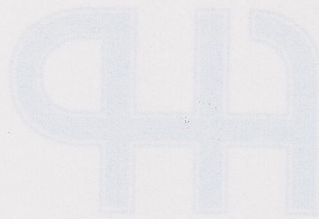


GUIDE SPECIFICATIONS

SE SERIES



FHP MANUFACTURING
Florida Heat Pump Environmental Equipment

mounted to rigid copper tubes in a staggered pattern not less than three rows deep and have a 450 PSIG working pressure. The coaxial water-to-refrigerant heat exchanger shall be constructed of a convoluted copper (optional expanded) inner tube and steel outer tube with a designed refrigerant working pressure of 450 PSIG.

FAN MOTOR & ASSEMBLY - The fan shall be a direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low velocity operation. The fan housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the fan motor. The fan motor shall be three speed PSC type. The motor shall be permanently lubricated and have thermal overload protection.

ELECTRICAL - Controls and safety devices will be factory wired and repaired within the unit. Controls shall include fan relay, compressor contactor, JAV transformer, reversing valve coil and lockout relay. A terminal block with screw terminals will be provided for field control wiring. When the safety controls are activated to prevent compressor short cycling, the lockout circuit must be reset at the thermostat or main circuit breaker. A lockout indicating terminal shall be provided in the low voltage circuit. An optional five minute time delay contact shall be provided to prevent short cycling of the compressor (delay on break). An optional reset second low pressure bypass time delay control shall be provided to prevent nuisance lockouts during cold weather startup. Safety devices include a low pressure control set at 30 PSIG and a high pressure control set at 380 PSIG. An optional condenser over flow safety switch shall be factory installed to stop compressor operation. An optional energy management relay to allow unit control by an external source shall be factory installed.

PIPING - Supply return water and condensate drain connections shall be brass female pipe thread fittings and mounted flush to cabinet exterior with optional stainless steel braided hose kit with swing connector.

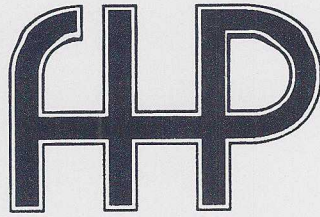
GENERAL - Units shall be A.R.I. Standard 32B performance certified and Indoor Air Quality Association (IAQ) listed and Canadian Standards Association (CSA) certified for safety. Each unit shall be run tested at the factory. Each unit shall be pallet mounted and shipped in a corrugated box.

The unit shall be warranted by the manufacturer against defects in materials and workmanship for a period of one year on all parts, and 2 years on the compressor.

The unit shall be designed to operate with entering liquid temperature between 52°F and 92°F as manufactured by FHP Manufacturing in Fort Lauderdale, Florida.

CABINET & CABINET - The cabinet shall be fabricated from heavy gauge "palm-rip" galvanized steel and finished with two coats of lacquer epoxy. The interior shall be insulated with 1" thick multi-density coated glass fiber. All units shall allow sufficient service access to replace the compressor without unit removal. One blower and two compressor compartment access panels shall be removable with supply and return ductwork in place. A door collar shall be provided on the supply air opening. A 1" return air filter rack/dust collar which uses standard size 1" filters shall be provided with each unit. The unit shall have an insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise and to permit operational service testing without air bypass.

REFRIGERANT CIRCUIT - All units shall contain a sealed refrigerant circuit including a hermetic compressor, capillary tube metering device, flared tube air-to-refrigerant heat exchanger, refrigerant reversing valve and service ports. Compressor shall be high efficiency designed for heat pump duty and mounted on vibration isolation. Compressor motor shall be equipped with internal overload protection. Refrigerant reversing valves shall be pilot operated sliding piston type with replaceable encapsulated magnetic coil energized only during the cooling cycle. The flared tube coil shall be constructed of brass minimum for not exceeding fourteen (14) per inch.



FHP MANUFACTURING
Florida Heat Pump Environmental Equipment

GUIDE SPECIFICATIONS

SE SERIES

GENERAL – Units shall be A.R.I. Standard 320 performance certified and Underwriters Laboratories (UL) listed and Canadian Standards Association (CSA) certified for safety. Each unit shall be run tested at the factory. Each unit shall be pallet mounted and shipped in a corrugated box.

The units shall be warranted by the manufacturer against defects in materials and workmanship for a period of one year on all parts, and 5 years on the compressor.

The units shall be designed to operate with entering liquid temperature between 55°F and 95°F as manufactured by FHP Manufacturing in Fort Lauderdale, Florida.

CASING & CABINET – The cabinet shall be fabricated from heavy-gauge "paint-grip" galvanized steel and finished with two coats of lacquer acrylic. The interior shall be insulated with 1/2" thick, multi density, coated glass fiber. All units shall allow sufficient service access to replace the compressor without unit removal. One blower and two compressor compartment access panels shall be removable with supply and return ductwork in place. A duct collar shall be provided on the supply air opening. A 2" return air filter rack/duct collar which uses standard size 1" filters shall be provided with each unit. The units shall have an insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise, and to permit operational service testing without air bypass.

REFRIGERANT CIRCUIT – All units shall contain a sealed refrigerant circuit including a hermetic compressor, capillary tube metering device, finned tube air-to-refrigerant heat exchanger, refrigerant reversing valve and service ports. Compressors shall be high efficiency designed for heat pump duty and mounted on vibration isolators. Compressor motors shall be equipped with internal overload protection. Refrigerant reversing valves shall be pilot operated sliding piston type with replaceable encapsulated magnetic coil energized only during the cooling cycle. The finned tube coil shall be constructed of lanced aluminum fins not exceeding fourteen fins per inch

bonded to rifled copper tubes in a staggered pattern not less than three rows deep and have a 450 PSIG working pressure. The coaxial water-to-refrigerant heat exchanger shall be constructed of a convoluted copper (optional cupronickel) inner tube and steel outer tube with a designed refrigerant working pressure of 450 PSIG.

FAN MOTOR & ASSEMBLY – The fan shall be a direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low velocity operation. The fan housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the fan motor. The fan motor shall be three speed PSC type. The motor shall be permanently lubricated and have thermal overload protection.

ELECTRICAL – Controls and safety devices will be factory wired and mounted within the unit. Controls shall include fan relay, compressor contactor, 24V transformer, reversing valve coil and lockout relay. A terminal block with screw terminals will be provided for field control wiring. When the safety controls are activated to prevent compressor short cycling, the lockout circuit must be reset at the thermostat or main circuit breaker. A lockout indicating terminal shall be provided in the low voltage circuit. An optional five minute time delay control shall be provided to prevent short cycling of the compressor (delay on break). An optional ninety second low pressure bypass time delay control shall be provided to prevent nuisance lockouts during cold weather startup. Safety devices include a low pressure cutout set at 20 PSIG and a high pressure cutout control set at 380 PSIG. An optional condensate over flow safety switch shall be factory installed to stop compressor operation. An optional energy management relay to allow unit control by an external source shall be factory installed.

PIPING – Supply, return water and condensate drain connections shall be brass female pipe thread fittings and mounted flush to cabinet exterior with optional stainless steel, braided hose kit with swivel connectors.