

GreenSource i series Model BP Residential Geothermal Heat Pumps

Engineering
Submittal
Sheet



BOSCH

Overview and Certifications



Standard Features, Factory Installed Options, and Field Installed Accessories

Standard Features

- ▶ **Available in Horizontal and Vertical Cabinets**
 - Constructed using white pre-painted steel
 - Superior corrosion protection for units indoors
 - Hanging brackets standard for horizontal cabinet
- ▶ **High Efficiency**
 - Up to 21.2 EER @ FL GLHP
 - Compliant with Energy Start Tier 3
 - PSC blower motor for 007 - 012
 - Constant Torque ECM for units sizes 015-060
- ▶ **Configured as Ordered**
 - Left hand or right hand return air
 - Top, straight through, or end supply air
- ▶ **½" Dual Density Fiber Insulation**
 - non-combustible, non-hydroscopic and does not support fungal growth
 - meets NFPA 90A and 90B for fire protection
 - meets the GREENGUARD Indoor Air Quality Standard
- ▶ **Compressors**
 - Floating compressor base pan for quiet operation
 - 007-018 Rotary
 - 0024-070 Scroll

- ▶ **Standard MERV 8 Filter with 4 sided Filter Rack**
- ▶ **TXV (Thermal Expansion Valve)**
 - Improves refrigerant management and efficiencies
- ▶ **Reliability - Durability - Serviceability**
 - Tin plated coil
 - UPM circuit board with communicating features
 - Completely serviceable from front of unit
- ▶ **Electronic Circuit Board UPM**

The electronic circuit board provides protection with:

 - Random Start of Unit
 - 5 minute short cycle time delay
 - Alarm communicating Output
 - Anti-short cycling
 - Low pressure switch bypass at start up

It also monitors and communicates standard safety features/alerts/operation/protection:

 - Low Pressure Switch
 - High Pressure Switch
 - Evaporator Freeze Switch
 - Water Coil Freeze Switch
 - Condensate Overflow Switch

This circuit board can communicate with a Bosch thermostat that alerts the customer of adverse conditions.

Standard Features, Factory Installed Options, and Field Installed Accessories continued..

- ▶ **Tin Plated Evaporator Coil**
 - Tin electro-plated copper tubing with high-tech polymer coated aluminum fins will protect the evaporator coil from all forms of corrosive elements in the airstream
- ▶ **Standard 75 VA Transformer**
- ▶ **Standard Warranty**
 - 10 Year all parts limited warranty
 - 10 Year labor limited warranty

Factory Installed Options

- ▶ **Heat Recovery Package (HRP)**
 - HRP is a domestic hot water generator feature that can be connected to a homes hot water system
- ▶ **ECM Constant CFM (Variable Speed)**
 - The new high efficiency ECM motor option, available in 1/3hp to 1hp, provides constant airflow in a wide static pressure range up to 1 in.w.g.
 - Improved efficiency up to 33% over the standard PSC motor
- ▶ **Hot Gas Reheat**
 - Another option for dehumidification
- ▶ **Fluid Differential Pressure Switch**
 - Prevents the unit refrigerant pressure switches to fault out
- ▶ **Closed Cell Foam Insulation**
 - Quiet Operation
 - Improved Indoor Air Quality
- ▶ **Auxiliary Pump Relay**
- ▶ **Energy Management Relay Switch (on/off)**

Field Installed Accessories

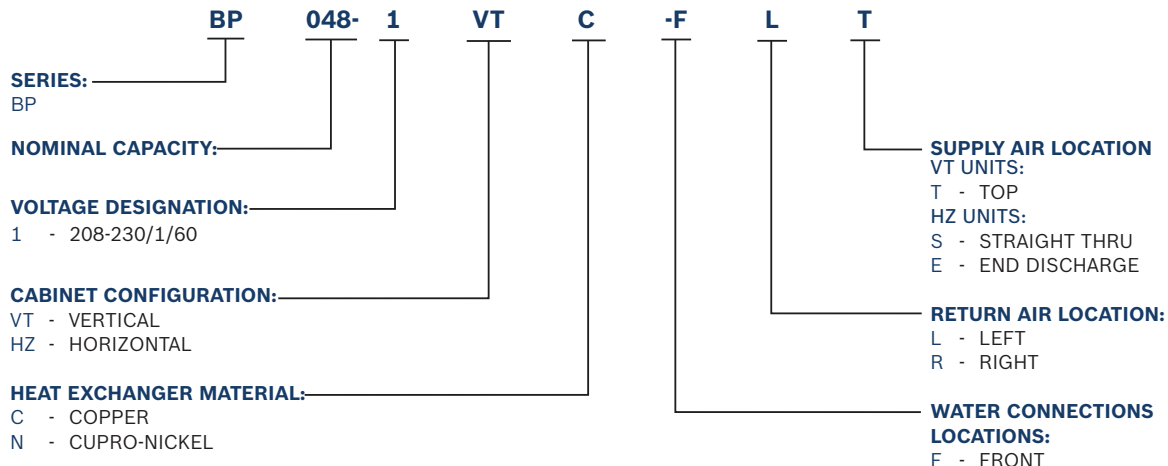
- ▶ **Optional 2" MERV 13 Filter (available 11/2014)**
 - The MERV 13 filter is a cost effective way of upgrading air quality while maintaining low pressure drop and sustaining long service life
- ▶ **Thermostats:**
 - Bosch thermostats are fully customized to meet your individual needs
- ▶ **Electric Duct Heaters**
- ▶ **Swivel Water Connections**
 - 3/4" or 1" FPT Swivel Water Connection

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



Model Nomenclature



ASHRAE/AHRI/ISO 13256-1. with PSC Motor

Models	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP
BP007	6800	15.7	8800	5.7	8400	25.1	7000	4.9	7400	18.5	5100	3.6
BP009	9000	16.2	11200	5.5	10500	25.5	9000	4.5	9500	19.3	6800	3.6
BP012	12200	14.9	16500	5.1	14600	22.7	13000	4.3	13000	17.5	10000	3.6

ASHRAE/AHRI/ISO 13256-1. with ECM Motor (Const Torque or Const Air Flow)

Models	Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP	Cooling Capacity (Btu/hr)	EER	Heating Capacity (Btu/hr)	COP
BP015	15200	17.5	17500	5.6	17000	28.8	13000	4.6	16200	20.6	11000	3.9
BP018	19500	16.4	21300	5.3	21300	25.6	17700	4.5	20500	19.0	14800	3.8
BP024	24500	18.2	28500	5.7	28400	28.1	23700	4.6	26000	21.1	18000	4.0
BP030	27000	16.6	31000	5.9	31700	27.0	25000	5.2	28500	19.4	20500	4.3
BP036	36000	17.2	41000	5.6	40200	25.9	34400	4.9	37500	19.7	26000	4.1
BP042	40600	18.2	42400	6.0	45000	25.7	35000	5.1	42200	21.1	26800	4.1
BP048	47400	17.2	50000	5.3	52900	26.1	40500	4.3	49500	20.0	33400	3.7
BP060	60400	16.2	71500	5.7	66500	24.1	56700	4.9	61500	18.5	47000	4.2

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Physical Data							
Description	Unit	Value					
		BP007	BP009	BP012	BP015	BP018	BP024
Compressor Type	—	Rotary	Rotary	Rotary	Rotary	Rotary	Scroll
Max Water Working Pressure	PSIG/kPa	400/3100	400/3100	400/3100	400/3100	400/3100	400/3100
Standard Fan Motor & Blower							
Fan Motor Type/Speeds	—	PSC/3	PSC/3	PSC/3	ECM Const Torque / 3 speed	ECM Const Torque / 3 speed	ECM Const Torque / 3 speed
Fan Motor (HP)	HP	1/10	1/10	1/10	1/3	1/3	1/3
Blower Wheel Size (Dia. x W)	Inch	4.5x4.5	4.5x4.5	5.5x5.5	5.5x4.5	9x7	9x7
ECM Const CFM Fan Motor							
Fan Motor Type/Speeds	—	NA	NA	NA	ECM Const CFM / 3 speed	ECM Const CFM / 3 speed	ECM Const CFM / 3 speed
Fan Motor (HP)	HP				1/3	1/3	1/3
Water Connection Size							
FPT	Inch	3/4	3/4	3/4	3/4	3/4	3/4
Coaxial Coil Volume	gal	0.15	0.15	0.31	0.31	0.31	0.48
Vertical Cabinet							
Refrigeration Charge	oz	29	31	46	35	35	65
Air Coil Dimensions (H x L)	Inch	12x16.5	12x16.5	16x16.5	16.5x20	16.5x20	24x21
Standard Filter - 2" MERV 8 (H x L)	Inch	15x20	15x20	18x20	20x20	20x20	24x24
Weight - Operating	Lbs	140	154	166	191	195	229
Weight - Shipping	Lbs	160	174	186	208	212	242
Horizontal Cabinet							
Refrigeration Charge	oz	29	31	46	35	35	65
Air Coil Dimensions (H x L)	Inch	12x16.5	12x16.5	16x16.5	18x18.5	18x18.5	18x28
Standard Filter - 2" MERV 8 (H x L)	Inch	15x20	15x20	18x20	18x20	18x20	20x30
Weight - Operating	Lbs	165	172	173	190	198	307
Weight - Shipping	Lbs	185	192	205	218	222	340

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Physical Data						
Description	Unit	Value				
		BP030	BP036	BP042	BP048	BP060
Compressor Type	—	Scroll	Scroll	Scroll	Scroll	Scroll
Max Water Working Pressure	PSIG/kPa	400/3100	400/3100	400/3100	400/3100	400/3100
Standard Fan Motor & Blower						
Fan Motor Type/Speeds	—	ECM Const Torque / 3 speed	ECM Const Torque / 3 speed	ECM Const Torque / 3 speed	ECM Const Torque / 3 speed	ECM Const Torque / 3 speed
Fan Motor (HP)	HP	1/2	3/4	3/4	3/4	1
Blower Wheel Size (Dia. x W)	Inch	9x7	9x7	10x8	10x8	11x9
ECM Const CFM Fan Motor						
Fan Motor Type/Speeds	—	ECM Const CFM / 3 speed	ECM Const CFM / 3 speed	ECM Const CFM / 3 speed	ECM Const CFM / 3 speed	ECM Const CFM / 3 speed
Fan Motor (HP)	HP	1/2	3/4	3/4	3/4	1
Water Connection Size						
FPT	Inch	1	1	1	1	1
Coaxial Coil Volume	gal	0.39	0.62	0.62	0.62	0.62
Vertical Cabinet						
Refrigeration Charge	oz	71	68	83	86	92
Air Coil Dimensions (H x L)	Inch	24x27	24x27	32x27	32x27	40x27
Standard Filter - 2" MERV 8 (H x L)	Inch	24x30	24x30	16x30 (2)	16x30 (2)	20x30 (2)
Weight - Operating	Lbs	269	281	334	340	396
Weight - Shipping	Lbs	292	304	360	366	422
Horizontal Cabinet						
Refrigeration Charge	oz	71	71	80	82	90
Air Coil Dimensions (H x L)	Inch	20x32.5	20x32.5	20x43.25	20x43.25	20x54
Standard Filter - 2" MERV 8 (H x L)	Inch	20x34.5	20x34.5	20x24 (2)	20x24 (2)	20x28 (2)
Weight - Operating	Lbs	358	369	400	405	452
Weight - Shipping	Lbs	404	415	465	470	520

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Horizontal Cabinet Corner Weights										
Configuration			Left Hand Evaporator				Right Hand Evaporator			
Model	Unit	Total	Left Front*	Right Front*	Left Back	Right Back	Left Front*	Right Front*	Left Back	Right Back
BPH 007	Lbs	165	40	42	42	41	39	43	39	44
	kg	75	18	19	19	19	18	19	18	20
BPH 009	Lbs	172	42	44	44	42	41	45	41	45
	kg	78	19	20	20	19	19	20	19	20
BPH 012	Lbs	173	46	42	45	40	44	44	40	45
	kg	79	21	19	21	18	20	20	18	21
BPH 015	Lbs	190	45	45	53	47	46	44	47	53
	kg	86	20	20	25	21	21	20	21	24
BPH 018	Lbs	198	51	49	50	48	49	51	47	51
	kg	90	23	22	23	22	22	23	22	23
BPH 024	Lbs	307	80	78	79	70	77	81	68	81
	kg	140	36	36	36	32	35	37	31	37
BPH 030	Lbs	358	99	88	92	79	96	92	78	92
	kg	163	45	40	42	36	44	42	35	42
BPH 036	Lbs	369	100	92	94	83	96	96	81	96
	kg	168	45	42	43	38	44	44	36	44
BPH 042	Lbs	400	107	99	105	89	103	103	88	106
	kg	182	49	45	48	40	47	47	40	48
BPH 048	Lbs	405	106	108	102	89	102	112	85	106
	kg	184	48	49	46	41	46	51	39	48
BPH 060	Lbs	452	116	118	118	100	111	123	95	123
	kg	205	53	54	54	44	50	56	43	56

*Front is control box end

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Factory Installed Options and Applicable Models	
Description	Applicable Model Numbers
Variable Speed/Constant CFM Blower Motor	BP015 to BP060
Heat Recovery Package/DeSuperheater/Hot Water Generator	BP024 to BP060
Electric Heat - 3.6/4.8 kW	BP018 to BP060
Electric Heat - 7.8/9.6 kW	BP024 to BP060
Electric Heat - 10.8/14.4 kW	BP036 to BP060
Electric Heat - 14.4/19.2 kW	BP048 to BP060
Sound Package	BP024 to BP060
Hot Gas Reheat (HGRH)	BP015 to BP060
Differential Pressure Switch	All Models
Pump Relay	All Models

Factory Installed Option - Cupro-Nickel Coil	
Model Number with Standard Copper Coil	Model Number with Cupro-Nickel Coil (To add this option to the product, change the model number 10TH Digit to an "N")
BP007-1HZC	BP007-1HZN
BP007-1VTC	BP007-1VTN
BP009-1HZC	BP009-1HZN
BP009-1VTC	BP009-1VTN
BP012-1HZC	BP012-1HZN
BP012-1VTC	BP012-1VTN
BP015-1HZC	BP015-1HZN
BP015-1VTC	BP015-1VTN
BP018-1HZC	BP018-1HZN
BP018-1VTC	BP018-1VTN
BP024-1HZC	BP024-1HZN
BP024-1VTC	BP024-1VTN
BP036-1HZC	BP036-1HZN
BP036-1VTC	BP036-1VTN
BP048-1HZC	BP048-1HZN
BP048-1VTC	BP048-1VTN
BP060-1HZC	BP060-1HZN
BP060-1VTC	BP060-1VTN

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Electrical Data - Standard Motor - PSC for 007-012, Constant Torque for 015-070

Model	Electrical Symbol	Voltage/Phase/Hz	Compressor			Blower Motor			Min Circuit Amps	Max Fuse/HACR
			QTY	RLA	LRA	QTY	FLA	HP		
BP007	-1	208-230/1/60	1	2.5	17.7	1	0.96	0.1	4.1	15
BP009	-1	208-230/1/60	1	3.4	22.2	1	0.96	0.1	5.2	15
BP012	-1	208-230/1/60	1	4.6	27.9	1	0.96	0.1	6.7	15
BP015	-1	208-230/1/60	1	5.6	29	1	2.8	0.33	9.8	15
BP018	-1	208-230/1/60	1	7.4	33	1	2.8	0.33	12.1	15
BP024	-1	208-230/1/60	1	13.5	58.3	1	2.8	0.33	19.7	30
BP030	-1	208-230/1/60	1	12.8	58.3	1	4.1	0.5	20.1	30
BP036	-1	208-230/1/60	1	16	77	1	6	0.75	26.0	40
BP042	-1	208-230/1/60	1	16.7	79	1	6	0.75	26.9	40
BP048	-1	208-230/1/60	1	19.9	109	1	6	0.75	30.9	50
BP060	-1	208-230/1/60	1	25	134	1	7.6	1	38.9	60

Electrical Data - Constant CFM Motor

Model	Electrical Symbol	Voltage/Phase/Hz	Compressor			Blower Motor			Min Circuit Amps	Max Fuse/HACR
			QTY	RLA	LRA	QTY	FLA	HP		
BP015	-1	208-230/1/60	1	5.6	29	1	2.8	0.33	9.8	15
BP018	-1	208-230/1/60	1	7.4	33	1	2.8	0.33	12.1	15
BP024	-1	208-230/1/60	1	13.5	58.3	1	2.8	0.33	19.7	30
BP030	-1	208-230/1/60	1	12.8	58.3	1	4.3	0.5	20.3	30
BP036	-1	208-230/1/60	1	16	77	1	6.8	0.75	26.8	40
BP042	-1	208-230/1/60	1	16.7	79	1	6.8	0.75	27.7	40
BP048	-1	208-230/1/60	1	19.9	109	1	6.8	0.75	31.7	50
BP060	-1	208-230/1/60	1	25	134	1	9.1	1	40.4	60



208/230V Units shipped with transformer wired for 230V—for 208V remove orange tranformer primary lead and replace with red lead.

