

# Bosch BOVA 2.0 Split System Heat Pump

Condensing Units Up to 20.5 SEER

2-3-4-5 Ton Capacity

R410A



# BOSCH

## Product Specifications





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## 1 Product Features

### 1.1 Features and Benefits

- ▶ Premium efficiency – Up to 20.5 SEER
- ▶ Outdoor coil – copper tube with hydrophilic aluminum fins
- ▶ 10 speed ECM outdoor motor for quiet and efficient operation
- ▶ Inverter Drive Compressor (25% - 110% capacity), modulation in 1% increments
- ▶ Whisper Quiet operation – as low as 56 dB
- ▶ Small footprint – 29-1/8" (W) x 29-1/8" (D)
- ▶ Easy to install – compatible with most standard 24 VAC heat pump thermostats

### 1.2 Standard Features

- ▶ R-410A Chlorine-Free Refrigerant
- ▶ Load 25%-110%
- ▶ 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
- ▶ AHRI certified; ETL listed

### 1.3 Cabinet Features

- ▶ Baked-on powder paint finish
- ▶ Wind Load compliant per Florida Building Code - 2010
- ▶ 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.

\* Please refer to [www.bosch-climate.us](http://www.bosch-climate.us) for full warranty terms and conditions.

\*\* Warranty Labor Allowance Schedule details are available on [www.boschprohvac.com](http://www.boschprohvac.com)

## 2 Nomenclature

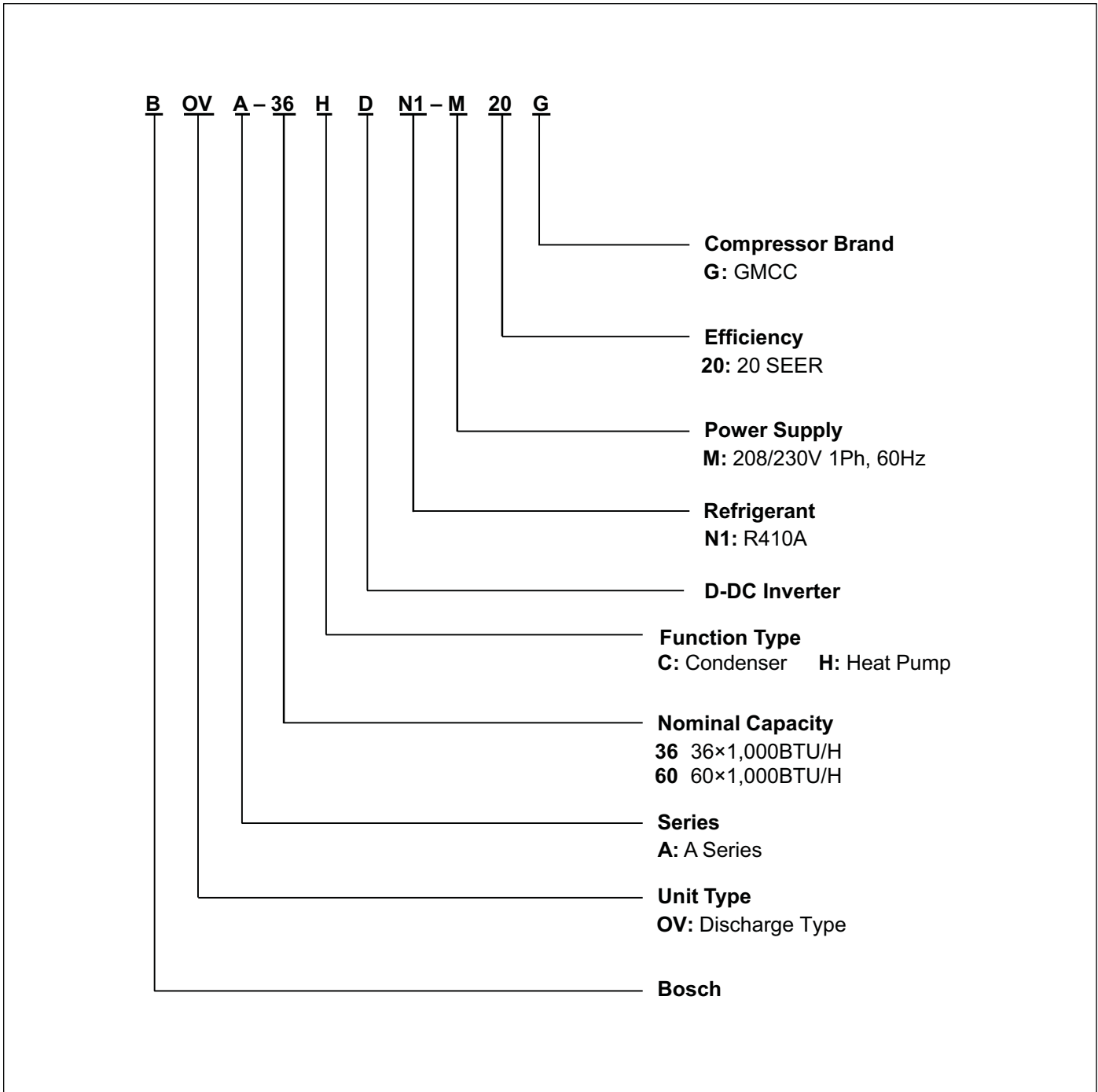


Figure 1

### 3 Product Specifications

	BOVA 36	BOVA 60
<b>Cooling Capacity</b>		
Nominal Cooling (BTU/h)	34,600	54,500
Nominal Heating (BTU/h)	34,200	56,000
<b>Decibels([dB(A)])</b>		
Max @ 100% load	77	79
Min @ min load	56	60
<b>Compressor</b>		
RLA	19	29
LRA	44	52
<b>Condenser Fan Motor</b>		
Horsepower (HP)	1/3	1/3
FLA	2.5	2.5
<b>Refrigeration System</b>		
Refrigerant Line Size <sup>1</sup>		
Liquid Line Size (OD)	3/8"	3/8"
Suction Line Size (OD)	3/4"	7/8"
Refrigerant Connection Size		
Liquid Valve Size (OD)	3/8"	3/8"
Suction Valve Size (OD)	3/4"	7/8"
Refrigerant Charge (R410-A, oz)	7 lbs. 9 oz.	11 lbs. 5 oz.
Expansion Device	EEV	EEV
Maximum Line Length	150 FT	150 FT
Maximum Elevation Difference	50 FT	50 FT
<b>Operating Range</b>		
Cooling	15-125°F	
Heating	-4~86°F	
<b>Electrical Data</b>		
Voltage-Phase-Hz	208/230-1-60	208/230-1-60
Minimum Circuit Ampacity <sup>2</sup>	26.3	38.8
Max. Overcurrent Protection <sup>3</sup>	45	60
Max Fuse Size	45	60
Min/Max Volts	172V/270V	
<b>Weight</b>		
Net Weight (without packaging)	150	220
Gross Weight (including packaging) <sup>4</sup>	180	253
<b>Dimensions</b>		
Unit L x W x H (in.)	29-1/8 x 29-1/8 x 24-15/16	29-1/8 x 29-1/8 x 33-3/16
<b>Outdoor Coil</b>		
Net face area - sq.ft. Outer Coil	13.6	18.4
Tube diameter-in.	9/32" (7mm)	9/32" (7mm)
No.of rows	2	2.8
Fins per inch	17	19

Table 1

<sup>1</sup> Tested and rated in accordance with AHRI Standard 210/240.

<sup>2</sup> Wire size should be determined in accordance with National Electrical Codes; extensive wire runs will require larger wire sizes.

<sup>3</sup> Must use time-delay fuses or HACR-type circuit breakers of the same size as noted.

<sup>4</sup> Weight values are estimated.



- Always check the rating plate for electrical data on the unit being installed.
- Unit is factory charged with refrigerant for 15' of 3/8" liquid line. System charge must be adjusted per Installation Instructions Final Charge Procedure.
- TXV is required at indoor unit to match our outdoor unit.

