Hazloc Heaters™

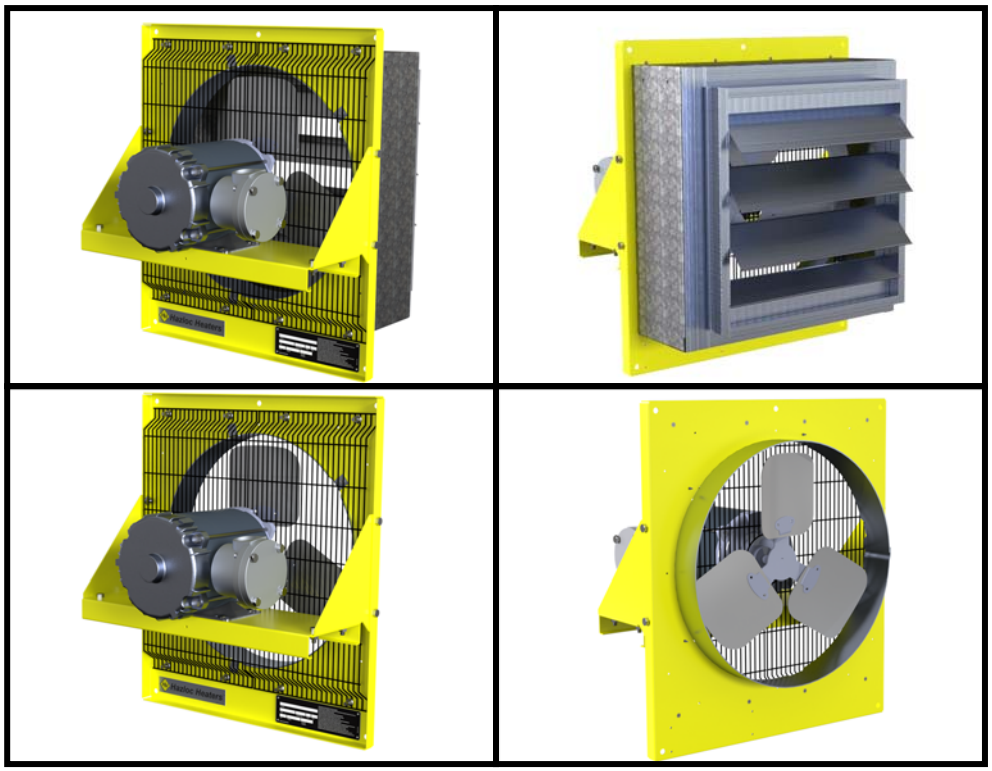
*Safe heat when you need it!*

# XEF1

## *Exhaust Fan*

## Owner's Manual, Version: XEF1-OM-D

**This manual covers installation, maintenance, repair, and replacement parts.**



**WARNING!**

**Please adhere to all instructions published in this manual.**
**Failure to do so may be dangerous and may void your warranty.**

***Note:*** ***XEF1 exhaust fan motors must not be exposed to rain or snow. This applies to installed & stored exhaust fans.***
***The XEF1 exhaust fan should not be modified in any way.***

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Printed in Canada

Part No. XEF1-OM-D

# XEF1 Model Coding on Data Plate

## Model and Option Code Reference Chart

**Model Code**

| XEF | 1 | - | 12 | - | 1210 | - | 115 | 1 | 60 | - | E1 | - | FM | - | A | Option: H |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Model Series**

**Generation**
For major revisions

**Fan Size**

| | |
|---|---|
| 12 Inches | **12** |
| 16 Inches | **16** |
| 20 Inches | **20** |
| 24 Inches | **24** |

**Air Delivery @ 0 in. WCG**

| | | |
|---|---|---|
| 640 CFM | **0640** | 12 inch fan size |
| 855 CFM | **0855** | 12 inch fan size |
| 1210 CFM | **1210** | 12 inch fan size |
| 1350 CFM | **1350** | 16 inch fan size |
| 1850 CFM | **1850** | 16 inch fan size |
| 2500 CFM | **2500** | 16 inch fan size |
| 2300 CFM | **2300** | 20 inch fan size |
| 3400 CFM | **3400** | 20 inch fan size |
| 3900 CFM | **3900** | 20 inch fan size |
| 5100 CFM | **5100** | **24 inch fan size** |

**Exhaust Fan Line Voltage**

| | | |
|---|---|---|
| 115 Volts | **115** | 1 phase only |
| 230 Volts | **230*** | |
| 460 Volts | **460** | 3 phase only |
| 575 Volts | **575** | 3 phase only |

**Factory Option ***

| | |
|---|---|
| **H** | Heresite Coating of Carbon Steel Cabinet Panels, Fan Guard & Aluminum Fan Blade |

**Product Revision No.**
For minor revisions

**Mounting Configuration**

| | |
|---|---|
| **FM** | Flush-surface Mount |
| **W4** | Through-the-Wall Mount with 4" Galvanized Steel Sleeve and Aluminum Backdraft Damper |
| **W6** | Through-the-Wall Mount with 6" Galvanized Steel Sleeve and Aluminum Backdraft Damper |

**Motor Type -**

| | |
|---|---|
| **E1** | Hazardous Location, *Class I, **Division 1 & 2**, Groups C, D, F & G; T3B* |
| **E2** | Hazardous Location, *Class I, **Division 2**, Groups A, B, C & D; T3 Class I, **Zone 2**, IIC* ***(Available in 3-Phase Only)*** |
| **GP** | General Purpose |

