



Meet the Bosch SV Model

The i Series Greensource water source heat pump comes equipped with the quality and innovative technology that only Bosch can provide.

Features

- Low installation costs Saving you money
- ► Easy to service Saving you time
- ▶ Energy efficient Meets ASHRAE 90.1 compliance
- Space saving technology Small footprint cabinet
- ▶ Specifically designed for replacement applications
- Available in Vertical and Horizontal
- Standard copper or cupro-nickel evaporator coil
- ▶ 1/2", 1 1/2 lb. Dual density fiberglass insulation
- ► High and low pressure switches
- ► Electronic circuit board with alert display which can also be displayed via a thermostat
- Tin-plated evaporator with coated fin coil Providing environmental corrosion protection (DuoGuard)
- Quiet operation
- Standard PSC motor
- > 75 VA transformer
- Galvanized steel cabinet
- Condensate overflow switch
- Water coil freeze protection
- Evaporator coil freeze protection
- Brownout low voltage protection
- ▶ Standard 1" glass fiber filter and 1" filter rack

Warranty⁽²⁾

- ▶ 1 year parts limited warranty
- ▶ 5 year compressor limited warranty









Water Connectors



Hanging Brackets
(Standard for Horizontal units)



ECM Constant Torque Motor Option

Bosch SV Model Features

Cabinet

The SV unit cabinetry is constructed using galvanized steel. This steel provides superior corrosion protection for units located indoors. All interior surfaces are lined with 1/2" thick, 1.5 lb./cu.ft. density, Micromat insulation for thermal insulation and acoustical attenuation. This insulation is non-combustible, non-hydroscopic and does not support fungal growth. Insulation meets NFPA 90A and 90B for fire protection and is certified to meet the GREENGUARD Indoor Air Quality Standard for Low Emitting Products.

Quiet Operation

Noise reduction is a critical consideration of the unit design. All SV units have a unique floating base compressor that is mounted on a heavy steel plate which rests on a high density rubber pad on the base of the unit. In addition, compressors are mounted on rubber grommets. This double isolation, which is unique to Bosch, is standard in all SV units and helps prevents vibration and noise transmission from the compressor to the unit structure resulting in exceptionally quiet operation.

Serviceability

All units are designed to be serviced from the front of the unit. Schrader valves for high and low pressure gauges and the electrical box components are easily accessible for diagnosing and servicing the unit.

Hanging Brackets

For some applications, hanging brackets may be needed. All horizontal units come standard with hanging bracket kits for suspending the unit from field supplied hanger rods. These kits include heavy duty steel brackets and rubber grommets for sound and vibration isolation from the building structure.

Unit Configurations

All units are available in vertical and horizontal configurations. Additionally, several options of return air and supply air are offered as standard, providing configuration flexibility.

Permanent Split Capacitor Motors (PSC)

The standard motor for all SV model heat pumps is a PSC. This motor utilizes the latest stator technology at low cost. This motor is not available on 041, 060, and 070 models.

ECM Constant Torque Motor(3)

The SV's ECM constant torque blower motor offers improved efficiency (up to 33%) over the PSC motor. The ECM constant-torque motors are similar in function to a PSC, but can handle up to 1 in.w.g. external static pressure making it a wise choice for high filtration applications. These motors come standard with the 041, 060 and 070 models.

Filter Racks and Unit Options

Units come standard with a 1" filter rack and 1" construction filter. A 1" return duct collar is integral to the filter rack eliminating the need for field mounted duct collars.

Water Connections

All water connections are heavy duty bronze 3/4" or 1" FPT fittings securely fastened to the unit corner post. This allows connecting to a Bosch Flexbile Hose Kit Accessory without the use of a backup wrench making for easier, faster installation.





Coax Coil



UPM Control Board



DuoGuard Evaporator Coil



Blower Housing (with Removable Inlet Ring)



Compressors

Refrigerant Circuit

SV Model units are designed using the optimum combination of compressor, water and air coils to provide peak performance.

Available heavy duty compressors:

- Rotary (sizes 007-018)
- Scroll (sizes 024-070)

Refrigerant to water heat exchangers are coaxial tube-intube copper/steel type providing a robust construction, ensuring years of trouble free operation. Optional Cupro-Nickel coils are available for applications where the water is of lower quality.

In geothermal applications where fluid temperatures can drop below the dew point of the surrounding air, optional insulation is available to prevent water coils and refrigerant piping from sweating.

Evaporator coils are state of the art, employing lanced fin and rifled tubing for maximum heat transfer. Large face areas result in lower face velocity, reducing sound while ensuring high latent heat removal for maximum dehumidification in the cooling mode.

