SEVRA

Heat Pump Catalogue

R290



R290 Heat Pump









High Efficiency

- Finned heat exchanger surface area ↑17%.[1]
- Enlarged plate heat exchanger.[1]
- Fan blade surface area ↑10%.[1]
- Compressor displacement ↑55%.[1]

100% heating output with no capacity drop at –7°C.[2]
Supply water temperature of up to 80°C at an ambient temperature of –10°C.[2]

High Energy Efficiency

- The main components use DC control technology, ensuring highly efficient operation.
- At water temperatures of 35°C and 55°C, the SCOP rating reaches energy efficiency class A+++.

Sealed Electrical Control Box

- 3 mm thick aluminium enclosure.
- Internal fan ensures uniform heat dissipation.
- Additional external cooling fins.

Explosion-Proof Design

- A sealed (hermetic) electrical control box, isolated from any potentially leaking refrigerant.

Precise Noise Control

- The compressor is enclosed with sound-absorbing materials.
- Vibration-damping materials are used in the central section.
- Fan with swept-back edges and a high blade pitch angle to reduce vortex noise.
- Unique mesh grille designed to reduce airflow resistance.
- Built-in acoustic insulation (soundproofing mats) at multiple points throughout the unit.
- The outdoor unit sound level is as low as 35 dB at a distance of three metres.[3]

1. Compared with the AUX R32 heat pump.
2. Data source: AUX Performance Laboratory, 16 October 2023.
3. Data source: AUX Acoustic Laboratory, 15 March 2023.

App Control

- Convenient control of parameter settings, energy consumption monitoring, holiday mode, and more.

Precise Temperature Control

- The mixing valve uses a 0–10 V control signal, enabling precise regulation of the supply water temperature for the underfloor heating system.

Cascade Function

- Up to 8 units can be connected in parallel, providing a total system capacity of up to 128 kW.
- The number of units used for domestic hot water production can be freely selected, making the system suitable for facilities with high DHW demand.

Intelligent Unit Runtime Control

- Using precise calculation algorithms, the system ensures balanced operating time across all units, so that each unit runs for an equal period.

Backup Heating and Gas Boiler Integration

- Powerful backup electric heaters with a capacity of up to 9 kW, with support for integration with an additional heat source.

Innovative Controller

- With a colour display.
- Featuring an elegant black design.
- Equipped with a Modbus gateway.
- Supports 18 languages.
- With a built-in temperature sensor.
- With an integrated Wi-Fi module.

Software Update

- Fast and easy software updates via the built-in USB port.

Built-in Wi-Fi Module

- Full control from anywhere.
- Thanks to Wi-Fi connectivity, you can manage the heat pump using a smartphone, tablet, or computer — whether you are at home, at work, or on holiday. All you need is internet access.
- Everyday comfort and convenience. Adjust the temperature, operating mode, or heating schedule without having to approach the controller. Everything can be set with just a few clicks.



New Design

- Consistent family-style design language, combining a clean and elegant appearance with strong product recognition.

High Energy Efficiency

- Large compressor, large condenser, and large plate heat exchanger. The SCOP rating can reach energy efficiency class A+++ at both 35°C and 55°C, while domestic hot water (DHW) performance can reach class A+.

Durable and Long-Lasting

- The internal water tank and heat exchanger coil are made of 316 stainless steel.

Excellent Heat Retention

- More than 45 mm of thermal insulation.
- At a water temperature of 55°C, the temperature drop is only 7°C over 24 hours.

Dual Temperature Sensor Locations

- The water tank is equipped with two temperature sensor ports. Users can select the appropriate sensor position depending on their water usage pattern and consumption level.

Precise Data Monitoring

- The built-in water flow sensor provides more accurate performance and energy efficiency readings.

Safe Operation

- The outdoor unit is equipped with a built-in water-gas separator and an automatic air vent valve, preventing refrigerant from entering the indoor space.
- The indoor unit is equipped with a manual air vent valve. During installation, connecting the indoor and outdoor units helps speed up the air removal process.

Quiet Operation

- The outdoor unit features a dedicated compressor compartment, a fan with high-pitch-angle blades, and sound-absorbing insulation.
- The sound level can be as low as 35 dB at a distance of 3 m.
- The indoor unit is equipped with a low-noise variable-frequency water pump, with an operating sound level of only 30 dB at a distance of 1 m.

