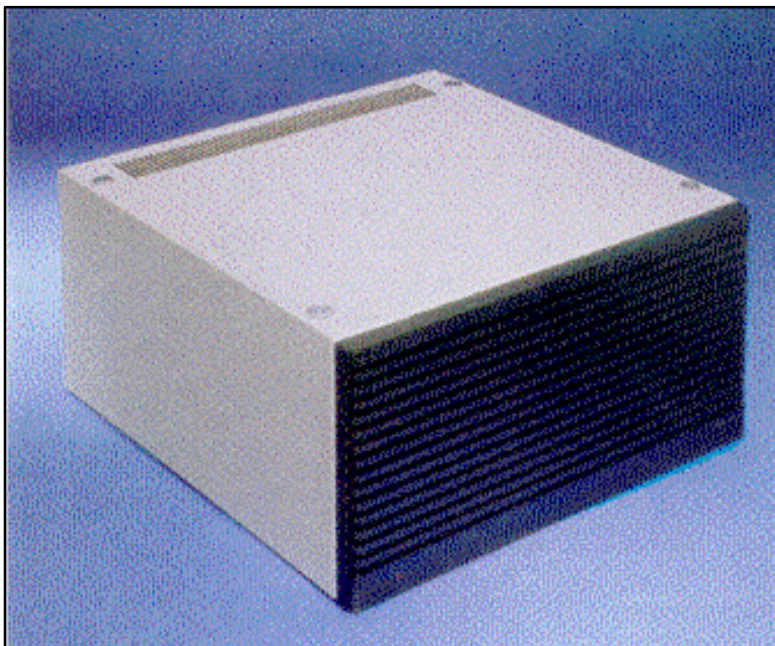


PROLINE®

Industrial Air Conditioner



PROLINE® Top Mount AC
4000 BTU/HOUR

Air Conditioners for PROLINE®
Electronic Enclosures

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INTRODUCTION

This installation manual applies to Hoffman 4000 BTU/HOUR PROLINE® air conditioners. Consult the label and specific design data for electrical requirements.

The standard air conditioning units are intended for indoor use in non-corrosive atmospheres, operating at ambient temperatures from 50°F (10°C) minimum to 125°F (52°C) maximum. Operation outside this range without prior modification or approval from Hoffman Enclosures Inc. will void the warranty.

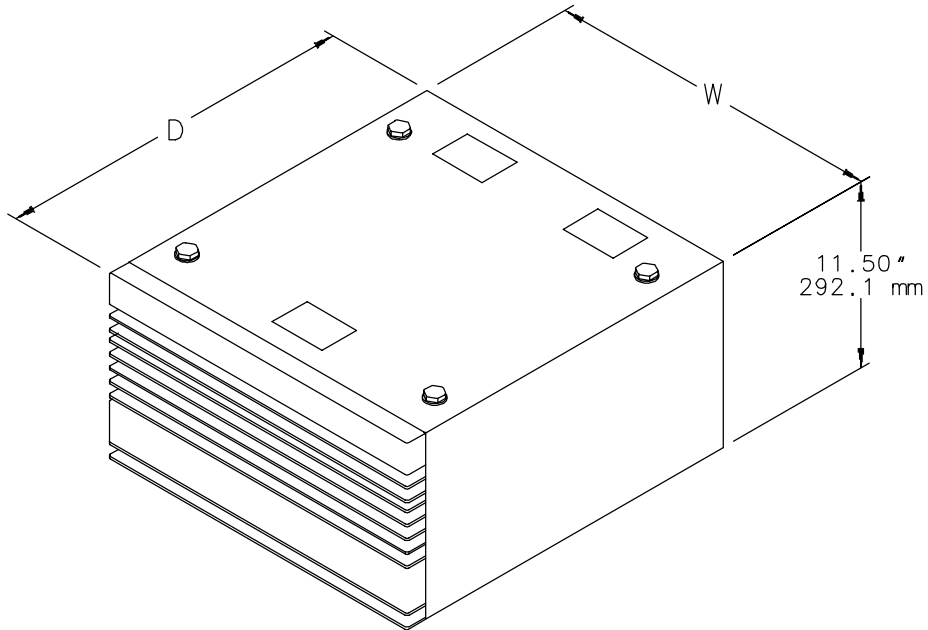
For applications where the ambient will be below 50°F (10°C), consult the factory.