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Electrical Data - Electric Heat Option Compressor Power Connection

Models	Voltage Code	Voltage/Phase/Hz	Voltage Min/Max	Compressor			Min Circuit Amps	Max Fuse/HACR
				QTY	RLA	LRA		
BP015	1	208-230/1/60	197/253	1	7.4	33.0	9.3	15
BP018	1	208-230/1/60	197/253	1	13.5	58.3	16.9	30
BP024	1	208-230/1/60	197/253	1	12.8	58.3	26.5	25
BP030	1	208-230/1/60	197/253	1	16.0	77.0	20.0	30
BP036	1	208-230/1/60	197/253	1	16.7	79.0	20.9	30
BP042	1	208-230/1/60	197/253	1	19.9	109.0	24.9	40
BP048	1	208-230/1/60	197/253	1	25.0	134.0	31.3	50
BP060	-1	208-230/1/60	197/253	1	26.3	134.0	26.5	50

Electrical Data - Electric Heat Option Constant Torque ECM

Model	EH RATED kW	STAGE	Heater Watts		Heater AMPS		Motor FLA (A)	Circuit	MCA		MOP	
			240	208	240V	208V		Fuses	240V	208V	240V	208V
BP018	4.8	1	4,800	3,600	20.0	17.3	2.8	-	28.5	25.1	30	30
BP024	4.8	1	4,800	3,600	20.0	17.3	2.8	-	28.5	25.1	30	30
BP024	9.6	1	9,600	7,200	40.0	34.6	2.8	-	53.5	46.8	60	50
BP030	4.8	1	4,800	3,600	20.0	17.3	4.1	-	30.1	26.8	35	30
BP030	9.6	1	9,600	7,200	40.0	34.6	4.1	-	55.1	48.4	60	50
BP036	4.8	1	4,800	3,600	20.0	17.3	6.0	-	32.5	29.1	35	30
BP036	9.6	1	9,600	7,200	40.0	34.6	6.0	-	57.5	50.8	60	60
BP036	14.4	2	14,400	10,800	60	51.9	6	F1/F2	82.5	72.4	90	80
								F3/F4				
BP042	4.8	1	4,800	3,600	20.0	17.3	6.0	-	32.5	29.1	35	30
BP042	9.6	1	9,600	7,200	40.0	34.6	6.0	-	57.5	50.8	60	60
BP042	14.4	2	14400	10800	60	51.9	6	F1/F2	82.5	72.4	90	80
								F3/F4				
BP048	4.8	1	4,800	3,600	20.0	17.3	6.0	-	32.5	29.1	35	30
BP048	9.6	1	9,600	7,200	40.0	34.6	6.0	-	57.5	50.8	60	60
BP048	14.4	2	14400	10800	60	51.9	6	F1/F2	82.5	72.4	90	80
								F3/F4				
BP048	19.2	2	19200	14000	80	69.2	6	F1/F2	107.5	94.0	110	100
								F3/F4				
BP060	4.8	1	4,800	3,600	20.0	17.3	7.6	-	34.5	31.1	35	35
BP060	9.6	1	9,600	7,200	40.0	34.6	7.6	-	59.5	52.8	60	60
BP060	14.4	2	14400	10800	60	51.9	7.6	F1/F2	84.5	74.4	90	80
								F3/F4				
BP060	19.2	2	19200	14000	80	69.2	7.6	F1/F2	109.5	96.0	110	100
								F3/F4				

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Electrical Data - Electric Heat Option Constant Airflow ECM												
Model	EH RATED kW	STAGE	Heater Watts		Heater AMPS		Motor FLA (A)	Circuit Fuses	MCA		MOP	
			240	208	240V	208V			240V	208V	240V	208V
BP018	4.8	1	4,800	3,600	20.0	17.3	2.8	-	28.5	25.1	30	30
BP024	4.8	1	4,800	3,600	20.0	17.3	2.8	-	28.5	25.1	30	30
BP024	9.6	1	9,600	7,200	40.0	34.6	2.8	-	53.5	46.8	60	50
BP030	4.8	1	4,800	3,600	20.0	17.3	4.3	-	30.4	27.0	35	30
BP030	9.6	1	9,600	7,200	40.0	34.6	4.3	-	55.4	48.6	60	50
BP036	4.8	1	4,800	3,600	20.0	17.3	6.8	-	33.5	30.1	35	35
BP036	9.6	1	9,600	7,200	40.0	34.6	6.8	-	58.5	51.8	60	60
BP036	14.4	2	14400	10800	60	51.9	6.8	F1/F2	83.5	73.4	90	80
								F3/F4				
BP042	4.8	1	4,800	3,600	20.0	17.3	6.8	-	33.5	30.1	35	35
BP042	9.6	1	9,600	7,200	40.0	34.6	6.8	-	58.5	51.8	60	60
BP042	14.4	2	14400	10800	60	51.9	6.8	F1/F2	83.5	73.4	90	80
								F3/F4				
BP048	4.8	1	4,800	3,600	20.0	17.3	6.8	-	33.5	30.1	35	35
BP048	9.6	1	9,600	7,200	40.0	34.6	6.8	-	58.5	51.8	60	60
BP048	14.4	2	14400	10800	60	51.9	6.8	F1/F2	83.5	73.4	90	80
								F3/F4				
BP048	19.2	2	19200	14000	80	69.2	6.8	F1/F2	108.5	95.0	110	100
								F3/F4				
BP060	4.8	1	4,800	3,600	20.0	17.3	9.1	-	36.4	33.0	40	35
BP060	9.6	1	9,600	7,200	40.0	34.6	9.1	-	61.4	54.6	70	60
BP060	14.4	2	14400	10800	60	51.9	9.1	F1/F2	86.4	76.3	90	80
								F3/F4				
BP060	19.2	2	19200	14000	80	69.2	9.1	F1/F2	111.4	97.9	120	100
								F3/F4				

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Operating Limits - Cooling & Heating	
Description	Standard Unit
COOLING	
Minimum ambient air temperature °F	50
Maximum ambient air temperature °F	100*
Minimum evaporator entering air db/wb °F	68/57
Rated air coil entering air db/wb °F	80/67
Maximum evaporator entering air db/wb °F	95/85
Minimum water coil entering fluid temperature °F	50
Water loop typical coil entering fluid range temperature °F	70/90
Maximum water coil entering fluid temperature °F	110
HEATING	
Minimum ambient air temperature °F	40
Maximum ambient air temperature °F	85
Minimum evaporator entering air db °F	50
Rated air coil entering air °F	68
Maximum evaporator entering air db °F	80
Normal water coil entering fluid range °F	25-80*
Minimum water coil entering Fluid °F	20*

* Antifreeze solution is required for fluid temperature at or below 45 Degrees F.

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Blower Performance CFM Standard Motor - PSC for 007-012, Constant Torque ECM for 015-070													
Model	Available External Static Pressure (in. wc. Wet coil and filter included)												
	Motor Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20
BP007	Low	430	420	390	360	335	310	260	-	-	-	-	-
	Medium	420	390	365	335	310	270	-	-	-	-	-	-
	High	370	360	340	315	285	245	-	-	-	-	-	-
BP009	Low	430	420	390	360	335	310	260	-	-	-	-	-
	Medium	420	390	365	335	310	270	-	-	-	-	-	-
	High	370	360	340	315	285	245	-	-	-	-	-	-
BP012	Low	450	435	415	400	385	360	330	305	-	-	-	-
	Medium	425	405	385	375	360	335	310	-	-	-	-	-
	High	390	380	365	350	335	315	290	-	-	-	-	-
BP015	Low	710	685	650	610	575	545	460	370	-	-	-	-
	Medium	530	510	480	445	405	360	-	-	-	-	-	-
	High	430	410	370	335	290	245	-	-	-	-	-	-
BP018	Low	730	700	660	615	580	545	505	460	-	-	-	-
	Medium	615	575	540	500	460	420	-	-	-	-	-	-
	High	540	510	480	445	405	360	-	-	-	-	-	-
BP024	Low	975	945	910	880	855	825	790	750	-	-	-	-
	Medium	905	885	855	825	790	755	700	650	-	-	-	-
	High	725	700	670	640	585	530	-	-	-	-	-	-
BP030	Low	1225	1195	1170	1140	1110	1075	1010	940	745	-	-	-
	Medium	1110	1075	1045	1015	985	955	915	880	700	-	-	-
	High	955	925	890	860	825	790	750	715	685	-	-	-
BP036	Low	1440	1420	1400	1380	1345	1315	1240	1165	1005	845	-	-
	Medium	1340	1315	1290	1270	1245	1225	1180	1135	990	845	-	-
	High	1190	1165	1140	1115	1090	1065	1040	1020	915	810	-	-
BP042	Low	1645	1635	1610	1585	1560	1535	1510	1485	1460	1430	-	-
	Medium	1455	1425	1400	1375	1345	1320	1290	1260	1225	1190	-	-
	High	1220	1190	1160	1130	1100	1070	1015	955	895	830	-	-
BP048	Low	1840	1820	1795	1775	1745	1720	1695	1670	1645	1615	-	-
	Medium	1655	1635	1610	1585	1560	1535	1510	1485	1460	1430	-	-
	High	1455	1425	1400	1375	1345	1320	1290	1260	1225	1190	-	-
BP060	Low	2225	2195	2165	2135	2105	2075	2045	2015	1980	1945	1900	1850
	Medium	2070	2045	2015	1990	1960	1925	1895	1870	1840	1810	1685	1600
	High	1815	1785	1755	1725	1695	1665	1630	1595	1555	1515	1425	-

Greensource i Series Model BP

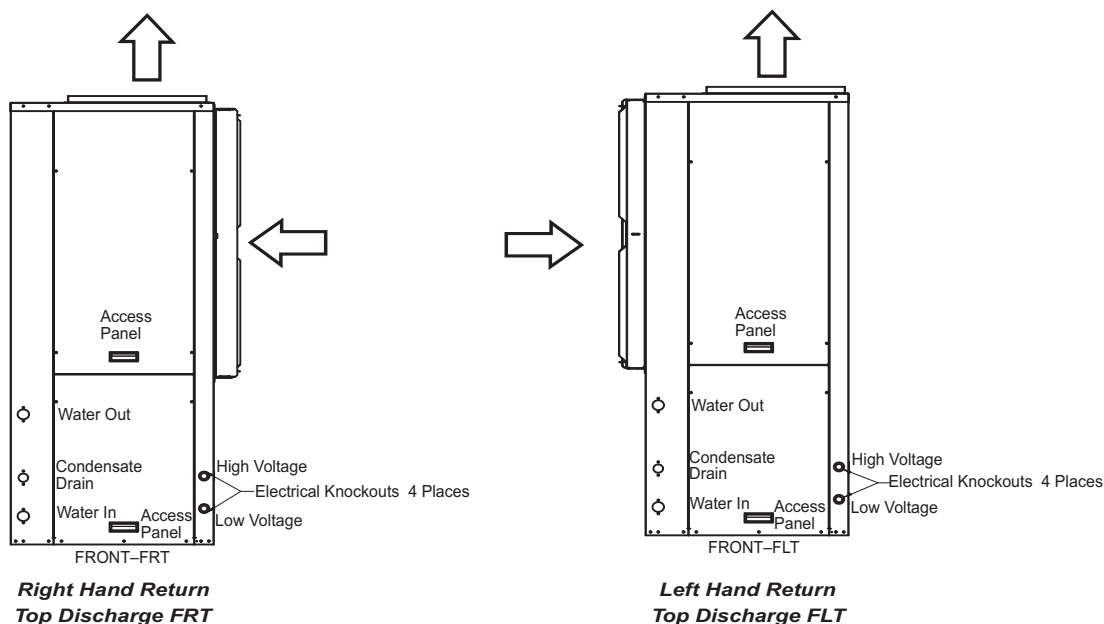
Residential Geothermal Heat Pumps



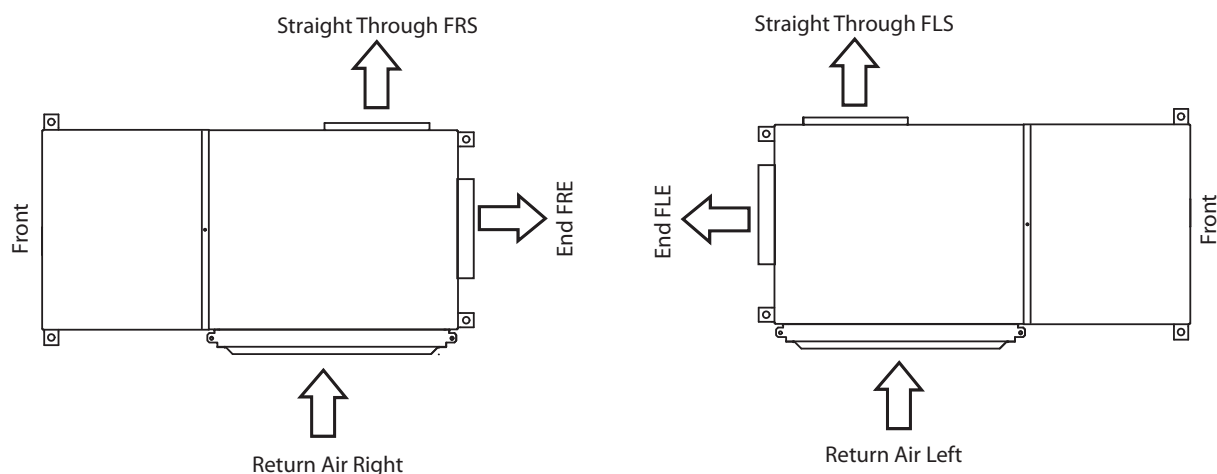
Blower Performance CFM (Variable Speed Constant CFM ECM)													
Model	Available External Static Pressure (in. wc. Wet coil and filter included)												
	Motor Speed	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20
BP015	+	575	575	575	575	575	575	575	575	-	-	-	-
	Normal	500	500	500	500	500	500	500	500	-	-	-	-
	-	425	425	425	425	425	425	425	425	-	-	-	-
BP018	+	745	745	745	745	745	745	745	745	-	-	-	-
	Normal	650	650	650	650	650	650	650	650	-	-	-	-
	-	555	555	555	555	555	555	555	555	-	-	-	-
BP024	+	1095	1095	1095	1095	1095	1095	1095	1095	1095	-	-	-
	Normal	950	950	950	950	950	950	950	950	950	-	-	-
	-	810	810	810	810	810	810	810	810	810	-	-	-
BP030	+	1150	1150	1150	1150	1150	1150	1150	1150	1150	-	-	-
	Normal	1000	1000	1000	1000	1000	1000	1000	1000	1000	-	-	-
	-	850	850	850	850	850	850	850	850	850	-	-	-
BP036	+	1380	1380	1380	1380	1380	1380	1380	1380	1380	1380	-	-
	Normal	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	-	-
	-	1020	1020	1020	1020	1020	1020	1020	1020	1020	1020	-	-
BP042	+	1610	1610	1610	1610	1610	1610	1610	1610	1610	1610	-	-
	Normal	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	-	-
	-	1190	1190	1190	1190	1190	1190	1190	1190	1190	1190	-	-
BP048	+	1840	1840	1840	1840	1840	1840	1840	1840	1840	1840	-	-
	Normal	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	-	-
	-	1360	1360	1360	1360	1360	1360	1360	1360	1360	1360	-	-
BP060	+	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
	Normal	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	-	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	-



Vertical Unit Configuration



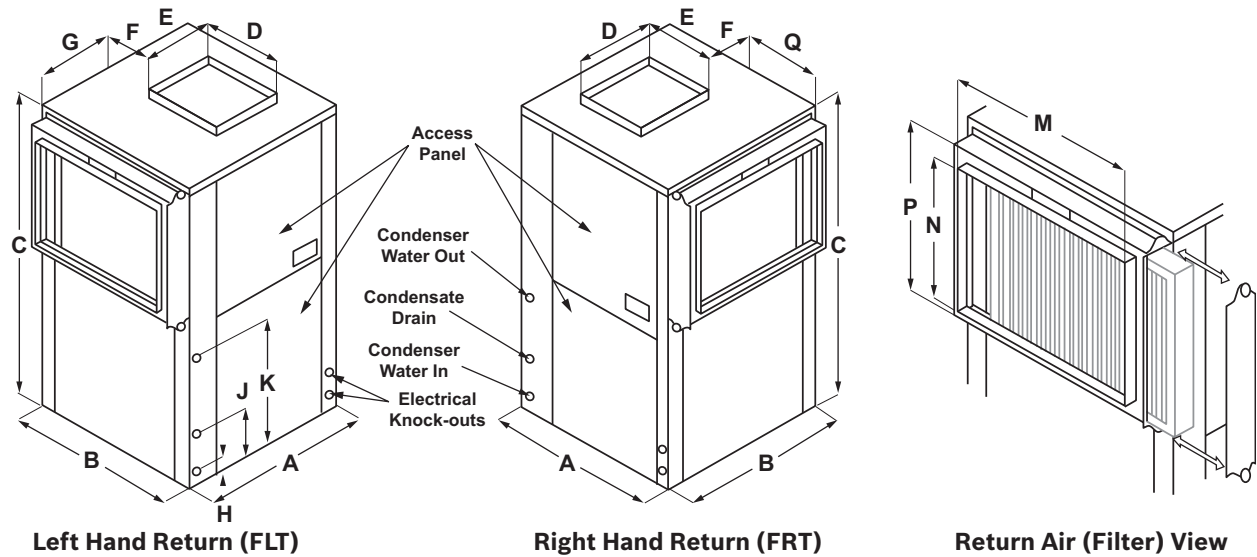
Horizontal Unit Configuration



Greensource i Series Model BP Residential Geothermal Heat Pumps



BP-Vertical Dimensions and Connections



BP-Vertical Dimensions and Connections

Model	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	Condenser Water Connections	Recommended Replacement Normal Filter Size
	Width	DBPth	Height	Dis-charge DBPth	Dis-charge Width	Cabinet Edge to Dis-charge	Left Side to Dis-charge	Water In	Bottom to Condensate Drain	Water Out	R/A Duct Width	R/A Duct Flange Height	Filter Rack Height	Right Side to Dis-charge		
BP007	21.75	21.75	32.75	11.75	7.75	5.00	8.50	2.25	8.00	13.75	18.00	13.00	15.00	8.50	3/4" FPT	15 x 20 x 1
BP009	21.75	21.75	32.75	11.75	7.75	5.00	8.50	2.25	8.00	13.75	18.00	13.00	15.00	8.50	3/4" FPT	15 x 20 x 1
BP012	21.75	21.75	32.75	11.75	7.75	5.00	8.50	2.62	7.50	12.50	18.00	16.00	18.00	8.50	3/4" FPT	18 x 20 x 1
BP015	21.75	21.75	39.25	13.75	13.75	4.00	6.12	2.25	7.50	12.25	18.00	18.00	20.00	4.00	3/4" FPT	20 x 20 x 1
BP018	21.75	21.75	39.25	13.75	13.75	4.00	6.12	2.25	7.50	12.25	18.00	18.00	20.00	4.00	3/4" FPT	20 x 20 x 1
BP024	21.75	26.25	47.25	13.75	15.75	6.25	4.87	2.50	8.75	15.00	22.00	22.00	24.00	4.00	3/4" FPT	24 x 24 x 1
BP030	24.25	33.50	47.25	15.75	15.75	8.87	7.00	2.50	8.50	14.50	28.00	22.00	24.00	4.00	1" FPT	24 x 30 x 1
BP036	24.25	33.50	47.25	15.75	15.75	8.87	7.00	2.50	8.50	14.50	28.00	22.00	24.00	4.00	1" FPT	24 x 30 x 1
BP042	26.25	33.50	58.25	17.75	17.75	7.87	6.75	3.25	8.50	13.25	28.00	30.00	32.00	4.00	1" FPT	16 x 30 x 1 (2)
BP048	26.25	33.50	58.25	17.75	17.75	7.87	6.75	3.25	8.50	13.25	28.00	30.00	32.00	4.00	1" FPT	16 x 30 x 1 (2)
BP060	26.25	33.50	66.25	17.75	17.75	7.87	7.00	3.25	8.50	13.25	28.00	38.00	40.00	4.00	1" FPT	20 x 30 x 1 (2)

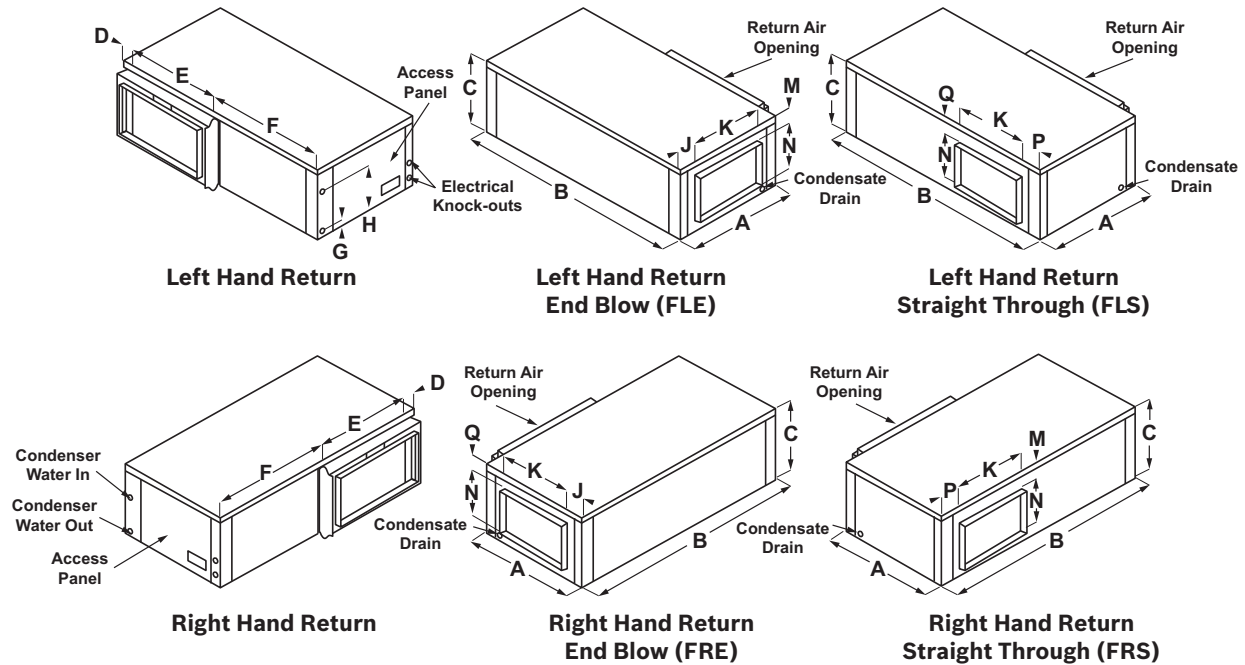
i All dimensions within +/- 0.125". Specifications subject to change without notice.

