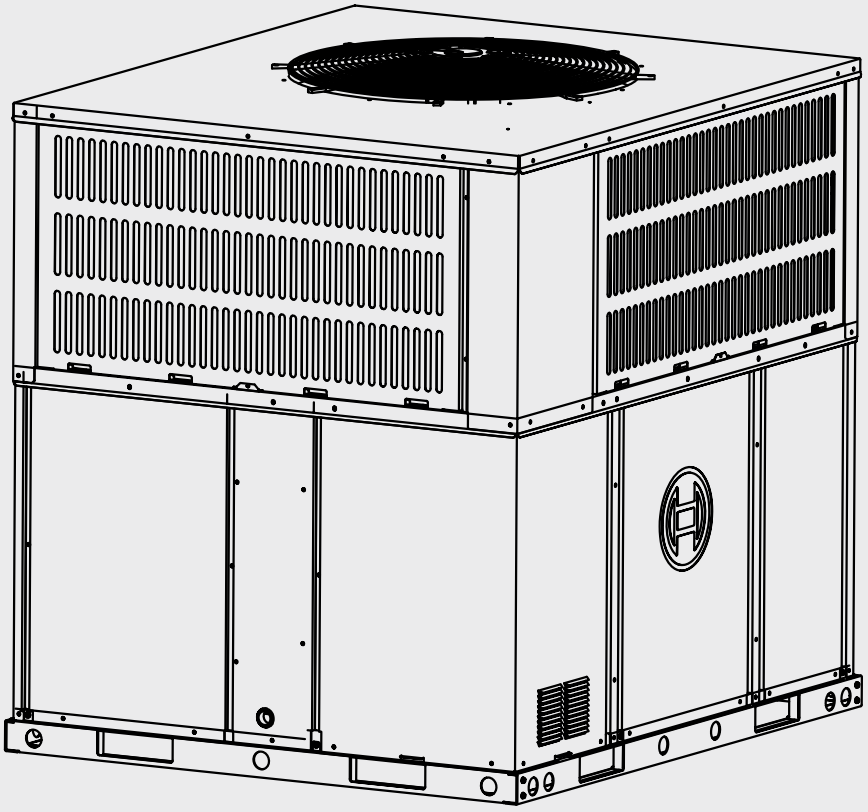
BOSCH

Product Specifications

Inverter Ducted Packaged Heat Pump

Bosch IDP Premium

18 SEER2 Series | 3 & 5 Ton Capacity | R410A



BTC 761701322 B | 02.2023

ENERGY STAR

Intertek

AHRI CERTIFIED
www.ahridirectory.org
Unitary Small HP
AHRI Standard 210/240

Table of Contents

1 Key to Symbols and Safety Instructions

1.1 Key to Symbols

Warnings

Warnings in this document are identified by a warning triangle printed against a grey background. Keywords at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.
- **NOTICE** is used to address practices not related to personal injury.

Important information

This symbol indicates important information where there is no risk to people or property.

1 Product Features

1.1 Features and Benefits

- Superior efficiency
  - IDP 3T rated at 18 SEER2, 10.6 EER2, 8.1 HSPF2
  - IDP 5T rated at 18 SEER2, 11.2 EER2, 9 HSPF2
- Fully modulating Inverter Drive precisely matches the heating/cooling load
- Inverter Compressor (36%-118% speed), modulation in 1% increments
- IDP 3T - Provides up to 4-stage indoor fan control, mobile home certified for high static
- IDP 5T - Provides up to 2-stage indoor fan control
- 2-way design allows for horizontal and downflow installations, air return/supply are convertible
- Easy to install – compatible with most standard 24 VAC heat pump thermostats

1.2 Standard Features

- R-410A Chlorine-Free Refrigerant
- Intelligent Oil Return Technology
- Inverter Driven Rotary Compressor
- Crankcase Heater Standard
- Compressor Sound Blanket
- Multiple System Protection:
  - High pressure switch and low pressure transducer
  - Compressor liquid return protection
  - Compressor high or low compression ratio protection
  - Compressor high temperature protection
  - High / low voltage protection and over current protection
  - IPM and electronic control board high temperature protection
- Outdoor coil is capable of withstanding 1000 hour salt spray test according to ASTM B117 standard
- AHRI certified; ETL listed

1.3 Cabinet Features

- Baked-on powder paint finish
- Wire fan discharge grille
- Steel louver coil guard

1.4 Limited Warranty

For Products installed in a one or two family residential dwelling BTC warrants that all compressors and internal components incorporated into the Product at the time of shipment by BTC shall remain free from defects in workmanship and materials for ten (10) years* from the Commencement Date. If the Warranty Registration process has been completed and BTC determines that the Product or any part of the Product has a defect in workmanship or materials, BTC shall pay labor charges associated with the repair or replacement of the part in accordance with the Warranty Labor Allowance Schedule** for the period of ninety (90) days from the Commencement Date.

For Products installed in a building other than a one or two family residential dwelling, BTC warrants that all compressors incorporated into the Product at the time of shipment by BTC shall remain free from defects in workmanship and materials for three (3) years* and other internal components incorporated into the Product components for one (1) year* from the Commencement Date

* Please refer to www.bosch-climate.us for full warranty terms and conditions.

** Warranty Labor Allowance Schedule details are available on www.boschprohvac.com

2 Nomenclature

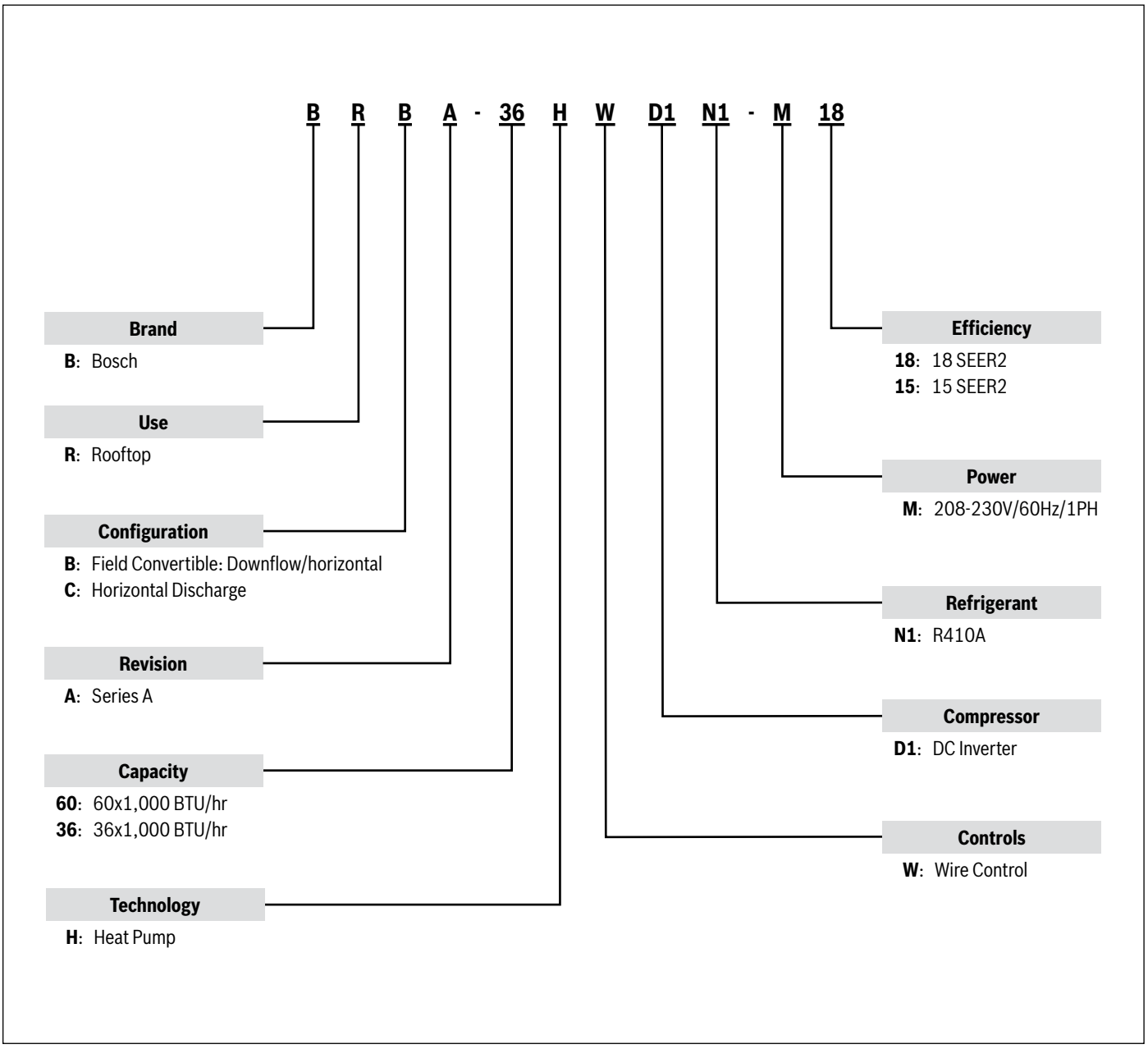


Figure 1

3 Product Specifications

	BRBA-36HWD1N1-M18	BRBA-60HWD1N1-M18
Electrical Data		
Rated Volts/PH/Hz	208-230/1/60	208-230/1/60
Performance Cooling		
BTUH (High)	34200	57000
Indoor Airflow (SCFM)	1250	1900
Power Input (KW)	3.20	5.10
SEER2/ EER2 - HI	18/10.6	18/11.2
Performance Heating		
(High Temp.) BTUH / COP (High)	36000	57000
Power Input (KW)	3.00	4.60
HSPF2 (BTU / Watt-Hr.)	8.1	9.0
Power Conn. - V/Ph/Hz	208-230/1/60	208-230/1/60
Min. Brch. Cir. Ampacity	28.7A	41.9A
Max. Overcurrent Protection	47.7A	68.9A
Min. / Max. Volts	173 / 269	173 / 269
Fuse Size - Max. / Recmd. (amps)	45A	60A
Compressor	Rotary	Rotary
Volts	DC Inverter	DC Inverter
R.L. Amps	19	27
Outdoor Coil - Type	Cu Finned Tube Heat	Cu Finned Tube
Rows/F.P.I.	3+2/17*	3+3/17*
Face Area (sq.ft.)	14.11	20.17
Tube Size (in.)	9/32	9/32
Circuitry Type	Interlaced	Interlaced
Refrigerant Control	EEV	EEV
Indoor Coil - Type	Al	Al
Rows / F.P.I.	4/17	4/17
Face Area (sq.ft.)	3.96	6.10
Tube Size (in.)	9/32	9/32
Circuitry Type	interlaced	interlaced
Drain Conn. Size (in.)	3/4" Female NPT	3/4" Female NPT
Outdoor Fan - Type	Propeller	Propeller
Dia. (in.)	23-5/8"	26-3/8"
Drive/No. Speeds	Direct / 10	Direct / 10
CFM @0.0 in. w.g.	3000	4100
Motor - HP/R.P.M.	1/3HP/200~880R.P.M.	1/3HP/200~880R.P.M.
Volts	DC310V	DC310V
F.L. Amps/L.R. Amps	2.1/-	2.1/-

Table 1

[1] Wire size should be determined in accordance with National Electrical Codes; extensive wire runs will require larger wire sizes.

[2] Must use time-delay fuses or HACR-type circuit breakers of the same size as noted.

There are two condenser coils, one has 3 rows, and the other has 2 /3 rows.

Always check the rating plate for electrical data on the unit being installed.

	BRBA-36HWD1N1-M18	BRBA-60HWD1N1-M18
Indoor Fan - Type	Centrifugal	Centrifugal
Dia x Width (in.)	11x10-3/4"	11x10-5/8"
Drive/No. Speeds	Direct / 5	Direct / 5
CFM @0.0 in. w.g.	1350@0.58	1900@0.58
Motor - HP/R.P.M.	1/2HP/1050R.P.M.	3/4HP/1075R.P.M.
Volts/Ph/Hz	208-230/1/60	208-230/1/60
F.L. Amps/L.R. Amps	3.8/-	6/-
Filter / Furnished		
Type Recommended	/	/
Recmd. Face Area (L x W x D)	16"×10"×1"	16"×14"×1"
Refrigerant / Charge (lbs. - oz.)	R410a/ 8-6	R410a/ 12-9
Dimensions		
Bare L x W x H (in.)	50-11/16" x 35-1/16" x 46-13/16"	51-9/16" x 51-7/16" x 44-13/16"
Weight [3]		
Net (lbs.)	400	556
Gross (lbs.)	420	591

Table 2

[3] Weight values are estimated.

