



water heater

**STRAW**  
SYSTEM

**JET**  
SYSTEM

**V-SHAPE**  
LAMELLA

**3 YEARS**  
WARRANTY



## BASIC FEATURES

Wide and variable range of highly efficient heating units designed for both wall and ceiling installation. They are suitable for use in the industrial premises, manufacturing hall, warehouses, sport facilities and other such buildings.

- 4 sizes with airflows of **1000 - 5850 m<sup>3</sup>/h**
- **7 different front covers** offering the choice of the best-suited one for a particular installation (Cut-out lamellas, Exhaust jets, Diffusor, Aluminium lamellas, Extension lamellas, Vertical cut-out lamellas, Straw-System)
- Powerful heating performance ensured by **2row** or **3row** LPHW coils
- Compact metal sheet casing treated with a white powder coating **RAL9016**
- Easy installation and maintenance
- Air filter with a simple access (optional accessory)

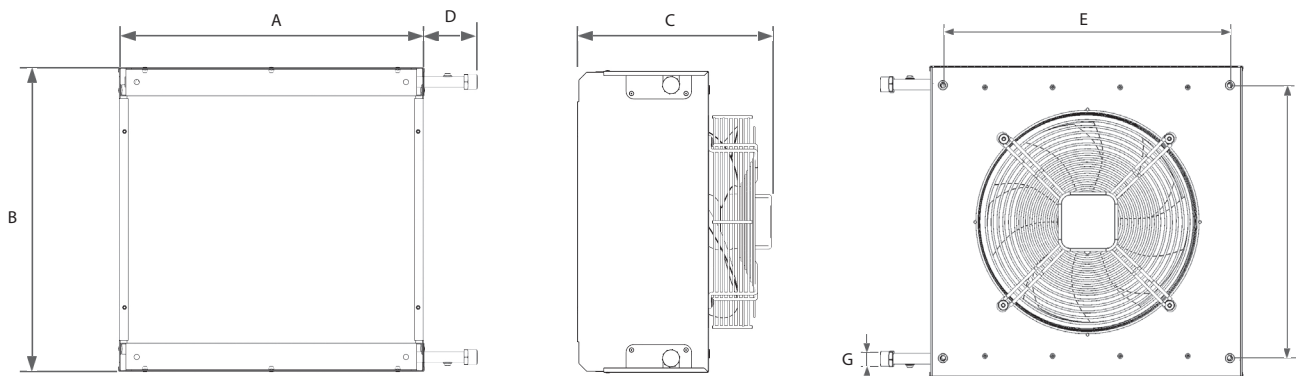
The heating unit shall be installed indoor in a dry area with ambient temperatures ranging from +5 °C up to +35 °C and relative humidity of up to 80%. It is designed for blowing air free of rough dust, grease, chemical fumes, and other impurities. The IP rating of the electric system of the complete heating unit is IP 44. The heating unit is produced in standard colour RAL 9016.



### PRIMARY PARAMETERS

The LPHW coil are designed for the maximum operating water temperature of +110 °C and maximum operating pressure of 1.6 MPa.

### Dimensions of the SAVANA unit



Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G(**)
SAV-1-2R-AC	455	455	350	100	408	383	3/4
SAV-2-2R-AC	555	555	350	100	508	483	3/4
SAV-4-2R-AC	755	755	350	100	708	683	3/4
SAV-6-2R-AC	855	855	350	100	808	783	1

Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G(**)
SAV-1-3R-AC	455	455	350	100	408	383	1
SAV-2-3R-AC	555	555	350	100	508	483	1
SAV-4-3R-AC	755	755	350	100	708	683	1
SAV-6-3R-AC	855	855	350	100	808	783	1 1/4

### Primary parameters

Type	Airflow [m³/h]	Airflow reach* [m]	Voltage [V/Hz]	Current [A]	Power consumption [W]	Noise** [dB(A)]	Weight*** [kg]
SAV-1-2R-AC	1300	11	230/50 (60)	0,65	150	44,3	16
SAV-2-2R-AC	2100	11		0,95	200	49,3	22
SAV-4-2R-AC	4350	12		2,00	460	55,0	34
SAV-6-2R-AC	5850	12		3,00	690	58,0	45