*Data source: AUX Acoustic Laboratory, 29 July 2024.

Built-in Three-Way Valve

- The built-in three-way valve allows separate connection of the domestic hot water system and the heating/cooling system, making installation more convenient.

More Detailed Energy Consumption Display

- Energy consumption by the outdoor unit, water pump, electric heater, and water tank electric heater is displayed separately, making it easier for users to monitor and manage energy use.

Multifunctional Wired Controller

- The Wi-Fi module, MODBUS module, and temperature sensor are built into the wired controller, making installation more convenient.
- A USB port is also integrated into the wired controller. It can be used for software updates and for copying and saving parameters, simplifying both installation and after-sales service.

Remote Software Update

- Software can be updated via the app and the remote management platform.
- The remote management platform also enables monitoring of the unit's operating status and adjustment of operating parameters, making service and maintenance more convenient.

Complete Model Range

- The 190-litre water tank can meet the needs of households with 2 to 6 people.
- Single-phase and three-phase units are available with 3 kW or 9 kW electric heaters.

High-Performance Mode

- In high-performance mode, heating/cooling capacity increases by more than 30%, ensuring rapid heating and cooling.

*Data source: AUX Laboratory, April 2024.

Easy Cleaning

- The water tank is equipped with a dedicated connection port for a magnesium anode. Users can choose whether to install one; its use provides enhanced corrosion protection.
- A drain outlet is located at the bottom of the tank, making draining and cleaning easier.

Easy Installation

- The indoor unit measures 600 × 600 mm, requiring only a small installation footprint, while its height is just 1800 mm.
- It can be installed within built-in cabinetry, such as a cupboard, without compromising the aesthetics of the interior.

Integrated Split System

No Side Service Clearance Required

- All installation and service operations are carried out from the front of the unit.
- No additional installation or service clearance is required on either side.



Technical Data Tables

Monobloc

Model name			4kW	6kW
Model			SEV-ACHP1-04-M	SEV-ACHP1-06-M
Power supply		V/Ph/H	220–240 / 1 / 50	
Heating[2]	Capacity	kW	4.5	6.35
	Rated power input	kW	0.87	1.28
	COP		5.15	4.95
Heating[3]	Capacity	kW	4.6	6.4
	Rated power input	kW	1.44	2.03
	COP		3.2	3.15
Cooling[4]	Capacity	kW	4.5	6.5
	Rated power input	kW	0.82	1.27
	EER		5.5	5.1
Cooling[5]	Capacity	kW	4.7	6.8
	Rated power input	kW	1.29	2.19
	EER		3.65	3.1
Seasonal space heating energy efficiency*	LWT 35°C		A+++	A+++
	LWT 55°C		A+++	A+++
SCOP[6]	LWT 35°C		4.96	4.96
	LWT 55°C		3.90	3.90
Water pump	Head	m	9	
	Maximum flow rate	m^3/h	4.5	
	Adapter diameter		DN25	
Sound pressure level	Monobloc unit	dB(A)	43	43
Sound power level	Monobloc unit	dB	56	57
Packaging dimensions (W × D × H)	Monobloc unit	mm	1205*555*870	
Unit dimensions (W × D × H)	Monobloc unit	mm	1130*450*740	
Net weight	Monobloc unit	kg	93	
Gross weight	Monobloc unit	kg	104	
Operating temperature range	Cooling	°C	-5 ~ 43	
	Heating	°C	-25 ~ 35	
	DHW (tank)	°C	-25 ~ 43	
Water temperature setting range	Cooling	°C	5 ~ 25	
	Heating	°C	25 ~ 80	
	DHW (tank)	°C	30 ~ 75	
Water circuit	Pipe connections	in.	G1" BSP	
	Safety valve pressure	MPa	0.3	
	Flow switch	m^3/h	0.36	
	Expansion vessel capacity	L	5	
	Backup heater capacity	kW	3	
Loading quantity	40H/40/20	pcs.	117/78/36	

Note:
1. Applicable EU standards and regulations: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.
2. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 30°C, LWT 35°C.
3. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 47°C, LWT 55°C.
4. Outdoor air temperature: 35°C (dry bulb); EWT 23°C, LWT 18°C.
5. Outdoor air temperature: 35°C (dry bulb); EWT 12°C, LWT 7°C.
6. Seasonal space heating energy efficiency class tested under average climate conditions.
7. Test standard: EN12102-1.
8. The sound pressure level is the maximum value measured under the two conditions specified in points 2 and 5.

