THE WALL-MOUNT™ "QUIET CLIMATE" HEAT PUMPS

Models: T42H to T60H Up to 11.1 EER
Heating Capacities: 39,000 to 56,000 BTUH
Cooling Capacities: 39,500 to 60,000 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

Copper Tube / Aluminum Fin Coils:
Grooved copper tubing and enhanced aluminum fins provide maximum heat transfer and high energy efficiency. Standard evaporator coils use green fin stock for additional protection. Optional corrosion resistant coated coils are also available.

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.

Stainless Steel cabinets available.

Foil Faced Insulation:
Standard on all units. Insulation used is non-fiberglass

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.

* The AHRI Certified® mark indicates Bard Manufacturing Company participation in the AHRI Certification program. For verification of individual certified products, go to www.ahridirectory.org.

- Complies with efficiency requirements of ASHRAE/IESNA 90.1-2019.
- 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, Fourth Edition.
- Commercial Product - Not intended for Residential application.

Form No. S3436-0722
Supersedes S3436-0522

Capacity and Efficiency Ratings

MODELS	T42H1	T48H1	T60H2
Cooling BTUH ①	39,500	46,500	60,500
EER ②	11.0	11.0	11.0
High Temp Heating (47F) BTUH	39,000	43,000	56,000
COP ②	3.3	3.4	3.3
Low Temp Heating (17F) BTUH	23,000	26,000	37,000
COP ②	2.0	2.3	2.5

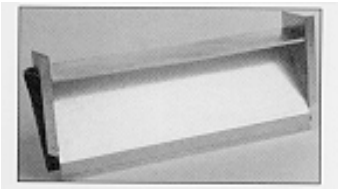
① Capacity is certified in accordance with ANSI/ARI Standard 390-2003.
② EER = Energy Efficiency Ratio, COP = Coefficient of Performance and are certified in accordance with ANSI/ARI Standard 390-2003. All ratings based on fresh air intake being 100% closed (no outside air introduction).

Specifications 3-1/2 through 5 Ton

MODELS	T42H1-A	T42H1-B	T42H1-C	T48H1-A	T48H1-B	T48H1-C	T60H2-A	T60H2-B	T60H2-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	22.9 / 25.5	17.2 / 19.2	9.9
Branch Circuit Selection Current	18.1	13.7	6.1	21.8	13.8	6.7	25.5	19.2	9.9
Lock Rotor Amps	112 / 112	88 / 88	44 / 44	117 / 117	83 / 83	41 / 41	166 / 166	110 / 110	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
Blower Motor & Evap.									
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

Ventilation System Packages

Bard Wall-Mounts are designed to provide optional ventilation packages to meet all of your ventilation and indoor air quality requirements. All units are equipped with a barometric fresh air damper as the standard ventilation package. All ventilation packages can be built-in at the factory, or field-installed at a later date.



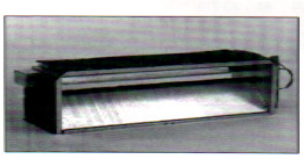
Barometric Fresh Air Damper

BAROMETRIC FRESH AIR DAMPER - BFAD — STANDARD

The barometric fresh air damper is a standard feature on all models. It is installed on the inside of the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The damper opens during blower operation and closes when the blower is off. Adjustable blade stops allow different amounts of outside air to be introduced into the building and can be easily locked closed if required.

BLANK OFF PLATE - BOP — OPTIONAL

A blank off plate is installed on the inside of the service door. It covers the air inlet openings which restricts any outside air from entering into the unit. The blank off plate should be utilized in applications where outside air is not required to be mixed with the conditioned air.



Motorized Fresh Air Damper

MOTORIZED FRESH AIR DAMPER - MFAD — OPTIONAL

The motorized fresh air damper is internally mounted behind the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The two position damper can be fully open or closed. The damper blade is powered open by a 24VAC motor with spring return on power loss. The damper can be controlled by indoor blower operation or can be field connected to be managed based on building occupancy.

NOTE: The above vent systems are intake only without built-in exhaust capability. Building will likely require separate field installed barometric relief or mechanical exhaust elsewhere within the conditioned space. Balancing dampers in the return air grille may be required to achieve specified amount of outdoor air intake.

Commercial Room Ventilator

COMMERCIAL ROOM VENTILATOR - CRV — OPTIONAL

The built-in commercial room ventilator is internally mounted behind the service door and allows outside ventilation air, up to 50% of the total airflow rating of the unit, to be introduced through the air inlet openings. It includes a built-in exhaust air damper. A solid state board allows for simple on/off operation based on 24VAC signal or full modulation with a 2-10VDC signal.

The commercial room ventilator (CRV) is a simple and innovative approach to improving the indoor air quality by providing fresh air intake and exhaust capability through the CRV. The damper can be easily adjusted to control the amount of fresh air supplied into the building. The CRV can be controlled by indoor blower operation or field controlled based on room occupancy. The CRV is power open - spring return on power loss. Complies with ANSI/ASHRAE Standard 62.1 "Ventilation for Acceptable Indoor Air Quality."