SAV-1-3R-AC	1200	9	230/50 (60)	0,65	150	45,3	18
SAV-2-3R-AC	2000	9		0,95	200	49,0	24
SAV-4-3R-AC	4050	11		2,00	460	54,8	36
SAV-6-3R-AC	5300	11		3,20	740	58,9	47

\* The airflow reach is equal to the distance where the air speed is 0,5m/s

\*\* Sound pressure measured 5m from the heating unit outlet (Q=2)

\*\*\* Weight without cover and without water in LPHW coil.

Basic technical parameters of LPHW coils

2-row heater

Airflow [m³/h]		SAV-1-2R-AC 1300				SAV-2-2R-AC 2100				SAV-4-2R-AC 4350				SAV-6-2R-AC 5850			
LPHW coil temperature gradient [°C]	Inlet air temperature [°C]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]
90/70	0	19,1	43,9	0,84	16	30,2	42,9	1,33	11	63,4	43,5	2,79	38	83,9	42,8	3,70	19
	10	16,6	48,2	0,73	12	26,2	47,2	1,15	9	55,2	47,9	2,43	29	72,9	47,2	3,21	15
	15	15,4	50,3	0,68	11	24,2	49,4	1,07	7	51,0	50,0	2,25	25	67,4	49,4	2,97	13
80/60	0	16,5	37,9	0,72	12	26,0	36,9	1,14	9	54,9	37,7	2,41	29	72,4	37,0	3,18	15
	10	14,0	42,1	0,61	9	21,9	41,2	0,96	6	46,6	42,0	2,05	22	61,4	41,4	2,70	11
	15	12,7	44,2	0,56	8	19,9	43,4	0,88	5	42,4	44,1	1,86	18	55,9	43,6	2,46	9
70/50	0	13,9	31,8	0,61	9	21,7	30,8	0,95	6	46,2	31,7	2,02	22	60,9	31,1	2,66	11
	10	11,4	36,1	0,50	6	17,7	35,2	0,77	4	38,0	36,1	1,66	15	49,8	35,4	2,18	8
	15	10,1	38,2	0,44	5	15,7	37,3	0,69	3	33,8	38,2	1,48	12	44,3	37,6	1,94	6
60/40	0	11,2	25,7	0,49	6	17,4	24,8	0,76	4	37,5	25,8	1,64	15	49,3	25,1	2,15	8
	10	8,7	30,0	0,38	4	13,4	29,1	0,58	3	29,2	30,1	1,27	9	38,2	29,5	1,67	5
	15	7,4	32,1	0,32	3	11,4	31,2	0,50	2	24,1	32,2	1,09	7	32,7	31,7	1,42	4
45/35	0	9,3	21,3	0,80	16	14,5	20,6	1,26	11	30,8	21,2	2,68	38	40,7	20,8	3,53	19
	10	6,8	25,6	0,59	9	10,5	25,0	0,91	6	22,6	25,5	1,96	22	29,7	25,2	2,58	11
	15	5,5	27,7	0,48	6	8,5	27,1	0,74	4	18,5	27,7	1,61	15	24,3	27,4	2,11	8

