

# GreenSource iSeries Model BC Geothermal Heat Pump

Engineering  
Submittal  
Sheet



# BOSCH

## Overview and Certifications



Made in  
the U.S.A.



## Standard Features, Factory Installed Options, and Field Installed Accessories

### Standard Features

- ▶ Available in 4 sizes:  $\frac{3}{4}$ , 1, 1  $\frac{1}{4}$ , 1  $\frac{1}{2}$  tons
- ▶ Cabinet is white pre-painted galvanized steel with slope top
- ▶ Discharge grill is black pre-painted galvanized steel for slope top
- ▶ Filter – washable, aluminum mesh filter
- ▶ Coated evaporator coil
- ▶ Thermal expansion valve
- ▶ Permanent split capacitor motor; both motor and fan are accessible by removing the cabinet
- ▶ Service connection
- ▶ R-410a refrigerant
- ▶ Stainless steel drain pan
- ▶ Copper coaxial heat exchanger
- ▶ Extended range
- ▶ Rotary compressor – isolated compressor compartment thermally and acoustically insulated
- ▶ Sub-base is black pre-painted galvanized steel
- ▶ Electronic circuit board with on board alerts
- ▶ Factory ordered either left hand or right hand water connections
- ▶ Remote thermostat capability
- ▶ High and low pressure switch protection
- ▶ Low voltage/brownout protection
- ▶ Condensate overflow protection\*
- ▶ Anti-short cycle delay
- ▶ Random start
- ▶ Evaporator freeze protection\*
- ▶ Coaxial heat exchanger/condenser freeze protection\*
- ▶ Standard warranty
  - 1 year parts limited warranty
  - 5 year compressor limited warranty

\* when ordered to accommodate a remote mounted thermostat

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

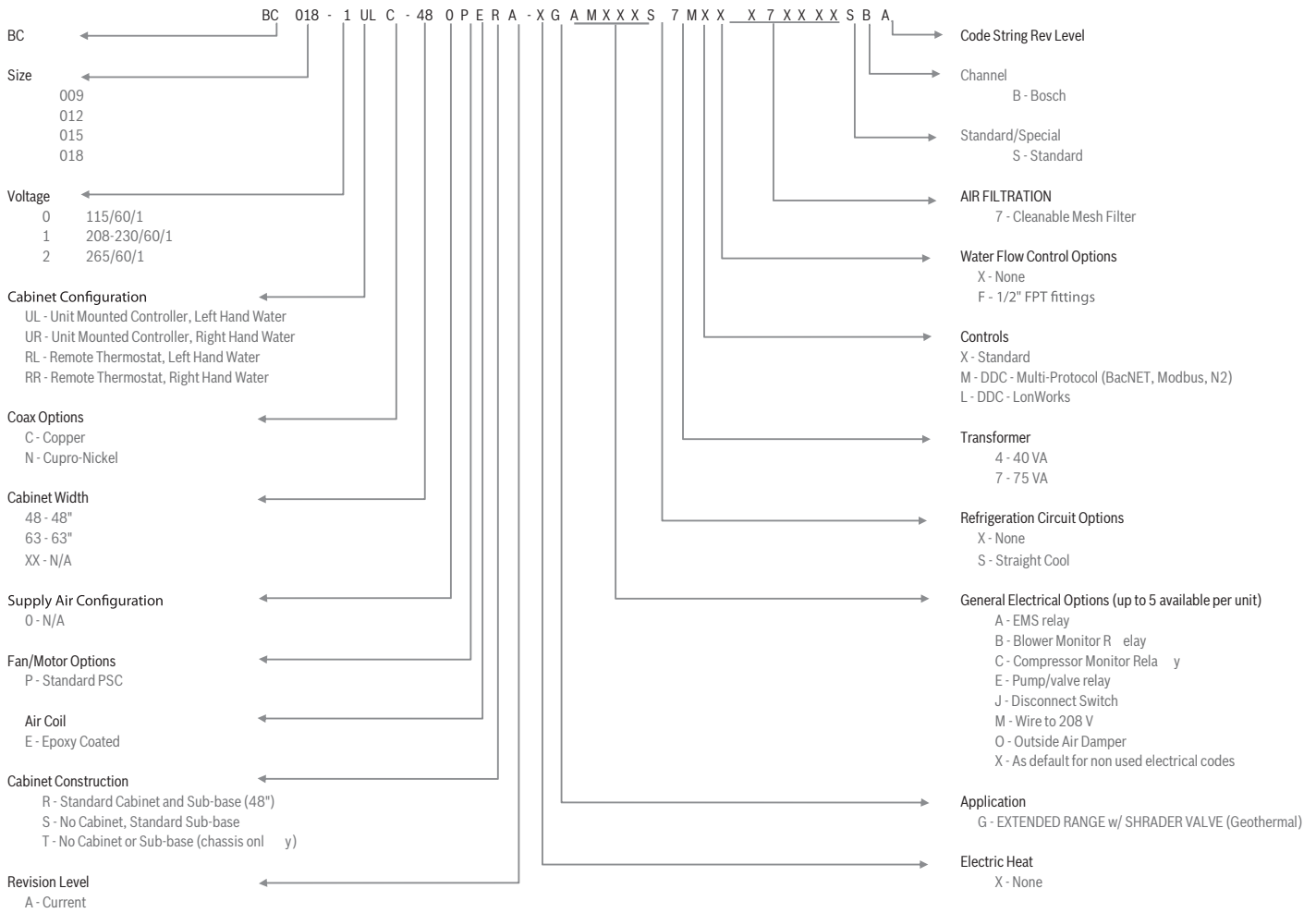
## Factory Installed Options

- ▶ Cupro-nickel coaxial heat exchanger
- ▶ CUC solid state console unit controller
- ▶ Fresh air damper
- ▶ DDC Controls
- ▶ 1/2" FPT water connections

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## Model Nomenclature



# Greensource iSeries Model BC

## Geothermal Heat Pump



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### AHRI/ANSI 13256-1 Capacity and Efficiency Data

Models	Water Flow (GPM)	Water Loop				Ground Water				Ground Loop			
		Cooling (86°F)		Heating (68°F)		Cooling (59°F)		Heating (50°F)		Cooling (77°F)		Heating (32°F)	
		Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	COP
<b>BC009</b>	2.0	8700	13.4	9500	4.5	10300	21.5	8000	3.9	9100	15.5	6000	3.2
<b>BC012</b>	3.0	11700	12.7	12600	4.3	13700	19.8	11000	3.8	12200	15.0	8500	3.2
<b>BC015</b>	4.0	14300	12.9	16700	4.5	16900	21.4	13900	3.8	14700	14.9	11000	3.2
<b>BC018</b>	5.0	16900	12.2	20800	4.3	20100	18.2	17500	3.6	17900	14.2	13900	3.2

### Physical Data

Description	Unit	Value			
		BC009	BC012	BC015	BC018
Compressor Type (Qty 1)	—	Rotary	Rotary	Rotary	Rotary
Refrigeration Charge	Oz	20	20	30	32
Max Water Working Pressure	PSIG/kPa	400/3100	400/3100	400/3100	400/3100
Number of Refrigeration Circuits	—	1	1	1	1
<b>Evaporator Coil</b>					
Coil Type	—	Tube-Fin	Tube-Fin	Tube-Fin	Tube-Fin
Air Coil Dimensions	H x L	10x27	10x27	10x27	10x27
Row(s)	—	2	2	3	3
<b>Motor &amp; Blower</b>					
Fan Motor Type/Speeds	—	PSC/2	PSC/2	PSC/2	PSC/2
Fan Motor	HP	1/10	1/4	1/4	1/4
Blower Wheel Size	Dia. x W	5.5 x 8 (2)	5.5 x 8 (2)	5.5 x 8 (2)	5.5 x 8 (2)
<b>Water Connection</b>					
Type	—	Tube / FPT Option	Tube / FPT Option	Tube / FPT Option	Tube / FPT Option
Size	—	5/8" / 1/2"	5/8" / 1/2"	5/8" / 1/2"	5/8" / 1/2"
Water Coil Type	—	Coaxial	Coaxial	Coaxial	Coaxial
Coaxial Coil Volume (gal)	gal	0.08	0.08	0.16	0.16
<b>Cabinet</b>					
Standard Filter - 1/2" Washable Aluminum (H x L)	H x L	7 x 31-1/4 x 3/8	7 x 31-1/4 x 3/8	7 x 31-1/4 x 3/8	7 x 31-1/4 x 3/8
Weight - Operating	lbs	131	138	144	144
Weight - Shipping	lbs	151	158	164	164

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

\* antifreeze solution is required at these fluid temperatures.

Electrical Data - PSC Motor												
Model	Voltage Code	Voltage/Phase/Hz	Voltage Min/Max	Compressor			Motor	Total Unit PSC Motor		Compressor Service		
				QTY	RLA	LRA	FLA	Min Circuit Amps	Max Fuse/HACR	Cold Winding Resistance (Ω)		Run Capacitor (µF/V)
										Single Phase: S-C	Single Phase: R-C	
009	0	115/1/60	104/126	1	7.0	45.6	2.1	10.9	15	3.48	0.71	35/240
	1	208-230/1/60	197/253	1	3.4	22.2	0.9	5.2	15	7.35	2.95	15/370
	2	265-277/1/60	239/291	1	2.9	18.8	0.7	4.3	15	10.74	4.27	10/440
012	0	115/1/60	104/126	1	9.6	58.4	1.3	13.3	20	3.15	0.58	35/370
	1	208-230/1/60	197/253	1	4.6	27.9	0.8	6.6	15	5.90	2.30	20/370
	2	265-277/1/60	239/291	1	3.8	22.2	0.8	5.6	15	8.70	3.47	15/440
015	0	115/1/60	104/126	1	12.7	63.0	1.3	17.2	25	N/A	N/A	40/370
	1	208-230/1/60	197/253	1	5.6	29.0	0.8	7.8	15	5.45	2.31	25/440
	2	265-277/1/60	239/291	1	4.6	20.0	0.8	6.6	15	7.39	3.58	15/440
018	1	208-230/1/60	197/253	1	7.4	33.0	0.8	10.1	15	3.05*	2.41*	35/370
	2	265-277/1/60	239/291	1	6.0	28.0	0.8	8.3	15	2.57*	3.26*	35/440

\* These values are reported at 167°F (75°C), not room temperature. All other resistance values must be measured with compressor at room temperature. Resistance value tolerance +/- 7%.