Models Available: CRVS - spring return on power loss or deactivation

Economizer

ECONOMIZER - ECONWM-Series — OPTIONAL

The built-in economizer system is internally mounted behind the service door and allows outdoor air to be introduced through the air inlet openings. The amount of outdoor air varies in response to the system controls and settings defined by the end user. It includes a built-in exhaust air damper. The economizer is designed to provide "free cooling" when outside air conditions are cool and dry enough to satisfy cooling requirements without running the compressor. This in turn provides lower operating costs, while extending the life of the compressor. A relief damper may be necessary for this model when using the economizer.

- ECONWMT Equipment Building versions have extended 11" air intake hood to deliver up to 100% of cooling rated airflow.
- ECONWMS Standard versions have 3" air intake hood to deliver up to 75% of cooling rated airflow.

Standard Features:

- Fully modulating
- Honeywell Direct Drive Hi-Torque Actuator
- No linkage required
- Simple single blade design
- Positive shut-off with non-stick gaskets
- Electronic DB and/or Enthalpy sensors depending upon version
- Honeywell JADE™ electronic economizer module with precision settings and diagnostics
- DB or Enthalpy economizer versions available

Energy Recovery Ventilator

WALL-MOUNT ENERGY RECOVERY VENTILATOR - ERV — OPTIONAL

The wall-mount energy recovery ventilator (ERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The ERV allows from 200 to 450 CFM (depending upon model) of fresh air and exhaust through the unit while maintaining superior indoor comfort and humidity levels. In most cases this can be accomplished without increasing equipment sizing or operating costs. Heat transfer efficiency is up to 67% during summer and 75% during winter conditions.

The ERV consists of a unique "rotary energy recovery cassette" that provides effective sensible and latent heat transfer capabilities during summer and winter conditions. Various control schemes are addressed including limiting ventilation during building occupancy only.

The ERV is designed to be internally mounted behind the service door in the WA, WH or WL model wall-mount units. It can be built-in at the factory or field installed as an option. ERV-*3 and ERV-*5 can be independently adjusted for intake and exhaust rates. 3" air intake hood is standard.

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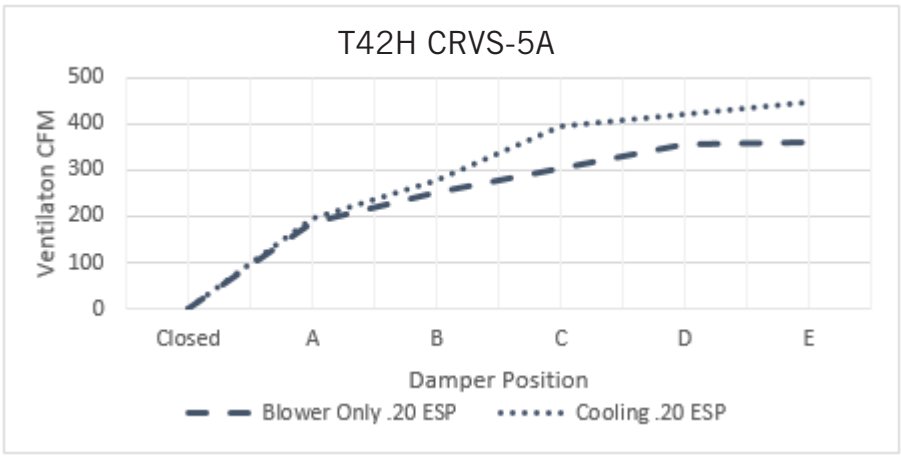
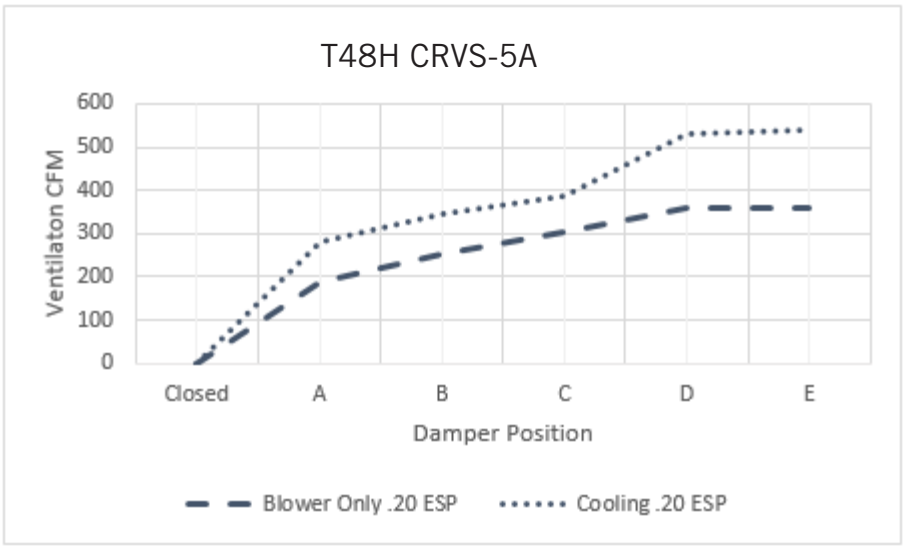
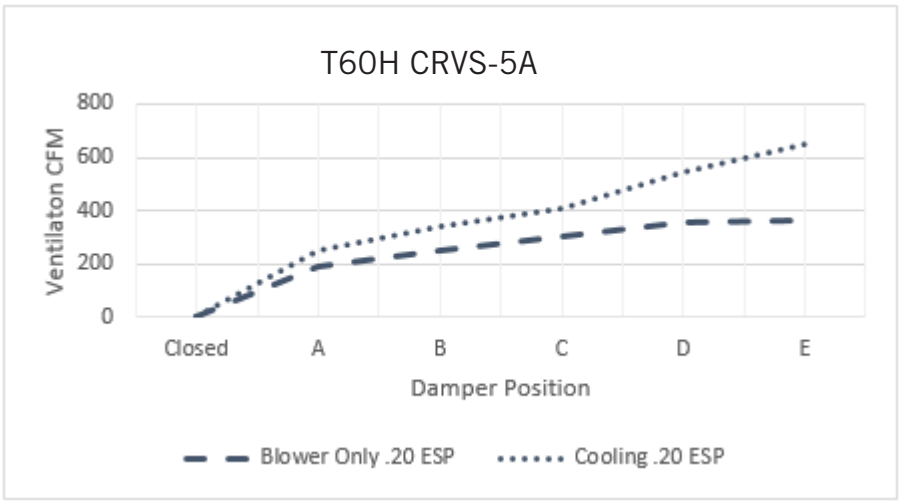

