

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pump

Engineering
Submittal
Sheet



BOSCH

Overview and Certifications



Condenser Section



Compact Air Handler/Fan Coil



Standard Features, Factory Installed Options, and Field Installed Accessories

Standard Features for Condenser Section

- ▶ **White Pre-Painted Sheet Metal Cabinets**
 - Appliance white for a clean - durable look
 - Door handles - for easy removal for service
 - Indoor or outdoor installation for condenser section
- ▶ **High Efficiency**
 - Up to 32.7 EER and 5.0 COP @ PL GWHP
 - Up to 26.5 EER and 5.2 COP @ FL GWHP with Bosch Model DX Fan Coil Section
- ▶ **Closed Cell (Fiber Free) Insulation**
 - Lowers unit sound levels
- ▶ **Patent Pending Floating Base Pan**
 - Lowers sound levels to whisper quiet operation
- ▶ **Factory installed swivel fittings**
- ▶ **Scroll two capacity compressor**
 - Better comfort control when match with a Bosch Communicating Thermostat
 - Two capacities compressor helps to match the structures heat gain or heat loss
- ▶ **Reliability - Durability - Serviceability**
 - Alert communicating circuit board
 - Completely serviceable from front of unit
- ▶ **Electronic Circuit Board**
 - Low pressure switch protection
 - High pressure switch protection
 - Alarm output
 - Anti-short cycling
 - 5 Minute delay
 - Low pressure bypass at start up
 - Random start of unit
 - Brown out protection
- ▶ **Freeze Sensor**
- ▶ **Standard Warranty**
 - 10 Year all parts limited warranty
 - 10 Year labor limited warranty



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

Factory Installed Options for Condenser Section

- ▶ **Cupro-nickel Coil:**
 - Recommended in conditions anticipating moderate scale formation or in brackish water/well water
- ▶ **SmartStart:**
 - A factory installed start up device that improved start up efficiency as much as 65% and helps reduce wear and tear on the compressor during start up
- ▶ **Comfort Alert Module:**
 - This module can be added for additional diagnostic features
- ▶ **Fluid Differential Pressure Switch**
 - Prevents the unit refrigerant pressure switches to fault out
- ▶ **Pump Interlock Relay**
 - Helps ensure the external flow/pump center operates when unit is operating
- ▶ **Closed Cell Foam Insulation**
 - For whisper quiet operation
 - Not recommended for outdoor installation
- ▶ **Domestic Hot Water Generator/Heat Recovery Package/Desuperheater**
 - This option can supplement your hot water needs

Standard Features for SM Fan Coil Section

- ▶ **Electronically Commutative Motor**
 - Constant CFM Variable Speed ECM
- ▶ **Closed Cell (Fiber Free) Insulation**
 - Less than 2% Air Leakage Rate
 - Improved Indoor Air Quality
- ▶ **Dehumidification:**
 - Lowering the humidity in your home allows you to turn up the thermostat in the summer and save you on operational costs; accomplished with a Bosch communicating thermostat
- ▶ **Tin Plated Copper Tubing with Aluminum Fins**
 - This will protect the evaporator coil from most forms of corrosive elements in the airstream

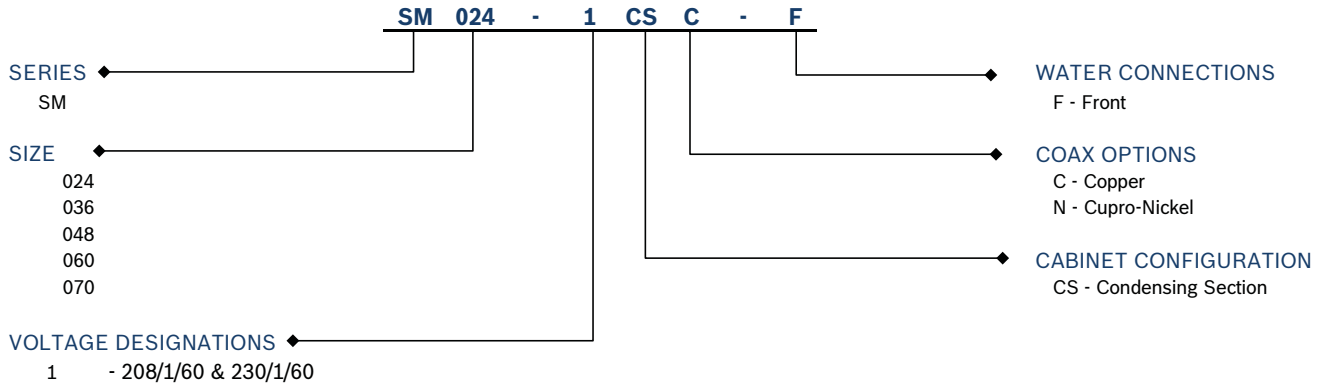
Factory Installed Options for SM Fan Coil Section

- ▶ **Internal Electric Heat:**
 - Can be factory mounted or field installed. Choices include 5, 10, 15, or 20 kilowatt back up or an emergency heater depending on the size of the geothermal heat pump

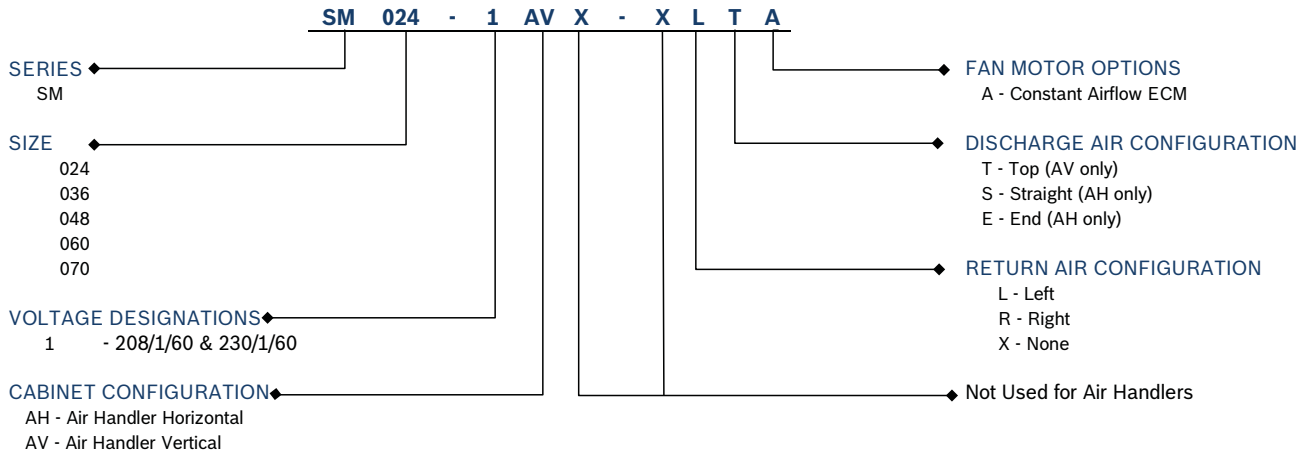
Field Installed Accessories for All

- ▶ **Thermostats:**
 - Bosch thermostats are fully customized to meet your individual needs. True Communicating thermostat that displays the alert messages without having to go to the unit
- ▶ **Photo-Catalytic Oxidizers (PCO):**
 - Refreshes and cleans the air in your home by converting Volatile Organic Compounds and other gases into harmless water vapor and CO2
- ▶ **Humidifiers:**
 - Bosch humidifiers release moisture into the air while helping to seal windows and doors tightly
- ▶ **Smoke Detection:**
 - In case of a fire, prevents smoke from spreading from room to room
- ▶ **Fresh Air Dampers:**
 - Helps to prevent home from going into a negative pressure situation
- ▶ **Carbon and Potassium- Permanganate Filters:**
 - Helps to remove gases, odors, and other volatile organic compounds by trapping them in mesh
- ▶ **DDC Control**
- ▶ **DX Air Handler/Fan Coil**
 - The Bosch DX fan coil is a full size fan coil for indoor use
 - Delivers the highest combined efficiencies
 - Constant CFM Variable Speed ECM
- ▶ **DX Evaporator Coil**
 - The Bosch DX Evaporator Coil is a great addition to add to a Hybrid System
 - Fits most manufacturers furnace opens
 - Delivers the highest combination efficiencies

Condenser Model Nomenclature



Fan Coil Model Nomenclature



GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



ASHRAE/AHRI/ISO 13256-1. English (I-P) Units														
Models	GPM	Load	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
SM024	6	Full	23800	14.1	29800	4.8	27100	20.6	24600	4.2	25300	16.2	19100	3.5
		Partial	18500	16.1	22700	5.6	20900	25.6	18300	4.6	19800	22.2	15500	3.9
SM036	9	Full	36900	16.2	44000	5.2	41100	24	36300	4.7	38800	18.8	28600	4.1
		Partial	26800	18.8	32000	6.1	30500	33	25900	5.1	29300	27.4	22800	4.5
SM048	12	Full	48000	15.4	56100	5.2	53400	23.1	45800	4.5	49400	17.7	35900	3.8
		Partial	35500	17.6	41000	5.8	39500	30.5	33400	4.8	38200	25.4	29200	4.3
SM060	15	Full	58100	14.6	72900	4.7	64100	20.6	59200	4.3	60200	16.4	46400	3.6
		Partial	43700	17	52900	5.2	48600	28	43000	4.5	47200	24.1	37800	4
SM070	18	Full	65200	13.1	80500	4.4	71600	18.6	66400	3.9	67500	14.9	52900	3.4
		Partial	51300	15	62300	5	56600	23.5	50000	4.2	55300	20.4	44800	3.8

ASHRAE/AHRI/ISO 13256-1. English (I-P) Units															
Models	Fan coil/Air handler or Evaporator Coil Model Number	Load	GPM	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
SM024-1CS	DX025-1VTX	F	6	23800	14.1	29800	4.8	27100	20.6	24600	4.2	25300	16.2	19100	3.5
	DX025-1VTX	P	6	18500	16.1	22700	5.6	20900	25.6	18300	4.6	19800	22.2	15500	3.9
	DX035-1VTX	F	6	26200	17.4	29000	5.7	29100	26.5	23900	5	27100	20.1	18700	4.2
	DX035-1VTX	P	6	19600	19.4	22500	6.5	21600	32.7	17800	5.2	21000	28	15500	4.5
	DX025-CC/UC	F	6	23200	13.9	30500	5	26500	20.5	25300	4.4	24700	16.1	19800	3.6
	DX025-CC/UC	P	6	18000	16	23200	5.8	20500	26.3	18800	4.7	19400	22.1	15800	4
SM036-1CS	DX035-1VTX	F	9	36900	16.2	44000	5.2	41100	24	36300	4.7	38800	18.8	28600	4.1
	DX035-1VTX	P	9	26800	18.8	32000	6.1	30500	33	25900	5.1	29300	27.4	22800	4.5
	DX049-1VTX	F	9	36900	16.7	43100	5.4	42000	25.4	35600	4.8	38600	19.4	28000	4.2
	DX049-1VTX	P	9	27100	19.3	31400	6.3	30900	34.6	25400	5.3	29400	28.5	22000	4.7
	DX035-CC/UC	F	9	36000	15.2	45000	5.1	40200	22.4	37200	4.6	37800	17.7	29600	4
	DX035-CC/UC	P	9	26100	17.2	32800	5.8	29700	29.3	26600	4.9	28600	24.7	23500	4.4
SM048-1CS	DX049-1VTX	F	12	48000	15.4	56100	5.2	53400	23.1	45800	4.5	49400	17.7	35900	3.8
	DX049-1VTX	P	12	35500	17.6	41000	5.8	39500	30.5	33400	4.8	38200	25.4	29200	4.3
	DX049-CC/UC	F	12	46500	14.4	57600	5.1	51900	21.3	47300	4.5	47900	16.5	37400	3.8
	DX049-CC/UC	P	12	34500	16.1	42100	5.6	38500	27.1	34400	4.7	37100	22.8	30300	4.1
SM060-1CS	DX061-1VTX	F	15	58100	14.6	72900	4.7	64100	20.6	59200	4.3	60200	16.4	46400	3.6
	DX061-1VTX	P	15	43700	17	52900	5.2	48600	28	43000	4.5	47200	24.1	37800	4
	DX071-1VTX	F	15	58700	14.5	70800	4.8	64900	20.4	59100	4.4	60800	16.4	47000	3.7
	DX071-1VTX	P	15	43700	17.3	51700	5.4	49000	28.6	42700	4.6	47300	24.4	37900	4.2
	DX061-CC/UC	F	15	56500	13.9	74600	4.8	62500	19.8	60900	4.3	58600	15.8	48100	3.6
	DX061-CC/UC	P	15	42500	15.7	54200	5.1	47400	25.4	44200	4.4	46000	21.9	39000	3.9
SM070-1CS	DX071-1VTX	F	18	65200	13.1	80500	4.4	71600	18.6	66400	3.9	67500	14.9	52900	3.4
	DX071-1VTX	P	18	51300	15	62300	5	56600	23.5	50000	4.2	55300	20.4	44800	3.8
	DX071-CC/UC	F	18	63400	12.9	82300	4.5	69900	18.5	68200	4	65800	14.7	54700	3.5
	DX071-CC/UC	P	18	49900	14.3	63700	5	55200	22.6	51400	4.2	54000	19.6	46300	3.9