Notes:
- The data are based on measurements conducted by the AUX Laboratory. Results may vary depending on the test conditions. AUX reserves the right to interpret the data.
- All specifications are subject to change by the manufacturer without prior notice.

Monoblc

Model name			8kW	10kW	12kW	14kW	16kW
Model			SEV-ACHP3-08-M	SEV-ACHP3-10-M	SEV-ACHP3-12-M	SEV-ACHP3-14-M	SEV-ACHP3-16-M
Power supply		V/Ph/H	380–415 / 3 / 50				
Heating[2]	Capacity	kW	8.4	10.0	12	14	15.1
	Rated power input	kW	1.68	2.08	2.45	2.92	3.21
	COP		5.0	4.8	4.9	4.8	4.7
Heating[3]	Capacity	kW	7.8	9.5	12	14	15.1
	Rated power input	kW	2.36	2.92	3.69	4.38	4.79
	COP		3.3	3.25	3.25	3.2	3.15
Cooling[4]	Capacity	kW	8.3	10.0	12	14	16
	Rated power input	kW	1.61	2.11	2.67	3.89	4.10
	EER		5.15	4.75	4.5	3.6	3.9
Cooling[5]	Capacity	kW	7.5	8.9	11.5	12.7	14
	Rated power input	kW	2.17	2.74	3.8	4.38	5.09
	EER		3.45	3.25	3.05	2.9	2.75
Seasonal space heating energy efficiency*	LWT 35°C		A+++	A+++	A+++	A+++	A+++
	LWT 55°C		A+++	A+++	A+++	A+++	A+++
SCOP[6]	LWT 35°C		5.15	5.15	4.73	4.73	4.78
	LWT 55°C		3.88	3.93	3.83	3.83	3.83
Water pump	Head	m	9				
	Maximum flow rate	m^3/h	4.5				
	Adapter diameter		DN25				
Sound pressure level	Monobloc unit	dB(A)	44	44	45	46	47
Sound power level	Monobloc unit	dB	57	57	57	57	58
Packaging dimensions (W × D × H)	Monobloc unit	mm	1355*545*1210				
Unit dimensions (W × D × H)	Monobloc unit	mm	1280*450*1040				
Net weight	Monobloc unit	kg	140		156		
Gross weight	Monobloc unit	kg	154		167		
Operating temperature range	Cooling	°C	-5 ~ 43				
	Heating	°C	-25 ~ 35				
	DHW (tank)	°C	-25 ~ 43				
Water temperature setting range	Cooling	°C	5 ~ 25				
	Heating	°C	25 ~ 80				
	DHW (tank)	°C	30 ~ 75				
Water circuit	Pipe connections	inch.	G1" BSP				
	Safety valve pressure	MPa	0.3				
	Flow switch	m^3/h	0.6				
	Expansion vessel capacity	L	5				
	Backup heater capacity	kW	9				
Loading quantity	40H/40/20	pcs.	68/33/16				

Note:
1. Applicable EU standards and regulations: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02:2014.
2. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 30°C, LWT 35°C.
3. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 47°C, LWT 55°C.
4. Outdoor air temperature: 35°C (dry bulb); EWT 23°C, LWT 18°C.
5. Outdoor air temperature: 35°C (dry bulb); EWT 12°C, LWT 7°C.
6. Seasonal space heating energy efficiency class tested under average climate conditions.
7. Test standard: EN12102-1.
8. The sound pressure level is the maximum value measured under the two conditions specified in points 2 and 5.

Notes:
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Integrated Split System