T42H CRVS-5A
Ventilaton CFM
500
400
300
200
100
0
Closed
A
B
C
D
E
Damper Position
Blower Only .20 ESP
Cooling .20 ESP


T48H CRVS-5A
Ventilaton CFM
600
500
400
300
200
100
0
Closed
A
B
C
D
E
Damper Position
Blower Only .20 ESP
Cooling .20 ESP


T60H CRVS-5A
Ventilaton CFM
800
600
400
200
0
Closed
A
B
C
D
E
Damper Position
Blower Only .20 ESP
Cooling .20 ESP

SUMMER COOLING PERFORMANCE
(INDOOR DESIGN CONDITIONS 75°DB/62°WB)

Ambient O.D.		VENTILATION RATE -- 450 CFM						VENTILATION RATE -- 375 CFM						VENTILATION RATE -- 300 CFM					
DB/ WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL
105	75	21465	14580	6884	13952	9477	4475	17887	12150	5737	11805	8018	3786	14310	9720	4590	9587	6512	3075
	70	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	0
	65	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	0
100	80	31590	12150	19440	20533	7897	12635	26325	10125	16200	17374	6682	10692	21060	8100	12960	14110	5427	8683
	75	21465	12150	9314	13952	7897	6054	17887	10125	7762	11805	6682	5123	14310	8100	6210	9587	5427	4160
	70	12352	12150	202	8029	7897	131	10293	10125	168	6793	6682	111	8235	8100	135	5517	5427	90
	65	12150	12150	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0
	60	12150	12150	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0
95	80	31590	9720	21870	20533	6318	14215	26325	8100	18225	17374	5345	12028	21060	6480	14580	14110	4341	9768
	75	21465	9720	11744	13952	6318	7634	17887	8100	9787	11805	5345	6459	14310	6480	7830	9587	4341	5246
	70	12352	9720	2632	8029	6318	1711	10293	8100	2193	6793	5345	1447	8235	6480	1755	5517	4341	1175
	65	9720	9720	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0
	60	9720	9720	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0
90	80	31590	7290	24300	20533	4738	15794	26325	6075	20250	17374	4009	13365	21060	4860	16200	14110	3256	10854
	75	21465	7290	14175	13952	4738	9213	17887	6075	11812	11805	4009	7796	14310	4860	9450	9587	3256	6331
	70	12352	7290	5062	8029	4738	3290	10293	6075	4218	6793	4009	2784	8235	4860	3375	5517	3256	2261
	65	7290	7290	0	4738	4738	0	6075	6075	0	4009	4009	0	4860	4860	0	3256	3256	0
	60	7290	7290	0	4738	4738	0	6075	6075	0	4009	4009	0	4860	4860	0	3256	3256	0
85	80	31590	4860	26730	20533	3159	17374	26325	4050	22275	17374	2672	14701	21060	3240	17820	14110	2170	11939
	75	21465	4860	16605	13952	3159	10793	17887	4050	13837	11805	2672	9132	14310	3240	11070	9587	2170	7416
	70	12352	4860	7492	8029	3159	4870	10293	4050	6243	6793	2672	4120	8235	3240	4995	5517	2170	3346
	65	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0
	60	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0
80	75	21465	2430	19035	13952	13952	12372	17887	2025	15862	11805	1336	10469	14310	1620	12690	9587	1085	8502
	70	12352	2430	9922	8029	8029	6449	10293	2025	8268	6793	1336	5457	8235	1620	6615	5517	1085	4432
	65	4252	2430	1822	2764	2764	1184	3543	2025	1518	2338	1336	1002	2835	1620	1215	1899	1085	814
	60	2430	2430	0	1579	1579	0	2025	2025	0	1336	1336	0	1620	1620	0	1085	1085	0
75	70	12352	0	12352	8029	0	8029	10293	0	10293	6793	0	6793	8235	0	8235	5517	0	5517
	65	4252	0	4252	2764	0	2764	3543	0	3543	2338	0	2338	2835	0	2835	1899	0	1899
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ERVF-*5 WINTER HEATING PERFORMANCE
(INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE					
	450 CFM		375 CFM		300 CFM	
DB/°F	WVL	WHR	WVL	WHR	WVL	WHR
65	2430	1944	2025	1640	1620	1328
60	4860	3888	4050	3280	3240	2656
55	7290	5832	6075	4920	4860	3985
50	9720	7776	8100	6561	6480	5313
45	12150	9720	10125	8201	8100	6642
40	14580	11664	12150	9841	9720	7970
35	17010	13608	14175	11481	11340	9298
30	19440	15552	16200	13122	12960	10627
25	21870	17496	18225	14762	14580	11955
20	24300	19440	20250	16402	16200	13284
15	26730	21384	22275	18042	17820	14612