Always check the rating plate for electrical data on the unit being installed.

4 AHRI 210/240 Performance Data

Nominal HP System Tonnage	Heat Pump Model	Cooling Capacity (BTU/h)			Heating Capacity			CFM
		Total	EER2[2]	SEER2[1]	Hi	HSPF2[3]	Low[4]	
5	BRBA-60HWD1N1-M18	57000	11.2	18.0	57000	9.0	46500	1900
3	BRBA-36HWD1N1-M18	34200	10.6	18.0	36000	8.1	24000	1250

Table 3

[1] Seasonal Energy Efficiency Ratio 2; Certified per AHRI 210/240

[2] Energy Efficiency Ratio 2; Certified per AHRI 210/240

[3] HSPF2 = Heating Seasonal Performance Factor 2; Certified per AHRI 210/240

[4] Jumper cut or dip switch off

Items in **bold** boxes meet the requirements for ENERGY STAR

5 Extended Performance Data

5.1 BRBA-60HWD1N1-M18 For Cooling

BRBA-60HWD1N1-M18 For Cooling																		
Indoor Airflow (SCFM)	Outdoor	IWB (°F)	59				63				67				71			
	DB	IDB (°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
1350	65	TC	39.9	40.1	40.2	40.4	47.3	47.5	47.7	48	54.2	54.5	54.8	55.1	\	63.4	63.9	64.1
		S/T	0.80	1.00	1.00	1.00	0.55	0.73	0.92	1.00	0.35	0.53	0.70	0.84	\	0.36	0.50	0.64
		KW	2.19	2.19	2.19	2.19	2.34	2.34	2.34	2.34	2.8	2.8	2.8	2.8	\	3.29	3.29	3.29
	75	TC	39.9	40.1	40.2	40.4	47.3	47.5	47.7	48	54.2	54.5	54.8	55.1	\	63.4	63.9	64.1
		S/T	0.80	1.00	1.00	1.00	0.55	0.73	0.92	1.00	0.35	0.53	0.70	0.84	\	0.36	0.50	0.64
		KW	2.65	2.65	2.65	2.65	2.85	2.85	2.85	2.85	3.44	3.44	3.44	3.44	\	4.05	4.05	4.05
	85	TC	39.9	40.1	40.2	40.4	47.3	47.5	47.7	48	59.1	54.5	54.8	55.1	\	63.4	63.9	64.1
		S/T	0.80	1.00	1.00	1.00	0.55	0.73	0.92	1.00	0.35	0.53	0.70	0.84	\	0.36	0.50	0.64
		KW	3.14	3.14	3.14	3.14	3.56	3.56	3.56	3.56	4.14	4.14	4.14	4.14	\	4.99	4.99	4.99
	95	TC	39.9	40.1	40.2	40.4	47.3	47.5	47.7	48	54.2	54.5	54.8	55.1	\	63.4	63.9	64.1
		S/T	0.80	1.00	1.00	1.00	0.55	0.73	0.92	1.00	0.35	0.53	0.70	0.84	\	0.36	0.50	0.64
		KW	3.68	3.68	3.68	3.68	4.46	4.46	4.46	4.46	5.25	5.25	5.25	5.25	\	6.18	6.18	6.18
	105	TC	39.9	40.1	40.2	40.4	47.3	47.5	47.7	48	53.1	53.4	53.7	54	\	56.2	56.5	56.8
		S/T	0.80	1.00	1.00	1.00	0.55	0.73	0.92	1.00	0.35	0.53	0.70	0.84	\	0.35	0.50	0.63
		KW	4.23	4.23	4.23	4.23	5.15	5.15	5.15	5.15	5.79	5.79	5.79	5.79	\	5.91	5.9	5.91
	115	TC	39.9	40.1	39.5	40.4	41.2	41.4	41.6	41.8	43.3	43.6	43.8	44	\	45.8	46	46.3
		S/T	0.80	1.00	1.00	1.00	0.57	0.79	0.99	1.00	0.40	0.59	0.78	0.94	\	0.36	0.56	0.78
		KW	4.92	4.92	4.92	4.92	5.08	5.08	5.08	5.08	5.24	5.24	5.24	5.24	\	5.4	5.4	5.4
1900	65	TC	41.4	41.6	41.8	42	49.2	49.5	49.7	49.9	56.4	56.7	57	57.3	\	66	66.4	66.7
		S/T	0.89	1.01	1.00	1.00	0.60	0.80	1.00	1.00	0.41	0.59	0.77	0.94	\	0.40	0.55	0.71
		KW	2.24	2.24	2.24	2.24	2.4	2.4	2.4	2.4	2.86	2.86	2.86	2.86	\	3.37	3.37	3.37
	75	TC	41.4	41.6	41.8	42	49.2	49.5	49.7	49.9	56.4	56.7	57	57.3	\	66	66.4	66.7
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.41	0.59	0.77	0.94	\	0.40	0.55	0.71
		KW	2.7	2.7	2.7	2.7	2.91	2.91	2.91	2.91	3.53	3.53	3.53	3.53	\	4.13	4.13	4.13
	85	TC	41.4	41.6	41.8	42	49.2	49.5	49.7	49.9	56.4	56.7	57	57.3	\	66	66.4	66.7
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.41	0.59	0.77	0.94	\	0.40	0.58	0.71
		KW	3.22	3.22	3.22	3.22	3.62	3.62	3.62	3.62	4.24	4.24	4.24	4.24	\	5.1	5.1	5.1
	95	TC	41.4	41.6	41.8	42	49.2	49.5	49.7	49.9	56.4	56.7	57	57.3	\	66	66.4	66.7
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.41	0.59	0.77	0.94	\	0.40	0.55	0.71
		KW	3.57	3.57	3.57	3.57	4.34	4.34	4.34	4.34	5.10	5.10	5.10	5.10	\	6.02	6.02	6.02
	105	TC	41.4	41.6	41.8	42	49.2	49.5	49.7	49.9	56.4	56.7	57	57.3	\	58.4	58.7	59
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.41	0.59	0.77	0.94	\	0.41	0.56	0.72
		KW	4.32	4.32	4.32	4.32	5.27	5.27	5.27	5.27	5.91	5.91	5.91	5.91	\	6.03	6.03	6.03
	115	TC	41.4	41.6	41.8	42	49.2	49.5	49.7	49.9	56.4	56.7	57	57.3	\	47.7	47.9	48.2
		S/T	0.89	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.41	0.59	0.77	0.94	\	0.41	0.61	0.86
		KW	5.03	5.03	5.03	5.03	5.2	5.2	5.2	5.2	5.36	5.36	5.36	5.36	\	5.52	5.52	5.52
2000	65	TC	42	42.2	42.4	42.6	49.9	50.2	50.4	50.7	57.3	57.6	57.9	58.2	\	67	67.5	67.7
		S/T	0.92	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.43	0.62	0.80	0.98	\	0.43	0.57	0.74
		KW	2.26	2.26	2.26	2.26	2.43	2.43	2.43	2.43	2.89	2.89	2.89	2.89	\	3.4	3.4	3.4
	75	TC	42	42.2	42.4	42.6	49.9	50.2	50.4	50.7	57.3	57.6	57.9	58.2	\	67	67.5	67.7
		S/T	0.92	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.43	0.62	0.80	0.98	\	0.43	0.57	0.74
		KW	2.72	2.72	2.72	2.72	2.94	2.94	2.94	2.94	3.57	3.57	3.57	3.57	\	4.17	4.17	4.17
	85	TC	42	42.2	42.4	42.6	49.9	50.2	50.4	50.7	67.1	57.6	57.9	58.2	\	67	67.5	67.7
		S/T	0.92	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.43	0.62	0.80	0.98	\	0.43	0.63	0.74
		KW	3.25	3.25	3.25	3.25	3.66	3.66	3.66	3.66	4.29	4.29	4.29	4.29	\	5.15	5.15	5.15
	95	TC	42	42.2	42.4	42.6	49.9	50.2	50.4	50.7	57.3	57.6	57.9	58.2	\	67	67.5	67.7
		S/T	0.92	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.43	0.62	0.80	0.98	\	0.43	0.57	0.74
		KW	3.97	3.97	3.97	3.97	4.81	4.81	4.81	4.81	5.67	5.67	5.67	5.67	\	6.67	6.67	6.67
	105	TC	42	42.2	42.4	42.6	49.9	50.2	50.4	50.7	58.4	58.7	59	59.4	\	59.3	59.6	59.9
		S/T	0.92	1.00	1.00	1.00	0.62	0.83	1.00	1.00	0.43	0.62	0.80	0.98	\	0.43	0.58	0.75
		KW	4.36	4.36	4.36	4.36	5.33	5.33	5.33	5.33	5.97	5.97	5.97	5.97	\	6.09	6.06	6.09
	115	TC	42	42.2	43.2	42.6	56.1	56.5	56.7	57.1	68.4	68.7	69.1	69.5	\	48.5	48.6	49
		S/T	0.92	1.00	1.00	1.00	0.59	0.77	1.00	1.00	0.39	0.55	0.72	0.88	\	0.42	0.63	0.90
		KW	5.08	5.08	5.08	5.08	5.26	5.26	5.26	5.26	5.42	5.42	5.42	5.42	\	5.58	5.58	5.58

Table 4

TC refers to total capacity S/T: refers to the ratio of sensible heat and total capacity kW: refers to total input power

5.2 BRBA-60HWD1N1-M18 For Heating

BRBA-60HWD1N1-M18 For Heating																		
Airflow (SCFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	5	2	-4
1350	60	TC	72.8	72.8	72.8	72.8	68.4	64.3	60.4	56.8	53.3	50.2	47.2	44.7	43	41.7	41.9	39.5	36.8
		KW	4.55	4.91	5.38	5.86	5.67	5.52	5.41	5.31	5.21	5.11	5.02	4.92	4.9	4.85	4.81	4.74	4.63
	70	TC	57.1	57.1	57.1	57.1	57.1	57.1	57.1	51.9	49	46.1	43	41.8	41.1	40.3	40.2	37.2	35.1
		KW	3.41	3.65	3.91	4.22	4.66	5.05	5.5	5.32	5.21	5.07	4.95	4.91	4.96	4.91	4.86	4.74	4.79
	75	TC	47.4	47.4	47.4	47.4	47.4	47.4	47.4	47.4	46.5	44.3	41.2	39	37.9	37.5	37.4	37.3	35.3
		KW	3.02	3.18	3.38	3.64	3.95	4.31	4.67	5.07	5.36	5.38	5.19	5.04	5	4.98	4.91	5.33	5.17
	80	TC	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	39.4	38.4	36.9	36.6	36.5	36.6	36.1
		KW	2.56	2.7	2.86	3.07	3.3	3.51	3.83	4.19	4.48	4.73	4.98	5.06	5.07	5.04	4.97	5.38	5.65
1900	60	TC	75.9	75.9	75.9	75.9	71.3	67	63.1	59.3	55.6	52.4	49.2	46.8	44.9	43.5	41.7	39.7	37.1
		KW	4.56	4.92	5.39	5.88	5.69	5.53	5.41	5.31	5.21	5.11	5.03	4.93	4.91	4.86	4.82	4.74	4.74
	70	TC	57	57	57	57	57	57	57	51.7	48.6	45.6	42.7	41.2	40.3	39.5	39.3	37	35.7
		KW	3.41	3.65	3.92	4.23	4.66	5.06	5.5	5.32	5.2	5.06	4.92	4.87	4.9	4.83	4.79	4.74	4.63
	75	TC	57.1	57.1	57.1	57.1	57.1	57.1	57.1	57.1	55.9	53.1	49.4	46.9	45.6	45.1	44.9	44.5	43.9
		KW	3.46	3.65	3.9	4.2	4.54	4.95	5.37	5.85	6.16	6.21	5.97	5.8	5.76	5.74	5.66	5.71	5.71
	80	TC	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	40.1	38.5	38.1	38	38.1	37.5
		KW	2.56	2.7	2.86	3.07	3.3	3.51	3.84	4.2	4.48	4.75	4.99	5.07	5.09	5.05	4.97	5.42	5.57
2000	60	TC	76.8	76.8	76.8	76.8	72.2	67.8	63.9	59.9	56.2	53	49.8	47.4	45.5	44	42.8	41.5	40.2
		KW	4.57	4.93	5.4	5.88	5.69	5.53	5.41	5.31	5.21	5.11	5.04	4.94	4.92	4.86	4.82	4.74	4.84
	70	TC	57	57	57	57	57	57	57	51.6	48.5	45.5	42.6	41	40.1	39.3	39.1	38.5	37.7
		KW	3.41	3.65	3.92	4.23	4.66	5.06	5.5	5.32	5.19	5.06	4.91	4.86	4.89	4.81	4.78	4.74	4.63
	75	TC	59.9	59.9	59.9	59.9	59.9	59.9	59.9	59.9	58.6	55.5	51.8	49.1	47.9	47.4	47.1	46.8	46.5
		KW	3.59	3.79	4.05	4.35	4.72	5.14	5.58	6.07	6.39	6.45	6.2	6.01	5.97	5.95	5.88	6.41	6.33
	80	TC	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	41.6	40.6	39	38.5	38.5	38.8	38.2
		KW	2.56	2.7	2.86	3.07	3.3	3.51	3.85	4.21	4.48	4.75	4.99	5.07	5.09	5.06	4.97	5.45	5.64