Model name			6kW	8kW	10kW
Outdoor unit model			SEV-AC1-06-HA	SEV-AC1-08-HA	SEV-AC1-10-HA
Indoor unit model			SEV-ACHA1-EB19	SEV-ACHA1-EA19	
Power supply		V/Ph/H	220-240/1/50		
Heating[2]	Capacity	kW	6.35	8.1	9.8
	Rated power input	kW	1.35	1.62	2.04
	COP		4.7	5.0	4.8
Heating[3]	Capacity	kW	6.28	7.6	9.4
	Rated power input	kW	1.62	2.30	2.89
	COP		3.88	3.3	3.25
Cooling[4]	Capacity	kW	6.2	8.1	9.8
	Rated power input	kW	2.05	1.57	2.06
	EER		3.02	5.15	4.57
Cooling[5]	Capacity	kW	5.75	7.4	8.8
	Rated power input	kW	1.6	2.14	2.71
	EER		3.58	3.45	3.25
Seasonal space heating energy efficiency*[7]	LWT 35°C		A+++	A+++	A+++
	LWT 55°C		A+++	A+++	A+++
SCOP[6]	LWT 35°C		4.85	5.1	5.1
	LWT 55°C		3.83	3.85	3.85
DHW energy efficiency	Water heating energy efficiency class		A+	A+	A+
	COPDHW		2.95	2.95	2.95
	Declared load profile			L	
Water pump	Available head	m	9	9	9
	Maximum flow rate	m^3/h		4.5	
	Adapter diameter			DN25	
Refrigerant R290	Factory charge	kg	0.55	0.85	1.35
Sound pressure level	Outdoor unit	dB(A)	44	44	44
	Indoor unit	dB(A)		31	
Sound power level	Outdoor unit	dB	53	57	57
	Indoor unit	dB	41	43	43
Packaging dimensions (W × D × H)	Outdoor unit	mm	1205*555*870	1355*545*1210	
	Indoor unit	mm	700*628*1945	700*682*1835	
Unit dimensions (W × D × H)	Outdoor unit	mm	1130*420*710	1280*420*1040	
	Indoor unit	mm	600*600*1795	600*600*1720	
Operating temperature range	Chłodzenie	°C	-5 ~ 43		
	Ogrzewanie	°C	-25 ~ 35		
	CWU (zbiornik)	°C	-25 ~ 43		
Water temperature setting range	Cooling	°C	5 ~ 25		
	Heating	°C	25 ~ 80		
	DHW (tank)	°C	30 ~ 75		
Water circuit	Pipe connections	in.	G1"BSP		
	DHW pipe connections	in.	G3/4"BSP		
	Safety valve pressure	MPa	0.3		
	Flow switch	m^3/h	0.6		
	Expansion vessel capacity	L	8		
	Backup heater capacity	kW	3		
	Water side	Type	Plate type		
Loading quantity	40H/40/20	Outdoor unit (pcs.)	68/33/16		
		Indoor unit (pcs.)	51/51/24		

Note:
1. Applicable EU standards and regulations: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02.2014.
2. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 30°C, LWT 35°C.
3. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 47°C, LWT 55°C.
4. Outdoor air temperature: 35°C (dry bulb); EWT 23°C, LWT 18°C.
5. Outdoor air temperature: 35°C (dry bulb); EWT 12°C, LWT 7°C.
6. Seasonal space heating energy efficiency class tested under average climate conditions.
7. Test standard: EN12102-1.
8. The sound pressure level is the maximum value measured under the two conditions specified in points 2 and 5.

Notes:
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Technical Data Tables

Integrated Split System

Model name			12kW	14kW	16kW
Outdoor unit model			SEV-AC3-12-HA	SEV-AC3-14-HA	SEV-AC3-16-HA
Indoor unit model			SEV-ACHA3-EA19		
Power supply		V/Ph/H	380-415/3/50		
Heating[2]	Capacity	kW	11.6	13.6	15.1
	Rated power input	kW	2.37	2.83	3.21
	COP		4.9	4.8	4.7
Heating[3]	Capacity	kW	11.5	14	14.8
	Rated power input	kW	3.54	4.38	4.70
	COP		3.25	3.2	3.15
Cooling[4]	Capacity	kW	11.6	13.6	15.8
	Rated power input	kW	2.58	3.78	4.05
	EER		4.5	3.6	3.9
Cooling[5]	Capacity	kW	11.1	12.5	14
	Rated power input	kW	3.6	4.31	5.09
	EER		3.05	2.9	2.75
Seasonal space heating energy efficiency*[7]	LWT 35°C		A+++	A+++	A+++
	LWT 55°C		A+++	A+++	A+++
SCOP[6]	LWT 35°C		4.71	4.71	4.75
	LWT 55°C		3.825	3.825	3.825
DHW energy efficiency	Water heating energy efficiency class		A+	A+	A+
	COPDHW		2.88	2.88	2.88
	Declared load profile			L	
Water pump	Available head	m	9	9	9
	Maximum flow rate	m^3/h		4.5	
	Adapter diameter			DN25	
Refrigerant R290	Factory charge	kg	1.35	1.35	1.35
Sound pressure level	Outdoor unit	dB(A)	45	46	47
	Indoor unit	dB(A)		31	
Sound power level	Outdoor unit	dB	58	59	60
	Indoor unit	dB		43	
Packaging dimensions (W × D × H)	Outdoor unit	mm		1355*545*1210	
	Indoor unit	mm		700*682*1835	
Unit dimensions (W × D × H)	Outdoor unit	mm		1280*420*1040	
	Indoor unit	mm		600*600*1720	
Operating temperature range	Chłodzenie	°C		-5 ~ 43	
	Ogrzewanie	°C		-25 ~ 35	
	CWU (zbiornik)	°C		-25 ~ 43	
Water temperature setting range	Cooling	°C		5 ~ 25	
	Heating	°C		25 ~ 80	
	DHW (tank)	°C		30 ~ 75	
Water circuit	Pipe connections	in.		G1"BSP	
	DHW pipe connections	in.		G3/4"BSP	
	Safety valve pressure	MPa		0.3	
	Flow switch	m^3/h		0.6	
	Expansion vessel capacity	L		8	
	Backup heater capacity	kW		3	
	Water side	Type		Plate type	
Loading quantity	40H/40/20	Outdoor unit (pcs.)		68/33/16	
		Indoor unit (pcs.)		51/51/24	