LEGEND:

VLT = Ventilation Load - Total
VLS = Ventilation Load - Sensible
VLL = Ventilation Load - Latent
HRT = Heat Recovery - Total
HRS = Heat Recovery - Sensible
HRL = Heat Recovery - Latent
WVL = Ventilation Load - Latent
WHR = Heat Recovery - Total

NOTE: Sensible performance only is shown for winter application.

Electrical Specifications - Standard Heat Pumps

MODEL	Rated Volts & Phase	No. Field Power Circuits	Single Circuit				Multiple Circuit											
			① Minimum Circuit Ampacity	② Maximum External Fuse or Ckt. Brkr.	③ Field Power Wire Size	③ Ground Wire	① Minimum Circuit Ampacity			② Maximum External Fuse or Ckt. Breaker			③ Field Power Wire Size			③ Ground Wire Size		
							Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C
T42H1-A00, A0Z	230/208-1	1	31	40	8	10												
-A05		1	57	60	6	10												
-A08		1 or 2	73	80	4	8	31	42		40	45		8	8		10	10	
-A10		1 or 2	83	90	4	8	31	52		40	60		8	6		10	10	
⑤ -A15		1 or 2	86	90	3	8	34	52		40	60		8	6		10	10	
T42H1-B00, B0Z	230/208-3	1	26	35	8	10												
-B06		1	44	50	8	10												
-B09		1	53	60	6	10												
⑥ -B15		1	53	60	6	10												
T42H1-C0Z	460-3	1	13	15	12	12												
-C06		1	22	25	10	10												
-C09		1	26	30	10	10												
⑥ -C15		1	27	30	10	10												
T48H1-A00, A0Z	230/208-1	1	37	50	8	10												
-A04		1	58	60	6	10												
-A05		1 or 2	63	70	6	8	37	26		50	30		8	10		10	10	
-A08		1 or 2	79	90	4	8	37	42		50	50		8	8		10	10	
-A10		1 or 2	89	100	3	8	37	52		50	60		8	6		10	10	
⑤ -A15		1 or 2	89	100	3	8	37	52		50	60		8	6		10	10	
T48H1-B00, B0Z	230/208-3	1	27	40	8	10												
-B06		1	45	50	8	10												
-B09		1	54	60	6	10												
⑥ -B15		1	55	60	6	10												
T48H1-C0Z	460-3	1	15	20	12	12												
-C06		1	24	25	10	10												
-C09		1	28	30	10	10												
⑥ -C15		1	29	30	10	10												
T60H2-A00, A0Z	230/208-1	1	43	60	8	10												
-A05		1 or 2	69	80	4	8	43	26		50	30		8	10		10	10	
-A10		1 or 2	95	100	3	8	43	52		50	60		8	6		10	10	
⑤ -A15		1 or 2	95	100	3	8	43	52		50	60		8	6		10	10	
⑤ -A20		1 or 3	113	125	2	6	43	52	52	50	60	60	8	6	6	10	10	10
T60H2-B00, B0Z	230/208-3	1	34	40	8	10												
-B09		1	59	60	6	10												
⑥ -B15		1	59	60	6	10												
⑥ -B18		2	N/A	N/A	N/A	N/A	59	28		60	30		6	10		10	10	
T60H2-C0Z	460-3	1	18	25	12	12												
-C09		1	32	35	10	10												
⑥ -C15		1	32	35	10	10												
⑥ -C18		1	34	35	8	10												

① These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical Code (latest version), Article 310 for power conductor sizing.