3-row heater

Airflow [m³/h]		SAV-1-3R-AC 1200				SAV-2-3R-AC 2000				SAV-4-3R-AC 4050				SAV-6-3R-AC 5300			
LPHW coil temperature gradient [°C]	Inlet air temperature [°C]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]	Heating output [kW]	Output air temp. [°C]	Water flow rate [m³/h]	Water pressure loss [kPa]
90/70	0	23,6	58,8	1,04	31	38,4	57,4	1,69	18	77,5	57,1	3,41	18	102,0	57,5	4,50	22
	10	20,6	61,4	0,91	24	33,5	60,1	1,48	14	67,6	59,8	2,98	14	89,1	60,2	3,93	17
	15	19,1	62,6	0,84	21	31,1	61,4	1,37	13	62,6	61,2	2,76	12	82,6	61,5	3,64	15
80/60	0	20,6	51,1	0,90	24	33,3	49,8	1,46	15	67,2	49,6	2,95	14	88,7	50,0	3,90	17
	10	17,6	53,7	0,77	18	28,4	52,4	1,25	11	57,3	52,3	2,52	11	75,7	52,6	3,33	13
	15	16,1	55,0	0,71	16	26,0	53,8	1,14	9	52,3	53,6	2,30	9	69,1	54,0	3,04	11
70/50	0	17,5	43,4	0,76	19	28,2	42,1	1,24	11	56,9	42,0	2,49	11	75,2	42,4	3,29	13
	10	14,5	46,0	0,63	13	23,3	44,8	1,02	8	46,9	44,6	2,05	8	62,1	45,0	2,72	9
	15	13,0	47,2	0,57	11	20,8	46,1	0,91	6	42,0	45,9	1,84	6	55,6	46,3	2,43	7
60/40	0	14,3	35,7	0,63	13	23,0	34,4	1,00	8	46,5	34,3	2,03	8	61,5	34,7	2,68	9
	10	11,3	38,2	0,49	9	18,1	37,0	0,79	5	36,4	36,9	1,59	5	48,4	37,3	2,11	6
	15	9,8	39,3	0,43	7	15,6	38,3	0,68	4	31,4	38,2	1,37	4	41,8	38,6	1,82	5
45/35	0	11,6	28,8	1,00	33	18,7	28,0	1,63	19	37,8	27,9	3,28	19	49,9	28,1	4,33	22
	10	8,6	31,4	0,75	19	13,9	30,7	1,20	11	27,9	30,6	2,42	11	36,9	30,8	3,21	13
	15	7,1	32,6	0,62	14	11,4	32,0	0,99	14	23,0	31,9	1,99	8	30,5	32,2	2,64	9

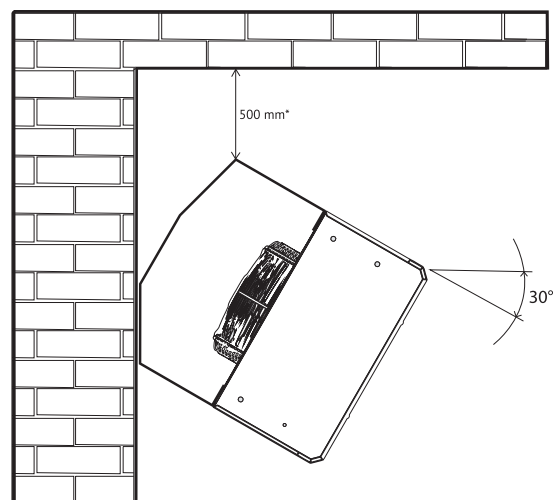
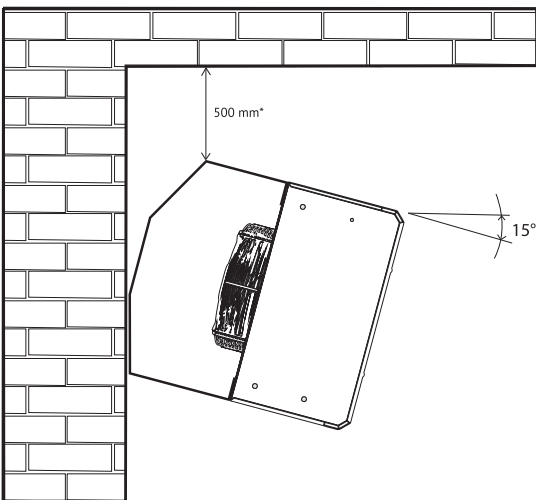


**INSTALLATION AND ASSEMBLY**

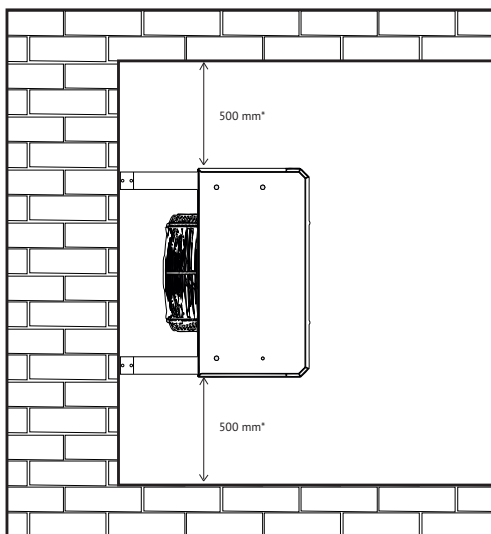
The heating unit can be wall-mounted and ceiling-mounted.

