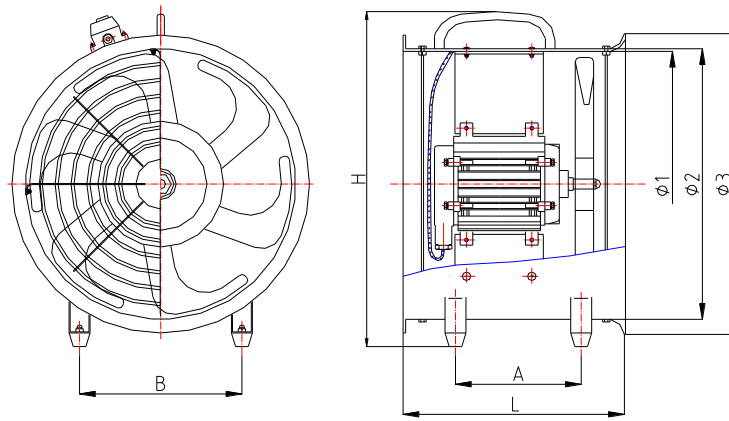


Figure 1: Diagram of ILG8EF10EX, ILG8EF12EX

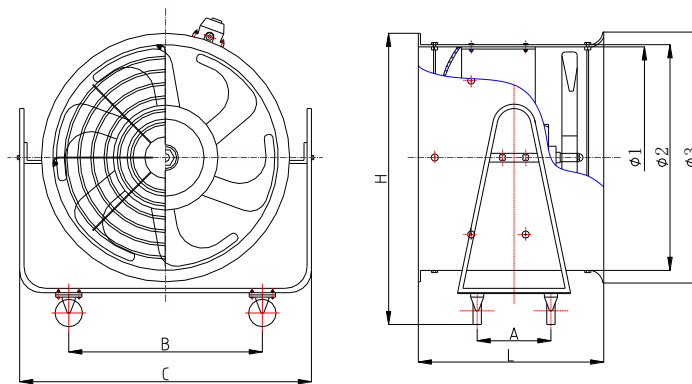


Figure 2: Diagram of ILG8EF16EX, ILG8EF20EX

Table2: The main dimensions of the fan

Model	A	B	C	L	H	Φ1	Φ2	Φ3
ILG8EF10EX	210	175	/	380	375	140	280	325
ILG8EF12EX	225	220	/	380	425	165	330	380
ILG8EF16EX	295	325	575	450	670	218	435	480
ILG8EF20EX	325	425	675	480	770	268	535	580

## 2. Service condition

- a) Ambient temperature:  $-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$ ;
- b) Height above sea level:  $\leq 2000\text{mm}$ ;
- c) Ambient humidity:  $\leq 95\%$  ( $+25^{\circ}\text{C}$ );
- d) Zone 1 and Zone 2 area that explosive mixture of group IIA and IIB T1~T4 gases, vapors and air exists;
- e) Place where no obvious shake, impact or vibration;
- f) In environment without gases or vapors, they may cause insulation breakdown.

### 3. Flame proof structural features of fan

#### 3.1.

The fan consists of Ex motor, impeller, enclosure, shield and Ex switch. Protection type of the fitted Ex motor and Ex switch is flameproof enclosure. The Ex motor consist of cast aluminum frame and end caps, axis, stator, rotor, sealing ring, compression nut and so on. The cable entry is mounted on the rear end cap. Impeller is made of cast aluminum alloy and fixed by fasten bolts. After finish machining a static pressure test shall be carried out on the motor, no structure damage, permanently deformation which may affect the explosion proof performance or drip allowed when tested by pressure of 1.5Mpa for 10 seconds.

#### 3.2.

Clearance(flame path), length and roughness of flame proof joint shall comply with associate requirements of GB3836.2-2010; electric clearance and creepage distance shall comply with associate requirements of GB3836.3-2010

#### 3.3.

Washer is required of every fasten bolts of flameproof enclosure, avoid loosen.

### 4. Installation, operation and maintenance

#### 4.1. Prepare before installation

4.1.1. Check integrity or any damage of the package before opening;

4.1.2. Clearance the dust and anti-rust coating;

4.1.3. The product is provided with cable glands with setting compound, the permissible cable diameter is 10-19mm, the compression nut shall be tightened with force of 30.0N.m. Only spare rubber sealing rings and nut delivered from the manufacturer can be used.

4.1.4. Shaft seals shall be periodically manual checked (minimum every three months), replacement is required if any abrasion found. contact the manufacturer for the spare part.

4.1.5. The axial flow fan is not allowed to put into use if any inconformity of the following items found before installation:

- a. Ex marking and number of Certificate of Conformity on the nameplate are distinct;
- b. All parts of the flameproof enclosure are well assembled, no damage;
- c. No crack or defect that may affect the explosion proof performance of all the flameproof components;
- d. The flameproof joint is lubricated with 204-1 anti-rust oil;
- e. Lubrication system of the bearing is unobstructed
- f. The insulation resistance is no less than 10MΩ.

4.2. Cut off the power supply before installation, choose a proper diameter of sealing ring to connect the switch, compress the compression device on the sealing ring, the earthing wire of switch shall be connected to the earthing terminal.

4.3. Check all the fasteners to ensure they are well fastened; the tighten force applied on cable glands shall be no less than 30N.m.

4.4. Specific condition for sage use:

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN/IEC 60079-1

### 5. Transportation and Storage

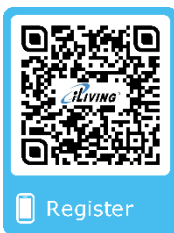
5.1. The fan shall be transported with no rain and snow. It shall be kept in a well

ventilated warehouse with no corrosive gas, the temperature shall be in the range of -25 to 45°C, relative humidity no more than 90%(25°C).

- 5.2. 6.2 The axial flow fan shall be kept in a well ventilated warehouse with no corrosive gases or vapors may affect the insulation resistance.

## 6. Warranty

This fan comes with a 1-YEAR LIMITED COMPONENT WARRANTY. If your unit does not appear to be working properly, please contact our service center by calling 1-800-317-1688. Prior to your call, we encourage you to visit our service related website [www.ilivingusa.com](http://www.ilivingusa.com) for troubleshooting tips and service instructions if needed.



*WARRANTY INFORMATION*

Register your product at our website:

Or visit [iLivingUSA.com/register-product](http://iLivingUSA.com/register-product)



*FEEDBACK*

**LOVE IT? HELP US MAKE THE PRODUCT MORE FOR YOU.**

Let us know with a customer review.

Please visit: <https://www.amazon.com/review/review-your-purchases#>

At iLiving USA, we are committed to bringing top quality products to  
our customers.

iLIVING USA

860 Mahler Road, Burlingame

CA 94010

Tel: 1-800-317-1688

Email: [service@ilivingusa.com](mailto:service@ilivingusa.com)



Like us on Facebook: <https://www.facebook.com/ilivingusa/>



Follow us on Twitter: @iLIVINGUSA

Check out our website: [www.ilivingusa.com](http://www.ilivingusa.com)