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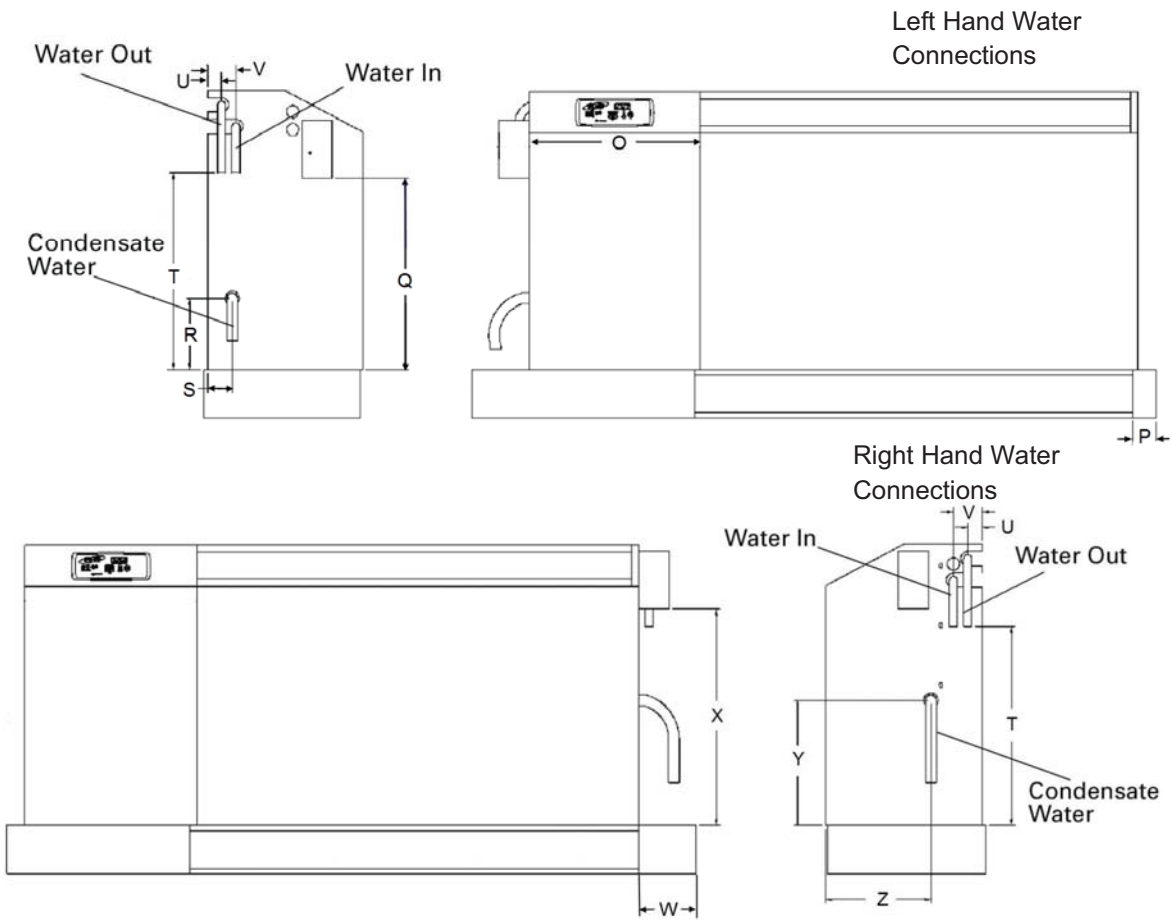
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Blower Performance PSC Motor																
Model	Fan Speed	Rated Airflow	Factory Setting	Available External Static Pressure (in. wc. Wet coil and filter included)												
				0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.10	1.20
009	High	350	X	300	-	-	-	-	-	-	-	-	-	-	-	-
	Low			275	-	-	-	-	-	-	-	-	-	-	-	-
012	High	450	X	520	-	-	-	-	-	-	-	-	-	-	-	
	Low			475	-	-	-	-	-	-	-	-	-	-	-	
015	High	550	X	500	-	-	-	-	-	-	-	-	-	-	-	
	Low			450	-	-	-	-	-	-	-	-	-	-	-	
018	High	600	X	520	-	-	-	-	-	-	-	-	-	-	-	
	Low			475	-	-	-	-	-	-	-	-	-	-	-	

Overall Dimensions							
Model	Unit of Measure	Standard Length			Extended Length		
		Width	Depth	Height	Width	Depth	Height
007	in	48.00	12.00	23.88	63.00	12.00	23.88
	cm	121.92	30.48	60.66	160.02	30.48	60.66
009	in	48.00	12.00	23.88	63.00	12.00	23.88
	cm	121.92	30.48	60.66	160.02	30.48	60.66
012	in	48.00	12.00	23.88	63.00	12.00	23.88
	cm	121.92	30.48	60.66	160.02	30.48	60.66
015	in	48.00	12.00	23.88	63.00	12.00	23.88
	cm	121.92	30.48	60.66	160.02	30.48	60.66

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

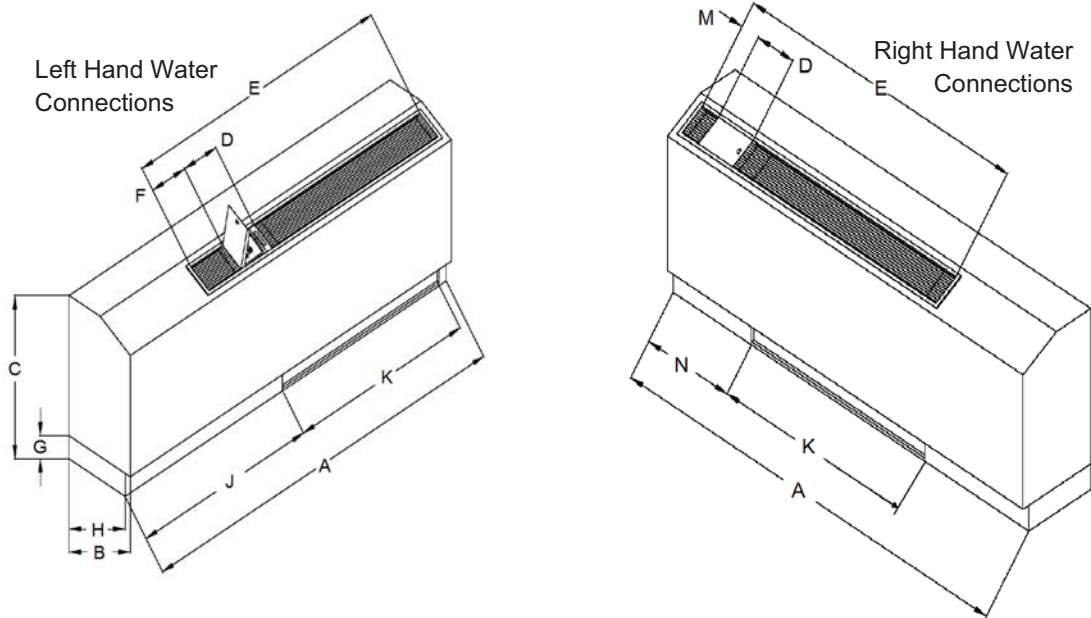
**BC Configurations and Connections**



# Greensource iSeries Model BC Geothermal Heat Pump



## BC Standard Length Dimensions and Connections



## BC-Standard Length Dimensions and Connections

Model	A	B	C	D	E	F	G	H	J	K	M	N	O	P
	Width	Depth	Height	Control Door Width	Discharge Grille Width	Grille Edge to Door, Left Hand	Clearance to Unit Bottom	Sub-Base Depth	Cabinet End to Return Air, Left Hand	Return Air Width	Grille Edge to Door, Right Hand	Cabinet End to Return Air, Right Hand	Control Panel Width	Return Air to Chassis End, Left Hand
BC009	48.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	12.87	30.75	2.87	12.87	12.00	1.63
BC012	48.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	12.87	30.75	2.87	12.87	12.00	1.63
BC015	48.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	12.87	30.75	2.87	12.87	12.00	1.63
BC018	48.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	12.87	30.75	2.87	12.87	12.00	1.63

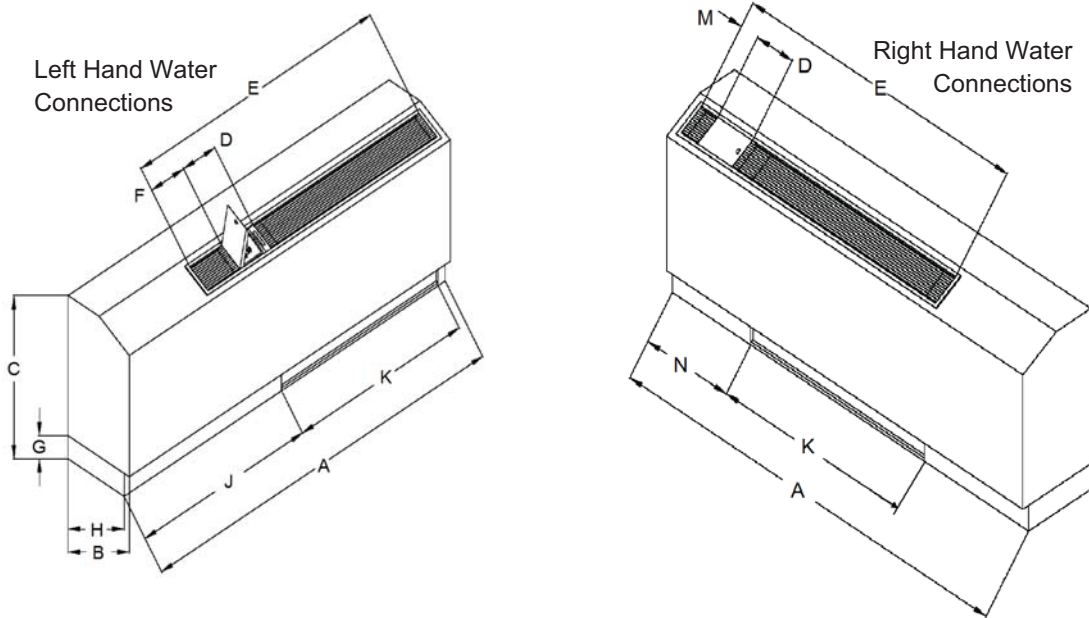
## BC-Standard Length Dimensions and Connections Continued

Model	Q	R	S	T	U	V	W	X	Y	Z	Condenser Water Connections	Permanent Washable Filter Size
	Power Switch Height from Sub-base, Left Hand	Condensate Height from Sub-base, Left Hand	Condensate Depth from Rear, Left Hand	Water Connection Height from Sub-base	Water Out Depth from Rear	Water In Depth from Rear	Return Air to Chassis End, Right Hand	Power Switch Height from Sub-base, Right Hand	Condensate Height from Sub-base, Right Hand	Condensate Depth from Front, Right Hand		
BC009	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37
BC012	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37
BC015	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37
BC018	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37

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**BC Extended Length Dimensions and Connections**



**BC-Extended Length Dimensions and Connections**

Model	A	B	C	D	E	F	G	H	J	K	M	N	O	P
	Width	Depth	Height	Control Door Width	Discharge Grille Width	Grille Edge to Door, Left Hand	Clearance to Unit Bottom	Sub-Base Depth	Cabinet End to Return Air, Left Hand	Return Air Width	Grille Edge to Door, Right Hand	Cabinet End to Return Air, Right Hand	Control Panel Width	Return Air to Chassis End, Left Hand
<b>BC009</b>	63.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	30.87	30.75	2.87	12.87	12.00	1.63
<b>BC012</b>	63.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	30.87	30.75	2.87	12.87	12.00	1.63
<b>BC015</b>	63.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	30.87	30.75	2.87	12.87	12.00	1.63
<b>BC018</b>	63.00	12.00	23.88	6.00	45.00	6.12	3.37	11.00	30.87	30.75	2.87	12.87	12.00	1.63

**BC-Extended Length Dimensions and Connections Continued**

Model	Q	R	S	T	U	V	W	X	Y	Z	Condenser Water Connections	Permanent Washable Filter Size
	Power Switch Height from Sub-base, Left Hand	Condensate Height from Sub-base, Left Hand	Condensate Depth from Rear, Left Hand	Water Connection Height from Sub-base	Water Out Depth from Rear	Water In Depth from Rear	Return Air to Chassis End, Right Hand	Power Switch Height from Sub-base, Right Hand	Condensate Height from Sub-base, Right Hand	Condensate Depth from Front, Right Hand		
<b>BC009</b>	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37
<b>BC012</b>	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37
<b>BC015</b>	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37
<b>BC018</b>	13.50	5.00	1.75	13.75	1.00	2.00	4.00	15.00	8.69	7.31	5/8" tube	30.12 x 7 x 0.37

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# Greensource iSeries Model BC

