



Heating and Air Conditioning

**USER'S
INFORMATION
MANUAL**

SINGLE PACKAGE HEAT PUMP

Congratulations . . .

on your purchase of our Heat Pump. This energy efficient unit has been precision designed, manufactured of high-quality materials and has passed many rigorous inspections and tests to ensure years of satisfactory performance.

Please read this booklet thoroughly. It will help you understand your heat pump and will tell you how to operate it efficiently and how to obtain the greatest measure of comfort at the lowest operating expense.

We appreciate your interest in our products and your decision to purchase our Heat Pump. Enjoy your comfort.

This Heat Pump has been specially developed and built as a heat pump - to meet the dual needs of heating and cooling. It's not just an air conditioner with extra parts. That's why you can rely on efficient, trouble-free operation.

Your system is fully automatic. Set the thermostat and forget it. And it's automatically protected against damage by voltage fluctuations or excessive heating or cooling demands.

HOW YOUR HEAT PUMP WORKS

If your hand is wet and you blow on it, it feels cool because some of the moisture is evaporating and becoming a vapor. This process requires heat. The heat is being taken from your hand, as your hand feels cool.

That's what happens with a heat pump. During the cooling cycle, your system will remove heat and humidity from your home and will transfer this heat to the outdoor air.

During the heating cycle, your system will remove heat and humidity from the outdoor air* and will transfer this heat to your home. Remember that your heat pump doesn't generate much heat, it merely transfers it from one place to another.

*This is possible because even 0°F outdoor air contains a great deal of heat.

SYSTEM OPERATION

Your thermostat puts full control of the comfort level in your home at your fingertips.

DO NOT switch your thermostat "On" and "Off" or between "Heat" to "Cool". This could damage your

equipment. Always allow at least 5 minutes between changes.

Set your thermostat for heating or for cooling. Then set it for the desired temperature. Find the temperature that is most comfortable for you, and then leave your thermostat alone. Manually moving the thermostat up or down to extreme settings will not speed up temperature changes. Avoid moving the thermostat up during heating - particularly where a demand type electric meter is installed. This will increase your operating cost substantially.

CAUTION: The Main power to the system must be kept "On" at all times to prevent damage to the outdoor unit compressor. If necessary, the thermostat control switch should be used to turn the system "Off". Should the main power be disconnected or interrupted for 8 hours or longer, DO NOT attempt to start the system for 8 hours after the power has been restored to the outdoor unit. If heat is needed during this 8 hour period, use emergency heat.

HEATING CYCLE

With the thermostat in the heating position, and outdoor temperature in the range of 20 - 30° or below, the outdoor unit will generally run 100% of time.

When the outdoor air is cool and moist, frost may form on the surface of your outdoor coil. When this frost builds to a certain point, your system will switch to a defrost cycle. Although you may feel cooler air coming from your registers, DO NOT adjust your thermostat. This frost will melt quickly,

and your system will return to normal operation automatically.

COOLING CYCLE

Switch your thermostat to cool. Select a comfortable thermostat temperature setting, typically between 75 and 80 degrees. Comfort sensations vary with individuals. The lower the indoor temperature desired, the greater will be the number of hours your unit must operate.

Set your thermostat 2 or 3° F below normal several hours before entertaining large groups during hot weather. People give off considerable heat and moisture.

On an extremely hot day, the indoor temperature may rise 3 to 6°F above the thermostat setting. Properly selected equipment does not have the capacity to maintain a constant indoor temperature during this peak load. Over-sizing your system to handle this peak load isn't practical because the oversized system would operate much less efficiently at all other conditions.

AIDS TO MAXIMUM OPERATING EFFICIENCY

HEATING CONSERVATION

For the most efficient operation, keep storm windows and doors closed all year long. They not only help to insulate against heat and cold, but they also keep out dirt, pollen and noise.

Closing drapes at night, keeping fire place dampers closed when necessary will help you to retain the air you have already paid to heat.

COOLING CONSERVATION

To comfortably cool your home, your heat pump must remove both heat and humidity. Don't turn your system off even though you will be away all day. On a hot day, your system may have to operate between 8 and 12 hours to reduce the temperature in your home to a normal comfort level.

Keep windows closed after sundown. While the outdoor temperature at night may be lower than indoors, the air is generally loaded with moisture which is soaked up by furniture, carpets, and fabrics. This moisture must be removed when you restart your system.

The hotter the outside temperature, the greater the load on your system. Therefore do not be alarmed when your system continues to run after the sun has set on a hot day. Heat is stored in your outside walls during the day and will continue to flow into your home for several hours after sunset.