**Frequency**

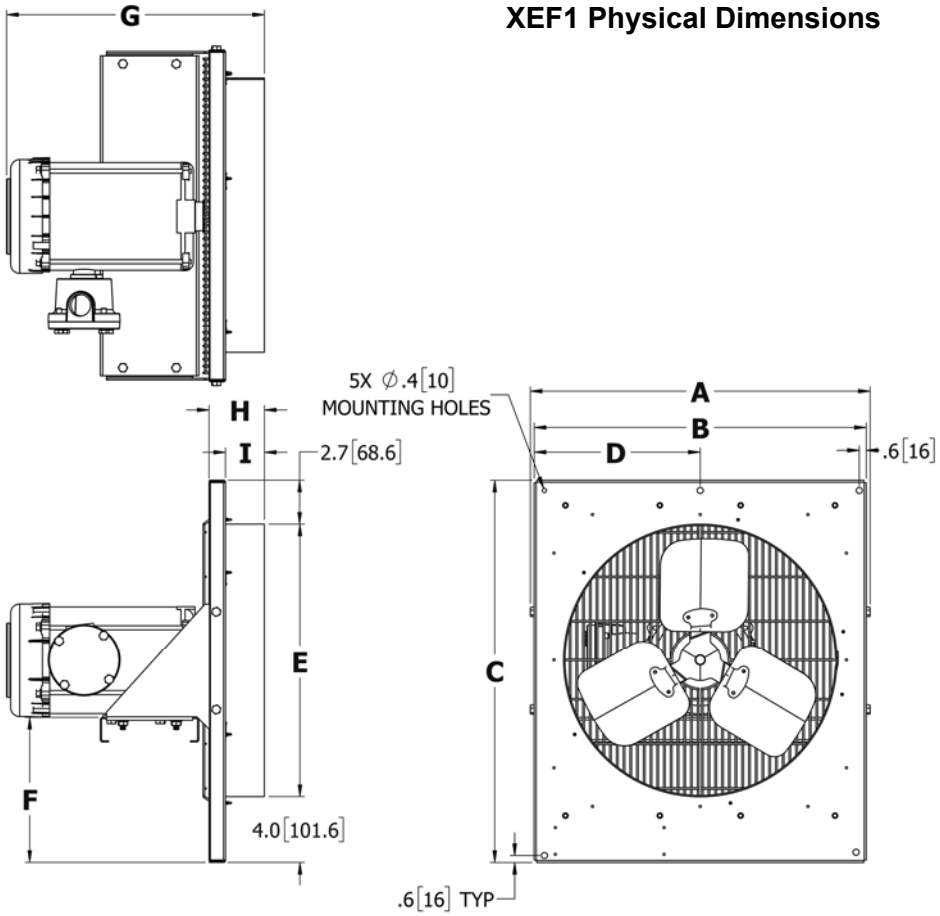
| | |
|---|---|
| **60** | 60 Hertz |

**Phase**

| | |
|---|---|
| **1** | 1 Phase |
| **3** | 3 Phase |

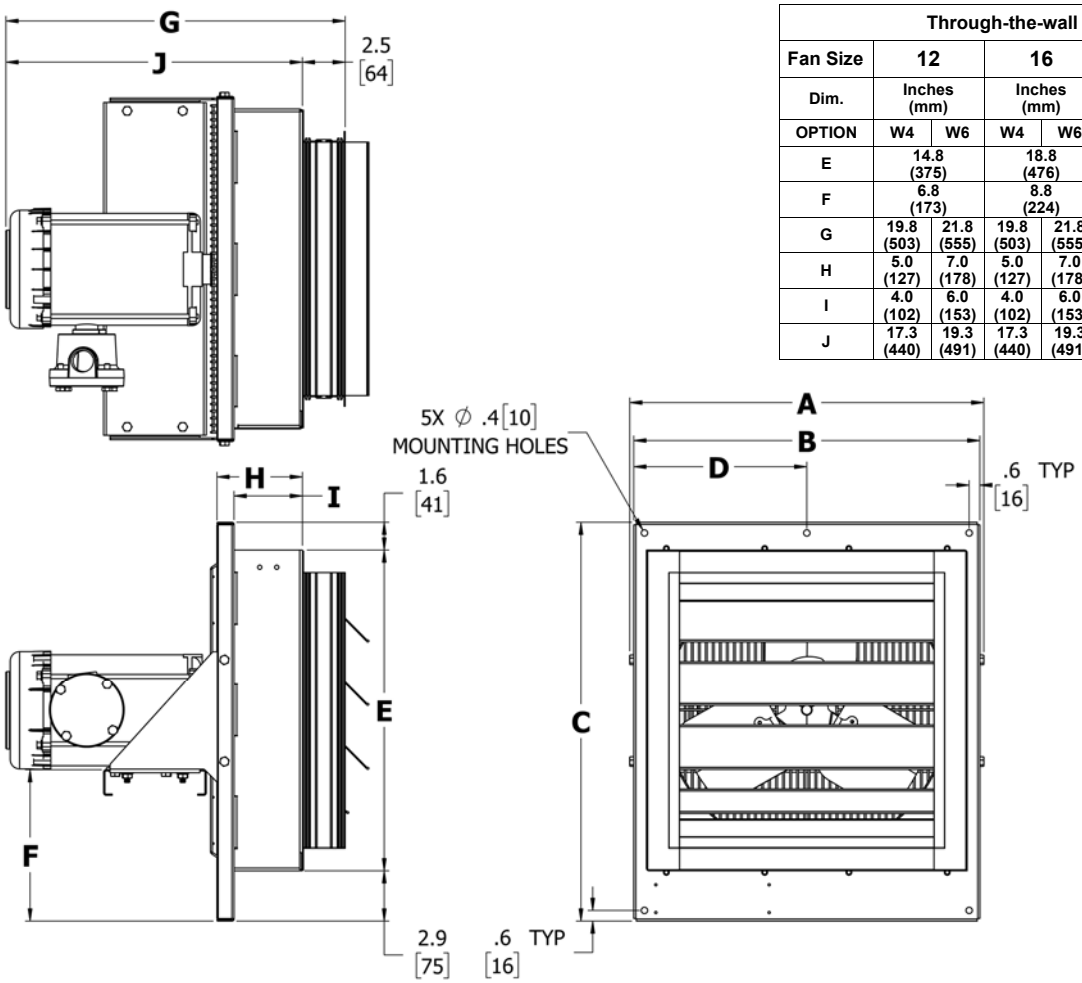
- Other motor types may be available. Contact Factory with your specific requirement.
* Due to the new U.S. DoE (Department of Energy) regulation change impacting "Useable at" Nameplate Voltages and federal efficiency requirements, E1 and E2 Motor Types will be marked as 230 Volt only on the motor nameplate (instead of 208-230V), but will still be suitable for use at 208V line voltage based on the manufacturer's marketing literature. However, the GP Motor Type is 230V only. It can not be used at 208V.