## Geothermal Heat Pump



BC009 Cooling Performance Data - (275 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	1	0.6 (1.5)	75/63	9.8	7.3	11.1	0.43	22.5
			80/67	10.4	7.6	11.8	0.43	24.1
			85/71	11.1	7.8	12.5	0.43	25.7
	2	2.3 (5.2)	75/63	10.3	7.5	11.5	0.37	28.0
			80/67	11.0	7.8	12.2	0.36	30.6
			85/71	11.8	8.0	13.0	0.35	33.6
	3	4.7 (10.8)	75/63	10.5	7.6	11.6	0.34	30.5
			80/67	11.2	7.9	12.4	0.33	33.7
			85/71	12.0	8.1	13.2	0.32	37.4
60	1	0.6 (1.4)	75/63	9.4	7.1	10.7	0.49	19.1
			80/67	10.0	7.4	11.4	0.49	20.3
			85/71	10.6	7.6	12.1	0.49	21.6
	2	2.2 (5)	75/63	9.9	7.3	11.1	0.43	23.1
			80/67	10.5	7.6	11.9	0.42	25.0
			85/71	11.2	7.8	12.6	0.41	27.1
	3	4.5 (10.5)	75/63	10.0	7.4	11.3	0.41	24.7
			80/67	10.7	7.7	12.0	0.40	27.1
			85/71	11.5	7.9	12.8	0.39	29.7
70	1	0.6 (1.4)	75/63	8.9	6.9	10.4	0.55	16.3
			80/67	9.5	7.2	11.0	0.55	17.3
			85/71	10.1	7.4	11.7	0.55	18.3
	2	2.1 (4.9)	75/63	9.4	7.1	10.8	0.49	19.2
			80/67	10.0	7.4	11.5	0.48	20.7
			85/71	10.7	7.7	12.2	0.48	22.3
	3	4.4 (10.1)	75/63	9.5	7.2	10.9	0.47	20.4
			80/67	10.2	7.5	11.6	0.46	22.2
			85/71	10.9	7.7	12.3	0.45	24.1
80	1	0.6 (1.4)	75/63	8.5	6.7	10.0	0.61	14.0
			80/67	9.0	7.0	10.6	0.61	14.8
			85/71	9.6	7.2	11.3	0.61	15.6
	2	2 (4.7)	75/63	8.9	6.9	10.4	0.55	16.2
			80/67	9.5	7.2	11.0	0.55	17.4
			85/71	10.2	7.5	11.7	0.55	18.6
	3	4.2 (9.8)	75/63	9.1	7.0	10.5	0.53	17.1
			80/67	9.7	7.3	11.2	0.53	18.4
			85/71	10.4	7.5	11.9	0.52	19.9
85	1	0.6 (1.3)	75/63	8.2	6.6	9.9	0.64	13.0
			80/67	8.8	6.9	10.5	0.64	13.7
			85/71	9.3	7.2	11.1	0.65	14.5
	2	2 (4.6)	75/63	8.7	6.8	10.2	0.58	14.9
			80/67	9.3	7.1	10.8	0.58	15.9
			85/71	9.9	7.3	11.5	0.58	17.1
	3	4.2 (9.6)	75/63	8.8	6.9	10.3	0.56	15.6
			80/67	9.4	7.2	11.0	0.56	16.8
			85/71	10.1	7.4	11.6	0.56	18.1
90	1	0.6 (1.3)	75/63	8.0	6.5	9.7	0.67	12.0
			80/67	8.5	6.8	10.3	0.67	12.7
			85/71	9.1	7.0	10.9	0.68	13.4
	2	2 (4.6)	75/63	8.4	6.7	10.0	0.61	13.7
			80/67	9.0	7.0	10.6	0.61	14.7
			85/71	9.6	7.2	11.3	0.61	15.6
	3	4.1 (9.5)	75/63	8.5	6.8	10.1	0.60	14.3
			80/67	9.2	7.0	10.8	0.59	15.4
			85/71	9.8	7.3	11.4	0.59	16.5
100	1	0.6 (1.3)	75/63	7.5	6.3	9.3	0.73	10.4
			80/67	8.0	6.6	9.9	0.73	10.9
			85/71	8.5	6.9	10.4	0.74	11.5
	2	1.9 (4.4)	75/63	7.9	6.5	9.6	0.68	11.6
			80/67	8.4	6.8	10.2	0.68	12.4
			85/71	9.0	7.0	10.8	0.68	13.2
	3	4 (9.2)	75/63	8.0	6.5	9.7	0.66	12.1
			80/67	8.6	6.8	10.3	0.66	13.0
			85/71	9.2	7.1	11.0	0.66	13.9
110	1	0.5 (1.2)	75/63	7.1	6.2	8.9	0.79	8.9
			80/67	7.5	6.4	9.5	0.80	9.4
			85/71	8.0	6.6	10.0	0.81	9.9
	2	1.9 (4.3)	75/63	7.4	6.3	9.2	0.75	9.9
			80/67	7.9	6.5	9.8	0.75	10.5
			85/71	8.4	6.8	10.4	0.75	11.2
	3	3.9 (8.9)	75/63	7.5	6.3	9.3	0.73	10.2
			80/67	8.0	6.6	9.9	0.74	10.9
			85/71	8.6	6.9	10.5	0.74	11.7

- Unit performance may be interpolated. Extrapolation is not allowed.

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BC009 Heating Performance Data - (275 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absp kBtu/hr	Power kW	COP
30	1	0.7 (1.6)	60	5.9	4.2	0.51	3.4
			70	5.9	4.0	0.55	3.1
			80	5.8	3.7	0.59	2.9
	2	2.4 (5.6)	60	6.5	4.8	0.52	3.7
			70	6.4	4.4	0.56	3.4
			80	6.2	4.1	0.60	3.0
	3	4.9 (11.6)	60	6.7	5.0	0.52	3.8
			70	6.6	4.6	0.56	3.4
			80	6.4	4.3	0.61	3.1
40	1	0.7 (1.6)	60	6.8	5.1	0.52	3.9
			70	6.7	4.8	0.57	3.5
			80	6.6	4.5	0.61	3.2
	2	2.3 (5.4)	60	7.5	5.8	0.53	4.1
			70	7.4	5.4	0.58	3.7
			80	7.2	5.0	0.63	3.4
	3	4.7 (11.2)	60	7.8	6.0	0.54	4.3
			70	7.6	5.7	0.59	3.8
			80	7.4	5.3	0.64	3.4
50	1	0.6 (1.5)	60	8.0	6.2	0.5	4.3
			70	7.9	5.9	0.6	3.9
			80	7.7	5.5	0.6	3.5
	2	2.3 (5.2)	60	8.8	7.0	0.6	4.6
			70	8.6	6.5	0.6	4.1
			80	8.4	6.1	0.7	3.7
	3	4.7 (10.8)	60	9.1	7.3	0.6	4.7
			70	8.9	6.8	0.6	4.2
			80	8.6	6.3	0.7	3.8
60	1	0.6 (1.4)	60	9.0	7.2	0.6	4.7
			70	8.9	6.8	0.6	4.2
			80	8.7	6.4	0.7	3.8
	2	2.2 (5)	60	9.9	8.1	0.6	5.0
			70	9.7	7.6	0.6	4.5
			80	9.5	7.1	0.7	4.0
	3	4.5 (10.5)	60	10.3	8.4	0.6	5.2
			70	10.0	7.9	0.6	4.6
			80	9.8	7.4	0.7	4.1
70	1	0.6 (1.4)	60	10.1	8.2	0.6	5.1
			70	9.9	7.8	0.6	4.5
			80	9.7	7.4	0.7	4.1
	2	2.1 (4.9)	60	11.1	9.2	0.6	5.5
			70	10.8	8.7	0.7	4.8
			80	10.6	8.2	0.7	4.3
	3	4.4 (10.1)	60	11.6	9.7	0.6	5.7
			70	11.2	9.1	0.7	5.0
			80	10.9	8.5	0.7	4.4
80	1	0.6 (1.4)	60	11.2	9.3	0.6	5.5
			70	10.9	8.8	0.7	4.9
			80	10.7	8.3	0.7	4.4
	2	2 (4.7)	60	12.4	10.5	0.6	6.0
			70	12.0	9.9	0.7	5.3
			80	11.7	9.3	0.7	4.7
	3	4.2 (9.8)	60	12.8	11.0	0.6	6.2
			70	12.5	10.3	0.7	5.4
			80	12.1	9.7	0.7	4.8

- Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC009 Cooling Performance Data - (300 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	1	0.6 (1.5)	75/63	9.9	7.6	11.3	0.5	21.8
			80/67	10.6	7.9	11.9	0.5	23.3
			85/71	11.2	8.2	12.6	0.5	24.8
	2	2.3 (5.2)	75/63	10.5	7.9	11.7	0.4	27.0
			80/67	11.2	8.1	12.4	0.4	29.5
			85/71	11.9	8.4	13.2	0.4	32.3
	3	4.7 (10.8)	75/63	10.7	7.9	11.8	0.4	29.4
			80/67	11.4	8.2	12.6	0.4	32.5
			85/71	12.2	8.5	13.4	0.3	35.9
60	1	0.6 (1.4)	75/63	9.5	7.4	10.9	0.5	18.6
			80/67	10.1	7.7	11.6	0.5	19.7
			85/71	10.7	7.9	12.2	0.5	21.0
	2	2.2 (5)	75/63	10.0	7.7	11.3	0.4	22.4
			80/67	10.7	7.9	12.0	0.4	24.2
			85/71	11.4	8.2	12.7	0.4	26.3
	3	4.5 (10.5)	75/63	10.2	7.7	11.4	0.4	24.0
			80/67	10.9	8.0	12.2	0.4	26.3
			85/71	11.6	8.3	12.9	0.4	28.7
70	1	0.6 (1.4)	75/63	9.0	7.2	10.5	0.6	15.9
			80/67	9.6	7.5	11.2	0.6	16.8
			85/71	10.2	7.8	11.8	0.6	17.8
	2	2.1 (4.9)	75/63	9.5	7.4	10.9	0.5	18.7
			80/67	10.2	7.7	11.6	0.5	20.2
			85/71	10.9	8.0	12.3	0.5	21.7
	3	4.4 (10.1)	75/63	9.7	7.5	11.1	0.5	19.9
			80/67	10.4	7.8	11.8	0.5	21.6
			85/71	11.1	8.1	12.5	0.5	23.5
80	1	0.6 (1.4)	75/63	8.6	7.0	10.2	0.6	13.7
			80/67	9.1	7.3	10.8	0.6	14.5
			85/71	9.7	7.6	11.4	0.6	15.3
	2	2 (4.7)	75/63	9.0	7.2	10.5	0.6	15.8
			80/67	9.6	7.5	11.2	0.6	16.9
			85/71	10.3	7.8	11.9	0.6	18.2
	3	4.2 (9.8)	75/63	9.2	7.3	10.7	0.6	16.7
			80/67	9.8	7.6	11.3	0.5	17.9
			85/71	10.5	7.8	12.0	0.5	19.4
85	1	0.6 (1.3)	75/63	8.3	7.0	10.0	0.7	12.7
			80/67	8.9	7.2	10.6	0.7	13.4
			85/71	9.4	7.5	11.2	0.7	14.2
	2	2 (4.6)	75/63	8.8	7.1	10.3	0.6	14.6
			80/67	9.4	7.4	11.0	0.6	15.6
			85/71	10.0	7.7	11.6	0.6	16.7
	3	4.2 (9.6)	75/63	8.9	7.2	10.4	0.6	15.3
			80/67	9.6	7.5	11.1	0.6	16.4
			85/71	10.2	7.8	11.8	0.6	17.7
90	1	0.6 (1.3)	75/63	8.1	6.9	9.8	0.7	11.8
			80/67	8.6	7.1	10.4	0.7	12.4
			85/71	9.2	7.4	11.0	0.7	13.1
	2	2 (4.6)	75/63	8.5	7.0	10.1	0.6	13.4
			80/67	9.1	7.3	10.8	0.6	14.3
			85/71	9.7	7.6	11.4	0.6	15.3
	3	4.1 (9.5)	75/63	8.7	7.1	10.2	0.6	14.0
			80/67	9.3	7.4	10.9	0.6	15.1
			85/71	9.9	7.7	11.6	0.6	16.2
100	1	0.6 (1.3)	75/63	7.6	6.7	9.4	0.7	10.2
			80/67	8.1	7.0	10.0	0.8	10.7
			85/71	8.6	7.2	10.6	0.8	11.3
	2	1.9 (4.4)	75/63	8.0	6.8	9.7	0.7	11.4
			80/67	8.6	7.1	10.3	0.7	12.2
			85/71	9.1	7.4	10.9	0.7	12.9
	3	4 (9.2)	75/63	8.1	6.8	9.8	0.7	11.9
			80/67	8.7	7.1	10.4	0.7	12.7
			85/71	9.3	7.5	11.1	0.7	13.6
110	1	0.5 (1.2)	75/63	7.1	6.4	9.0	0.8	8.8
			80/67	7.6	6.7	9.6	0.8	9.3
			85/71	8.1	7.0	10.2	0.8	9.7
	2	1.9 (4.3)	75/63	7.5	6.6	9.3	0.8	9.7
			80/67	8.0	6.9	9.9	0.8	10.4
			85/71	8.5	7.1	10.5	0.8	11.0
	3	3.9 (8.9)	75/63	7.6	6.6	9.4	0.8	10.1
			80/67	8.1	7.0	10.0	0.8	10.7
			85/71	8.7	7.2	10.6	0.8	11.5

