BOSCH
Invented for life

Bosch Heat Pump

SV Model: i Series

The i Series SV Model is a cost-effective single stage water source heat pump that is designed for residential and commercial retrofits as well as new construction applications.

www.BoschHeatingAndCooling.com

Quality & Innovative Home Comfort

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.

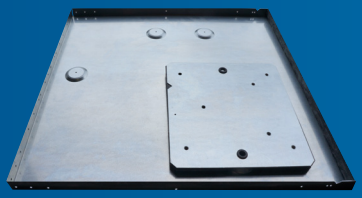
Features

- 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", 1.5 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

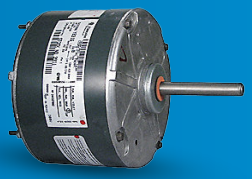
(1)56 dBA sound level is based on outdoor unit. (2)Please go to boschheatingandcooling.com for full limited warranty details



Standard Basepan

Water Connectors

Hanging Brackets
(Standard for Horizontal units)



PSC Motor

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 on 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 a low cost.

Filter Racks and Unit Options

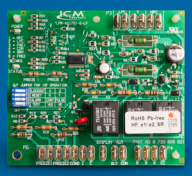
Units come standard with a 1" filter rack and 1" construction filter. A 1" return duct collar is integral to the filter rack eliminating the need for field mounted duct collars.

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

TXV Valve



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-in-tube 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.

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

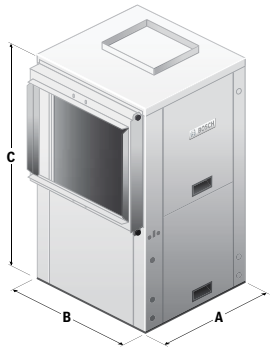
Two LED indicators are provided on the circuit board:

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

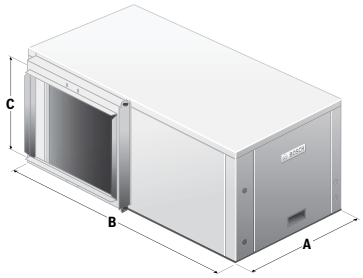
SV Models				
Size	**Cabinet Configuration**	**Coax Coil**	**Return Air**	**Part Number**
007	HZ	C	L	7-735-086-391
007			R	7-735-086-393
007		N	L	7-735-086-394
007			R	7-735-086-395
007	VT	C	L	7-735-086-396
007			R	7-735-086-397
007		N	L	7-735-086-398
007			R	7-735-086-399
009	HZ	C	L	7-735-086-400
009			R	7-735-086-401
009		N	L	7-735-086-402
009			R	7-735-086-403
009	VT	C	L	7-735-077-553
009			R	7-735-077-554
009		N	L	7-735-077-555
009			R	7-735-077-556
012	HZ	C	L	7-735-086-404
012			R	7-735-086-406
012		N	L	7-735-086-407
012			R	7-735-086-408
012	VT	C	L	7-735-086-409
012			R	7-735-086-410
012		N	L	7-735-086-411
012			R	7-735-086-412
015	HZ	C	L	7-735-086-413
015			R	7-735-086-414
015		N	L	7-735-086-416
015			R	7-735-086-420
015	VT	C	L	7-735-086-423
015			R	7-735-086-424
015		N	L	7-735-086-425
015			R	7-735-086-426
018	HZ	C	L	7-735-072-057
018			R	7-735-071-725
018		N	L	7-735-072-058
018			R	7-735-072-116
018	VT	C	L	7-735-072-118
018			R	7-735-071-566
018		N	L	7-735-072-061
018			R	7-735-072-062
024	HZ	C	L	7-735-072-119
024			R	7-735-072-064
024		N	L	7-735-072-120
024			R	7-735-072-066
024	VT	C	L	7-735-071-847
024			R	7-735-071-569
024		N	L	7-735-071-863
024			R	7-735-072-121
030	HZ	C	L	7-735-072-068
030			R	7-735-072-069
030		N	L	7-735-071-864
030			R	7-735-072-070
030	VT	C	L	7-735-072-071
030			R	7-735-071-165
030		N	L	7-735-071-573
030			R	7-735-072-114
036	HZ	C	L	7-735-072-023
036			R	7-735-072-098
036		N	L	7-735-072-072
036			R	7-735-072-073
036	VT	C	L	7-735-072-131
036			R	7-735-072-075
036		N	L	7-735-071-545
036			R	7-735-072-076
041	VT	C	L	7-735-073-974
041			R	7-735-071-982
041		N	L	7-735-080-203
041			R	7-735-080-204
042	HZ	C	L	7-735-072-115
042			R	7-735-072-124
042		N	L	7-735-072-125
042			R	7-735-072-126
042	VT	C	L	7-735-072-127
042			R	7-735-072-128
042		N	L	7-735-072-129
042			R	7-735-072-130
048	HZ	C	L	7-735-072-088
048			R	7-735-072-089
048		N	L	7-735-072-090
048			R	7-735-072-091
048	VT	C	L	7-735-072-092
048			R	7-735-071-306
048		N	L	7-735-072-093
048			R	7-735-071-702
060	HZ	C	L	7-735-080-212
060			R	7-735-080-213
060		N	L	7-735-080-215
060			R	7-735-080-216
060	VT	C	L	7-735-080-442
060			R	7-735-080-904
060		N	L	7-735-080-444
060			R	7-735-080-445
070	HZ	C	L	7-735-078-026
070			R	7-735-078-028
070		N	L	7-735-078-029
070			R	7-735-078-030
070	VT	C	L	7-735-077-595
070			R	7-735-077-596