Greensource i Series Model BP

Residential Geothermal Heat Pumps



BP-Horizontal Dimensions and Connections



BP- Horizontal Dimensions and Connections

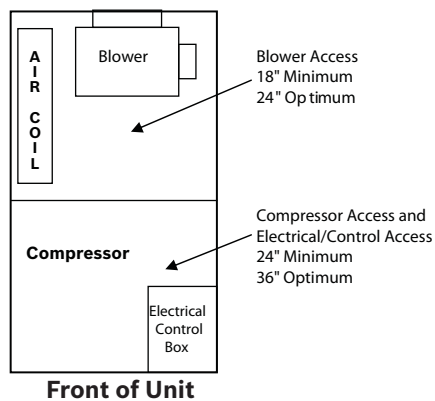
Model	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R	T	Condenser Water Connections	Recommended Replacement Normal Filter Size
	Width	Depth	Height	Cab End to Filter Rack	"R/A Duct Width"	Cab Front to Filter Rack	Water In	Water Out	Side to Dis-charge	Dis-charge Width	Top to Dis-charge (FLE & FRS)	Dis-charge Height	End to Dis-charge	Top to Dis-charge (FRE & FLS)	Filter Rack Height	R/A Duct Flange Height		
BP007	21.75	43.25	16.75	0.50	20.25	22.25	2.25	13.87	3.50	11.75	4.62	7.75	3.50	4.62	15.00	13.00	3/4" FPT	15 x 20 x 1
BP009	21.75	43.25	16.75	0.50	20.25	22.25	2.25	13.87	3.50	11.75	4.62	7.75	3.50	4.62	15.00	13.00	3/4" FPT	15 x 20 x 1
BP012	22.25	45.25	19.75	0.62	20.25	24.25	2.50	12.50	3.62	11.75	7.12	7.75	3.62	4.75	18.00	16.00	3/4" FPT	18 x 20 x 1
BP015	22.25	45.25	19.75	1.62	20.25	23.25	2.50	12.50	2.75	13.75	3.12	13.75	2.75	2.87	18.00	16.00	3/4" FPT	18 x 20 x 1
BP018	22.25	45.25	19.75	1.62	20.25	23.25	2.50	12.50	2.75	13.75	3.12	13.75	2.75	2.87	18.00	16.00	3/4" FPT	18 x 20 x 1
BP024	26.25	54.75	22.00*	1.25	30.25	23.00	2.62	15.12	3.75	13.75	2.12	15.75	3.75	4.25	20.12	18.00	3/4" FPT	20 x 30 x 1
BP030	30.25	68.25	22.00*	2.00	35.00	31.25	2.50	13.25	4.50	15.75	4.00	15.75	4.50	2.25	20.12	18.00	1" FPT	20 x 34.5 x 1
BP036	30.25	68.25	22.00*	2.00	35.00	31.25	2.50	13.25	4.50	15.75	4.00	15.75	4.50	2.25	20.12	18.00	1" FPT	20 x 34.5 x 1
BP042	30.25	79.00	22.00*	0.75	48.25	29.62	2.75	13.25	4.50	17.75	2.25	17.75	4.50	2.12	20.12	18.00	1" FPT	20 x 24 x 1 (2)
BP048	30.25	79.00	22.00*	0.75	48.25	29.62	2.75	13.25	4.50	17.75	2.25	17.75	4.50	2.12	20.12	18.00	1" FPT	20 x 24 x 1 (2)
BP060	30.25	89.25	22.00*	1.87	56.25	31.00	2.62	13.25	4.50	17.75	2.25	17.75	4.50	2.12	20.12	18.00	1" FPT	20 x 28 x 1 (2)



All dimensions within +/- 0.125". Specifications subject to change without notice.

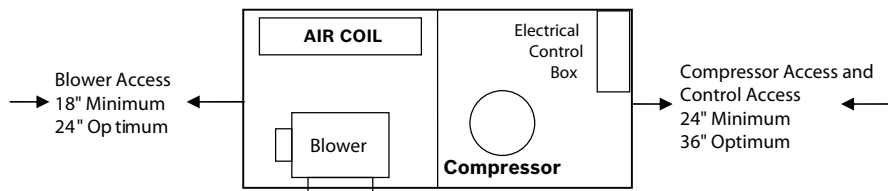
BP Service Clearances

**Vertical Unit
Service Clearances**



NOTE: The local electric codes may require 36" or more clearance at the electrical control box.

**Horizontal Unit
Service Clearances**



NOTE: The local electric codes may require 36" or more clearance at the electrical control box.

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP007 (315 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	1	1.5	0.6	75/63	7.8	6.8	8.8	0.34	23.0	30*	1	1.6	0.7	60	5.1	3.9	0.43	3.5	
				80/67	8.3	7.1	9.3	0.33	25.0					70	5.0	3.6	0.46	3.2	
				85/71	8.8	7.3	9.9	0.32	27.1					80	4.8	3.3	0.49	2.9	
	2	5.2	2.3	75/63	8.0	7.0	9.0	0.31	26.1		2	5.6	2.4	60	5.4	4.2	0.43	3.7	
				80/67	8.6	7.2	9.6	0.30	29.0					70	5.2	3.9	0.46	3.3	
				85/71	9.2	7.4	10.1	0.28	32.4					80	5.0	3.6	0.50	3.0	
	3	10.8	4.7	75/63	8.1	7.0	9.1	0.30	26.9		3	11.6	5.0	60	5.5	4.3	0.43	3.8	
				80/67	8.7	7.2	9.6	0.29	30.0					70	5.3	3.9	0.46	3.4	
				85/71	9.3	7.5	10.2	0.27	34.3					80	5.1	3.6	0.50	3.0	
60	1	1.4	0.6	75/63	7.4	6.7	8.5	0.38	19.2	40*	1	1.6	0.7	60	6.0	4.7	0.43	4.1	
				80/67	7.8	6.9	9.0	0.38	20.5					70	5.8	4.4	0.47	3.7	
				85/71	8.4	7.2	9.5	0.37	22.5					80	5.6	4.1	0.50	3.3	
	2	5	2.2	75/63	7.6	6.7	8.7	0.36	21.2		2	5.4	2.3	60	6.4	5.1	0.43	4.4	
				80/67	8.1	7.0	9.2	0.34	23.4					70	6.1	4.7	0.47	3.8	
				85/71	8.7	7.3	9.8	0.34	25.9					80	5.9	4.4	0.51	3.4	
	3	10.4	4.5	75/63	7.7	6.8	8.7	0.35	22.0		3	11.2	4.9	60	6.5	5.2	0.43	4.4	
				80/67	8.2	7.0	9.3	0.34	24.1					70	6.3	4.8	0.47	4.0	
				85/71	8.8	7.3	9.8	0.33	26.6					80	6.0	4.5	0.51	3.5	
70	1	1.4	0.6	75/63	6.9	6.5	8.2	0.43	15.9	50	1	1.5	0.6	60	6.9	5.6	0.43	4.7	
				80/67	7.4	6.7	8.7	0.43	17.2					70	6.6	5.2	0.47	4.1	
				85/71	7.9	7.0	9.2	0.42	18.6					80	6.4	4.8	0.51	3.7	
	2	4.9	2.1	75/63	7.1	6.6	8.4	0.41	17.4		2	5.2	2.3	60	7.3	6.0	0.43	5.0	
				80/67	7.7	6.8	8.9	0.40	19.2					70	7.1	5.6	0.47	4.4	
				85/71	8.2	7.0	9.4	0.39	20.8					80	6.8	5.2	0.52	3.9	
	3	10.1	4.4	75/63	7.2	6.6	8.4	0.40	18.1		3	10.8	4.7	60	7.5	6.2	0.43	5.1	
				80/67	7.7	6.9	8.9	0.39	19.7					70	7.2	5.8	0.47	4.5	
				85/71	8.3	7.1	9.5	0.38	21.7					80	6.9	5.3	0.52	3.9	
80	1	1.3	0.6	75/63	6.5	6.3	7.9	0.48	13.5	60	1	1.4	0.6	60	7.8	6.5	0.43	5.3	
				80/67	7.0	6.6	8.3	0.48	14.6					70	7.5	6.1	0.48	4.6	
				85/71	7.4	6.9	8.8	0.47	15.6					80	7.3	5.7	0.52	4.1	
	2	4.7	2.0	75/63	6.7	6.4	8.0	0.45	14.7		2	5.0	2.2	60	8.3	7.0	0.43	5.7	
				80/67	7.2	6.7	8.5	0.45	15.9					70	8.0	6.6	0.48	4.9	
				85/71	7.7	7.0	9.0	0.44	17.4					80	7.7	6.1	0.52	4.3	
	3	9.7	4.2	75/63	6.8	6.4	8.1	0.45	15.2		3	10.5	4.5	60	8.5	7.2	0.43	5.8	
				80/67	7.3	6.7	8.6	0.44	16.5					70	8.2	6.7	0.48	5.1	
				85/71	7.8	7.0	9.1	0.43	17.9					80	7.9	6.3	0.52	4.4	
85	1	1.3	0.6	75/63	6.3	6.2	7.7	0.50	12.5	70	1	1.4	0.6	60	8.7	7.4	0.43	5.9	
				80/67	6.7	6.5	8.2	0.50	13.3					70	8.4	6.9	0.48	5.2	
				85/71	7.2	6.8	8.6	0.50	14.4					80	8.1	6.5	0.52	4.6	
	2	4.6	2.0	75/63	6.5	6.3	7.9	0.48	13.5		2	4.9	2.1	60	9.3	8.1	0.43	6.4	
				80/67	6.9	6.6	8.3	0.48	14.4					70	9.0	7.5	0.48	5.5	
				85/71	7.4	6.9	8.8	0.47	15.6					80	8.7	7.0	0.53	4.9	
	3	9.6	4.2	75/63	6.6	6.3	7.9	0.47	14.0		3	10.1	4.4	60	9.6	8.3	0.43	6.6	
				80/67	7.0	6.6	8.4	0.47	14.9					70	9.2	7.8	0.48	5.7	
				85/71	7.5	6.9	8.9	0.46	16.2					80	8.9	7.2	0.53	5.0	
90	1	1.3	0.6	75/63	6.1	6.1	7.6	0.53	11.5	80	1	1.4	0.6	60	9.6	8.3	0.43	6.6	
				80/67	6.5	6.4	8.0	0.53	12.3					70	9.3	7.9	0.48	5.7	
				85/71	6.9	6.7	8.5	0.52	13.1					80	9.0	7.4	0.53	5.0	
	2	4.6	2.0	75/63	6.3	6.2	7.7	0.50	12.4		2	4.7	2.0	60	10.4	9.1	0.42	7.2	
				80/67	6.7	6.5	8.2	0.50	13.3					70	10.0	8.6	0.48	6.2	
				85/71	7.2	6.8	8.6	0.50	14.4					80	9.6	8.0	0.53	5.3	
	3	9.4	4.1	75/63	6.4	6.3	7.8	0.50	12.9		3	9.8	4.2	60	10.7	9.4	0.42	7.5	
				80/67	6.8	6.5	8.2	0.49	13.7					70	10.3	8.8	0.48	6.4	
				85/71	7.3	6.8	8.7	0.49	14.9					80	9.8	8.2	0.53	5.4	
100	1	1.3	0.6	75/63	5.7	5.7	7.3	0.58	9.8	* Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	1	1.4	0.6	60	10.3	9.0	0.42	7.5	
				80/67	6.1	6.1	7.7	0.58	10.5					70	10.0	8.6	0.48	6.2	
				85/71	6.5	6.5	8.2	0.58	11.2					80	9.6	8.0	0.53	5.3	
	2	4.4	1.9	75/63	5.9	5.9	7.4	0.55	10.6		2	4.9	2.1	60	10.7	9.4	0.42	7.5	
				80/67	6.3	6.3	7.9	0.55	11.3					70	10.3	8.8	0.48	6.4	
				85/71	6.7	6.6	8.3	0.55	12.1					80	10.0	8.6	0.53	5.3	
	3	9.2	4.0	75/63	5.9	5.9	7.5	0.55	10.7		3	10.1	4.4	60	10.7	9.4	0.42	7.5	
				80/67	6.4	6.4	7.9	0.54	11.7					70	10.3	8.8	0.48	6.4	
				85/71	6.8	6.7	8.3	0.54	12.5					80	10.0	8.6	0.53	5.3	
110	1	1.2	0.5	75/63	5.3	5.3	7.0	0.63	8.4	▶ Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	1	1.3	0.5	60	10.7	9.4	0.42	7.5	
				80/67	5.7	5.7	7.4	0.63	9.0					70	10.3	8.8	0.48	6.4	
				85/71	6.0	6.0	7.8	0.63	9.5					80	10.0	8.6	0.53	5.3	
	2	4.3	1.9	75/63	5.5	5.5	7.1	0.61	9.0		2	4.9	2.1	60	10.7	9.4	0.42	7.5	
				80/67	5.8	5.8	7.5	0.61	9.5					70	10.3	8.8	0.48	6.4	
				85/71	6.2	6.2	7.9	0.61	10.2					80	10.0	8.6	0.53	5.3	
	3	8.9	3.9	75/63	5.5	5.5	7.2	0.60	9.1		3	9.8	4.2	60	10.7	9.4	0.42	7.5	
				80/67	5.9	5.9	7.6	0.60	9.8					70	10.3	8.8	0.48	6.4	
				85/71	6.3	6.3	8.0	0.60	10.5					80	10.0	8.6	0.53	5.3	

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BP009 (325 CFM) Capacity Data