Evaporator Coil

Corrosion Protection that comes standard is the tin-plated coil protection (DuoGuard™). Tin Electro-Plated Copper Tubing hair pins with High-Tech Polymer Coated Aluminum Fins will protect the evaporator coil from all forms of corrosive elements in the air stream.

Blower Housing

A removable inlet ring is a standard feature of the blower housing on all unit sizes. In the unlikely event that the motor requires removal, the inlet ring helps facilitate easy removal and installation without having to remove the fan housing from the cabinet.

Unit Protection Module

Each SV unit is factory provided with a Unit Protection Module (UPM) that controls the unit operation and monitors the safety controls that protect the unit. The UPM interfaces with the thermostat. The main purpose of the UPM is to protect the compressor by monitoring the different states of switches and sensors.

This module provides time delays and protects the unit against freezing of the water coil and evaporator coil.

UPM Control Board Features

- Anti-Short Cycle Timer 5 minute delay
- ▶ High and low pressure protection
- Water and evaporator freeze protection
- Condensate overflow protection
- ▶ Brownout/Surge/Power Interruption Protection
- ▶ The controller has a set of contacts for fault indication
- ▶ With a Bosch Communicating Thermostat alerts can be conveniently displayed without having to go to the unit.

Safety Controls include the following:

- ▶ High pressure switch in the refrigerant discharge line
- Low pressure switch in the refrigerant suction line
- ➤ Standard low fluid temperature (freeze) protection sensor. The freeze protection sensor is designed to disable compressor operation when the unit is in the heating mode, should the refrigerant temperature fall below either 26°F (-3.3°C) or 15°F (-9.4°C)
- Condensate overflow protection sensor is standard and factory mounted in the drain pan of the unit
- ► Low air coil temperature (freeze) protection sensor disables the compressor when the refrigerant entering the air coil drops below 26°F (-3.3°C)

LED Fault Indication

Two LED indicators are provided on the circuit board:

- ► Green: Power
- Red: Fault indicator with blink codes: High pressure, Low pressure, Freeze protection, Condensate overflow, Brownout condition

				sv
Size	Cabinet Configuration	Coax Coil	Return Air	Part Number
007		С	L	7-735-069-385
007	HZ	C	R	7-735-069-386
007	112	N	L	7-735-069-631
007		IN	R	7-735-069-632
007		С	L	7-735-069-388
007	VT	C	R	7-735-069-389
007	V 1	N	L	7-735-069-390
007		14	R	7-735-069-391
009		С	L	7-735-069-392
009	HZ	Ü	R	7-735-069-393
009		N	L	7-735-069-394
009			R	7-735-069-395
009		С	L	7-735-069-396
009	VT	Ü	R	7-735-069-397
009		N	L	7-735-069-633
009			R	7-735-069-634
012		С	L	7-735-069-398
012	HZ	Ü	R	7-735-069-399
012	112	N	L	7-735-069-400
012			R	7-735-069-401
012		С	L	7-735-069-402
012	VT	Ü	R	7-735-069-403
012	* .	N	L	7-735-069-635
012			R	7-735-069-636
015		С	L	7-735-069-404
015	HZ	Ü	R	7-735-069-405
015		N	L	7-735-069-406
015			R	7-735-069-407
015		С	L	7-735-069-408
015	VT		R	7-735-069-409
015		N	L	7-735-069-410
015			R	7-735-069-411
018		С	L	7-735-069-412
018	HZ		R	7-735-069-413
018		N	L	7-735-069-414
018			R	7-735-069-415
018		С	L	7-735-069-416
018	VT		R	7-735-069-417
018		N	L	7-735-069-418
018			R	7-735-069-419
024		С	L	7-735-069-420
024	HZ		R	7-735-069-421
024		N	L	7-735-069-422
024			R	7-735-069-423
024		С	L	7-735-069-424
024	VT		R	7-735-069-425
024		N	L	7-735-069-426
024			R	7-735-069-427
030		С	L	7-735-069-428
030	HZ		R	7-735-069-429
030		N	L	7-735-069-430
030			R	7-735-069-431
030		С	L	7-735-069-432 7-735-069-433
030	VT		R	7-735-069-433 N/A
030		N	L R	N/A N/A
030				7-735-069-434
036		С	L R	
036	HZ		R L	7-735-069-648 7-735-069-436
036		N	R	7-735-069-437
030			n	1-133-003-431