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC Geothermal Heat Pump



BC009 Heating Performance Data - (300 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absp kBtu/hr	Power kW	COP
30	1	0.7 (1.6)	60	5.9	4.3	0.5	3.4
			70	5.9	4.0	0.5	3.1
			80	5.8	3.7	0.6	2.9
	2	2.4 (5.6)	60	6.5	4.8	0.5	3.7
			70	6.4	4.5	0.6	3.4
			80	6.3	4.2	0.6	3.0
	3	4.9 (11.6)	60	6.8	5.0	0.5	3.8
			70	6.6	4.7	0.6	3.4
			80	6.5	4.4	0.6	3.1
40	1	0.7 (1.6)	60	6.9	5.1	0.5	3.9
			70	6.8	4.8	0.6	3.5
			80	6.7	4.5	0.6	3.2
	2	2.3 (5.4)	60	7.6	5.8	0.5	4.2
			70	7.4	5.5	0.6	3.7
			80	7.3	5.1	0.6	3.4
	3	4.7 (11.2)	60	7.9	6.1	0.5	4.3
			70	7.7	5.7	0.6	3.8
			80	7.5	5.3	0.6	3.5
50	1	0.6 (1.5)	60	8.1	6.3	0.6	4.3
			70	8.0	5.9	0.6	3.9
			80	7.8	5.6	0.7	3.5
	2	2.3 (5.2)	60	8.9	7.0	0.6	4.6
			70	8.7	6.6	0.6	4.1
			80	8.5	6.1	0.7	3.7
	3	4.7 (10.8)	60	9.2	7.3	0.6	4.7
			70	9.0	6.9	0.6	4.2
			80	8.7	6.4	0.7	3.8
60	1	0.6 (1.4)	60	9.1	7.3	0.6	4.7
			70	9.0	6.8	0.6	4.2
			80	8.8	6.5	0.7	3.8
	2	2.2 (5)	60	10.1	8.2	0.6	5.1
			70	9.8	7.7	0.6	4.5
			80	9.6	7.2	0.7	4.0
	3	4.5 (10.5)	60	10.4	8.5	0.6	5.2
			70	10.1	8.0	0.6	4.6
			80	9.9	7.5	0.7	4.1
70	1	0.6 (1.4)	60	10.2	8.3	0.6	5.1
			70	10.0	7.9	0.6	4.6
			80	9.8	7.4	0.7	4.1
	2	2.1 (4.9)	60	11.3	9.4	0.6	5.6
			70	11.0	8.8	0.7	4.9
			80	10.7	8.3	0.7	4.4
	3	4.4 (10.1)	60	11.7	9.8	0.6	5.8
			70	11.4	9.2	0.7	5.1
			80	11.1	8.6	0.7	4.5
80	1	0.6 (1.4)	60	11.3	9.4	0.6	5.6
			70	11.0	8.9	0.7	4.9
			80	10.8	8.4	0.7	4.4
	2	2 (4.7)	60	12.5	10.6	0.6	6.1
			70	12.2	10.0	0.7	5.4
			80	11.9	9.4	0.7	4.8
	3	4.2 (9.8)	60	13.0	11.1	0.6	6.3
			70	12.6	10.5	0.7	5.5
			80	12.3	9.9	0.7	4.9

**☐** - Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC012 Cooling Performance Data - (475 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	1.5	1.3 (3.1)	75/63	12.8	10.6	14.6	0.6	22.4
			80/67	13.6	11.0	15.5	0.6	23.8
			85/71	14.4	11.4	16.3	0.6	25.3
	2.5	3.4 (7.8)	75/63	13.2	10.8	15.0	0.5	25.9
			80/67	14.1	11.2	15.9	0.5	27.9
			85/71	15.0	11.6	16.8	0.5	30.1
	3.5	6.2 (14.3)	75/63	13.4	10.9	15.1	0.5	27.6
			80/67	14.3	11.3	16.0	0.5	30.1
			85/71	15.3	11.7	17.0	0.5	32.8
60	1.5	1.3 (3)	75/63	12.2	10.4	14.2	0.6	19.0
			80/67	13.0	10.8	15.0	0.6	20.1
			85/71	13.8	11.2	15.8	0.6	21.3
	2.5	3.3 (7.5)	75/63	12.6	10.5	14.5	0.6	21.4
			80/67	13.5	11.0	15.4	0.6	23.0
			85/71	14.3	11.3	16.3	0.6	24.7
	3.5	6 (13.8)	75/63	12.8	10.6	14.6	0.6	22.6
			80/67	13.7	11.1	15.5	0.6	24.5
			85/71	14.6	11.4	16.5	0.6	26.5
70	1.5	1.3 (2.9)	75/63	11.6	10.2	13.7	0.7	16.2
			80/67	12.3	10.5	14.5	0.7	17.1
			85/71	13.1	10.9	15.3	0.7	18.0
	2.5	3.2 (7.3)	75/63	12.0	10.3	14.0	0.7	18.0
			80/67	12.8	10.8	14.8	0.7	19.2
			85/71	13.6	11.2	15.7	0.7	20.5
	3.5	5.8 (13.3)	75/63	12.2	10.3	14.2	0.6	18.8
			80/67	13.0	10.8	15.0	0.6	20.2
			85/71	13.8	11.2	15.9	0.6	21.7
80	1.5	1.2 (2.8)	75/63	11.0	9.9	13.3	0.8	13.8
			80/67	11.7	10.3	14.1	0.8	14.6
			85/71	12.4	10.7	14.8	0.8	15.4
	2.5	3.1 (7.1)	75/63	11.4	10.1	13.5	0.7	15.2
			80/67	12.1	10.5	14.4	0.8	16.2
			85/71	12.9	10.9	15.2	0.8	17.2
	3.5	5.6 (12.9)	75/63	11.5	10.2	13.6	0.7	15.8
			80/67	12.3	10.5	14.5	0.7	16.9
			85/71	13.1	11.0	15.3	0.7	18.0
85	1.5	1.2 (2.8)	75/63	10.7	9.8	13.0	0.8	12.8
			80/67	11.4	10.2	13.8	0.8	13.5
			85/71	12.1	10.6	14.6	0.9	14.2
	2.5	3 (6.9)	75/63	11.0	9.9	13.3	0.8	14.0
			80/67	11.8	10.3	14.1	0.8	14.9
			85/71	12.5	10.8	14.9	0.8	15.8
	3.5	5.5 (12.7)	75/63	11.2	10.0	13.4	0.8	14.5
			80/67	11.9	10.4	14.2	0.8	15.4
			85/71	12.7	10.9	15.0	0.8	16.5
90	1.5	1.2 (2.7)	75/63	10.4	9.6	12.8	0.9	11.9
			80/67	11.1	10.0	13.6	0.9	12.5
			85/71	11.7	10.5	14.3	0.9	13.1
	2.5	3 (6.8)	75/63	10.7	9.8	13.0	0.8	12.9
			80/67	11.4	10.2	13.9	0.8	13.7
			85/71	12.2	10.6	14.7	0.8	14.5
	3.5	5.4 (12.5)	75/63	10.8	9.9	13.1	0.8	13.3
			80/67	11.6	10.2	14.0	0.8	14.2
			85/71	12.4	10.7	14.8	0.8	15.1
100	1.5	1.1 (2.6)	75/63	9.8	9.3	12.3	1.0	10.2
			80/67	10.4	9.7	13.1	1.0	10.8
			85/71	11.0	10.2	13.8	1.0	11.3
	2.5	2.9 (6.6)	75/63	10.0	9.5	12.6	0.9	10.9
			80/67	10.7	9.9	13.3	0.9	11.6
			85/71	11.4	10.4	14.1	0.9	12.3
	3.5	5.3 (12.1)	75/63	10.0	9.3	12.6	0.9	10.9
			80/67	10.9	10.0	13.4	0.9	12.0
			85/71	11.6	10.4	14.2	0.9	12.7
110	1.5	1.1 (2.6)	75/63	9.1	9.0	11.9	1.0	8.7
			80/67	9.7	9.4	12.6	1.1	9.2
			85/71	10.3	9.9	13.3	1.1	9.7
	2.5	2.8 (6.4)	75/63	9.4	9.1	12.1	1.0	9.3
			80/67	10.0	9.6	12.8	1.0	9.8
			85/71	10.7	10.0	13.6	1.0	10.4
	3.5	5.1 (11.8)	75/63	9.4	9.0	12.1	1.0	9.3
			80/67	10.1	9.7	12.9	1.0	10.1
			85/71	10.8	10.1	13.6	1.0	10.7

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC Geothermal Heat Pump



BC012 Heating Performance Data - (475 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absorp kBtu/hr	Power kW	COP
30	1.5	1.4 (3.3)	60	7.9	5.6	0.7	3.4
			70	7.8	5.2	0.7	3.1
			80	7.7	4.8	0.8	2.9
	2.5	3.5 (8.4)	60	8.4	6.0	0.7	3.6
			70	8.2	5.6	0.7	3.2
			80	8.1	5.2	0.8	3.0
	3.5	6.4 (15.3)	60	8.6	6.2	0.7	3.7
			70	8.4	5.8	0.7	3.3
			80	8.2	5.4	0.8	3.0
40	1.5	1.3 (3.2)	60	9.0	6.6	0.7	3.8
			70	8.8	6.2	0.8	3.4
			80	8.7	5.8	0.8	3.1
	2.5	3.4 (8.1)	60	9.6	7.2	0.7	4.0
			70	9.4	6.7	0.8	3.6
			80	9.2	6.3	0.8	3.2
	3.5	6.2 (14.8)	60	9.9	7.5	0.7	4.1
			70	9.6	7.0	0.8	3.7
			80	9.4	6.5	0.8	3.3
50	1.5	1.3 (3.1)	60	10.5	8.0	0.7	4.3
			70	10.3	7.5	0.8	3.9
			80	10.1	7.1	0.8	3.5
	2.5	3.4 (7.8)	60	11.1	8.7	0.7	4.5
			70	10.8	8.1	0.8	4.0
			80	10.6	7.6	0.9	3.6
	3.5	6.2 (14.3)	60	11.4	9.0	0.7	4.6
			70	11.2	8.4	0.8	4.1
			80	10.9	7.8	0.9	3.7
60	1.5	1.3 (3)	60	11.8	9.3	0.7	4.7
			70	11.5	8.8	0.8	4.2
			80	11.3	8.2	0.9	3.8
	2.5	3.3 (7.5)	60	12.6	10.1	0.7	5.0
			70	12.3	9.5	0.8	4.4
			80	12.0	8.9	0.9	4.0
	3.5	6 (13.8)	60	13.0	10.5	0.7	5.1
			70	12.6	9.9	0.8	4.6
			80	12.3	9.2	0.9	4.1
70	1.5	1.3 (2.9)	60	13.1	10.7	0.7	5.2
			70	12.9	10.1	0.8	4.6
			80	12.6	9.5	0.9	4.1
	2.5	3.2 (7.3)	60	14.1	11.6	0.7	5.5
			70	13.7	10.9	0.8	4.9
			80	13.4	10.3	0.9	4.3
	3.5	5.8 (13.3)	60	14.5	12.1	0.8	5.7
			70	14.1	11.4	0.8	5.0
			80	13.7	10.7	0.9	4.4
80	1.5	1.2 (2.8)	60	14.6	12.1	0.8	5.7
			70	14.3	11.5	0.8	5.0
			80	14.0	10.8	0.9	4.5
	2.5	3.1 (7.1)	60	15.6	13.1	0.8	6.0
			70	15.2	12.4	0.8	5.3
			80	14.9	11.7	0.9	4.7
	3.5	5.6 (12.9)	60	16.1	13.7	0.8	6.2
			70	15.7	12.9	0.8	5.4
			80	15.3	12.1	0.9	4.8

- Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC012 Cooling Performance Data - (520 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	1.5	1.3 (3.1)	12.9	11.1	14.9	0.6	21.5	19.2
			80/67	13.7	11.6	15.7	0.6	22.8
			85/71	14.5	12.1	16.6	0.6	24.2
	2.5	3.4 (7.8)	13.4	11.4	15.2	0.5	24.7	22.7
			80/67	14.3	11.8	16.1	0.5	26.7
			85/71	15.2	12.3	17.1	0.5	28.7
	3.5	6.2 (14.3)	13.6	11.5	15.4	0.5	26.3	24.5
			80/67	14.5	11.9	16.3	0.5	28.7
			85/71	15.4	12.4	17.3	0.5	31.1
60	1.5	1.3 (3)	12.3	11.0	14.4	0.7	18.3	16.4
			80/67	13.1	11.4	15.3	0.7	19.4
			85/71	13.9	11.8	16.1	0.7	20.5
	2.5	3.3 (7.5)	12.8	11.2	14.8	0.6	20.6	19.0
			80/67	13.6	11.5	15.7	0.6	22.1
			85/71	14.5	12.0	16.5	0.6	23.7
	3.5	6 (13.8)	13.0	11.2	14.9	0.6	21.7	20.3
			80/67	13.8	11.6	15.8	0.6	23.5
			85/71	14.7	12.1	16.7	0.6	25.3
70	1.5	1.3 (2.9)	11.7	10.7	14.0	0.7	15.7	14.1
			80/67	12.5	11.1	14.8	0.8	16.6
			85/71	13.2	11.5	15.6	0.8	17.5
	2.5	3.2 (7.3)	12.1	10.9	14.3	0.7	17.4	16.1
			80/67	12.9	11.3	15.2	0.7	18.6
			85/71	13.7	11.8	16.0	0.7	19.8
	3.5	5.8 (13.3)	12.3	11.0	14.4	0.7	18.2	17.1
			80/67	13.1	11.5	15.3	0.7	19.5
			85/71	14.0	11.9	16.2	0.7	20.9
80	1.5	1.2 (2.8)	11.1	10.4	13.5	0.8	13.5	12.2
			80/67	11.8	10.8	14.3	0.8	14.2
			85/71	12.6	11.3	15.1	0.8	14.9
	2.5	3.1 (7.1)	11.5	10.6	13.8	0.8	14.8	13.7
			80/67	12.3	11.0	14.7	0.8	15.7
			85/71	13.0	11.5	15.5	0.8	16.7
	3.5	5.6 (12.9)	11.6	10.7	13.9	0.8	15.3	14.4
			80/67	12.4	11.1	14.8	0.8	16.4
			85/71	13.3	11.5	15.6	0.8	17.5
85	1.5	1.2 (2.8)	10.8	10.3	13.3	0.9	12.5	11.3
			80/67	11.5	10.7	14.1	0.9	13.2
			85/71	12.2	11.2	14.9	0.9	13.8
	2.5	3 (6.9)	11.2	10.4	13.6	0.8	13.6	12.7
			80/67	11.9	10.9	14.4	0.8	14.5
			85/71	12.7	11.4	15.2	0.8	15.4
	3.5	5.5 (12.7)	11.3	10.5	13.7	0.8	14.1	13.3
			80/67	12.1	10.9	14.5	0.8	15.0
			85/71	12.9	11.5	15.3	0.8	16.0
90	1.5	1.2 (2.7)	10.5	10.1	13.1	0.9	11.6	10.6
			80/67	11.2	10.5	13.8	0.9	12.2
			85/71	11.9	11.0	14.6	0.9	12.8
	2.5	3 (6.8)	10.8	10.3	13.3	0.9	12.6	11.7
			80/67	11.6	10.7	14.1	0.9	13.4
			85/71	12.3	11.2	14.9	0.9	14.1
	3.5	5.4 (12.5)	11.0	10.3	13.4	0.8	13.0	12.3
			80/67	11.7	10.8	14.2	0.8	13.8
			85/71	12.5	11.2	15.1	0.8	14.7
100	1.5	1.1 (2.6)	9.9	9.8	12.6	1.0	10.0	9.2
			80/67	10.5	10.3	13.3	1.0	10.5
			85/71	11.2	10.7	14.1	1.0	11.0
	2.5	2.9 (6.6)	10.2	9.9	12.8	1.0	10.7	10.1
			80/67	10.8	10.5	13.6	1.0	11.3
			85/71	11.6	10.9	14.4	1.0	12.0
	3.5	5.3 (12.1)	10.2	9.8	12.9	1.0	10.6	10.5
			80/67	11.0	10.5	13.7	0.9	11.7
			85/71	11.7	10.9	14.5	0.9	12.4
110	1.5	1.1 (2.6)	9.3	9.3	12.2	1.1	8.6	8.0
			80/67	9.8	9.8	12.9	1.1	9.1
			85/71	10.4	10.4	13.6	1.1	9.5
	2.5	2.8 (6.4)	9.5	9.5	12.4	1.0	9.1	8.6
			80/67	10.1	10.1	13.1	1.0	9.6
			85/71	10.8	10.6	13.8	1.1	10.2
	3.5	5.1 (11.8)	9.5	9.5	12.4	1.0	9.1	8.9
			80/67	10.2	10.1	13.1	1.0	9.9
				10.9	10.6	13.9	1.0	10.5

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



# Greensource iSeries Model BC Geothermal Heat Pump



BC012 Heating Performance Data - (520 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absp kBtu/hr	Power kW	COP
30	1.5	1.4 (3.3)	60	7.9	5.6	0.7	3.3
			70	7.9	5.2	0.8	3.1
			80	7.7	4.9	0.8	2.8
	2.5	3.5 (8.4)	60	8.4	6.0	0.7	3.5
			70	8.2	5.6	0.8	3.2
			80	8.1	5.2	0.8	2.9
	3.5	6.4 (15.3)	60	8.7	6.3	0.7	3.6
			70	8.5	5.9	0.8	3.2
			80	8.3	5.4	0.8	2.9
40	1.5	1.3 (3.2)	60	9.1	6.7	0.7	3.7
			70	8.9	6.3	0.8	3.4
			80	8.8	5.8	0.8	3.1
	2.5	3.4 (8.1)	60	9.7	7.2	0.7	3.9
			70	9.4	6.8	0.8	3.5
			80	9.2	6.3	0.9	3.2
	3.5	6.2 (14.8)	60	10.0	7.5	0.7	4.0
			70	9.7	7.0	0.8	3.6
			80	9.5	6.6	0.9	3.2
50	1.5	1.3 (3.1)	60	10.5	8.1	0.7	4.2
			70	10.4	7.6	0.8	3.8
			80	10.1	7.1	0.9	3.4
	2.5	3.4 (7.8)	60	11.2	8.7	0.7	4.4
			70	10.9	8.2	0.8	3.9
			80	10.7	7.6	0.9	3.6
	3.5	6.2 (14.3)	60	11.5	9.1	0.7	4.5
			70	11.2	8.5	0.8	4.0
			80	11.0	7.9	0.9	3.6
60	1.5	1.3 (3)	60	11.9	9.4	0.7	4.6
			70	11.6	8.9	0.8	4.2
			80	11.4	8.3	0.9	3.7
	2.5	3.3 (7.5)	60	12.7	10.2	0.8	4.9
			70	12.4	9.6	0.8	4.4
			80	12.1	9.0	0.9	3.9
	3.5	6 (13.8)	60	13.1	10.6	0.8	5.1
			70	12.7	10.0	0.8	4.5
			80	12.4	9.3	0.9	4.0
70	1.5	1.3 (2.9)	60	13.2	10.8	0.8	5.1
			70	13.0	10.2	0.8	4.6
			80	12.7	9.6	0.9	4.1
	2.5	3.2 (7.3)	60	14.2	11.7	0.8	5.4
			70	13.8	11.1	0.8	4.8
			80	13.5	10.4	0.9	4.3
	3.5	5.8 (13.3)	60	14.6	12.2	0.8	5.6
			70	14.3	11.5	0.8	4.9
			80	13.9	10.8	0.9	4.4
80	1.5	1.2 (2.8)	60	14.7	12.2	0.8	5.6
			70	14.4	11.6	0.8	5.0
			80	14.1	10.9	0.9	4.4
	2.5	3.1 (7.1)	60	15.7	13.3	0.8	6.0
			70	15.4	12.6	0.9	5.3
			80	15.0	11.8	0.9	4.7
	3.5	5.6 (12.9)	60	16.3	13.8	0.8	6.2
			70	15.8	13.0	0.9	5.4
			80	15.4	12.3	0.9	4.8

**□** - Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC015 Cooling Performance Data - (450 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	2	0.8 (1.8)	75/63	16.3	12.3	18.8	0.8	21.2
			80/67	17.4	12.7	19.9	0.8	22.7
			85/71	18.5	13.0	21.1	0.8	24.3
	3	1.6 (3.7)	75/63	16.8	12.5	19.1	0.7	23.8
			80/67	18.0	12.9	20.3	0.7	25.9
			85/71	19.2	13.3	21.5	0.7	28.1
	4	2.7 (6.2)	75/63	17.1	12.6	19.3	0.7	25.5
			80/67	18.2	13.0	20.5	0.7	27.8
			85/71	19.5	13.4	21.7	0.6	30.5
60	2	0.7 (1.7)	75/63	15.6	12.0	18.2	0.9	17.9
			80/67	16.6	12.3	19.3	0.9	19.1
			85/71	17.7	12.7	20.5	0.9	20.4
	3	1.6 (3.6)	75/63	16.1	12.2	18.6	0.8	19.9
			80/67	17.2	12.6	19.7	0.8	21.4
			85/71	18.3	12.9	20.9	0.8	23.1
	4	2.6 (6)	75/63	16.3	12.3	18.7	0.8	21.0
			80/67	17.4	12.7	19.9	0.8	22.8
			85/71	18.6	13.0	21.1	0.8	24.7
70	2	0.7 (1.7)	75/63	14.8	11.6	17.7	1.0	15.2
			80/67	15.9	12.0	18.8	1.0	16.2
			85/71	16.9	12.5	19.8	1.0	17.2
	3	1.5 (3.5)	75/63	15.3	11.8	18.0	0.9	16.7
			80/67	16.3	12.2	19.1	0.9	17.9
			85/71	17.4	12.6	20.2	0.9	19.2
	4	2.5 (5.8)	75/63	15.5	11.9	18.2	0.9	17.5
			80/67	16.6	12.3	19.3	0.9	18.9
			85/71	17.7	12.8	20.5	0.9	20.4
80	2	0.7 (1.6)	75/63	14.1	11.3	17.2	1.1	13.0
			80/67	15.0	11.7	18.2	1.1	13.8
			85/71	16.0	12.1	19.2	1.1	14.7
	3	1.5 (3.4)	75/63	14.5	11.5	17.4	1.0	14.1
			80/67	15.5	11.9	18.5	1.0	15.1
			85/71	16.5	12.3	19.6	1.0	16.2
	4	2.4 (5.6)	75/63	14.7	11.6	17.6	1.0	14.8
			80/67	15.7	11.9	18.7	1.0	15.9
			85/71	16.8	12.4	19.8	1.0	17.0
85	2	0.7 (1.6)	75/63	13.7	11.1	16.9	1.1	12.1
			80/67	14.6	11.5	17.9	1.1	12.8
			85/71	15.6	11.9	18.9	1.1	13.6
	3	1.4 (3.3)	75/63	14.1	11.3	17.2	1.1	13.0
			80/67	15.1	11.7	18.2	1.1	13.9
			85/71	16.1	12.2	19.3	1.1	14.9
	4	2.4 (5.5)	75/63	14.3	11.3	17.3	1.1	13.6
			80/67	15.3	11.8	18.4	1.1	14.5
			85/71	16.3	12.3	19.5	1.0	15.6
90	2	0.7 (1.6)	75/63	13.3	11.0	16.6	1.2	11.2
			80/67	14.2	11.3	17.6	1.2	11.9
			85/71	15.1	11.8	18.6	1.2	12.5
	3	1.4 (3.3)	75/63	13.7	11.1	16.9	1.1	12.0
			80/67	14.6	11.6	17.9	1.1	12.8
			85/71	15.6	11.9	19.0	1.1	13.7
	4	2.4 (5.5)	75/63	13.9	11.2	17.0	1.1	12.5
			80/67	14.8	11.6	18.0	1.1	13.4
			85/71	15.9	12.0	19.1	1.1	14.3
100	2	0.7 (1.5)	75/63	12.5	10.6	16.1	1.3	9.6
			80/67	13.4	11.1	17.0	1.3	10.2
			85/71	14.2	11.5	18.0	1.3	10.8
	3	1.4 (3.2)	75/63	12.9	10.7	16.3	1.3	10.3
			80/67	13.8	11.2	17.3	1.3	10.9
			85/71	14.7	11.6	18.3	1.3	11.6
	4	2.3 (5.3)	75/63	13.0	10.8	16.4	1.2	10.6
			80/67	14.0	11.2	17.4	1.2	11.3
			85/71	14.9	11.7	18.4	1.2	12.1
110	2	0.6 (1.5)	75/63	11.7	10.3	15.5	1.4	8.3
			80/67	12.5	10.7	16.4	1.4	8.7
			85/71	13.3	11.1	17.3	1.4	9.2
	3	1.3 (3.1)	75/63	12.0	10.4	15.7	1.4	8.8
			80/67	12.8	10.8	16.6	1.4	9.3
			85/71	13.7	11.3	17.6	1.4	9.9
	4	2.2 (5.1)	75/63	12.2	10.5	15.8	1.3	9.0
			80/67	13.0	10.9	16.8	1.4	9.6
			85/71	14.0	11.3	17.8	1.4	10.3