CAUTION

- Read this manual thoroughly before attempting to install this air conditioner. Failure to do so may result in damage to the unit or other enclosure equipment.
- The air conditioner power source should be electrically isolated from all other sources to the enclosure equipment. This is particularly important if any of the equipment is susceptible to noise or voltage fluctuations which may be encountered in air conditioner start up.

DESIGN DATA

Catalog Number	(inch) W x D	(mm) W x D	Voltage	HZ	FLA @ Max Amb Temp	BTU/Hr (watts) @ Max Amb Temp	Max Amb Temp °F(°C)	Shipping Weight Lbs (Kgs)	Refrigerant Type	Volume Oz
PAC416T66	23.31 x 15.75	(592 x 400)	115	50/60	14.7/13.6	4000 (1172)	125 (52)	125 (57)	R134A	7.0
PAC426T66	23.31 x 15.75	(592 x 400)	230	50/60	8.0/7.5	4000 (1172)	125 (52)	125 (57)	R134A	8.0
PAC416T68	23.31 x 23.61	(592 x 400)	115	50/60	14.7/13.6	4000 (1172)	125 (52)	140 (63)	R134A	7.0
PAC426T68	23.31 x 23.61	(592 x 400)	230	50/60	8.0/7.5	4000 (1172)	125 (52)	140 (63)	R134A	8.0
PAC416T86	31.19 x 15.75	(792 x 400)	115	50/60	14.7/13.6	4000 (1172)	125 (52)	140 (63)	R134A	7.0
PAC426T86	31.19 x 15.75	(792 x 400)	230	50/60	8.0/7.5	4000 (1172)	125 (52)	140 (63)	R134A	8.0
PAC416T88	31.19 x 23.61	(792 x 400)	115	50/60	14.7/13.6	4000 (1172)	125 (52)	160 (72)	R134A	7.0
PAC426T88	31.19 x 23.61	(792 x 400)	230	50/60	8.0/7.5	4000 (1172)	125 (52)	160 (72)	R134A	8.0
PAC416T65	23.31 x 23.61	(592 x 400)	115	50/60	14.7/13.6	4000 (1172)	125 (52)	128 (58)	R134A	7.0
PAC426T65	23.31 x 23.61	(592 x 400)	230	50/60	8.0/7.5	4000 (1172)	125 (52)	128 (58)	R134A	8.0
PAC416T85	31.19 x 23.61	(792 x 400)	115	50/60	14.7/13.6	4000 (1172)	125 (52)	140 (63)	R134A	7.0
PAC426T85	31.19 x 23.61	(792 x 400)	230	50/60	8.0/7.5	4000 (1172)	125 (52)	140 (63)	R134A	8.0



UNPACKING AND INSPECTION

Inspect the industrial air conditioner by checking for concealed damage that may have occurred during shipment. Look for dents, scratches, loose assemblies, evidence of oil, etc. Any evident damage upon receipt should be noted on the freight bill. Damages should be brought to the attention of the delivering carrier within 15 days of delivery, NOT to Hoffman Enclosures Inc.. If damage is evident, save all packaging materials and request the carrier to inspect the product prior to filing a claim with the carrier.

Hoffman Enclosures Inc. cannot accept responsibility for freight damages; however, we are ready to assist you in any way possible. For assistance, call or write:

Hoffman Enclosures Inc.
2100 Hoffman Way
Anoka, MN 55303-1745
(763) 422-2211

PRODUCT HANDLING


To avoid possible shipping damage and facilitate transportation and storage, the industrial air conditioner may have been shipped in a vertical position. If it is necessary to place the air conditioner in a vertical position after removing from carton, be certain it is placed in an upright (horizontal) or mounting position for a minimum of five (5) minutes before operating, in order to allow the compressor oil to drain to the compressor sump area.

⚠ CAUTION

NEVER attempt to operate the air conditioner while in any other position than the operating position. Running the refrigeration compressor without oil in the lower part of the housing will cause permanent damage to the unit. This also voids the warranty.

PRODUCT IDENTIFICATION

For installation and maintenance as outlined in this manual, first refer to the nameplate on your unit. The nameplate will provide important data regarding capacity of the unit, minimum and maximum ambient operating temperatures, type and amount of refrigerant required for recharging, and electrical power characteristics when making electrical hookups or connections.