Caution: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) conductors are in a raceway.

② Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.

③ Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.

④ Maximum KW that can operate with the heat pump on is 4KW. Full heat available during Emergency Heat Mode.

⑤ Maximum KW that can operate with the heat pump on is 10KW. Full heat available during Emergency Heat Mode.

⑥ Maximum KW that can operate with the heat pump on is 9KW. Full heat available during Emergency Heat Mode.

⑦ Maximum KW that can operate with the heat pump on is 8KW. Full heat available during Emergency Heat Mode.

IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses & conductor wires in accordance with the National Electrical Code & all local codes.

Indoor Blower Performance · CFM [0.00" - 0.50" H_2O] ①

Model	Rated ESP	① Max ESP	② Blower Only	③ Cooling & Heat Pump	③ Electric Heat
T42H	.15	.50	1250	1250	1250
T48H	.20	.50	1550	1550	1550
T60H	.20	.50	1650	1650	1650

NOTE: These units are equipped with a variable speed (ECM) indoor motor that automatically adjusts itself to maintain approximately the same rate of indoor airflow in both heating & cooling, dry & wet coil conditions and at both 230/208 or 460 volts.

① Maximum ESP (inches WC) shown is with 2" thick disposable filter.
② Blower only CFM is the total air being circulated during continuous fan mode. Airflow remains constant.
③ CFM output on Cooling or Electric Heat.

Electric Heat Table · Refer to Electrical Specifications for Availability by Unit Model

Nominal KW	At 240V ①				At 208V ①				At 480V ②			At 460V ②		
	KW	1-Ph Amps	3-Ph Amps	Btuh	KW	1-Ph Amps	3-Ph Amps	Btuh	KW	3-Ph Amps	Btuh	KW	3-Ph Amps	Btuh
4.0	4.0	16.7		13,652	3.00	14.4		10,239						
5.0	5.0	20.8		17,065	3.75	18.0		12,799						
6.0	6.0		14.4	20,478	4.50		12.5	15,359	6.0	7.2	20,478	5.52	6.9	18,840
8.0	8.0	33.3		27,304	6.00	28.8		20,478						
9.0	9.0		21.7	30,717	6.75		18.7	23,038	9.0	10.8	30,717	8.28	10.4	28,260
10.0	10.0	41.7		34,130	7.50	36.1		25,598						
15.0	15.0	62.5	36.1	51,195	11.25	54.1	31.2	38,396	15.0	18.0	51,195	13.80	17.3	47,099
20.0	20.0	83.3		68,260	15.00	72.1		51,195						

① These electric heaters are available in 230/208V units only.
② These electric heaters are available in 480V units only.

Heater Packages · Field Installed for Standard & Dehumidification Models

- Designed for adding Electric Heat to 0 KW Units
- Circuit Breaker Standard on 230/208V Models
- ETL US & Canada Listed
- Toggle Disconnect Standard on 460V Models

Heat Pump Models	-A00 Models 230/208-1		-B00 Models 230/208-3		-C00 Models 460-3	
	Heater Model #	KW	Heater Model #	KW	Heater Model #	KW
T42H1	WMCB-06A EHS03H-A05B EHT05H-A08B EHT05H-A10B EHT05H-A15B	0Z 5 8 10 15	WMCB-05B EHS05H-B06B EHS05H-B09B EHS05H-B15B	0Z 6 9 15	WMRD-01C EHS05H-C06 EHS05H-C09 EHS05H-C15	0 6 9 15
T48H1	WMCB-06A EHT06H-A05B EHT06H-A08B EHT06H-A10B EHT06H-A15B	0Z 5 8 10 15	WMCB-05B EHT06H-B06B EHT06H-B09B EHT06H-B15B	0Z 6 9 15	WMRD-01C EHT06H-C06 EHT06H-C09 EHT06H-C15	0 6 9 15
T60H2	WMCB-09A EHT06H-A05B EHT06H-A10B EHT06H-A15B EHT06H-A20B	0Z 5 10 15 20	WMCB-06B EHT06H-B09B EHT06H-B15B EHT06H-B18B	0Z 9 15 18	WMRD-01C EHT06H-C09 EHT06H-C15 EHT06H-C18	0 9 15 18