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC Geothermal Heat Pump



BC015 Heating Performance Data - (450 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absorp kBtu/hr	Power kW	COP
30	2	0.8 (1.9)	60	10.4	7.3	0.9	3.3
			70	10.2	6.8	1.0	3.0
			80	10.2	6.3	1.1	2.8
	3	1.7 (4)	60	10.9	7.7	0.9	3.4
			70	10.7	7.2	1.0	3.1
			80	10.6	6.7	1.1	2.9
	4	2.8 (6.7)	60	11.2	8.0	0.9	3.5
			70	11.0	7.5	1.0	3.2
			80	10.8	6.9	1.1	2.9
40	2	0.8 (1.9)	60	11.9	8.7	1.0	3.6
			70	11.7	8.2	1.0	3.3
			80	11.5	7.6	1.1	3.0
	3	1.6 (3.8)	60	12.5	9.3	1.0	3.8
			70	12.3	8.7	1.1	3.4
			80	12.1	8.1	1.1	3.1
	4	2.7 (6.5)	60	12.9	9.6	1.0	3.9
			70	12.6	9.0	1.1	3.5
			80	12.4	8.4	1.1	3.2
50	2	0.8 (1.8)	60	13.8	10.5	1.0	4.1
			70	13.6	9.9	1.1	3.7
			80	13.4	9.3	1.2	3.3
	3	1.6 (3.7)	60	14.5	11.2	1.0	4.3
			70	14.2	10.5	1.1	3.8
			80	13.9	9.8	1.2	3.4
	4	2.7 (6.2)	60	14.9	11.5	1.0	4.3
			70	14.6	10.8	1.1	3.9
			80	14.3	10.1	1.2	3.5
60	2	0.7 (1.7)	60	15.6	12.1	1.0	4.5
			70	15.3	11.5	1.1	4.0
			80	15.0	10.8	1.2	3.6
	3	1.6 (3.6)	60	16.4	12.9	1.0	4.7
			70	16.0	12.2	1.1	4.2
			80	15.7	11.4	1.2	3.7
	4	2.6 (6)	60	16.9	13.4	1.0	4.8
			70	16.5	12.6	1.1	4.2
			80	16.1	11.8	1.2	3.8
70	2	0.7 (1.7)	60	17.4	13.9	1.0	4.9
			70	17.0	13.1	1.2	4.3
			80	16.7	12.4	1.3	3.9
	3	1.5 (3.5)	60	18.4	14.9	1.1	5.1
			70	18.0	14.0	1.2	4.5
			80	17.5	13.2	1.3	4.0
	4	2.5 (5.8)	60	18.9	15.4	1.1	5.2
			70	18.5	14.5	1.2	4.6
			80	18.0	13.6	1.3	4.1
80	2	0.7 (1.6)	60	19.2	15.7	1.1	5.3
			70	18.8	15.0	1.2	4.7
			80	18.5	14.1	1.3	4.2
	3	1.5 (3.4)	60	20.3	16.9	1.1	5.6
			70	19.9	16.0	1.2	4.9
			80	19.5	15.1	1.3	4.4
	4	2.4 (5.6)	60	21.0	17.5	1.1	5.7
			70	20.5	16.5	1.2	5.0
			80	20.0	15.6	1.3	4.5

- Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC015 Cooling Performance Data - (500 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	2	0.8 (1.8)	75/63	16.6	13.0	19.1	0.8	20.8
			80/67	17.7	13.4	20.3	0.8	22.3
			85/71	18.8	13.8	21.4	0.8	23.8
	3	1.6 (3.7)	75/63	17.1	13.2	19.5	0.7	23.4
			80/67	18.3	13.6	20.7	0.7	25.4
			85/71	19.5	14.0	21.9	0.7	27.5
	4	2.7 (6.2)	75/63	17.4	13.3	19.7	0.7	25.0
			80/67	18.6	13.7	20.9	0.7	27.3
			85/71	19.8	14.1	22.1	0.7	29.8
60	2	0.7 (1.7)	75/63	15.9	12.6	18.6	0.9	17.6
			80/67	16.9	13.0	19.7	0.9	18.8
			85/71	17.9	13.5	20.8	0.9	20.0
	3	1.6 (3.6)	75/63	16.3	12.8	18.9	0.8	19.5
			80/67	17.4	13.3	20.1	0.8	21.1
			85/71	18.6	13.7	21.2	0.8	22.7
	4	2.6 (6)	75/63	16.6	12.9	19.1	0.8	20.7
			80/67	17.7	13.4	20.3	0.8	22.4
			85/71	18.9	13.9	21.5	0.8	24.3
70	2	0.7 (1.7)	75/63	15.1	12.3	18.0	1.0	15.0
			80/67	16.1	12.8	19.1	1.0	16.0
			85/71	17.1	13.1	20.2	1.0	17.0
	3	1.5 (3.5)	75/63	15.5	12.4	18.4	0.9	16.5
			80/67	16.6	13.0	19.5	0.9	17.7
			85/71	17.7	13.4	20.6	0.9	18.9
	4	2.5 (5.8)	75/63	15.8	12.5	18.5	0.9	17.3
			80/67	16.9	13.1	19.7	0.9	18.6
			85/71	18.0	13.5	20.8	0.9	20.1
80	2	0.7 (1.6)	75/63	14.3	12.0	17.5	1.1	12.9
			80/67	15.3	12.4	18.5	1.1	13.7
			85/71	16.2	12.8	19.6	1.1	14.5
	3	1.5 (3.4)	75/63	14.7	12.1	17.8	1.1	14.0
			80/67	15.7	12.6	18.9	1.1	14.9
			85/71	16.8	13.0	19.9	1.1	16.0
	4	2.4 (5.6)	75/63	14.9	12.2	17.9	1.0	14.6
			80/67	16.0	12.7	19.0	1.0	15.6
			85/71	17.0	13.2	20.1	1.0	16.8
85	2	0.7 (1.6)	75/63	13.9	11.7	17.2	1.2	12.0
			80/67	14.8	12.3	18.2	1.2	12.7
			85/71	15.8	12.7	19.2	1.2	13.4
	3	1.4 (3.3)	75/63	14.3	12.0	17.5	1.1	12.9
			80/67	15.3	12.4	18.5	1.1	13.8
			85/71	16.3	12.9	19.6	1.1	14.7
	4	2.4 (5.5)	75/63	14.5	12.1	17.6	1.1	13.4
			80/67	15.5	12.5	18.7	1.1	14.4
			85/71	16.6	13.0	19.8	1.1	15.4
90	2	0.7 (1.6)	75/63	13.5	11.6	16.9	1.2	11.1
			80/67	14.4	12.1	17.9	1.2	11.7
			85/71	15.3	12.6	18.9	1.2	12.4
	3	1.4 (3.3)	75/63	13.9	11.7	17.2	1.2	11.9
			80/67	14.9	12.2	18.2	1.2	12.7
			85/71	15.8	12.7	19.3	1.2	13.5
	4	2.4 (5.5)	75/63	14.1	11.8	17.3	1.1	12.4
			80/67	15.1	12.3	18.4	1.1	13.3
			85/71	16.1	12.8	19.5	1.1	14.2
100	2	0.7 (1.5)	75/63	12.7	11.2	16.4	1.3	9.5
			80/67	13.5	11.8	17.3	1.3	10.1
			85/71	14.4	12.2	18.3	1.4	10.7
	3	1.4 (3.2)	75/63	13.1	11.4	16.6	1.3	10.2
			80/67	13.9	11.9	17.6	1.3	10.8
			85/71	14.9	12.4	18.6	1.3	11.5
	4	2.3 (5.3)	75/63	13.2	11.4	16.7	1.3	10.5
			80/67	14.2	12.0	17.7	1.3	11.2
			85/71	15.1	12.5	18.8	1.3	12.0
110	2	0.6 (1.5)	75/63	11.8	10.9	15.8	1.4	8.2
			80/67	12.6	11.4	16.7	1.5	8.7
			85/71	13.5	11.9	17.6	1.5	9.1
	3	1.3 (3.1)	75/63	12.2	11.0	16.0	1.4	8.7
			80/67	13.0	11.5	16.9	1.4	9.2
			85/71	13.9	12.0	17.9	1.4	9.8
	4	2.2 (5.1)	75/63	12.4	11.1	16.1	1.4	9.0
			80/67	13.2	11.6	17.1	1.4	9.6
			85/71	14.2	12.1	18.1	1.4	10.2

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC Geothermal Heat Pump



BC015 Heating Performance Data - (500 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absp kBtu/hr	Power kW	COP
30	2	0.8 (1.9)	60	10.5	7.3	0.9	3.3
			70	10.4	6.9	1.0	3.0
			80	10.3	6.4	1.1	2.7
	3	1.7 (4)	60	11.0	7.8	1.0	3.4
			70	10.8	7.3	1.0	3.1
			80	10.8	6.7	1.1	2.8
	4	2.8 (6.7)	60	11.3	8.1	1.0	3.5
			70	11.1	7.5	1.0	3.1
			80	11.0	7.0	1.1	2.9
40	2	0.8 (1.9)	60	12.0	8.7	1.0	3.6
			70	11.8	8.2	1.1	3.3
			80	11.6	7.7	1.1	3.0
	3	1.6 (3.8)	60	12.7	9.4	1.0	3.8
			70	12.4	8.8	1.1	3.4
			80	12.2	8.2	1.2	3.1
	4	2.7 (6.5)	60	13.0	9.7	1.0	3.9
			70	12.8	9.1	1.1	3.5
			80	12.5	8.5	1.2	3.2
50	2	0.8 (1.8)	60	14.0	10.6	1.0	4.1
			70	13.8	10.0	1.1	3.7
			80	13.5	9.3	1.2	3.3
	3	1.6 (3.7)	60	14.7	11.3	1.0	4.2
			70	14.4	10.6	1.1	3.8
			80	14.1	9.9	1.2	3.4
	4	2.7 (6.2)	60	15.2	11.7	1.0	4.3
			70	14.8	11.0	1.1	3.9
			80	14.5	10.2	1.2	3.5
60	2	0.7 (1.7)	60	15.8	12.3	1.0	4.5
			70	15.5	11.6	1.1	4.0
			80	15.2	10.9	1.2	3.6
	3	1.6 (3.6)	60	16.6	13.1	1.0	4.7
			70	16.3	12.4	1.1	4.2
			80	15.9	11.6	1.2	3.7
	4	2.6 (6)	60	17.1	13.6	1.1	4.8
			70	16.7	12.8	1.2	4.2
			80	16.3	12.0	1.3	3.8
70	2	0.7 (1.7)	60	17.6	14.1	1.1	4.9
			70	17.2	13.3	1.2	4.3
			80	16.9	12.6	1.3	3.9
	3	1.5 (3.5)	60	18.6	15.1	1.1	5.1
			70	18.2	14.2	1.2	4.6
			80	17.8	13.4	1.3	4.1
	4	2.5 (5.8)	60	19.2	15.7	1.1	5.3
			70	18.7	14.8	1.2	4.7
			80	18.3	13.9	1.3	4.2
80	2	0.7 (1.6)	60	19.5	16.0	1.1	5.3
			70	19.1	15.3	1.2	4.7
			80	18.8	14.3	1.3	4.3
	3	1.5 (3.4)	60	20.6	17.1	1.1	5.6
			70	20.2	16.2	1.2	5.0
			80	19.7	15.3	1.3	4.4
	4	2.4 (5.6)	60	21.3	17.8	1.1	5.8
			70	20.8	16.8	1.2	5.1
			80	20.3	15.9	1.3	4.5

