

Electrical components shall be listed and labeled as defined in NFPA 70 by a qualified testing agency, and marked for intended location and application.

Air conditioning unit shall comply with applicable requirements of ARI 210/240 and/or ARI 390.

Manufacturer's standard warranty in which the manufacturer agrees to repair or replace components of self contained air conditioners that fail in materials or workmanship within five years from date of substantial completion for compressors, and two years from substantial completion for all other components.

Although the self contained heat pump air conditioner is designed to be wall mounted, the metal frame building is unable to support the units weight. The self contained air conditioning unit shall be supported using structural steel members standing and fastened to a 4" thick concrete base. The unit shall be mounted so that supply air is delivered at least 8 feet above finish floor.

The metal frame building shall have penetrations for return and supply air. G90 sheet metal supply and return duct extensions shall be sealed to the unit's supply and return flange connections and extended inside the metal frame building at least 4" for the return and 12" for the supply. The penetration openings shall be boxed with steel stud members and secured to the building floor. The penetrations shall be flanged both inside and outside and flashed and sealed watertight using silicone caulking.

The Self contained air conditioning shall be factory assembled, wall mount configuration, vertical unit arrangement with horizontal return (low) and supply (high) connections.

The frame and cabinet shall be made with structural steel frame with 20 gauge galvanized steel panels and access door. The exterior finish shall be factory painted in the standard factory color. Foil faced unit insulation shall be a minimum of 1/2" thick complying with ASTM C 1091.

The supply fan shall be constructed from galvanized steel in a double width, double inlet, forward curved configuration, statically and dynamically balanced. The fan and motor shall be mounted on a common base assembly with spring isolation.

Outside air intake shall be fixed position, set to 10% outside air.

The compressors shall be scroll type, hermetically sealed, 3600 rpm maximum speed with positive lubrication and internal motor protection. The refrigerant coil shall be seamless copper tube expanded into aluminum fins. The coil shall have a stainless steel drain pan to catch condensate. A 3/4" condensate p-trap and condensate drain pipe shall connect to the condensate pan discharge and terminated 6" above grade.

The refrigeration system shall be R-410A and also have an expansion valve with replaceable thermostatic element, refrigerant dryer, high pressure switch, low pressure switch, thermostat for coil freeze up protection, low ambient temperature switch. Brass service valves shall be installed on discharge and liquid lines. The unit shall have low ambient controls designed to operate down to 18 degrees F.

The control package shall be factory wired, including contactor, high and low pressure cutouts, internal winding thermostat for the compressor, control circuit transformer and non cycling reset relay. A factory mount disconnect switch shall be mounted inside the cabinet. A time delay relay shall be configured to provide a five minute delay to prevent compressor cycling.

A unit mounted thermostat shall control the supply fan, compressor, condenser fan and have a heat-off-auto-cool selector switch

Unit Characteristics

- Total cooling capacity: 32,400 btu per hour. 3.5 tons minimum.
- Sensible cooling capacity: 32,400 btu per hour
- EER: 11.1 minimum
- Cooling coil entering air temperature: 70F dry bulb, 54.2 wet bulb
- Leaving air temperature: 56F dry bulb
- Heat capacity: 9,400 btu per hour in heat pump mode at 32 degrees F.
- Supply fan: 3/4 HP, 4.0 amps, 1250 cfm
- Filter: MERV 8
- Single point electrical connection: 460 volts, 3 phase, 60 Hz. Compressor: 6.1 RLA, 44 LRA. Condenser fan motor: 1/3 HP, 2.5 amps, condenser fan 2,900 cfm @ 24" diameter.
- Shipping weight: 550 pounds



THE WALL-MOUNT™ "QUIET CLIMATE" HEAT PUMPS

Models: T24H to T60H **11 EER**
Heating Capacities: 22,600 to 54,000 BTUH
Cooling Capacities: 22,800 to 57,500 BTUH

GREEN REFRIGERANT
R-410A

The Bard Wall-Mount Heat Pump is a self-contained energy efficient heating and cooling system, which is designed to offer maximum indoor comfort at a minimal cost without using valuable indoor floor space or outside ground space. This unit is the ideal product for versatile applications such as: new construction, modular offices, school modernization, telecommunication structures, portable structures or correctional facilities. Factory or field installed accessories are available to meet specific job requirements.

Engineered Features

Aluminum Finned Copper Coils:

Grooved tubing and enhanced louvered fin for maximum heat transfer and energy efficiency.