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps



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Condenser Physical Data						
Description	Unit	Value				
		SM024	SM036	SM048	SM060	SM070
Compressor Type (Qty 1)	—	Scroll	Scroll	Scroll	Scroll	Scroll
Refrigeration Charge*	Oz.	80	86	93	115	127
Max Water Working Pressure	PSIG/kPa	450/3100	450/3100	450/3100	450/3100	450/3100
Water Connection Size						
FPT Swivel Connection	Inch	1.0	1.0	1.0	1.0	1.0
Coaxial Coil Volume	Gal	0.33	0.62	0.62	1.07	1.07
Cabinet						
Weight - Operating (lbs)**	lbs	172	172	172	237	237
Weight - Shipping (lbs)**	lbs	189	189	189	261	261

Fan Coil Physical Data						
Description	Unit	Value				
		SM024	SM036	SM048	SM060	SM070
ECM Const AirFlow -Eon Fan Motor & Blower						
Fan Motor Type/Speeds	—	ECM Const Air Flow	ECM Const Air Flow	ECM Const Air Flow	ECM Const Air Flow	ECM Const Air Flow
Fan Motor	HP	0.33	0.50	0.75	1.00	1.00
Blower Wheel Size	Inch (Dia. x W)	9 X 7	9 X 7	10 X 8	11 X 9	12 X 9
Vertical Cabinet (AV)						
Air Coil Dimensions (H x W)	Inch (H x W)	24 X 21	24 X 21	24 X 27	24 X 27	32 x 27
Nominal size of Standard Filter - 2" MERV8	Inch (L x H)	24 X 24 (1)	24 X 24 (1)	24 X 30 (1)	24 X 30 (1)	16 X 30 (2)
Weight - Operating (lbs)**	lbs	124	143	180	207	228
Weight - Shipping (lbs)**	lbs	152	175	220	253	279
Horizontal Cabinet (AH)						
Air Coil Dimensions	Inch (H x W)	18 X 28	18 X 28	20 X 32.5	20 X 32.5	20 X 43
Nominal size of Standard Filter - 2" MERV8	Inch (L x H)	20 X 30 (1)	20 X 30(1)	20 X 34 1/2 (1)	20 X 34 1/2 (1)	20 X 24 (2)
Weight - Operating (lbs)**	lbs	124	143	180	207	228
Weight - Shipping (lbs)**	lbs	152	175	220	253	279

* for 25 feet of line set

** This data reflects standard unit weights only. Additional options may cause differences in listed weights.

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

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps



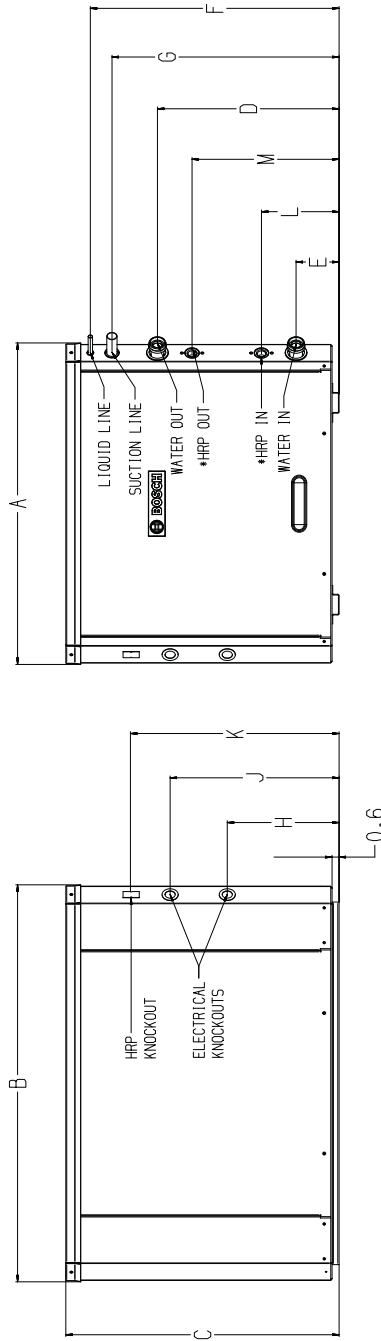
Condenser Electrical Data									
Models	Compressor	Voltage Code	Voltage/Phase/Hz	Voltage Min/Max	Compressor			Total Unit	
					QTY	RLA	LRA	Min Circuit Amps	Max Fuse/HACR
SM024	8733902168	1	208-230/1/60	197/253	1	11.7	58.3	14.6	25
SM036	8733902169	1	208-230/1/60	197/253	1	15.3	83.0	19.1	30
SM048	8733902170	1	208-230/1/60	197/253	1	21.2	104.0	26.5	45
SM060	8733902171	1	208-230/1/60	197/253	1	27.1	152.9	33.9	60
SM070	8733902172	1	208-230/1/60	197/253	1	29.7	179.2	37.1	60

Fan Coil Electrical Data								
Models	Blower motor	Voltage Code	Voltage/Phase/Hz	Voltage Min/Max	QTY	Motor FLA (A)	Total Unit	
							Min Circuit Amps	Max Fuse/HACR
SM024	8733805680	1	208-230/1/60	197/253	1	2.8	3.5	15
SM036	8733805681	1	208-230/1/60	197/253	1	4.3	5.4	15
SM048	8733805682	1	208-230/1/60	197/253	1	6.8	8.5	15
SM060	8733805683	1	208-230/1/60	197/253	1	9.1	11.4	20
SM070	8733805684	1	208-230/1/60	197/253	1	9.1	11.4	20

For units with Electric Heat Option - Constant CFM Variable Speed ECM all single circuit fused											
Model	Electric Heater Rated kW	Stage	Heater Watts		Heater Amps		Motor FLA (A)	MCA		MOCP	
			240V	208V	240V	208V		240V	208V	240V	208V
SM024	4.8	1	4,800	3,600	20.0	17.3	2.8	28.5	25.1	30	30
SM036	4.8	1	4,800	3,600	20.0	17.3	4.3	30.4	27.0	35	35
SM036	9.6	1	9,600	7,200	40.0	34.6	4.3	55.4	48.6	60	60
SM048	4.8	1	4,800	3,600	20.0	17.3	6.8	33.5	30.1	35	35
SM048	9.6	1	9,600	7,200	40.0	34.6	6.8	58.5	51.8	60	60
SM048	14.4	2	14400	10800	60	51.9	6.8	83.5	73.4	90	80
SM060	4.8	1	4,800	3,600	20.0	17.3	9.1	36.4	33.0	40	35
SM060	9.6	1	9,600	7,200	40.0	34.6	9.1	61.4	54.6	70	60
SM060	14.4	2	14400	10800	60	51.9	9.1	86.4	76.3	90	80
SM060	19.2	2	19200	14000	80	69.2	9.1	111.4	97.9	125	100
SM070	4.8	1	4,800	3,600	20.0	17.3	9.1	36.4	33.0	40	35
SM070	9.6	1	9,600	7,200	40.0	34.6	9.1	61.4	54.6	70	60
SM070	14.4	2	14400	10800	60	51.9	9.1	86.4	76.3	90	80
SM070	19.2	2	19200	14000	80	69.2	9.1	111.4	97.9	125	100

Condenser Dimensions and Connections

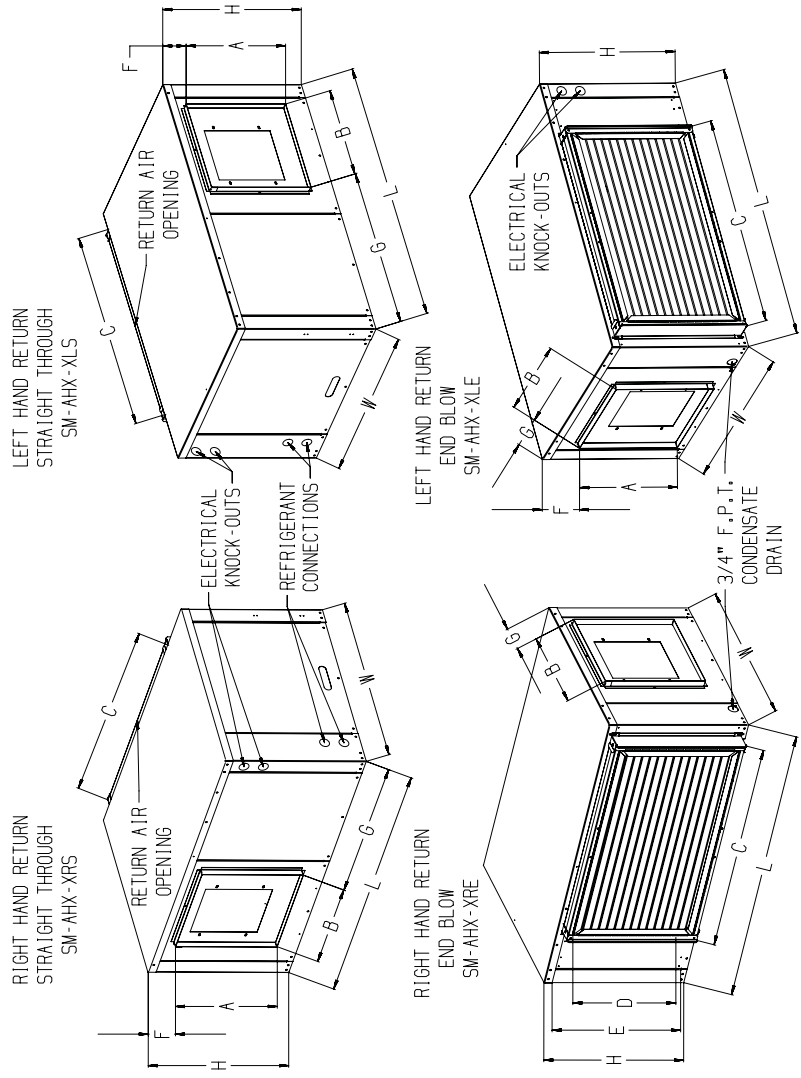
Model	A	B	C	D	E	F	G	H	J	K	L	M	WATER CONNECTIONS (SMVEL TYPE)
SM024-CS	24.0	27.4	21.5	12.7	3.7	3/8" @ 19.4	7/8" @ 17.6	8.6	13.5	16.8	6.2	10.1	1" F.P.T.
SM036-CS	24.0	27.4	21.5	15.5	3.5	3/8" @ 19.4	7/8" @ 17.6	8.6	13.5	16.8	6.6	13.0	1" F.P.T.
SM048-CS	24.0	27.4	21.5	15.5	3.5	3/8" @ 19.4	7/8" @ 17.6	8.6	13.5	16.8	6.6	13.0	1" F.P.T.
SM060-CS	27.0	33.4	23.3	15.5	3.7	3/8" @ 21.2	1" @ 19.4	9.5	14.4	17.7	6.6	12.5	1" F.P.T.
SM070-CS	27.0	33.4	23.3	15.5	3.7	3/8" @ 21.2	1" @ 19.4	9.5	14.4	17.7	6.6	12.5	1" F.P.T.



- NOTES**
- ALL DIMENSIONS WITHIN +/- 0.125"
 - ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED
 - SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
 - SMVEL TYPE WATER FITTINGS PROTRUDES 1.15" FROM POST
 - OPTIONAL HRP FEATURE WITH 1/2" FPT WATER CONNECTIONS

Fan Coil Horizontal Dimensions and Connections

MODEL	L	W	H	A	B	C	D	E	F	G	F	G	F	G	F	G	RECOMMENDED REPLACEMENT NOMINAL FILTER SIZE
SM024	33.00	26.00	21.75	15.75	13.75	30.00	16.00	16.00	1.25	4.13	2.00	4.13	1.38	10.63	1.88	10.63	20 X 30 X 2
SM036	33.00	26.00	21.75	15.75	13.75	30.00	16.00	16.00	1.25	4.13	2.00	4.13	1.38	10.63	1.88	10.63	20 X 30 X 2
SM048	36.50	30.00	21.75	15.75	15.75	33.50	18.50	20.50	2.63	4.00	2.63	4.00	2.63	11.38	2.63	11.38	20 X 34.5 X 2
SM060	36.50	30.00	21.75	17.75	17.75	33.50	18.50	20.50	1.50	4.13	1.75	4.13	1.75	10.38	1.50	10.38	20 X 34.5 X 2
SM070	49.50	30.00	21.75	17.75	17.75	44.00	18.50	20.50	1.50	4.13	1.75	4.13	1.75	15.63	1.50	15.63	20 X 24 X 1 (2)

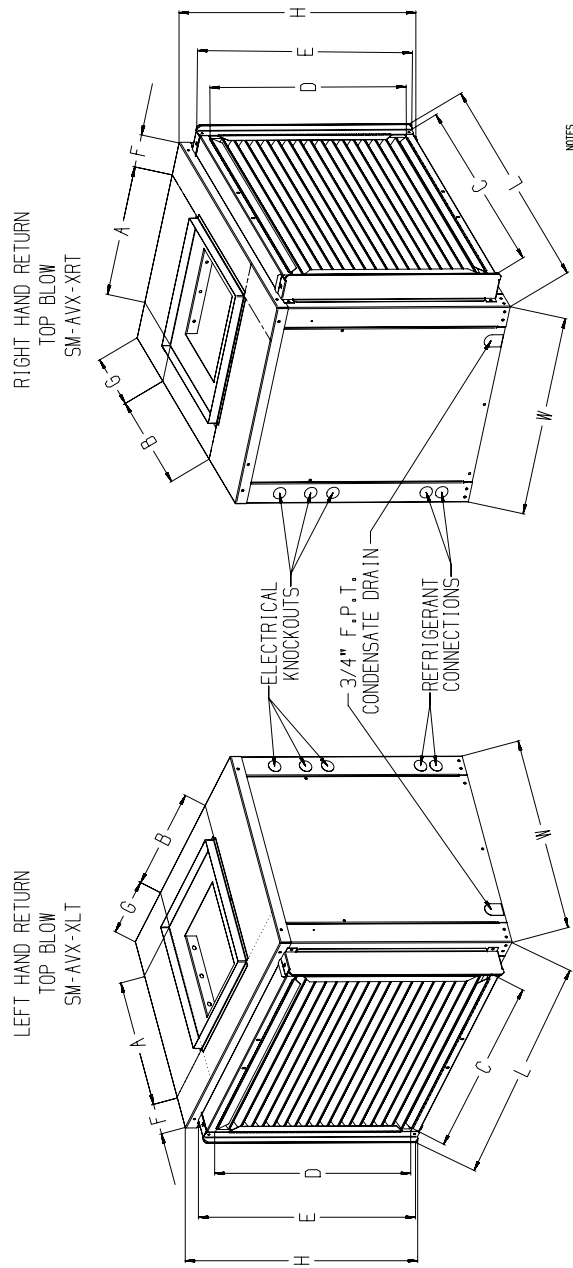


NOTES:
- DIMENSIONS WITHIN 1/8" ±
- ALL DIMENSIONS ARE IN INCHES
- SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SM HZ AIR HANDLING SECTION