COOLING										HEATING								
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP
50	1	1.2	0.5	75/63	9.8	7.8	11.1	0.42	23.2	30*	1	1.3	0.5	60	6.6	4.9	0.54	3.6
				80/67	10.4	8.0	11.7	0.41	25.0					70	6.4	4.6	0.59	3.2
				85/71	11.1	8.3	12.4	0.41	27.2					80	6.3	4.3	0.64	2.9
	2	4.1	1.8	75/63	10.3	8.0	11.4	0.36	28.4		2	4.4	1.9	60	7.0	5.4	0.55	3.8
				80/67	11.0	8.2	12.1	0.35	31.5					70	6.9	5.0	0.60	3.4
				85/71	11.7	8.5	12.8	0.33	35.0					80	6.7	4.7	0.65	3.1
	3	8.6	3.7	75/63	10.4	8.0	11.5	0.34	30.3		3	9.1	3.9	60	7.2	5.5	0.55	3.9
				80/67	11.1	8.3	12.2	0.33	34.0					70	7.0	5.2	0.60	3.4
				85/71	11.9	8.5	12.9	0.31	38.4					80	6.8	4.8	0.65	3.1
60	1	1.1	0.5	75/63	9.3	7.6	10.8	0.48	19.2	40*	1	1.2	0.5	60	7.6	5.9	0.55	4.0
				80/67	9.9	7.8	11.4	0.48	20.6					70	7.4	5.6	0.61	3.6
				85/71	10.6	8.1	12.0	0.47	22.3					80	7.3	5.2	0.66	3.3
	2	4	1.7	75/63	9.8	7.8	11.1	0.43	22.9		2	4.2	1.8	60	8.2	6.5	0.56	4.3
				80/67	10.4	8.0	11.7	0.42	25.0					70	8.0	6.1	0.61	3.8
				85/71	11.1	8.3	12.4	0.40	27.5					80	7.7	5.7	0.67	3.4
	3	8.3	3.6	75/63	9.9	7.8	11.2	0.41	24.2		3	8.8	3.8	60	8.4	6.7	0.56	4.4
				80/67	10.6	8.1	11.8	0.40	26.8					70	8.2	6.3	0.62	3.9
				85/71	11.3	8.3	12.5	0.38	29.7					80	7.9	5.8	0.67	3.5
70	1	1.1	0.5	75/63	8.8	7.4	10.5	0.55	16.0	50	1	1.2	0.5	60	8.7	6.9	0.56	4.5
				80/67	9.4	7.6	11.1	0.54	17.2					70	8.5	6.5	0.62	4.0
				85/71	10.0	7.9	11.7	0.54	18.4					80	8.3	6.1	0.68	3.6
	2	3.9	1.7	75/63	9.2	7.6	10.7	0.49	18.6		2	4.1	1.8	60	9.4	7.6	0.57	4.9
				80/67	9.9	7.8	11.4	0.48	20.4					70	9.1	7.2	0.63	4.3
				85/71	10.5	8.0	12.0	0.47	22.1					80	8.9	6.7	0.69	3.8
	3	8	3.5	75/63	9.4	7.6	10.8	0.48	19.7		3	8.5	3.7	60	9.7	7.9	0.57	5.0
				80/67	10.0	7.9	11.5	0.46	21.5					70	9.4	7.4	0.63	4.4
				85/71	10.7	8.1	12.1	0.45	23.6					80	9.1	6.9	0.69	3.9
80	1	1.1	0.5	75/63	8.3	7.2	10.1	0.61	13.5	60	1	1.1	0.5	60	9.8	8.0	0.57	5.0
				80/67	8.9	7.4	10.7	0.61	14.5					70	9.5	7.5	0.63	4.4
				85/71	9.4	7.7	11.3	0.61	15.4					80	9.3	7.1	0.69	3.9
	2	3.7	1.6	75/63	8.7	7.3	10.4	0.56	15.5		2	4.0	1.7	60	10.6	8.8	0.58	5.4
				80/67	9.3	7.6	11.0	0.55	16.8					70	10.3	8.3	0.64	4.7
				85/71	10.0	7.9	11.6	0.55	18.3					80	10.0	7.8	0.71	4.2
	3	7.8	3.4	75/63	8.8	7.4	10.5	0.54	16.1		3	8.2	3.6	60	11.0	9.2	0.58	5.6
				80/67	9.5	7.7	11.1	0.54	17.7					70	10.6	8.6	0.65	4.8
				85/71	10.1	7.9	11.7	0.53	19.1					80	10.3	8.1	0.71	4.3
85	1	1.1	0.5	75/63	8.1	7.1	10.0	0.64	12.5	70	1	1.1	0.5	60	10.9	9.1	0.58	5.5
				80/67	8.6	7.3	10.5	0.64	13.3					70	10.6	8.6	0.64	4.8
				85/71	9.2	7.6	11.1	0.64	14.2					80	10.4	8.1	0.71	4.3
	2	3.7	1.6	75/63	8.5	7.2	10.2	0.59	14.3		2	3.8	1.7	60	11.9	10.1	0.58	6.0
				80/67	9.1	7.5	10.8	0.59	15.4					70	11.6	9.5	0.65	5.3
				85/71	9.7	7.8	11.4	0.58	16.6					80	11.2	8.9	0.72	4.6
	3	7.6	3.3	75/63	8.6	7.3	10.3	0.58	14.8		3	7.9	3.4	60	12.3	10.5	0.58	6.2
				80/67	9.2	7.5	10.9	0.57	16.1					70	11.9	9.9	0.65	5.4
				85/71	9.8	7.8	11.5	0.56	17.4					80	11.6	9.3	0.72	4.7
90	1	1	0.4	75/63	7.8	7.0	9.8	0.68	11.5	80	1	1.1	0.5	60	12.0	10.2	0.58	6.1
				80/67	8.3	7.2	10.4	0.68	12.2					70	11.7	9.7	0.65	5.3
				85/71	8.9	7.5	10.9	0.68	13.1					80	11.5	9.1	0.72	4.7
	2	3.6	1.6	75/63	8.2	7.1	10.0	0.63	13.0		2	3.7	1.6	60	13.2	11.4	0.58	6.7
				80/67	8.8	7.4	10.6	0.62	14.1					70	12.8	10.8	0.65	5.8
				85/71	9.4	7.6	11.2	0.62	15.1					80	12.5	10.1	0.73	5.1
	3	7.5	3.2	75/63	8.3	7.2	10.1	0.61	13.5		3	7.7	3.3	60	13.6	11.9	0.58	6.9
				80/67	8.9	7.4	10.7	0.61	14.6					70	13.2	11.2	0.65	5.9
				85/71	9.5	7.7	11.3	0.60	15.8					80	12.8	10.5	0.73	5.2
100	1	1	0.4	75/63	7.3	6.8	9.4	0.74	9.8	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	1	1.1	0.5	60	10.9	9.1	0.58	5.5
				80/67	7.8	7.0	10.0	0.75	10.4					70	10.6	8.6	0.64	4.8
				85/71	8.3	7.3	10.5	0.75	11.1					80	10.4	8.1	0.71	4.3
	2	3.5	1.5	75/63	7.7	6.9	9.7	0.70	11.0		2	3.8	1.7	60	11.9	10.1	0.58	6.0
				80/67	8.2	7.2	10.3	0.70	11.7					70	11.6	9.5	0.65	5.3
				85/71	8.8	7.4	10.8	0.69	12.7					80	11.2	8.9	0.72	4.6
	3	7.3	3.2	75/63	7.7	6.9	9.8	0.68	11.2		3	7.9	3.4	60	12.3	10.5	0.58	6.2
				80/67	8.3	7.2	10.3	0.68	12.1					70	11.9	9.9	0.65	5.4
				85/71	8.9	7.5	10.9	0.68	13.1					80	11.6	9.3	0.72	4.7
110	1	1	0.4	75/63	6.8	6.6	9.1	0.81	8.4	Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	1	1.1	0.5	60	13.2	11.4	0.58	6.7
				80/67	7.2	6.8	9.6	0.81	8.8					70	12.8	10.8	0.65	5.8
				85/71	7.7	7.1	10.1	0.82	9.4					80	12.5	10.1	0.73	5.1
	2	3.4	1.5	75/63	7.1	6.7	9.3	0.77	9.2		2	3.7	1.6	60	13.6	11.9	0.58	6.9
				80/67	7.6	7.0	9.9	0.77	9.8					70	13.2	11.2	0.65	5.9
				85/71	8.1	7.2	10.4	0.77	10.5					80	12.8	10.5	0.73	5.2
	3	7.1	3.1	75/63	7.2	6.7	9.4	0.76	9.5		3	7.7	3.3	60	13.6	11.9	0.58	6.9
				80/67	7.7	7.0	9.9	0.76	10.1					70	13.2	11.2	0.65	5.9
				85/71	8.3	7.3	10.5	0.75	11.0					80	12.8	10.5	0.73	5.2

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BP012 (400 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	1.5	1.1	0.5	75/63	13.2	10.0	15.1	0.60	21.8	30*	1.5	1.1	0.5	60	9.1	6.6	0.77	3.5	
				80/67	14.1	10.3	16.0	0.60	23.5					70	8.9	6.3	0.83	3.2	
				85/71	15.0	10.5	16.9	0.60	25.1					80	8.7	5.9	0.88	2.9	
	2.5	2.7	1.2	75/63	13.7	10.2	15.4	0.54	25.1		2.5	2.8	1.2	60	9.6	7.2	0.77	3.7	
				80/67	14.7	10.5	16.4	0.53	27.5					70	9.4	6.8	0.83	3.3	
				85/71	15.6	10.8	17.3	0.52	29.7					80	9.2	6.3	0.89	3.0	
	3.5	4.9	2.1	75/63	13.9	10.3	15.6	0.52	26.7		3.5	5.1	2.2	60	9.9	7.4	0.78	3.7	
				80/67	14.9	10.6	16.5	0.51	29.4					70	9.6	7.0	0.84	3.4	
				85/71	15.9	10.9	17.5	0.49	32.2					80	9.4	6.5	0.90	3.1	
60	1.5	1	0.4	75/63	12.6	9.7	14.7	0.68	18.5	40*	1.5	1.1	0.5	60	10.4	8.0	0.78	3.9	
				80/67	13.4	10.0	15.5	0.68	19.7					70	10.2	7.5	0.85	3.5	
				85/71	14.3	10.3	16.4	0.68	21.1					80	10.0	7.1	0.91	3.2	
	2.5	2.6	1.1	75/63	13.0	9.9	15.0	0.62	20.8		2.5	2.7	1.2	60	11.1	8.6	0.79	4.1	
				80/67	13.9	10.2	15.9	0.62	22.5					70	10.9	8.1	0.86	3.7	
				85/71	14.9	10.5	16.8	0.61	24.4					80	10.6	7.6	0.93	3.4	
	3.5	4.7	2.0	75/63	13.3	10.0	15.1	0.60	22.2		3.5	5.0	2.1	60	11.5	8.9	0.80	4.2	
				80/67	14.2	10.3	16.0	0.59	24.1					70	11.2	8.4	0.87	3.8	
				85/71	15.2	10.6	17.0	0.58	26.2					80	10.9	7.9	0.93	3.4	
70	1.5	1	0.4	75/63	11.9	9.4	14.2	0.76	15.7	50	1.5	1.0	0.5	60	11.9	9.3	0.80	4.4	
				80/67	12.7	9.7	15.0	0.76	16.7					70	11.7	8.9	0.87	3.9	
				85/71	13.5	10.0	15.9	0.76	17.7					80	11.4	8.3	0.95	3.5	
	2.5	2.5	1.1	75/63	12.3	9.6	14.5	0.70	17.4		2.5	2.6	1.1	60	12.7	10.1	0.81	4.6	
				80/67	13.2	9.9	15.4	0.70	18.8					70	12.4	9.6	0.89	4.1	
				85/71	14.1	10.2	16.3	0.69	20.3					80	12.1	9.0	0.96	3.7	
	3.5	4.5	1.9	75/63	12.5	9.7	14.7	0.68	18.3		3.5	4.8	2.1	60	13.1	10.5	0.82	4.7	
				80/67	13.4	10.0	15.6	0.67	19.9					70	12.8	9.9	0.89	4.2	
				85/71	14.3	10.3	16.5	0.67	21.4					80	12.5	9.3	0.97	3.8	
80	1.5	1	0.4	75/63	11.2	9.1	13.8	0.84	13.4	60	1.5	1.0	0.4	60	13.4	10.8	0.82	4.8	
				80/67	12.0	9.5	14.6	0.84	14.2					70	13.2	10.2	0.90	4.3	
				85/71	12.8	9.7	15.4	0.84	15.1					80	12.9	9.7	0.98	3.9	
	2.5	2.4	1.0	75/63	11.7	9.3	14.1	0.79	14.9		2.5	2.5	1.1	60	14.4	11.8	0.83	5.1	
				80/67	12.5	9.6	14.9	0.78	15.9					70	14.1	11.1	0.91	4.5	
				85/71	13.3	9.9	15.8	0.78	17.0					80	13.7	10.5	0.99	4.0	
	3.5	4.4	1.9	75/63	11.8	9.4	14.2	0.76	15.4		3.5	4.6	2.0	60	14.9	12.2	0.84	5.2	
				80/67	12.7	9.7	15.0	0.76	16.7					70	14.5	11.6	0.92	4.6	
				85/71	13.6	10.0	15.9	0.76	18.0					80	14.1	10.9	1.00	4.1	
85	1.5	0.9	0.4	75/63	10.9	9.0	13.6	0.88	12.4	70	1.5	1.0	0.4	60	15.0	12.3	0.84	5.3	
				80/67	11.6	9.3	14.3	0.88	13.1					70	14.7	11.7	0.92	4.7	
				85/71	12.4	9.6	15.1	0.89	14.0					80	14.4	11.1	1.01	4.2	
	2.5	2.4	1.0	75/63	11.3	9.2	13.8	0.83	13.6		2.5	2.4	1.1	60	16.2	13.5	0.85	5.6	
				80/67	12.1	9.5	14.6	0.83	14.6					70	15.8	12.8	0.94	4.9	
				85/71	12.9	9.8	15.5	0.83	15.6					80	15.4	12.1	1.03	4.4	
	3.5	4.3	1.9	75/63	11.5	9.2	14.0	0.81	14.2		3.5	4.5	1.9	60	16.7	14.1	0.86	5.7	
				80/67	12.3	9.6	14.8	0.80	15.2					70	16.3	13.3	0.95	5.1	
				85/71	13.1	9.9	15.6	0.80	16.3					80	15.9	12.5	1.04	4.5	
90	1.5	0.9	0.4	75/63	10.5	8.9	13.3	0.92	11.4	80	1.5	0.9	0.4	60	16.7	13.9	0.86	5.7	
				80/67	11.2	9.2	14.1	0.92	12.1					70	16.3	13.3	0.95	5.1	
				85/71	12.0	9.5	14.9	0.93	12.9					80	16.0	12.6	1.04	4.5	
	2.5	2.3	1.0	75/63	10.9	9.0	13.6	0.87	12.5		2.5	2.4	1.0	60	18.0	15.3	0.87	6.1	
				80/67	11.7	9.3	14.4	0.87	13.4					70	17.5	14.5	0.97	5.3	
				85/71	12.5	9.7	15.2	0.87	14.3					80	17.1	13.7	1.06	4.7	
	3.5	4.3	1.9	75/63	11.1	9.1	13.7	0.85	13.0		3.5	4.3	1.9	60	18.7	15.9	0.88	6.2	
				80/67	11.9	9.4	14.5	0.85	14.0					70	18.2	15.1	0.98	5.5	
				85/71	12.7	9.7	15.4	0.85	14.9					80	17.7	14.2	1.07	4.9	
100	1.5	0.9	0.4	75/63	9.8	8.6	12.8	1.00	9.8	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	1.5	0.9	0.4	60	19.8	17.1	0.89	6.5	
				80/67	10.5	8.9	13.6	1.01	10.4					70	19.4	16.6	0.97	5.9	
				85/71	11.2	9.2	14.4	1.02	11.0					80	19.0	16.1	1.05	5.3	
	2.5	2.3	1.0	75/63	10.2	8.7	13.1	0.95	10.7		2.5	2.3	1.0	60	21.0	18.3	0.90	6.8	
				80/67	10.9	9.1	13.9	0.96	11.3					70	20.6	17.8	0.98	6.2	
				85/71	11.7	9.4	14.7	0.96	12.1					80	20.2	17.3	1.06	5.6	
	3.5	4.1	1.8	75/63	10.4	8.8	13.2	0.94	11.1		3.5	4.1	1.8	60	22.0	19.3	0.91	7.0	
				80/67	11.1	9.2	14.0	0.94	11.8					70	21.6	18.8	0.99	6.4	
				85/71	11.9	9.5	14.8	0.94	12.6					80	21.2	18.3	1.07	5.8	
110	1.5	0.9	0.4	75/63	9.1	8.3	12.4	1.08	8.4	Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	1.5	0.9	0.4	60	23.0	20.3	0.92	7.3	
				80/67	9.8	8.7	13.1	1.09	8.9					70	22.6	19.8	1.00	6.7	
				85/71	10.4	9.0	13.8	1.11	9.4					80	22.2	19.3	1.08	6.1	
	2.5	2.2	1.0	75/63	9.5	8.5	12.6	1.04	9.1		2.5	2.2	1.0	60	24.0	21.1	0.93	7.6	
				80/67	10.2	8.8	13.4	1.05	9.7					70	23.6	20.6	1.01	7.0	
				85/71	10.9	9.1	14.1	1.06	10.3					80	23.2	20.1	1.09	6.4	
	3.5	4	1.7	75/63	9.6	8.5	12.7	1.03	9.3		3.5	4	1.7	60	25.0	21.9	0.94	7.9	
				80/67	10.3	8.9	13.5	1.03	10.0					70	24.6	21.4	1.02	7.3	
				85/71	11.1	9.2	14.3	1.04	10.7					80	24.2	20.9	1.10	6.7	

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP015 (500 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	2	1.7	0.7	75/63	16.0	12.5	17.9	0.60	26.5	30*	2	1.8	0.8	60	9.9	7.4	0.77	3.8	
				80/67	17.0	12.9	18.9	0.59	28.6					70	9.7	7.0	0.85	3.4	
				85/71	18.1	13.3	20.0	0.58	31.1					80	9.5	6.5	0.92	3.0	
	3	3.5	1.5	75/63	16.4	12.7	18.2	0.55	29.9		3	3.8	1.7	60	10.3	7.8	0.78	3.9	
				80/67	17.5	13.1	19.2	0.53	32.9					70	10.1	7.3	0.86	3.5	
				85/71	18.7	13.5	20.3	0.51	36.3					80	9.9	6.8	0.93	3.1	
	4	5.9	2.6	75/63	16.6	12.8	18.3	0.52	31.9		4	6.4	2.8	60	10.5	8.0	0.78	3.9	
				80/67	17.8	13.2	19.4	0.50	35.5					70	10.3	7.5	0.86	3.5	
				85/71	18.9	13.6	20.5	0.48	39.4					80	10.0	6.9	0.94	3.1	
60	2	1.6	0.7	75/63	15.2	12.2	17.4	0.70	21.7	40*	2	1.8	0.8	60	11.4	8.9	0.79	4.2	
				80/67	16.2	12.6	18.4	0.69	23.3					70	11.2	8.3	0.87	3.8	
				85/71	17.2	13.0	19.4	0.69	25.1					80	10.9	7.8	0.96	3.4	
	3	3.4	1.5	75/63	15.6	12.4	17.7	0.65	24.1		3	3.7	1.6	60	11.9	9.4	0.80	4.4	
				80/67	16.7	12.7	18.7	0.64	26.2					70	11.7	8.7	0.88	3.9	
				85/71	17.8	13.1	19.8	0.62	28.6					80	11.3	8.2	0.97	3.4	
	4	5.7	2.5	75/63	15.8	12.4	17.8	0.62	25.4		4	6.2	2.7	60	12.2	9.6	0.80	4.5	
				80/67	16.9	12.8	18.9	0.61	27.9					70	11.9	9.0	0.88	4.0	
				85/71	18.0	13.2	19.9	0.59	30.6					80	11.5	8.4	0.97	3.5	
70	2	1.6	0.7	75/63	14.4	11.8	16.9	0.80	18.0	50	2	1.7	0.7	60	13.0	10.4	0.81	4.7	
				80/67	15.4	12.3	17.9	0.80	19.3					70	12.7	9.8	0.90	4.2	
				85/71	16.4	12.6	18.9	0.79	20.7					80	12.4	9.2	0.99	3.7	
	3	3.3	1.4	75/63	14.8	12.0	17.2	0.75	19.7		3	3.6	1.5	60	13.7	11.0	0.81	5.0	
				80/67	15.8	12.4	18.2	0.74	21.3					70	13.3	10.3	0.90	4.3	
				85/71	16.9	12.8	19.2	0.73	23.1					80	12.9	9.6	1.00	3.8	
	4	5.5	2.4	75/63	15.0	12.1	17.3	0.72	20.7		4	6.0	2.6	60	14.0	11.4	0.81	5.1	
				80/67	16.1	12.5	18.3	0.71	22.6					70	13.6	10.6	0.91	4.4	
				85/71	17.1	12.9	19.4	0.70	24.4					80	13.2	9.9	1.00	3.9	
80	2	1.5	0.6	75/63	13.6	11.5	16.4	0.90	15.1	60	2	1.7	0.7	60	14.7	12.1	0.82	5.3	
				80/67	14.5	11.9	17.3	0.90	16.1					70	14.3	11.4	0.91	4.6	
				85/71	15.5	12.3	18.3	0.90	17.2					80	14.0	10.7	1.01	4.1	
	3	3.2	1.4	75/63	14.0	11.7	16.6	0.85	16.4		3	3.4	1.5	60	15.4	12.8	0.82	5.5	
				80/67	14.9	12.1	17.6	0.85	17.5					70	15.0	12.0	0.92	4.8	
				85/71	16.0	12.5	18.6	0.84	19.0					80	14.6	11.2	1.02	4.2	
	4	5.4	2.3	75/63	14.2	11.8	16.8	0.83	17.1		4	5.8	2.5	60	15.8	13.2	0.82	5.6	
				80/67	15.2	12.2	17.7	0.82	18.5					70	15.4	12.4	0.92	4.9	
				85/71	16.2	12.6	18.8	0.81	19.9					80	14.9	11.6	1.03	4.3	
85	2	1.5	0.6	75/63	13.2	11.4	16.1	0.95	13.8	70	2	1.6	0.7	60	16.4	13.8	0.83	5.8	
				80/67	14.1	11.7	17.1	0.95	14.8					70	16.0	13.0	0.93	5.1	
				85/71	15.0	12.2	18.0	0.95	15.7					80	15.6	12.2	1.03	4.4	
	3	3.1	1.3	75/63	13.6	11.5	16.4	0.91	15.0		3	3.3	1.4	60	17.3	14.6	0.83	6.1	
				80/67	14.5	11.9	17.3	0.90	16.0					70	16.8	13.8	0.94	5.3	
				85/71	15.5	12.3	18.3	0.90	17.2					80	16.3	12.9	1.04	4.6	
	4	5.3	2.3	75/63	13.7	11.6	16.5	0.88	15.5		4	5.6	2.4	60	17.8	15.1	0.83	6.3	
				80/67	14.7	12.0	17.5	0.88	16.7					70	17.2	14.2	0.94	5.4	
				85/71	15.7	12.4	18.5	0.87	18.0					80	16.7	13.3	1.05	4.7	
90	2	1.5	0.6	75/63	12.8	11.2	15.9	1.00	12.7	80	2	1.6	0.7	60	18.2	15.6	0.83	6.4	
				80/67	13.7	11.6	16.8	1.01	13.6					70	17.8	14.7	0.94	5.6	
				85/71	14.6	12.0	17.7	1.01	14.5					80	17.3	13.8	1.05	4.8	
	3	3.1	1.3	75/63	13.1	11.3	16.1	0.96	13.6		3	3.2	1.4	60	19.2	16.6	0.83	6.8	
				80/67	14.1	11.7	17.1	0.96	14.7					70	18.7	15.6	0.94	5.9	
				85/71	15.0	12.2	18.0	0.95	15.7					80	18.1	14.7	1.05	5.0	
	4	5.2	2.3	75/63	13.3	11.4	16.2	0.94	14.2		4	5.4	2.3	60	19.8	17.1	0.83	7.0	
				80/67	14.3	11.8	17.2	0.93	15.3					70	19.2	16.2	0.94	6.0	
				85/71	15.3	12.2	18.2	0.93	16.5					80	18.6	15.1	1.06	5.2	
100	2	1.4	0.6	75/63	11.9	10.9	15.3	1.11	10.7	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	2	1.4	0.6	60	11.9	10.9	1.11	10.7	
				80/67	12.8	11.3	16.2	1.11	11.5					70	11.9	10.9	1.11	11.5	
				85/71	13.7	11.7	17.1	1.12	12.2					80	11.9	11.7	1.12	12.2	
	3	3	1.3	75/63	12.3	11.0	15.6	1.07	11.5		3	3	1.3	60	13.2	11.4	1.07	12.3	
				80/67	13.2	11.4	16.5	1.07	12.3					70	13.2	11.4	1.07	12.3	
				85/71	14.1	11.8	17.4	1.07	13.2					80	13.2	11.8	1.07	13.2	
	4	5	2.2	75/63	12.4	11.1	15.7	1.05	11.8		4	5	2.2	60	13.4	11.5	1.05	12.8	
				80/67	13.4	11.5	16.6	1.05	12.8					70	13.4	11.5	1.05	12.8	
				85/71	14.3	11.9	17.5	1.04	13.7										
110	2	1.4	0.6	75/63	11.1	10.5	14.8	1.22	9.1	► AHRI/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating. ► Tabulated unit performance does not include fan or pump power corrections required for AHRI/ISO standard performance ratings. ► Unit performance may be interpolated. Extrapolation is not allowed. ► Ratings below 40°F are with a methanol solution. ► Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time. ► Continuous research and development to improve our products may result in a change to the current design and specifications without notice.	2	1.4	0.6	60	11.9	10.9	1.23	9.7	
				85/71	12.7	11.4	16.5	1.23	10.3										
				75/63	11.4	10.6	15.0	1.18	9.7										
	3	2.9	1.3	80/67	12.2	11.1	15.9	1.18	10.3		3	2.9	1.3	85/71	13.1	11.5	16.8	1.19	11.0
				75/63	11.6	10.7	15.1	1.16	10.0										
				80/67	12.4	11.2	16.0	1.16	10.6										
	4	4.9	2.1	85/71	13.3	11.6	16.9	1.16	11.4		4	4.9	2.1	80/67	12.4	11.2	16.0	1.16	10.6
				75/63	11.6	10.7	15.1	1.16	10.0										
				85/71	13.3	11.6	16.9	1.16	11.4										