# XEF1 Physical Dimensions




| Flush Mount and Through-the-wall | | | | |
|---|---|---|---|---|
| Fan Size | 12 | 16 | 20 | 24 |
| Dim. | Inches (mm) | Inches (mm) | Inches (mm) | Inches (mm) |
| A | 16.7 (425) | 20.7 (526) | 24.7 (628) | 28.6 (727) |
| B | 16.2 (413) | 20.2 (514) | 24.2 (616) | 28.2 (715) |
| C | 19.3 (491) | 23.3 (592) | 27.3 (694) | 31.3 (795) |
| D | 8.1 (206) | 10.1 (257) | 12.1 (308) | 14.1 (358) |

| Flush Mount only | | | | |
|---|---|---|---|---|
| Fan Size | 12 | 16 | 20 | 24 |
| Dim. | Inches (mm) | Inches (mm) | Inches (mm) | Inches (mm) |
| E | 12.8 (324) | 16.6 (423) | 20.8 (528) | 24.9 (632) |
| F | 6.8 (173) | 8.8 (224) | 10.8 (275) | 12.8 (325) |
| G | 15.7 (399) | 15.7 (399) | 15.7 (399) | 16.3 (415) |
| H | 3.4 (86) | 3.4 (86) | 3.4 (86) | 4.0 (101) |
| I | 2.4 (60) | 2.4 (60) | 2.4 (60) | 3.0 (76) |




| Through-the-wall Mount only | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fan Size | 12 | | 16 | | 20 | | 24 | |
| Dim. | Inches (mm) | | Inches (mm) | | Inches (mm) | | Inches (mm) | |
| OPTION | W4 | W6 | W4 | W6 | W4 | W6 | W4 | W6 |
| E | 14.8 (375) | | 18.8 (476) | | 22.8 (578) | | 26.8 (679) | |
| F | 6.8 (173) | | 8.8 (224) | | 10.8 (275) | | 12.8 (325) | |
| G | 19.8 (503) | 21.8 (555) | 19.8 (503) | 21.8 (555) | 19.8 (503) | 21.8 (555) | 19.8 (503) | 21.8 (555) |
| H | 5.0 (127) | 7.0 (178) | 5.0 (127) | 7.0 (178) | 5.0 (127) | 7.0 (178) | 5.0 (127) | 7.0 (178) |
| I | 4.0 (102) | 6.0 (153) | 4.0 (102) | 6.0 (153) | 4.0 (102) | 6.0 (153) | 4.0 (102) | 6.0 (153) |
| J | 17.3 (440) | 19.3 (491) | 17.3 (440) | 19.3 (491) | 17.3 (440) | 19.3 (491) | 17.3 (440) | 19.3 (491) |

**XEF1 Specifications By Model Size**

| Model | | XEF1-12 | | | XEF1-16 | | | XEF1-20 | | | XEF1-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fan Diameter | in.(mm) | 12 (304.8) | | | 16 (406.4) | | | 20 (508.0) | | | 24 ( 609.6) |
| Air Delivery @70°F (21°C) And at 0 in. WCG | CFM | 640 | 855 | 1210 | 1350 | 1850 | 2500 | 2300 | 3400 | 3900 | 5100 |
| | $m^3$/hr | 1019 | 1359 | 2056 | 2294 | 2888 | 4247 | 3568 | 5097 | 6626 | 8665 |
| Motor Power | HP (Watts) | ½ (373) | | | | | | | | | |
| Motor Speed | RPM | 1725 | | | | | | | | | |

**Flush Mount (FM)**

| | | | | | |
|---|---|---|---|---|---|
| Approx. Net Weight | Lbs (kg) | 41 (18.6) | 44 (20.0) | 50 (22.7) | 56 (25.4) |
| Approx. Shipping Weight | Lbs (kg) | 47 (21.3) | 64 (29.0) | 75 (34.0) | 90 (40.8) |