INDUSTRIAL AIR CONDITIONER
FOR ELECTRICAL AND ELECTRONIC ENCLOSURES

HOFFMAN CAT NO

SERIAL/JOB NO

CAP. BTU/HR WATTS

AMB AIR TEMP MIN/MAX °F °C


V. A. C. PH HZ FLA

REFRIGERANT OZ. GRAMS

CAUTION: USE A TIME DELAY FUSE OR CIRCUIT BREAKER.

DESIGN PRESSURES P. S. I. G.

HIGH LOW



A PENTAIR COMPANY

900 EHLEN DRIVE, ANOKA, MINNESOTA 55303-7504 U. S. A.

When ordering service parts, specify the catalog or job number and serial number.

Before installing, make certain these parameters are met. Lower or higher ambient temperatures may cause permanent damage or malfunction of the unit.

Before operating, make certain outlet and power source match these requirements.

Refer to "Design Data" (page 3) and label information for full load amp rating and "Wiring Schematic" (page 9) for specific model. Follow all applicable electrical codes.

Leak test pressures.

POWER CONNECTION

CAUTION

To avoid possible damage to the air conditioner, it must be in an upright (horizontal position) for a minimum of five (5) minutes before start up.

Refer to nameplate for proper electrical frequency, current, and voltage requirements, then connect to a properly grounded and fused electrical circuit. (see "Wiring Schematic" (page 9) for location of power connection)

NOTE: No other equipment should be connected to this circuit to prevent overloading. Additional isolation may be required if the equipment nearby is susceptible to line noise or voltage fluctuation.

STARTUP PROCEDURE

- Make sure the unit has been upright for five (5) minutes.
- Operate the air conditioner for ten (10) minutes. No excessive noise or vibration should be evident during this run period. The condenser fan, the evaporator or cool air fan, and the compressor should be running. To check cool air output, use a reliable air temperature measuring device. The cool air output should be between 50° to 60° F when room temperature is between 70° to 80° F.
- These units are equipped with a thermostat. If the thermostat is not set properly the condenser fan and compressor may not operate while the evaporator fan runs. If this condition exists, the entering air temperature to the evaporator may be below the thermostat setpoint. To correct, set the thermostat setting to a lower setpoint, until the condenser fan and compressor start.
- The compressor is provided with automatic reset thermal overload switch. This switch is located and mounted inside the plastic enclosure clipped to the compressor. This switch will be activated whenever the compressor overheats. Excessive heat buildup may be caused by:
 1. Clogged or dirty inlet air filter.
 2. Ambient air temperatures exceed nameplate rating.
 3. Enclosure heat load exceeds the rated capacity of the air conditioner.

The thermal overload switch will actuate and stop compressor operation. Blowers will continue to operate, however, and the compressor will restart when it has cooled to within the thermal overload cut-in temperature setting.

INSTALLATION INSTRUCTIONS

⚠ CAUTION

- Before installing, read these instructions carefully. Failure to do so could result in damage to the unit and/or cause a hazardous condition.
- Check the ratings on the air conditioner to ensure the product is suitable for your application. Electrical ratings are located on the air conditioner nameplate on the side of the unit.
- **DISCONNECT POWER BEFORE BEGINNING INSTALLATION.**
- If continuous operation of the unit is essential to ensure the function of any other equipment, then adequate warning devices should be installed.
- Enclosures equipped with air conditioners must be securely fastened to prevent tipping.
- These air conditioners are not intended for use in hose down areas or hazardous locations.
- Once installation is complete, check all internal and external electrical clearances to ensure equipment will function safely and properly