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BP018 (575 CFM) Capacity Data

COOLING										HEATING								
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP
50	2.5	3.2	1.4	75/63	20.2	15.2	23.3	0.95	21.2	30*	2.5	3.4	1.5	60	13.4	10.0	1.03	3.8
				80/67	21.5	15.6	24.6	0.93	23.1					70	13.0	9.4	1.08	3.5
				85/71	22.8	15.9	25.8	0.90	25.3					80	12.7	8.8	1.16	3.2
	4	7.4	3.2	75/63	20.8	15.4	23.9	0.95	21.8		4	7.9	3.4	60	14.0	10.5	1.05	3.9
				80/67	22.2	15.8	25.2	0.92	24.0					70	13.6	9.9	1.11	3.6
				85/71	23.5	16.2	26.5	0.89	26.4					80	13.2	9.3	1.18	3.3
	5	11.1	4.8	75/63	21.0	15.5	24.1	0.96	21.9		5	11.9	5.1	60	14.2	10.8	1.06	3.9
				80/67	22.4	15.9	25.4	0.93	24.2					70	13.9	10.1	1.12	3.7
				85/71	23.8	16.2	26.7	0.89	26.8					80	13.4	9.5	1.19	3.3
60	2.5	3.1	1.3	75/63	19.4	14.8	22.5	0.98	19.7	40*	2.5	3.3	1.4	60	15.3	11.7	1.09	4.1
				80/67	20.6	15.2	23.7	0.97	21.3					70	14.9	11.0	1.15	3.8
				85/71	21.9	15.6	24.9	0.95	23.0					80	14.5	10.4	1.23	3.5
	4	7.2	3.1	75/63	19.9	15.0	23.0	0.96	20.7		4	7.7	3.3	60	16.0	12.4	1.11	4.2
				80/67	21.2	15.4	24.3	0.94	22.6					70	15.6	11.7	1.17	3.9
				85/71	22.6	15.8	25.5	0.91	24.8					80	15.2	11.0	1.25	3.6
	5	10.7	4.6	75/63	20.1	15.1	23.2	0.96	21.0		5	11.4	5.0	60	16.3	12.7	1.11	4.3
				80/67	21.4	15.5	24.5	0.93	23.0					70	15.9	11.9	1.17	4.0
				85/71	22.8	15.9	25.7	0.90	25.2					80	15.4	11.2	1.26	3.6
70	2.5	3	1.3	75/63	18.5	14.4	21.8	1.04	17.7	50	2.5	3.2	1.4	60	17.3	13.5	1.13	4.5
				80/67	19.7	14.8	23.0	1.04	19.0					70	16.8	12.8	1.20	4.1
				85/71	20.9	15.2	24.2	1.03	20.3					80	16.5	12.1	1.29	3.8
	4	7	3.0	75/63	19.0	14.6	22.2	1.01	18.9		4	7.4	3.2	60	18.2	14.4	1.14	4.7
				80/67	20.3	15.0	23.4	0.99	20.5					70	17.7	13.6	1.21	4.3
				85/71	21.5	15.4	24.7	0.98	22.0					80	17.3	12.8	1.31	3.9
	5	10.4	4.5	75/63	19.2	14.7	22.3	0.99	19.3		5	11.1	4.8	60	18.5	14.8	1.14	4.8
				80/67	20.5	15.1	23.6	0.98	21.0					70	18.0	13.9	1.22	4.3
				85/71	21.7	15.5	24.8	0.96	22.6					80	17.5	13.1	1.31	3.9
80	2.5	2.9	1.3	75/63	17.6	14.0	21.2	1.13	15.5	60	2.5	3.1	1.3	60	19.4	15.5	1.15	5.0
				80/67	18.7	14.4	22.3	1.14	16.5					70	18.9	14.7	1.23	4.5
				85/71	19.9	14.8	23.5	1.14	17.5					80	18.4	14.0	1.33	4.0
	4	6.7	2.9	75/63	18.1	14.2	21.5	1.08	16.7		4	7.1	3.1	60	20.4	16.6	1.15	5.2
				80/67	19.2	14.7	22.7	1.08	17.8					70	19.9	15.7	1.24	4.7
				85/71	20.5	15.0	23.9	1.07	19.1					80	19.4	14.8	1.35	4.2
	5	10.1	4.4	75/63	18.2	14.3	21.6	1.07	17.0		5	10.7	4.6	60	20.8	17.0	1.15	5.3
				80/67	19.4	14.7	22.8	1.06	18.3					70	20.3	16.1	1.24	4.8
				85/71	20.7	15.1	24.1	1.05	19.7					80	19.8	15.1	1.36	4.3
85	2.5	2.8	1.2	75/63	17.1	13.8	20.9	1.19	14.4	70	2.5	3.0	1.3	60	21.5	17.6	1.15	5.5
				80/67	18.2	14.2	22.0	1.19	15.3					70	21.0	16.8	1.25	4.9
				85/71	19.3	14.6	23.1	1.20	16.1					80	20.5	16.0	1.37	4.4
	4	6.6	2.9	75/63	17.6	14.0	21.2	1.13	15.5		4	6.9	3.0	60	22.7	18.9	1.16	5.8
				80/67	18.7	14.5	22.3	1.13	16.5					70	22.1	17.9	1.26	5.1
				85/71	19.9	14.8	23.5	1.13	17.6					80	21.6	17.0	1.39	4.6
	5	9.9	4.3	75/63	17.8	14.1	21.3	1.12	15.9		5	10.3	4.5	60	23.2	19.4	1.16	5.9
				80/67	18.9	14.5	22.4	1.11	17.0					70	22.6	18.4	1.27	5.2
				85/71	20.1	14.9	23.7	1.11	18.2					80	22.0	17.3	1.39	4.6
90	2.5	2.8	1.2	75/63	16.7	13.6	20.6	1.24	13.4	80	2.5	2.9	1.2	60	23.7	19.9	1.16	6.0
				80/67	17.7	14.1	21.7	1.25	14.1					70	23.2	18.9	1.28	5.3
				85/71	18.8	14.5	22.8	1.26	14.9					80	22.7	18.0	1.41	4.7
	4	6.5	2.8	75/63	17.1	13.8	20.9	1.19	14.4		4	6.7	2.9	60	25.1	21.3	1.16	6.3
				80/67	18.2	14.2	22.0	1.19	15.3					70	24.5	20.2	1.29	5.6
				85/71	19.4	14.7	23.2	1.19	16.3					80	23.9	19.1	1.44	4.9
	5	9.8	4.2	75/63	17.3	13.9	21.0	1.17	14.8		5	10.0	4.3	60	25.6	21.8	1.17	6.4
				80/67	18.4	14.3	22.1	1.17	15.7					70	25.0	20.7	1.30	5.6
				85/71	19.6	14.8	23.3	1.17	16.8					80	24.4	19.5	1.45	4.9
100	2.5	2.7	1.2	75/63	15.7	13.3	20.0	1.37	11.5	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	2.5	2.9	1.2	60	23.7	19.9	1.16	6.0
				80/67	16.8	13.7	21.1	1.38	12.2					70	23.2	18.9	1.28	5.3
				85/71	17.8	14.1	22.2	1.39	12.8					80	22.7	18.0	1.41	4.7
	4	6.3	2.7	75/63	16.2	13.4	20.3	1.31	12.3		4	6.7	2.9	60	25.1	21.3	1.16	6.3
				80/67	17.2	13.9	21.4	1.32	13.0					70	24.5	20.2	1.29	5.6
				85/71	18.4	14.3	22.5	1.32	13.9					80	23.9	19.1	1.44	4.9
	5	9.5	4.1	75/63	16.3	13.5	20.3	1.29	12.6		5	10.0	4.3	60	25.6	21.8	1.17	6.4
				80/67	17.4	13.9	21.4	1.30	13.4					70	25.0	20.7	1.30	5.6
				85/71	18.5	14.3	22.6	1.30	14.2									
110	2.5	2.6	1.1	75/63	14.8	12.9	19.5	1.49	9.9	Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	2.5	2.9	1.2	60	23.7	19.9	1.16	6.0
				80/67	15.8	13.3	20.5	1.51	10.4					70	23.2	18.9	1.28	5.3
				85/71	16.8	13.7	21.6	1.53	10.9					80	22.7	18.0	1.41	4.7
	4	6.1	2.6	75/63	15.2	13.0	19.7	1.44	10.5		4	6.7	2.9	60	25.1	21.3	1.16	6.3
				80/67	16.2	13.5	20.8	1.45	11.1					70	24.5	20.2	1.29	5.6
				85/71	17.3	14.0	21.9	1.47	11.8					80	23.9	19.1	1.44	4.9
	5	9.2	4.0	75/63	15.3	13.1	19.7	1.42	10.7		5	10.0	4.3	60	25.6	21.8	1.17	6.4
				80/67	16.4	13.5	20.9	1.44	11.4					70	25.0	20.7	1.30	5.6
				85/71	17.4	14.0	22.0	1.45	12.0									

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP024 (800 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	3	2.1	0.9	75/63	27.1	20.5	30.5	1.05	25.9	30*	3	2.2	1.0	60	18.2	13.6	1.38	3.9	
				80/67	28.8	21.0	32.3	1.06	27.3					70	17.8	12.8	1.53	3.4	
				85/71	30.6	21.6	34.1	1.06	28.8					80	17.6	11.9	1.71	3.0	
	4	3.6	1.6	75/63	27.6	20.8	30.8	0.98	28.2		4	3.8	1.6	60	18.7	14.1	1.38	3.9	
				80/67	29.4	21.3	32.7	0.98	30.0					70	18.3	13.2	1.54	3.5	
				85/71	31.2	21.8	34.6	0.98	31.8					80	18.1	12.3	1.71	3.1	
	6	7.4	3.2	75/63	28.1	21.0	31.1	0.92	30.8		6	7.8	3.4	60	19.3	14.7	1.39	4.1	
				80/67	30.0	21.5	33.0	0.91	33.1					70	18.9	13.8	1.55	3.6	
				85/71	31.9	22.1	34.9	0.90	35.5					80	18.6	12.8	1.72	3.2	
60	3	2.1	0.9	75/63	25.8	20.0	29.7	1.20	21.5	40*	3	2.2	0.9	60	20.7	16.0	1.41	4.3	
				80/67	27.5	20.5	31.5	1.21	22.7					70	20.3	15.1	1.57	3.8	
				85/71	29.2	21.1	33.3	1.22	23.9					80	20.0	14.2	1.74	3.4	
	4	3.5	1.5	75/63	26.3	20.2	30.0	1.14	23.1		4	3.6	1.6	60	21.3	16.6	1.41	4.4	
				80/67	28.1	20.7	31.9	1.14	24.6					70	21.0	15.7	1.58	3.9	
				85/71	29.9	21.3	33.7	1.15	26.1					80	20.6	14.8	1.76	3.4	
	6	7.2	3.1	75/63	26.8	20.4	30.4	1.08	24.9		6	7.5	3.3	60	22.1	17.4	1.42	4.5	
				80/67	28.7	21.0	32.2	1.08	26.7					70	21.7	16.4	1.59	4.0	
				85/71	30.5	21.6	34.0	1.07	28.5					80	21.3	15.4	1.77	3.5	
70	3	2	0.9	75/63	24.6	19.4	29.0	1.36	18.1	50	3	2.1	0.9	60	23.4	18.6	1.44	4.8	
				80/67	26.2	20.0	30.6	1.37	19.1					70	23.0	17.6	1.61	4.2	
				85/71	27.8	20.6	32.3	1.39	20.1					80	22.6	16.6	1.79	3.7	
	4	3.3	1.4	75/63	25.1	19.6	29.3	1.30	19.4		4	3.5	1.5	60	24.2	19.4	1.45	4.9	
				80/67	26.7	20.3	30.9	1.31	20.5					70	23.8	18.4	1.62	4.3	
				85/71	28.4	20.8	32.7	1.32	21.6					80	23.4	17.3	1.81	3.8	
	6	6.9	3.0	75/63	25.6	19.8	29.6	1.24	20.7		6	7.3	3.1	60	25.2	20.3	1.46	5.0	
				80/67	27.3	20.5	31.3	1.24	22.1					70	24.7	19.2	1.64	4.4	
				85/71	29.0	21.1	33.1	1.24	23.3					80	24.2	18.0	1.83	3.9	
80	3	1.9	0.8	75/63	23.3	18.9	28.2	1.53	15.3	60	3	2.0	0.9	60	26.3	21.3	1.48	5.2	
				80/67	24.8	19.5	29.7	1.54	16.1					70	25.8	20.3	1.66	4.6	
				85/71	26.4	20.1	31.4	1.56	17.0					80	25.4	19.2	1.85	4.0	
	4	3.2	1.4	75/63	23.8	19.1	28.4	1.46	16.3		4	3.4	1.5	60	27.3	22.3	1.50	5.3	
				80/67	25.3	19.7	30.1	1.48	17.2					70	26.8	21.2	1.67	4.7	
				85/71	27.0	20.3	31.8	1.49	18.2					80	26.3	20.0	1.87	4.1	
	6	6.7	2.9	75/63	24.2	19.3	28.7	1.41	17.2		6	7.0	3.0	60	28.5	23.4	1.51	5.5	
				80/67	25.9	19.9	30.4	1.41	18.4					70	27.9	22.2	1.69	4.8	
				85/71	27.6	20.5	32.2	1.42	19.5					80	27.3	21.0	1.88	4.2	
85	3	1.9	0.8	75/63	22.7	18.7	27.8	1.61	14.1	70	3	2.0	0.8	60	29.3	24.2	1.52	5.6	
				80/67	24.1	19.3	29.3	1.63	14.8					70	28.8	23.1	1.70	4.9	
				85/71	25.6	19.9	30.9	1.65	15.5					80	28.4	21.9	1.90	4.4	
	4	3.2	1.4	75/63	23.1	18.8	28.0	1.55	14.9		4	3.3	1.4	60	30.6	25.4	1.54	5.8	
				80/67	24.7	19.4	29.7	1.56	15.8					70	29.9	24.3	1.73	5.1	
				85/71	26.2	20.1	31.3	1.58	16.6					80	29.4	22.9	1.92	4.5	
	6	6.6	2.9	75/63	23.5	19.0	28.3	1.49	15.8		6	6.8	2.9	60	32.0	26.8	1.57	6.0	
				80/67	25.1	19.7	29.9	1.50	16.8					70	31.3	25.4	1.75	5.2	
				85/71	26.8	20.2	31.7	1.51	17.8					80	30.6	24.0	1.95	4.6	
90	3	1.9	0.8	75/63	22.0	18.4	27.4	1.71	12.9	80	3	1.9	0.8	60	32.5	27.2	1.58	6.0	
				80/67	23.5	19.0	29.0	1.72	13.7					70	31.9	26.0	1.76	5.3	
				85/71	24.9	19.6	30.5	1.74	14.3					80	31.4	24.7	1.97	4.7	
	4	3.1	1.3	75/63	22.5	18.6	27.7	1.64	13.7		4	3.2	1.4	60	33.9	28.6	1.60	6.2	
				80/67	23.9	19.2	29.2	1.66	14.5					70	33.3	27.3	1.79	5.4	
				85/71	25.5	19.7	30.9	1.67	15.3					80	32.6	25.9	2.00	4.8	
	6	6.5	2.8	75/63	22.9	18.7	27.9	1.59	14.5		6	6.6	2.8	60	35.5	30.4	1.64	6.3	
				80/67	24.4	19.3	29.5	1.59	15.3					70	34.8	28.6	1.83	5.6	
				85/71	26.0	20.0	31.2	1.60	16.2					80	34.0	27.1	2.04	4.9	
100	3	1.8	0.8	75/63	20.8	17.8	26.7	1.90	10.9	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	3	1.8	0.8	60	36.0	31.0	1.60	6.0	
				80/67	22.1	18.5	28.2	1.92	11.5					70	35.0	30.0	1.70	5.0	
				85/71	23.5	19.1	29.7	1.94	12.1					80	34.0	29.0	1.80	4.0	
	4	3	1.3	75/63	21.2	18.0	27.0	1.84	11.5		4	3	1.3	60	37.0	32.0	1.60	6.0	
				80/67	22.5	18.7	28.4	1.86	12.1					70	36.0	31.0	1.70	5.0	
				85/71	24.0	19.3	29.9	1.87	12.8					80	35.0	30.0	1.80	4.0	
	6	6.3	2.7	75/63	21.5	18.2	27.2	1.78	12.1		6	6.3	2.7	60	38.0	33.0	1.60	6.0	
				80/67	23.0	18.8	28.7	1.79	12.9					70	37.0	32.0	1.70	5.0	
				85/71	24.5	19.4	30.2	1.81	13.6					80	36.0	31.0	1.80	4.0	
110	3	1.8	0.8	75/63	19.4	17.3	26.1	2.13	9.2	Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	3	1.8	0.8	60	39.0	34.0	1.60	6.0	
				80/67	20.8	17.9	27.5	2.14	9.7					70	38.0	33.0	1.70	5.0	
				85/71	22.1	18.6	29.0	2.16	10.3					80	37.0	32.0	1.80	4.0	
	4	3	1.3	75/63	19.8	17.5	26.2	2.06	9.6		4	3	1.3	60	40.0	35.0	1.60	6.0	
				80/67	21.1	18.1	27.7	2.07	10.2					70	39.0	34.0	1.70	5.0	
				85/71	22.5	18.8	29.1	2.08	10.8					80	38.0	33.0	1.80	4.0	
	6	6.1	2.6	75/63	20.1	17.6	26.4	2.01	10.0		6	6.1	2.6	60	41.0	36.0	1.60	6.0	
				80/67	21.5	18.2	27.9	2.01	10.7					70	40.0	35.0	1.70	5.0	
				85/71	23.0	18.9	29.4	2.02	11.4					80	39.0	34.0	1.80	4.0	