**Through Wall (W4 or W6)**

| Insert Option | | W4 | W6 | W4 | W6 | W4 | W6 | W4 | W6 |
|---|---|---|---|---|---|---|---|---|---|
| Approx. Net Weight | Lbs (kg) | 49 (22.2) | 51 (23.1) | 56 (25.4) | 58 (26.3) | 66 (29.9) | 68 (30.8) | 76 (34.5) | 79 (35.8) |
| Approx. Shipping Weight | Lbs (kg) | 52 (23.6) | 54 (24.5) | 71 (32.2) | 73 (33.1) | 88 (39.9) | 91 (41.3) | 99 (44.9) | 102 (46.3) |

**Storm Hood (FM, W4, and W6)**

| | | | | | |
|---|---|---|---|---|---|
| Approx. Net Weight | Lbs (kg) | 10 (4.5) | 17 (7.7) | 22 (10.0) | 30 (13.6) |
| Approx. Shipping Weight | Lbs (kg) | 12 (5.4) | 20 (9.1) | 25 (11.3) | 35 (15.9) |

**Backdraft Damper (FM when ordered separately)**

| | | | | | |
|---|---|---|---|---|---|
| Approx. Net Weight | Lbs (kg) | 6 (2.7) | 9 (4.1) | 12 (5.4) | 15 (6.8) |
| Approx. Shipping Weight | Lbs (kg) | 8 (3.6) | 11 (5.0) | 16 (7.3) | 20 (9.1) |

- BDD = Backdraft Damper

## XEF1 General Specifications

| | |
|---|---|
| **Explosionproof Motor Hazardous Location Classification** | Motor type E1 - Class I, Division 1 & 2, Groups C, D, F & G; T3B<br><br>Motor type E2 - Class I, Division 2, Groups A, B, C & D; T3; Class I, Zone 2, IIC (available in 3 - phase only) |
| **Standards** | Designed in compliance to UL 705 (2022) and CSA 22.2 No 113 (2018). |
| **Approvals** | Motors are CSA approved and/or UL Listed. |
| **Fan** | Three-blade spark-resistant aluminum, steel spider and hub with 5/8 in. bore. |
| **Fan Shroud** | 12-gauge (0.081 in.) (2.1 mm) spark-resistant aluminum. Compliant to AMCA 99, Type B. |
| **Fan Guard** | Split design with close wire spacing. Meets OSHA requirements. A 3/8 in. (9.5 mm) diameter probe will not enter. Black polyester powder coated. |
| **Motors** | 1/2 HP, TEFC, permanently lubricated ball bearing type with rigid base. All standard Single-Phase and three-phase voltages available. |
| **Cabinet Housing Material** | Epoxy/polyester powder-coated carbon steel 18-gauge (0.048 in.) (1.2 mm) fan panel, 14-gauge (0.075 in) (1.9 mm) motor mount, and fan guard. 18 GA galvanized steel sleeve for W4 and W6 mounting configuration models. |
| **Fasteners** | Zinc plated steel for corrosion resistance. |
| **Mounting Configurations** | Flush-surface mount (FM) or Through-the-wall mount with 4" 18 GA galvanized steel sleeve and aluminum backdraft damper (W4) or Through-the-wall mount with 6" 18 GA galvanized steel sleeve and aluminum backdraft damper (W6). |
| **Options** | Option Code H. Heresite coating of the motor mount, fan panel, fan guard and fan blade (motors, sleeves, backdraft damper louvers or storm hoods can not be Heresite coated). |
| **Accessories** | Explosion-proof thermostat, disconnect switch, 20 GA galvanized storm hood (with bird screen) and aluminum backdraft damper. |
| **Ambient Temperature** | Operating: E1 = - 40°F to 104°F (- 40°C to 40°C); E2 & GP = - 4°F to 104°F (- 20°C to 40°C); Storage: - 40°F to 140°F (- 40°C to 60°C). |