Fan Coil Vertical Dimensions and Connections

Model	L LENGTH	W WIDTH	H HEIGHT	C R/A DUCT FLANGE WIDTH	D R/A DUCT FLANGE HEIGHT	E FILTER RACK HEIGHT	A		B		G	F		RECOMMENDED REPLACEMENT NOMINAL FILTER SIZE
							TOP BLOW UNITS (XLT & XRT)	S/A DUCT COLLAR	TOP BLOW UNITS (XLT & XRT)	S/A DUCT COLLAR		XLT	XRT	
SM024	26.00	21.50	25.75	22.00	22.25	24.00	15.75	13.75	6.13	5.25	6.13	4.00	4.00	24 X 24 X 2
SM036	26.00	21.50	25.75	22.00	22.25	24.00	15.75	13.75	6.13	5.25	6.13	4.00	4.00	24 X 24 X 2
SM048	32.75	24.00	25.75	28.50	22.25	24.00	15.75	15.75	8.38	5.50	8.38	3.50	3.50	24 X 30 X 2
SM060	33.25	26.00	27.75	28.50	22.25	24.00	17.75	17.75	8.37	6.25	8.37	4.00	4.00	24 X 30 X 2
SM070	33.25	26.00	35.75	28.50	30.25	32.00	17.75	17.75	8.37	6.25	8.37	4.00	4.00	16 X 30 X 2 (2)



NOTES
 - DIMENSIONS WITHIN +/- 0.125"
 - ALL DIMENSIONS ARE IN INCHES
 - SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

SM VT AIR HANDLING SECTION

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



SM024 Heating Performance Data - Full Load @ 900CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	3	1.9	0.8	60	16911	12302	1351	3.7
				70	16800	11442	1485	3.3
				80	16511	10495	1628	3.0
	4	3.2	1.4	60	17464	12848	1359	3.8
				70	17310	11954	1492	3.4
				80	16978	10933	1635	3.0
	6	6.6	2.9	60	18262	13446	1367	3.9
				70	17849	12495	1501	3.5
				80	17464	11543	1643	3.1
40	3	1.8	0.8	60	19093	14446	1384	4.0
				70	18943	13557	1518	3.7
				80	18723	12555	1662	3.3
	4	3.1	1.3	60	19937	15162	1395	4.2
				70	19503	14239	1530	3.7
				80	19215	13240	1673	3.4
	6	6.4	2.8	60	20766	15995	1408	4.3
				70	20352	14923	1541	3.9
				80	19928	13918	1685	3.5
50	3	1.8	0.8	60	22018	17322	1430	4.5
				70	21597	16356	1565	4.0
				80	21251	15292	1709	3.6
	4	3	1.3	60	22964	18141	1443	4.7
				70	22388	17131	1578	4.2
				80	21971	15986	1722	3.7
	6	6.1	2.6	60	23975	18993	1458	4.8
				70	23274	18010	1593	4.3
				80	22793	16757	1736	3.9
60	3	1.7	0.7	60	24767	19968	1473	4.9
				70	24260	18983	1609	4.4
				80	23851	17817	1755	4.0
	4	2.9	1.3	60	25912	20876	1489	5.1
				70	25209	19919	1625	4.5
				80	24667	18796	1772	4.1
	6	5.9	2.6	60	27075	22003	1508	5.3
				70	26436	20800	1642	4.7
				80	25835	19596	1789	4.2
70	3	1.6	0.7	60	27631	22790	1519	5.3
				70	27216	21564	1655	4.8
				80	26519	20590	1805	4.3
	4	2.8	1.2	60	28968	23825	1537	5.5
				70	28333	22644	1673	5.0
				80	27739	21438	1822	4.5
	6	5.7	2.5	60	30379	25157	1559	5.7
				70	29593	23864	1694	5.1
				80	28897	22553	1842	4.6
80	3	1.6	0.7	60	30791	25562	1565	5.8
				70	29957	24553	1703	5.2
				80	29534	23175	1853	4.7
	4	2.7	1.2	60	32207	26935	1584	6.0
				70	31392	25627	1723	5.3
				80	30725	24326	1873	4.8
	6	5.5	2.4	60	33755	28559	1603	6.2
				70	32916	27095	1739	5.5
				80	32082	25640	1893	5.0

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SM024 Heating Performance Data - Partial Load @ 600CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	3	1.9	0.8	60	11921	8450	1012	3.5
				70	11892	7765	1143	3.1
				80	11625	7030	1280	2.7
	4	3.2	1.4	60	12526	8902	1015	3.6
				70	12210	8146	1144	3.1
				80	11917	7366	1281	2.7
	6	6.6	2.9	60	12967	9391	1018	3.7
				70	12575	8562	1145	3.2
				80	12256	7741	1282	2.8
40	3	1.8	0.8	60	13981	10304	1023	4.0
				70	13534	9512	1148	3.5
				80	13297	8801	1283	3.0
	4	3.1	1.3	60	14602	11163	1026	4.2
				70	14015	10014	1151	3.6
				80	13830	9224	1287	3.2
	6	6.4	2.8	60	14951	11437	1028	4.3
				70	14469	10665	1154	3.7
				80	14219	9744	1288	3.2
50	3	1.8	0.8	60	16029	12638	1032	4.6
				70	15723	11740	1157	4.0
				80	15513	11044	1294	3.5
	4	3	1.3	60	16666	13324	1034	4.7
				70	16345	12405	1158	4.1
				80	16024	11513	1296	3.6
	6	6.1	2.6	60	17365	13929	1035	4.9
				70	16925	13025	1159	4.3
				80	16561	12060	1298	3.7
60	3	1.7	0.7	60	18768	15524	1039	5.3
				70	17772	13452	1160	4.5
				80	18052	13535	1303	4.1
	4	2.9	1.3	60	18959	15635	1039	5.3
				70	18498	14658	1162	4.7
				80	18119	13589	1303	4.1
	6	5.9	2.6	60	19665	16341	1039	5.5
				70	19091	15352	1164	4.8
				80	18740	14340	1305	4.2
70	3	1.6	0.7	60	21214	18287	1042	6.0
				70	19532	15558	1167	4.9
				80	19731	14651	1306	4.4
	4	2.8	1.2	60	21721	18347	1040	6.1
				70	20757	17069	1168	5.2
				80	20272	15710	1309	4.5
	6	5.7	2.5	60	22132	18847	1040	6.2
				70	21496	17732	1168	5.4
				80	21016	16640	1310	4.7
80	3	1.6	0.7	60	21935	20052	1045	6.2
				70	21855	17854	1168	5.5
				80	22013	17724	1313	4.9
	4	2.7	1.2	60	22863	18866	1037	6.5
				70	23304	19772	1168	5.9
				80	21525	18464	1282	4.9
	6	5.5	2.4	60	24507	20832	1033	7.0
				70	23833	20011	1167	6.0
				80	23322	18979	1321	5.2

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SM036 Heating Performance Data - Full Load @ 1225CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	4.5	1.7	0.7	60	27618	20038	2038	4.0
				70	27385	18790	2237	3.6
				80	26941	17719	2458	3.2
	6	2.9	1.3	60	28580	21034	2054	4.1
				70	28142	19819	2255	3.7
				80	27759	18515	2475	3.3
	9	6.1	2.6	60	29657	22286	2075	4.2
				70	29161	20825	2274	3.8
				80	28677	19413	2494	3.4
40	4.5	1.7	0.7	60	31399	23779	2104	4.4
				70	30891	22413	2307	3.9
				80	30435	21032	2531	3.5
	6	2.8	1.2	60	32623	24976	2126	4.5
				70	32006	23500	2328	4.0
				80	31250	22136	2554	3.6
	9	5.8	2.5	60	34011	26335	2151	4.6
				70	33262	24732	2353	4.1
				80	32637	23235	2578	3.7
50	4.5	1.6	0.7	60	36065	28402	2187	4.8
				70	35420	26890	2386	4.4
				80	34855	25498	2622	3.9
	6	2.7	1.2	60	37513	30099	2211	5.0
				70	36806	28243	2405	4.5
				80	36047	26487	2637	4.0
	9	5.6	2.4	60	39247	31577	2237	5.1
				70	38312	29844	2430	4.6
				80	37368	28032	2656	4.1
60	4.5	1.6	0.7	60	40626	32554	2257	5.3
				70	39817	31117	2455	4.8
				80	39157	29621	2678	4.3
	6	2.6	1.1	60	42284	34532	2287	5.4
				70	41430	32863	2482	4.9
				80	40571	30945	2702	4.4
	9	5.5	2.4	60	44406	36336	2321	5.6
				70	43240	34667	2513	5.0
				80	42206	32707	2733	4.5
70	4.5	1.5	0.7	60	45260	37402	2337	5.7
				70	44350	35699	2532	5.1
				80	43484	33827	2755	4.6
	6	2.5	1.1	60	47302	39703	2374	5.8
				70	46269	37588	2567	5.3
				80	45498	35262	2786	4.8
	9	5.3	2.3	60	49769	41429	2414	6.0
				70	48411	39712	2605	5.4
				80	47261	37624	2824	4.9
80	4.5	1.5	0.7	60	50082	42310	2423	6.1
				70	49066	40294	2617	5.5
				80	48114	38402	2840	5.0
	6	2.5	1.1	60	52493	44523	2467	6.2
				70	51298	42481	2659	5.7
				80	50177	40422	2879	5.1
	9	5.1	2.2	60	55385	46568	2516	6.5
				70	53791	44939	2706	5.8
				80	52467	42683	2924	5.3

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SM036 Heating Performance Data - Partial Load @ 1050CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	4.5	1.7	0.7	60	19553	13698	1586	3.6
				70	19299	12536	1765	3.2
				80	18841	11380	1970	2.8
	6	2.9	1.3	60	20075	14228	1587	3.7
				70	19745	12994	1766	3.3
				80	19267	11902	1971	2.9
	9	6.1	2.6	60	20651	14813	1589	3.8
				70	20244	13471	1767	3.4
				80	19701	12245	1970	2.9
40	4.5	1.7	0.7	60	22550	16772	1595	4.1
				70	22173	15542	1771	3.7
				80	21736	14300	1976	3.2
	6	2.8	1.2	60	23232	17466	1597	4.3
				70	22769	16163	1773	3.8
				80	22285	14836	1977	3.3
	9	5.8	2.5	60	23990	18237	1599	4.4
				70	23441	16841	1774	3.9
				80	22895	15394	1979	3.4
50	4.5	1.6	0.7	60	26125	20502	1606	4.8
				70	25506	19118	1781	4.2
				80	24943	17615	1985	3.7
	6	2.7	1.2	60	26918	21351	1608	4.9
				70	26284	19819	1783	4.3
				80	25719	18408	1989	3.8
	9	5.6	2.4	60	27829	22158	1609	5.1
				70	27078	20624	1786	4.4
				80	26354	19468	1993	3.9
60	4.5	1.6	0.7	60	29592	23981	1613	5.4
				70	28906	22504	1794	4.7
				80	28307	21016	2003	4.1
	6	2.6	1.1	60	30564	24977	1615	5.5
				70	29796	23408	1798	4.9
				80	29116	21832	2008	4.3
	9	5.5	2.4	60	31631	26070	1618	5.7
				70	30769	24396	1802	5.0
				80	30000	22721	2014	4.4
70	4.5	1.5	0.7	60	33152	27676	1617	6.0
				70	32384	26062	1807	5.3
				80	31691	24443	2025	4.6
	6	2.5	1.1	60	34323	28893	1616	6.2
				70	33508	27197	1805	5.4
				80	32681	25442	2029	4.7
	9	5.3	2.3	60	35617	30233	1615	6.5
				70	34708	28449	1802	5.6
				80	33806	26572	2029	4.9
80	4.5	1.5	0.7	60	36866	31539	1614	6.7
				70	36034	29871	1803	5.9
				80	35310	27976	2028	5.1
	6	2.5	1.1	60	38241	32967	1612	7.0
				70	37303	31179	1806	6.1
				80	36459	29333	2030	5.3
	9	5.1	2.2	60	39754	34545	1610	7.2
				70	38703	32616	1808	6.3
				80	37754	30668	2033	5.4