An installation bracket is possible to order as accessories. For ceiling installation can be also used threaded bars.

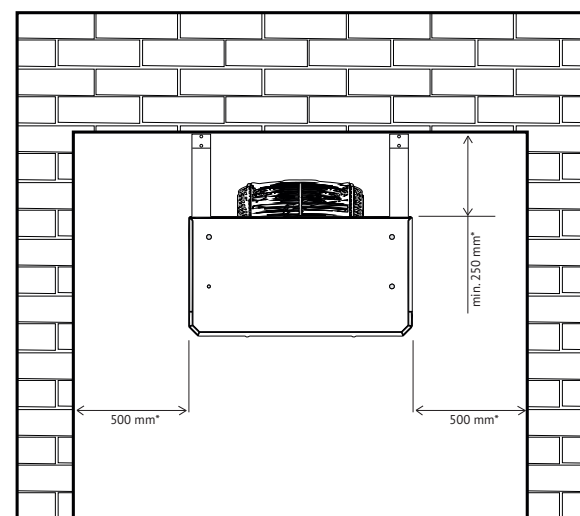
**Wall-mounting (side view)**



**Wall-mounting (top view)**



**Ceiling-mounting (side view)**



\* Recommended distance for easy access and installation.



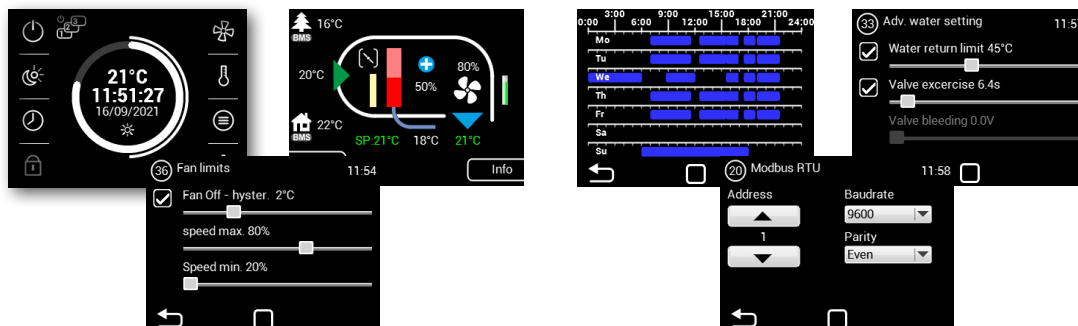
## CONTROL

The **SAVANA** heating units are delivered without integrated control system. Below see recommended control options:

### AirGENIO SC-C-AC control unit Control features overview:



- Touch screen display
- Manual/Auto control mode
- Control of airflow in 5 steps
- 0-10V control of valve actuator for LPHW coil
- Integrated antifreeze protection of LPHW coil
- Day / Night mode
- Possibility of connecting a RUN contact and external control switch
- Integrated timer
- Temperature measurement (All temperature NTC sensors included, temperature shown on display)
- Chaining 1+10 (Master-Slave)
- Mixing chamber control
- BMS connection - Modbus RTU, TCP, BACnet
- Error contact
- 2nd control panel ready



The maximum numbers of **SAVANA** units that can be connected to the respective individual types of the **SC-C-AC** control unit are given in the following table:

Controller type	SAV-1-AC	SAV-2-AC	SAV-4-AC	SAV-6-AC
SC-C-AC-04	6	4	2	1
SC-C-AC-07	11	7	3	2
SC-C-AC-16	24	16	8	5



**CONTROL**

The **SAVANA** heating units are delivered without integrated control system. Below see recommended control options:

**STRA1 fan speed control (AC)**



The **STRA1** five-speed controller should be used for controlling the fan speed. Required speed is selected manually by a switch located on the controller housing. This controller may also be complemented with the **TER-P** room thermostat for activating the fan depending on the room temperature. Multiple heating units can be connected to a single **STRA1** controller at the same time; however, the sum of motor currents shall not exceed the maximum admissible loading of the **STRA1** controller.