| **Model** | | **Air delivery at Static Pressure (Inches - Water Column Gauge)** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **0** | **0.05** | **0.1** | **0.15** | **0.2** | **0.25** | **0.3** | **0.35** | **0.4** | **0.5** |
| **XEF1-12-0640** | cfm | 640 | 635 | 550 | 510 | 460 | 410 | 350 | 280 | 220 | X X |
| | $m^3$/hr | 1087 | 1079 | 934 | 866 | 782 | 697 | 595 | 476 | 374 | X X |
| **XEF1-12-0855** | cfm | 855 | 800 | 770 | 720 | 670 | 620 | 580 | 540 | 480 | 350 |
| | $m^3$/hr | 1453 | 1359 | 1308 | 1223 | 1138 | 1053 | 985 | 917 | 816 | 595 |
| **XEF1-12-1210** | cfm | 1210 | 1205 | 1120 | 1050 | 1000 | 940 | 910 | 870 | 830 | 760 |
| | $m^3$/hr | 2056 | 2047 | 1903 | 1784 | 1699 | 1597 | 1546 | 1478 | 1410 | 1291 |
| **XEF1-16-1350** | cfm | 1350 | 1341 | 1170 | 1070 | 970 | 890 | 820 | 780 | 750 | 680 |
| | $m^3$/hr | 2294 | 2278 | 1988 | 1818 | 1648 | 1512 | 1393 | 1325 | 1274 | 1155 |
| **XEF1-16-1850** | cfm | 1850 | 1842 | 1680 | 1590 | 1490 | 1390 | 1260 | 1180 | 1060 | 1010 |
| | $m^3$/hr | 3143 | 3130 | 2854 | 2701 | 2532 | 2362 | 2141 | 2005 | 1801 | 1716 |
| **XEF1-16-2500** | cfm | 2500 | 2494 | 2380 | 2290 | 2220 | 2140 | 2030 | 1870 | 1630 | 1570 |
| | $m^3$/hr | 4248 | 4237 | 4044 | 3891 | 3772 | 3636 | 3449 | 3177 | 2769 | 2667 |
| **XEF1-20-2300** | cfm | 2300 | 2290 | 2100 | 2000 | 1940 | 1840 | 1740 | 1640 | 1540 | 1440 |
| | $m^3$/hr | 3908 | 3891 | 3568 | 3398 | 3296 | 3126 | 2956 | 2786 | 2616 | 2447 |
| **XEF1-20-3400** | cfm | 3400 | 3392 | 3250 | 3180 | 3100 | 3000 | 2900 | 2725 | 2625 | 2200 |
| | $m^3$/hr | 5777 | 5763 | 5522 | 5403 | 5267 | 5097 | 4927 | 4630 | 4460 | 3738 |
| **XEF1-20-3900** | cfm | 3900 | 3894 | 3780 | 3720 | 3620 | 3540 | 3430 | 3330 | 3200 | 2740 |
| | $m^3$/hr | 6626 | 6616 | 6422 | 6320 | 6150 | 6014 | 5828 | 5658 | 5437 | 4655 |
| **XEF1-24-5100** | cfm | 5100 | 5090 | 4900 | 4790 | 4650 | 4480 | 4380 | 4210 | 4130 | 3950 |
| | $m^3$/hr | 8665 | 8648 | 8325 | 8138 | 7900 | 7612 | 7442 | 7153 | 7017 | 6711 |

Note: CFM data listed in the above table will open the louvers on the backdraft damper a minimum of 1 inch. External environmental factors can have a significant effect on the amount the louvers open and the overall performance of the exhaust fan. A 15 km/hr (9.3 mph) wind causes a 0.04 inch water column static pressure. A 30 km/hr (18.6 mph) wind causes a 0.17 inch water column static pressure. External environmental factors must be considered when sizing the CFM of the exhaust fan and the use of a storm hood as a wind block.

Note: The air delivery values stated in the XEF model code are for zero static pressure in front of the fan (100% open air, no obstructions). If a "through the wall mount" configuration is selected (W4 or W6) then the air delivery is reduced by approximately 20%. Example: the 2500 cfm exhaust fan with the W4 or W6 mounting configuration has an air delivery of approximately 2000 cfm. The same principle applies if the "flush surface mount" configuration (FM) is selected and the "backdraft damper" accessory is added to it.

## — WARNING! —

**Read and follow the instructions in this manual. Failure to do so may result in severe or fatal injury.**

### IMPORTANT SAFETY INFORMATION

1. Exhaust fan is to be connected and serviced only by qualified electrician experienced with hazardous location equipment (When E1 or E2 motor options ordered). It is the responsibility of the installer to verify the safety and suitability of the installation.
2. Installation and wiring of the exhaust fan must adhere to all applicable codes. Exhaust fan must be effectively grounded to eliminate shock hazard.
3. Exhaust Fan is to be used only in atmospheres having an ignition temperature higher than the exhaust fan's maximum rated operating temperature as shown on the motor data plate. For details of hazardous locations with potential for explosion, refer to the Canadian Electrical Code, Part 1, Section 18 or Articles 500 through 516 of the National Electrical Code.
4. Do not operate exhaust fan in ambient temperatures above 40°C (104°F).
5. **Explosion/Electric Shock Hazard**. Disconnect exhaust fan from power supply or fuse box before opening enclosure or servicing exhaust fan. Lock the switch in the "OFF" (open) position and/or tag the switch to prevent unexpected power application.
6. Keep motor enclosure tightly closed and secured. Mating faces of enclosure must be clean before replacing the cover. Keep away from rain or snow. Exhaust fan is for dry indoor use only.
7. Exhaust Fan must be kept clean. When operating in a dirty environment, regularly clean the motor, fan, and fan guard. Refer to recommended maintenance procedures.
8. Do not operate exhaust fan in atmospheres which are corrosive to aluminum or steel.
9. See applicable electrical codes for installation requirements such as seal requirements of in field installed conduits.
10. **Do not modify the exhaust fan in any way**.
11. Use factory approved replacement parts only. Contact factory for any questions or concerns.
12. See installation instructions for proper mounting and installation.
13. If motor is not thermally protected, incorporate remote motor-overload protection in ventilator circuit.
14. Install behind shutters for protection from rain.
15. Check rotation of motor and do not block air flow.
16. CAUTION: use supply wires rated at 90°C (194°F).

**— WARNING! —**
**Read and follow the instructions in this manual. Failure to do so may result in severe or fatal injury.**

## — INSTALLATION —
## Mechanical

### Location

Please follow guidelines below for optimum ventilating results:

1. Do not install exhaust fans such that airflow is blocked or impeded.
2. For large workshops or warehouses it may be acceptable to use fewer, higher CFM exhaust fans.