Table 5

TC refers to total capacity S/T: refers to the ratio of sensible heat and total capacity kW: refers to total input power

5.3 BRBA-36HWD1N1-M18 For Cooling

BRBA-36HWD1N1-M18 For Cooling																		
Indoor Airflow (SCFM)	Outdoor	IWB (℉)	59				63				67				71			
	DB	IDB (℉)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
950	65	TC	29.1	29.4	30.0	30.4	30.0	30.4	30.7	31.0	32.1	32.4	32.7	32.9	\	39.1	39.4	39.7
		S/T	1.00	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.41	0.60	0.77	0.95	\	0.41	0.56	0.71
		kW	1.79	1.82	1.83	1.83	1.83	1.85	1.86	1.88	1.88	1.90	1.92	1.94	\	2.38	2.40	2.42
	75	TC	29.1	29.5	30.1	30.4	30.1	30.4	30.8	31.1	32.2	32.5	32.8	33.0	\	38.7	39.0	39.3
		S/T	1.00	1.00	1.00	1.00	0.65	0.88	1.00	1.00	0.41	0.59	0.77	0.95	\	0.41	0.56	0.71
		kW	1.99	2.01	2.04	2.04	2.04	2.06	2.09	2.10	2.09	2.12	2.14	2.16	\	2.61	2.64	2.66
	85	TC	28.7	29.0	29.6	30.0	29.6	30.0	30.3	30.6	31.7	32.0	32.3	32.5	\	38.0	38.3	38.5
		S/T	1.00	1.00	1.00	1.00	0.65	0.89	1.00	1.00	0.41	0.60	0.78	0.96	\	0.41	0.56	0.71
		kW	2.24	2.27	2.29	2.29	2.29	2.32	2.34	2.37	2.37	2.39	2.41	2.42	\	2.96	3.00	3.02
	95	TC	28.2	28.5	29.1	29.5	29.1	29.5	29.8	30.1	31.2	31.5	31.7	32.0	\	37.1	37.4	37.6
		S/T	1.00	1.00	1.00	1.00	0.65	0.89	1.00	1.00	0.41	0.60	0.78	0.97	\	0.41	0.56	0.72
		kW	2.69	2.72	2.75	2.75	2.75	2.77	2.81	2.83	2.85	2.87	2.89	2.93	\	3.53	3.56	3.59
	105	TC	26.9	27.3	27.9	28.2	27.9	28.2	28.4	28.7	29.7	30.0	30.2	30.4	\	34.9	35.0	35.2
		S/T	1.00	1.00	1.00	1.00	0.65	0.89	1.00	1.00	0.41	0.60	0.79	0.98	\	0.41	0.57	0.73
		kW	3.23	3.26	3.30	3.30	3.30	3.33	3.37	3.41	3.41	3.44	3.47	3.50	\	4.12	4.13	4.14
	115	TC	22.5	22.7	23.3	23.5	23.3	23.5	23.7	24.0	25.0	25.2	25.3	25.5	\	27.0	27.2	27.3
		S/T	1.00	1.00	1.00	1.00	0.65	0.90	1.00	1.00	0.42	0.63	0.83	1.00	\	0.41	0.61	0.80
		kW	2.91	2.94	2.97	2.97	2.97	3.02	3.04	3.07	3.10	3.12	3.14	3.15	\	3.24	3.26	3.28
1250	65	TC	31.3	31.6	32.4	32.7	32.4	32.7	33.1	33.4	34.7	34.9	35.2	35.5	\	41.9	42.2	42.5
		S/T	1.00	1.00	1.00	1.00	0.32	0.91	1.00	1.00	0.41	0.61	0.80	0.99	\	0.41	0.57	0.73
		kW	2.29	2.32	2.34	2.34	2.34	2.37	2.39	2.41	2.41	2.42	2.46	2.48	\	2.86	2.89	2.92
	75	TC	30.8	31.1	31.8	32.2	31.8	32.2	32.5	32.9	34.1	34.4	34.6	34.9	\	40.5	40.8	41.1
		S/T	1.00	1.00	1.00	1.00	0.67	0.91	1.00	1.00	0.41	0.61	0.80	1.00	\	0.41	0.57	0.74
		kW	2.29	2.32	2.34	2.34	2.34	2.37	2.39	2.41	2.41	2.42	2.46	2.48	\	2.86	2.89	2.92
	85	TC	30.8	31.1	31.8	32.2	31.8	32.2	32.5	32.9	34.1	34.4	34.6	34.9	\	40.5	40.8	41.1
		S/T	1.00	1.00	1.00	1.00	0.67	0.91	1.00	1.00	0.41	0.61	0.80	1.00	\	0.41	0.57	0.74
		kW	2.51	2.54	2.58	2.58	2.58	2.60	2.63	2.66	2.66	2.68	2.70	2.74	\	3.30	3.32	3.35
	95	TC	30.4	30.8	31.5	31.8	31.5	31.8	32.1	32.5	33.4	33.9	34.2	34.4	\	39.4	39.6	39.8
		S/T	1.00	1.00	1.00	1.00	0.67	0.92	1.00	1.00	0.41	0.61	0.80	1.00	\	0.41	0.58	0.75
		kW	3.00	3.03	3.06	3.06	3.06	3.09	3.13	3.16	3.18	3.20	3.23	3.25	\	3.88	3.91	3.95
	105	TC	28.8	29.2	29.8	30.1	29.8	30.1	30.4	30.8	31.8	31.9	32.4	32.7	\	35.6	35.6	35.8
		S/T	1.00	1.00	1.00	1.00	0.67	0.92	1.00	1.00	0.41	0.62	0.82	1.00	\	0.41	0.60	0.78
		kW	3.57	3.60	3.65	3.65	3.65	3.69	3.72	3.76	3.77	3.80	3.84	3.87	\	4.17	4.20	4.22
	115	TC	22.3	22.5	23.0	23.3	23.0	23.3	23.5	23.8	25.4	25.5	25.1	25.2	\	26.1	26.2	26.3
		S/T	1.00	1.00	1.00	1.00	0.68	0.93	1.00	1.00	0.42	0.65	0.91	1.00	\	0.42	0.65	0.89
		kW	2.96	3.00	3.03	3.03	3.03	3.05	3.09	3.12	3.18	3.19	3.19	3.20	\	3.23	3.24	3.25
1350	65	TC	33.3	33.7	34.4	34.8	34.4	34.8	35.2	35.6	36.8	37.1	37.3	37.6	\	44.1	44.4	45.0
		S/T	1.00	1.00	1.00	1.00	0.68	0.93	1.00	1.00	0.41	0.62	0.82	1.00	\	0.40	0.58	0.75
		kW	2.45	2.47	2.49	2.49	2.49	2.52	2.55	2.58	2.58	2.60	2.64	2.66	\	3.12	3.14	3.16
	75	TC	33.4	33.8	34.6	34.9	34.6	34.9	35.3	35.7	37.0	37.2	37.5	37.8	\	45.1	45.3	45.4
		S/T	1.00	1.00	1.00	1.00	0.67	0.93	1.00	1.00	0.41	0.62	0.82	1.00	\	0.40	0.58	0.75
		kW	2.51	2.54	2.58	2.58	2.58	2.60	2.63	2.66	2.66	2.68	2.70	2.74	\	3.43	3.44	3.44
	85	TC	32.7	33.1	33.8	34.2	33.8	34.2	34.5	34.9	36.3	36.4	36.7	36.9	\	42.7	42.8	43.1
		S/T	1.00	1.00	1.00	1.00	0.68	0.94	1.00	1.00	0.41	0.62	0.83	1.00	\	0.41	0.59	0.77
		kW	2.85	2.87	2.91	2.91	2.91	2.94	2.96	3.00	3.01	3.03	3.05	3.07	\	3.67	3.70	3.72
	95	TC	31.9	32.2	32.9	33.3	32.9	33.3	33.7	34.0	35.4	35.6	35.8	36.1	\	40.6	40.8	40.8
		S/T	1.00	1.00	1.00	1.00	0.68	0.95	1.00	1.00	0.41	0.63	0.84	1.00	\	0.41	0.60	0.79
		kW	3.34	3.39	3.42	3.42	3.42	3.46	3.49	3.52	3.54	3.57	3.59	3.61	\	4.13	4.14	4.14
	105	TC	30.1	30.4	31.1	31.5	31.1	31.5	31.8	32.2	33.5	33.7	33.9	34.2	\	36.1	36.3	36.5
		S/T	1.00	1.00	1.00	1.00	0.69	0.95	1.00	1.00	0.41	0.63	0.86	1.00	\	0.41	0.62	0.83
		kW	3.94	3.97	4.02	4.02	4.02	4.05	4.10	4.14	4.16	4.20	4.22	4.25	\	4.38	4.40	4.44
	115	TC	22.5	22.6	23.2	23.5	23.2	23.5	23.7	23.9	25.0	25.1	25.2	25.4	\	26.7	26.8	26.9
		S/T	1.00	1.00	1.00	1.00	0.70	1.00	1.00	1.00	0.42	0.70	0.98	1.00	\	0.42	0.69	0.95
		kW	3.07	3.11	3.15	3.15	3.15	3.19	3.21	3.24	3.29	3.30	3.32	3.33	\	3.43	3.44	3.46

Table 6

TC refers to total capacity S/T: refers to the ratio of sensible heat and total capacity kW: refers to total input power