Twin Blowers:

Move air quietly. All models feature variable speed blower motors providing airflow adjustment for high and low static operation. Motor overload protection is standard on all models.

ECM Indoor Blower Motor:

Features a variable speed motor providing super-high efficiency, low sound levels and soft-start capabilities. The motor is self-adjusting to provide the proper airflow rate for the staged capacity, and for higher static pressure in ducted installations without user adjustment or wiring changes.

Heat Pump Compressor:

Scroll Compressors are standard on all 2 to 5 ton models. Eliminates need for crankcase heater.

Double isolated floating compressor mounting system and compressor sound blanket for reduced outdoor sound level.

Phase Rotation Monitor:

Standard on all 3 phase scroll compressors. Protects against reverse rotation if power supply is not properly connected.

R-410A Refrigerant:

Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements.

Liquid Line Filter Drier:

Standard on all units. Protects system against moisture.

Galvanized 20 Gauge Zinc Coated Steel Cabinet:

Cleaned, rinsed, sealed and dried before the polyurethane primer is applied. The cabinet is handsomely finished with a baked on, beige textured enamel, which allows it to withstand 1000 hours of salt spray tests per ASTM B117-03.

Aluminum and Stainless Steel cabinets available.

Foil Faced Insulation:

Standard on all units.

Electrical Components:

Are easily accessible for routine inspection and maintenance through a right side, service panel opening. Features a lockable, hinged access cover to the circuit breaker or rotary disconnect switch.

Electric Heat Strips:

Features an automatic limit and thermal cut-off safety control. Heater packages are factory or field installed for all 2 through 5 ton models. Features easy slide-in field assembly with various BTUH outputs.

Condenser Fan and Motor Shroud Assembly:

Slide out for easy access.

Filter Service Door:

Separate service door provides easy access for filter change.

One Inch, Disposable Air Filters:

Are standard equipment. Optional one inch washable filters available and filter racks permit the addition of 2" pleated filter. Factory or field installed.

Solid State Electronic Heat Pump Control:

Provides efficient 30, 60 or 90 minute defrost cycle. A thermistor sensor, speed up terminal for service and 10 minute defrost override are standard on the electronic heat pump control.

High & Low Pressure Switches are Auto-Reset:

Standard on all units. Built-in lockout circuit resets from the room thermostat. Provides commercial quality protection to the compressor.

Five Minute Compressor Time Delay:

Short cycle protection is standard. Built into the heat pump control.

Emergency Heat Circuit:

Permits continuous operation of the system.

Barometric Fresh Air Damper:

Standard on all units. Allows up to 25% outside fresh air. Not installed if other optional vent packages selected.



Built-in Circuit Breakers:

Standard on all electric heat versions of single and three phase (230/208 volt) equipment. Rotary disconnects are standard on all electric heat versions of three phase (460 volt) equipment.

Slope Top:

Standard feature for water run-off.

Full Length Mounting Brackets:

Built into cabinet for improved appearance and easy installation. NOTE: Bottom mounting bracket included to assist in installation.

Top Rain Flashing:

Standard feature on all models.

Ventilation System Packages

Six ventilation options are available. See Page 3 for details on these options.



- Complies with efficiency requirements of ANSI/ASHRAE/IESNA 90.1-2010.
- Certified to ANSI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05, Third Edition.
- Commercial Product - Not intended for Residential application.

Attachment One to Amendment 0002 of Solicitation VA258-12-R-0065

HVAC Information

Capacity and Efficiency Ratings

MODELS	T24H1	T30H1	T36H1	T42H1	T48H1	T60H1
Cooling BTUH ①	22,600	28,000	34,200	40,000	47,000	57,500
EER ②	11.3	11.0	11.3	11.1	11.3	10.7
High Temp Heating (47F) BTUH ①	22,200	26,800	33,200	39,000	43,000	54,000
COP ②	3.3	3.3	3.4	3.3	3.5	3.2
Low Temp Heating (17F) BTUH ①	12,600	16,500	19,500	23,000	26,000	32,000
COP ②	2.0	2.2	2.2	2.0	2.3	2.2

① Capacity is certified in accordance with ANSI/ARI Standard 390-2003.

② EER = Energy Efficiency Ratio, COP = Coefficient of Performance and are certified in accordance with ANSI/ARI Standard 390-2003.