### Cutout

Use the following table for proper cutout dimensions:

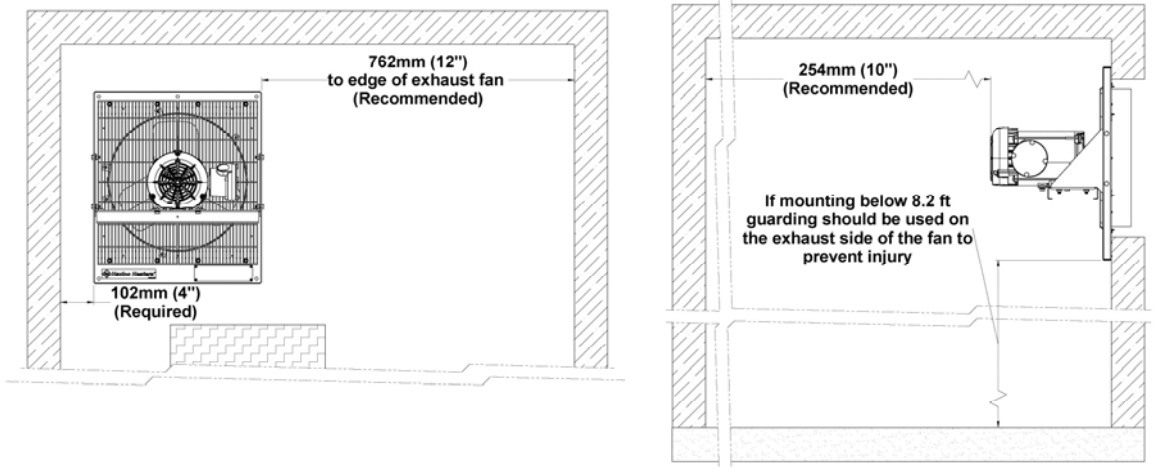
| Fan Size | 12 | 16 | 20 | 24 |
|---|---|---|---|---|
| Height x Length (in x in) | 15 x 15 | 19 x 19 | 23 x 23 | 27 x 27 |

### Mounting

1. Install in the proper orientation, 3 mounting holes to the top, with the motor on the inside of the room to be ventilated (See Figure below).
2. Use the five 3/8” diameter mounting holes, three located on the top, two on the bottom, with appropriate sized fasteners.
3. It is essential that adequate structural support be provided for installation. **The mounting structure must be strong enough to support the exhaust fan’s weight**, provide sufficient stiffness to prevent excessive vibration, and withstand all probable abusive situations such as transportable installations where truck off-loading impacts, etc. may occur. Refer to table on **Page 4**, XEF1 Specifications by Model Size, for exhaust fan net weights.

### Mounting Heights and Clearances

1. To ensure proper ventilation observe the minimum installation clearances (See Figure below).
2. If mounting less than 8.2 feet off the floor or ground level guarding should be used, for example using a storm hood.



**— WARNING! —**
**Read and follow the instructions in this manual. Failure to do so may result in severe or fatal injury.**

## — INSTALLATION —
## Electrical

1. Exhaust fan is to be connected and serviced only by qualified electrician experienced with hazardous location equipment (When E1 or E2 motor options ordered). It is the responsibility of the installer to verify the safety and suitability of the installation.
2. **Explosion/Electric Shock Hazard**. Disconnect exhaust fan from power supply or fuse box before opening enclosures or servicing exhaust fan. Lock the switch in the “OFF” (open) position and/or tag the switch to prevent unexpected power application.
3. Use copper conductors only for supply wires and approved explosion-proof means of wiring during installation. Use minimum 90°C rated wire. Refer to “Supply Wire Requirements” table for wire ratings.
4. Installation must include appropriate over-current protection devices (fusing or circuit breakers) as required by the CEC or NEC. Refer to “Supply Wire Requirements” table and exhaust fan data plate for current ratings. Supply voltage is to be within 10% of the data plate voltage.
5. Confirm that the electrical power supply matches the nameplate voltage, phase, amperage and frequency rating of the exhaust fan to be connected.
6. Supply conductors and ground conductor pass through the 1 in. NPT opening on the motor enclosure.
7. Refer to wiring diagram on the motor to ensure that all connections are as required and securely fastened.
8. Seals are to conform to the NEC or CEC as applicable.
9. Ensure that input conductors and conduit have adequate strain relief at installation.
10. Before application of electrical power, recheck all connections to ensure compliance with the wiring diagram and any code requirements. Remove any foreign objects from the enclosure and exhaust fan. Ensure all wire connections are tight and not pinching the wire insulation. Reinstall cover tightly.
11. **On all three-phase exhaust fans, it is necessary to verify that the fan rotation is correct** (counter clockwise when facing the rear of the exhaust fan). If air delivery is not from the front of the exhaust fan, reverse any two supply leads.

**XEF1 Supply Wire Requirements**

| Model | Volts | Ø | Total Current Amps | Minimum Circuit Ampacity | Max Fuse Amps | Supply Wire (AWG) |
|---|---|---|---|---|---|---|
| XEF1-YY-XXXX-115160- | 115 | 1 | 8.8 | 11 | 15 | 14 |
| XEF1-YY-XXXX-230160- | 230 | 1 | 4.4 | 5.5 | 15 | 14 |
| XEF1-YY-XXXX-230360- | 230 | 3 | 2.4 | 3 | 15 | 14 |
| XEF1-YY-XXXX-460360- | 460 | 3 | 1.2 | 1.5 | 15 | 14 |
| XEF1-YY-XXXX-575360- | 575 | 3 | 0.95 | 1.2 | 15 | 14 |

## — WARNING! —

Exhaust fan is to be serviced only by qualified electrician.

