OPERATION MANUAL

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: EX d e IIB T6
Larson Electronics 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/EECI, 94/9/EC. And 76/117/EEC.
Category, Group and Zone Classifications
*According to ATEX Directive (94/9/EC)
II 2 G Ex d e IIB T6
CE 0539
Demko 09 ATEX 0926969
T6 Temperature Classification
*According to EN 60079-0:2006
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 is below ignition temperature of the explosive atmosphere concerned. This equipment is intended for use in ambient temperatures ranging between -20°C and
+40°C. This equipment is intended for use in ambient temperatures ranging between -20°C and +40°C.

Classification: Ex de
*According to EN 60079-1:2004
Flame Proof Enclosures with Increased Safety Components.
Ingress Protection to IEC 529: IP55

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 60079-0:2006, EN 60079-1:2004, 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-ohmes. 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, Pat No. 05080806, and covered under the certificate No. PTB 00ATEX1063. This box was designed to conform to International Standards EN 60079-0:2006, EN 60079-1:2004, EN 60079-7:2006, EN 61241-0:2004 and EN 61241-1:2004. The enclosure features stainless steel grounding lugs, with a high heat silicone gasket.

The Flame Proof enclosure has attached, approved, explosion proof cable glands Rated: IIGD Ex e II

Type: Polyamide Ex metric conforms to International Standards EN 60079-0:2006, EN 60079-7:2006, EN 61241-0:2006 and EN 61241-1:2004.
Material: Polymide
Color: Black/Blue
Grommet: NBR
Protection Classification: IP68
Temperature Range: -4°F to +212°F
Approval: PTB 00 ATEX 1063

The power cable from each blower is terminated with either a 120VAC plug to match the operating voltage of the motor, or flying leads which will need to be terminated with an appropriate cord cap. Cord cap selection is made when ordering. The plug complies with International Standards: EN 60079-0:2006, EN 60079-1:2004, EN 61241-0:2004, EN 61241-1:2004 & EN 60079-7:2006.

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

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

- Design of the electrical installations must be in accordance with EN 60079-14.
- If you ordered flying leads instead of specifying a cord cap, an appropriate cord cap will need to be fitted.
- Ensure power source is providing an electrical ground.
- 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, and 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 protection trips, disconnect unit and determine cause.
- Conductive 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 the make or model number of motor for any reason.

CAUTION

- 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

The electric explosion proof fan, excluding engine and wear items, is warranted for one year form 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.* 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.