## 4 Extended Performance Data

### 4.1 Outdoor Unit (BOVA) + Indoor Unit (BVA) – Cooling Mode

BOVA 36 + BVA 24 For Cooling																		
Indoor Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71			
		IDB (°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
660	65	TC	18.2	18.4	18.8	19.0	18.8	19.0	19.2	19.4	20.0	20.2	20.4	20.6	\	26.2	26.4	26.7
		S/T	1.00	1.00	1.00	1.00	0.65	1.00	1.00	1.00	0.40	0.57	0.75	0.92	\	0.39	0.52	0.66
		kW	0.77	0.77	0.78	0.78	0.78	0.79	0.80	0.81	0.80	0.81	0.82	0.83	\	1.05	1.06	1.08
	75	TC	18.4	18.6	19.0	19.2	19.0	19.2	19.4	19.6	20.2	20.4	20.6	20.8	\	25.8	26.1	26.3
		S/T	1.00	1.00	1.00	1.00	0.64	1.00	1.00	1.00	0.40	0.57	0.75	0.92	\	0.39	0.53	0.66
		kW	0.93	0.94	0.95	0.95	0.95	0.96	0.97	0.98	0.98	0.99	1.00	1.01	\	1.31	1.33	1.35
	85	TC	18.4	18.6	19.0	19.2	19.0	19.2	19.4	19.6	20.2	20.4	20.6	20.8	\	25.8	26.0	26.3
		S/T	1.00	1.00	1.00	1.00	0.64	1.00	1.00	1.00	0.40	0.57	0.75	0.92	\	0.39	0.53	0.66
		kW	1.10	1.11	1.13	1.13	1.13	1.14	1.15	1.16	1.16	1.17	1.18	1.19	\	1.45	1.46	1.48
	95	TC	18.3	18.5	18.9	19.1	18.9	19.1	19.3	19.5	20.1	20.4	20.5	20.8	\	25.7	25.9	26.1
		S/T	1.00	1.00	1.00	1.00	0.64	1.00	1.00	1.00	0.40	0.57	0.75	0.92	\	0.39	0.53	0.66
		kW	1.33	1.35	1.36	1.36	1.36	1.38	1.39	1.40	1.41	1.42	1.43	1.45	\	1.76	1.77	1.79
	105	TC	18.2	18.4	18.8	19.0	18.8	19.0	19.2	19.4	20.1	20.3	20.5	20.7	\	25.4	25.7	25.9
		S/T	0.99	1.00	1.00	1.00	0.64	0.99	1.00	1.00	0.40	0.57	0.75	0.92	\	0.39	0.53	0.67
		kW	1.60	1.61	1.63	1.63	1.63	1.65	1.67	1.68	1.69	1.70	1.72	1.73	\	2.11	2.13	2.15
	115	TC	17.9	18.1	18.5	18.7	18.5	18.7	18.9	19.1	19.8	20.0	20.1	20.3	\	25.2	25.4	25.7
		S/T	1.00	1.00	1.00	1.00	0.64	0.99	1.00	1.00	0.40	0.58	0.76	0.93	\	0.39	0.53	0.67
		kW	1.87	1.89	1.91	1.91	1.91	1.94	1.96	1.98	1.98	2.00	2.02	2.04	\	2.52	2.54	2.56
760	65	TC	20.1	20.3	20.8	21.0	20.8	21.0	21.2	21.5	22.2	22.4	22.6	22.9	\	28.6	28.9	29.1
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.39	0.58	0.76	0.94	\	0.39	0.53	0.67
		kW	0.91	0.92	0.93	0.93	0.93	0.94	0.95	0.96	0.95	0.96	0.97	0.99	\	1.22	1.23	1.24
	75	TC	20.3	20.5	21.0	21.2	21.0	21.2	21.4	21.7	22.4	22.6	22.8	23.0	\	28.7	29.0	29.2
		S/T	1.00	1.00	1.00	1.00	0.65	1.00	1.00	1.00	0.39	0.58	0.76	0.94	\	0.39	0.53	0.67
		kW	1.08	1.09	1.10	1.10	1.10	1.12	1.13	1.14	1.14	1.15	1.16	1.18	\	1.45	1.47	1.49
	85	TC	20.3	20.5	21.0	21.2	21.0	21.2	21.4	21.7	22.3	22.6	22.8	23.0	\	28.4	28.6	28.9
		S/T	0.99	1.00	1.00	1.00	0.65	1.00	1.00	1.00	0.39	0.58	0.76	0.94	\	0.39	0.53	0.68
		kW	1.24	1.25	1.26	1.26	1.26	1.28	1.29	1.30	1.31	1.32	1.33	1.34	\	1.63	1.64	1.66
	95	TC	20.2	20.4	20.9	21.1	20.9	21.1	21.3	21.6	22.2	22.5	22.7	22.8	\	28.1	28.4	28.6
		S/T	0.99	1.00	1.00	1.00	0.65	1.00	1.00	1.00	0.39	0.58	0.75	0.95	\	0.39	0.53	0.68
		kW	1.49	1.51	1.52	1.52	1.52	1.54	1.55	1.57	1.58	1.59	1.60	1.61	\	1.96	1.99	2.00
	105	TC	19.8	20.1	20.5	20.7	20.5	20.7	20.9	21.2	21.9	22.1	22.3	22.5	\	27.8	28.1	28.3
		S/T	0.99	1.00	1.00	1.00	0.65	1.00	1.00	1.00	0.39	0.58	0.77	0.95	\	0.39	0.53	0.68
		kW	1.76	1.78	1.80	1.80	1.80	1.82	1.83	1.85	1.86	1.88	1.89	1.91	\	2.35	2.37	2.40
	115	TC	19.7	19.9	20.4	20.6	20.4	20.6	20.8	21.0	21.7	21.9	22.1	22.4	\	27.5	27.7	28.0
		S/T	1.00	1.00	1.00	1.00	0.65	1.00	1.00	1.00	0.39	0.58	0.77	0.96	\	0.39	0.54	0.69
		kW	2.09	2.11	2.13	2.13	2.13	2.16	2.18	2.20	2.21	2.23	2.25	2.27	\	2.82	2.85	2.88
860	65	TC	22.3	22.5	23.0	23.3	23.0	23.3	23.5	23.8	24.6	24.8	25.0	25.3	\	31.1	31.4	31.7
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.39	0.58	0.77	0.95	\	0.39	0.54	0.68
		kW	0.99	1.00	1.01	1.01	1.01	1.02	1.04	1.05	1.04	1.06	1.07	1.08	\	1.41	1.43	1.45
	75	TC	22.0	22.3	22.8	23.0	22.8	23.0	23.3	23.5	24.4	24.7	24.8	24.8	\	31.2	31.4	31.7
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.39	0.58	0.77	1.00	\	0.39	0.54	0.68
		kW	1.23	1.25	1.26	1.26	1.26	1.27	1.29	1.30	1.31	1.32	1.33	1.33	\	1.66	1.68	1.70
	85	TC	21.9	22.1	22.6	22.9	22.6	22.9	23.1	23.4	24.4	24.5	24.6	24.8	\	30.8	31.1	31.3
		S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.39	0.59	0.78	1.00	\	0.39	0.54	0.69
		kW	1.36	1.38	1.39	1.39	1.39	1.41	1.42	1.44	1.46	1.46	1.46	1.48	\	1.81	1.83	1.85
	95	TC	21.7	22.0	22.5	22.7	22.5	22.7	22.9	23.2	24.0	24.2	24.4	24.6	\	30.5	30.7	30.9
		S/T	1.00	1.00	0.99	1.00	0.66	1.00	1.00	1.00	0.39	0.59	0.78	1.00	\	0.39	0.54	0.69
		kW	1.62	1.64	1.66	1.66	1.66	1.68	1.69	1.71	1.73	1.74	1.75	1.77	\	2.19	2.21	2.22
	105	TC	21.5	21.8	22.3	22.5	22.3	22.5	22.8	23.0	23.8	24.0	24.2	24.5	\	30.0	30.2	30.5
		S/T	0.99	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.39	0.59	0.78	1.00	\	0.39	0.54	0.70
		kW	1.95	1.97	1.99	1.99	1.99	2.01	2.03	2.05	2.06	2.08	2.09	2.11	\	2.63	2.65	2.68
	115	TC	21.4	21.6	22.1	22.3	22.1	22.3	22.6	22.8	23.6	23.8	24.0	24.2	\	28.8	28.8	28.7
		S/T	0.99	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.39	0.59	0.79	0.99	\	0.39	0.55	0.72
		kW	2.31	2.33	2.36	2.36	2.36	2.38	2.41	2.43	2.44	2.46	2.48	2.50	\	3.00	3.00	3.00