MOUNTING INSTRUCTIONS

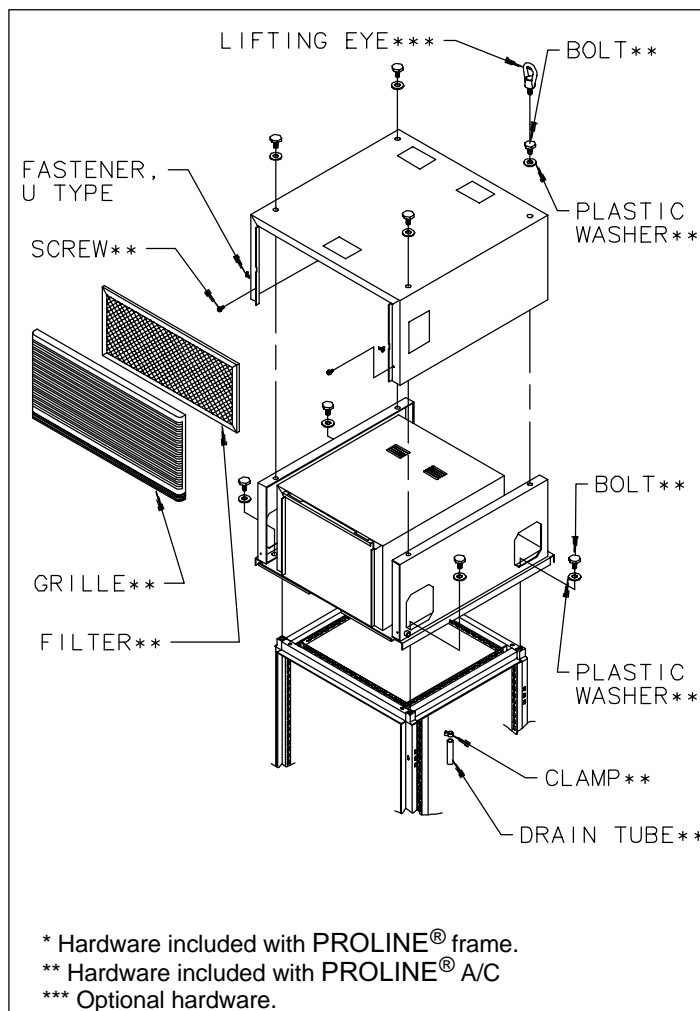
1. Remove cover from PROLINE® frame.
2. Remove shroud from air conditioner:
 - Four bolts and washers at top of air conditioner.
 - Two screws in front flange.
3. Place air conditioner base on top of PROLINE® frame.
4. Use the four bolts and washers to fasten air conditioner base to the top of the PROLINE® frame.
5. Place shroud on air conditioner base.
6. Fasten shroud to air conditioner base with four bolts and washers (or optional lifting eyes) at the top of the shroud and two screws in the shrouds front flange.
7. Attach elbow and drain tube with clamp provided.
8. Install filter and grille.

NOTE: Air conditioner should be installed as level as possible to ensure proper operation.

A spreader bar must be used when air conditioner / PROLINE® frame is lifted with optional lifting eyes.

WIRING

- All wiring must comply with applicable codes and ordinances.
- Air conditioner must be properly grounded.
- Electrical connection is located on bottom side of air conditioner. Remove access cover to gain access to three pole terminal blocks and unsnap plastic cover. Replace covers to original position after completion of electrical connections.



MAINTENANCE PROCEDURES

CAUTION

- Disconnect all power supplies to the air conditioner before performing any service inside the unit.
- Operation of the air conditioner in areas containing airborne caustics or chemicals can rapidly deteriorate filters, condenser coils, blowers and motors, etc. Contact Hoffman Enclosures Inc. for special recommendations.
- In accordance with section 608 of the Clean Air Act, no person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the environment any class I or class II substance used as refrigerant.

MAINTENANCE INFORMATION

- Always disconnect power before inspecting or working on unit.
- Access filter by lifting off grille.
- Filter is reusable and can be cleaned by flushing with water.
- For additional filtering capacity, coat both sides of filter with filter adhesive (catalog number AFLTAD)

COMPRESSOR

The compressor requires no maintenance. It is hermetically sealed, properly lubricated at the factory, and should provide years of satisfactory operating service.

Should the refrigerant charge be lost, recharging ports (access fittings) on the suction and discharge sides of the compressor are provided for recharging and/or checking suction and discharge pressures.

In the event that service is required, use only certified refrigeration repair service personnel. Consult your local listing for commercial air conditioning maintenance establishments.

REFRIGERANT LOSS

Your air conditioner was thoroughly tested before leaving the factory to insure against refrigerant leaks. Shipping damage or microscopic leaks not found with sensitive electronic refrigerant leak detection equipment during manufacturing may require repair and recharging of the system. This work should be performed by qualified professionals only, generally available in any reputable air conditioning repair or service company in your local area.

Refer to the data on your nameplate which specifies the type of refrigerant and the charge sizes in ounces.

Prior to recharging, the system must be evacuated and checked for leaks.