5.4 BRBA-36HWD1N1-M18 For Heating

BRBA-36HWD1N1-M18 For Heating																			
Airflow (SCFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	5	2	-4
950	60	TC	42.4	42.4	42.3	42.3	42.2	40.7	36.1	32.7	30.1	28.9	26.3	22.8	21.7	20.3	19.2	18.1	16.9
		kW	2.6	2.78	3.01	3.27	3.53	3.55	3.38	3.24	3.14	3.43	3.3	3.15	3.05	2.97	2.88	2.79	2.71
	70	TC	32.8	32.6	32.8	32.7	32.4	32.3	31.3	30.7	29.6	28.4	25.6	22.5	21.2	20	19	18	16.8
		kW	1.95	2.05	2.25	2.41	2.59	2.82	3.06	3.3	3.44	3.72	3.56	3.41	3.29	3.2	3.1	3	2.89
	75	TC	27.6	27.5	27.5	27.5	27.5	27.5	26.2	25.7	25.4	24.4	23.6	21.3	20.1	18.7	17.3	16.7	16.1
		kW	1.61	1.74	1.88	2.03	2.22	2.4	2.52	2.73	2.91	3.17	3.38	3.54	3.44	3.34	3.24	3.25	3.31
	80	TC	22.7	22.7	22.7	22.7	22.6	22.6	21.7	21.3	21.1	20	19.4	17.5	17.8	18.1	17.1	16.5	15.9
		kW	1.34	1.43	1.56	1.68	1.8	1.96	2.07	2.27	2.41	2.54	2.71	2.87	3.1	3.38	3.37	3.44	3.48
1250	60	TC	47.4	47.4	47.3	46	43.4	41.2	36.7	33.2	30.8	29.4	26.4	23.3	22.2	20.7	19.6	18.5	17.3
		kW	3.07	3.26	3.51	3.61	3.51	3.48	3.34	3.19	3.13	3.41	3.27	3.14	3.05	2.97	2.89	2.81	2.73
	70	TC	36.7	36.5	36.2	36.2	36.2	36	34.7	32.4	30.1	28.7	26	23	21.6	20.2	19.2	18.2	17.1
		kW	2.24	2.4	2.54	2.76	2.99	3.17	3.53	3.49	3.39	3.68	3.54	3.38	3.29	3.2	3.11	3.02	2.91
	75	TC	31	30.9	30.7	30.9	30.8	30.3	29.3	28.8	28.5	27.3	25.7	21.6	20.4	19	17.5	17	16.4
		kW	1.88	2.01	2.14	2.34	2.48	2.68	2.89	3.13	3.35	3.64	3.7	3.52	3.43	3.33	3.24	3.54	3.61
	80	TC	25.3	25.3	25.3	25.3	25.3	25.2	24.4	23.6	23.4	22.4	21.7	19.7	20	18.7	17.3	16.7	16.1
		kW	1.56	1.64	1.78	1.92	2.06	2.22	2.41	2.53	2.71	2.91	3.11	3.28	3.54	3.47	3.36	3.41	3.53
1350	60	TC	52.8	51.9	49.1	46.9	44.2	41.9	37.2	33.7	31.3	29.9	27	23.6	22.5	21.1	20	19.1	18.1
		kW	3.61	3.7	3.61	3.59	3.5	3.48	3.34	3.23	3.15	3.43	3.32	3.18	3.11	3.03	2.96	2.87	2.79
	70	TC	40.6	40.5	40.5	40.5	40.4	40.4	36.4	32.9	30.7	29.2	26.5	23.2	22.1	20.7	19.6	18.7	17.9
		kW	2.58	2.74	2.98	3.22	3.47	3.74	3.64	3.5	3.43	3.7	3.56	3.42	3.34	3.26	3.17	3.09	3.01
	75	TC	34.6	34.4	34.4	34	34	33.9	32.9	32.1	30.2	28.8	26.1	22.1	20.8	19.3	18	17.4	16.9
		kW	2.2	2.32	2.53	2.64	2.86	3.1	3.36	3.61	3.56	3.87	3.72	3.55	3.47	3.38	3.29	3.41	3.53
	80	TC	28.4	28.3	28.3	28.3	28.3	28.2	26.9	26.4	26.2	25.0	24.2	21.7	20.5	19.1	17.7	17.1	16.4
		kW	1.83	1.93	2.09	2.22	2.41	2.59	2.72	2.92	3.11	3.37	3.56	3.71	3.60	3.51	3.42	3.45	3.48

Table 7

TC refers to total capacity S/T: refers to the ratio of sensible heat and total capacity kW: refers to total input power

6 Airflow Performance

Airflow performance data is based on cooling performance with a coil and no filter in place. Check the performance table for appropriate unit size selection.

External static pressure should stay within the minimum and maximum limits shown in the table below in order to ensure proper operation of both cooling, heating, and electric heating operation.

Model Number	Motor Speed		SCFM								
			External Static Pressure-Inches W.C.[kPa]								
			0[0]	0.1[.02]	0.2[. 05]	0.3[.07]	0.4[.10]	0.5[.12]	0.6[.15]	0.7[.17]	0.8[.20]
BRBA-60HWD1N1-M18	Tap (1)	SCFM	1385	1300	1230	1136	1045	959	867	787	717
		Watts	164	171	180	192	204	217	232	238	249
		Amps	1.43	1.48	1.56	1.64	1.74	1.84	1.94	1.99	2.07
	Tap (2)	SCFM	1489	1432	1352	1279	1172	1088	1013	934	863
		Watts	206	211	223	233	241	257	269	283	295
		Amps	1.76	1.80	1.89	1.96	2.02	2.13	2.24	2.34	2.43
	Tap (3)	SCFM	1638	1572	1511	1440	1368	1293	1205	1137	1067
		Watts	293	319	333	343	348	355	365	373	383
		Amps	2.03	2.08	2.15	2.17	2.20	2.27	2.31	2.39	2.42
	Tap (4)	SCFM	1964	1903	1840	1786	1724	1655	1591	1488	1427
		Watts	435	450	466	479	494	507	521	535	551
		Amps	3.51	3.67	3.71	3.86	3.96	4.07	4.17	4.27	4.38
	Tap (5)	SCFM	2293	2225	2193	2133	2090	2011	1877	1755	1614
		Watts	661	682	708	710	731	730	720	701	667
		Amps	5.13	5.29	5.49	5.52	5.67	5.59	5.66	5.45	5.17
BRBA-36HWD1N1-M18	Tap (1)	SCFM	925	807	723	658	/	/	/	/	/
		Watts	114	120	126	130	/	/	/	/	/
		Amps	1.07	1.12	1.17	1.19	/	/	/	/	/
	Tap (2)	SCFM	1103	993	911	841	776	710	596	/	/
		Watts	162	169	175	181	187	193	197	/	/
		Amps	1.45	1.51	1.56	1.6	1.65	1.69	1.72	/	/
	Tap (3)	SCFM	1132	1084	1027	972	907	832	762	700	637
		Watts	193	201	207	214	221	229	238	243	247
		Amps	2.03	2.08	2.15	2.17	2.20	2.27	2.31	2.39	2.42
	Tap (4)	SCFM	1355	1310	1270	1180	1049	989	931	870	813
		Watts	296	301	307	312	318	323	327	331	336
		Amps	2.52	2.56	2.6	2.64	2.68	2.71	2.74	2.77	2.81
	Tap (5)	SCFM	1522	1465	1364	1291	1231	1177	1121	1066	1017
		Watts	426	432	438	443	448	452	456	460	466
		Amps	3.49	3.54	3.58	3.62	3.65	3.68	3.7	3.74	3.78

Table 8

Bold outlined areas represent airflow outside of the required 300-450 cfm/ton range.

NOTES:

1. This table is only used to select the **highest blower speed.** The high stage airflow must be used as the rated airflow for the full load operation of machine.
2. The rated airflow of systems without electric heater kits requires between 300 and 450 cubic feet of air per minute (CFM). The rated airflow of systems with electric heater kits requires between 350 and 450 cubic feet of air per minute (CFM).
3. The air distribution system has the greatest effect on airflow. Therefore, the contractor should use only industry-recognized procedures.
4. Duct design and construction should be carefully done. System performance can be lowered dramatically through poor design or workmanship.
5. Air supplier ducts should be located along the perimeter of the conditioned space and properly sized. Improper location or insufficient air flow may cause drafts or noise in the ductwork.
6. Installers should balance the air distribution system to ensure proper quiet airflow to all rooms in the home. An air velocity meter or airflow hood can be used to balance and verify branch and system airflow (CFM).
7. For the IDP 3-ton, 4 Speed Fan default is Tap (1), Tap (2), Tap (3), Tap (4). For the IDP 5-ton, the default fan speeds are Tap (2) for low speed and Tap (4) for high speed.

For instructions on how to select fan speeds, refer to the Installation Manual.

7 Sound Data

Mode	Frequency	3T dB (A)	5T dB (A)
Cooling	High	74	75
	Mid	73	74
	Low	61	66
Heating	High	74	75
	Mid	73	73
	Low	59	66
Fan	High	67	74
	Mid	62	70
	Low	55	64

Table 9 IDP Sound power level

8 Electrical Data

Size (Tons)	Voltage - Phase - Frequency	Compressors (each)	OD Fan Motors (each)	Supply Blower Motor	Unit Circuit	
		RLA	FLA	FLA	MCA[1] (Amps)	Max Fuse[2]/ Breaker[3] Size (Amps)
60 (5.0)	208/230-1-60	27A	2.1A	6.0A	41.9	60
36 (3.0)	208/230-1-60	19A	1.4A	3.5A	28.7	45

Table 10 Electrical Data Without Electric Heat

Heat Kit Model	Heat Pump Model	(kW) 208/240V	Stages	FLA (Amps) 208/240V	Dual Point		Single Point	
					MCA[1] (Amps) 208/240V	Max Fuse[2]/ Breaker[3] Size (Amps)* 208/240V	MCA[1] (Amps) 208/240V	Max Fuse[2]/ Breaker[3] Size (Amps)** 208/240V
EHK-05J	60	3.8/5	1	18.1/20.8	23/26	25/30	65/68	80/80
EHK-08J		5.6/7.5	1	27.1/31.3	34/40	35/40	76/81	90/100
EHK-10J		7.5/10.0	1	36.1/41.7	46/53	50/60	87/94	100/110
EHK-15J		11.3/15	2	54.2/62.5	68/79	70/80	110/120	110/125
EHK-20J		15/20	2	72.2/83.3	91/105	100/110	133/146	150/150
EHK-05J	36	3.8/5	1	18.1/20.8	23/26	25/30	52/55	60/60
EHK-08J		5.6/7.5	1	27.1/31.3	34/40	35/40	63/68	70/70
EHK-10J		7.5/10.0	1	36.1/41.7	46/53	50/60	74/81	80/90
EHK-15J		11.3/15	2	54.2/62.5	68/79	70/80	97/107	100/110

Table 11 Electrical Data With Electric Heat

[1] Minimum Circuit Ampacity.

[2] Maximum Over Current Protection per Standard UL 1995.

[3] Fuse or HACR circuit breaker size field installed.

* Max Fuse/Breaker Sizes are for electric heater ONLY (dual point electric heat). DOES NOT include breaker size for the unit.

** Max Fuse/Breaker Sizes include breaker size for the unit AND electric heat (single point electric heat).

Refer to Electric Heat Kit Installation Manual, some heater kits include fuses from the manufacturer.

9 Dimensions

9.1 BRBA-60HWD1N1-M18 Unit Dimensions

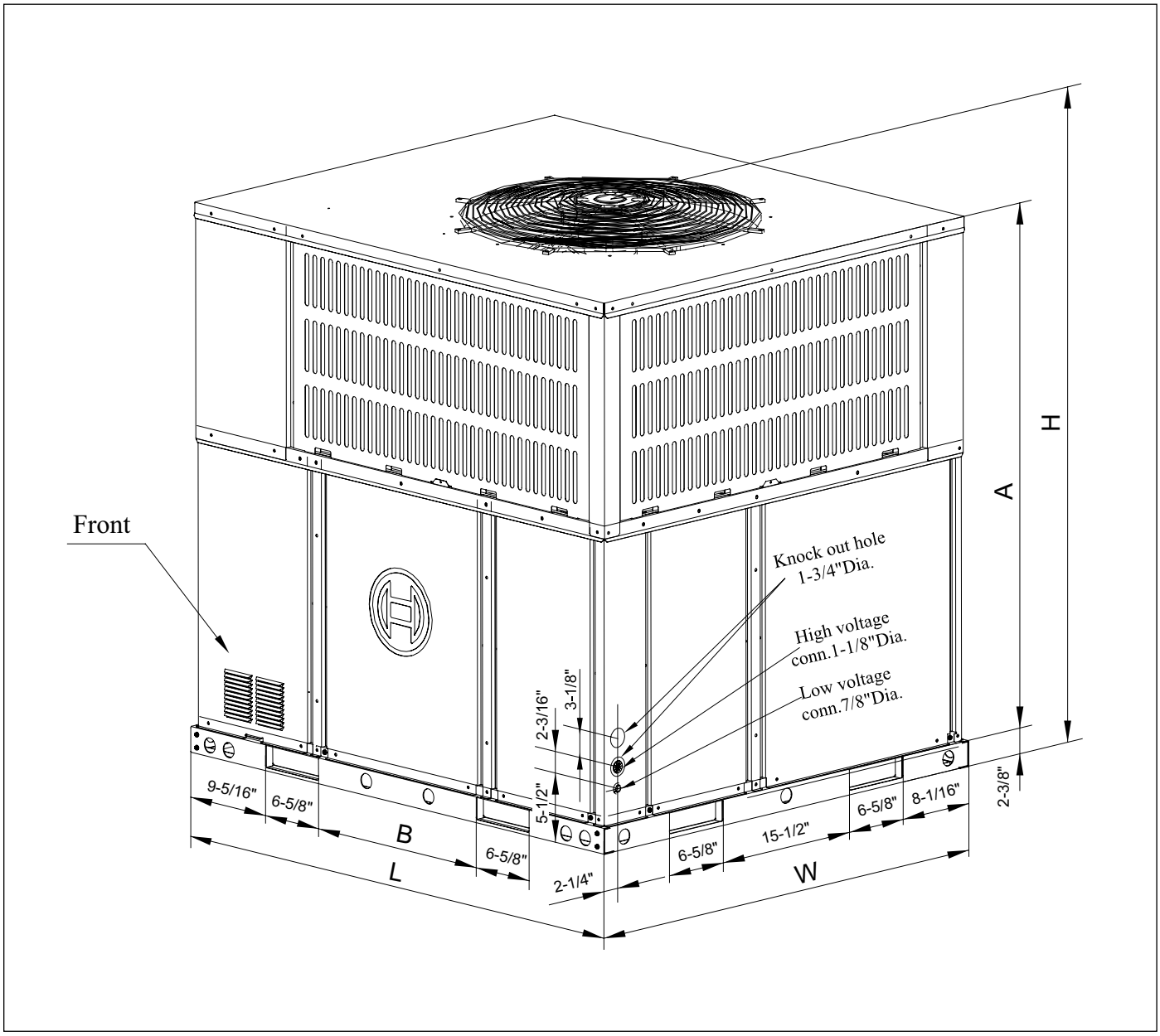


Figure 2

Heat Pump Model	L	W	H	A	B
BRBA-60HWD1N1-M18	51-9/16"	44-13/16"	51-7/16"	47-5/16"	19-11/16"