Size	Cabinet Configuration	Coax Coil	Return Air	Part Num
036	Configuration		L	7-735-069-
036		С	R	7-735-069-
036	VT		L	7-735-069-
036		N	R	7-735-069-
041			L	7-735-069-
041		С	R	7-735-069-
041	VT		L	7-735-069-
041		N	R	7-735-069-
042			L	7-735-069
042		С	R	7-735-069-
042	HZ		L	7-735-069-
042		N	R	7-735-069-
042			L	7-735-069
042		С	R	7-735-069
042	VT		L	7-735-069
042		N	R	7-735-069
048			L	7-735-069
048		С	R	7-735-069
048	HZ		L	7-735-069
048		N	R	7-735-069
048			L	7-735-069
048		С	R	7-735-069
048	VT		L	7-735-069
048		N	R	7-735-069
060			L	7-735-069
060		С	R	7-735-069
060	HZ		L	7-735-069
060		N	R	7-735-069
060			L	7-735-069
060		С	R	7-735-069
060	VT		L	7-735-069
060		N	R	7-735-069
070		_	L	7-735-069
070		С	R	7-735-069
070	HZ		L	7-735-069
070		N	R	7-735-069
070		0	L	7-735-069
070	\	С	R	7-735-069-
070	VT		L	7-735-069
070		N	R	7-735-069-

To Be Released

The following products are currently not available for purchase. These will be available upon the anticipated release date.

Size	Cabinet Configuration	Coax Coil	Return Air	Part Number	Release Date
007	HZ	N	L	7-735-069-631	
007	HZ	IN	R	7-735-069-632	
009	VT	N	L	7-735-069-633	
009		IN	R	7-735-069-634	Camina Caan
012	VT	N	L	7-735-069-635	Coming Soon
012	V I	IN	R	7-735-069-636	
012	117	N.	L	7-735-069-400	
012	HZ	N	R	7-735-069-401	

System & Technical Information

VERTICAL TOP DISCHARGE WATER SOURCE HEAT PUMP DIMENSIONS									
	Unit Overall Dimensions				Supply Air Duct Connection		Air Duct ection	Con	Reco Rep N.
Model	Height	Width	Depth	Discharge Width	Discharge Height	R/A Duct Flange Height	R/A Duct Width	Condenser Water Connections	Recommended Replacement Nominal Filter Size
SV007	24.25	19.0	19.0	8.0	10.0	8.0	16.0	3/4" FPT	10 × 16 × 1
SV009	24.25	19.0	19.0	8.0	10.0	8.0	16.0	3/4" FPT	10 × 16 × 1
SV012	24.25	19.0	19.0	8.0	10.0	8.0	16.0	3/4" FPT	10 × 16 × 1
SV015	32.25	21.5	21.5	14.0	14.0	14.0	20.0	3/4" FPT	16 × 20 × 1
SV018	32.25	21.5	21.5	14.0	14.0	14.0	20.0	3/4" FPT	16 × 20 × 1
SV024	39.25	21.5	21.5	14.0	14.0	18.0	20.0	3/4" FPT	20 × 20 × 1
SV030	39.25	21.5	21.5	14.0	14.0	18.0	20.0	3/4" FPT	20 × 20 × 1
SV036	44.25	21.5	26.0	14.0	16.0	22.0	24.0	3/4" FPT	24 × 24 × 1
SV041	39.25	21.5	21.5	14.0	16.0	18.0	20.0	3/4" FPT	20 × 20 × 1
SV042	44.25	21.5	26.0	14.0	16.0	22.0	24.0	3/4" FPT	24 × 24 × 1
SV048	45.25	24.0	32.5	14.0	18.0	22.0	30.0	1" FPT	24 × 30 × 1
SV060	45.25	24.0	32.5	14.0	18.0	22.0	30.0	1" FPT	24 × 30 × 1
SV070	58.25	26.0	33.25	16	18.0	30.0	30.0	1" FPT	16 × 30 × 1 (2)