Table 2

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

		BOVA 36 + BVA 36 For Cooling																
Indoor Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71			
		IDB (°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
1020	65	TC	29.4	29.7	30.3	30.7	30.3	30.7	31.0	31.3	32.4	32.7	33.0	33.2	\	39.5	39.8	40.1
		S/T	0.99	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.57	0.73	0.90	\	0.39	0.53	0.67
		kW	1.54	1.56	1.57	1.57	1.57	1.59	1.60	1.62	1.62	1.63	1.65	1.67	\	2.04	2.06	2.09
	75	TC	29.4	29.8	30.4	30.7	30.4	30.7	31.1	31.4	32.5	32.8	33.1	33.3	\	39.1	39.4	39.7
		S/T	1.00	1.00	0.99	1.00	0.62	0.83	1.00	1.00	0.39	0.56	0.73	0.90	\	0.39	0.53	0.67
		kW	1.71	1.73	1.75	1.75	1.75	1.77	1.79	1.80	1.79	1.82	1.84	1.86	\	2.25	2.27	2.29
	85	TC	29.0	29.3	29.9	30.3	29.9	30.3	30.6	30.9	32.0	32.3	32.6	32.8	\	38.4	38.7	38.9
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	\	0.39	0.53	0.67
		kW	1.93	1.95	1.97	1.97	1.97	1.99	2.01	2.03	2.03	2.05	2.07	2.09	\	2.55	2.58	2.60
	95	TC	28.5	28.8	29.4	29.8	29.4	29.8	30.1	30.4	31.5	31.8	32.0	32.3	\	37.5	37.8	38.0
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.92	\	0.39	0.53	0.68
		kW	2.32	2.34	2.37	2.37	2.37	2.39	2.42	2.44	2.45	2.47	2.49	2.52	\	3.04	3.06	3.09
105	TC	27.9	28.3	28.9	29.2	28.9	29.2	29.5	29.8	30.9	31.2	31.4	31.6	\	36.2	36.3	36.5	
	S/T	0.99	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.93	\	0.39	0.54	0.69	
	kW	2.76	2.79	2.82	2.82	2.82	2.85	2.88	2.91	2.91	2.94	2.96	2.99	\	3.52	3.53	3.54	
115	TC	25.0	25.3	25.9	26.1	25.9	26.1	26.4	26.7	27.8	28.0	28.1	28.3	\	30.1	30.3	30.4	
	S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.40	0.60	0.79	0.99	\	0.39	0.58	0.76	
	kW	2.81	2.84	2.87	2.87	2.87	2.91	2.94	2.97	2.99	3.01	3.03	3.04	\	3.13	3.15	3.16	
1150	65	TC	31.6	31.9	32.7	33.0	32.7	33.0	33.4	33.7	35.0	35.2	35.5	35.8	\	42.2	42.5	42.8
		S/T	0.99	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.94	\	0.39	0.54	0.69
		kW	1.80	1.82	1.84	1.84	1.84	1.86	1.88	1.90	1.89	1.92	1.94	1.96	\	2.34	2.37	2.39
	75	TC	31.6	32.0	32.7	33.0	32.7	33.0	33.4	33.8	35.0	35.3	35.5	35.8	\	41.9	42.2	42.5
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.58	0.76	0.94	\	0.39	0.54	0.69
		kW	1.97	1.99	2.01	2.01	2.01	2.03	2.05	2.07	2.07	2.09	2.12	2.14	\	2.46	2.49	2.51
	85	TC	31.1	31.4	32.1	32.5	32.1	32.5	32.8	33.2	34.4	34.7	34.9	35.2	\	40.8	41.1	41.4
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.95	\	0.39	0.54	0.70
		kW	2.17	2.19	2.22	2.22	2.22	2.24	2.26	2.29	2.29	2.31	2.33	2.36	\	2.84	2.86	2.89
	95	TC	30.7	31.1	31.8	32.1	31.8	32.1	32.4	32.8	33.7	34.2	34.5	34.7	\	39.8	40.0	40.2
		S/T	1.00	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.58	0.76	1.00	\	0.39	0.55	0.71
		kW	2.58	2.61	2.64	2.64	2.64	2.66	2.69	2.72	2.73	2.75	2.78	2.80	\	3.34	3.37	3.39
105	TC	29.9	30.3	31.0	31.3	31.0	31.3	31.6	32.0	33.0	33.4	33.6	33.9	\	36.9	36.9	37.1	
	S/T	0.99	1.00	0.99	1.00	0.63	0.87	1.00	1.00	0.39	0.59	0.78	1.00	\	0.39	0.57	0.74	
	kW	3.05	3.08	3.11	3.11	3.11	3.15	3.18	3.21	3.22	3.25	3.28	3.30	\	3.61	3.59	3.61	
115	TC	24.8	25.1	25.6	25.9	25.6	25.9	26.2	26.5	28.2	28.3	27.9	28.0	\	29.1	29.2	29.3	
	S/T	1.00	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.40	0.62	0.86	1.00	\	0.40	0.62	0.84	
	kW	2.86	2.89	2.92	2.92	2.92	2.95	2.98	3.01	3.06	3.08	3.07	3.09	\	3.12	3.13	3.14	
1350	65	TC	33.6	34.0	34.7	35.1	34.7	35.1	35.5	35.9	37.2	37.5	37.7	38.0	\	44.5	44.8	45.5
		S/T	0.99	1.00	1.00	1.00	0.64	0.88	1.00	1.00	0.39	0.59	0.78	0.99	\	0.38	0.55	0.71
		kW	2.11	2.13	2.15	2.15	2.15	2.18	2.20	2.22	2.22	2.24	2.27	2.29	\	2.68	2.70	2.56
	75	TC	33.7	34.1	34.9	35.2	34.9	35.2	35.6	36.0	37.4	37.6	37.9	38.2	\	45.6	45.8	45.9
		S/T	0.99	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.59	0.78	1.00	\	0.38	0.55	0.71
		kW	2.17	2.19	2.22	2.22	2.22	2.24	2.26	2.29	2.29	2.31	2.33	2.36	\	2.95	2.96	2.96
	85	TC	33.0	33.4	34.1	34.5	34.1	34.5	34.8	35.2	36.6	36.8	37.1	37.3	\	43.0	43.2	43.5
		S/T	0.99	1.00	1.00	1.00	0.64	0.89	1.00	1.00	0.39	0.59	0.79	1.00	\	0.39	0.56	0.73
		kW	2.45	2.47	2.50	2.50	2.50	2.53	2.55	2.58	2.59	2.61	2.63	2.65	\	3.15	3.18	3.20
	95	TC	32.2	32.5	33.2	33.6	33.2	33.6	34.0	34.3	35.7	35.9	36.1	36.4	\	40.9	41.1	41.1
		S/T	1.00	1.00	1.00	1.00	0.64	0.90	1.00	1.00	0.39	0.60	0.80	1.00	\	0.39	0.57	0.75
		kW	2.88	2.91	2.94	2.94	2.94	2.97	3.00	3.03	3.05	3.07	3.09	3.11	\	3.56	3.57	3.57
105	TC	31.3	31.6	32.3	32.7	32.3	32.7	33.0	33.4	34.7	34.9	35.1	35.4	\	37.4	37.6	37.4	
	S/T	1.00	1.00	1.00	1.00	0.65	0.90	1.00	1.00	0.39	0.60	0.81	1.00	\	0.39	0.59	0.79	
	kW	3.36	3.39	3.43	3.43	3.43	3.47	3.50	3.54	3.56	3.59	3.61	3.64	\	3.74	3.76	3.70	
115	TC	25.0	25.2	25.8	26.1	25.8	26.1	26.4	26.6	27.8	27.9	28.0	28.2	\	29.8	29.9	30.0	
	S/T	1.00	1.00	1.00	1.00	0.66	1.00	1.00	1.00	0.40	0.66	0.93	1.00	\	0.40	0.65	0.90	
	kW	2.97	3.00	3.04	3.04	3.04	3.07	3.10	3.13	3.17	3.18	3.20	3.21	\	3.31	3.32	3.33	