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP030 (1000 CFM) Capacity Data

COOLING										HEATING								
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP
50	4	1.3	0.6	75/63	30.0	24.0	34.0	1.23	24.5	30*	4	1.3	0.6	60	19.8	15.0	1.43	4.1
				80/67	31.9	24.6	36.1	1.27	25.2					70	19.4	14.1	1.60	3.6
				85/71	33.8	25.4	38.1	1.31	25.8					80	19.0	13.0	1.78	3.1
	6	2.6	1.1	75/63	30.9	24.3	34.6	1.14	27.2		6	2.8	1.2	60	20.5	15.7	1.43	4.2
				80/67	32.8	25.0	36.7	1.17	28.1					70	20.0	14.6	1.60	3.7
				85/71	34.8	25.7	38.9	1.21	28.7					80	19.6	13.3	1.78	3.2
	8	4.4	1.9	75/63	31.3	24.5	34.9	1.09	28.8		8	4.7	2.0	60	21.0	16.1	1.43	4.3
				80/67	33.2	25.2	36.9	1.12	29.7					70	20.5	15.2	1.60	3.8
				85/71	35.3	25.9	39.2	1.16	30.5					80	19.8	14.0	1.78	3.2
60	4	1.2	0.5	75/63	28.7	23.4	33.1	1.38	20.8	40*	4	1.3	0.6	60	22.4	17.6	1.43	4.6
				80/67	30.4	24.2	35.0	1.42	21.5					70	21.8	16.5	1.60	4.0
				85/71	32.3	24.9	37.1	1.47	22.0					80	21.5	15.3	1.79	3.5
	6	2.5	1.1	75/63	29.5	23.7	33.7	1.29	22.9		6	2.7	1.2	60	23.4	18.5	1.43	4.8
				80/67	31.4	24.4	35.7	1.33	23.7					70	22.8	17.3	1.60	4.2
				85/71	33.2	25.2	37.7	1.37	24.3					80	22.3	16.2	1.79	3.6
	8	4.3	1.9	75/63	29.9	23.9	33.9	1.25	24.0		8	4.5	1.9	60	23.9	19.2	1.43	4.9
				80/67	31.7	24.7	35.9	1.28	24.9					70	23.3	17.8	1.60	4.3
				85/71	33.8	25.3	38.2	1.32	25.7					80	22.5	16.6	1.79	3.7
70	4	1.2	0.5	75/63	27.3	22.8	32.3	1.54	17.7	50	4	1.2	0.5	60	25.3	20.4	1.43	5.2
				80/67	29.0	23.6	34.1	1.58	18.4					70	24.9	19.3	1.61	4.5
				85/71	30.8	24.4	36.1	1.63	18.9					80	24.3	18.1	1.81	3.9
	6	2.5	1.1	75/63	28.0	23.1	32.7	1.46	19.3		6	2.6	1.1	60	26.5	21.6	1.44	5.4
				80/67	29.9	23.9	34.7	1.49	20.1					70	26.0	20.8	1.62	4.7
				85/71	31.7	24.7	36.7	1.53	20.7					80	25.6	19.6	1.82	4.1
	8	4.1	1.8	75/63	28.4	23.3	32.9	1.41	20.1		8	4.3	1.9	60	27.2	22.5	1.45	5.5
				80/67	30.3	24.0	35.0	1.44	21.0					70	26.5	20.8	1.63	4.8
				85/71	32.2	24.8	37.1	1.48	21.7					80	25.9	19.7	1.82	4.2
80	4	1.1	0.5	75/63	25.9	22.3	31.4	1.72	15.1	60	4	1.2	0.5	60	28.6	23.7	1.46	5.7
				80/67	27.6	23.0	33.2	1.76	15.7					70	27.9	22.2	1.64	5.0
				85/71	29.3	23.8	35.1	1.81	16.2					80	27.3	21.0	1.84	4.4
	6	2.4	1.0	75/63	26.6	22.6	31.8	1.63	16.3		6	2.5	1.1	60	30.1	25.1	1.48	5.9
				80/67	28.3	23.3	33.7	1.67	17.0					70	29.3	23.5	1.66	5.2
				85/71	30.2	24.0	35.7	1.71	17.7					80	28.8	22.5	1.86	4.5
	8	4	1.7	75/63	26.9	22.7	32.0	1.59	16.9		8	4.2	1.8	60	30.8	25.9	1.50	6.0
				80/67	28.7	23.4	34.0	1.62	17.7					70	30.0	24.3	1.67	5.2
				85/71	30.6	24.3	36.0	1.66	18.5					80	29.4	22.9	1.87	4.6
85	4	1.1	0.5	75/63	25.2	22.0	31.0	1.82	13.9	70	4	1.2	0.5	60	32.1	26.9	1.52	6.2
				80/67	26.8	22.8	32.8	1.85	14.5					70	31.2	25.4	1.70	5.4
				85/71	28.6	23.5	34.7	1.91	15.0					80	30.6	24.1	1.89	4.7
	6	2.3	1.0	75/63	25.9	22.2	31.4	1.73	15.0		6	2.4	1.0	60	33.7	28.4	1.55	6.4
				80/67	27.6	23.1	33.2	1.76	15.7					70	33.2	27.6	1.74	5.6
				85/71	29.4	23.8	35.2	1.80	16.3					80	32.2	25.5	1.93	4.9
	8	3.9	1.7	75/63	26.2	22.4	31.6	1.68	15.6		8	4.1	1.8	60	34.8	29.6	1.58	6.4
				80/67	27.9	23.2	33.4	1.71	16.3					70	34.1	28.5	1.77	5.7
				85/71	29.8	23.9	35.4	1.75	17.0					80	33.5	27.3	1.97	5.0
90	4	1.1	0.5	75/63	24.5	21.7	30.5	1.92	12.8	80	4	1.1	0.5	60	35.8	30.4	1.60	6.5
				80/67	26.1	22.5	32.3	1.96	13.4					70	34.9	28.7	1.79	5.7
				85/71	27.8	23.3	34.2	2.00	13.9					80	34.2	27.3	1.99	5.0
	6	2.3	1.0	75/63	25.2	21.9	31.0	1.83	13.8		6	2.3	1.0	60	37.7	32.1	1.67	6.6
				80/67	26.8	22.8	32.7	1.86	14.4					70	36.9	30.5	1.86	5.8
				85/71	28.5	23.6	34.6	1.90	15.0					80	36.1	29.0	2.06	5.1
	8	3.9	1.7	75/63	25.5	22.1	31.2	1.78	14.3		8	3.9	1.7	60	39.2	33.4	1.72	6.7
				80/67	27.2	22.9	33.0	1.81	15.0					70	38.5	32.1	1.91	5.9
				85/71	29.0	23.6	34.9	1.85	15.7					80	37.7	31.3	2.12	5.2
100	4	1.1	0.5	75/63	23.0	21.1	29.7	2.14	10.8	* Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	4	1.1	0.5	60	33.2	27.6	1.74	5.6
				80/67	24.6	22.0	31.5	2.17	11.3					70	32.2	25.5	1.93	4.9
				85/71	26.2	22.8	33.2	2.22	11.8					80	31.2	24.1	2.12	4.2
	6	2.2	1.0	75/63	23.6	21.4	30.1	2.04	11.6		6	2.2	1.0	60	34.8	29.6	1.58	6.4
				80/67	25.3	22.1	31.9	2.08	12.2					70	33.2	27.6	1.74	5.6
				85/71	26.9	23.0	33.7	2.12	12.7					80	32.2	25.5	1.93	4.9
	8	3.7	1.6	75/63	23.9	21.5	30.2	2.00	12.0		8	3.7	1.6	60	36.1	30.5	1.86	5.8
				80/67	25.6	22.3	32.1	2.03	12.6					70	34.9	28.7	1.79	5.7
				85/71	27.3	23.2	33.9	2.07	13.2									
110	4	1	0.4	75/63	21.5	20.5	29.0	2.39	9.0	▶ Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	4	1	0.4	60	32.1	26.9	1.52	6.2
				80/67	23.0	21.4	30.7	2.42	9.5					70	31.2	25.4	1.70	5.4
				85/71	24.6	22.2	32.4	2.45	10.0					80	30.6	24.1	1.89	4.7
	6	2.2	1.0	75/63	22.1	20.8	29.3	2.29	9.7		6	2.2	1.0	60	33.7	28.4	1.55	6.4
				80/67	23.6	21.6	31.0	2.32	10.2					70	33.2	27.6	1.74	5.6
				85/71	25.3	22.5	32.8	2.35	10.8					80	32.2	25.5	1.93	4.9
	8	3.6	1.6	75/63	22.4	20.8	29.5	2.25	10.0		8	3.6	1.6	60	34.8	29.6	1.58	6.4
				80/67	23.9	21.7	31.1	2.27	10.5					70	34.1	28.5	1.77	5.7
				85/71	25.6	22.6	32.9	2.30	11.1					80	33.5	27.3	1.97	5.0

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP036 (1200 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	4.5	2.1	0.9	75/63	37.1	29.1	42.4	1.64	22.6	30*	4.5	1.5	0.7	60	26.3	20.0	1.90	4.1	
				80/67	39.4	30.0	44.8	1.66	23.7					70	25.7	18.8	2.09	3.6	
				85/71	42.0	30.7	47.5	1.68	24.9					80	25.2	17.4	2.31	3.2	
	6	3.4	1.5	75/63	37.8	29.4	42.9	1.56	24.2		6	2.6	1.1	60	27.0	20.4	1.91	4.2	
				80/67	40.3	30.3	45.4	1.58	25.6					70	26.7	19.4	2.10	3.7	
				85/71	42.9	31.2	48.1	1.59	27.0					80	26.0	18.4	2.32	3.3	
	9	7.2	3.1	75/63	38.6	29.7	43.4	1.48	26.1		9	5.3	2.3	60	28.3	21.7	1.92	4.3	
				80/67	41.2	30.6	46.1	1.48	27.7					70	27.8	20.5	2.12	3.8	
				85/71	43.9	31.4	48.9	1.49	29.4					80	27.1	19.4	2.34	3.4	
60	4.5	2	0.9	75/63	35.4	28.4	41.3	1.81	19.5	40*	4.5	1.5	0.6	60	29.5	23.1	1.94	4.5	
				80/67	37.8	29.2	43.7	1.84	20.6					70	29.2	21.5	2.14	4.0	
				85/71	40.1	30.2	46.1	1.86	21.6					80	28.3	20.6	2.36	3.5	
	6	3.3	1.4	75/63	36.2	28.7	41.8	1.74	20.8		6	2.5	1.1	60	30.8	24.6	1.96	4.6	
				80/67	38.5	29.6	44.2	1.75	22.0					70	30.6	22.6	2.16	4.2	
				85/71	41.0	30.5	46.8	1.77	23.2					80	29.7	21.6	2.37	3.7	
	9	6.9	3.0	75/63	36.9	29.0	42.3	1.66	22.3		9	5.1	2.2	60	32.1	25.3	1.97	4.8	
				80/67	39.5	29.9	44.9	1.67	23.7					70	31.4	24.3	2.17	4.2	
				85/71	42.0	30.8	47.5	1.67	25.1					80	31.1	22.8	2.39	3.8	
70	4.5	1.9	0.8	75/63	33.9	27.8	40.3	2.00	17.0	50	4.5	1.4	0.6	60	33.7	26.9	1.99	5.0	
				80/67	36.1	28.7	42.6	2.02	17.9					70	32.9	25.5	2.19	4.4	
				85/71	38.4	29.6	45.0	2.04	18.8					80	32.3	24.4	2.41	3.9	
	6	3.2	1.4	75/63	34.5	28.0	40.6	1.92	18.0		6	2.4	1.0	60	35.0	28.4	2.01	5.1	
				80/67	36.8	28.9	43.0	1.94	19.0					70	34.4	27.0	2.21	4.6	
				85/71	39.2	29.9	45.6	1.95	20.1					80	33.8	25.6	2.43	4.1	
	9	6.7	2.9	75/63	35.2	28.3	41.1	1.84	19.1		9	5.0	2.2	60	36.6	29.6	2.03	5.3	
				80/67	37.6	29.2	43.6	1.85	20.3					70	35.7	28.4	2.23	4.7	
				85/71	40.0	30.1	46.1	1.86	21.5					80	35.0	27.0	2.45	4.2	
80	4.5	1.9	0.8	75/63	32.1	27.0	39.1	2.19	14.6	60	4.5	1.4	0.6	60	37.8	30.8	2.04	5.4	
				80/67	34.2	28.0	41.3	2.22	15.4					70	36.9	29.7	2.24	4.8	
				85/71	36.4	28.9	43.7	2.24	16.2					80	36.3	28.0	2.47	4.3	
	6	3.1	1.3	75/63	32.7	27.3	39.5	2.11	15.4		6	2.3	1.0	60	39.6	32.6	2.06	5.6	
				80/67	35.0	28.3	41.9	2.13	16.4					70	38.7	30.8	2.26	5.0	
				85/71	37.3	29.2	44.2	2.15	17.3					80	37.8	29.7	2.49	4.5	
	9	6.5	2.8	75/63	33.5	27.4	40.0	2.04	16.4		9	4.8	2.1	60	41.6	34.6	2.08	5.9	
				80/67	35.8	28.5	42.4	2.05	17.4					70	40.9	33.3	2.29	5.2	
				85/71	38.2	29.4	44.9	2.06	18.5					80	39.7	31.0	2.52	4.6	
85	4.5	1.8	0.8	75/63	31.2	26.7	38.6	2.30	13.5	70	4.5	1.3	0.6	60	42.3	35.1	2.09	5.9	
				80/67	33.3	27.6	40.7	2.32	14.3					70	41.4	33.6	2.30	5.3	
				85/71	35.4	28.5	43.0	2.35	15.1					80	40.5	32.2	2.53	4.7	
	6	3.1	1.3	75/63	31.9	27.0	39.0	2.22	14.4		6	2.2	1.0	60	44.4	37.5	2.12	6.1	
				80/67	34.0	27.9	41.2	2.24	15.2					70	43.3	34.9	2.33	5.5	
				85/71	36.6	28.1	43.9	2.26	16.2					80	42.4	33.7	2.56	4.9	
	9	6.4	2.8	75/63	32.5	27.2	39.4	2.14	15.2		9	4.6	2.0	60	47.4	40.4	2.16	6.4	
				80/67	34.8	28.2	41.7	2.15	16.1					70	45.6	38.5	2.37	5.6	
				85/71	37.1	29.1	44.1	2.16	17.1					80	44.7	36.2	2.60	5.0	
90	4.5	1.8	0.8	75/63	30.3	26.3	38.0	2.41	12.5	80	4.5	1.3	0.6	60	47.0	39.6	2.16	6.4	
				80/67	32.4	27.3	40.1	2.44	13.3					70	46.2	38.1	2.37	5.7	
				85/71	34.6	28.2	42.4	2.46	14.1					80	45.3	36.4	2.61	5.1	
	6	3	1.3	75/63	31.0	26.6	38.4	2.33	13.3		6	2.2	0.9	60	49.1	41.8	2.19	6.6	
				80/67	33.1	27.5	40.7	2.35	14.1					70	48.1	40.4	2.41	5.9	
				85/71	35.2	28.5	42.8	2.37	14.8					80	47.1	38.8	2.65	5.2	
	9	6.3	2.7	75/63	31.6	26.9	38.8	2.25	14.0		9	4.5	1.9	60	52.8	45.3	2.24	6.9	
				80/67	33.8	27.8	41.0	2.26	14.9					70	51.4	43.3	2.46	6.1	
				85/71	35.8	28.7	43.2	2.28	15.7					80	49.7	40.1	2.69	5.4	
100	4.5	1.7	0.7	75/63	28.6	25.6	37.0	2.66	10.7	* Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	4.5	1.5	0.7	60	26.3	20.0	1.90	4.1	
				80/67	30.5	26.6	39.1	2.68	11.4					70	25.7	18.8	2.09	3.6	
				85/71	32.6	27.6	41.2	2.69	12.1					80	25.2	17.4	2.31	3.2	
	6	2.9	1.3	75/63	29.2	25.9	37.4	2.58	11.3		6	2.6	1.1	60	27.0	20.4	1.91	4.2	
				80/67	31.2	26.8	39.4	2.59	12.0					70	26.7	19.4	2.10	3.7	
				85/71	33.4	27.7	41.7	2.60	12.8					80	26.0	18.4	2.32	3.3	
	9	6.1	2.6	75/63	29.8	26.1	37.7	2.49	11.9		9	5.3	2.3	60	28.3	21.7	1.92	4.3	
				80/67	31.9	27.0	39.9	2.51	12.7					70	27.8	20.5	2.12	3.8	
				85/71	34.0	28.1	42.1	2.51	13.5	80				27.1	19.4	2.34	3.4		
110	4.5	1.7	0.7	75/63	26.8	24.2	36.2	2.94	9.1	▶ Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	4.5	1.5	0.6	60	29.5	23.1	1.94	4.5	
				80/67	28.7	25.9	38.1	2.95	9.7					70	29.2	21.5	2.14	4.0	
				85/71	30.8	26.8	40.3	2.97	10.4					80	28.3	20.6	2.36	3.5	
	6	2.8	1.2	75/63	27.4	24.4	36.4	2.85	9.6		6	2.5	1.1	60	30.8	24.6	1.96	4.6	
				80/67	29.3	26.1	38.4	2.86	10.2					70	30.6	22.6	2.16	4.2	
				85/71	31.3	27.1	40.5	2.87	10.9					80	29.7	21.6	2.37	3.7	
	9	5.9	2.6	75/63	27.9	25.3	36.7	2.77	10.1		9	5.1	2.2	60	32.1	25.3	1.97	4.8	
				80/67	29.9	26.4	38.7	2.77	10.8					70	31.4	24.3	2.17	4.2	
				85/71	32.0	27.4	40.8	2.77	11.5	80				31.1	22.8	2.39	3.8		