**Explosion/Electric Shock Hazard**. Disconnect exhaust fan from power supply or fuse box before opening enclosures or servicing exhaust fan. Lock the switch in the "OFF" (open) position and/or tag the switch to prevent unexpected power application.

## — Repair and Replacement —

### Fan, Fan Guard or Motor Replacement (See **Page 10** for assembly diagram)

**The motor is a sealed unit that requires no lubrication. If the motor is defective, it must be replaced with an original factory supplied motor.**

**Removal:**

**Backdraft damper**

1. Disconnect exhaust fan from power.
2. Remove the storm hood if applicable.
3. While supporting the backdraft damper, unscrew the fasteners holding the backdraft damper to the wall or the wall insert.
4. Carefully remove the backdraft damper.

**Fan**

1. Remove Exhaust fan from wall, place on a flat, clean work surface and support the exhaust fan.
2. Remove the backdraft damper if repairing an XEF with the W4 or W6 option, loosen the set screw of the fan and slide fan off of motor shaft.

**Motor**

1. Remove four bolts holding motor to the motor mount, and covers from enclosure box.
2. Note wire connections for future reference and cut all wires leading to the motor close to the terminations. All motor wires are permanently marked according to the nameplate on the motor. Slide the motor backwards until shaft is passed the fan guards.

**Fan Guards**

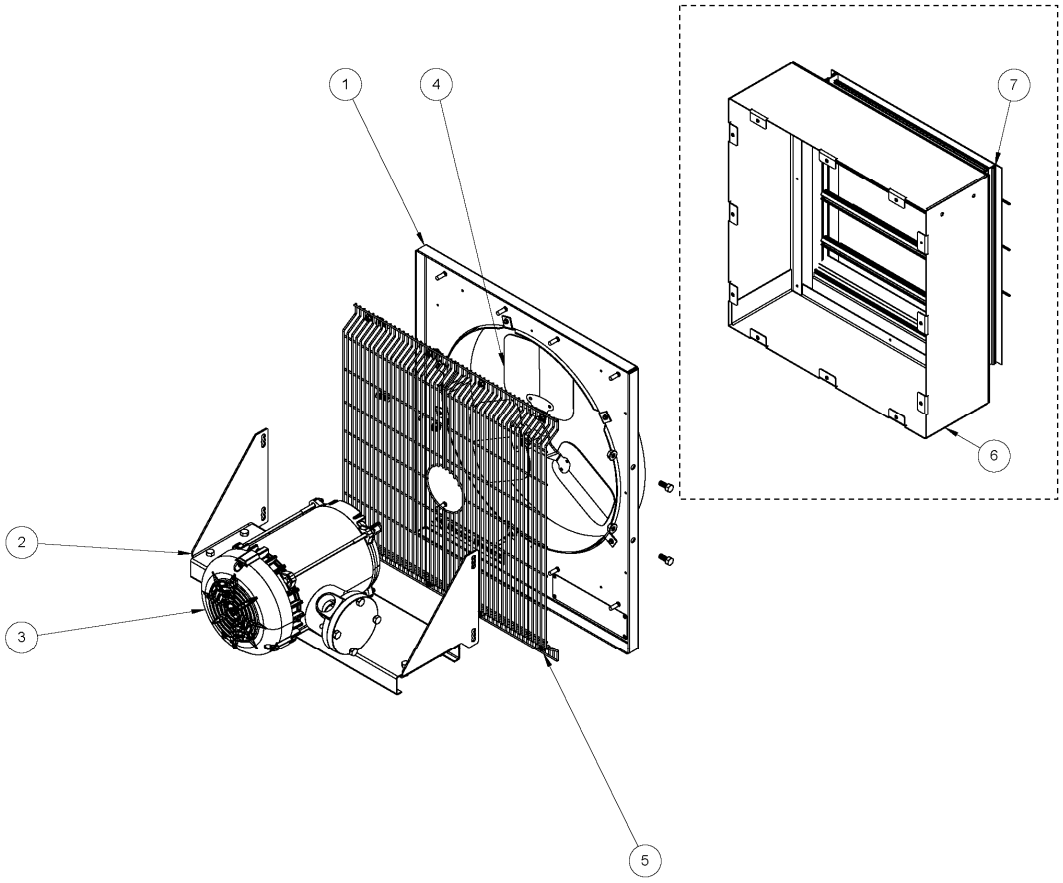
1. Remove the nuts holding the fan guard to the fan panel.
2. Remove the four bolts attaching the motor shelf to the fan panel sides and remove the fan guards.