Table 3

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



		BOVA 60 + BVA 48 For Cooling																	
Indoor Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71				
		IDB (°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85	
1330	65	TC	40.6	41.0	41.9	42.4	41.9	42.4	42.9	43.3	45.3	45.4	45.6	46.0	\	55.3	55.7	56.2	
		S/T	1.00	1.00	1.00	1.00	0.60	0.81	1.00	1.00	0.39	0.55	0.71	0.87	\	0.38	0.52	0.64	
		kW	2.01	2.03	2.05	2.05	2.05	2.07	2.09	2.11	2.14	2.15	2.16	2.19	\	2.58	2.61	2.64	
	75	TC	40.8	41.2	42.1	42.6	42.1	42.6	43.1	43.5	45.0	45.4	45.8	46.2	\	55.0	55.4	55.8	
		S/T	1.00	1.00	1.00	1.00	0.60	0.81	1.00	1.00	0.39	0.55	0.71	0.87	\	0.38	0.52	0.65	
		kW	2.17	2.19	2.22	2.22	2.22	2.24	2.26	2.29	2.28	2.31	2.33	2.36	\	2.80	2.83	2.86	
	85	TC	40.2	40.7	41.6	42.0	41.6	42.0	42.5	42.9	44.4	44.8	45.2	45.6	\	54.1	54.5	54.9	
		S/T	1.00	1.00	1.00	1.00	0.60	0.81	1.00	1.00	0.39	0.56	0.72	0.88	\	0.38	0.52	0.65	
		kW	2.41	2.44	2.46	2.46	2.46	2.49	2.52	2.54	2.55	2.57	2.59	2.62	\	3.16	3.19	3.22	
	95	TC	39.7	40.2	41.1	41.5	41.1	41.5	42.0	42.4	43.9	44.3	44.6	45.0	\	53.0	53.4	53.8	
		S/T	1.00	1.00	1.00	1.00	0.61	0.81	1.00	1.00	0.39	0.56	0.72	0.88	\	0.38	0.52	0.66	
		kW	2.90	2.93	2.96	2.96	2.96	2.99	3.02	3.05	3.06	3.09	3.12	3.14	\	3.77	3.80	3.83	
	105	TC	39.1	39.6	40.5	40.9	40.5	40.9	41.3	41.8	43.3	43.6	44.0	44.3	\	51.9	52.3	52.6	
		S/T	1.00	1.00	1.00	1.00	0.61	0.82	1.00	1.00	0.39	0.56	0.73	0.89	\	0.38	0.52	0.66	
		kW	3.45	3.49	3.53	3.53	3.53	3.57	3.60	3.64	3.65	3.68	3.71	3.74	\	4.48	4.52	4.55	
	115	TC	38.3	38.8	39.6	40.0	39.6	40.0	40.5	40.9	42.6	42.9	43.1	43.0	\	45.3	45.5	45.7	
		S/T	1.00	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.56	0.73	0.90	\	0.39	0.55	0.71	
		kW	4.07	4.11	4.15	4.15	4.15	4.20	4.24	4.28	4.33	4.36	4.37	4.36	\	4.39	4.41	4.43	
	1530	65	TC	43.2	43.7	44.6	45.1	44.6	45.1	45.6	46.1	47.7	48.1	48.5	48.9	\	58.5	58.9	59.4
			S/T	1.00	1.00	1.00	1.00	0.61	0.84	1.00	1.00	0.39	0.57	0.74	0.91	\	0.38	0.53	0.67
			kW	2.30	2.33	2.35	2.35	2.35	2.37	2.40	2.42	2.41	2.44	2.47	2.50	\	2.92	2.95	2.98
75		TC	43.4	43.9	44.8	45.3	44.8	45.3	45.8	46.3	47.9	48.3	48.7	49.1	\	58.1	58.5	58.9	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	\	0.38	0.53	0.67	
		kW	2.44	2.47	2.50	2.50	2.50	2.52	2.55	2.58	2.57	2.60	2.63	2.65	\	3.11	3.13	3.16	
85		TC	42.7	43.2	44.2	44.7	44.2	44.7	45.1	45.6	47.2	47.7	48.0	48.4	\	57.0	57.5	57.9	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.74	0.91	\	0.38	0.53	0.67	
		kW	2.67	2.70	2.73	2.73	2.73	2.76	2.78	2.81	2.82	2.85	2.87	2.90	\	3.47	3.50	3.52	
95		TC	42.2	42.7	43.7	44.1	43.7	44.1	44.6	45.1	46.6	47.0	47.5	47.8	\	55.8	56.2	56.6	
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.92	\	0.38	0.53	0.68	
		kW	3.18	3.21	3.25	3.25	3.25	3.28	3.32	3.35	3.37	3.39	3.42	3.45	\	4.12	4.16	4.19	
105		TC	41.4	41.9	42.8	43.3	42.8	43.3	43.7	44.2	45.7	46.2	46.5	46.9	\	54.5	54.8	55.1	
		S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.57	0.75	0.93	\	0.38	0.54	0.69	
		kW	3.77	3.81	3.85	3.85	3.85	3.89	3.93	3.97	3.98	4.02	4.05	4.08	\	4.87	4.90	4.93	
115		TC	38.9	39.3	40.2	40.6	40.2	40.6	41.1	41.5	43.3	43.4	43.7	43.4	\	46.7	46.9	47.1	
		S/T	1.00	1.00	1.00	1.00	0.62	0.86	1.00	1.00	0.39	0.59	0.78	1.00	\	0.39	0.57	0.75	
		kW	4.19	4.23	4.28	4.28	4.28	4.32	4.37	4.41	4.49	4.48	4.50	4.45	\	4.62	4.64	4.65	
1760		65	TC	45.5	46.0	47.0	47.5	47.0	47.5	48.0	48.5	50.4	50.7	51.1	52.3	\	61.3	61.7	62.7
			S/T	1.00	1.00	1.00	1.00	0.62	0.86	1.00	1.00	0.39	0.58	0.76	0.94	\	0.38	0.54	0.69
			kW	2.62	2.65	2.68	2.68	2.68	2.70	2.73	2.76	2.76	2.79	2.82	2.62	\	3.27	3.30	3.08
	75	TC	45.9	46.4	47.4	47.9	47.4	47.9	48.4	49.0	50.5	50.9	51.5	51.9	\	61.2	61.6	62.0	
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.76	0.94	\	0.38	0.54	0.69	
		kW	2.62	2.65	2.68	2.68	2.68	2.71	2.74	2.76	2.89	2.92	2.82	2.85	\	3.32	3.34	3.37	
	85	TC	45.0	45.5	46.5	47.0	46.5	47.0	47.5	48.0	49.8	50.2	50.5	50.9	\	59.7	60.1	60.5	
		S/T	1.00	1.00	1.00	1.00	0.63	0.86	1.00	1.00	0.39	0.58	0.77	0.95	\	0.38	0.54	0.70	
		kW	2.95	2.98	3.01	3.01	3.01	3.04	3.07	3.11	3.12	3.15	3.17	3.20	\	3.80	3.84	3.87	
	95	TC	44.1	44.6	45.6	46.1	45.6	46.1	46.6	47.1	48.9	49.2	49.6	50.0	\	58.2	58.6	59.0	
		S/T	1.00	1.00	1.00	1.00	0.63	0.87	1.00	1.00	0.39	0.58	0.77	1.00	\	0.38	0.55	0.71	
		kW	3.48	3.52	3.56	3.56	3.56	3.59	3.63	3.67	3.69	3.72	3.74	3.78	\	4.49	4.53	4.56	
	105	TC	43.2	43.7	44.7	45.1	44.7	45.1	45.6	46.1	47.9	48.2	48.5	48.9	\	56.5	56.5	56.7	
		S/T	1.00	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.59	0.78	1.00	\	0.38	0.55	0.72	
		kW	4.09	4.14	4.18	4.18	4.18	4.22	4.27	4.31	4.33	4.37	4.40	4.43	\	5.24	5.24	5.25	
	115	TC	38.9	39.3	40.2	40.6	40.2	40.6	41.1	41.5	43.3	43.5	43.7	43.9	\	47.8	44.3	44.5	
		S/T	1.00	1.00	1.00	1.00	0.64	0.89	1.00	1.00	0.39	0.61	0.83	1.00	\	0.39	0.61	0.82	
		kW	4.26	4.31	4.35	4.35	4.35	4.40	4.45	4.49	4.61	4.63	4.58	4.60	\	4.86	4.57	4.59	