All ratings based on fresh air intake being 100% closed (no outside air introduction).

Specifications 2 through 3 Ton

MODELS	T24H1-A	T24H1-B	T24H1-C	T30H1-A	T30H1-B	T30H1-C	T36H1-A	T36H1-B	T36H1-C
Electrical Rating -- 60 HZ	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Operating Voltage Range	197 - 253	197 - 253	414 - 506	197 - 253	197 - 253	414 - 506	197 - 253	197 - 253	414 - 506
Compressor -- Circuit A									
Voltage	230/208	230/208	460	203/208	230/208	460	230/208	230/208	460
Rated Load Amps	7.8 / 8.9	4.2 / 4.7	2.4	10.4 / 11.8	6.6 / 7.5	3.6	14.3 / 16.5	9.0 / 10.3	5.8
Branch Circuit Selection Current	13.5	7.1	3.6	14.2	9.0	4.2	16.7	10.5	5.8
Lock Rotor Amps	58 / 58	55 / 55	28	73 / 73	58 / 58	28	79 / 79	73 / 73	38
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
Fan Motor -- HP - RPM - SPD	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/5-1050-1	1/3-825-2	1/3-825-2	1/3-825-2
Fan Motor -- Amps	1.5	1.5	.8	1.5	1.5	.8	2.5	2.5	1.1
Fan -- DIA - CFM	20"-1900	20"-1900	20"-1900	20"-1900	20"-1900	20"-1900	24"-2900	24"-2900	24"-2900
Motor & Evaporator									
Blower Motor -- HP - RPM - SPD	1/3 Var.	1/3 Var.	1/3 Var.	1/3 Var.	1/3 Var.	1/3 Var.	1/2 Var.	1/2 Var.	1/2 Var.
Blower Motor -- Amps	2.8	2.8	2.8	2.8	2.8	2.8	3.2	3.2	3.2
CFM Cooling & E.S.P. w/Filter (Rated - Wet Coil)	800 - .10	800 - .10	800 - .10	900 - .10	900 - .10	900 - .10	1100 - .15	1100 - .15	1100 - .15
Filter Sizes (inches) STD	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1
Shipping Weight -- LBS.	400	400	400	400	400	400	550	550	550

Specifications 3-1/2 through 5 Ton

MODELS	T42H1-A	T42H1-B	T42H1-C	T48H1-A	T48H1-B	T48H1-C	T60H1-A	T60H1-B	T60H1-C
Electrical Rating -- 60 HZ	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Operating Voltage Range	197 - 253	197 - 253	414 - 506	197 - 253	197 - 253	414 - 506	197 - 253	197 - 253	414 - 506
Compressor -- Circuit A									
Voltage	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	16.3 / 18.1	12.3 / 13.7	6.1	15.7 / 17.7	9.9 / 11.1	6.7	20.5 / 23.2	12.2 / 13.8	6.9
Branch Circuit Selection Current	18.1	13.7	6.1	21.8	13.8	6.7	26.3	15.7	7.8
Lock Rotor Amps	112 / 112	88 / 88	44 / 44	117 / 117	83 / 83	41 / 41	134 / 134	110 / 110	52 / 52
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
Fan Motor -- HP - RPM - SPD	1/3-825-2	1/3-825-2	1/3-825-1	1/3-825-2	1/3-825-2	1/3-825-1	1/2-1025-1	1/2-1025-1	1/2-1025-1
Fan Motor -- Amps	2.5	2.5	1.3	2.5	2.5	1.3	3.8	3.8	3.8
Fan -- DIA - CFM	24"-2900	24"-2900	24"-2900	24"-2900	24"-2900	24"-2900	24"-3700	24"-3700	24"-3700
Motor & Evaporator									
Blower Motor -- HP - RPM - SPD	3/4 Var.	3/4 Var.	3/4 Var.	3/4 Var.	3/4 Var.	3/4 Var.	3/4 Var.	3/4 Var.	3/4 Var.
Blower Motor -- Amps	4.0	4.0	4.0	4.9	4.9	4.9	4.9	4.9	4.9
CFM Cooling & E.S.P. w/Filter (Rated - Wet Coil)	1250 - .15	1250 - .15	1250 - .15	1550 - .2	1550 - .2	1550 - .2	1650 - .2	1650 - .2	1650 - .2
Filter Sizes (inches) STD	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1
Shipping Weight -- LBS.	550	550	550	575	575	575	575	575	575