**Reassembly:**

1. To reassemble, replace the fan guards with a gap between them in the middle and tighten the nuts to the fan panel's studs.
2. Attach the motor shelf assembly with the four bolts on the side of the fan panel.
3. Place the motor onto motor mount and loosely tighten the nuts so the motor cannot fall off of the shelf. From the exhaust side, slip fan blade onto motor shaft and ensure fan hub is flush with end of motor shaft. The set screw on the fan should line up with the machined portion of the motor shaft. Tighten set screw to 150 in-lbs torque.
4. Make the power connections to the motor and ensuring to use a ground connection. Install the cover of the motor enclosure with the provided screws. Center fan in fan-panel opening and leave approximately 1/16" to 3/16" (1.6 to 4.8 mm) gap between motor face and fan guard.
5. Manually spin the fan blade to ensure it rotates freely before reconnecting exhaust fan to power supply. Fan must rotate counterclockwise when viewed from rear of exhaust fan. Tighten motor nuts to 250 in-lbs torque.
6. Reinstall the backdraft damper if using an XEF with the W4 or W6 option.
7. Position the new backdraft damper so the holes are visible, ensure louvers open in the correct direction, closed due to gravity when in the correct orientation, before fastening.
8. Fasten all of the screws in the provided holes.
9. Replace the storm hood if applicable.

| Torque Settings | |
|---|---|
| **Item** | **Torque (in-lbs)** |
| Fan blade set screw (1 only) | 150 |
| 5/16 - 18 UNC motor nuts | 250 |
| 5/16 - 18 UNC motor mount bolts | 250 |
| 1/4 - 20 UNC fan panel nuts | 100 |
| 1/4 - 20 UNC fan guard self tapping screws | 100 |

## — Assembly Diagram —




### *** Please have model & serial number available before calling ***

| Item No. | Description | 12" Fan Size | 16" Fan Size | 20" Fan Size | 24” Fan Size |
|---|---|---|---|---|---|
| 1 | Fan Panel | 3571 | 3572 | 3573 | 3574 |
| 2 | Motor Mount Kit | 1151 | 1152 | 1153 | 1154 |
| 3 | Motor | Explosion-proof | | General Purpose | |
| | | 115/230V, 1Ø, 60Hz = *G654A (E1)<br>230/460V, 3Ø, 60Hz = *G649 (E1), *3625 (E2)<br>575V, 3Ø, 60Hz = *G666 (E1), *3627 (E2) | | 115/230V, 1Ø, 60Hz = 2799<br>230/460V, 3Ø, 60Hz = 2805<br>575V, 3Ø, 60Hz = 2807 | |
| 4 | Fan Blade | 640 CFM = 1546<br>855 CFM = 1547<br>1210 CFM = 3623 | 1350 CFM = 1548<br>1850 CFM = 1549<br>2500 CFM = 1165 | 2300 CFM = 1550<br>3400 CFM = 1551<br>3900 CFM = 1167 | 5100 CFM = 1169 |
| 5 | Fan Guard Kit | 1157 | 1158 | 1159 | 1160 |
| 6 | Wall Insert (W4 or W6 option) | 3531 = 4”<br>3523 = 6” | 3532 = 4”<br>3524 = 6” | 3533 = 4”<br>3525 = 6” | 3534 = 4”<br>3526 = 6” |
| 7 | Backdraft Damper (W4 or W6 option) | 3590 | 3539 | 3540 | 3541 |

* - Motor code definition for E1 & E2 located on model coding page

**— WARNING! —**

Exhaust fan should only be service by qualified personnel experienced in electrical work.

Disconnect unit exhaust fan from power supply before starting any service or repair work. Lock the disconnect switch in the “OFF” (open) position and/or tag the switch to prevent unexpected power application. Failure to follow these procedures may result in severe or fatal injury.

## — Maintenance Program —

***Regular inspection, based on a schedule determined by the amount of dirt in the atmosphere, assures maximum operating economy.***

### Annual Inspection

1. Check all connections and electrical conductors for damage, looseness, defects, fraying, etc. and replace or tighten where applicable.
2. Replace damaged components. Inside of enclosures must be clean, dry, and free from any foreign materials. Enclosure covers must also be completely on and tight.
3. Check motor shaft bearing play. Replace motor if play is excessive or if motor does not run quietly and smoothly. Motor bearings are permanently lubricated.
4. Check fan blade. Replace immediately if cracked or damaged.
5. Check louvers for free movement or damage.
6. Check the tightness of all hardware. All nuts and bolts, including mounting hardware, must be tightened to correct torque settings on **Page 9**.
7. Turn exhaust fan motor on for a minimum of 5 minutes. Check for air exiting exhaust fan through louvers and smooth running of motor.

### Periodic Maintenance

1. Clean the following (remove dust using compressed air):
    - Fan
    - Fan Guard
    - Motor
    - Louvers

    ⇒ Wipe fan and motor shelf panels with a damp cloth to remove any remaining dirt / dust and to mitigate any electrostatic charge buildup
2. Check the following:
    - Motor for smooth and quiet operation
    - Louvers for free movement and proper closing
    - All explosion-proof covers and fittings for tightness

## Limited 18-Month Warranty

***Hazloc Heaters™*** *warrants all XEF1 Exhaurio series of explosion-proof exhaust fans against defects in materials and workmanship under normal conditions of use for a period of eighteen (18) months from date of purchase, or twelve (12) months from date the product is first placed into service, whichever period lapses first, based on the following terms:*

1. The exhaust fan must not be modified in any way.
2. The exhaust fan must be stored, installed and used only in accordance with the owner's manual and attached data plate information.
3. Replacement parts will be provided free of charge as necessary to restore any unit to normal operating condition, provided that the defective parts be returned to us freight prepaid and that the replacement parts be accepted freight collect.
4. The complete exhaust fan may be returned to our manufacturing plant for repair or replacement (at our discretion), freight charges prepaid and return charges collect.
5. Contamination by dirt, dust, etc. or corrosion will not be considered as defects.
6. This warranty shall be limited to the actual equipment involved and, under no circumstances, shall include or extend to installation or removal costs, or to consequential damages or losses.

Hazloc Heaters™

*Safe heat when you need it!*

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