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP042 (1400 CFM) Capacity Data

COOLING										HEATING								
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP
50	5	1.5	0.6	75/63	43.5	34.3	49.1	1.68	25.8	30*	5	1.9	0.8	60	26.2	20.3	1.87	4.1
				80/67	46.3	35.4	51.9	1.70	27.3					70	25.5	18.8	2.09	3.6
				85/71	49.2	36.3	55.0	1.72	28.6					80	25.0	17.5	2.33	3.1
	8	3.5	1.5	75/63	45.0	35.0	50.1	1.53	29.4		8	4.3	1.9	60	27.6	21.6	1.89	4.3
				80/67	48.1	36.0	53.2	1.54	31.3					70	26.9	20.2	2.11	3.7
				85/71	51.0	37.0	56.2	1.54	33.2					80	26.3	18.8	2.35	3.3
	11	6.2	2.7	75/63	45.8	35.2	50.7	1.46	31.4		11	7.7	3.3	60	28.4	22.4	1.90	4.4
				80/67	48.8	36.4	53.7	1.45	33.6					70	27.7	20.9	2.11	3.8
				85/71	52.0	37.4	56.9	1.45	35.9					80	27.0	19.4	2.35	3.4
60	5	1.4	0.6	75/63	41.6	33.4	47.8	1.88	22.1	40*	5	1.8	0.8	60	29.9	23.7	1.91	4.6
				80/67	44.3	34.5	50.6	1.90	23.3					70	29.2	21.9	2.12	4.0
				85/71	47.1	35.5	53.4	1.92	24.5					80	28.8	20.9	2.37	3.6
	8	3.4	1.5	75/63	43.0	34.0	48.8	1.74	24.7		8	4.2	1.8	60	31.7	25.1	1.92	4.8
				80/67	45.9	35.1	51.7	1.74	26.3					70	30.8	23.8	2.15	4.2
				85/71	48.9	36.1	54.7	1.75	27.9					80	30.3	22.2	2.39	3.7
	11	6	2.6	75/63	43.7	34.3	49.3	1.67	26.2		11	7.4	3.2	60	32.8	26.3	1.94	5.0
				80/67	46.6	35.5	52.2	1.67	27.9					70	31.7	24.9	2.16	4.3
				85/71	49.7	36.5	55.3	1.67	29.7					80	31.0	23.3	2.40	3.8
70	5	1.4	0.6	75/63	39.5	32.7	46.3	2.08	19.0	50	5	1.7	0.7	60	33.9	27.4	1.95	5.1
				80/67	42.1	33.8	49.0	2.10	20.0					70	33.3	26.0	2.17	4.5
				85/71	44.9	34.7	51.9	2.13	21.1					80	32.3	24.1	2.42	3.9
	8	3.3	1.4	75/63	40.9	33.2	47.3	1.95	21.0		8	4.0	1.7	60	36.1	29.7	1.97	5.4
				80/67	43.6	34.3	50.1	1.95	22.3					70	35.1	27.4	2.20	4.7
				85/71	46.5	35.4	53.0	1.97	23.7					80	34.3	26.3	2.44	4.1
	11	5.8	2.5	75/63	41.5	33.5	47.7	1.88	22.1		11	7.1	3.1	60	37.2	30.7	1.99	5.5
				80/67	44.4	34.5	50.7	1.89	23.6					70	36.5	29.4	2.21	4.8
				85/71	47.3	35.7	53.6	1.89	25.0					80	35.4	27.5	2.46	4.2
80	5	1.4	0.6	75/63	37.5	31.8	45.0	2.31	16.3	60	5	1.7	0.7	60	38.2	31.6	2.00	5.6
				80/67	40.0	32.9	47.6	2.33	17.2					70	37.4	30.0	2.23	4.9
				85/71	42.5	34.0	50.2	2.35	18.1					80	36.7	28.7	2.47	4.3
	8	3.2	1.4	75/63	38.8	32.4	45.8	2.16	17.9		8	3.9	1.7	60	41.3	35.1	2.04	5.9
				80/67	41.5	33.4	48.6	2.18	19.1					70	40.1	33.2	2.26	5.2
				85/71	44.2	34.5	51.4	2.19	20.2					80	38.6	30.6	2.50	4.5
	11	5.6	2.4	75/63	39.4	32.6	46.2	2.10	18.8		11	6.9	3.0	60	42.5	35.7	2.05	6.1
				80/67	42.1	33.8	49.0	2.11	20.0					70	41.0	33.8	2.27	5.3
				85/71	45.0	34.7	52.0	2.12	21.3					80	40.1	32.1	2.52	4.7
85	5	1.3	0.6	75/63	36.4	31.4	44.3	2.42	15.0	70	5	1.6	0.7	60	43.0	36.1	2.06	6.1
				80/67	39.0	32.5	46.9	2.44	16.0					70	41.7	34.6	2.29	5.3
				85/71	41.4	33.6	49.4	2.47	16.8					80	41.1	32.8	2.53	4.8
	8	3.1	1.3	75/63	37.8	31.8	45.2	2.28	16.6		8	3.8	1.6	60	46.5	39.0	2.10	6.5
				80/67	40.3	33.0	47.8	2.29	17.6					70	45.5	37.8	2.33	5.7
				85/71	43.0	34.2	50.5	2.30	18.7					80	44.3	36.0	2.58	5.0
	11	5.5	2.4	75/63	38.3	32.2	45.5	2.22	17.3		11	6.7	2.9	60	48.1	40.8	2.12	6.6
				80/67	41.0	33.2	48.3	2.22	18.4					70	46.1	40.0	2.36	5.7
				85/71	43.7	34.4	51.0	2.23	19.6					80	45.2	37.0	2.60	5.1
90	5	1.3	0.6	75/63	35.5	30.9	43.7	2.55	13.9	80	5	1.6	0.7	60	47.9	40.8	2.12	6.6
				80/67	37.8	32.2	46.1	2.57	14.7					70	46.9	38.9	2.36	5.8
				85/71	40.2	33.3	48.7	2.59	15.5					80	45.9	37.1	2.61	5.2
	8	3.1	1.3	75/63	36.6	31.5	44.4	2.40	15.2		8	3.6	1.6	60	52.6	44.6	2.18	7.1
				80/67	39.2	32.7	47.0	2.41	16.2					70	47.9	42.5	2.37	5.9
				85/71	41.8	33.8	49.7	2.43	17.2					80	48.9	40.6	2.67	5.4
	11	5.4	2.3	75/63	37.2	31.7	44.8	2.34	15.9		11	6.5	2.8	60	53.9	48.1	2.22	7.1
				80/67	39.8	32.9	47.4	2.34	17.0					70	52.7	45.1	2.45	6.3
				85/71	42.5	34.0	50.2	2.35	18.1					80	51.3	42.3	2.71	5.6
100	5	1.3	0.6	75/63	33.4	30.2	42.4	2.81	11.9	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	5	1.3	0.6	60	53.9	48.1	2.22	7.1
				80/67	35.6	31.3	44.8	2.84	12.6					70	52.7	45.1	2.45	6.3
				85/71	38.0	32.5	47.3	2.86	13.3					80	51.3	42.3	2.71	5.6
	8	3	1.3	75/63	34.5	30.5	43.1	2.67	12.9		8	3	1.3	60	53.9	48.1	2.22	7.1
				80/67	36.9	31.8	45.5	2.68	13.8					70	52.7	45.1	2.45	6.3
				85/71	39.4	33.0	48.2	2.69	14.6					80	51.3	42.3	2.71	5.6
	11	5.3	2.3	75/63	34.9	30.8	43.3	2.61	13.4		11	5.3	2.3	60	53.9	48.1	2.22	7.1
				80/67	37.5	31.9	46.0	2.61	14.4					70	52.7	45.1	2.45	6.3
				85/71	40.1	33.2	48.6	2.62	15.3									
110	5	1.2	0.5	75/63	31.3	29.3	41.3	3.11	10.1	▶ AHRI/ISO13256-1 certified performance is rated at entering air conditions of 80.6°F DB and 66.2°F WB in cooling and 68°F DB in heating. ▶ Tabulated unit performance does not include fan or pump power corrections required for AHRI/ISO standard performance ratings. ▶ Unit performance may be interpolated. Extrapolation is not allowed. ▶ Ratings below 40°F are with a methanol solution. ▶ Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time. ▶ Continuous research and development to improve our products may result in a change to the current design and specifications without notice.	5	1.2	0.5	60	53.9	48.1	2.22	7.1
				80/67	33.5	30.6	43.6	3.14	10.7					70	52.7	45.1	2.45	6.3
				85/71	35.4	31.6	45.6	3.16	11.2					80	51.3	42.3	2.71	5.6
	8	2.9	1.3	75/63	32.3	29.7	41.8	2.96	10.9		8	2.9	1.3	60	53.9	48.1	2.22	7.1
				80/67	34.7	30.9	44.3	2.98	11.7					70	52.7	45.1	2.45	6.3
				85/71	37.0	32.1	46.8	2.99	12.4					80	51.3	42.3	2.71	5.6
	11	5.1	2.2	75/63	32.8	29.9	42.2	2.90	11.3		11	5.1	2.2	60	53.9	48.1	2.22	7.1
				80/67	35.2	31.1	44.6	2.91	12.1					70	52.7	45.1	2.45	6.3
				85/71	37.6	32.3	47.1	2.92	12.9									

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BOSCH

BP048 (1600 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	6	3.6	1.6	75/63	49.9	39.2	56.9	2.14	23.3	30*	6	2.6	1.1	60	32.7	24.6	2.41	4.0	
				80/67	53.3	40.3	60.2	2.13	25.1					70	32.1	23.1	2.66	3.5	
				85/71	56.6	41.4	63.6	2.10	26.9					80	31.5	21.8	2.95	3.1	
	8	6	2.6	75/63	50.9	39.6	57.6	2.04	25.0		8	4.3	1.9	60	33.8	25.6	2.43	4.1	
				80/67	54.4	40.7	61.1	2.01	27.0					70	33.1	24.0	2.68	3.6	
				85/71	57.9	41.9	64.5	1.98	29.2					80	32.6	22.7	2.97	3.2	
	12	12.4	5.4	75/63	52.1	40.0	58.5	1.94	26.9		12	9.0	3.9	60	35.3	26.8	2.45	4.2	
				80/67	55.6	41.3	61.9	1.90	29.2					70	34.3	25.4	2.70	3.7	
				85/71	59.3	42.4	65.5	1.86	31.9					80	33.8	23.9	3.00	3.3	
60	6	3.4	1.5	75/63	47.8	38.2	55.5	2.37	20.1	40*	6	2.5	1.1	60	37.2	28.8	2.48	4.4	
				80/67	50.9	39.5	58.6	2.36	21.5					70	36.5	27.4	2.74	3.9	
				85/71	54.2	40.5	61.9	2.35	23.1					80	35.9	25.9	3.04	3.5	
	8	5.8	2.5	75/63	48.8	38.6	56.2	2.26	21.6		8	4.2	1.8	60	38.4	29.9	2.49	4.5	
				80/67	52.1	39.8	59.5	2.24	23.2					70	37.7	28.5	2.76	4.0	
				85/71	55.4	41.1	62.7	2.22	25.0					80	37.3	26.6	3.07	3.6	
	12	12	5.2	75/63	49.8	39.1	56.8	2.15	23.1		12	8.6	3.7	60	40.0	31.6	2.52	4.7	
				80/67	53.2	40.4	60.2	2.12	25.1					70	39.2	29.9	2.79	4.1	
				85/71	56.7	41.6	63.6	2.09	27.2					80	38.6	28.3	3.10	3.7	
70	6	3.3	1.4	75/63	45.5	37.3	54.0	2.64	17.3	50	6	2.4	1.0	60	42.1	33.5	2.55	4.8	
				80/67	48.6	38.5	57.2	2.63	18.5					70	41.3	31.8	2.83	4.3	
				85/71	51.6	39.8	60.2	2.62	19.7					80	41.0	30.2	3.13	3.8	
	8	5.6	2.4	75/63	46.5	37.7	54.6	2.52	18.5		8	4.0	1.7	60	43.8	35.1	2.57	5.0	
				80/67	49.6	39.0	57.8	2.50	19.8					70	42.9	33.3	2.85	4.4	
				85/71	52.9	40.2	61.0	2.48	21.3					80	42.2	31.6	3.16	3.9	
	12	11.6	5.0	75/63	47.5	38.1	55.3	2.40	19.8		12	8.3	3.6	60	45.6	37.3	2.60	5.1	
				80/67	50.7	39.4	58.5	2.38	21.3					70	44.6	35.3	2.88	4.5	
				85/71	54.1	40.7	61.8	2.35	23.1					80	43.8	33.2	3.19	4.0	
80	6	3.2	1.4	75/63	43.3	36.4	52.7	2.93	14.8	60	6	2.3	1.0	60	47.7	38.7	2.62	5.3	
				80/67	46.2	37.7	55.6	2.93	15.8					70	47.0	36.9	2.91	4.7	
				85/71	49.2	38.8	58.7	2.93	16.8					80	45.9	34.9	3.22	4.2	
	8	5.4	2.3	75/63	44.2	36.7	53.3	2.81	15.7		8	3.9	1.7	60	49.5	40.6	2.64	5.5	
				80/67	47.2	38.1	56.2	2.80	16.9					70	48.5	38.6	2.93	4.8	
				85/71	50.4	39.2	59.4	2.78	18.1					80	47.7	37.0	3.26	4.3	
	12	11.2	4.8	75/63	45.2	37.1	53.8	2.69	16.8		12	8.1	3.5	60	51.8	42.8	2.67	5.7	
				80/67	48.3	38.4	57.0	2.67	18.1					70	50.6	41.0	2.96	5.0	
				85/71	51.5	39.7	60.1	2.64	19.5					80	49.9	38.3	3.28	4.5	
85	6	3.2	1.4	75/63	42.1	36.0	52.0	3.09	13.6	70	6	2.2	1.0	60	53.1	44.1	2.68	5.8	
				80/67	45.0	37.1	55.0	3.09	14.5					70	52.1	42.1	2.98	5.1	
				85/71	47.8	38.5	57.8	3.09	15.5					80	51.3	40.1	3.31	4.5	
	8	5.3	2.3	75/63	43.0	36.3	52.5	2.97	14.5		8	3.8	1.6	60	55.5	46.4	2.70	6.0	
				80/67	45.9	37.6	55.5	2.96	15.5					70	54.8	44.9	3.01	5.3	
				85/71	49.0	38.8	58.5	2.94	16.6					80	53.4	42.2	3.34	4.7	
	12	11	4.8	75/63	44.0	36.6	53.1	2.85	15.5		12	7.8	3.4	60	58.2	49.1	2.72	6.3	
				80/67	47.0	37.9	56.2	2.83	16.6					70	57.0	46.8	3.03	5.5	
				85/71	50.1	39.2	59.2	2.80	17.9					80	55.8	44.4	3.37	4.9	
90	6	3.1	1.3	75/63	41.0	35.4	51.5	3.26	12.6	80	6	2.2	0.9	60	58.9	49.8	2.73	6.3	
				80/67	43.7	36.8	54.2	3.26	13.4					70	57.9	47.6	3.04	5.6	
				85/71	46.7	37.9	57.2	3.26	14.3					80	56.9	45.4	3.38	4.9	
	8	5.2	2.3	75/63	41.8	35.8	51.9	3.14	13.3		8	3.6	1.6	60	61.7	52.5	2.74	6.6	
				80/67	44.7	37.1	54.8	3.13	14.3					70	60.5	50.2	3.06	5.8	
				85/71	47.6	38.4	57.7	3.11	15.3					80	59.5	47.8	3.41	5.1	
	12	10.8	4.7	75/63	42.8	36.1	52.4	3.01	14.2		12	7.5	3.3	60	64.9	55.6	2.76	6.9	
				80/67	45.7	37.5	55.3	2.99	15.3					70	63.3	53.0	3.09	6.0	
				85/71	48.8	38.6	58.5	2.97	16.4					80	61.9	50.4	3.44	5.3	
100	6	3	1.3	75/63	38.7	34.4	50.3	3.63	10.7	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	6	2.1	0.9	60	68.9	60.8	2.77	7.3	
				80/67	41.3	35.8	52.9	3.63	11.4					70	67.7	59.6	3.08	6.6	
				85/71	43.9	37.1	55.6	3.63	12.1					80	66.5	57.4	3.40	5.9	
	8	5.1	2.2	75/63	39.5	34.8	50.7	3.50	11.3		8	3.5	1.5	60	71.9	63.8	2.78	7.6	
				80/67	42.1	36.2	53.3	3.49	12.1					70	70.7	62.6	3.09	6.9	
				85/71	44.9	37.4	56.1	3.48	12.9					80	69.5	60.4	3.41	6.2	
	12	10.5	4.5	75/63	40.3	35.1	51.1	3.38	11.9		12	7.1	3.1	60	76.9	68.8	2.79	7.9	
				80/67	43.1	36.5	53.9	3.36	12.8					70	75.7	67.6	3.10	7.2	
				85/71	46.0	37.8	56.8	3.34	13.8										
110	6	2.9	1.3	75/63	36.2	33.5	49.0	4.02	9.0	Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	6	2.0	0.8	60	81.9	73.8	2.80	8.3	
				80/67	38.7	34.9	51.6	4.03	9.6					70	80.7	72.6	3.11	7.6	
				85/71	41.1	36.2	54.1	4.03	10.2					80	79.5	70.4	3.43	6.9	
	8	4.9	2.1	75/63	37.0	33.8	49.4	3.90	9.5		8	3.8	1.6	60	86.9	78.8	2.81	8.7	
				80/67	39.5	35.2	51.9	3.89	10.1					70	85.7	77.6	3.12	8.0	
				85/71	42.2	36.5	54.7	3.88	10.9					80	84.5	75.4	3.45	7.3	
	12	10.2	4.4	75/63	37.7	34.2	49.7	3.77	10.0		12	7.5	3.3	60	92.9	84.8	2.82	9.1	
				80/67	40.3	35.5	52.3	3.76	10.7					70	91.7	83.6	3.13	8.4	
				85/71	43.1	36.9	55.2	3.74	11.5	80				90.5	81.4	3.46	7.7		