Table 4

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

		BOVA 60 + BVA 60 For Cooling																
Indoor Airflow (CFM)	Outdoor DB	IWB (°F)	59				63				67				71			
		IDB (°F)	70	75	80	85	70	75	80	85	70	75	80	85	70	75	80	85
1520	65	TC	48.0	48.5	49.6	50.1	49.6	50.1	50.7	51.2	53.1	53.5	53.9	54.3	\	62.9	63.4	63.8
		S/T	1.00	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.39	0.55	0.70	0.85	\	0.38	0.51	0.64
		kW	2.55	2.57	2.60	2.60	2.60	2.63	2.66	2.68	2.68	2.71	2.74	2.77	\	3.13	3.17	3.20
	75	TC	47.6	48.2	49.2	49.8	49.2	49.8	50.3	50.8	52.7	53.2	53.5	53.9	\	62.3	62.7	63.1
		S/T	1.00	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.39	0.55	0.70	0.86	\	0.38	0.52	0.65
		kW	2.75	2.78	2.81	2.81	2.81	2.84	2.87	2.90	2.91	2.93	2.96	2.98	\	3.43	3.46	3.50
	85	TC	46.8	47.3	48.4	48.9	48.4	48.9	49.4	49.9	51.8	52.2	52.6	53.0	\	60.8	61.3	61.7
		S/T	1.00	1.00	1.00	1.00	0.60	0.80	1.00	1.00	0.39	0.55	0.71	0.87	\	0.38	0.52	0.65
		kW	3.09	3.12	3.15	3.15	3.15	3.19	3.22	3.25	3.27	3.30	3.32	3.35	\	3.94	3.98	4.01
	95	TC	45.9	46.4	47.4	48.0	47.4	48.0	48.5	49.0	50.8	51.2	51.6	51.9	\	59.3	59.7	60.1
		S/T	1.00	1.00	1.00	1.00	0.60	0.81	1.00	1.00	0.39	0.55	0.72	0.87	\	0.38	0.52	0.66
		kW	3.66	3.70	3.74	3.74	3.74	3.78	3.82	3.86	3.87	3.90	3.93	3.96	\	4.66	4.69	4.72
105	TC	44.8	45.3	46.3	46.8	46.3	46.8	47.4	47.9	49.7	50.0	50.4	50.7	\	57.7	57.9	57.9	
	S/T	1.00	1.00	1.00	1.00	0.60	0.81	1.00	1.00	0.39	0.56	0.72	0.89	\	0.38	0.53	0.67	
	kW	4.31	4.36	4.40	4.40	4.40	4.45	4.50	4.54	4.56	4.60	4.64	4.67	\	5.46	5.48	5.48	
115	TC	38.4	38.9	39.7	40.2	39.7	40.2	40.6	41.0	42.8	43.0	43.2	43.3	\	44.7	44.8	45.0	
	S/T	1.00	1.00	1.00	1.00	0.61	0.82	1.00	1.00	0.39	0.59	0.78	1.00	\	0.39	0.58	0.76	
	kW	4.25	4.30	4.34	4.34	4.34	4.39	4.43	4.48	4.53	4.55	4.57	4.46	\	4.60	4.62	4.63	
1750	65	TC	51.0	51.6	52.7	53.3	52.7	53.3	53.9	54.4	56.5	56.9	57.3	57.7	\	66.5	66.9	67.3
		S/T	1.00	1.00	1.00	1.00	0.60	0.82	1.00	1.00	0.39	0.55	0.72	0.88	\	0.38	0.52	0.66
		kW	2.91	2.94	2.97	2.97	2.97	3.01	3.04	3.07	3.07	3.10	3.13	3.16	\	3.55	3.58	3.62
	75	TC	50.6	51.1	52.3	52.8	52.3	52.8	53.4	54.0	56.0	56.4	56.8	57.2	\	65.7	66.1	66.9
		S/T	0.99	1.00	1.00	1.00	0.60	0.82	1.00	1.00	0.39	0.56	0.72	0.89	\	0.38	0.52	0.66
		kW	3.09	3.12	3.16	3.16	3.16	3.19	3.22	3.26	3.27	3.30	3.32	3.35	\	3.83	3.87	3.78
	85	TC	49.6	50.2	51.3	51.8	51.3	51.8	52.4	53.0	54.9	55.3	55.7	56.1	\	64.1	64.5	64.8
		S/T	1.00	1.00	1.00	1.00	0.61	0.82	1.00	1.00	0.39	0.56	0.73	0.90	\	0.38	0.53	0.67
		kW	3.43	3.47	3.50	3.50	3.50	3.54	3.58	3.61	3.63	3.65	3.69	3.72	\	4.35	4.39	4.42
	95	TC	48.5	49.0	50.1	50.7	50.1	50.7	51.2	51.7	53.7	54.0	54.5	54.7	\	62.2	62.6	62.9
		S/T	1.00	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.56	0.73	0.91	\	0.38	0.53	0.68
		kW	4.03	4.08	4.12	4.12	4.12	4.17	4.21	4.25	4.27	4.31	4.34	4.37	\	5.09	5.13	5.16
105	TC	47.2	47.7	48.8	49.3	48.8	49.3	49.8	50.4	52.3	52.7	53.0	53.3	\	58.5	58.8	58.7	
	S/T	0.99	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.57	0.75	0.92	\	0.38	0.54	0.71	
	kW	4.72	4.77	4.83	4.83	4.83	4.88	4.93	4.98	5.01	5.05	5.08	5.11	\	5.62	5.66	5.62	
115	TC	39.6	40.0	40.9	41.3	40.9	41.3	41.8	42.2	44.1	44.3	44.5	44.6	\	45.7	45.8	46.0	
	S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.60	0.81	1.00	\	0.39	0.60	0.80	
	kW	4.38	4.42	4.47	4.47	4.47	4.52	4.56	4.61	4.67	4.69	4.71	4.72	\	4.84	4.85	4.86	
1880	65	TC	53.2	53.8	55.0	55.5	55.0	55.5	56.1	56.7	59.0	59.3	59.7	60.1	\	69.1	69.5	69.9
		S/T	1.00	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.56	0.73	0.90	\	0.38	0.53	0.68
		kW	3.18	3.21	3.24	3.24	3.24	3.28	3.31	3.35	3.35	3.38	3.41	3.45	\	3.86	3.89	3.92
	75	TC	53.0	53.5	54.7	55.3	54.7	55.3	55.9	56.5	58.7	59.1	59.5	59.9	\	68.6	69.0	69.4
		S/T	1.00	1.00	1.00	1.00	0.61	0.83	1.00	1.00	0.39	0.56	0.73	0.91	\	0.38	0.53	0.68
		kW	3.22	3.26	3.29	3.29	3.29	3.33	3.36	3.40	3.42	3.44	3.47	3.50	\	4.00	4.03	4.06
	85	TC	51.6	52.2	53.4	54.0	53.4	54.0	54.5	55.1	57.3	57.6	58.0	58.4	\	66.4	66.8	67.1
		S/T	1.00	1.00	1.00	1.00	0.61	0.84	1.00	1.00	0.39	0.57	0.74	0.92	\	0.38	0.54	0.69
		kW	3.68	3.72	3.76	3.76	3.76	3.80	3.84	3.88	3.90	3.93	3.96	3.99	\	4.65	4.68	4.71
	95	TC	50.3	50.8	52.0	52.5	52.0	52.5	53.1	53.7	55.8	56.2	56.5	56.8	\	64.2	64.6	64.9
		S/T	1.00	1.00	1.00	1.00	0.62	0.84	1.00	1.00	0.39	0.57	0.75	0.93	\	0.38	0.54	0.70
		kW	4.31	4.36	4.40	4.40	4.40	4.45	4.50	4.54	4.57	4.60	4.64	4.67	\	5.40	5.43	5.47
105	TC	48.8	49.4	50.5	51.0	50.5	51.0	51.6	52.1	54.2	54.5	54.8	55.2	\	59.6	58.6	58.9	
	S/T	1.00	1.00	1.00	1.00	0.62	0.85	1.00	1.00	0.39	0.58	0.76	0.95	\	0.38	0.56	0.73	
	kW	5.02	5.07	5.13	5.13	5.13	5.18	5.24	5.29	5.33	5.36	5.40	5.43	\	5.78	5.69	5.72	
115	TC	40.5	40.9	41.8	42.3	41.8	42.3	42.7	43.2	45.1	45.3	45.5	45.7	\	46.4	46.6	46.7	
	S/T	1.00	1.00	1.00	1.00	0.63	0.88	1.00	1.00	0.39	0.62	0.84	1.00	\	0.39	0.61	0.84	
	kW	4.54	4.59	4.64	4.64	4.64	4.69	4.74	4.79	4.86	4.87	4.89	4.90	\	5.00	4.70	4.71	