Use your kitchen exhaust fan when cooking. One surface burner on "High" requires one ton of cooling. Turn on your bathroom exhaust fan while showering to remove humidity.

You can also help your system in the summer by closing drapes or blinds and by lowering awnings on windows that get direct sunlight.

CARE OF SYSTEM

In order to insure long and trouble free service from your system, we recommend periodic inspection, cleaning, lubrication and adjustment by your installing Dealer/Contractor. Be sure to ask about this service.

For those who prefer to do-it-yourself, please follow the instructions listed below to care for your system.

PROPER CARE OF YOUR SYSTEM

CAUTION: Prior to any of the following maintenance procedures, shut off all power to the unit.

LUBRICATION

Both the indoor blower motor and outdoor fan motor are permanently lubricated and require no maintenance.

FILTER CARE

Single phase units are shipped without a filter and is the responsibility of the installer to place a high velocity filter into the return air duct system or install a filter/frame kit (1FF0114). The filter rack and filters are standard on three phase units.

Filters must always be used and must be kept clean. When filters become dirt laden, insufficient air will be delivered by the blower, decreasing your units efficiency and increasing operating costs and wear-and-tear on the unit and controls.

Filters should be checked monthly especially since the unit is used for both heating and cooling. You must have a high velocity permanent filters.

High velocity permanent filters may be removed for cleaning. Remove filters, vacuum or wash with a stream of water directly from a faucet or hose. Allow filters to dry and replace.

High velocity permanent filters should last for many years. How-

ever, if they ever need replacing, they must be replaced with the same size and type.

REGISTERS

Supply and return air registers must be open when the unit is in operation. Furniture must not block airflow in or out of the registers.

COIL CARE

An annual check and cleaning, if necessary, of the condenser coil should be done. Clean any debris and dirt from the outside coil face with a brush being careful not to damage the fins. If extremely dirty, a hose can be used to wash the coil from the inside out while brushing a soapy solution on the outside.

CLEARANCES

The minimum clearances shown below must be maintained should any patio or yard improvements be done around the outdoor unit.

TOP	36"	RIGHT SIDE	12"
FRONT	12"	LEFT SIDE	24"
REAR	0"	BOTTOM	0"

PARTS INFORMATION

UPG renew parts may be obtained from your local qualified UPG contractor-check the yellow pages in your telephone directory.

CHARACTERISTICS OF HEAT PUMPS

A CONSTANT HEAT

Heat pumps have a noticeably cooler supply air temperature than furnaces. The common practice of over-sizing furnaces contributes to an "off-and-on-again" operation with short blasts of hot supply air. The heat pump system is sized more closely to the heating needs of your home. Heat is supplied at a lower temperature over a longer period of

time to provide a more constant heat, and it may give you the impression that your system "never stops running".

WATER RUN - OFF

During the heating cycle, you may notice water running off the outdoor coil. Moisture from the air is condensed on the outside surface of the coil where it gathers and runs off.

No need for alarm, your unit has not sprung a leak!

OUTDOOR COIL DEFROSTING

At certain outdoor conditions (low temperature, high humidity), frost may build up on the coil of the outdoor unit. In order to maintain heating efficiency, the system will automatically defrost itself.

Water vapor rising from the outdoor unit is normal and is an indication of proper operation. The vapor cloud will only last for a few minutes. When the defrost cycle is completed, the system will automatically switch back to heating. Electric heat is automatically energized to maintain comfort during defrost.

TROUBLESHOOTING GUIDE

PROBLEM	CORRECTION
NO HEAT	Check thermostat for proper setting Check circuit breaker and fuses. Check filters. Call qualified service man.
NOT ENOUGH HEAT - OUTDOOR UNIT NOT RUNNING	Check thermostat for proper setting. Check circuit breaker and fuses. Switch thermostat to Emergency Heat position. Call qualified service man.
NO COOLING	Check thermostat for proper setting. Check circuit breaker and fuses. Check filters. Call qualified service man.
ELECTRICAL POWER INTERRUPTION (ice, snow, or wind storms)	Procedure Heating Season: 1. Switch thermostat to Emergency Heat.* 2. Leave on Emergency Heat for at least 12 hours after electrical power is re-established. 3. Switch thermostat back to Heating or Auto. Procedure Cooling Season: 1. Switch thermostat to Off position. 2. Do not switch to Cooling or Auto unit electrical power has been re-established for 4 hours.

*There will be no heat available until power is re-established.



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