System & Technical Information

Vertical



Horizontal



Vertical Cabinet SV Model Dimensions				
Model	**Unit**	**Width (A)**	**Depth (B)**	**Height (C)**
007 - 012	in	19.0	19.0	24.3
	cm	48.3	48.3	61.6
015 - 018	in	21.5	21.5	32.3
	cm	54.6	54.6	81.9
024, 030, 041	in	21.5	21.5	39.3
	cm	54.6	54.6	99.7
036, 042	in	21.5	26.0	44.3
	cm	54.6	66.0	109.9
048 - 060	in	24.0	32.5	45.3
	cm	61.0	82.6	114.9
070	in	26.0	33.3	58.3
	cm	66.0	84.5	148.0

Horizontal Cabinet SV Model Dimensions				
Model	**Unit**	**Width (A)**	**Depth (B)**	**Height (C)**
007 - 012	in	19.0	33.0	11.5
	cm	48.3	83.8	29.2
015-018	in	22.0	43.0	17.0
	cm	55.9	109.2	43.2
024-030	in	22.0	43.0	18.0
	cm	55.9	109.2	43.2
036, 042	in	22.0	54.5	19.0
	cm	55.9	138.4	48.3
048 - 060	in	25.0	54.5	21.0
	cm	63.5	138.4	53.3
070	in	25.0	65.0	21.0
	cm	63.5	165.1	53.3

AHRI/ANSI 13256-1 CAPACITY AND EFFICIENCY DATA – PSC MOTOR										
Models	**Water Loop Heat Pump**				**Ground Loop Heat Pump**				**CFM**	**GPM**
	Cooling 86 °F		**Heating 68 °F**		**Cooling 77 °F**		**Heating 32 °F**			
	Capacity (Btuh)	**EER (Btuh/W)**	**Capacity (Btuh)**	**COP**	**Capacity (Btuh)**	**EER (Btuh/W)**	**Capacity (Btuh)**	**COP**		
SV007	6,100	13.20	7,800	5.10	6,800	15.10	4,900	3.40	300	2.0
SV009 (HZ)	8,150	12.40	10,700	4.70	8,700	14.0	6,900	3.0	300	2.5
SV009 (VT)	8,150	12.40	10,700	4.70	8,700	14.40	6,900	3.20	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	36,250	14.30	38,800	4.65	38,000	16.65	27,100	3.55	1200	9
SV041	35,600	14.15	39,100	4.45	37,300	16.20	27,400	3.30	1240	9
SV042	39,500	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
SV060 (HZ)	59,200	13.60	74,200	4.80	61,900	15.50	49,200	3.8	1700	15
SV060 (VT)	59,100	13.60	77,800	4.80	61,600	15.80	53,400	3.75	1900	15
SV070	64,000	13.30	72,800	4.40	66,400	15.00	50,800	3.40	2000	16

Notes: All dimensions within +– 0.125". All condensate drain connections are 3/4" FPT. Horizontal models can be field converted between end blow and straight through supply air configurations. Specifications subject to change without notice. 1" filter rack extends 1.23" beyond the side of the unit.
GLHP ratings require an extended range option.
Ratings based upon A HRI/ANSI 13256-1 with 1" disposable filter.

A Zero Energy Capable Home for Peace of Mind

The Bosch zero energy capable home is a full systems approach to creating a house that is not an energy drain on the planet's finite resources. This technology helps homeowners to reduce their monthly utility bills and protect the environment.

Bosch has assembled a comprehensive suite of heating, cooling, water heating, and energy-efficient appliances that, when installed in a home, reduces home energy usage due to intelligent product designs and higher efficiencies. In addition, this approach enables the homeowner to save enough power to offset the already reduced energy demand, meaning virtually a zero energy bill for the homeowner.

Ask your Bosch Contractor or go to Boschexperiencecenter.com to learn more about how Bosch products can work together for your ultimate comfort.

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.

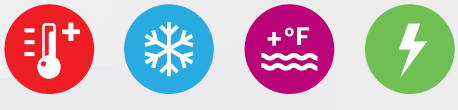
In the U.S., Canada and Mexico, the Bosch Group manufactures and markets automotive original equipment and aftermarket solutions, industrial drives and control technology, power tools, security and communication systems, packaging technology, thermotechnology, household appliances and software solutions. 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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Bosch Thermotechnology Corp.
Watertown, MA • Londonderry, NH • Ft. Lauderdale, FL
General Inquiries: 1-866-642-3198

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