Table 12 Unit Dimensions

Heat Pump Model	Net Weight	Gross Weight
BRBA-60HWD1N1-M18	556 lbs (252kg)	591 lbs (268kg)

Table 13 Unit Weights

9.2 BRBA-60HWD1N1-M18 Dimensions - Back and Bottom

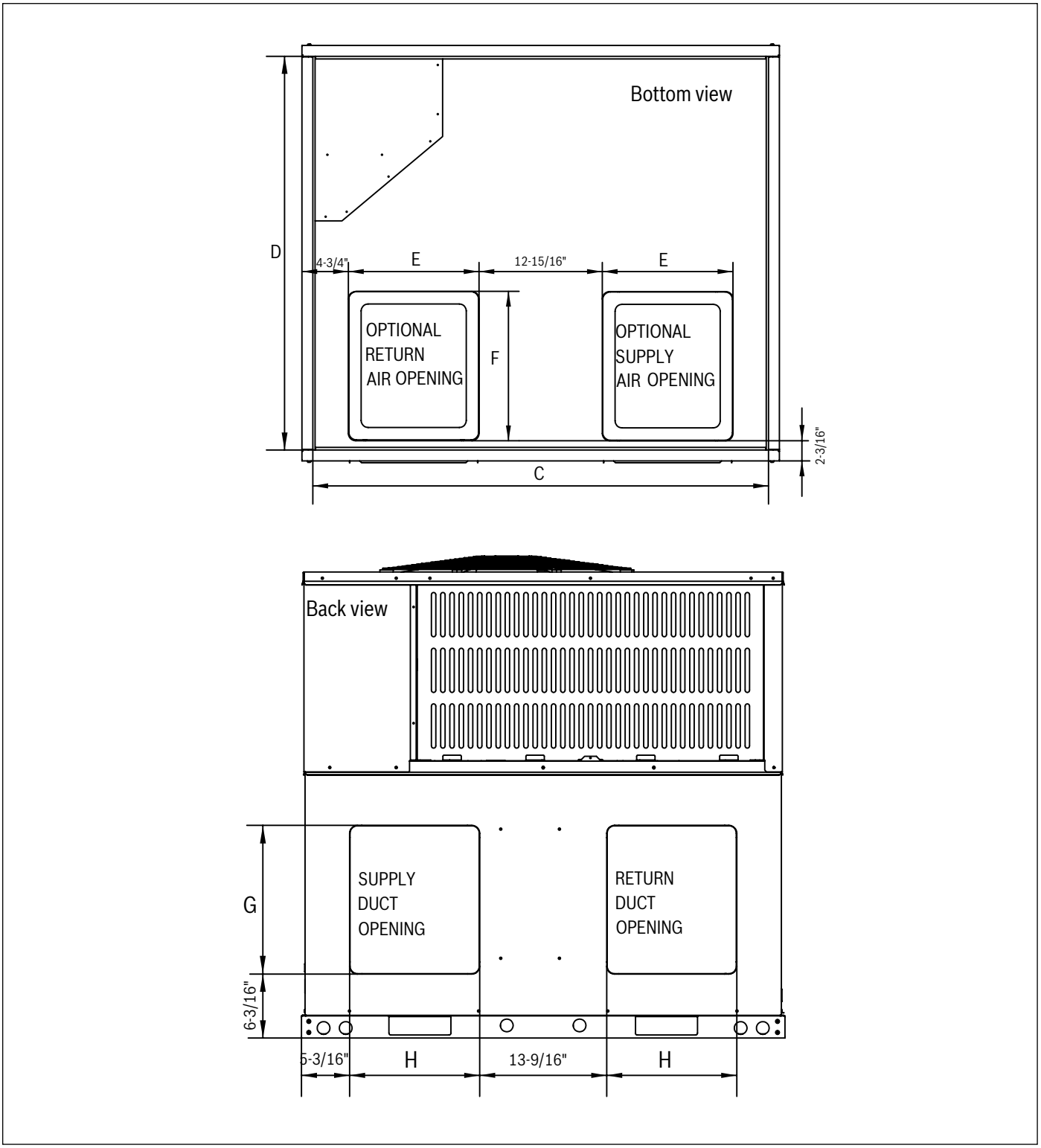


Figure 3

Heat Pump Model	C	D	E	F	G	H
BRBA-60HWD1N1-M18	49-1/4"	42-1/2"	14-1/8"	16-1/8"	15-7/8"	13-7/8"

Table 14 Dimensions - Back and Bottom

9.3 BRBA-60HWD1N1-M18 Dimensions - Right and Top

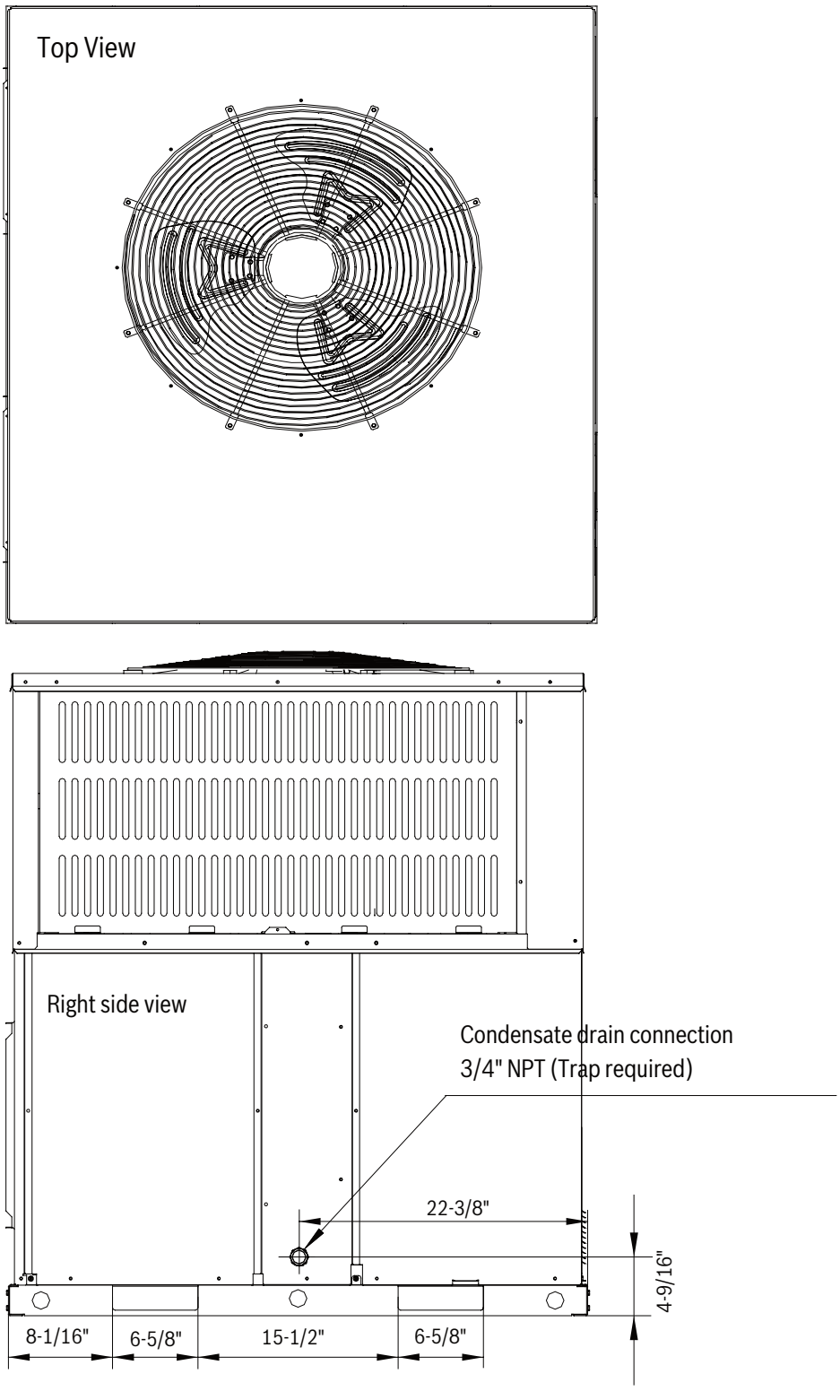


Figure 4

9.4 BRBA-36HWD1N1-M18 Unit Dimensions

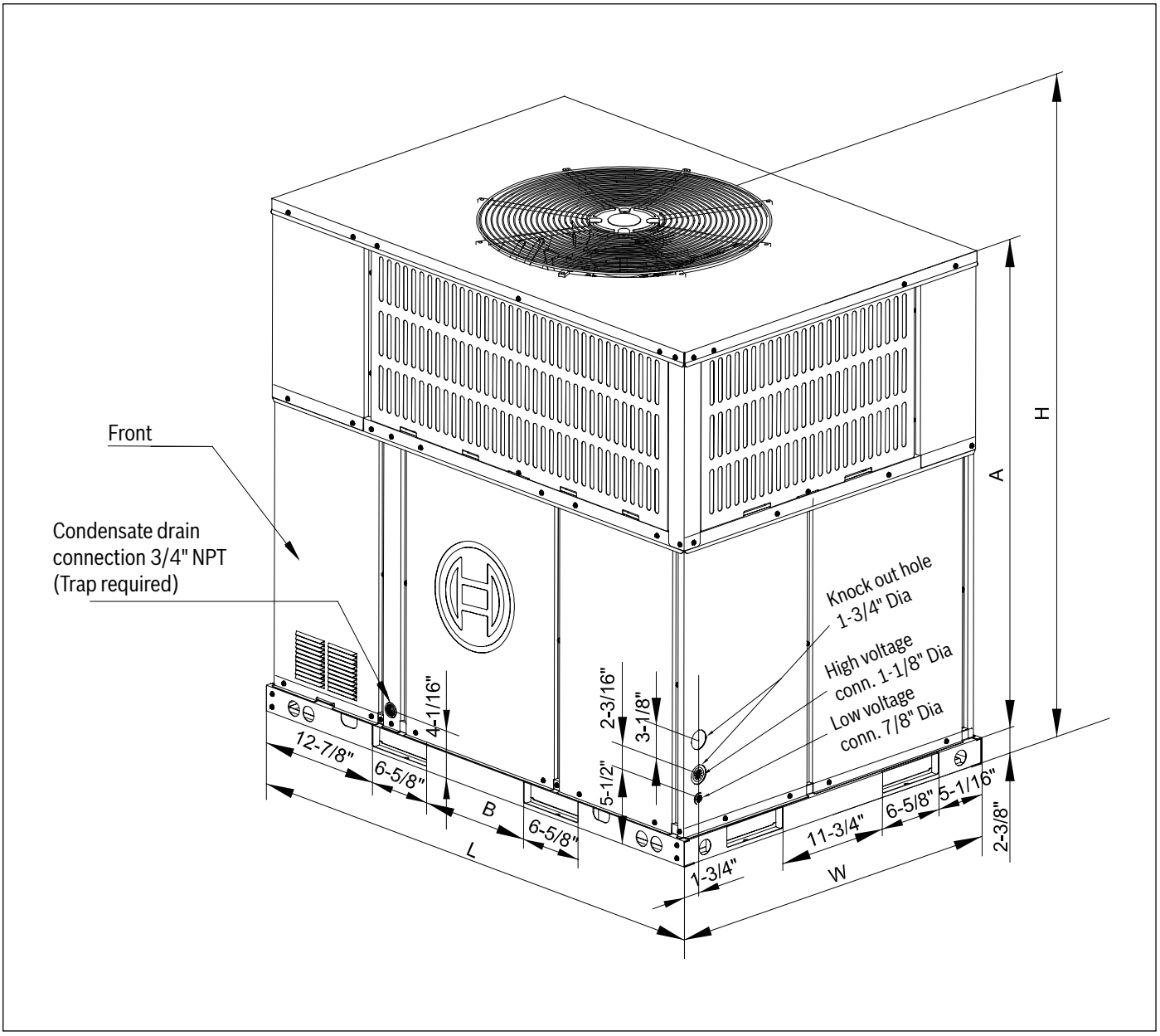


Figure 5

Heat Pump Model	L	W	H	A	B
BRBA-36HWD1N1-M18	50-11/16"	35-1/16"	46-13/16"	44-1/16"	11-3/4"

