OWNER'S MANUAL

OUTDOOR SPLIT-SYSTEM HEAT PUMP

15 SEER 2.5 TO 5 TONS

MODELS: **E4TS030**
E4TS036
E4TS048
E4TS060

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Congratulations . . .

On your purchase of one of the most versatile heat pump systems available in the industry today. This Stealth series high efficiency system has been precision designed, manufactured of high quality materials and has passed many vigorous inspections and tests to ensure years of satisfactory service.
This booklet is meant to increase your understanding of your system, tell you how to operate it efficiently and how to obtain the greatest measure of comfort at the lowest operating expense. Please read this booklet thoroughly.
We appreciate your interest in our product and your decision to purchase our system. 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 from damage by voltage fluctuations or excessive heating or cooling demands.

Your split system heat pump consists of two units - one installed outdoors and one installed indoors. The indoor unit may be installed in a basement, attic, or crawl space.

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, so 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. This is possible because even 0°F outdoor air contains a great deal of heat. Remember that your heat pump doesn't generate much heat, it merely transfers it from one place to another

SYSTEM OPERATION

THERMOSTATS

Though thermostats may vary widely in appearance they are all designed to perform the same basic function, to control the operation of your air conditioning system. Regardless of size or shape, each thermostat will feature a temperature indicator; a dial, arm or push button for selection of the desired temperature; a fan switch to choose the indoor fan operation; and a comfort switch for you to select the system mode of operation.

Your new unit will require a three stage heating / two stage cooling thermostat for optimum efficiency and energy savings. **Please be aware that many different thermostats operate on batteries or "power stealing" principals. UPG can not support such models to be trouble free when used with this unit.**

The following illustrations and discussion will aid you to determine which type of thermostat you have for your system.

A complete operating instruction is provided by the manufacturer for each thermostat. Familiarize yourself with its proper operation to obtain the maximum comfort with a minimum of energy consumption.

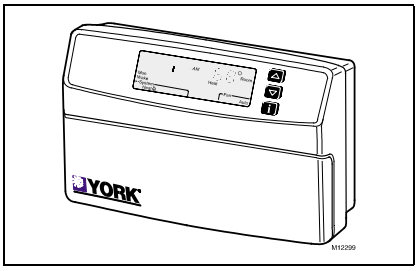

FIGURE 1:PROGRAMMABLE ELECTRONIC THERMOSTAT

FAN OPERATION SELECTION

A multi-position fan switch allows you to choose the type of fan operation of the indoor fan.

AUTO

With the thermostat fan switch set to "AUTO", the fan will run intermittently as required for either heating or cooling. This position will provide the lowest operating cost. If you purchased one of the recommended thermostats, they have an Intelligent fan mode which continually circulates the air during occupied modes or when you are at home, and can cycle the fan during unoccupied mode or during the night while you sleep to further conserve energy.

ON

CONTINUOUS FAN OPERATION: With the thermostat fan switch set to "ON", the indoor fan will not shut off. However, the cooling and heating systems will still operate as required by room temperatures. This provides continuous air filtering and more even temperature distribution to all conditioned spaces.

FAN ONLY OPERATION: On moderate days, usually during spring and fall, when neither heating nor cooling is required, you may want to run only the fan to ventilate, circulate and filter the air in your home or building. Set the comfort control switch to "OFF" and the fan switch to "ON". Be sure to return the switches to their original positions for normal operation.

⚠ 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 the outdoor temperature in the range of 20 to 30° or below, the outdoor unit will generally run 100% of the time.

All E*TS systems are equipped with balance point control to provide even more efficient operation. This control will prevent the electric heater from being energized when the outdoor air is above some predetermined temperature setting (0 to 45° F). At higher temperatures, your system will provide all the heat your home will ever need. At lower temperatures, the supplemental electric heat will be energized to keep your home comfortable.

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. The frost will melt quickly, and your system will return to normal operation automatically.