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



BP060 (2000 CFM) Capacity Data

COOLING										HEATING									
Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (db/wb) F	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER	Entering Fluid Temp (F)	Water Flow (GPM)	Pressure Drop (FOH)	Pressure Drop (PSI)	Entering Air Temp (F)	Total Capacity (MBTUH)	Heat of Absorption (MBTUH)	Power Input (kW)	COP	
50	7.5	2.8	1.2	75/63	64.4	50.2	74.5	3.07	20.9	30*	7.5	3.8	1.7	60	44.2	33.8	3.16	4.1	
				80/67	68.9	51.7	79.2	3.11	22.2					70	43.6	31.9	3.47	3.7	
				85/71	73.0	53.5	83.5	3.14	23.3					80	43.2	30.2	3.82	3.3	
	10	4.8	2.1	75/63	65.9	50.5	75.6	2.95	22.3		10	6.4	2.8	60	46.0	35.0	3.18	4.2	
				80/67	70.2	52.5	80.1	2.97	23.6					70	45.1	33.3	3.50	3.8	
				85/71	74.7	54.3	84.7	3.00	24.9					80	44.5	31.5	3.85	3.4	
	15	9.9	4.3	75/63	67.2	51.4	76.6	2.83	23.8		15	13.4	5.8	60	47.6	36.8	3.21	4.3	
				80/67	71.8	53.1	81.3	2.85	25.2					70	46.8	34.9	3.52	3.9	
				85/71	76.6	54.8	86.2	2.86	26.8					80	46.1	33.0	3.87	3.5	
60	7.5	2.7	1.2	75/63	61.9	49.0	72.9	3.34	18.5	40*	7.5	3.7	1.6	60	49.8	39.0	3.24	4.5	
				80/67	66.0	50.8	77.1	3.37	19.6					70	49.1	37.2	3.56	4.0	
				85/71	70.2	52.6	81.4	3.40	20.7					80	48.9	35.6	3.92	3.7	
	10	4.6	2.0	75/63	63.0	49.6	73.6	3.21	19.7		10	6.2	2.7	60	52.4	41.1	3.27	4.7	
				80/67	67.3	51.3	77.9	3.23	20.9					70	51.5	39.1	3.59	4.2	
				85/71	71.7	53.4	82.5	3.25	22.1					80	50.6	37.2	3.95	3.8	
	15	9.6	4.2	75/63	64.3	50.0	74.5	3.08	20.9		15	12.9	5.6	60	54.5	43.0	3.30	4.8	
				80/67	68.8	51.8	79.1	3.09	22.3					70	53.5	41.3	3.63	4.3	
				85/71	73.5	53.7	83.8	3.10	23.7					80	52.6	38.9	3.99	3.9	
70	7.5	2.7	1.2	75/63	59.2	47.6	71.1	3.65	16.2	50	7.5	3.6	1.5	60	56.8	45.6	3.34	5.0	
				80/67	62.5	49.5	74.5	3.67	17.0					70	56.0	43.6	3.66	4.5	
				85/71	63.1	51.1	75.1	3.66	17.3					80	55.2	41.4	4.03	4.0	
	10	4.5	1.9	75/63	60.3	48.4	71.8	3.50	17.2		10	6.0	2.6	60	58.9	47.6	3.37	5.1	
				80/67	64.5	50.1	76.1	3.52	18.3					70	58.4	46.1	3.70	4.6	
				85/71	68.3	52.8	79.9	3.53	19.3					80	57.3	43.5	4.07	4.1	
	15	9.2	4.0	75/63	61.6	48.9	72.7	3.37	18.3		15	12.5	5.4	60	62.5	50.6	3.41	5.4	
				80/67	66.0	50.5	77.2	3.38	19.6					70	61.0	48.2	3.74	4.8	
				85/71	70.4	52.6	81.6	3.38	20.8					80	59.8	45.8	4.11	4.3	
80	7.5	2.6	1.1	75/63	53.4	46.4	66.3	3.97	13.5	60	7.5	3.5	1.5	60	64.0	52.4	3.43	5.5	
				80/67	55.0	47.6	67.9	3.97	13.9					70	62.9	50.2	3.77	4.9	
				85/71	66.4	52.4	79.9	4.09	16.3					80	62.0	47.9	4.15	4.4	
	10	4.3	1.9	75/63	58.3	48.4	71.0	3.87	15.1		10	5.8	2.5	60	67.0	55.3	3.48	5.6	
				80/67	62.8	50.7	75.6	3.89	16.1					70	65.7	52.9	3.81	5.0	
				85/71	61.1	50.4	73.7	3.84	15.9					80	64.6	50.3	4.19	4.5	
	15	8.9	3.9	75/63	58.6	47.5	70.7	3.70	15.9		15	12.0	5.2	60	70.7	58.5	3.52	5.9	
				80/67	62.8	49.2	75.0	3.71	16.9					70	69.2	55.6	3.86	5.2	
				85/71	68.8	53.0	81.8	3.91	17.6					80	67.6	53.0	4.25	4.7	
85	7.5	2.5	1.1	75/63	53.1	44.0	66.7	4.17	12.7	70	7.5	3.3	1.4	60	71.5	59.8	3.54	5.9	
				80/67	54.8	47.5	68.4	4.18	13.1					70	70.2	57.4	3.89	5.3	
				85/71	64.7	52.1	78.8	4.28	15.1					80	69.2	54.7	4.28	4.7	
	10	4.2	1.8	75/63	51.9	45.8	64.8	4.00	13.0		10	5.6	2.4	60	74.7	62.8	3.59	6.1	
				80/67	61.2	50.1	74.6	4.08	15.0					70	73.1	60.0	3.93	5.4	
				85/71	66.2	52.4	79.8	4.12	16.1					80	72.2	57.5	4.33	4.9	
	15	8.8	3.8	75/63	55.9	44.3	68.6	3.89	14.4		15	11.7	5.0	60	79.4	66.8	3.65	6.4	
				80/67	59.4	46.9	72.1	3.88	15.3					70	77.6	63.6	4.00	5.7	
				85/71	66.9	52.3	80.4	4.08	16.4					80	75.7	60.7	4.39	5.1	
90	7.5	2.5	1.1	75/63	51.7	43.3	65.9	4.38	11.8	80	7.5	3.2	1.4	60	79.5	67.3	3.65	6.4	
				80/67	55.6	44.2	70.0	4.41	12.6					70	78.0	64.6	4.01	5.7	
				85/71	62.8	51.0	77.6	4.48	14.0					80	76.6	61.9	4.41	5.1	
	10	4.2	1.8	75/63	52.7	43.9	66.5	4.23	12.5		10	5.4	2.4	60	83.7	71.5	3.71	6.6	
				80/67	56.5	45.5	70.4	4.24	13.3					70	81.9	68.5	4.07	5.9	
				85/71	64.3	51.9	78.5	4.31	14.9					80	80.2	65.1	4.47	5.3	
	15	8.7	3.8	75/63	53.8	44.3	67.1	4.08	13.2		15	11.3	4.9	60	87.8	74.2	3.77	6.8	
				80/67	55.8	47.9	69.1	4.06	13.7					70	85.5	70.9	4.13	6.1	
				85/71	65.1	51.5	79.2	4.27	15.3					80	84.1	68.8	4.55	5.4	
100	7.5	2.4	1.0	75/63	49.0	41.2	64.7	4.84	10.1	Extended Range - Antifreeze required for entering fluid temperature at or below 45 Degrees F.	7.5	3.1	1.3	60	91.5	79.5	3.59	7.5	
				80/67	52.0	43.2	67.9	4.86	10.7					70	90.0	77.0	3.95	6.8	
				85/71	51.8	47.3	67.6	4.86	10.7					80	88.5	74.5	4.31	6.1	
	10	4.1	1.8	75/63	48.2	44.3	63.3	4.66	10.3		10	5.1	2.3	60	94.5	82.5	3.69	8.1	
				80/67	52.0	45.8	67.3	4.68	11.1					70	93.0	80.0	4.05	7.4	
				85/71	60.4	50.4	76.1	4.76	12.7					80	91.5	77.5	4.41	6.7	
	15	8.4	3.6	75/63	50.1	43.6	64.8	4.52	11.1		15	10.1	4.5	60	100.5	88.5	3.89	9.1	
				80/67	53.0	46.6	67.7	4.51	11.7					70	99.0	86.0	4.25	8.4	
				85/71	54.4	48.1	69.1	4.50	12.1					80	97.5	83.5	4.61	7.7	
110	7.5	2.3	1.0	75/63	44.8	41.4	62.1	5.36	8.4	Due to variations in installation, actual performance may vary from the tabulated data. Performance contained herein are as a result of extensive testing by FHP and are not express warranties between the parties and may be changed at any time.	7.5	2.9	1.2	60	107.5	95.5	4.05	10.0	
				80/67	47.1	44.2	64.5	5.38	8.8					70	106.0	94.0	4.41	9.3	
				85/71	48.7	46.2	66.3	5.39	9.0					80	104.5	92.5	4.77	8.6	
	10	3.9	1.7	75/63	44.7	42.9	61.5	5.19	8.6		10	4.9	2.1	60	114.5	102.5	4.25	10.8	
				80/67	48.4	44.4	65.3	5.21	9.3					70	113.0	101.0	4.61	10.1	
				85/71	56.8	49.1	74.1	5.28	10.8					80	111.5	99.5	4.97	9.4	
	15	8.2	3.5	75/63	49.3	44.7	66.1	5.16	9.6		15	11.9	4.7	60	122.5	110.5	4.51	11.7	
				80/67	49.9	44.1	66.3	5.04	9.9					70	121.0	109.0	4.87	11.0	
				85/71	57.7	49.4	74.7	5.17	11.2					80	119.5	107.5	5.23	10.3	

GreenSource i Series Model BP
Residential Geothermal Heat Pumps



Antifreeze Correction							
Antifreeze Type	Antifreeze %	Cooling			Heating		WPD Correction Factor EWT 30 °F
		EWT 90 Deg.F			EWT 30 Deg. F		
		Total Cap.	Sens. Cap	Power	Htg. Cap	Power	
Water	0	1.000	1.000	1.000	1.000	1.000	1.000
Propylene Glycol	5	0.997	0.997	1.004	0.989	0.997	1.06
	10	0.994	0.994	1.006	0.986	0.995	1.125
	15	0.990	0.990	1.009	0.978	0.988	1.19
	25	0.983	0.983	1.016	0.960	0.979	1.3
Methanol	5	0.997	0.997	1.003	0.990	0.997	1.06
	10	0.996	0.996	1.005	0.979	0.993	1.1
	15	0.994	0.994	1.008	0.970	0.990	1.14
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.16
	10	0.996	0.996	1.004	0.960	0.988	1.23
	15	0.992	0.992	1.006	0.944	0.983	1.280
	25	0.986	0.986	1.009	0.917	0.974	1.4
Ethylene Glycol	5	0.997	0.997	1.003	0.993	0.998	1.06
	10	0.995	0.995	1.004	0.986	0.996	1.12
	15	0.992	0.992	1.005	0.980	0.993	1.19
	25	0.988	0.988	1.009	0.970	0.990	1.33
	30	0.985	0.985	1.012	0.965	0.987	1.4

GreenSource i Series Model BP

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Casing Radiated Sound Power - Octave Band Sound Power Levels dB, re 10-12 Watts

Model	Load	Center Frequency - Hz								Overall (dBA)
		125	250	500	1000	2000	4000	8000	Overall	
BP007	Cooling Full	64	48	43	42	38	32	27	64	50
	Heating Full	63	58	44	44	40	34	28	64	53
	FAN Only	54	43	42	42	37	31	24	55	46*
BP009	Cooling Full	61	50	46	51	45	40	34	62	54
	Heating Full	62	53	46	51	45	40	34	63	54
	FAN Only	55	48	47	51	45	40	32	58	53
BP012	Cooling Full	66	58	51	51	45	41	35	67	56
	Heating Full	71	61	51	51	45	40	34	71	59
	FAN Only	61	56	51	51	45	39	33	63	55
BP015	Cooling Full	59	51	51	46	42	34	32	60	52
	Heating Full	63	56	57	55	51	45	40	66	59
	FAN Only	51	46	46	38	33	25	23	45	45
BP018	Cooling Full	71	62	53	49	47	45	41	72	59
	Heating Full	76	66	59	56	55	52	47	77	65
	FAN Only	50	48	49	42	35	30	24	54	48
BP024	Cooling Full	63	55	54	49	42	37	28	65	55
	Heating Full	71	56	54	50	44	41	32	72	58
	FAN Only	55	52	53	49	42	38	27	59	54
BP030	Cooling Full	67	58	56	52	45	38	28	68	58
	Heating Full	67	58	66	52	46	39	30	68	58
	FAN Only	58	55	56	52	45	38	26	62	56
BP036	Cooling Full	65	62	62	63	58	52	43	70	66
	Heating Full	67	63	63	64	59	52	44	71	67
	FAN Only	65	62	62	63	58	52	43	70	66
BP042	Cooling Full	71	58	57	55	46	46	39	71	60
	Heating Full	73	58	57	55	47	47	39	73	61
	FAN Only	56	55	57	55	46	46	37	62	59
BP048	Cooling Full	72	63	58	57	51	43	38	73	62
	Heating Full	73	63	58	57	52	44	37	74	62
	FAN Only	60	61	57	57	51	43	34	66	60
BP060	Cooling Full	63	61	59	57	53	48	39	67	61
	Heating Full	64	61	58	58	53	49	40	67	62
	FAN Only	59	60	58	57	53	48	39	65	61

i Tested according to AHRI-260 standard for ISO-13256
WLHP condition at rated water and air flow rate

i Overall calculated using 125-8000 Hz octave bands.

GreenSource i Series Model BP

Residential Geothermal Heat Pumps



Ducted Discharge Sound Power - Octave Band Sound Power Levels dB, re 10-12 Watts										
Model	Load	Center Frequency - Hz								Overall (dBA)
		125	250	500	1000	2000	4000	8000	Overall	
BP007	Cooling Full	60	47	51	57	51	45	37	63	59
	Heating Full	61	50	51	53	47	46	39	63	56
	FAN Only	58	50	51	56	47	46	39	61	58
BP009	Cooling Full	62	52	53	55	50	51	47	64	59
	Heating Full	63	53	54	56	50	50	47	65	60
	FAN Only	63	53	54	55	49	51	47	65	59
BP012	Cooling Full	71	61	58	56	51	51	48	72	62
	Heating Full	71	62	59	58	50	51	48	72	63
	FAN Only	71	61	61	70	59	51	48	74	71
BP015	Cooling Full	66	50	56	53	47	46	37	67	58
	Heating Full	68	53	57	58	48	46	38	69	61
	FAN Only	61	49	57	57	48	46	37	64	60
BP018	Cooling Full	69	52	59	57	50	48	39	70	61
	Heating Full	70	53	60	57	49	48	39	71	62
	FAN Only	62	51	59	58	49	48	39	65	61
BP024	Cooling Full	70	55	63	52	51	54	43	71	62
	Heating Full	73	56	63	54	50	53	42	74	63
	FAN Only	66	55	63	52	50	53	43	68	62
BP030	Cooling Full	70	55	63	52	51	54	43	71	62
	Heating Full	73	56	63	54	50	53	42	74	63
	FAN Only	66	55	63	52	50	53	43	68	62
BP036	Cooling Full	78	64	71	60	59	62	55	79	71
	Heating Full	79	67	71	61	58	61	55	80	71
	FAN Only	79	66	71	60	58	61	55	80	71
BP042	Cooling Full	73	58	66	57	56	56	50	74	66
	Heating Full	75	59	66	56	56	56	49	76	66
	FAN Only	73	59	66	57	56	56	49	74	66
BP048	Cooling Full	75	62	66	59	58	61	53	76	68
	Heating Full	75	62	66	58	56	60	52	76	67
	FAN Only	76	63	66	59	57	60	53	77	68
BP060	Cooling Full	78	65	66	60	57	60	54	79	69
	Heating Full	76	64	67	60	54	59	52	77	68
	FAN Only	77	65	66	60	55	60	53	77	68

i Tested according to AHRI-260 standard for ISO-13256
WLHP condition at rated water and air flow rate

i Overall calculated using 125-8000 Hz octave bands.

Greensource i Series Model BP Residential Geothermal Heat Pumps



WARNING:
These electric heaters can only be installed in factory default blower configuration only.

Field Installed Accessory - Duct Mounted Electric Heaters 208/230V

Kilowatt Heater - 208/230V	Part Number	Nominal Dimensions (inches)	Duct Flange Connection (Inches)	Min. CFM Required
Duct Heater 5 kW	7738000004	14 x 14	13.75 x 13.75	600
Duct Heater 5 kW	7738000005	14 x 16	13.75 x 13.75	600
Duct Heater 5 kW	7738000006	16 x 16	15.75 x 15.75	600
Duct Heater 5 kW	7738000007	18 x 18	17.75 x 17.75	600
Duct Heater 10 kW	7738000008	14 x 16	13.75 x 13.75	800
Duct Heater 10 kW	7738000009	16 x 16	17.75 x 17.75	800
Duct Heater 10 kW	7738000010	18 x 18	17.75 x 17.75	800
Duct Heater 15 kW	7738000011	18 x 18	17.75 x 17.75	1400
Duct Heater 20 kW	7738000012	18 x 18	17.75 x 17.75	2000



It is recommended to use a seven (7) conductor cable for thermostat interface.



It is required for the duct mounted heater to have an independent power supply.



In fiber glass duct systems, a metal sleeve MUST be used to insert the support the heater.

Field Installed Option - Swivel Connector Kit (two connectors per package)

Order Number	Type & Size	BP007			BP009			BP012			BP015			BP018			BP024			BP030			BP036			BP042			BP048			BP060		
		VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF			
		Where Used																																
7738003200	Male 3/4" NPT	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●																
7738003201	Male 1" NPT																		●	●	●	●	●	●	●	●	●	●	●	●	●	●		

GreenSource i Series Model BP Residential Geothermal Heat Pumps



Field Installed Option - Communicating Thermostats



Model/Order Number:	7738002993	
Description:	TSTBT4H2CP - M - KA	
Features:	4 stages of heat, 2nd stage latching, Low temp alert, High temp alert, Inefficient heating and cooling operation alerts	
Application:	Communicating Thermostat Kit	
Warranty:	5 Year Limited Warranty	
Communicating Thermostat Accessories		
Model/Order Number:	7738002978	7738002979
Description:	ZONB - OTS - - - M - - A	ZONB - LAS - - - M - - A
Features:	Wired Outdoor Temperature Sensor	Leaving Air and/or Return Air Sensor

Field Installed Option - 24V Conventional Thermostat



Model/Order Number:	7738002984	
Description:	TSTBM3H2CPH6W - A	
Features:	Smoke detection, Semi-wireless, Filter change/clean notification, Programmable fan	
Application:	If smoke is detected in ducting, unit will stop, preventing circulation of smoke to other rooms.	
Warranty:	5 Year Limited Warranty	
24V Conventional Thermostat Accessories		
Model/Order Number:	7738002985	7738002986
Description:	TSTBM - RRS - - TW - A	TSTBM - OTS - - TW - A
Features:	Wireless Remote Room Sensor Thermostat	Wireless Outdoor Temperature Sensor