Table 15 Unit Dimensions

Heat Pump Model	Net Weight	Gross Weight
BRBA-36HWD1N1-M18	400 lbs (182kg)	420 lbs (191kg)

Table 16 Unit Weights

9.5 BRBA-36HWD1N1-M18 Dimensions - Back and Bottom

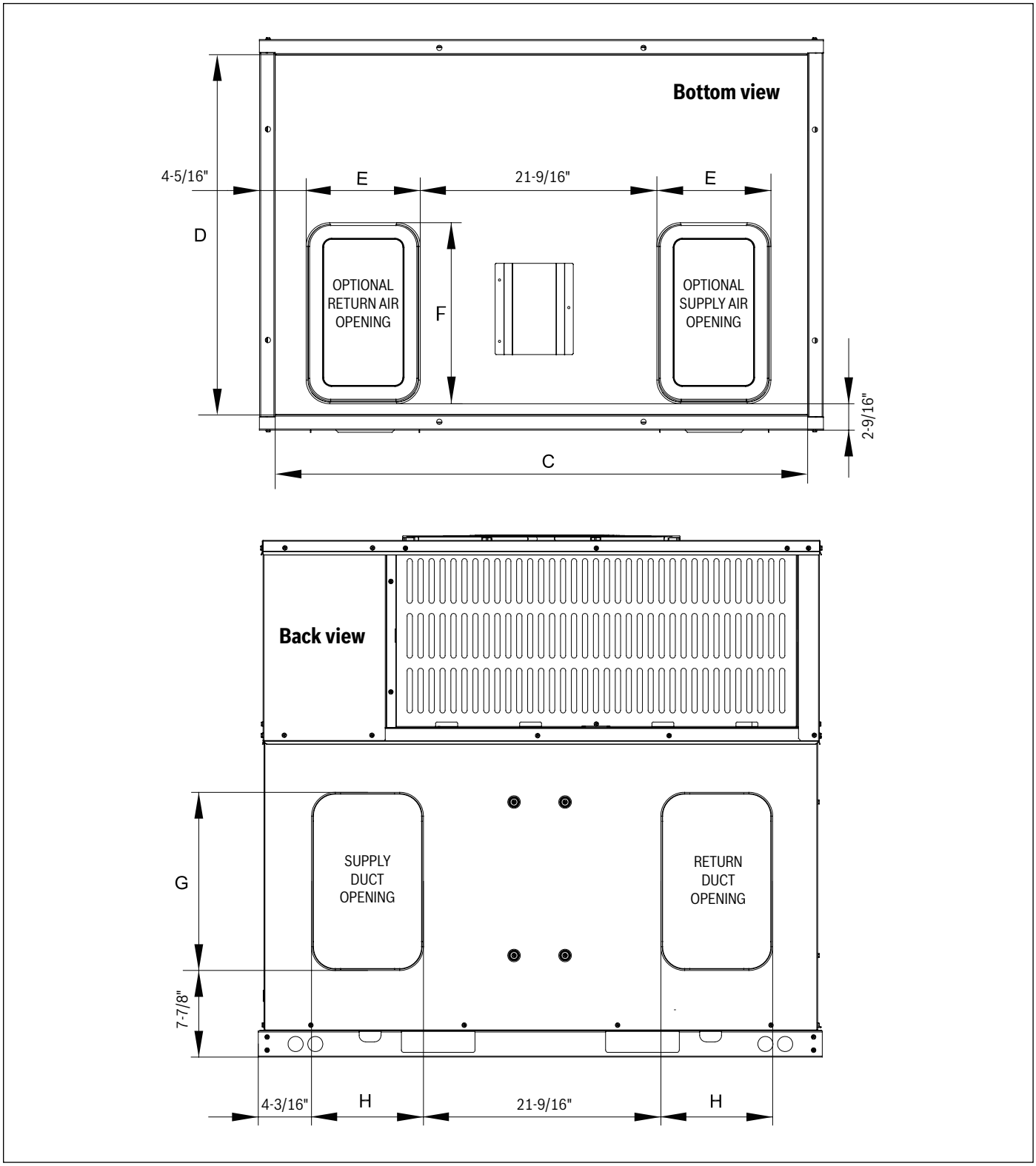
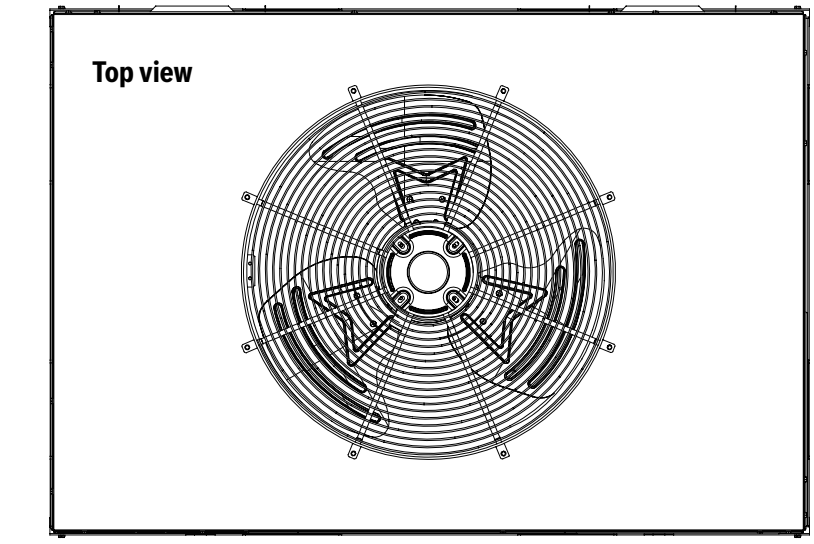


Figure 6

Heat Pump Model	C	D	E	F	G	H
BRBA-36HWD1N1-M18	47-13/16"	32-1/4"	9-15/16"	15-7/8"	15-3/4"	9-3/4"

Table 17 Dimensions - Back and Bottom

9.6 BRBA-36HWD1N1-M18 Dimensions - Right and Top



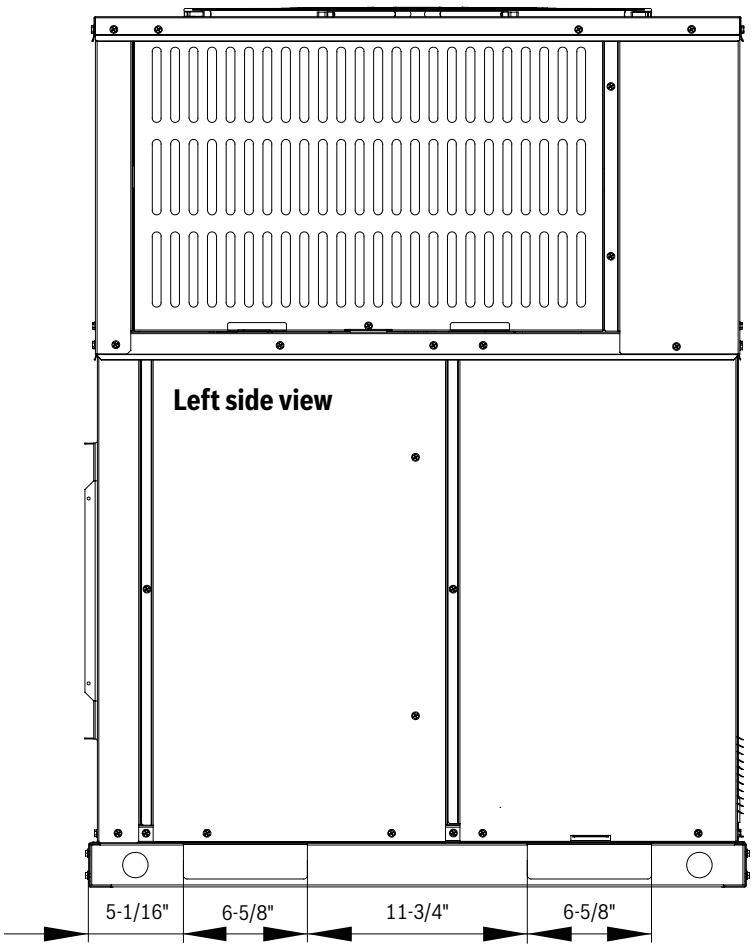


Figure 7

10 Rooftop Installation - Curb Mounting

The manufacturer does not supply roof curbs, they must be field supplied. Refer to Figure 11 for recommended roof curb dimensions. On applications when a roof curb is used, the unit must be positioned on the curb so the front of the unit is tight against the curb.

The default orientation from the factory is for horizontal airflow. Convert the unit to downflow using the following procedure:

1. Remove sheet metal screws from both the supply air and return air panels.
2. Add foam tape on the perimeter of the non painted side of each panel.
3. Move and re-secure the panels to the downflow location using the sheet metal screws from step 1.

For more information, refer to the the Conversion Kit Manual included with each heat pump unit.

Install the field-supplied roof mounting curb according to the Installation Instructions supplied with the curb. Install insulation, cant strips, roofing, and flashing. Ductwork must be attached to curb.

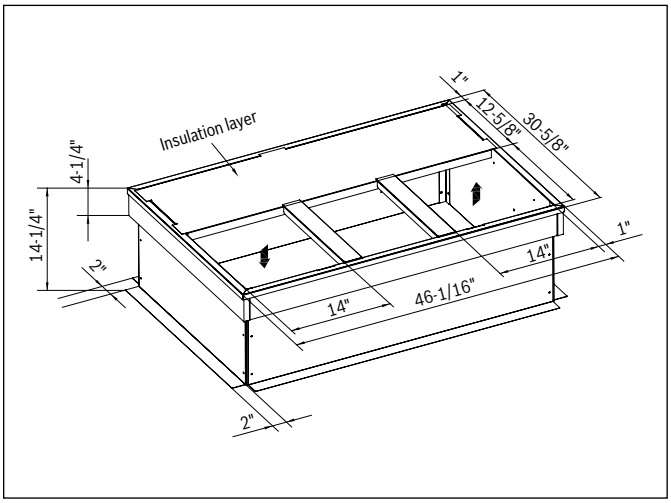


Figure 8 3T Roof Curb Dimensions

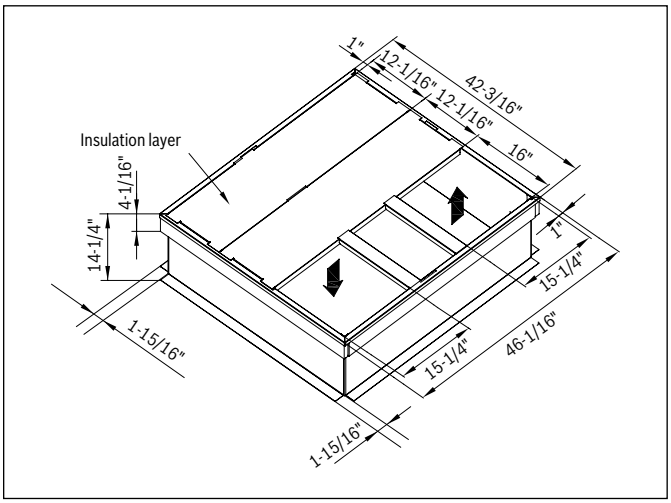


Figure 9 5T Roof Curb Dimensions

NOTICE:

- The gasketing of the unit to the roof curb is critical for a water tight seal. Install gasketing material supplied with the field supplied roof curb. Improperly applied gasketing also can result in air leaks and poor unit performance.