Table 5

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

### 4.2 Outdoor Unit (BOVA) + Indoor Unit (BVA) - Heating Mode

BOVA 36 + BVA 24 For Heating																			
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
660	60	TC	27.2	27.1	27.2	27.2	27.1	27.2	27.0	27.0	25.7	26.2	24.5	24.4	23.2	22.1	21.1	19.5	
		KW	1.21	1.31	1.44	1.60	1.71	1.86	2.02	2.23	2.22	2.52	2.44	2.36	2.29	2.22	2.15	2.10	
	70	TC	20.1	20.1	20.2	20.2	20.1	20.1	20.1	20.0	20.0	20.1	20.0	19.1	18.0	17.2	16.8	16.0	
		KW	0.89	0.96	1.05	1.16	1.25	1.37	1.53	1.65	1.76	1.88	2.03	2.20	2.38	2.39	2.31	2.25	
	75	TC	16.5	16.5	16.5	16.5	16.5	16.5	16.5	16.4	16.4	16.5	16.5	16.5	16.3	16.3	16.3	15.6	
		KW	0.73	0.79	0.87	0.97	1.05	1.15	1.24	1.36	1.48	1.56	1.70	1.81	1.93	2.10	2.30	2.34	
80	TC	13.1	13.1	13.1	13.1	13.1	13.1	13.1	13.0	13.0	12.9	13.0	13.0	13.0	13.0	13.0	12.9	12.9	
	KW	0.58	0.64	0.70	0.78	0.84	0.93	1.02	1.13	1.19	1.28	1.36	1.45	1.58	1.70	1.82	1.96		
760	60	TC	29.9	29.9	29.9	29.9	29.8	29.7	29.7	27.8	26.0	26.6	24.8	24.7	23.4	22.3	21.3	19.7	
		KW	1.37	1.49	1.61	1.77	1.88	2.06	2.28	2.25	2.18	2.48	2.41	2.34	2.27	2.21	2.14	2.10	
	70	TC	22.2	22.2	22.2	22.2	22.1	22.1	22.1	22.0	22.2	22.0	22.0	21.2	19.9	19.1	18.6	17.7	
		KW	1.00	1.08	1.18	1.29	1.41	1.57	1.69	1.83	1.93	2.11	2.27	2.46	2.45	2.38	2.30	2.24	
	75	TC	18.2	18.2	18.2	18.2	18.2	18.2	18.2	18.1	18.1	18.1	18.1	18.2	18.0	18.0	18.0	17.1	15.8
		KW	0.82	0.89	0.97	1.08	1.17	1.27	1.37	1.54	1.63	1.75	1.87	1.99	2.15	2.34	2.40	2.33	
80	TC	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.3	14.4	14.4	14.4	14.4	14.4	14.3	14.2	14.2	
	KW	0.66	0.72	0.79	0.87	0.94	1.05	1.13	1.24	1.31	1.41	1.50	1.63	1.74	1.82	2.01	2.17		
860	60	TC	32.6	32.7	32.6	32.7	32.4	32.4	30.4	28.2	26.1	26.9	25.0	24.8	23.5	22.5	21.4	19.9	
		KW	1.54	1.66	1.80	1.96	2.11	2.30	2.29	2.23	2.17	2.46	2.40	2.34	2.27	2.21	2.15	2.10	
	70	TC	24.2	24.3	24.2	24.3	24.2	24.2	24.1	24.1	24.0	24.0	24.0	22.9	21.6	20.6	19.7	18.2	
		KW	1.13	1.22	1.32	1.48	1.58	1.73	1.86	2.01	2.14	2.35	2.53	2.52	2.45	2.38	2.31	2.26	
	75	TC	19.9	19.9	19.9	19.9	19.9	19.9	19.8	19.8	19.8	19.8	19.7	19.7	19.7	19.0	17.4	16.1	
		KW	0.93	1.00	1.09	1.20	1.29	1.41	1.57	1.69	1.79	1.93	2.05	2.20	2.39	2.48	2.40	2.34	
80	TC	15.8	15.8	15.8	15.8	15.8	15.7	15.7	15.7	15.7	15.7	15.8	15.8	15.8	15.6	15.6	15.6		
	KW	0.75	0.82	0.89	0.97	1.06	1.16	1.24	1.36	1.44	1.55	1.68	1.79	1.89	2.04	2.23	2.40		

Table 6

BOVA 36 + BVA 36 For Heating																			
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
1020	60	TC	41.0	41.0	40.9	40.9	40.8	39.3	36.1	33.4	31.0	31.1	29.2	27.9	26.1	24.2	22.6	21.1	
		KW	2.18	2.33	2.53	2.74	2.96	2.98	2.87	2.77	2.69	2.96	2.88	2.80	2.72	2.65	2.57	2.52	
	70	TC	31.7	31.5	31.7	31.6	31.3	31.2	31.2	31.2	30.5	30.5	28.4	27.5	25.6	23.8	22.3	20.7	
		KW	1.63	1.72	1.89	2.02	2.17	2.36	2.60	2.83	2.94	3.22	3.12	3.03	2.93	2.85	2.76	2.69	
	75	TC	26.7	26.6	26.6	26.6	26.6	26.6	26.6	26.2	26.2	26.2	26.2	26.2	26.1	24.2	22.3	20.4	18.9
		KW	1.36	1.46	1.58	1.70	1.86	2.01	2.14	2.34	2.50	2.74	2.95	3.16	3.06	2.97	2.88	2.80	
80	TC	21.9	21.9	21.9	21.9	21.8	21.8	21.7	21.7	21.8	21.5	21.5	21.5	21.5	21.5	20.1	18.6		
	KW	1.13	1.20	1.30	1.41	1.51	1.64	1.76	1.95	2.07	2.20	2.37	2.56	2.76	3.01	3.00	2.92		
1150	60	TC	45.8	45.8	45.7	44.5	42.0	39.8	36.7	33.9	31.7	31.6	29.3	28.5	26.6	24.7	23.1	21.5	
		KW	2.58	2.73	2.95	3.03	2.95	2.92	2.83	2.74	2.68	2.94	2.86	2.79	2.72	2.65	2.58	2.53	
	70	TC	35.5	35.3	35.0	35.0	35.0	34.8	34.7	33.1	31.0	30.9	28.9	28.2	26.0	24.1	22.6	21.0	
		KW	1.88	2.01	2.13	2.31	2.51	2.66	3.00	2.99	2.91	3.18	3.10	3.01	2.93	2.85	2.77	2.71	
	75	TC	29.9	29.8	29.6	29.8	29.7	29.3	29.3	29.4	29.4	29.4	28.5	26.5	24.6	22.6	20.6	19.2	
		KW	1.58	1.68	1.79	1.97	2.08	2.24	2.46	2.68	2.87	3.15	3.23	3.14	3.05	2.96	2.88	2.81	
80	TC	24.5	24.5	24.5	24.5	24.5	24.4	24.4	24.1	24.1	24.0	24.1	24.1	24.1	24.1	22.3	20.3	18.9	
	KW	1.30	1.38	1.50	1.61	1.73	1.86	2.05	2.17	2.32	2.52	2.72	2.92	3.16	3.09	2.99	2.92		
1350	60	TC	51.0	50.2	47.4	45.3	42.7	40.5	37.2	34.4	32.2	32.1	30.0	28.9	27.0	25.1	23.5	21.9	
		KW	3.03	3.10	3.03	3.01	2.94	2.92	2.83	2.76	2.70	2.96	2.89	2.83	2.77	2.70	2.64	2.59	
	70	TC	39.2	39.1	39.1	39.1	39.0	39.0	36.4	33.6	31.5	31.4	29.4	28.4	26.5	24.6	23.0	21.4	
		KW	2.16	2.30	2.50	2.70	2.91	3.14	3.09	3.00	2.93	3.20	3.12	3.04	2.97	2.90	2.82	2.77	
	75	TC	33.4	33.3	33.3	32.9	32.9	32.8	32.9	32.8	31.1	31.0	29.0	27.0	25.0	23.0	21.2	19.7	
		KW	1.84	1.95	2.12	2.22	2.40	2.60	2.85	3.09	3.06	3.34	3.25	3.17	3.09	3.01	2.93	2.87	
80	TC	27.5	27.4	27.4	27.4	27.4	27.3	26.9	26.9	27.0	26.9	26.9	26.6	24.7	22.7	20.8	19.3		
	KW	1.53	1.62	1.75	1.86	2.02	2.17	2.31	2.51	2.67	2.91	3.12	3.30	3.21	3.13	3.04	2.97		

Table 7

BOVA 60 + BVA 48 For Heating																			
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
1330	60	TC	57.2	57.2	57.1	57.1	56.8	56.9	53.3	49.2	46.1	43.8	42.4	40.6	39.2	37.4	35.5	33.7	
		kW	2.86	3.06	3.32	3.59	3.87	4.21	4.14	3.99	3.83	4.03	4.41	4.41	4.29	4.22	4.14	3.99	
	70	TC	44.0	44.0	44.0	43.9	43.8	43.8	43.7	43.7	43.7	43.7	41.6	40.2	38.5	37.2	35.4	33.7	31.9
		kW	2.19	2.32	2.52	2.71	2.92	3.17	3.46	3.75	4.04	4.24	4.65	4.65	4.53	4.45	4.36	4.20	
	75	TC	37.1	37.0	37.0	37.0	37.0	36.9	36.8	37.0	37.0	36.8	36.8	36.8	35.0	33.5	31.7	29.8	
		kW	1.90	1.99	2.13	2.30	2.45	2.69	2.90	3.16	3.37	3.65	3.92	4.23	4.27	4.15	4.06	3.89	
	80	TC	30.5	30.5	30.4	30.4	30.4	30.3	30.2	30.4	30.4	30.4	30.4	30.4	30.4	30.2	30.3	30.2	28.2
		kW	1.63	1.72	1.82	1.97	2.08	2.23	2.39	2.62	2.77	3.00	3.21	3.43	3.69	4.01	4.40	4.43	
1530	60	TC	62.9	63.0	62.8	62.7	62.0	58.8	53.7	49.9	46.6	44.3	42.9	41.0	39.6	37.8	35.9	34.0	
		kW	3.27	3.49	3.76	4.07	4.31	4.25	4.08	3.96	3.85	4.04	4.43	4.43	4.31	4.24	4.16	4.00	
	70	TC	48.4	48.5	48.4	48.4	48.3	48.2	48.2	48.2	45.6	43.3	42.0	40.1	38.8	36.9	35.1	33.3	
		kW	2.46	2.63	2.83	3.07	3.30	3.61	3.91	4.25	4.19	4.40	4.82	4.82	4.70	4.61	4.53	4.36	
	75	TC	40.9	40.8	40.8	40.6	40.8	40.7	40.6	40.8	40.6	40.6	40.6	40.1	38.1	36.5	34.5	32.5	
		kW	2.13	2.24	2.39	2.56	2.78	3.01	3.27	3.54	3.77	4.12	4.43	4.76	4.81	4.66	4.57	4.38	
	80	TC	33.7	33.6	33.6	33.6	33.6	33.5	33.4	33.6	33.6	33.6	33.6	33.4	33.4	33.4	31.0	28.7	
		kW	1.83	1.92	2.04	2.19	2.33	2.49	2.72	2.93	3.12	3.38	3.60	3.85	4.16	4.53	4.63	4.67	
1760	60	TC	68.7	68.7	68.7	66.8	63.0	59.7	54.8	50.6	46.8	44.4	43.0	41.2	39.8	37.9	36.0	34.1	
		kW	3.70	3.95	4.28	4.40	4.29	4.24	4.10	3.97	3.87	4.06	4.45	4.45	4.33	4.25	4.18	4.02	
	70	TC	53.0	53.2	53.0	53.0	52.9	52.7	52.8	49.4	46.3	44.0	42.6	40.7	39.3	37.5	35.6	33.8	
		kW	2.77	2.98	3.21	3.47	3.72	4.00	4.39	4.33	4.22	4.43	4.85	4.85	4.72	4.64	4.55	4.39	
	75	TC	44.8	44.9	44.8	44.8	44.7	44.6	44.5	44.6	44.5	44.5	42.0	40.6	38.6	36.9	34.9	32.9	
		kW	2.39	2.53	2.72	2.92	3.13	3.38	3.67	3.97	4.25	4.65	4.93	4.78	4.83	4.69	4.59	4.40	
	80	TC	37.0	36.9	36.9	36.9	36.9	36.8	36.7	36.9	36.9	36.7	36.7	36.7	36.7	34.5	31.6	29.3	
		kW	2.07	2.16	2.29	2.46	2.61	2.84	3.05	3.29	3.50	3.76	4.03	4.32	4.69	4.68	4.77	4.82	