The maximum numbers of **SAVANA** units that can be connected to the respective individual types of the **STRA1** speed controller are given in the following table:

Speed controller type	SAV-1-AC	SAV-2-AC	SAV-4-AC	SAV-6-AC
STRA1-5	7	5	2	1
STRA1-7,5	11	7	3	2
STRA1-16	24	16	8	5

**LPHW coil output control options**

**1) Basic by throttling**

**TV-1-1/1** thermostatic valve. The valve controls smoothly the warm water supply into the heating unit depending on the temperature of air leaving the heating unit. One valve is required for each heating unit.

**2) Economical by splitting (open/closed)**

**ZV** water valve with a servo drive and **TER-P** room thermostat. The valve switches the warm water supply into the heating unit and back towards the heat source depending on the temperature of air leaving the heating unit or depending on the room temperature. One valve is required for each heating unit.

**3) Precise by mixing**

**SMU2** mixing node. The mixing system controls smoothly the ratio of supply and return heating water flowing into the heating unit depending on the temperature of air leaving the heating unit and/or depending on the room temperature. One mixing mode may be used for multiple heating units provided that they have identical size and that they are connected in a parallel arrangement.

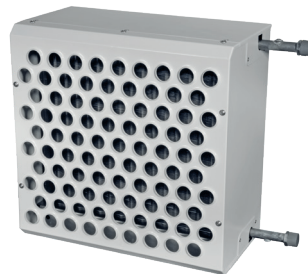


OPTIONAL ACCESSORIES

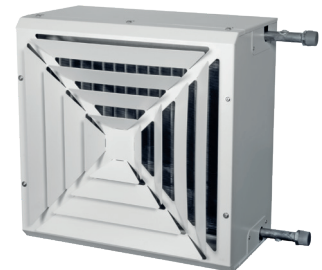
Face cover



SAV-FC-x-G-x-x



SAV-FC-x-D-x-x



SAV-FC-x-F-x-x



SAV-FC-x-A-x-x



SAV-FC-x-A-x-x + SAV-FC-x-N-x-x



SAV-FC-x-V-x-x

SAV-FC-2-G-0 A0

- A0 2VV version
- 0 White colour casing RAL 9016 (Standard)
- 9 Atyp RAL casing
- G Cut-out lamellas (Horizontal)
- A Alluminium lamellas (Horizontal)
- V Cut-out lamellas (Vertical)
- F Diffusor
- D Exhaust jets
- N Extension (Addition to aluminum lamellas - Vertical)
- S Straw system
- 1 Output series (SAV-1)
- 2 Output series (SAV-2)
- 4 Output series (SAV-4)
- 6 Output series (SAV-6)
- FC Face cover
- SAV Heating unit SAVANA



SAV-FC-x-S-x-x

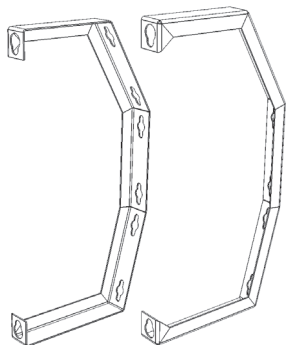


**OPTIONAL ACCESSORIES**

**Mounting Bracket**

**SAV-HOL-x-x-x**

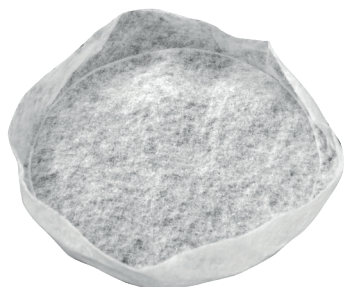
Allow to mount unit on the wall at 3 different angles: 0°, 15°, 30°