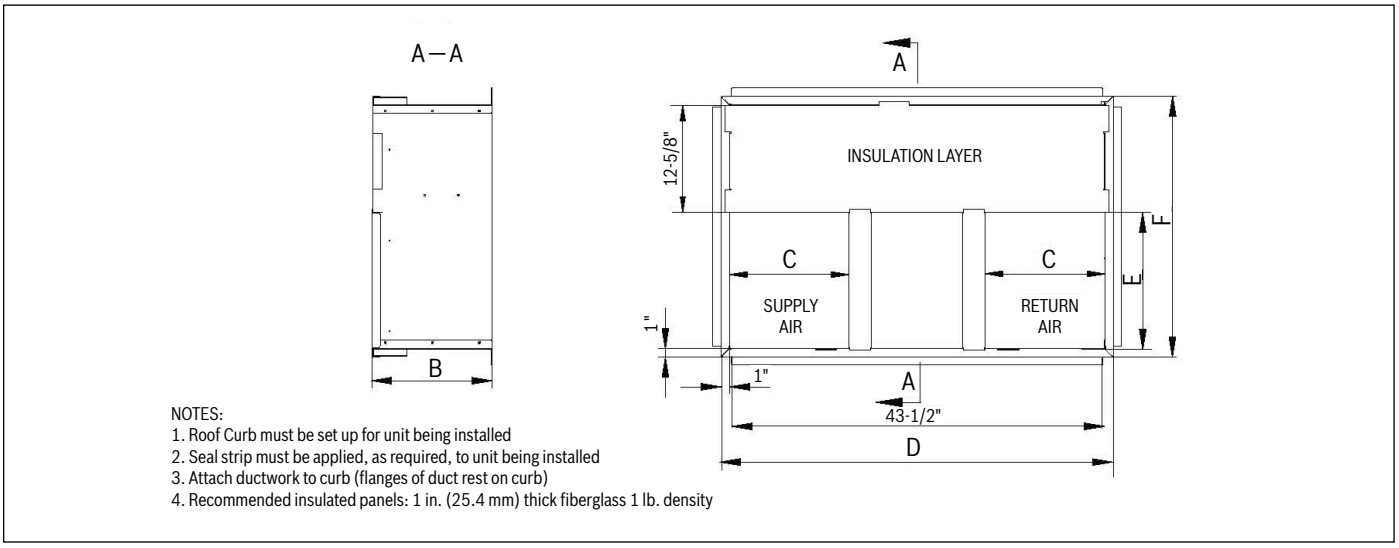
CAUTION:

- The unit must be secured to the curb by installing screws through the bottom of the curb flange and into the unit base rails.

For units applied with a roof curb, the minimum clearance may be reduced from 1 inch to 1/2 inch between combustible roof curb material and supply air duct.

NOTICE: UNIT/STRUCTURAL DAMAGE HAZARD

- Failure to follow this caution may result in property damage. Ensure there is sufficient clearance for saw blade when cutting the outer horizontal flange of the roof curb so there is no damage to the roof or flashing.

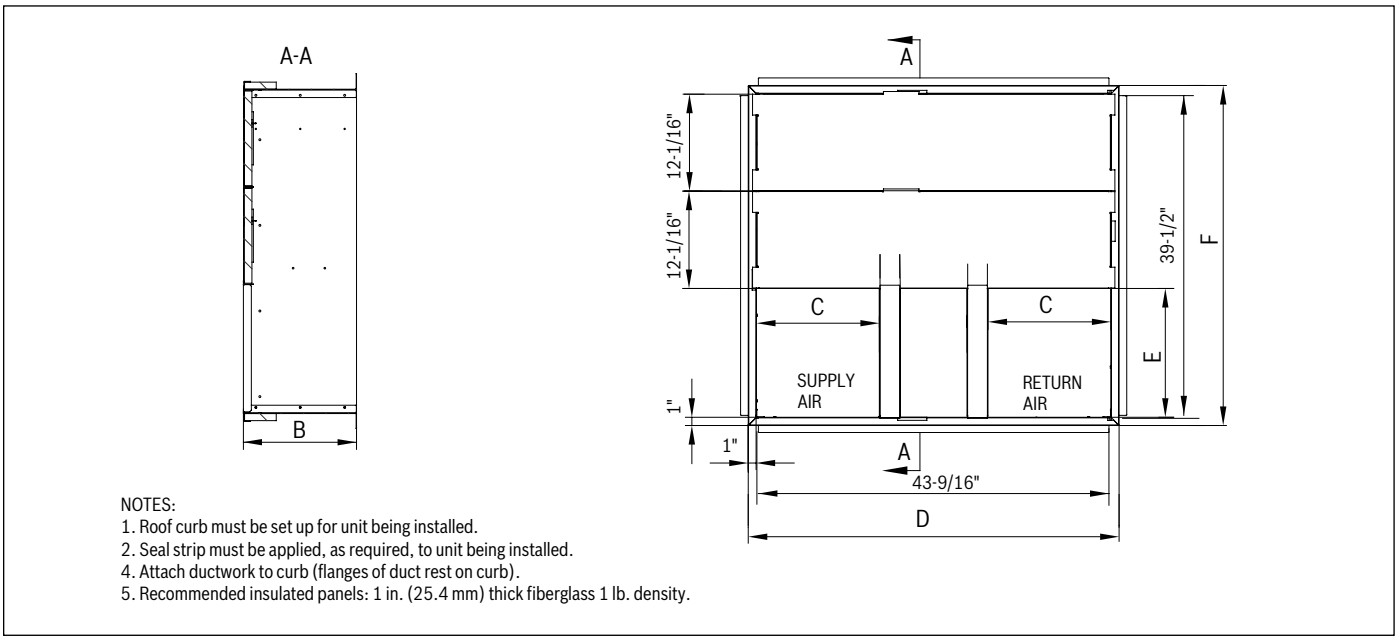


NOTES:
1. Roof Curb must be set up for unit being installed
2. Seal strip must be applied, as required, to unit being installed
3. Attach ductwork to curb (flanges of duct rest on curb)
4. Recommended insulated panels: 1 in. (25.4 mm) thick fiberglass 1 lb. density

Figure 10 3T Roof Curb Details

	B	C	D	E	F
CURB	14-1/4"	14"	46-1/16"	16"	30-5/8"

Table 18 3T Roof Curb Details - inches



NOTES:
1. Roof curb must be set up for unit being installed.
2. Seal strip must be applied, as required, to unit being installed.
4. Attach ductwork to curb (flanges of duct rest on curb).
5. Recommended insulated panels: 1 in. (25.4 mm) thick fiberglass 1 lb. density.

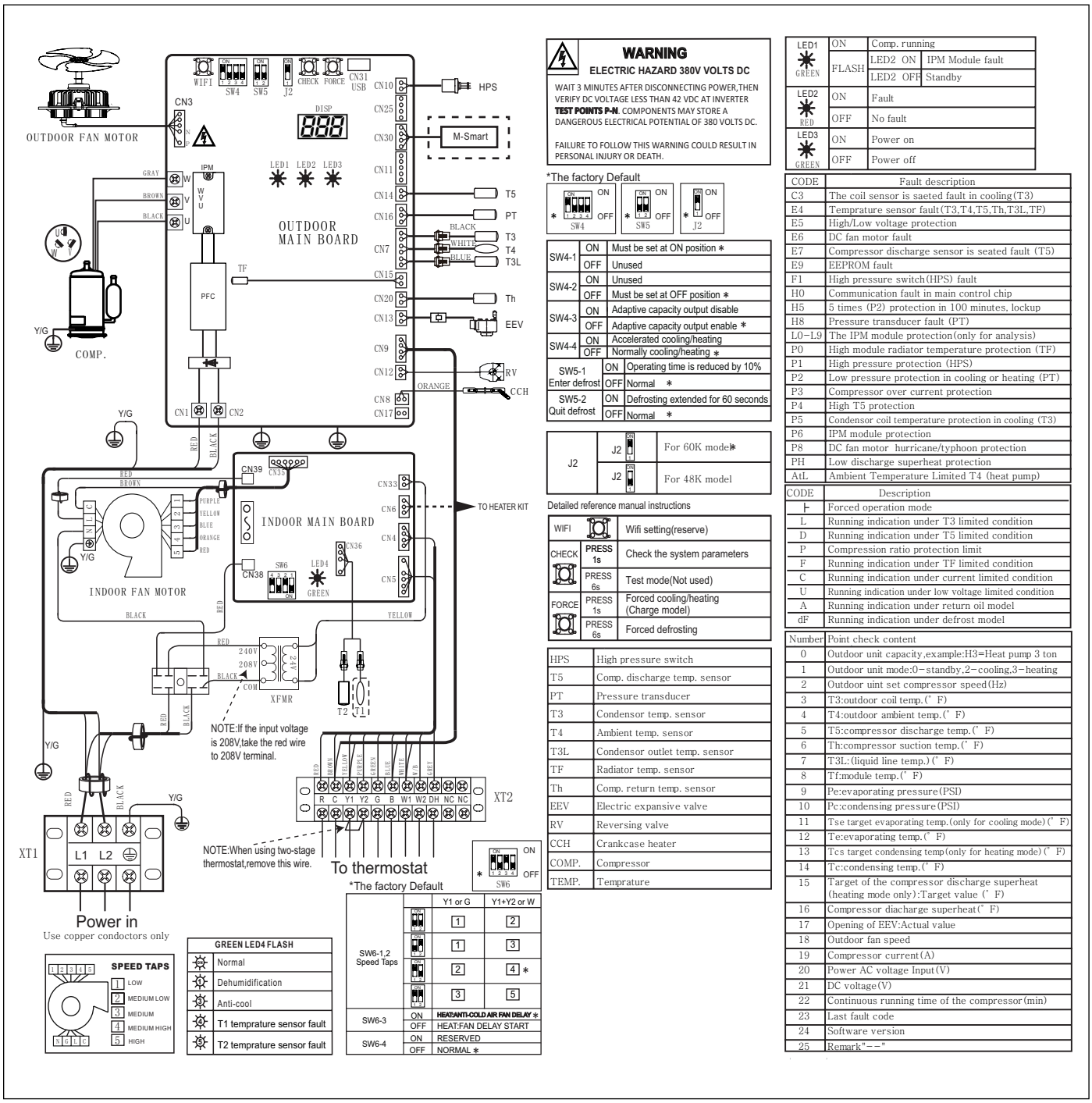
Figure 11 5T Roof Curb Details

	B	C	D	E	F
CURB	14-1/4"	15-1/4"	46-1/16"	16"	42-3/16"

Table 19 5T Roof Curb Details - inches

11 Wiring Diagram

11.1 BRBA-60HWD1N1-M18 Wiring Diagram



WARNING
ELECTRIC HAZARD 380V VOLTS DC

WAIT 3 MINUTES AFTER DISCONNECTING POWER,THEN VERIFY DC VOLTAGE LESS THAN 42 VDC AT INVERTER **TEST POINTS P-N**. COMPONENTS MAY STORE A DANGEROUS ELECTRICAL POTENTIAL OF 380 VOLTS DC.

FAILURE TO FOLLOW THIS WARNING COULD RESULT IN PERSONAL INJURY OR DEATH.