Cooling Application Data · Outdoor Temperature °F ①

Model	Return Air (DB/WB) ②	Cooling Capacity	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F
T42H1	75/62	Total Cooling	42,000	40,300	38,500	36,700	34,800	33,100	31,200	29,300	27,400	25,400
		Sensible Cooling	32,900	32,100	31,200	30,300	29,600	28,700	27,900	27,100	26,400	25,500
	80/67	Total Cooling	44,800	43,900	42,700	41,500	39,500	38,500	36,800	34,900	32,900	30,800
		Sensible Cooling	31,900	31,400	30,900	30,300	29,800	29,200	28,600	28,000	27,400	26,700
	85/72	Total Cooling	53,400	51,300	49,100	46,900	44,500	42,100	39,700	37,200	34,600	32,000
		Sensible Cooling	32,700	31,900	31,100	30,100	29,300	28,300	27,300	26,300	25,300	24,100
T48H1	75/62	Total Cooling	49,000	47,100	45,100	43,100	40,900	38,800	36,600	34,400	32,100	29,600
		Sensible Cooling	39,400	38,800	38,000	37,100	36,200	35,100	33,800	32,500	31,200	29,600
	80/67	Total Cooling	52,300	51,300	50,100	48,700	46,500	45,200	43,200	41,000	38,600	35,900
		Sensible Cooling	38,200	38,000	37,600	37,100	36,500	35,700	34,700	33,600	32,400	31,000
	85/72	Total Cooling	62,300	60,000	57,500	55,000	52,200	49,500	46,600	43,600	40,600	37,300
		Sensible Cooling	39,100	38,600	37,800	36,900	35,800	34,600	33,100	31,500	29,900	28,000
T60H2	75/62	Total Cooling	64,800	61,500	58,400	55,500	52,700	50,000	47,600	45,200	42,900	40,700
		Sensible Cooling	48,900	47,100	45,500	44,100	42,700	41,400	40,200	39,100	38,200	37,300
	80/67	Total Cooling	69,200	67,000	64,900	62,700	60,000	58,300	56,100	53,900	51,600	49,300
		Sensible Cooling	47,400	46,200	45,100	44,100	43,100	42,100	41,200	40,400	39,700	39,000
	85/72	Total Cooling	82,400	78,300	74,500	70,800	67,200	63,800	60,500	57,300	54,200	51,200
		Sensible Cooling	48,600	46,900	45,300	43,800	42,300	40,700	39,300	37,900	36,600	35,200

① Below 65°F, unit requires a factory or field installed low ambient control.
② Return air temperature °F.

Capacity Multiplier Factors			
% of Rated Airflow	-10	Rated	+10
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

Heating Application Rating & Outdoor Temperature °F*

MODEL		0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°F
T42H1	BTUH	14,000	16,600	19,300	22,000	24,200	26,100	28,000	29,900	33,700	37,500	40,600	43,300	46,000
	WATTS	2860	2920	2980	3040	3110	3170	3240	3310	3360	3400	3460	3520	3580
	COP	1.44	1.67	1.90	2.13	2.28	2.42	2.54	2.65	2.94	3.24	3.44	3.61	3.77
T48H1	BTUH	17,400	20,100	22,800	25,600	27,500	29,000	30,500	32,000	36,600	41,200	44,700	47,400	50,200
	WATTS	3100	3150	3190	3240	3270	3300	3330	3360	3430	3500	3560	3600	3650
	COP	1.65	1.87	2.10	2.32	2.47	2.58	2.69	2.80	3.13	3.45	3.68	3.86	4.03
T60H2	BTUH	32,280	33,354	34,711	36,350	38,272	40,477	42,964	45,734	48,787	52,123	55,741	59,642	63,825
	WATTS	4108	4157	4210	4269	4333	4401	4474	4553	4636	4724	4817	4915	5018
	COP	2.30	2.35	2.41	2.49	2.58	2.69	2.81	2.94	3.08	3.23	3.39	3.55	3.72

*** 70°F DB indoor return air at rated CFM includes defrost operation below 45°.**

Clearances Required for Service Access and Adequate Condenser Airflow

MODELS	LEFT SIDE	RIGHT SIDE
All Models	20"	20"

1.) Follow all national, state, and local codes and regulations regarding the installation of heating and cooling equipment regarding Single Packaged Vertical Units (SPVU) including electrical access clearances.
2.) Bard recommends a minimum of 10 ft. between the unit front condenser air outlet and solid objects including fences, walls, bushes, and other airflow obstructions.
3.) Bard recommends a minimum of 15 ft. between the condenser air outlets of 2 units that are facing each other.
4.) Bard recommends a minimum clearance of 4" under the unit cabinet for condenser defrost drain age during heat pump operation.