**SAV-HOL-2-0 A0**

- A0** 2V version
- 0** White colour casing RAL 9016 (**Standard**)
- 9** Atyp RAL casing
- 1** Output series (SAV-1)
- 2** Output series (SAV-2)
- 4** Output series (SAV-4)
- 6** Output series (SAV-6)
- HOL** Holder (set; 2pcs)
- SAV** Heating unit **SAVANA**

**Spare filter for SAVANA products**



**FI-PYTEL-KRUH-G2-SAV-1**

- SAV-1** Output series (SAV-1)
- SAV-2** Output series (SAV-2)
- SAV-4** Output series (SAV-4)
- SAV-6** Output series (SAV-6)
- G2** Filter type Coarse 40% (only G2)
- FI-PYTEL-KRUH** Filter

**Mixing chamber for SAVANA**



**SAV-MIX-2-0**

- 0** Colour **standard** (galvanized steel)
- 9** Colour Atyp RAL
- 2** Output series (SAV-2)
- 4** Output series (SAV-4)
- 6** Output series (SAV-6)
- SAV-MIX** Mixing chamber





## OPTIONAL ACCESSORIES

More details can be found on the relevant page in this catalog.

### Control unit

#### **AirGENIO SC-C-AC (SC-S-AC)**

4A / 7A / 16A



### Speed controller

#### **STRA1-x**

5A / 7,5A / 16A



#### **ZV2-230-xx**

2-way O/C valve with 230V actuator  
(Suitable to be used with STRA1-x control, not to be used with SC-C control).



#### **ZV3-230-xx**

3-way O/C valve with 230V actuator  
(Suitable to be used with STRA1-x control, not to be used with SC-C control).



#### **ZV2-024-xx**

2-way valve with 24DCV actuator, 0-10V DC control signal  
(Suitable to be used with SC-C control).



#### **ZV3-024-xx**

3-way valve with 24DCV actuator, 0-10V DC control signal  
(Suitable to be used with SC-C control).



#### **RT-3-xx**

3-way O/C valve with 230V actuator (Suitable to be used with STRA1-x control, not to be used with SC-C control).





**OPTIONAL ACCESSORIES**

More details can be found on the relevant page in this catalog.

**Thermostatic valve**

**TV-1-1/1**



**Mixing node**

**SMU2-xx-xx**



**Flexible connection hoses**

**OH-xxx**



**Room thermostat**

**TER-P**



**Threaded bar**

The unit can be suspended using four threaded bars.

**ZTZ-M8-1,0** – threaded bar, M8 thread, 1m length, suitable for all types of heating units.

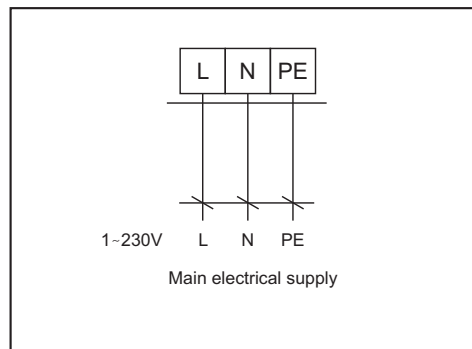




**WIRING DIAGRAMS**

All wiring diagrams provided in the technical catalog are indicative only. When assembling the product, observe strictly the nameplate ratings as well as directions and diagrams affixed directly to the product or enclosed to the product.

**SAV-AC**



Wiring diagrams for the control system are provided in the manual.



**KEY TO CODING**

**SAV-2-2R-1AC-0 A0**

- A0** 2VW version
- 0** White colour casing RAL 9016 (Standard)
- 9** Casing color atyp RAL
- 1AC** AC fan, 1 phase
- 2R** 2-row LPHW coil
- 3R** 3-row LPHW coil
- 1** Output series (SAV-1)
- 2** Output series (SAV-2)
- 4** Output series (SAV-4)
- 6** Output series (SAV-6)
- SAV** Heating unit **SAVANA**