*The factory Default

SW4-1	ON	Must be set at ON position *
	OFF	Unused
SW4-2	ON	Unused
	OFF	Must be set at OFF position *
SW4-3	ON	Adaptive capacity output disable
	OFF	Adaptive capacity output enable *
SW4-4	ON	Accelerated cooling/heating
	OFF	Normally cooling/heating *
SW5-1 Enter defrost	ON	Operating time is reduced by 10%
	OFF	Normal *
SW5-2 Quit defrost	ON	Defrosting extended for 60 seconds
	OFF	Normal *

J2	J2	For 60K mode*
	J2	For 48K model

Detailed reference manual instructions

WIFI		Wifi setting(reserve)
CHECK	PRESS 1s	Check the system parameters
	PRESS 6s	Test mode(Not used)
FORCE	PRESS 1s	Forced cooling/heating (Charge model)
	PRESS 6s	Forced defrosting

HPS	High pressure switch
T5	Comp. discharge temp. sensor
PT	Pressure transducer
T3	Condensor temp. sensor
T4	Ambient temp. sensor
T3L	Condensor outlet temp. sensor
TF	Radiator temp. sensor
Th	Comp. return temp. sensor
EEV	Electric expansive valve
RV	Reversing valve
CCH	Crankcase heater
COMP.	Compressor
TEMP.	Temprature

LED1 GREEN	ON	Comp. running
	FLASH	LED2 ON IPM Module fault
		LED2 OFF Standby
LED2 RED	ON	Fault
	OFF	No fault
LED3 GREEN	ON	Power on
	OFF	Power off

CODE	Fault description
C3	The coil sensor is saeted fault in cooling(T3)
E4	Temprature sensor fault(T3,T4,T5,Th,T3L,TF)
E5	High/Low voltage protection
E6	DC fan motor fault
E7	Compressor discharge sensor is seated fault (T5)
E9	EEPROM fault
F1	High pressure switch(HPS) fault
H0	Communication fault in main control chip
H5	5 times (P2) protection in 100 minutes, lockup
H8	Pressure transducer fault (PT)
L0-L9	The IPM module protection(only for analysis)
P0	High module radiator temperature protection (TF)
P1	High pressure protection (HPS)
P2	Low pressure protection in cooling or heating (PT)
P3	Compressor over current protection
P4	High T5 protection
P5	Condensor coil temperature protection in cooling (T3)
P6	IPM module protection
P8	DC fan motor hurricane/typhoon protection
PH	Low discharge superheat protection
AtL	Ambient Temperature Limited T4 (heat pump)

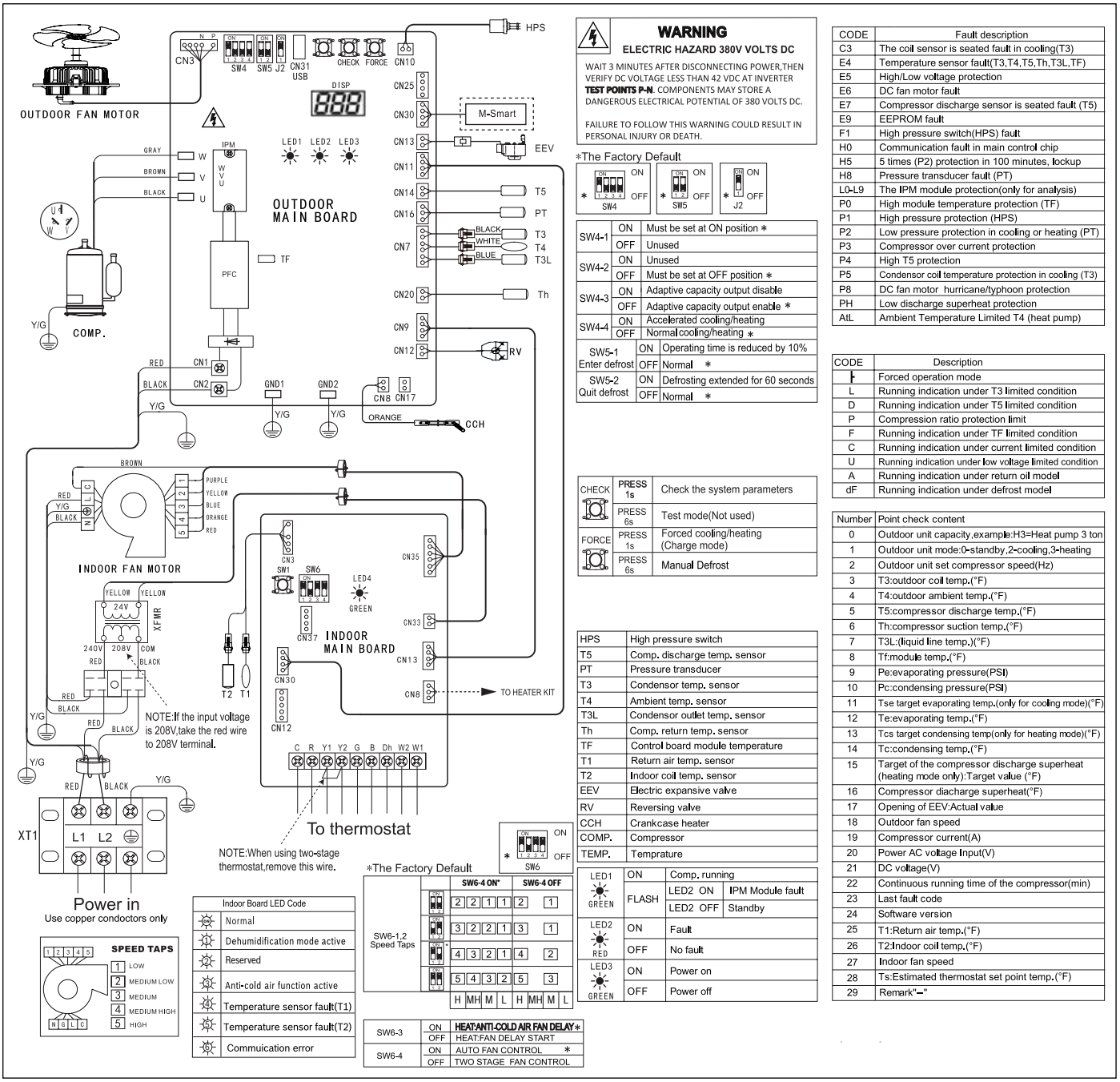
CODE	Description
⊢	Forced operation mode
L	Running indication under T3 limited condition
D	Running indication under T5 limited condition
P	Compression ratio protection limit
F	Running indication under TF limited condition
C	Running indication under current limited condition
U	Running indication under low voltage limited condition
A	Running indication under return oil model
dF	Running indication under defrost model

Number	Point check content
0	Outdoor unit capacity,example:H3=Heat pump 3 ton
1	Outdoor unit mode:0-standby,2-cooling,3-heating
2	Outdoor uint set compressor speed(Hz)
3	T3:outdoor coil temp.(°F)
4	T4:outdoor ambient temp.(°F)
5	T5:compressor discharge temp.(°F)
6	Th:compressor suction temp.(°F)
7	T3L:(liquid line temp.)(°F)
8	Tf:module temp.(°F)
9	Pe:evaporating pressure(PSI)
10	Pc:condensing pressure(PSI)
11	Tse target evaporating temp.(only for cooling mode)(°F)
12	Te:evaporating temp.(°F)
13	Tcs target condensing temp(only for heating mode)(°F)
14	Tc:condensing temp.(°F)
15	Target of the compressor discharge superheat (heating mode only):Target value (°F)
16	Compressor diacharge superheat(°F)
17	Opening of EEV:Actual value
18	Outdoor fan speed
19	Compressor current(A)
20	Power AC voltage Input(V)
21	DC voltage(V)
22	Continuous running time of the compressor(min)
23	Last fault code
24	Software version
25	Remark"--"

GREEN LED4 FLASH
Normal
Dehumidification
Anti-cool
T1 temprature sensor fault
T2 temprature sensor fault

Figure 12

11.2 BRBA-36HWD1N1-M18 Wiring Diagram



WARNING

ELECTRIC HAZARD 380V VOLTS DC

WAIT 3 MINUTES AFTER DISCONNECTING POWER,THEN VERIFY DC VOLTAGE LESS THAN 42 VDC AT INVERTER **TEST POINTS P-N**. COMPONENTS MAY STORE A DANGEROUS ELECTRICAL POTENTIAL OF 380 VOLTS DC.

FAILURE TO FOLLOW THIS WARNING COULD RESULT IN PERSONAL INJURY OR DEATH.

*The Factory Default

CODE	Fault description
C3	The coil sensor is seated fault in cooling(T3)
E4	Temperature sensor fault(T3,T4,T5,Th,T3L,TF)
E5	High/Low voltage protection
E6	DC fan motor fault
E7	Compressor discharge sensor is seated fault (T5)
E9	EEPROM fault
F1	High pressure switch(HPS) fault
H0	Communication fault in main control chip
H5	5 times (P2) protection in 100 minutes, lockup
H8	Pressure transducer fault (PT)
L0-L9	The IPM module protection(only for analysis)
P0	High module temperature protection (TF)
P1	High pressure protection (HPS)
P2	Low pressure protection in cooling or heating (PT)
P3	Compressor over current protection
P4	High T5 protection
P5	Condensor coil temperature protection in cooling (T3)
P8	DC fan motor hurricane/typhoon protection
PH	Low discharge superheat protection
AtL	Ambient Temperature Limited T4 (heat pump)

SW4-1	ON	Must be set at ON position *
	OFF	Unused
SW4-2	ON	Unused
	OFF	Must be set at OFF position *
SW4-3	ON	Adaptive capacity output disable
	OFF	Adaptive capacity output enable *
SW4-4	ON	Accelerated cooling/heating
	OFF	Normal cooling/heating *
SW5-1 Enter defrost	ON	Operating time is reduced by 10%
	OFF	Normal *
SW5-2 Quit defrost	ON	Defrosting extended for 60 seconds
	OFF	Normal *

CODE	Description
-	Forced operation mode
L	Running indication under T3 limited condition
D	Running indication under T5 limited condition
P	Compression ratio protection limit
F	Running indication under TF limited condition
C	Running indication under current limited condition
U	Running indication under low voltage limited condition
A	Running indication under return oil model
dF	Running indication under defrost model

CHECK	PRESS 1s	Check the system parameters
	PRESS 6s	Test mode(Not used)
FORCE	PRESS 1s	Forced cooling/heating (Charge mode)
	PRESS 6s	Manual Defrost

Number	Point check content
0	Outdoor unit capacity,example:H3=Heat pump 3 ton
1	Outdoor unit mode:0-standby,2-cooling,3-heating
2	Outdoor unit set compressor speed(Hz)
3	T3:outdoor coil temp.(°F)
4	T4:outdoor ambient temp.(°F)
5	T5:compressor discharge temp.(°F)
6	Th:compressor suction temp.(°F)
7	T3L:(liquid line temp.)(°F)
8	Tf:module temp.(°F)
9	Pe:evaporating pressure(PSI)
10	Pc:condensing pressure(PSI)
11	Tse target evaporating temp.(only for cooling mode)(°F)
12	Te:evaporating temp.(°F)
13	Tcs target condensing temp(only for heating mode)(°F)
14	Tc:condensing temp.(°F)
15	Target of the compressor discharge superheat (heating mode only):Target value (°F)
16	Compressor diacharge superheat(°F)
17	Opening of EEV:Actual value
18	Outdoor fan speed
19	Compressor current(A)
20	Power AC voltage Input(V)
21	DC voltage(V)
22	Continuous running time of the compressor(min)
23	Last fault code
24	Software version
25	T1:Return air temp.(°F)
26	T2:Indoor coil temp.(°F)
27	Indoor fan speed
28	Ts:Estimated thermostat set point temp.(°F)
29	Remark"–"

HPS	High pressure switch
T5	Comp. discharge temp. sensor
PT	Pressure transducer
T3	Condensor temp. sensor
T4	Ambient temp. sensor
T3L	Condensor outlet temp. sensor
Th	Comp. return temp. sensor
TF	Control board module temperature
T1	Return air temp. sensor
T2	Indoor coil temp. sensor
EEV	Electric expansive valve
RV	Reversing valve
CCH	Crankcase heater
COMP.	Compressor
TEMP.	Temprature

LED1 GREEN	ON	Comp. running
	FLASH	LED2 ON IPM Module fault
		LED2 OFF Standby
LED2 RED	ON	Fault
	OFF	No fault
LED3 GREEN	ON	Power on
	OFF	Power off

Indoor Board LED Code	
	Normal
	Dehumidification mode active
	Reserved
	Anti-cold air function active
	Temperature sensor fault(T1)
	Temperature sensor fault(T2)
	Commuication error

*The Factory Default

SW6-1,2 Speed Taps

	SW6-4 ON*	SW6-4 OFF
	2 2 1 1 2	1
	3 2 2 1 3	1
	4 3 2 1 4	2
	5 4 3 2 5	3
	H MH M L H	MH M L

SW6-3	ON	HEAT:ANTI-COLD AIR FAN DELAY*
	OFF	HEAT:FAN DELAY START
SW6-4	ON	AUTO FAN CONTROL *
	OFF	TWO STAGE FAN CONTROL

Figure 13

NOTES:

NOTES:

NOTES:

United States and Canada
Bosch Thermotechnology Corp.
65 Grove St.
Watertown, MA 02472

Tel: 866-642-3198
Fax: 954-776-5529
www.bosch-thermotechnology.us

BTC 761701322 B | 02.2023