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SM048 Heating Performance Data - Full Load @ 1700CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	6	2.9	1.3	60	35981	26768	2644	4.0
				70	35742	25216	2910	3.6
				80	35228	23613	3194	3.2
	8	4.9	2.1	60	37800	28238	2674	4.1
				70	37124	26538	2935	3.7
				80	36483	24807	3217	3.3
	12	10.2	4.4	60	39571	29925	2708	4.3
				70	38698	28075	2963	3.8
				80	37847	26246	3242	3.4
40	6	2.8	1.2	60	40956	31473	2737	4.4
				70	40546	29875	2991	4.0
				80	40005	28203	3264	3.6
	8	4.7	2.0	60	43109	33358	2772	4.6
				70	42324	31592	3018	4.1
				80	41587	29792	3288	3.7
	12	9.8	4.3	60	45392	35565	2808	4.7
				70	44417	33616	3051	4.3
				80	43483	31631	3318	3.8
50	6	2.7	1.2	60	48188	37963	2847	5.0
				70	47089	36262	3093	4.5
				80	46283	34333	3363	4.0
	8	4.6	2.0	60	50267	40242	2882	5.1
				70	49191	38233	3125	4.6
				80	48080	36121	3394	4.2
	12	9.5	4.1	60	52847	42782	2921	5.3
				70	51601	40562	3162	4.8
				80	50414	38309	3431	4.3
60	6	2.6	1.1	60	54146	44024	2940	5.4
				70	53084	42097	3186	4.9
				80	52150	39968	3460	4.4
	8	4.4	1.9	60	56842	46637	2980	5.6
				70	55629	44439	3225	5.1
				80	54379	42197	3500	4.6
	12	9.1	3.9	60	59972	49674	3026	5.8
				70	58526	47240	3271	5.2
				80	57148	44776	3546	4.7
70	6	2.5	1.1	60	60901	50286	3036	5.9
				70	59408	48115	3285	5.3
				80	58339	45942	3566	4.8
	8	4.3	1.9	60	63784	53353	3082	6.1
				70	62250	51323	3334	5.5
				80	61221	48529	3617	5.0
	12	8.8	3.8	60	67454	56913	3135	6.3
				70	65811	54255	3388	5.7
				80	64246	51569	3674	5.1
80	6	2.5	1.1	60	67688	56734	3134	6.3
				70	66037	54451	3392	5.7
				80	64781	52057	3683	5.2
	8	4.1	1.8	60	71009	60338	3187	6.5
				70	69328	57996	3448	5.9
				80	67858	55514	3744	5.3
	12	8.6	3.7	60	75234	64436	3249	6.8
				70	73400	61546	3514	6.1
				80	71652	58632	3813	5.5

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SM048 Heating Performance Data - Partial Load @ 1100CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	6	2.9	1.3	60	26178	19040	2048	3.7
				70	25260	17284	2275	3.3
				80	24632	15515	2528	2.9
	8	4.9	2.1	60	26961	19913	2054	3.8
				70	26030	17757	2279	3.4
				80	25392	16029	2533	2.9
	12	10.2	4.4	60	27802	20532	2059	4.0
				70	26738	18681	2288	3.4
				80	25884	16885	2543	3.0
40	6	2.8	1.2	60	29775	22601	2074	4.2
				70	28893	20652	2308	3.7
				80	28094	18838	2569	3.2
	8	4.7	2.0	60	30741	23397	2081	4.3
				70	29779	21504	2316	3.8
				80	28887	19580	2578	3.3
	12	9.8	4.3	60	31852	24470	2089	4.5
				70	30729	22463	2326	3.9
				80	29743	20576	2590	3.4
50	6	2.7	1.2	60	34375	26992	2109	4.8
				70	33189	25308	2354	4.1
				80	32517	23101	2622	3.6
	8	4.6	2.0	60	35491	28087	2117	4.9
				70	34230	26514	2365	4.2
				80	33349	24228	2634	3.7
	12	9.5	4.1	60	36732	29386	2124	5.1
				70	35662	27364	2369	4.4
				80	34395	25463	2648	3.8
60	6	2.6	1.1	60	38532	31633	2136	5.3
				70	37619	29841	2383	4.6
				80	36855	27317	2663	4.1
	8	4.4	1.9	60	39957	32847	2143	5.5
				70	39041	30663	2390	4.8
				80	37970	28650	2671	4.2
	12	9.1	3.9	60	41709	34329	2151	5.7
				70	40445	32053	2401	4.9
				80	39144	30059	2679	4.3
70	6	2.5	1.1	60	43202	36326	2162	5.9
				70	42372	34007	2415	5.1
				80	41379	31892	2694	4.5
	8	4.3	1.9	60	44892	37762	2170	6.1
				70	43891	35504	2426	5.3
				80	43050	33497	2707	4.7
	12	8.8	3.8	60	46934	39569	2180	6.3
				70	45568	36949	2439	5.5
				80	44147	35273	2722	4.8
80	6	2.5	1.1	60	48330	41358	2190	6.5
				70	47180	38796	2451	5.6
				80	46102	36590	2737	4.9
	8	4.1	1.8	60	50042	42883	2200	6.7
				70	48960	40555	2465	5.8
				80	48006	38197	2752	5.1
	12	8.6	3.7	60	52398	45041	2213	6.9
				70	50893	42526	2481	6.0
				80	49694	39862	2771	5.3

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SM060 Heating Performance Data - Full Load @ 2000CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	7.5	3.1	1.3	60	47287	34119	3738	3.7
				70	46427	32332	4065	3.4
				80	46113	30133	4418	3.1
	10	5.2	2.3	60	48924	35799	3768	3.8
				70	48158	33523	4092	3.5
				80	47523	31486	4448	3.1
	15	10.8	4.7	60	50752	37380	3801	3.9
				70	49897	35207	4127	3.5
				80	49124	33022	4483	3.2
40	7.5	3	1.3	60	53236	39633	3845	4.1
				70	52291	37884	4179	3.7
				80	51873	35588	4542	3.4
	10	5	2.2	60	55353	41645	3883	4.2
				70	54417	39501	4215	3.8
				80	53679	37318	4581	3.4
	15	10.4	4.5	60	57664	44018	3928	4.3
				70	56654	41667	4260	3.9
				80	55737	39294	4626	3.5
50	7.5	2.9	1.3	60	61213	47395	3993	4.5
				70	60369	45334	4335	4.1
				80	59507	42855	4709	3.7
	10	4.9	2.1	60	63669	49771	4040	4.6
				70	62629	47669	4382	4.2
				80	61605	44863	4755	3.8
	15	10.1	4.4	60	66438	52456	4093	4.8
				70	65139	49789	4432	4.3
				80	63936	47096	4808	3.9
60	7.5	2.8	1.2	60	68748	54683	4137	4.9
				70	67632	52263	4484	4.4
				80	66604	49804	4870	4.0
	10	4.7	2.0	60	71610	57365	4193	5.0
				70	70316	54685	4539	4.5
				80	69101	52378	4928	4.1
	15	9.7	4.2	60	74931	60565	4259	5.2
				70	73368	57614	4605	4.7
				80	71902	54633	4989	4.2
70	7.5	2.7	1.2	60	76513	62009	4291	5.2
				70	74983	59411	4643	4.7
				80	73775	56709	5036	4.3
	10	4.5	2.0	60	79976	65327	4362	5.4
				70	78513	62605	4716	4.9
				80	77019	59653	5111	4.4
	15	9.4	4.1	60	83862	69054	4443	5.5
				70	82005	65790	4794	5.0
				80	80252	62493	5187	4.5
80	7.5	2.6	1.1	60	84718	69871	4461	5.6
				70	83157	66816	4820	5.1
				80	81726	63823	5223	4.6
	10	4.4	1.9	60	88716	73905	4547	5.7
				70	86851	70705	4908	5.2
				80	85050	67511	5311	4.7
	15	9.1	3.9	60	93110	77807	4644	5.9
				70	90940	74207	5002	5.3
				80	88874	70579	5402	4.8

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SM060 Heating Performance Data - Partial Load @ 1500CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	7.5	3.1	1.3	60	34386	24920	2628	3.8
				70	33122	22613	2900	3.4
				80	31980	20180	3199	2.9
	10	5.2	2.3	60	35324	25797	2636	3.9
				70	34003	23504	2910	3.4
				80	32769	20927	3210	3.0
	15	10.8	4.7	60	36416	26875	2647	4.0
				70	34988	24330	2921	3.5
				80	33642	21762	3222	3.1
40	7.5	3	1.3	60	38956	29638	2672	4.3
				70	37865	27227	2952	3.8
				80	36674	24763	3266	3.3
	10	5	2.2	60	40255	30889	2685	4.4
				70	38879	28504	2962	3.9
				80	37687	25897	3282	3.4
	15	10.4	4.5	60	41704	32363	2694	4.5
				70	40265	29601	2971	4.0
				80	38846	26991	3287	3.5
50	7.5	2.9	1.3	60	44946	35834	2716	4.9
				70	43488	33183	2999	4.3
				80	42705	30564	3313	3.8
	10	4.9	2.1	60	46633	37115	2724	5.0
				70	45077	34414	3010	4.4
				80	43716	31783	3326	3.9
	15	10.1	4.4	60	48262	38797	2734	5.2
				70	46561	35899	3022	4.5
				80	45062	33118	3339	4.0
60	7.5	2.8	1.2	60	50880	41406	2749	5.4
				70	49499	38732	3044	4.8
				80	48101	36610	3370	4.2
	10	4.7	2.0	60	52650	43229	2759	5.6
				70	50841	40793	3057	4.9
				80	49533	37580	3381	4.3
	15	9.7	4.2	60	54612	45242	2770	5.8
				70	52790	42154	3068	5.0
				80	51166	39214	3396	4.4
70	7.5	2.7	1.2	60	56910	47429	2781	6.0
				70	55410	44581	3086	5.3
				80	53830	41867	3419	4.6
	10	4.5	2.0	60	58861	49489	2791	6.2
				70	57026	47094	3100	5.4
				80	55583	43628	3433	4.7
	15	9.4	4.1	60	61147	51817	2802	6.4
				70	59144	49156	3114	5.6
				80	57510	45569	3449	4.9
80	7.5	2.6	1.1	60	63002	53670	2810	6.6
				70	61509	50623	3125	5.8
				80	59778	47822	3466	5.1
	10	4.4	1.9	60	65383	56094	2821	6.8
				70	63707	52981	3138	6.0
				80	61898	50496	3484	5.2
	15	9.1	3.9	60	68013	58779	2831	7.0
				70	65851	55946	3153	6.1
				80	64030	52126	3497	5.4

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps



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SM070 Heating Performance Data - Full Load @ 2200CFM

Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	9	4.3	1.9	60	50800	36465	4052	3.7
				70	49994	33811	4408	3.3
				80	50400	32427	4820	3.1
	12	7.2	3.1	60	53190	38703	4094	3.8
				70	52582	36451	4459	3.5
				80	51901	34164	4862	3.1
	18	15	6.5	60	55316	40134	4131	3.9
				70	54332	37946	4491	3.5
				80	53751	36025	4894	3.2
40	9	4.2	1.8	60	57978	42876	4183	4.1
				70	57352	41004	4547	3.7
				80	56721	38810	4946	3.4
	12	7	3.0	60	60345	45151	4223	4.2
				70	59629	42886	4586	3.8
				80	58958	40617	4986	3.5
	18	14.5	6.3	60	63227	48221	4274	4.3
				70	62344	45403	4635	3.9
				80	60970	43352	5037	3.6
50	9	4	1.7	60	67321	51779	4339	4.6
				70	66562	49570	4712	4.1
				80	65082	47149	5120	3.7
	12	6.7	2.9	60	69901	54144	4385	4.7
				70	68753	51541	4756	4.2
				80	67892	49293	5170	3.9
	18	14	6.1	60	72972	57275	4442	4.8
				70	71691	54180	4810	4.4
				80	69959	50939	5211	3.9
60	9	3.9	1.7	60	75315	59603	4483	4.9
				70	74283	56832	4860	4.5
				80	73621	54501	5283	4.1
	12	6.5	2.8	60	79255	63760	4551	5.1
				70	77469	59787	4921	4.6
				80	76247	57598	5345	4.2
	18	13.5	5.9	60	82144	66427	4611	5.2
				70	81265	63441	4993	4.8
				80	79925	59461	5406	4.3
70	9	3.8	1.6	60	84258	67943	4641	5.3
				70	82700	65161	5026	4.8
				80	81580	62007	5451	4.4
	12	6.3	2.7	60	88774	72282	4721	5.5
				70	87188	69371	5107	5.0
				80	85822	66517	5537	4.5
	18	13.1	5.7	60	92931	76109	4802	5.7
				70	90819	72502	5182	5.1
				80	89321	68900	5610	4.7
80	9	3.6	1.6	60	93466	76707	4812	5.7
				70	91831	73497	5201	5.2
				80	90277	70221	5633	4.7
	12	6.1	2.6	60	97928	81729	4904	5.9
				70	96020	77894	5289	5.3
				80	94944	74665	5726	4.9
	18	12.6	5.5	60	103243	86686	5005	6.0
				70	101113	82024	5387	5.5
				80	98695	78702	5816	5.0