Table 8

BOVA 60 + BVA 60 For Heating																			
Airflow (CFM)	ID (°F)	OD (°F)	72	67	62	57	52	47	42	37	32	27	22	17	12	7	2	-4	
1520	60	TC	69.0	68.5	68.5	68.4	68.3	67.4	61.6	56.6	53.0	52.2	52.7	49.1	45.6	42.1	38.7	36.0	
		kW	3.45	3.65	3.98	4.30	4.67	4.92	4.73	4.56	4.44	5.30	5.34	5.18	5.02	4.86	4.70	4.57	
	70	TC	52.0	52.0	52.0	52.0	51.9	51.3	51.5	51.4	51.4	48.9	45.8	42.7	41.6	40.6	38.0	36.0	
		kW	2.50	2.68	2.91	3.16	3.40	3.63	4.03	4.39	4.76	4.90	5.04	5.09	4.99	4.91	4.80	4.76	
	75	TC	43.2	43.2	43.1	43.1	43.1	43.0	42.9	42.8	42.6	42.6	42.6	42.6	40.5	38.8	36.7	34.5	
		kW	2.12	2.24	2.40	2.58	2.78	3.04	3.32	3.56	3.82	4.19	4.51	4.90	4.90	4.71	4.56	4.46	
	80	TC	34.8	34.8	34.8	34.7	34.7	34.7	34.4	34.7	34.7	34.7	34.7	34.2	34.2	34.2	34.2	34.2	33.9
		kW	1.78	1.88	2.00	2.16	2.29	2.46	2.64	2.88	3.10	3.36	3.53	3.80	4.10	4.47	4.92	5.36	
1750	60	TC	75.6	75.5	75.5	75.5	72.1	68.2	62.4	57.5	53.8	51.1	49.5	47.3	45.7	43.6	41.4	39.3	
		kW	3.97	4.22	4.58	4.96	4.95	4.88	4.71	4.56	4.45	2.10	5.12	5.12	4.98	4.90	4.81	4.63	
	70	TC	57.3	57.5	57.4	57.2	56.4	56.2	56.1	55.3	53.6	51.0	47.7	44.5	43.4	42.4	39.7	37.0	
		kW	2.87	3.08	3.33	3.60	3.82	4.13	4.56	4.77	4.84	4.99	5.13	5.18	5.08	5.00	4.89	4.84	
	75	TC	47.7	47.8	47.7	47.6	47.6	47.5	47.1	47.0	47.0	47.0	47.0	44.0	41.8	40.1	37.9	35.7	
		kW	2.40	2.55	2.74	2.96	3.20	3.45	3.73	4.04	4.34	4.78	5.17	5.42	5.42	5.20	5.04	4.93	
	80	TC	38.4	38.5	38.5	38.4	38.4	38.3	38.2	38.4	38.4	37.9	37.9	37.8	37.9	37.8	37.2	34.5	
		kW	2.02	2.13	2.27	2.43	2.58	2.76	3.01	3.29	3.51	3.74	4.01	4.30	4.68	5.09	5.54	5.39	
1880	60	TC	81.0	81.0	81.0	77.1	72.6	68.6	62.6	58.0	54.2	54.4	53.8	50.0	46.5	43.1	39.7	37.0	
		kW	4.40	4.66	5.08	5.02	4.90	4.84	4.69	4.56	4.45	5.27	5.33	5.19	5.05	4.91	4.77	4.65	
	70	TC	61.6	61.7	61.6	61.0	60.8	60.9	61.0	56.8	54.2	51.5	48.2	45.0	43.9	42.8	40.1	37.9	
		kW	3.18	3.39	3.66	3.90	4.20	4.54	5.03	4.97	4.84	4.99	5.13	5.18	5.08	5.00	4.89	4.84	
	75	TC	51.2	51.3	50.9	51.1	51.1	51.0	50.5	50.5	50.6	50.5	50.6	44.6	42.4	40.6	38.4	36.1	
		kW	2.62	2.79	2.98	3.26	3.50	3.76	4.08	4.43	4.77	5.27	5.70	5.85	5.85	5.62	5.44	5.32	
	80	TC	41.4	41.4	41.4	41.3	41.2	41.2	41.2	41.3	40.9	40.7	40.7	40.7	40.7	40.7	37.7	34.9	
		kW	2.21	2.32	2.47	2.64	2.80	3.02	3.32	3.59	3.77	4.09	4.39	4.73	5.13	5.65	5.56	5.41	