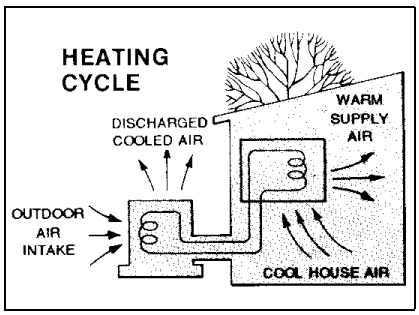

FIGURE 2:

COOLING CYCLE

Switch your thermostat to cool. Select a comfortable thermostat temperature setting, typically between 75 and 80°. 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.

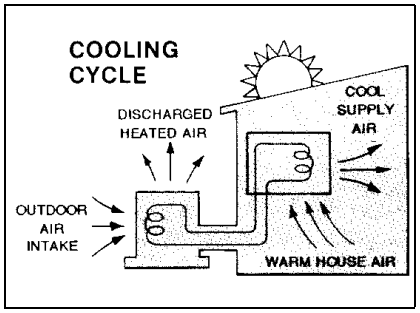

FIGURE 3:

TO MAXIMIZE OPERATING EFFICIENCY

HEATING CONSERVATION

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

Closing the drapes at night, keeping fireplace dampers closed when not in use, and running exhaust fans only 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

A periodic inspection, cleaning, lubrication and adjustment of your heat pump is available from your dealer. Be sure to ask him about this service. For those who prefer to do-it-yourself, follow the instructions below to care for your system.

COIL CARE

Keep outdoor unit free of snow, foliage and grass, grass clippings, leaves, paper, and any other material which could restrict proper air flow in and out of the unit. The coil may be vacuumed to remove any debris from between the fins.

If the coil becomes excessively dirty, turn the Main Disconnect Switch to “OFF” and wash the coil with your garden hose. Avoid getting water into the fan motor and control box. Flush dirt from base pan after cleaning the coil.

FILTER CARE

Inspect the air filter(s) at least once a month. If they are dirty, wash reusable filters with a mild detergent per manufacturer's recommendations. Replace disposable filters with new filters.

Install the clean filters with “air flow” arrow in the same direction as the air flow in your duct. Filters should be clean to assure maximum efficiency and adequate air circulation. Drapes, furniture or other obstructions blocking your supply and return air grilles will decrease efficiency.

NOTE: There will be no heat available until power is reestablished.

<u>HEATING SEASON</u>

1. Leave on Emergency Heat for at least 8 hours after electrical power is reestablished if the power was off more than 8 hours.
2. Switch thermostat back to Heating or Auto.

<u>COOLING SEASON</u>

1. Switch thermostat to Off position.

2. Do not switch to Cooling or Auto until electrical power has been reestablished for 8 hours if the power was off more than 8 hours.

SERVICE CALLS

There are a few instances where you can avoid unnecessary service calls.

(See Troubleshooting Guide above). The flashing light on the system thermostat of E*TS units is capable of providing you with time and money saving information. The fault code numbers listed can be handled by taking the corrective action indicated. Call qualified serviceman if displaying fault code numbers not listed.

PARTS INFORMATION

Replacement parts are available from local YORK contractor/dealers or the nearest YORK distribution center.

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, in mild weather 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. *Steam 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	CHECK:	ACTION TO TAKE	FAULT CODE
NO HEAT OR COOLING	1. Thermostat for proper setting.	Set thermostat to proper setting.	-
	2. Circuit breakers and fuses.	Reset circuit breakers - Replace blown fuses.	-
	3. Check Outdoor unit for dirty coil. (Cooling)	Clean coil, see “Coil Care” section.	2
	4. Outdoor unit for snow accumulation. (Heating)	Remove snow.	5
	5. Indoor unit for dirty filter. (Heating)	Clean or Replace, see “Filter Care” section.	2
	6. Emergency Heat Light Status on thermostat.		
	After completing the checks and actions above, turn thermostat to “OFF” for 10 seconds and attempt restart. Wait 5 minutes. If system does not start, call qualified serviceman. Obtain the fault code number of times the Emergency Heat light on the thermostat flashes between pauses.		

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