FANS AND MOTORS

Fan motors require no maintenance. All bearings, shafts, etc. are lubricated during manufacturing for the life of the motor. Access for fan replacement requires the removal of the air conditioner shroud.

CONDENSER AND EVAPORATOR

Condensers and evaporator coils are constructed with copper tubes with mechanically bonded aluminum fins. No maintenance is ordinarily required. If the air conditioner is used in a dirty environment, periodic cleaning of dirt and debris from the outside fin surface may be required to maintain design operating performance. Care must be taken during cleaning to prevent damage to coil fins.

CONDENSER INLET FILTER

Periodic maintenance of the inlet filter will assure normal operation of your air conditioner.

As the compressors operating temperature increases above normal due to dirty or clogged inlet filter (or plugged condenser coil), it will stop operating due to actuation of the thermal overload cut-out switch located on the compressor housing. As soon as the compressor temperature has dropped to within the switch's cut-in setting, the compressor will restart automatically. However, the above condition will continue to take place until the inlet filter has been cleaned or replaced. It is recommended that the power to the air conditioner be disconnected when abnormally high compressor operating temperatures cause automatic shut-down of the unit. The above described shutdown is symptomatic of clogged or dirty filters, thus causing a reduction in cooling air flow across the surface of the compressor and condenser coil.

CONTINUED OPERATION OF THE AIR CONDITIONER WITH A CLOGGED OR DIRTY FILTER WILL DAMAGE AND SHORTEN COMPRESSOR LIFE. The air conditioner features an easily removable inlet filter to facilitate necessary cleaning.

FILTER CLEANING

1. Flush the filter with warm water from the exhaust side to the intake side. **DO NOT USE CAUSTICS.**
2. After flushing, allow filter to drain. Placing it with a corner down will assure complete drainage.
3. Recoat the filters with filter spray adhesive. Spray filter from both sides for maximum concentration of adhesive. Filter spray adhesive is available from Hoffman Enclosures Inc. (Hoffman catalog number AFLTAD)

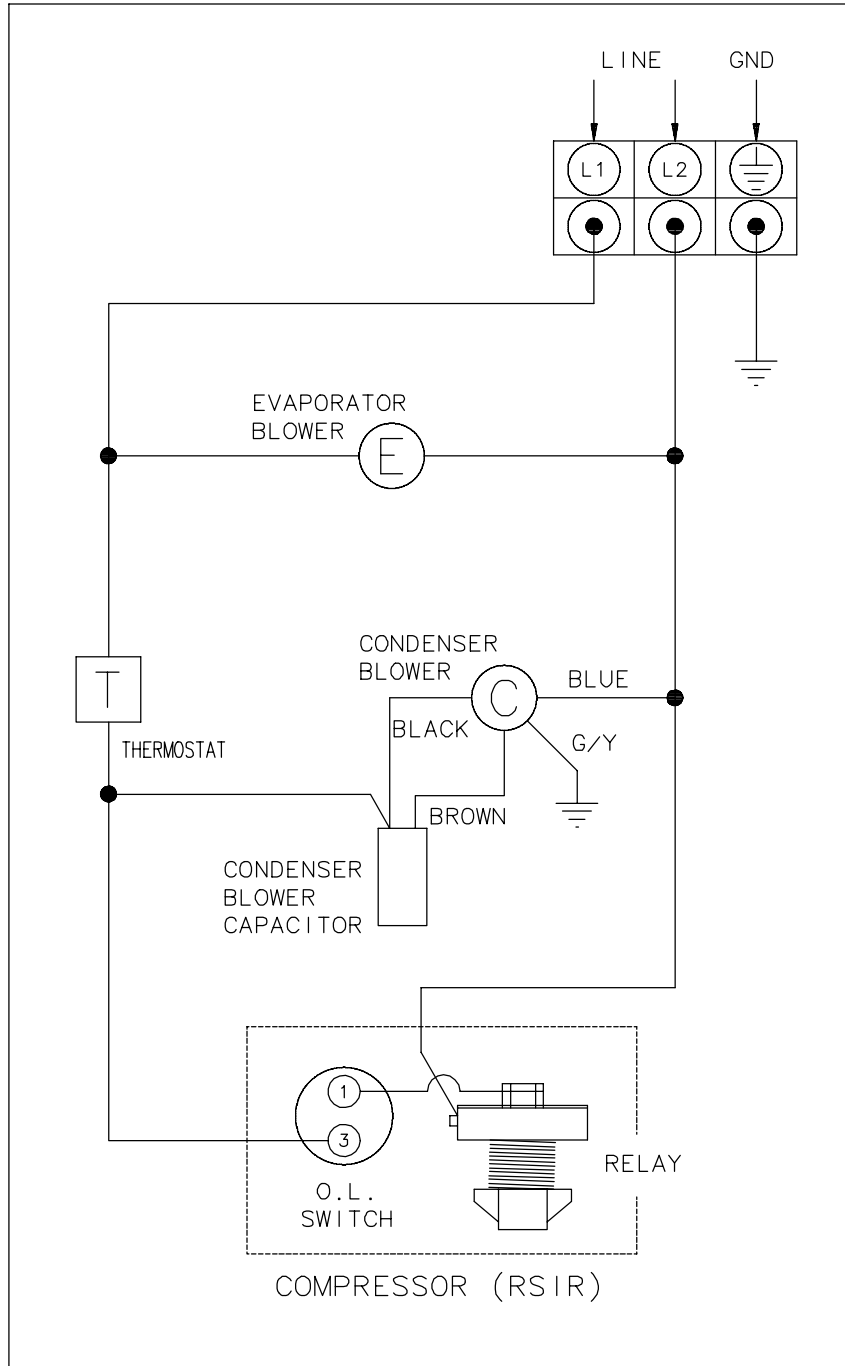
It is impossible to recommend a filter cleaning interval due to the wide variety of air quality conditions, as well as fluctuations in operating duty cycles of the air conditioner. Amounts of airborne dust/dirt particles are different in every location. It is recommended that when a fine layer of dust or lint is visible on the surface of the filter, it should be flushed, drained, coated with proper adhesive and reinstalled.