Table 9

### 5 AHRI 210/240 Performance Data

Nominal HP System Tonnage	Outdoor Unit Model	Indoor Unit Model		Cooling Capacity (BTU/h)			Heating Capacity			CFM
		Coils/Air Handlers	Furnace Model	Total	EER <sup>2</sup>	SEER <sup>1</sup>	Hi	HSPF <sup>3</sup>	Low <sup>4</sup>	
2	BOVA-36HDN1-M20G	BVA-24WN1-M20	/	24000	14	20.5	24000	10.5	23000	860/680
3	BOVA-36HDN1-M20G	BVA-36WN1-M20	/	34600	12.5	20	34200	10.5	28000	1150/820
4	BOVA-60HDN1-M20G	BVA-48WN1-M20	/	47500	13.5	20	48000	10.5	40000	1530/1150
5	BOVA-60HDN1-M20G	BVA-60WN1-M20	/	54500	12.5	19	56000	10.5	44000	1750/1350
3	BOVA-36HDN1-M20G	BMAC2430ANTD	/	23400	11.8	16.5	23400	9.5	18000	750/600
	BOVA-36HDN1-M20G	BMAC2430BNTD	/	23600	11.8	16.5	23800	9.5	18000	800/600
	BOVA-36HDN1-M20G	BMAC3036ANTD	/	32000	10.8	16	33600	9.5	22000	900/750
	BOVA-36HDN1-M20G	BMAC3036BNTD	/	32400	11.2	16	33800	9.5	23000	1000/800
	BOVA-36HDN1-M20G	BMAC3036CNTD	/	32600	11.4	16	34000	9.5	23000	1050/800
4	BOVA-60HDN1-M20G	BMAC4248BNTF	/	43000	11.2	16.5	44500	9.5	31500	1200/1050
	BOVA-60HDN1-M20G	BMAC4248CNTF	/	44000	11.8	16.5	46000	9.5	32000	1350/1050
	BOVA-60HDN1-M20G	BMAC4248DNTF	/	45000	11.8	16.5	46500	9.5	32000	1450/1050
5	BOVA-60HDN1-M20G	BMAC4860CNTF	/	55000	10.5	16	55500	9.5	38000	1350/1150
	BOVA-60HDN1-M20G	BMAC4860CNTF	/	56000	10.5	16	56000	9.5	39000	1500/1150
2	BOVA-36HDN1-M20G	BMAC2430ANTD	BGH96M060B3A	24000	13	18.5	24000	10	18000	820/630
	BOVA-36HDN1-M20G	BMAC2430ANTD	BGH96M080B3A	24000	13	18.5	24000	10	18000	800/580
	BOVA-36HDN1-M20G	BMAC2430BNTD	BGH96M060B3A	24000	13.5	19	24000	10	19000	860/680
	BOVA-36HDN1-M20G	BMAC2430BNTD	BGH96M080B3A	24000	13.5	19	24000	10	19000	840/630
3	BOVA-36HDN1-M20G	BMAC3036ANTD	BGH96M060B3A	32200	11.2	17	34000	10	25000	1050/800
	BOVA-36HDN1-M20G	BMAC3036ANTD	BGH96M080B3A	32200	11.2	17	34000	10	25000	1020/800
	BOVA-36HDN1-M20G	BMAC3036BNTD	BGH96M060B3A	33000	11.6	17.5	34200	10	25000	1100/850
	BOVA-36HDN1-M20G	BMAC3036BNTD	BGH96M080B3A	33000	11.6	17.5	34200	10	25000	1070/850
	BOVA-36HDN1-M20G	BMAC3036CNTD	BGH96M080C4A	33600	12	18	34200	10	25000	1050/820
	BOVA-36HDN1-M20G	BMAC3036CNTD	BGH96M100C5A	33600	12	18	34200	10	25000	1150/750
	BOVA-36HDN1-M20G	BMAC4248BNTF	BGH96M080B3A	33000	12.5	18.5	34200	10	26000	1000/850
	BOVA-36HDN1-M20G	BMAC4248CNTF	BGH96M100C5A	33000	12.5	18.5	34200	10	26000	1100/800
4	BOVA-60HDN1-M20G	BMAC4248BNTF	BGH96M080B3A	43000	11.2	18	45000	9.5	34000	1250/1050
	BOVA-60HDN1-M20G	BMAC4248CNTF	BGH96M080C4A	44000	12	18.5	46000	10	35000	1250/1050
	BOVA-60HDN1-M20G	BMAC4248CNTF	BGH96M100C5A	45000	12.5	18.5	46500	10	35000	1450/1150
	BOVA-60HDN1-M20G	BMAC4248DNTF	BGH96M100D5A	45500	12.5	18.5	47000	10	35000	1500/1200
	BOVA-60HDN1-M20G	BMAC4248DNTF	BGH96M120D5A	45500	12.5	18.5	47000	10	35000	1500/1200
5	BOVA-60HDN1-M20G	BMAC4860CNTF	BGH96M100C5A	52000	12	18	53500	10	37000	1450/1150
	BOVA-60HDN1-M20G	BMAC4860DNTF	BGH96M100D5A	52000	12.5	18.5	54000	10	38000	1500/1200
	BOVA-60HDN1-M20G	BMAC4860DNTF	BGH96M120D5A	52000	12.5	18.5	54000	10	38000	1500/1200

Table 10

<sup>1</sup> Seasonal Energy Efficiency Ratio; Certified per AHRI 210/240

<sup>2</sup> Energy Efficiency Ratio; Certified per AHRI 210/240

<sup>3</sup> HSPF = Heating Seasonal Performance Factor; Certified per AHRI 210/240

<sup>4</sup> Jumper cut or dip switch off



Always check the rating plate for electrical data on the unit being installed. The above data are for reference only.



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

## 6 Suction Corrected Factor

Model Size		2 Ton	3 Ton	4 Ton	5 Ton
BOVA-Suction Line Connection Size		3/4	3/4	7/8	7/8
Suction Line Run - Feet		3/4 STD	3/4 STD	7/8 STD	7/8 STD
		5/8 OPT	5/8 OPT	3/4 OPT	3/4 OPT
25'	Standard	1	1	1	1
	Optional	1	0.99	0.99	0.98
50'	Standard	0.99	0.99	0.99	0.99
	Optional	0.99	0.98	0.98	0.97
100'	Standard	0.99	0.98	0.98	0.97
	Optional	0.98	0.95	0.97	0.95
150'	Standard	0.97	0.96	0.96	0.95
	Optional	0.96	0.93	0.95	0.93

Table 11

Std: Standard size

Opt: Optional size



Using suction line larger than shown in chart will result in poor oil return and is not recommended.

## 7 Sound Data

Model	Sound Power Level [dB(A)]	Full Octave Linear Sound Power Level dB -Center Frequency -Hz								Sound Power Level [dB(A)] with Sound Blanket
		100	125	250	500	1000	2000	4000	8000	
3 Ton	56 (Low)	26.1	28.9	37.5	44.4	48.1	42.5	47.1	40.7	Sound Blanket - Standard
	77 (High)	48.4	54.3	60.5	66.2	68.7	63.6	62.3	53.7	
5 Ton	60 (Low)	30.5	36.0	47.6	50.1	48.5	50.1	50.5	41.3	
	79 (High)	51.6	47.6	62.3	67.0	68.6	64.2	64.6	56.5	

Table 12 IDS Sound power level

## 8 Dimensions

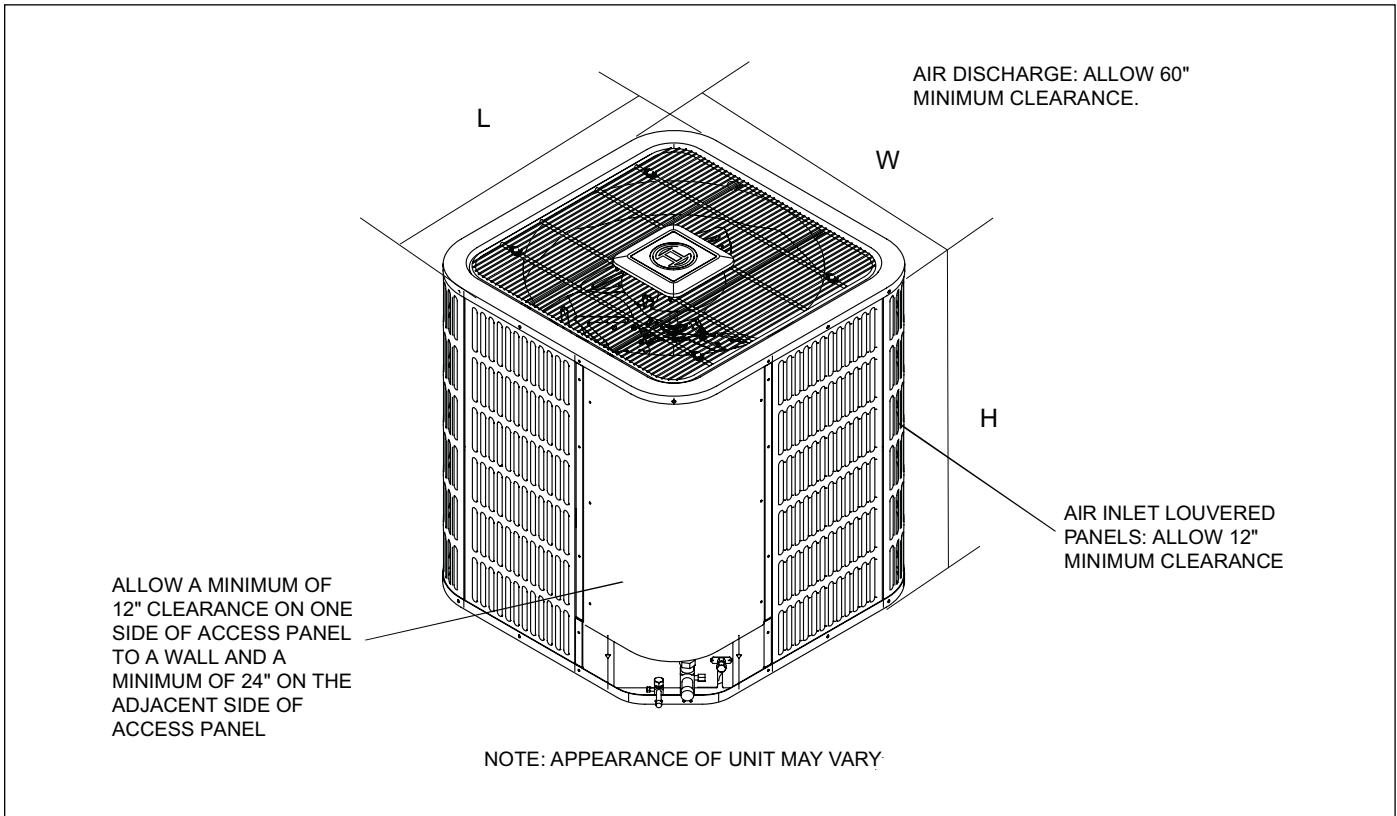


Figure 2

Model Size	Dimensions (Inches)		
	"H" in. [mm]	"W" in. [mm]	"L" in. [mm]
Heat Pump			
BOVA 36	24-15/16 [633]	29-1/8 [740]	29-1/8 [740]
BOVA 60	33-3/16 [843]	29-1/8 [740]	29-1/8 [740]

Table 13

**United States and Canada**

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