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



SM070 Heating Performance Data - Partial Load @ 1600CFM								
Entering Water Temp °F	Water flow GPM	Pressure Drop (FOH)	Pressure Drop (PSI)	Ent. Air db/wb, °F	Total Btu/hr.	Ht. Abs. Btu/hr.	Unit kW	COP
30	9	4.3	1.9	60	37698	26277	3246	3.4
				70	37247	24337	3595	3.0
				80	36794	22949	4002	2.7
	12	7.2	3.1	60	38647	26811	3252	3.5
				70	38908	25845	3610	3.2
				80	38782	23861	4016	2.8
	18	15	6.5	60	39538	28374	3262	3.6
				70	39129	26186	3616	3.2
				80	38742	24284	4023	2.8
40	9	4.2	1.8	60	42995	31105	3290	3.8
				70	42345	29006	3652	3.4
				80	41834	26942	4065	3.0
	12	7	3.0	60	44163	32675	3304	3.9
				70	43386	30389	3667	3.5
				80	43072	27364	4077	3.1
	18	14.5	6.3	60	45532	35636	3325	4.0
				70	45089	32773	3691	3.6
				80	40669	30071	3995	3.0
50	9	4	1.7	60	49674	37791	3358	4.3
				70	49436	37564	3747	3.9
				80	48548	34794	4176	3.4
	12	6.7	2.9	60	51196	39257	3373	4.5
				70	49603	37422	3747	3.9
				80	48233	27618	4162	3.4
	18	14	6.1	60	52015	39575	3377	4.5
				70	48471	38982	3670	3.9
				80	50584	36003	4195	3.5
60	9	3.9	1.7	60	55929	44085	3412	4.8
				70	55686	44073	3813	4.3
				80	54730	41766	4241	3.8
	12	6.5	2.8	60	57753	46170	3429	4.9
				70	55949	43158	3807	4.3
				80	51650	43746	4137	3.7
	18	13.5	5.9	60	61323	49733	3455	5.2
				70	57993	44434	3824	4.4
				80	53706	43067	4149	3.8
70	9	3.8	1.6	60	62830	50886	3471	5.3
				70	61604	48484	3864	4.7
				80	61453	47309	4317	4.2
	12	6.3	2.7	60	65503	53632	3494	5.5
				70	63215	50984	3889	4.8
				80	61194	51254	4346	4.1
	18	13.1	5.7	60	67865	55282	3514	5.7
				70	67138	53049	3922	5.0
				80	60472	49806	4234	4.2
80	9	3.6	1.6	60	69472	57799	3536	5.8
				70	68346	54772	3939	5.1
				80	67195	52410	4383	4.5
	12	6.1	2.6	60	72543	60123	3560	6.0
				70	71665	57024	3969	5.3
				80	69077	53987	4408	4.6
	18	12.6	5.5	60	76164	67475	3607	6.2
				70	74595	62840	4017	5.4
				80	71754	56593	4419	4.8

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



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SM024 Cooling Performance Data - Full Load @ 900CFM									
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
50	3	1.7	0.7	75/63	27260	21766	31270	1281	21.3
				80/67	29055	22452	33230	1304	22.3
				85/71	30843	23355	35173	1326	23.2
	4	2.9	1.3	75/63	27846	22025	31773	1225	22.7
				80/67	29678	22834	33761	1244	23.9
				85/71	31586	23603	35825	1264	25.0
	6	5.9	2.6	75/63	28457	22264	32296	1165	24.4
				80/67	30369	23081	34357	1180	25.7
				85/71	32361	23868	36500	1196	27.0
60	3	1.6	0.7	75/63	26146	21295	30314	1391	18.8
				80/67	27840	22093	32169	1413	19.7
				85/71	29602	22845	34093	1435	20.6
	4	2.8	1.2	75/63	26690	21517	30782	1338	20.0
				80/67	28451	22324	32697	1356	21.0
				85/71	30306	23087	34708	1374	22.0
	6	5.7	2.5	75/63	27242	21758	31255	1283	21.2
				80/67	29118	22503	33282	1298	22.4
				85/71	31035	23348	35347	1312	23.6
70	3	1.6	0.7	75/63	25008	20833	29349	1506	16.6
				80/67	26652	21603	31160	1528	17.4
				85/71	28359	22333	33034	1551	18.3
	4	2.7	1.2	75/63	25519	21037	29781	1453	17.6
				80/67	27226	21824	31646	1472	18.5
				85/71	29003	22577	33581	1490	19.5
	6	5.5	2.4	75/63	26032	21248	30217	1402	18.6
				80/67	27812	22054	32147	1416	19.6
				85/71	29672	22806	34158	1430	20.7
80	3	1.5	0.6	75/63	23842	20334	28394	1632	14.6
				80/67	25443	21093	30167	1655	15.4
				85/71	27035	22037	31924	1677	16.1
	4	2.6	1.1	75/63	24327	20524	28789	1578	15.4
				80/67	25983	21305	30606	1597	16.3
				85/71	27649	22234	32429	1615	17.1
	6	5.4	2.3	75/63	24809	20724	29186	1527	16.2
				80/67	26529	21510	31060	1542	17.2
				85/71	28271	22440	32949	1555	18.2
85	3	1.5	0.6	75/63	23247	19540	27925	1701	13.7
				80/67	24792	20947	29641	1724	14.4
				85/71	26415	21683	31439	1748	15.1
	4	2.5	1.1	75/63	23716	20275	28294	1647	14.4
				80/67	25350	21041	30093	1666	15.2
				85/71	27003	21903	31908	1684	16.0
	6	5.3	2.3	75/63	24182	20459	28670	1595	15.2
				80/67	25874	21250	30518	1609	16.1
				85/71	27574	22217	32366	1623	17.0
90	3	1.5	0.6	75/63	22649	19263	27468	1776	12.8
				80/67	24154	20730	29148	1800	13.4
				85/71	25719	21570	30888	1824	14.1
	4	2.5	1.1	75/63	23100	19461	27812	1720	13.4
				80/67	24667	20912	29542	1739	14.2
				85/71	26328	21645	31372	1758	15.0
	6	5.2	2.3	75/63	23547	19657	28161	1667	14.1
				80/67	25179	21097	29947	1681	15.0
				85/71	26904	21859	31828	1695	15.9
100	3	1.4	0.6	75/63	21409	18768	26573	1944	11.0
				80/67	22917	19524	28263	1968	11.6
				85/71	24409	20508	29919	1986	12.3
	4	2.4	1.0	75/63	21824	18956	26860	1884	11.6
				80/67	23340	19828	28546	1904	12.3
				85/71	24932	20677	30296	1918	13.0
	6	5	2.2	75/63	22240	19118	27162	1828	12.2
				80/67	23824	19967	28905	1843	12.9
				85/71	25488	21374	30724	1855	13.7
110	3	1.4	0.6	75/63	20180	18246	25785	2140	9.4
				80/67	21617	19122	27399	2160	10.0
				85/71	23074	19994	29030	2179	10.6
	4	2.4	1.0	75/63	20554	18392	26015	2078	9.9
				80/67	22071	19173	27700	2093	10.5
				85/71	23562	20169	29346	2106	11.2
	6	4.9	2.1	75/63	20900	18552	26233	2022	10.3
				80/67	22479	19353	27965	2031	11.1
				85/71	24054	20271	29685	2039	11.8

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



SM024 Cooling Performance Data - Partial Load @ 600CFM

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
50	3	1.7	0.7	75/63	20699	15630	23132	760	27.2
				80/67	22133	16115	24641	754	29.4
				85/71	23603	16649	26177	746	31.6
	4	2.9	1.3	75/63	21046	15778	23462	732	28.8
				80/67	22502	16357	24990	723	31.1
				85/71	24022	16888	26574	713	33.7
	6	5.9	2.6	75/63	21381	15916	23788	706	30.3
				80/67	22921	16448	25402	695	33.0
				85/71	24471	17050	27012	683	35.8
60	3	1.6	0.7	75/63	19755	15188	22260	847	23.3
				80/67	21111	15785	23690	840	25.1
				85/71	22562	16241	25213	832	27.1
	4	2.8	1.2	75/63	20078	15326	22554	816	24.6
				80/67	21483	15928	24029	806	26.6
				85/71	22982	16403	25596	796	28.9
	6	5.7	2.5	75/63	20380	15443	22836	789	25.8
				80/67	21840	16072	24359	776	28.1
				85/71	23395	16557	25911	762	30.7
70	3	1.6	0.7	75/63	18790	14752	21413	949	19.8
				80/67	20107	15317	22809	942	21.3
				85/71	21474	15867	24250	935	23.0
	4	2.7	1.2	75/63	19083	14877	21666	917	20.8
				80/67	20450	15455	23106	907	22.5
				85/71	21836	16101	24559	896	24.4
	6	5.5	2.4	75/63	19207	14749	21847	911	21.1
				80/67	20770	15571	23391	875	23.7
				85/71	22218	16235	24896	860	25.8
80	3	1.5	0.6	75/63	17776	14418	20556	1064	16.7
				80/67	19035	14998	21903	1059	18.0
				85/71	20367	15472	23320	1054	19.3
	4	2.6	1.1	75/63	18069	14468	20803	1031	17.5
				80/67	19349	15115	22161	1023	18.9
				85/71	20695	15694	23583	1014	20.4
	6	5.4	2.3	75/63	18228	14288	21005	1023	17.8
				80/67	19567	15439	22260	984	19.9
				85/71	21033	15818	23865	977	21.5
85	3	1.5	0.6	75/63	17289	14212	20166	1128	15.3
				80/67	18506	14800	21476	1124	16.5
				85/71	19815	15260	22876	1120	17.7
	4	2.5	1.1	75/63	17539	14319	20364	1094	16.0
				80/67	18835	14827	21748	1087	17.3
				85/71	20158	15389	23150	1079	18.7
	6	5.3	2.3	75/63	17714	14086	20579	1085	16.3
				80/67	19015	14571	21973	1079	17.6
				85/71	20455	15551	23384	1042	19.6
90	3	1.5	0.6	75/63	16809	13949	19799	1195	14.1
				80/67	17989	14585	21075	1193	15.1
				85/71	19251	15064	22433	1190	16.2
	4	2.5	1.1	75/63	17051	14048	19986	1162	14.7
				80/67	18267	14689	21290	1156	15.8
				85/71	19546	15284	22654	1149	17.0
	6	5.2	2.3	75/63	17199	13872	20163	1152	14.9
				80/67	18458	14401	21519	1146	16.1
				85/71	19752	15609	22727	1106	17.9
100	3	1.4	0.6	75/63	15779	13590	19028	1343	11.7
				80/67	16919	14198	20277	1344	12.6
				85/71	18093	14775	21559	1344	13.5
	4	2.4	1.0	75/63	16018	13605	19209	1311	12.2
				80/67	17169	14296	20458	1307	13.1
				85/71	18386	14879	21771	1302	14.1
	6	5	2.2	75/63	16161	13921	19257	1278	12.7
				80/67	17346	14028	20656	1295	13.4
				85/71	18590	14508	22005	1291	14.4
110	3	1.4	0.6	75/63	14729	13187	18296	1510	9.8
				80/67	15850	13702	19544	1513	10.5
				85/71	16937	14387	20752	1517	11.2
	4	2.4	1.0	75/63	14942	13184	18449	1479	10.1
				80/67	16048	13872	19667	1477	10.9
				85/71	17227	14375	20960	1476	11.7
	6	4.9	2.1	75/63	15069	13451	18490	1447	10.4
				80/67	16220	13624	19844	1464	11.1
				85/71	17375	14792	20987	1436	12.1

GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



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SM036 Cooling Performance Data - Full Load @ 1225CFM

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
50	4.5	3.2	1.4	75/63	39260	29336	46057	2068	19.0
				80/67	41900	30410	49001	2116	19.8
				85/71	44636	31545	52048	2164	20.6
	6	5.4	2.3	75/63	39979	29657	46752	2015	19.8
				80/67	42700	30756	49785	2063	20.7
				85/71	45549	31892	52953	2110	21.6
	9	11.1	4.8	75/63	40675	29972	47443	1969	20.7
				80/67	43496	31098	50586	2015	21.6
				85/71	46467	32247	53889	2064	22.5
60	4.5	3.1	1.3	75/63	37637	28627	44552	2205	17.1
				80/67	40219	29697	47425	2248	17.9
				85/71	42896	30782	50400	2289	18.7
	6	5.2	2.3	75/63	38344	28923	45198	2143	17.9
				80/67	40970	30079	48118	2183	18.8
				85/71	43788	31095	51238	2224	19.7
	9	10.7	4.6	75/63	38970	29276	45780	2089	18.7
				80/67	41742	30374	48851	2127	19.6
				85/71	44664	31426	52082	2166	20.6
70	4.5	3	1.3	75/63	35911	27878	43122	2372	15.2
				80/67	38462	29022	45878	2410	16.0
				85/71	41083	30051	48782	2447	16.8
	6	5	2.2	75/63	36617	28218	43655	2303	15.9
				80/67	39211	29317	46527	2337	16.8
				85/71	41927	30354	49526	2371	17.7
	9	10.4	4.5	75/63	37198	28576	44129	2240	16.6
				80/67	39914	29606	47151	2273	17.6
				85/71	42754	30660	50274	2302	18.6
80	4.5	2.9	1.3	75/63	34302	27155	41760	2571	13.3
				80/67	36714	28219	44449	2607	14.1
				85/71	39176	29439	47178	2640	14.8
	6	4.8	2.1	75/63	34912	27416	42243	2496	14.0
				80/67	37412	28502	45011	2527	14.8
				85/71	39970	29743	47828	2554	15.7
	9	10.1	4.4	75/63	35391	27631	42630	2440	14.5
				80/67	38024	28878	45482	2454	15.5
				85/71	40715	30034	48453	2477	16.4
85	4.5	2.8	1.2	75/63	33458	26744	41120	2684	12.5
				80/67	35760	27957	43692	2718	13.2
				85/71	38224	29070	46425	2750	13.9
	6	4.8	2.1	75/63	34043	27003	41563	2607	13.1
				80/67	36440	28226	44219	2634	13.8
				85/71	39068	29175	47114	2662	14.7
	9	9.9	4.3	75/63	34521	27215	41934	2546	13.6
				80/67	37005	28332	44685	2573	14.4
				85/71	39690	29777	47559	2577	15.4
90	4.5	2.8	1.2	75/63	32545	26448	40436	2806	11.6
				80/67	34855	27566	43020	2839	12.3
				85/71	37324	28532	45763	2871	13.0
	6	4.7	2.0	75/63	33169	26566	40912	2727	12.2
				80/67	35552	27709	43553	2753	12.9
				85/71	38057	28828	46314	2777	13.7
	9	9.7	4.2	75/63	33645	26789	41264	2661	12.6
				80/67	36065	27933	43943	2687	13.4
				85/71	38670	29329	46747	2692	14.4
100	4.5	2.7	1.2	75/63	30818	25638	39271	3079	10.0
				80/67	33054	26687	41785	3111	10.6
				85/71	35367	27817	44360	3138	11.3
	6	4.6	2.0	75/63	31324	25854	39604	2997	10.5
				80/67	33634	26918	42173	3021	11.1
				85/71	35993	28223	44773	3040	11.8
	9	9.5	4.1	75/63	31808	26064	39931	2921	10.9
				80/67	34166	27124	42546	2945	11.6
				85/71	36580	28456	45192	2959	12.4
110	4.5	2.6	1.1	75/63	29054	24835	38203	3391	8.6
				80/67	31235	25900	40654	3418	9.1
				85/71	33384	27199	43062	3443	9.7
	6	4.4	1.9	75/63	29481	25043	38445	3311	8.9
				80/67	31762	26089	40975	3328	9.5
				85/71	34005	27405	43454	3344	10.2
	9	9.2	4.0	75/63	29981	25252	38748	3223	9.3
				80/67	32293	26354	41296	3235	10.0
				85/71	34584	27658	43819	3249	10.6

GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



BOSCH

SM036 Cooling Performance Data - Full Load @ 800CFM

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
50	4.5	3.2	1.4	75/63	29519	23623	33767	1240	23.8
				80/67	31653	24650	36008	1225	25.8
				85/71	33898	25537	38352	1207	28.1
	6	5.4	2.3	75/63	29927	23812	34197	1215	24.6
				80/67	32127	24855	36504	1196	26.9
				85/71	34466	25765	38937	1174	29.3
	9	11.1	4.8	75/63	30293	23979	34591	1195	25.3
				80/67	32505	25016	36907	1176	27.6
				85/71	34935	25806	39460	1152	30.3
60	4.5	3.1	1.3	75/63	28175	23005	32414	1343	21.0
				80/67	30239	24060	34596	1330	22.7
				85/71	32384	25029	36853	1315	24.6
	6	5.2	2.3	75/63	28551	23181	32765	1310	21.8
				80/67	30688	24236	35034	1294	23.7
				85/71	32894	25237	37347	1274	25.8
	9	10.7	4.6	75/63	28932	23371	33165	1281	22.6
				80/67	31088	24414	35433	1263	24.6
				85/71	33312	25406	37760	1244	26.8
70	4.5	3	1.3	75/63	26806	22313	31137	1477	18.1
				80/67	28783	23430	33242	1466	19.6
				85/71	30874	24384	35459	1454	21.2
	6	5	2.2	75/63	27100	22541	31400	1443	18.8
				80/67	29155	23526	33597	1431	20.4
				85/71	31365	24547	35905	1408	22.3
	9	10.4	4.5	75/63	27538	22742	31806	1399	19.7
				80/67	29615	23802	34004	1384	21.4
				85/71	31793	24770	36296	1367	23.3
80	4.5	2.9	1.3	75/63	25353	21757	29869	1642	15.4
				80/67	27302	22797	31961	1634	16.7
				85/71	29335	23738	34133	1625	18.1
	6	4.8	2.1	75/63	25688	21901	30152	1601	16.0
				80/67	27646	22951	32249	1592	17.4
				85/71	29714	23886	34462	1581	18.8
	9	10.1	4.4	75/63	26093	22091	30500	1552	16.8
				80/67	28110	23153	32647	1538	18.3
				85/71	30217	24124	34878	1523	19.8
85	4.5	2.8	1.2	75/63	24667	21343	29321	1737	14.2
				80/67	26582	22404	31380	1729	15.4
				85/71	28512	23520	33450	1721	16.6
	6	4.8	2.1	75/63	24981	21569	29566	1691	14.8
				80/67	26904	22641	31632	1683	16.0
				85/71	28907	23605	33775	1675	17.3
	9	9.9	4.3	75/63	25373	21760	29888	1640	15.5
				80/67	27357	22815	32007	1627	16.8
				85/71	29400	23868	34179	1614	18.2
90	4.5	2.8	1.2	75/63	23908	21122	28707	1839	13.0
				80/67	25788	22185	30743	1832	14.1
				85/71	27708	23238	32813	1825	15.2
	6	4.7	2.0	75/63	24264	21252	28993	1790	13.6
				80/67	26162	22268	31040	1783	14.7
				85/71	28126	23271	33151	1775	15.8
	9	9.7	4.2	75/63	24648	21412	29298	1737	14.2
				80/67	26576	22527	31365	1725	15.4
				85/71	28581	23558	33504	1712	16.7
100	4.5	2.7	1.2	75/63	22458	20454	27648	2065	10.9
				80/67	24256	21461	29618	2064	11.8
				85/71	26126	22495	31645	2058	12.7
	6	4.6	2.0	75/63	22798	20605	27890	2010	11.3
				80/67	24636	21631	29887	2004	12.3
				85/71	26468	22774	31877	1999	13.2
	9	9.5	4.1	75/63	23141	20788	28137	1954	11.8
				80/67	25048	21780	30192	1944	12.9
				85/71	26965	22832	32256	1934	13.9
110	4.5	2.6	1.1	75/63	21026	19768	26689	2316	9.1
				80/67	22691	20943	28536	2317	9.8
				85/71	24469	21891	30499	2320	10.5
	6	4.4	1.9	75/63	21333	19898	26888	2260	9.4
				80/67	23087	20978	28811	2256	10.2
				85/71	24836	22163	30730	2253	11.0
	9	9.2	4.0	75/63	21638	20094	27086	2204	9.8
				80/67	23447	21133	29052	2195	10.7
				85/71	25289	22205	31052	2187	11.6

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



BOSCH

SM048 Cooling Performance Data - Full Load @ 1700CFM

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
50	6	2.6	1.1	75/63	52122	39647	61121	2804	18.6
				80/67	55667	41174	64883	2832	19.7
				85/71	59427	42271	68881	2862	20.8
	8	4.4	1.9	75/63	53312	40176	62077	2691	19.8
				80/67	57012	41718	65978	2713	21.0
				85/71	60846	43030	70021	2734	22.3
	12	9.1	3.9	75/63	54561	40735	63089	2576	21.2
				80/67	58431	42219	67160	2592	22.5
				85/71	62438	43572	71348	2605	24.0
60	6	2.5	1.1	75/63	49938	38684	59403	3020	16.5
				80/67	53487	39934	63204	3051	17.5
				85/71	56979	41450	66909	3079	18.5
	8	4.3	1.9	75/63	51073	39176	60292	2906	17.6
				80/67	54688	40645	64125	2927	18.7
				85/71	58442	41937	68081	2948	19.8
	12	8.8	3.8	75/63	52266	39650	61255	2792	18.7
				80/67	56036	41144	65212	2805	20.0
				85/71	59967	42429	69326	2817	21.3
70	6	2.5	1.1	75/63	47741	37579	57779	3263	14.6
				80/67	51095	39028	61368	3294	15.5
				85/71	54452	40636	64948	3324	16.4
	8	4.1	1.8	75/63	48803	38060	58568	3144	15.5
				80/67	52334	39468	62314	3167	16.5
				85/71	55806	41150	65979	3186	17.5
	12	8.6	3.7	75/63	49921	38509	59426	3028	16.5
				80/67	53596	39948	63293	3042	17.6
				85/71	57225	41682	67087	3050	18.8
80	6	2.4	1.0	75/63	45488	36424	56197	3541	12.8
				80/67	48634	38155	59577	3573	13.6
				85/71	51880	39685	63066	3606	14.4
	8	4	1.7	75/63	46494	36882	56900	3416	13.6
				80/67	49779	38587	60391	3437	14.5
				85/71	53290	39890	64127	3463	15.4
	12	8.3	3.6	75/63	47525	37314	57644	3295	14.4
				80/67	50926	39125	61221	3305	15.4
				85/71	54606	40417	65098	3320	16.5
85	6	2.3	1.0	75/63	44212	36095	55291	3693	12.0
				80/67	47468	37419	58813	3731	12.7
				85/71	50539	39260	62106	3764	13.4
	8	3.9	1.7	75/63	45205	36522	55965	3564	12.7
				80/67	48577	37899	59570	3591	13.5
				85/71	51934	39383	63149	3615	14.4
	12	8.1	3.5	75/63	46203	36990	56658	3440	13.4
				80/67	49694	38382	60354	3455	14.4
				85/71	53230	39887	64081	3468	15.4
90	6	2.3	1.0	75/63	43021	35545	54521	3859	11.2
				80/67	46197	36937	57970	3898	11.9
				85/71	49184	38819	61186	3934	12.5
	8	3.9	1.7	75/63	43974	35961	55139	3727	11.8
				80/67	47135	37697	58501	3752	12.6
				85/71	50438	39237	62044	3777	13.4
	12	8	3.5	75/63	45031	36167	55888	3601	12.5
				80/67	48391	37798	59445	3615	13.4
				85/71	51823	39327	63073	3629	14.3
100	6	2.2	1.0	75/63	40699	34240	53191	4234	9.6
				80/67	43590	36076	56349	4273	10.2
				85/71	46706	37370	59765	4320	10.8
	8	3.8	1.6	75/63	41492	34852	53596	4091	10.1
				80/67	44575	36486	56923	4119	10.8
				85/71	47797	37874	60402	4152	11.5
	12	7.8	3.4	75/63	42419	35077	54183	3959	10.7
				80/67	45641	36706	57615	3975	11.5
				85/71	48811	38664	60947	3986	12.2
110	6	2.2	1.0	75/63	38212	33301	51870	4662	8.2
				80/67	41058	34798	55046	4716	8.7
				85/71	43886	36574	58178	4764	9.2
	8	3.6	1.6	75/63	38973	33600	52249	4524	8.6
				80/67	41948	35153	55499	4560	9.2
				85/71	44879	36996	58686	4592	9.8
	12	7.6	3.3	75/63	39820	33847	52712	4383	9.1
				80/67	42901	35499	56017	4402	9.8
				85/71	46042	37142	59380	4422	10.4

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



BOSCH

SM048 Cooling Performance Data - Partial Load @ 1100CFM

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
50	6	2.6	1.1	75/63	40322	29617	45105	1497	26.9
				80/67	43140	30522	48009	1483	29.1
				85/71	46045	31597	50964	1461	31.5
	8	4.4	1.9	75/63	41107	29973	45764	1427	28.8
				80/67	44033	30891	48759	1406	31.3
				85/71	47046	31954	51807	1378	34.1
	12	9.1	3.9	75/63	41915	30339	46450	1358	30.9
				80/67	44959	31276	49545	1329	33.8
				85/71	48086	32339	52691	1293	37.2
60	6	2.5	1.1	75/63	38313	28751	43456	1684	22.8
				80/67	41006	29725	46243	1674	24.5
				85/71	43920	30617	49231	1655	26.5
	8	4.3	1.9	75/63	39054	29064	44061	1613	24.2
				80/67	41847	30062	46929	1596	26.2
				85/71	44852	30975	49992	1571	28.6
	12	8.8	3.8	75/63	39806	29387	44681	1544	25.8
				80/67	42710	30414	47642	1518	28.1
				85/71	45817	31338	50793	1486	30.8
70	6	2.5	1.1	75/63	36248	27791	41815	1892	19.2
				80/67	38834	28772	44518	1891	20.5
				85/71	41665	29811	47425	1871	22.3
	8	4.1	1.8	75/63	36936	28080	42357	1821	20.3
				80/67	39616	29040	45143	1813	21.8
				85/71	42538	30136	48114	1785	23.8
	12	8.6	3.7	75/63	37623	28413	42905	1753	21.5
				80/67	40441	29361	45799	1732	23.3
				85/71	43375	30631	48765	1698	25.5
80	6	2.4	1.0	75/63	34158	26847	40228	2126	16.1
				80/67	36635	27909	42834	2127	17.2
				85/71	39295	29165	45576	2110	18.6
	8	4	1.7	75/63	34788	27113	40701	2054	16.9
				80/67	37293	28323	43313	2048	18.2
				85/71	40112	29448	46198	2023	19.8
	12	8.3	3.6	75/63	35414	27360	41180	1985	17.8
				80/67	38059	28460	43917	1972	19.3
				85/71	40937	29732	46836	1938	21.1
85	6	2.3	1.0	75/63	33032	26517	39382	2253	14.7
				80/67	35463	27614	41949	2255	15.7
				85/71	38206	28524	44795	2243	17.0
	8	3.9	1.7	75/63	33644	26753	39833	2181	15.4
				80/67	36210	27711	42521	2177	16.6
				85/71	38965	28836	45352	2155	18.1
	12	8.1	3.5	75/63	34232	27001	40268	2112	16.2
				80/67	36884	27976	43024	2100	17.6
				85/71	39760	29092	45957	2070	19.2
90	6	2.3	1.0	75/63	31990	25920	38654	2389	13.4
				80/67	34392	27029	41197	2392	14.4
				85/71	37022	28120	43932	2381	15.6
	8	3.9	1.7	75/63	32566	26168	39065	2317	14.1
				80/67	34985	27430	41602	2312	15.1
				85/71	37695	28606	44390	2291	16.5
	12	8	3.5	75/63	33114	26412	39459	2249	14.7
				80/67	35631	27684	42072	2236	15.9
				85/71	38448	28843	44947	2206	17.4
100	6	2.2	1.0	75/63	29796	25019	37163	2686	11.1
				80/67	32159	26346	39639	2676	12.0
				85/71	34733	27323	42338	2669	13.0
	8	3.8	1.6	75/63	30297	25223	37492	2615	11.6
				80/67	32719	26583	40013	2599	12.6
				85/71	35308	27764	42701	2584	13.7
	12	7.8	3.4	75/63	30729	25562	37761	2547	12.1
				80/67	33332	26597	40461	2528	13.2
				85/71	36010	27744	43219	2506	14.4
110	6	2.2	1.0	75/63	27649	23462	35821	3012	9.2
				80/67	29994	25348	38289	3001	10.0
				85/71	32409	26513	40829	2993	10.8
	8	3.6	1.6	75/63	28057	23823	36044	2939	9.5
				80/67	30485	25540	38589	2926	10.4
				85/71	32918	26919	41120	2909	11.3
	12	7.6	3.3	75/63	28453	24682	36281	2877	9.9
				80/67	30951	25652	38891	2859	10.8
				85/71	33452	27127	41457	2832	11.8

GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



BOSCH

SM060 Cooling Performance Data - Full Load @ 2000CFM

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
50	7.5	2.8	1.2	75/63	61359	46250	72741	3487	17.6
				80/67	65503	47989	77246	3543	18.5
				85/71	69968	49148	82118	3607	19.4
	10	4.7	2.0	75/63	62478	46771	73680	3382	18.5
				80/67	66907	48125	78499	3438	19.5
				85/71	71275	50008	83216	3492	20.4
	15	9.7	4.2	75/63	63652	47132	74707	3283	19.4
				80/67	68203	48646	79631	3334	20.5
				85/71	72881	50298	84677	3387	21.5
60	7.5	2.7	1.2	75/63	58978	45020	70845	3735	15.8
				80/67	62955	46899	75149	3785	16.6
				85/71	67162	48383	79731	3841	17.5
	10	4.5	1.9	75/63	59998	45657	71626	3621	16.6
				80/67	64330	46992	76333	3670	17.5
				85/71	68631	48692	80979	3719	18.5
	15	9.4	4.1	75/63	61146	45981	72593	3515	17.4
				80/67	65561	47508	77359	3557	18.4
				85/71	69942	49415	82068	3599	19.4
70	7.5	2.6	1.1	75/63	56396	44064	68827	4019	14.0
				80/67	60344	45638	73135	4068	14.8
				85/71	64393	47183	77546	4121	15.6
	10	4.4	1.9	75/63	57427	44514	69605	3899	14.7
				80/67	61506	46126	74028	3941	15.6
				85/71	65702	47691	78570	3985	16.5
	15	9.1	3.9	75/63	58456	44957	70403	3784	15.5
				80/67	62641	46760	74901	3817	16.4
				85/71	67064	48176	79673	3857	17.4
80	7.5	2.5	1.1	75/63	53802	42900	66965	4350	12.4
				80/67	57610	44490	71130	4397	13.1
				85/71	61444	46189	75317	4445	13.8
	10	4.2	1.8	75/63	54848	43162	67740	4224	13.0
				80/67	58820	44693	72050	4262	13.8
				85/71	62819	46386	76374	4302	14.6
	15	8.8	3.8	75/63	55796	43602	68424	4103	13.6
				80/67	59792	45415	72721	4130	14.5
				85/71	63955	47139	77192	4161	15.4
85	7.5	2.5	1.1	75/63	52553	42132	66162	4536	11.6
				80/67	56313	43664	70279	4582	12.3
				85/71	60083	45288	74398	4630	13.0
	10	4.2	1.8	75/63	53423	42727	66706	4402	12.1
				80/67	57293	44321	70918	4439	12.9
				85/71	61314	45776	75275	4479	13.7
	15	8.7	3.8	75/63	54409	42962	67432	4281	12.7
				80/67	58359	44717	71683	4307	13.6
				85/71	62387	46563	76006	4334	14.4
90	7.5	2.5	1.1	75/63	51132	41718	65193	4732	10.8
				80/67	54839	43192	69270	4777	11.5
				85/71	58574	44702	73363	4826	12.1
	10	4.1	1.8	75/63	52057	42106	65795	4596	11.3
				80/67	55896	43587	69981	4633	12.1
				85/71	59762	45171	74174	4671	12.8
	15	8.5	3.7	75/63	52999	42337	66462	4473	11.9
				80/67	56914	43969	70684	4499	12.7
				85/71	60789	45969	74832	4521	13.4
100	7.5	2.4	1.0	75/63	48361	40445	63512	5171	9.4
				80/67	51945	41932	67474	5216	10.0
				85/71	55269	44053	71115	5260	10.5
	10	4	1.7	75/63	49212	40899	63996	5029	9.8
				80/67	52945	42270	68093	5066	10.5
				85/71	56487	44234	71937	5098	11.1
	15	8.3	3.6	75/63	50103	41027	64612	4905	10.2
				80/67	53755	42908	68543	4924	10.9
				85/71	57615	44897	72666	4943	11.7
110	7.5	2.3	1.0	75/63	45702	39064	62165	5669	8.1
				80/67	48854	41016	65672	5718	8.5
				85/71	52216	42649	69409	5766	9.1
	10	3.9	1.7	75/63	46428	39376	62538	5534	8.4
				80/67	49746	41303	66171	5567	8.9
				85/71	53060	43415	69762	5597	9.5
	15	8	3.5	75/63	47075	39650	62863	5411	8.7
				80/67	50607	41589	66662	5425	9.3
				85/71	54051	43755	70320	5434	10.0

GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



BOSCH

SM060 Cooling Performance Data - Partial Load @ 1500CFM

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
50	7.5	2.8	1.2	75/63	52034	38112	57683	1720	30.2
				80/67	55609	40470	61354	1699	32.7
				85/71	59344	41817	65196	1678	35.4
	10	4.7	2.0	75/63	53011	38561	58584	1656	32.0
				80/67	56712	40022	62375	1630	34.8
				85/71	60562	42255	66322	1604	37.8
	15	9.7	4.2	75/63	54043	38882	59569	1597	33.8
				80/67	57903	41120	63529	1567	36.9
				85/71	61815	42627	67505	1532	40.3
60	7.5	2.7	1.2	75/63	49450	36771	55361	1908	25.9
				80/67	52880	38377	58882	1887	28.0
				85/71	56507	39740	62622	1866	30.3
	10	4.5	1.9	75/63	50272	37397	56061	1839	27.3
				80/67	53910	38812	59807	1814	29.7
				85/71	57646	40202	63647	1788	32.2
	15	9.4	4.1	75/63	51258	37578	56997	1779	28.8
				80/67	54939	39268	60741	1744	31.5
				85/71	58816	41621	64712	1712	34.4
70	7.5	2.6	1.1	75/63	46632	35666	52865	2123	22.0
				80/67	50040	37201	56383	2102	23.8
				85/71	53689	38341	60177	2083	25.8
	10	4.4	1.9	75/63	47489	36110	53600	2051	23.1
				80/67	51006	37601	57224	2026	25.2
				85/71	54684	38948	61026	2001	27.3
	15	9.1	3.9	75/63	48304	36510	54310	1986	24.3
				80/67	51963	37989	58067	1954	26.6
				85/71	55748	39349	61963	1923	29.0
80	7.5	2.5	1.1	75/63	43885	34458	50535	2361	18.6
				80/67	47205	35871	54000	2345	20.1
				85/71	50614	37351	57535	2327	21.8
	10	4.2	1.8	75/63	44649	34790	51178	2293	19.5
				80/67	48073	36270	54727	2269	21.2
				85/71	51688	37513	58464	2245	23.0
	15	8.8	3.8	75/63	45381	35128	51791	2228	20.4
				80/67	48892	36650	55414	2198	22.2
				85/71	52629	37898	59266	2168	24.3
85	7.5	2.5	1.1	75/63	42522	33767	49426	2492	17.1
				80/67	45802	35126	52855	2479	18.5
				85/71	49085	36791	56261	2460	20.0
	10	4.2	1.8	75/63	43229	34107	50003	2424	17.8
				80/67	46618	35489	53525	2403	19.4
				85/71	50034	37141	57048	2376	21.1
	15	8.7	3.8	75/63	43875	34411	50536	2363	18.6
				80/67	47378	35859	54152	2333	20.3
				85/71	51011	37207	57898	2303	22.2
90	7.5	2.5	1.1	75/63	41091	33174	48263	2631	15.6
				80/67	44317	34497	51647	2620	16.9
				85/71	47635	35948	55101	2602	18.3
	10	4.1	1.8	75/63	41827	33348	48871	2564	16.3
				80/67	45114	34828	52295	2544	17.7
				85/71	48531	36320	55829	2519	19.3
	15	8.5	3.7	75/63	42425	33618	49359	2506	16.9
				80/67	45752	35415	52778	2472	18.5
				85/71	49380	36526	56542	2446	20.2
100	7.5	2.4	1.0	75/63	38273	31963	46048	2925	13.1
				80/67	41405	33298	49352	2917	14.2
				85/71	44495	34841	52597	2906	15.3
	10	4	1.7	75/63	38931	32021	46583	2863	13.6
				80/67	42077	33567	49875	2846	14.8
				85/71	45218	35307	53146	2827	16.0
	15	8.3	3.6	75/63	39376	31612	47046	2840	13.9
				80/67	42556	33024	50383	2823	15.1
				85/71	45939	35643	53707	2753	16.7
110	7.5	2.3	1.0	75/63	35502	30531	44001	3255	10.9
				80/67	38451	32042	47126	3247	11.8
				85/71	41394	33808	50228	3236	12.8
	10	3.9	1.7	75/63	35941	30900	44291	3195	11.3
				80/67	38973	32393	47495	3181	12.3
				85/71	42112	33821	50788	3164	13.3
	15	8	3.5	75/63	36236	30925	44531	3164	11.5
				80/67	39275	32425	47730	3149	12.5
				85/71	42624	33561	51251	3123	13.7

GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



BOSCH

SM070 Cooling Performance Data - Full Load @ 2200CFM

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
50	9	2.1	0.9	75/63	70724	54414	83259	3896	18.2
				80/67	75525	55928	88489	3972	19.0
				85/71	80332	58092	93671	4032	19.9
	12	3.5	1.5	75/63	72256	54704	84521	3751	19.3
				80/67	77010	56823	89658	3816	20.2
				85/71	82160	58672	95183	3871	21.2
	18	7.3	3.2	75/63	73727	54151	85700	3601	20.5
				80/67	78698	57441	91042	3658	21.5
				85/71	84078	59317	96784	3705	22.7
60	9	2	0.9	75/63	67944	53254	81086	4194	16.2
				80/67	72517	54959	86082	4266	17.0
				85/71	77209	57029	91147	4324	17.9
	12	3.4	1.5	75/63	69341	53670	82192	4048	17.1
				80/67	74072	55488	87314	4111	18.0
				85/71	78925	57685	92517	4158	19.0
	18	7.1	3.1	75/63	70759	54218	83313	3900	18.1
				80/67	75682	56068	88607	3953	19.1
				85/71	80734	58360	93986	3991	20.2
70	9	2	0.9	75/63	65129	51877	78999	4525	14.4
				80/67	69430	53882	83706	4595	15.1
				85/71	74107	55544	88776	4655	15.9
	12	3.3	1.4	75/63	66428	52367	79970	4375	15.2
				80/67	70873	54462	84795	4435	16.0
				85/71	75609	56530	89880	4480	16.9
	18	6.9	3.0	75/63	67759	52886	80984	4226	16.0
				80/67	72373	55056	85952	4275	16.9
				85/71	77339	57124	91245	4309	18.0
80	9	1.9	0.8	75/63	62196	49235	76924	4901	12.7
				80/67	66371	52420	81516	4972	13.4
				85/71	70754	54349	86278	5026	14.1
	12	3.2	1.4	75/63	63425	49714	77791	4744	13.4
				80/67	67629	53249	82371	4801	14.1
				85/71	72350	54890	87458	4848	14.9
	18	6.6	2.9	75/63	64674	51479	78694	4591	14.1
				80/67	69056	53774	83423	4636	14.9
				85/71	73968	55471	88673	4671	15.8
85	9	1.9	0.8	75/63	60697	49844	75916	5108	11.9
				80/67	64847	51780	80464	5169	12.5
				85/71	68989	54157	84961	5217	13.2
	12	3.1	1.3	75/63	61770	49273	76598	4945	12.5
				80/67	66111	52269	81339	5007	13.2
				85/71	70426	54678	85981	5043	14.0
	18	6.5	2.8	75/63	62968	49784	77431	4789	13.2
				80/67	67478	52817	82310	4837	14.0
				85/71	71906	55553	86992	4859	14.8
90	9	1.8	0.8	75/63	59065	49483	74812	5327	11.1
				80/67	63292	51229	79418	5377	11.8
				85/71	67337	53591	83820	5425	12.4
	12	3.1	1.3	75/63	60196	49940	75543	5163	11.7
				80/67	64403	52000	80104	5207	12.4
				85/71	68739	54087	84784	5247	13.1
	18	6.4	2.8	75/63	61432	48868	76406	5005	12.3
				80/67	65746	52158	81081	5051	13.0
				85/71	70176	54606	85800	5072	13.8
100	9	1.8	0.8	75/63	56095	46938	73009	5790	9.7
				80/67	60131	50016	77440	5844	10.3
				85/71	64122	52022	81808	5894	10.9
	12	3	1.3	75/63	57119	47357	73613	5626	10.2
				80/67	61285	50476	78139	5667	10.8
				85/71	65426	52520	82622	5705	11.5
	18	6.2	2.7	75/63	58143	47781	74237	5467	10.6
				80/67	62449	50924	78871	5496	11.4
				85/71	66775	52940	83509	5522	12.1
110	9	1.7	0.7	75/63	52980	45631	71318	6329	8.4
				80/67	56829	47359	75568	6383	8.9
				85/71	60624	49328	79742	6432	9.4
	12	2.9	1.3	75/63	53911	45998	71804	6163	8.8
				80/67	57774	48095	76012	6199	9.3
				85/71	61828	51274	80425	6239	9.9
	18	6.1	2.6	75/63	54929	46095	72419	6008	9.1
				80/67	58988	49594	76768	6024	9.8
				85/71	63103	51669	81186	6045	10.4