Do not run the air conditioner for an extended period of time with the inlet filter removed. Particles of dust, lint, etc. can plug the fins of the condenser coil which will give the same reaction as a plugged filter. The condenser coil is not visible through the filter opening, so protect it with a clean filter.

REPLACEMENT FILTERS

Replacement air filters are available from Hoffman Enclosures Inc.. Order by air conditioner catalog number, and description of filter. Contact Hoffman Customer Service.

WIRING SCHEMATIC



WARRANTY POLICY

Hoffman warrants that all material and workmanship are free of defects in quality which impair the usefulness of the product for a period of one year from the date of purchase for the hermetic system components, and the air moving devices when installed and operated under the following conditions:

A. Maximum voltage variation no greater than plus or minus 10% of nameplate nominal rating.

B. Maximum frequency variation no greater than plus or minus 3 Hz. of nameplate nominal rating.

C. Must not exceed minimum and maximum stated temperatures on the nameplates.

D. Not to exceed (BTU/HR) rating, including any heat sink, as indicated on the nameplate.

E. The unit must not be restarted for a period of one minute after intentional or accidental shut-off.

Not covered in this warranty is damage to the air conditioner due to the introduction of other than the nameplate designated refrigerant, operation in an abnormal or corrosive atmosphere, or prolonged operation with dirty filters.

Should any part prove defective within the above stated time periods, Hoffman will

repair the part or provide a replacement (new or rebuilt) part at Hoffman's option without charge, but will not provide labor or reimbursement for labor for removal or installation of any such part. Parts supplied as warranty replacement parts will assume the balance of the warranty on the part returned for warranty consideration.

Hoffman assumes no liability beyond the repair or replacement of its own product, returned transportation prepaid. Customer modification of any Hoffman product voids this warranty.

The purchaser assumes the responsibility of grounding the unit and installing it in accordance with local electrical and safety codes, as well as the National Electric Code (NEC) and (OSHA).

This express warranty constitutes the entire warranty with respect to the PRODUCT and IS IN LIEU OF ALL OTHERS, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND IN NO EVENT IS HOFFMAN RESPONSIBLE FOR ANY CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER.

Please complete and return the product registration and record of purchase card to Hoffman Enclosures Inc. *This card must be on file at Hoffman to consider any warranty claim.*



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A Pentair Company

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Ciudad Satélite,
Naucalpan, México C.P. 53100
011-52-55-5393-8263

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75334 Straubenhardt
49 (07082) 794-0 www.schroff.de

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