	HORIZONTAL WATER SOURCE HEAT PUMP DIMENSIONS									
	Unit Overall Dimensions			Supply / Conne		Return / Conne	ection	Con	Reco Rep N	
Model	Height	Width	Depth	Discharge Width	Discharge Height	R/A Duct Flange Width	R/A Duct Height	Condenser Water Connections	Recommended Replacement Nominal Filter Size	
SV007	11.5	19.0	33.0	6.3	4.1	16.2	8.6	3/4" FPT	10 × 16 × 1	
SV009	11.5	19.0	33.0	6.3	4.1	16.2	8.6	3/4" FPT	10 × 16 × 1	
SV012	11.5	19.0	33.0	6.4	4.1	16.2	8.6	3/4" FPT	10 × 16 × 1	
SV015	17.0	22.0	43.0	9.1	9.7	20.2	15.0	3/4" FPT	16 × 20 × 1	
SV018	17.0	22.0	43.0	9.1	9.7	20.2	15.0	3/4" FPT	16 × 20 × 1	
SV024	17.0	22.0	43.0	9.1	9.7	25.0	15.0	3/4" FPT	16 × 25 × 1	
SV030	17.0	22.0	43.0	9.1	9.7	25.0	15.0	3/4" FPT	16 × 25 × 1	
SV036	19.0	22.0	54.5	9.1	10.3	30.2	17.0	3/4" FPT	18 × 30 × 1	
SV042	19.0	22.0	54.5	10.5	11.3	30.2	17.0	3/4" FPT	18 × 30 × 1	
SV048	21.0	25.0	54.5	10.5	11.4	34.6	19.0	1" FPT	20 × 34.5 × 5 × 1	
SV060	21.0	25.0	54.5	11.8	12.5	34.6	19.0	1" FPT	20 × 34.5 × 5 × 1	
SV070	21.0	25.0	65.0	11.8	12.5	48.1	19.0	1" FPT	20 × 24 × 1 (2)	

Performance Data

	AHRI/ANSI 13256-1 CAPACITY AND EFFICIENCY DATA - PSC MOTOR										
		Water Loop	Heat Pump			Ground Loop					
Models	Cooling 86 °F		Heating 68 °F		Coolin	Cooling 77 °F		g 32 °F	CFM	GPM	
	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР			
SV007	6,100	13.20	7,800	5.10	6,800	15.10	4,900	3.40	300	2	
SV009	8,200	12.40	9,900	4.70	N/A				330	2.5	
SV012	10,900	12.20	13,000	4.30	11,800	14.10	8,700	3.20	375	3	
SV015	14,200	12.80	16,100	4.40	14,200	14.60	11,300	3.30	500	4	
SV018	18,200	14.10	20,200	4.60	19,200	16.15	14,300	3.50	600	5	
SV024	24,300	14.20	27,400	5.00	25,400	16.90	18,100	3.55	800	6	
SV030	28,200	13.40	32,600	4.70	29,500	15.60	21,500	3.40	950	7	
SV036	36,900	14.30	38,800	4.65	38,500	16.65	27,100	3.55	1200	9	
SV042	49,600	13.65	42,800	4.45	41,200	15.90	30,000	3.25	1380	10	
SV048	46,200	13.95	58,600	4.65	48,400	16.35	39,300	3.40	1640	12	

	AHRI/ANSI 13256-1 CAPACITY AND EFFICIENCY DATA - CONSTANT TORQUE										
Water Loop Heat Pump				Water Loop Heat Pump Ground Loop Heat Pump							
Models	Cooling 86 °F		Heatin	Heating 68 °F		Cooling 77 °F		g 32 °F	СҒМ	GPM	
	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР	Capacity (Btuh)	EER (Btuh/W)	Capacity (Btuh)	СОР			
SV041	40,500	14.35	38,200	4.70	38,400	16.45	26,500	3.45	1240	9	
SV060	59,000	14.30	77,000	4.95	62,200	16.55	52,400	3.90	2000	15	
SV070	65,200	14.60	71,800	4.60	67,600	16.60	50,000	3.50	2100	16	

About Bosch

Bosch Group

The Bosch Group is a leading global supplier of technology and services in the areas of Automotive, Industrial Technology, Consumer Goods and Building Technology. The company was founded in Stuttgart, Germany, in 1886 and presently has more than 440 subsidiaries and is represented in over 150 countries.

In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket solutions, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances and software solutions. The Bosch Group's products and services are designed to improving quality of life by providing innovative and beneficial solutions. In this way, the company offers technology worldwide that is "Invented for life." Additional information is available online at boschheatingandcooling.com and bosch.ca.

Bosch Thermotechnology in North America

Bosch Thermotechnology is a leading source of high quality water heating and comfort systems. The company offers gas tankless, electric whole house and point-of-use water heaters, Bosch and Buderus floor-standing and wall mounted boilers, Bosch and FHP geothermal, water-source and air-source systems as well as controls and accessories for all product lines. Bosch Thermotechnology is committed to being Simply Smart by offering products that work together as integrated systems that enhance quality of life in an ultra-efficient and environmentally friendly manner. For more information, visit boschheatingandcooling.com.

Bosch Water-Source Heat Pumps: Made in the U.S.A.

Bosch and FHP water-source and geothermal heat pumps are made by highly trained and skilled workers in our factory based in Fort Lauderdale, Florida. They are manufactured with rigorous standards and factory testing ensuring high efficient operation over the life of the unit. Bosch's ISO 9001 and ISO 14001 certified facilities provide consistent quality in every unit built.









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