Note:
1. Applicable EU standards and regulations: EN14511; EN14825; EN50564; EN12102; (EU) No 811/2013; (EU) No 813/2013; OJ 2014/C 207/02.2014.
2. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 30°C, LWT 35°C.
3. Outdoor air temperature: 7°C (dry bulb), 85% relative humidity; EWT 47°C, LWT 55°C.
4. Outdoor air temperature: 35°C (dry bulb); EWT 23°C, LWT 18°C.
5. Outdoor air temperature: 35°C (dry bulb); EWT 12°C, LWT 7°C.
6. Seasonal space heating energy efficiency class tested under average climate conditions.
7. Test standard: EN12102-1.
8. The sound pressure level is the maximum value measured under the two conditions specified in points 2 and 5.

Notes:
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- All specifications are subject to change by the manufacturer without prior notice.

Built-in Three-Way Valve

- The built-in three-way valve allows the domestic hot water circuit and the heating/cooling system to be connected independently, making installation of the entire system easier and more efficient. This solution reduces the need for additional hydraulic compo nents, helping to save space and shorten installation time. The integrated valve also enables smooth swi tching of the heat pump between space heating or cooling and domestic hot water production.



Cascade Function

- Up to 8 units can be combined (up to 128 kW)
- Up to 8 units for domestic hot water production
- Simultaneous space heating/cooling and domestic hot water production
- Balanced distribution of operating time across all units

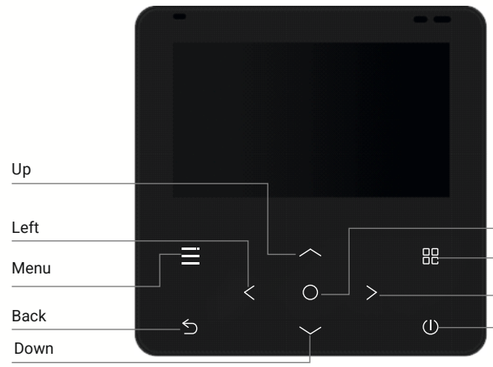


Additional Function Explanations

Modern Controller

- The modern wired controller combines an elegant design with extensive functionality, ensuring convenient system operation while simplifying installation and subsequent servicing. Its slim black ho using and colour display give it a modern, refined appearance that blends well with a wide range of interior styles.
- The controller integrates key communication and measurement components, including a Wi-Fi module, Modbus gateway, and temperature sensor. This reduces the need for additional accesso ries and simplifies installation. Built-in Wi-Fi connectivity enables convenient remote control, while Modbus communication facilita tes integration with higher-level automation and building manage ment systems.
- The controller is also equipped with a USB port that can be used for software updates, as well as for copying, saving, and transferring configuration parameters. This speeds up system commissioning, makes it easier to configure additional units, and streamlines servi ce operations.
- Support for 18 languages is an additional advantage, allowing the interface to be easily adapted to users in different markets.
- The integrated temperature sensor enables continuous monitoring of indoor conditions and supports precise system control.







Remote Update



USB Update

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