**□** - Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC018 Cooling Performance Data - (475 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	2.5	1.2 (2.7)	75/63	18.1	13.3	21.3	1.0	18.2
			80/67	19.3	13.7	22.4	1.0	19.8
			85/71	20.5	14.1	23.7	1.0	21.6
	4	2.7 (6.2)	75/63	18.6	13.5	21.8	1.0	18.6
			80/67	19.8	14.0	23.0	1.0	20.5
			85/71	21.1	14.3	24.3	0.9	22.6
	5	4 (9.3)	75/63	18.7	13.6	22.0	1.0	18.7
			80/67	20.0	14.0	23.2	1.0	20.6
			85/71	21.3	14.5	24.5	0.9	22.8
60	2.5	1.1 (2.6)	75/63	17.4	13.0	20.6	1.0	16.9
			80/67	18.6	13.4	21.7	1.0	18.2
			85/71	19.7	13.8	22.9	1.0	19.6
	4	2.6 (6)	75/63	17.9	13.2	21.0	1.0	17.7
			80/67	19.0	13.6	22.2	1.0	19.3
			85/71	20.3	14.0	23.4	1.0	21.1
	5	3.9 (9)	75/63	18.0	13.2	21.1	1.0	18.0
			80/67	19.2	13.7	22.3	1.0	19.6
			85/71	20.5	14.0	23.6	1.0	21.5
70	2.5	1.1 (2.5)	75/63	16.7	12.7	19.9	1.1	15.3
			80/67	17.8	13.1	21.1	1.1	16.3
			85/71	18.9	13.5	22.2	1.1	17.4
	4	2.5 (5.8)	75/63	17.1	12.9	20.3	1.1	16.2
			80/67	18.2	13.3	21.4	1.0	17.4
			85/71	19.4	13.7	22.6	1.0	18.8
	5	3.8 (8.7)	75/63	17.2	12.9	20.4	1.0	16.5
			80/67	18.4	13.4	21.6	1.0	17.8
			85/71	19.6	13.8	22.8	1.0	19.3
80	2.5	1 (2.4)	75/63	15.9	12.4	19.3	1.2	13.4
			80/67	17.0	12.7	20.5	1.2	14.3
			85/71	18.0	13.2	21.6	1.2	15.1
	4	2.4 (5.6)	75/63	16.3	12.5	19.6	1.1	14.3
			80/67	17.4	12.9	20.8	1.1	15.3
			85/71	18.5	13.4	21.9	1.1	16.4
	5	3.6 (8.4)	75/63	16.4	12.6	19.7	1.1	14.6
			80/67	17.5	13.0	20.9	1.1	15.7
			85/71	18.7	13.5	22.1	1.1	16.8
85	2.5	1 (2.4)	75/63	15.5	12.2	19.1	1.2	12.5
			80/67	16.5	12.6	20.1	1.2	13.3
			85/71	17.6	13.1	21.3	1.3	14.0
	4	2.4 (5.5)	75/63	15.9	12.4	19.3	1.2	13.4
			80/67	17.0	12.7	20.5	1.2	14.2
			85/71	18.1	13.2	21.6	1.2	15.2
	5	3.6 (8.3)	75/63	16.0	12.4	19.4	1.2	13.6
			80/67	17.1	12.8	20.6	1.2	14.6
			85/71	18.2	13.3	21.7	1.2	15.6
90	2.5	1 (2.3)	75/63	15.2	12.0	18.8	1.3	11.7
			80/67	16.1	12.5	19.9	1.3	12.3
			85/71	17.2	12.8	21.0	1.3	13.0
	4	2.4 (5.5)	75/63	15.5	12.1	19.0	1.2	12.4
			80/67	16.5	12.6	20.1	1.3	13.2
			85/71	17.6	13.0	21.3	1.3	14.0
	5	3.5 (8.2)	75/63	15.6	12.2	19.1	1.2	12.6
			80/67	16.7	12.6	20.2	1.2	13.5
			85/71	17.8	13.0	21.4	1.2	14.4
100	2.5	1 (2.3)	75/63	14.4	11.6	18.3	1.4	10.1
			80/67	15.3	12.1	19.3	1.4	10.6
			85/71	16.2	12.5	20.4	1.5	11.1
	4	2.3 (5.3)	75/63	14.6	11.8	18.5	1.4	10.6
			80/67	15.6	12.3	19.5	1.4	11.3
			85/71	16.6	12.7	20.6	1.4	11.9
	5	3.4 (7.9)	75/63	14.7	11.8	18.5	1.4	10.8
			80/67	15.7	12.3	19.6	1.4	11.5
			85/71	16.8	12.7	20.8	1.4	12.2
110	2.5	1 (2.2)	75/63	13.5	11.3	17.7	1.6	8.7
			80/67	14.4	11.8	18.7	1.6	9.1
			85/71	15.3	12.1	19.8	1.6	9.5
	4	2.2 (5.1)	75/63	13.8	11.4	17.9	1.5	9.1
			80/67	14.7	11.9	18.9	1.5	9.6
			85/71	15.6	12.4	20.0	1.5	10.1
	5	3.3 (7.7)	75/63	13.8	11.3	17.9	1.5	9.0
			80/67	14.8	11.8	19.0	1.5	9.7
			85/71	15.8	12.4	20.1	1.5	10.3

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC018 Heating Performance Data - (475 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absorp kBtu/hr	Power kW	COP
30	2.5	1.2 (2.9)	60	13.5	9.6	1.2	3.4
			70	13.3	9.0	1.2	3.1
			80	13.1	8.5	1.3	2.9
	4	2.8 (6.7)	60	14.3	10.3	1.2	3.5
			70	14.0	9.6	1.3	3.2
			80	13.8	9.0	1.4	2.9
	5	4.2 (10)	60	14.6	10.5	1.2	3.5
			70	14.3	9.9	1.3	3.2
			80	14.1	9.3	1.4	3.0
40	2.5	1.2 (2.8)	60	15.4	11.2	1.2	3.6
			70	15.2	10.6	1.3	3.3
			80	14.9	10.0	1.4	3.1
	4	2.7 (6.5)	60	16.3	12.0	1.3	3.8
			70	16.0	11.4	1.4	3.4
			80	15.8	10.7	1.5	3.1
	5	4 (9.6)	60	16.7	12.4	1.3	3.8
			70	16.4	11.7	1.4	3.5
			80	16.1	11.0	1.5	3.2
50	2.5	1.2 (2.7)	60	17.8	13.4	1.3	4.0
			70	17.5	12.7	1.4	3.6
			80	17.3	12.1	1.5	3.3
	4	2.7 (6.2)	60	18.6	14.1	1.3	4.0
			70	18.2	13.4	1.4	3.7
			80	18.0	12.7	1.6	3.4
	5	4 (9.3)	60	19.0	14.5	1.4	4.1
			70	18.7	13.7	1.5	3.7
			80	18.4	13.0	1.6	3.4
60	2.5	1.1 (2.6)	60	20.0	15.4	1.4	4.3
			70	19.7	14.7	1.5	3.9
			80	19.3	13.9	1.6	3.5
	4	2.6 (6)	60	20.8	16.2	1.4	4.4
			70	20.5	15.4	1.5	4.0
			80	20.1	14.6	1.6	3.6
	5	3.9 (9)	60	21.4	16.8	1.4	4.5
			70	21.0	15.9	1.5	4.0
			80	20.6	15.1	1.7	3.7
70	2.5	1.1 (2.5)	60	22.2	17.5	1.4	4.6
			70	21.9	16.7	1.6	4.1
			80	21.6	15.9	1.7	3.8
	4	2.5 (5.8)	60	23.2	18.5	1.4	4.7
			70	22.8	17.6	1.6	4.2
			80	22.5	16.7	1.7	3.8
	5	3.8 (8.7)	60	23.8	19.1	1.5	4.8
			70	23.4	18.1	1.6	4.3
			80	23.0	17.2	1.7	3.9
80	2.5	1 (2.4)	60	24.5	19.7	1.5	4.8
			70	24.2	18.8	1.6	4.4
			80	23.9	17.9	1.8	4.0
	4	2.4 (5.6)	60	25.7	20.7	1.5	5.0
			70	25.3	19.8	1.7	4.4
			80	24.9	18.8	1.8	4.0
	5	3.6 (8.4)	60	26.4	21.4	1.5	5.0
			70	25.9	20.4	1.7	4.5
			80	25.5	19.4	1.8	4.1

**Extended Range - Anti-freeze required**  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC

## Geothermal Heat Pump



BC018 Cooling Performance Data - (520 CFM)								
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	Entering Air Temp (db/wb °F)	Total Capacity (MBTUH)	Sensible Capacity (MBTUH)	Heat of Rejection (MBTUH)	Power Input (kW)	EER
50	2.5	1.2 (2.7)	75/63	18.4	14.0	21.7	1.0	17.7
			80/67	19.6	14.4	22.9	1.0	19.3
			85/71	20.8	14.9	24.1	1.0	21.0
	4	2.7 (6.2)	75/63	18.9	14.2	22.2	1.0	18.3
			80/67	20.1	14.6	23.4	1.0	20.0
			85/71	21.4	15.0	24.7	1.0	22.1
	5	4 (9.3)	75/63	19.0	14.2	22.4	1.0	18.4
			80/67	20.3	14.7	23.6	1.0	20.2
			85/71	21.6	15.1	25.0	1.0	22.3
60	2.5	1.1 (2.6)	75/63	17.7	13.7	21.0	1.1	16.5
			80/67	18.8	14.1	22.1	1.1	17.8
			85/71	20.0	14.6	23.3	1.0	19.1
	4	2.6 (6)	75/63	18.1	13.9	21.4	1.0	17.3
			80/67	19.3	14.3	22.6	1.0	18.8
			85/71	20.6	14.8	23.8	1.0	20.5
	5	3.9 (9)	75/63	18.3	13.9	21.6	1.0	17.5
			80/67	19.5	14.3	22.8	1.0	19.1
			85/71	20.8	14.9	24.0	1.0	20.9
70	2.5	1.1 (2.5)	75/63	16.9	13.4	20.3	1.1	14.9
			80/67	18.0	13.7	21.5	1.1	15.9
			85/71	19.2	14.2	22.6	1.1	17.0
	4	2.5 (5.8)	75/63	17.3	13.5	20.7	1.1	15.8
			80/67	18.5	13.9	21.9	1.1	17.0
			85/71	19.7	14.4	23.1	1.1	18.4
	5	3.8 (8.7)	75/63	17.5	13.6	20.8	1.1	16.1
			80/67	18.7	14.0	22.0	1.1	17.4
			85/71	19.9	14.4	23.2	1.1	18.9
80	2.5	1 (2.4)	75/63	16.2	13.0	19.7	1.2	13.1
			80/67	17.2	13.5	20.8	1.2	13.9
			85/71	18.3	13.8	22.0	1.2	14.8
	4	2.4 (5.6)	75/63	16.5	13.1	20.0	1.2	14.0
			80/67	17.6	13.6	21.2	1.2	15.0
			85/71	18.8	14.0	22.4	1.2	16.0
	5	3.6 (8.4)	75/63	16.7	13.2	20.1	1.2	14.3
			80/67	17.8	13.6	21.3	1.2	15.3
			85/71	19.0	14.1	22.5	1.2	16.5
85	2.5	1 (2.4)	75/63	15.8	12.8	19.4	1.3	12.3
			80/67	16.7	13.3	20.5	1.3	13.0
			85/71	17.8	13.8	21.6	1.3	13.7
	4	2.4 (5.5)	75/63	16.1	12.9	19.7	1.2	13.1
			80/67	17.2	13.5	20.8	1.2	13.9
			85/71	18.3	13.9	22.0	1.2	14.9
	5	3.6 (8.3)	75/63	16.2	13.0	19.8	1.2	13.3
			80/67	17.3	13.5	20.9	1.2	14.2
			85/71	18.5	13.9	22.1	1.2	15.3
90	2.5	1 (2.3)	75/63	15.4	12.6	19.2	1.3	11.4
			80/67	16.3	13.2	20.2	1.4	12.0
			85/71	17.3	13.6	21.3	1.4	12.7
	4	2.4 (5.5)	75/63	15.7	12.8	19.4	1.3	12.2
			80/67	16.7	13.2	20.5	1.3	12.9
			85/71	17.8	13.8	21.6	1.3	13.7
	5	3.5 (8.2)	75/63	15.8	12.8	19.5	1.3	12.4
			80/67	16.8	13.4	20.6	1.3	13.2
			85/71	18.0	13.9	21.8	1.3	14.1
100	2.5	1 (2.3)	75/63	14.5	12.3	18.6	1.5	9.9
			80/67	15.4	12.8	19.6	1.5	10.4
			85/71	16.4	13.2	20.8	1.5	10.9
	4	2.3 (5.3)	75/63	14.9	12.4	18.8	1.4	10.4
			80/67	15.8	12.9	19.9	1.4	11.0
			85/71	16.9	13.4	21.0	1.4	11.7
	5	3.4 (7.9)	75/63	14.9	12.5	18.9	1.4	10.6
			80/67	15.9	13.0	20.0	1.4	11.3
			85/71	17.0	13.5	21.1	1.4	12.0
110	2.5	1 (2.2)	75/63	13.7	12.0	18.1	1.6	8.5
			80/67	14.6	12.4	19.1	1.6	8.9
			85/71	15.5	12.9	20.2	1.7	9.3
	4	2.2 (5.1)	75/63	14.0	12.0	18.3	1.6	8.9
			80/67	14.9	12.5	19.3	1.6	9.4
			85/71	15.8	13.1	20.4	1.6	9.9
	5	3.3 (7.7)	75/63	14.0	12.2	18.3	1.5	9.1
			80/67	15.0	12.7	19.3	1.6	9.6
			85/71	16.0	13.2	20.5	1.6	10.1

- Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL



# Greensource iSeries Model BC Geothermal Heat Pump



BC018 Heating Performance Data - (520 CFM)							
Enter Fluid Temp (°F)	Water Flow (GPM)	Pressure Drop PSI (FOH)	EAT °F DB	"Total KBtu/hr."	Heat of Absorp kBtu/hr	Power kW	COP
30	2.5	1.2 (2.9)	60	13.7	9.6	1.2	3.4
			70	13.4	9.1	1.3	3.1
			80	13.3	8.5	1.4	2.8
	4	2.8 (6.7)	60	14.5	10.3	1.2	3.5
			70	14.2	9.7	1.3	3.2
			80	14.0	9.1	1.4	2.9
	5	4.2 (10)	60	14.8	10.6	1.2	3.5
			70	14.5	10.0	1.3	3.2
			80	14.2	9.3	1.4	2.9
40	2.5	1.2 (2.8)	60	15.6	11.3	1.3	3.6
			70	15.3	10.7	1.4	3.3
			80	15.1	10.1	1.5	3.0
	4	2.7 (6.5)	60	16.5	12.1	1.3	3.7
			70	16.2	11.5	1.4	3.4
			80	15.9	10.8	1.5	3.1
	5	4 (9.6)	60	16.9	12.5	1.3	3.8
			70	16.6	11.8	1.4	3.5
			80	16.3	11.1	1.5	3.2
50	2.5	1.2 (2.7)	60	18.0	13.5	1.3	3.9
			70	17.7	12.8	1.4	3.6
			80	17.5	12.2	1.5	3.3
	4	2.7 (6.2)	60	18.7	14.2	1.4	4.1
			70	18.4	13.5	1.5	3.7
			80	18.1	12.8	1.6	3.4
	5	4 (9.3)	60	19.2	14.7	1.4	4.1
			70	18.8	13.9	1.5	3.8
			80	18.6	13.2	1.6	3.4
60	2.5	1.1 (2.6)	60	20.2	15.6	1.4	4.3
			70	19.9	14.8	1.5	3.9
			80	19.5	14.1	1.6	3.5
	4	2.6 (6)	60	21.1	16.4	1.4	4.4
			70	20.7	15.6	1.5	4.0
			80	20.3	14.8	1.6	3.6
	5	3.9 (9)	60	21.6	17.0	1.4	4.5
			70	21.2	16.1	1.5	4.1
			80	20.8	15.2	1.7	3.7
70	2.5	1.1 (2.5)	60	22.4	17.7	1.4	4.6
			70	22.1	16.9	1.6	4.2
			80	21.8	16.1	1.7	3.8
	4	2.5 (5.8)	60	23.4	18.7	1.4	4.8
			70	23.1	17.8	1.6	4.3
			80	22.7	16.9	1.7	3.9
	5	3.8 (8.7)	60	24.1	19.3	1.5	4.8
			70	23.7	18.4	1.6	4.4
			80	23.3	17.5	1.7	3.9
80	2.5	1 (2.4)	60	24.7	20.0	1.5	4.9
			70	24.4	19.1	1.6	4.4
			80	24.1	18.2	1.8	4.0
	4	2.4 (5.6)	60	25.9	21.0	1.5	5.1
			70	25.5	20.1	1.6	4.5
			80	25.1	19.1	1.8	4.1
	5	3.6 (8.4)	60	26.7	21.7	1.5	5.1
			70	26.2	20.7	1.7	4.6
			80	25.8	19.7	1.8	4.1

**☐** - Extended Range - Anti-freeze required  
Ratings below 40°F are with a methanol solution.  
Unit performance may be interpolated. Extrapolation is not allowed.

Bosch Thermotechnology Corp.  
Londonderry, NH • Ft. Lauderdale, FL

# Greensource iSeries Model BC Geothermal Heat Pump



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	1.060
	10	0.994	0.994	1.006	0.986	0.995	1.125
	15	0.990	0.990	1.009	0.978	0.988	1.190
	25	0.983	0.983	1.016	0.960	0.979	1.300
Methanol	5	0.997	0.997	1.003	0.990	0.997	1.060
	10	0.996	0.996	1.005	0.979	0.993	1.100
	15	0.994	0.994	1.008	0.970	0.990	1.140
Ethanol	5	0.998	0.998	1.002	0.981	0.994	1.160
	10	0.996	0.996	1.004	0.960	0.988	1.230
	15	0.992	0.992	1.006	0.944	0.983	1.280
	25	0.986	0.986	1.009	0.917	0.974	1.400
Ethylene Glycol	5	0.997	0.997	1.003	0.993	0.998	1.060
	10	0.995	0.995	1.004	0.986	0.996	1.120
	15	0.992	0.992	1.005	0.980	0.993	1.190
	25	0.988	0.988	1.009	0.970	0.990	1.330
	30	0.985	0.985	1.012	0.965	0.987	1.400

Sound Data										
Casing Radiated	Load	Octave Band Sound Power Levels dB, re 10-12 Watts Center Frequency - Hz							Overall	A weighted overall (dBA)
		125	250	500	1000	2000	4000	8000		ARI-260:2001 (100hz-10kHz)
009	Cooling Full	65	59	47	43	34	30	28	66	54
012	Cooling Full	65	58	52	44	37	33	28	66	55
015	Cooling Full	62	61	54	50	43	40	35	65	56
018	Cooling Full	70	62	55	51	45	40	34	70	59

\* Tested according to AHRI-350-86 standard for "Sound Rating of Non-Ducted Indoor Air Conditioning Equipment"

\* Overall calculated using 125-8000 Hz octave bands.

# Greensource iSeries Model BC

## Geothermal Heat Pump



# BOSCH

### Specification Guide

#### GENERAL

Units shall be performance certified to ISO standard 13256-1 for Water Loop Heat Pump, Ground Water Heat Pump and Ground Loop Heat Pump applications. Units shall be ETL (US and C) listed for safety on all models. Each unit shall be run tested at the factory. Each unit shall be pallet mounted and stretch wrapped. The units shall be warranted by Bosch Thermotechnology Corp. against defects in materials and workmanship for a period of one year on all parts, and 5 years on the compressor. The units shall be designed to operate with entering fluid temperatures between 50°F (10°C) and 110°F (43.3°C) in cooling and temperatures between 25°F (-3.9°C) and 80°F (27°C) in heating as manufactured. The units shall be manufactured in an ISO9001:2000 certified facility.

#### CABINETWORK

Cabinetwork shall include two (2) separate integral assemblies to include: Cabinet and Sub-base. Cabinet shall be factory fabricated from heavy gauge "paint-grip" galvanized steel and finished with Polane T Plus polyurethane enamel paint finish. Cabinet dimensions are in accordance with drawings and are manufactured for left or right water discharge piping. Cabinet shall be single-piece construction. Removal of the cabinet shall give complete side and front access to unit for routine servicing. The cabinet is mounted onto the subbase and secured with two screws for security. A wall mounting bracket secured to the subbase shall be provided. Air flow is bottom intake-top discharge. Cabinets will be factory fabricated specifically for left hand or right hand connections as specified. Cabinet shall be slope top style, flat top cabinet is not acceptable.

#### SUB-BASE

Factory mounted 3-3/8" sub-base is constructed of heavy gauge painted steel. Cutouts are provided for floor connections and outside air. Includes integral filter mounts to support a bottom mount permanent, washable, aluminum mesh filter. Sub-base has a bracked that may be secured to the wall to provide stability.

#### CHASSIS

Chassis is of compact design and of the same dimensions for all model sizes. Dimensions must match details on drawings. Chassis mounts directly on support structures provided by the sub-base and shall be removable from the sub-base without dismantling the sub-base. Both compressor and coil compartments shall be thermally and acoustically insulated, and have removable steel cover plates giving double acoustical protection between the two compartments. Compressor is mounted to the bottom of chassis with a 2 piece base pan to reduce noise transmission and vibration. The compressor access panel shall have a closed cell foam insulation for extra quiet operation. Fiberglass insulation is not acceptable on compressor access panel. The stainless steel condensate drain pan shall be IAQ with positive slope and be removable without disturbing the evaporator assembly for cleaning as needed.

#### REFRIGERANT CIRCUIT

All units shall contain sealed R-410A refrigerant circuit including a hermetic compressor, finned tube refrigerant to air heat exchanger, four-way solenoid activated reversing valve, expansion valve refrigerant metering device and coaxial tube-in-tube water to refrigerant heat exchanger. Compressor shall be high efficiency designed for heat pump duty and mounted on vibration isolators. Fin-tube refrigerant-to-air exchanger shall be aluminum fin plate and copper tube construction rated to withstand 600 psig (4140 Kpa) refrigerant working pressure. Coils shall be baked enamel coated for protection against most airborne chemicals. Water-to-refrigerant heat exchanger shall be constructed of a convoluted copper or cupro-nickel inner tube and steel outer tube with a designed refrigerant working pressure of 600 psig (4140 Kpa) and water side working pressure of no less than 400 PSI (2750 Kpa). Four-way solenoid activated refrigerant reversing valve shall allow heating operation should the solenoid fail to function. All interconnecting tubing shall be copper. High and low pressure access shall be provided via schrader style ports.

#### FAN MOTOR ASSEMBLY

Unit blower is three-speed high efficiency PSC type. Motor is direct connected to two double width, double inlet forward curved oversized centrifugal blower wheels that are selected for quiet operation, and balanced to minimize vibration. Blower wheel access is through removable blower housing covers. Motor and Blower assembly shall be removable without removing the chassis. Blower CFM is per scheduled data.

#### ELECTRICAL

Control circuit shall be 24 volt with direct sensing high and low pressure switches connected to a normally closed safety circuit. Line voltage control circuit and/or normally open safety switches are unacceptable. Compressor and blower motors shall be individually protected against current and/or heat overload. Standard control options shall be: a) Unit mounted CUC controller incorporating the following features: Tactile touchpad for temperature, fan and mode adjustment, Digital temperature display, LED display indicating unit operating mode as well as fan speed and fault indication, Adjustable temperature set point and differential, Options for manual or automatic changeover, hi or low fan speed and constant or cycling fan operation, b) Provisions for a remotely mounted thermostat. The control box will additionally have a compressor contactor, fan relay, solid state lock-out device and class-2 transformer. The lockout circuit shall include diagnostic LED's, anti short cycle time delay, random start time delay and low pressure bypass time delay. A low voltage terminal board is provided for NEC class-2 connection to units intended for remote thermostat or master/slave connection only.

#### POWER CONNECTION

Units shall be provided with a factory mounted 2 x 4 junction box with removable cover on the same side as the water connections (left or right) for direct wire connection. This cover may be supplied with a non-fused power disconnect switch for servicing the unit. The unit shall operate with specified voltages 115v, 208/230v or 265v, single phase, 60 Hz supply current. Supply power ampacity and maximum fuse size are per electrical specifications marked on each unit's data plate.

#### REMOTE THERMOSTAT

Remote thermostat equipped units shall be provided with a 24 volt anticipating type wall thermostat. a) The thermostat shall be a manual changeover type with an OFF, HEAT, COOL selector switch and a FAN, AUTO selector switch. b) The thermostat shall be an auto changeover type with an OFF, AUTO selector switch and a FAN, AUTO selector switch. A Hi/Lo fan switch shall be unit mounted for fan speed control.

#### CABINET OPTIONS

The unit shall be chassis only, chassis on subbase, or chassis with subbase and cabinet.

#### PIPING OPTIONS

The unit shall be provided with factory installed supply and return water connection on right or left side. Supply and return water connections shall be a) 5/8" copper pipe for field connection of male or female pipe thread b) factory installed 1/2" FPT fitting for hose connection c) Factory supplied 1/2" FPT thread and field installed 1/2" x 12" stainless steel hose kit with an automatic flow control valve, ball valves with P/T ports, y-strainer with blow down valve.



Continuing engineering research results in steady improvements. Therefore, these ratings and specifications are subject to change without notice.