GreenSource CDi Series Model SM - Split System

Residential Geothermal Heat Pumps



BOSCH

SM070 Cooling Performance Data - Partial Load @ 1600CFM

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
50	9	2.1	0.9	75/63	56190	41840	64023	2407	23.3
				80/67	60052	43244	68037	2400	25.0
				85/71	64066	44491	72201	2392	26.8
	12	3.5	1.5	75/63	57105	42229	64772	2310	24.7
				80/67	61105	43657	68900	2293	26.7
				85/71	65250	44917	73171	2275	28.7
	18	7.3	3.2	75/63	58053	42629	65563	2215	26.2
				80/67	62186	44083	69801	2187	28.4
				85/71	66472	45364	74186	2157	30.8
60	9	2	0.9	75/63	53791	40653	62126	2680	20.1
				80/67	57457	42283	65960	2677	21.5
				85/71	61391	43528	70072	2675	22.9
	12	3.4	1.5	75/63	54667	41090	62812	2579	21.2
				80/67	58450	42673	66739	2566	22.8
				85/71	62504	43948	70945	2554	24.5
	18	7.1	3.1	75/63	55538	41480	63505	2481	22.4
				80/67	59457	43129	67542	2457	24.2
				85/71	63563	44577	71769	2433	26.1
70	9	2	0.9	75/63	51212	39760	60156	2988	17.1
				80/67	54899	41062	64047	2992	18.3
				85/71	58623	42491	67967	2995	19.6
	12	3.3	1.4	75/63	52027	40099	60759	2884	18.0
				80/67	55824	41433	64735	2878	19.4
				85/71	59681	42905	68760	2870	20.8
	18	6.9	3.0	75/63	52825	40440	61359	2785	19.0
				80/67	56751	41805	65438	2767	20.5
				85/71	60669	43490	69489	2747	22.1
80	9	1.9	0.8	75/63	48716	38482	58417	3340	14.6
				80/67	52194	40031	62110	3347	15.6
				85/71	55697	41732	65820	3353	16.6
	12	3.2	1.4	75/63	49465	38808	58934	3234	15.3
				80/67	52977	40560	62629	3229	16.4
				85/71	56682	42052	66522	3226	17.6
	18	6.6	2.9	75/63	50193	39107	59450	3134	16.0
				80/67	53828	40881	63237	3117	17.3
				85/71	57659	42393	67228	3103	18.6
85	9	1.9	0.8	75/63	47320	38133	57446	3532	13.4
				80/67	50835	39448	61192	3542	14.4
				85/71	54359	40938	64938	3551	15.3
	12	3.1	1.3	75/63	48042	38435	57926	3425	14.0
				80/67	51657	39784	61745	3424	15.1
				85/71	55289	41302	65572	3422	16.2
	18	6.5	2.8	75/63	48736	38728	58396	3324	14.7
				80/67	52460	40104	62299	3312	15.8
				85/71	56122	41901	66117	3296	17.0
90	9	1.8	0.8	75/63	46016	37554	56615	3739	12.3
				80/67	49335	39181	60163	3748	13.2
				85/71	52886	40451	63951	3759	14.1
	12	3.1	1.3	75/63	46677	37867	57026	3630	12.9
				80/67	50136	39470	60688	3629	13.8
				85/71	53695	41028	64448	3628	14.8
	18	6.4	2.8	75/63	47321	38179	57437	3530	13.4
				80/67	50909	39758	61202	3517	14.5
				85/71	54593	41326	65058	3503	15.6
100	9	1.8	0.8	75/63	43347	36293	55035	4194	10.3
				80/67	46606	37847	58536	4204	11.1
				85/71	49911	39416	62080	4215	11.8
	12	3	1.3	75/63	43989	36526	55414	4086	10.8
				80/67	47312	38157	58948	4084	11.6
				85/71	50733	39692	62579	4084	12.4
	18	6.2	2.7	75/63	44556	36776	55750	3988	11.2
				80/67	47988	38412	59358	3973	12.1
				85/71	51437	40255	62973	3958	13.0
110	9	1.7	0.7	75/63	40455	35376	53440	4714	8.6
				80/67	43662	36751	56903	4726	9.2
				85/71	46841	38681	60280	4719	9.9
	12	2.9	1.3	75/63	41009	35586	53726	4609	8.9
				80/67	44291	37001	57234	4609	9.6
				85/71	47589	38903	60696	4590	10.4
	18	6.1	2.6	75/63	41532	35816	53995	4509	9.2
				80/67	44841	37505	57484	4493	10.0
				85/71	48309	39152	61085	4467	10.8

GreenSource CDi Series Model SM - Split System
Residential Geothermal Heat Pumps



BOSCH

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

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps



BOSCH

Blower Performance Data - ECM Const CFM Motor - Eon														
Models	Fan Speed	Rated Airflow	Adjust	Tap	External Static Pressure (Inches of W.C.)									
					0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
SM024 Part Load	Hi	600	+	A	600	600	600	600	600	600	600	600	-	-
	Med	500	Normal	A	500	500	500	500	500	500	500	500	-	-
	Low	425	-	A	425	425	425	425	425	425	425	425	-	-
SM024 Full Load	Hi	900	+	A	900	900	900	900	900	900	900	900	-	-
	Med	750	Normal	A	750	750	750	750	750	750	750	750	-	-
	Low	650	-	A	650	650	650	650	650	650	650	650	-	-
SM036 Part Load	Hi	1200	+	A	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
	Med	1050	Normal	A	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
	Low	900	-	A	900	900	900	900	900	900	900	900	900	900
SM036 Full Load	Hi	1400	+	A	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
	Med	1225	Normal	A	1225	1225	1225	1225	1225	1225	1225	1225	1225	1225
	Low	1050	-	A	1050	1050	1050	1050	1050	1050	1050	1050	1050	1050
SM048 Part Load	Hi	1100	+	B	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
	Med	925	Normal	B	925	925	925	925	925	925	925	925	925	925
	Low	800	-	B	800	800	800	800	800	800	800	800	800	800
SM048 Full Load	Hi	1700	+	B	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
	Med	1500	Normal	B	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
	Low	1275	-	B	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275
SM060 Part Load	Hi	1725	+	A	1725	1725	1725	1725	1725	1725	1725	1725	1725	1725
	Med	1500	Normal	A	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500
	Low	1275	-	A	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275
SM060 Full Load	Hi	2300	+	A	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
	Med	2000	Normal	A	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
	Low	1700	-	A	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
SM070 Part Load	Hi	1850	+	A	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
	Med	1600	Normal	A	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
	Low	1500	-	A	1525	1525	1525	1525	1525	1525	1525	1525	1525	1525
SM070 Full Load	Hi	2300	+	A	2300	2300	2300	2300	2300	2300	2300	2300	2300	2300
	Med	2200	Normal	A	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
	Low	1900	-	A	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps




BOSCH


Factory Installed Option - Electric Heaters for SM Vertical Units					
Kilowatt Heater - 208/230V	Model Number				
	SM024	SM036	SM048	SM060	SM070
Electric Heat - 3.6/4.8 kW	●	●	●	●	●
Electric Heat - 7.8/9.6 kW	●	●	●	●	●
Electric Heat - 10.8/14.4 kW		●	●	●	●
Electric Heat - 14.4/19.2 kW			●	●	●

Factory Installed Option - Electric Heaters for SM Horizontal Units					
Kilowatt Heater - 208/230V	Order Number				
	SM024	SM036	SM048	SM060	SM070
Electric Heat - 3.6/4.8 kW	●	●	●	●	●
Electric Heat - 7.8/9.6 kW	●	●	●	●	●
Electric Heat - 10.8/14.4 kW		●	●	●	●
Electric Heat - 14.4/19.2 kW			●	●	●

Additional Factory Installed Options															
Description	SM024			SM036			SM048			SM060			SM070		
	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF	VT	HZ	CF
Heat Recovery/Desuperheater/HWG	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Differential Pressure Switch	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Smart Start	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Pump Relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Comfort Alert	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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")
SM024-1CSC	SM024-1CSN
SM036-1CSC	SM036-1CSN
SM048-1CSC	SM048-1CSN
SM060-1CSC	SM060-1CSN
SM070-1CSC	SM070-1CSN

Field Installed Option - Communicating Thermostats			
	Model/Order Number:	7738002994	7738002993
	Description:	TSTBT4H2CPHM - KA	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 w/ Humidity Control	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

Field Installed Option - SmartStart Accessory					
Order Number	SM024	SM036	SM048	SM060	SM070
7738003200	•	•	•	•	•

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps



Field Installed Accessory - Factory Internal Electric Heater Kits						
SM - Split Air Handler	Order Number	Availability per Unit				
		SM024	SM036	SM048	SM060	SM070
5 kW	HK050-1201	•	•	•	•	•
10 kW	HK100-1201		•	•	•	•
15 kW	HK150-1201			•	•	•
20 kW	HK200-1201				•	•

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

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

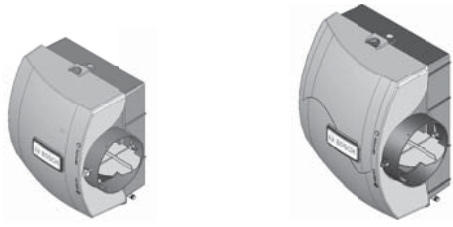
i It is required for the duct mounted heater to have an independent power supply.

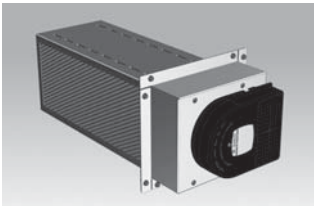
i In fiber glass duct systems, a metal sleeve **MUST** be used to insert the support the heater.

GreenSource CDi Series Model SM - Split System Residential Geothermal Heat Pumps




Field Installed Option - Standard MERV 8 Pleated Filter					
Filter Size	SM024	SM036	SM048	SM060	SM070
	Quantity Need per Unit				
24 X 24 X 2	1	1			
24 X 30 X 2			1	1	
16 X 30 X 2					2


Field Installed Option - Bosch Humidifiers			
 <p>HUMBSP-12H6--A HUMBSP-17H6--A</p>	Model/Order Number:	7738002895	7738002896
	Description:	HUMBXSBP12H6 -- A	HUMBXLBP17H6 -- A
	Features:	Small Bypass Humidifier, Manual Summer/Winter Damper, Humidistat included	Large Bypass Humidifier, Manual Summer/Winter Damper, Humidistat Included
	Application:	12 Gallons per Day	17 Gallons per Day
	Warranty:	1 Year Limited Warranty on Humidifer Pad 5 Year Limited Warranty on Assembly	

Field Installed Option - Bosch Photo Catalytic Oxidizer (PCO)			
	Model/Order Number:	7738002879	7738002880
	Description:	PCOB - 09012 - 0 -- A	PCOB - 14024 - 0 -- A
	Features:	9" UVC Light Bulb	14" UVC Light Bulb
	Application:	up to 1500 CFM units or House up to 2000 sq. ft.	up to 2400 CFM units or House up to 4700 sq. ft.
	Warranty:	1 Year Limited Warranty on Bulb 2 Year Limited Warranty on Ballast 5 Year Limited Warranty on Assembly	

GreenSource CDi Series Model SM - Split System
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Field Installed Option - Bosch Fresh Air Damper (FAD)				
	Model/Order Number:	7738002927	7738002928	7738002929
	Description:	FADB - 04007 - 6 - - A	FADB - 050011 - 6 - - A	FADB - 060015 - 6 - - A
	Size	4" Fresh Air Damper	5" Fresh Air Damper	6" Fresh Air Damper
	Features:	<ul style="list-style-type: none"> - Variable Capacity Control (settings from 0 to 100 of available CFM) - Variable Position Damper - Included Variable Position Control Included - Vent Hood with Screen Included 		
	Application:	A minimum of 70 CFM of fresh air from outside up to 1300 sq. ft. home	A minimum of 110 CFM of fresh air from outside up to 2100 sq. ft. home	A minimum of 150 CFM of fresh air from outside up to 3000 sq. ft. home
	Warranty:	5 Year Limited Warranty on Assembly		

Field Installed Option - Smoke Detector			
	Model/Order Number:	7738002987	7738002988
	Description:	SMKB - - - 040 - 6 - - A	SMKB - 02FST - 6 - - A
	Features:	Duct Smoke Detector	2 Foot Air Sampling Tube
	Application:	If smoke is detected in ducting, unit will stop, preventing circulation of smoke to other rooms. Manual reset is required which let's customer know there was an occurrence.	
	Warranty:	5 Year Limited Warranty on Parts	