Minimum Clearances Required to Combustible Materials

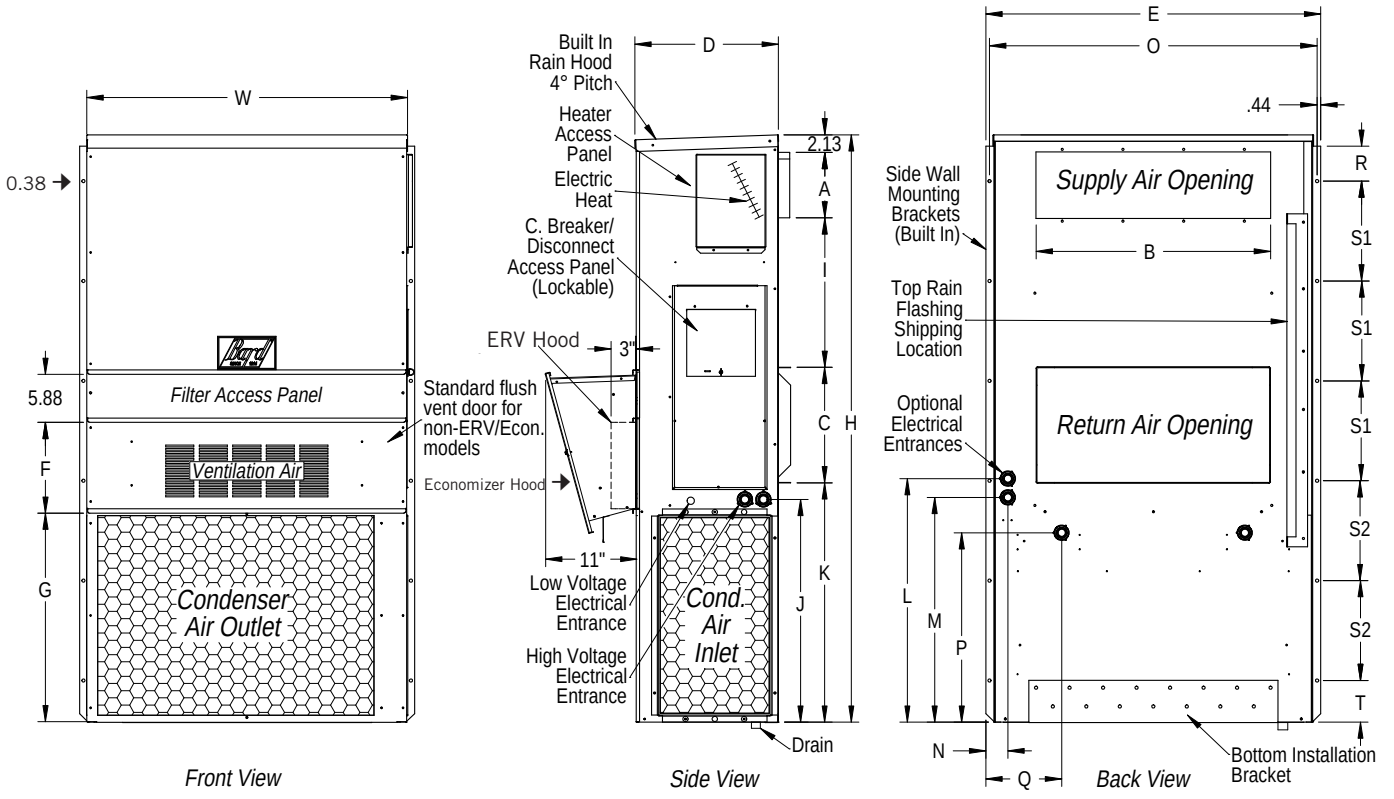
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
All Models	1/4"	0"

① Refer to the Installation Manual for more detailed information.

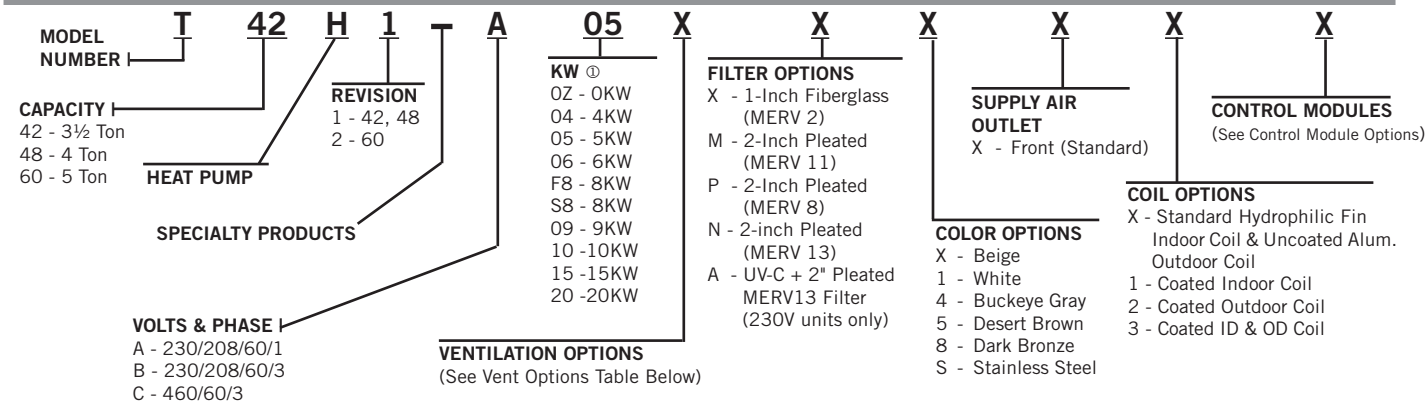
Dimensions of Basic Unit for Architectural & Installation Requirements (Nominal)

MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN																		
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	P	Q	R	S1	S2	T	
T42H1	42.075	22.432	84.875	9.88	29.88	15.88	29.88	43.88	13.56	31.66	30.00	32.68	26.94	34.69	32.43	3.37	43.00	23.88	10.00	1.44	16.00	16.00	1.88	
T48H1 T60H2	42.075	22.432	93.000	9.88	29.88	15.88	29.88	43.88	13.56	37.00	30.00	40.81	35.06	42.81	40.56	3.37	43.00	31.00	10.00	1.44	16.00	16.00	10.00	

All dimensions are in inches. Dimensional drawings are not to scale.



Heat Pump Wall-Mount Model Nomenclature



① For 0 KW and circuit breakers (230/208 volt) or toggle disconnect (460V) applications, insert 0Z in the KW field of the model number. See Pages 8 & 9.

Ventilation Options

Models	T42H1, T48H1, T60H2	
Description	Factory Installed Code No.	Field Installed Part No.
Barometric Fresh Air Damper - Standard	X	BFAD-5
Blank-Off Plate	B	BOP-5
Motorized Fresh Air Damper - No Exhaust ①	M	MFAD-5
Commercial Ventilator - Spring Return w/Exhaust, Modulating or On/Off	V	CRVS-5A
Economizer - Standard - Enthalpy ④	S	ECONWMS-E5B ②
Economizer - Equipment Bldg., Enthalpy ⑤	W	ECONWMT-E5B ②
Economizer - Equipment Bldg., DB Temp ⑤	T	ECONWMT-T5B ②
Energy Recovery Ventilator - 230 Volt ③	R	ERVF-A5 ①
Energy Recovery Ventilator - 460 Volt ③	R	ERVF-C5 ①
Door Kit for ERVF (Required)	N/A	WMDK5- ③

① Intake and exhaust can be independently adjusted.
② Insert color to match unit ("X" = Beige; "4" = Buckeye Gray; etc.)
③ WMDK Door Kit must be ordered in addition to ERVF Assembly and color matched to unit ("X" = Beige; "4" = Buckeye Gray; etc.)
④ Partial Full Flow (75% of Rated Cooling CFM). All ECONWMS versions have 3" deep intake hood.
⑤ Full Flow (100% of Rated Cooling CFM). All ECONWMT versions have 11" deep intake hood.

Heat Pump Control Modules

Low Pressure Control ①	High Pressure Control ①	Low Ambient Control and Relay ②	Start Kit ③	Start Kit ④	Outdoor Thermostat	Factory Installed Code	Field Installed Part
STD	STD					X	N/A
STD	STD	T42-48 ● 230V				E	CMH-20
STD	STD	T42-48 ● 460V				E	CMH-21
STD	STD	T60 ● All				E	CMH-19
STD	STD				●	Q	CMC-14A
STD	STD	● ⑥			●	R	CMH-14A
STD	STD		●			Field Installed Only	CMC-15 ③
STD	STD			●		Field Installed Only	SK111 ④
STD	STD				●	Field Installed Only	CMC-29

STD = Standard Equipment
① The high & low pressure controls are auto reset. Operating circuit includes a lockout feature and is resettable from the wall thermostat. All low pressure controls use a timed bypass circuit to prevent nuisance tripping during low temperature start-up.
② The low ambient control includes an 8201-008 (fan relay) and permits cooling operation down to 0°F.
③ PTCR start kit can be used with all -A single phase models. Increases starting torque 2-3x. Not used for -B or -C three phase models. Do not use if SK111 is used.
④ Start capacitor and potential relay start kit can be used with all -A single phase models. Increases starting torque 9x. Not used for -B or -C three phase models. Do not use if CMC-15 is used.
⑤ The outdoor thermostat is adjustable from 0°F to 50°F. It is suitable for use as a compressor cut-off thermostat. Not available on dehumidification models. Use outdoor sensor input to electronic thermostat.
⑥ Applies to both 230V and 460V models.
⑦ Freezestat is standard on dehumidification models. Field installed option for standard units.
NOTE: Standard heat pump control board has a 5-minute compressor anti-short cycle timer.

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Due to our continuous product improvement policy, all specifications subject to change without notice.

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