

• **EIS** ENERGY SAVE

Residential Heating

Air-to-water Heat Pump Accessories

Our customized line of accessories can improve the energy output and cost effectiveness of your installation.



Future-proof your home

Maximise your energy savings while contributing to a greener world with heat pumps developed in Sweden.



ES Heat Pumps

ES air-to-water heat pumps are both economical and efficient, user-friendly with an elegant design, and designed in Sweden to meet the demands of the Nordic climate. By utilising the ambient air as a heat source, the system transfers heat to water through a refrigerant, making it ideal for space heating, domestic hot water, and even cooling applications. These heat pumps deliver up to five times more heat energy than they consume in electricity, making them both cost-effective and environmentally friendly. With built-in connectivity, users can easily control and monitor the system via their mobile phones, allowing for even more optimised usage.



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ES Buffer Tanks

Buffer tanks capture excess heat energy in your installation while ensuring that your heat pump always has the water that it needs for optimal functionality.

ES Buffer Tanks are manufactured from high performance stainless steel leading to a longer lifespan and increased performance. The stainless steel inner tank mitigates damaging particles from entering your heat pump and indoor unit as can happen with traditional black steel buffer tanks.

A buffer tank is recommended together with a heat pump when the water volume for the heating system is less than 15 l/kW. This increases the water volume and running stability of the heat pump in order to:

- Ensure stable and sufficient flow
- Store heat to minimise fluctuations in the system
- Increase the water volume for better heat pump performance

- Non-polluting stainless steel construction.
- Compact design needing < 0,2m² of space with an optional wall bracket for the 100-liter variants.
- Additional internal coil adds the possibility of connecting additional heating sources or preheating sanitary water.



Buffer Tanks	Unit	BT100TC-1	BT100TC-2	BT200TC-1
Article number	bar	120200	120201	120205
Max water pressure	bar	10		
Water temperature Max.	°C	95		
Volume	l	100	100	200
Hight	mm	1500		
Diameter	mm	375		520
Material of inner tank		Stainless steel 304		
Material of coil		Not available	Stainless steel 316	
Insolation – Type / Thickness	mm	Polyurethan / 37.5		Polyurethan / 50.0
Colour		White		
Thermometer		Yes		
Weight	kg	25	29	46
Coil	m	Not available	15	20
Coil diameter	mm	Not available	22	
2 inch/ R50 connector	pcs	1		
Wall bracket		Yes		Not available
Connections		1 inch, top connections		
Thermowell	pcs	2		

ES Multifunctional Tanks

The ES range of multifunctional tanks efficiently combine several different heat sources and can be used instead of an indoor unit for residential purposes or even as a buffer tank for larger installations.

ES Multifunctional Tanks have connections for several sources of energy and can be seen as your home's heating system hub. It can be used as a clean electric boiler or connected to a combination of energy sources such as a solar collector, pellets, heat pump and/or a water powered wood stove.

- Non-polluting stainless steel construction with approval to be used as a pure water heater.
- Corrugated stainless steel spirals provide maximum heat transfer.
- The 300 and 500-liter tanks have a 3 kW electric heater built-in to accommodate larger hot water needs. These tanks are thermostat regulated between 30–75 °C and are intended as a backup for hot water heating.



Multifunctional Tanks	Unit	MWT 75.4	MWT 300.4-3H	MWT 500.4-3H	MWT 500C.1
Article number		120177	120175	120176	120239
Water pressure Max.	bar	10			
Water temperature Max.	°C	95			
Volume	l	75	300	500	
Height	mm	875	1560	1850	
Diameter	mm	476	630	700	
Inner tank and coils		Stainless 304 and 316			
Outer tank		Stainless 304, powder-coated			
Insulation		Polyurethane, 50 mm	Polyurethane, 100 mm	Polyurethane, 70 mm	
Weight (blank)	kg	30	95	120	
Spiral (s) for solar collector/hot water	m	15	10+20+20	15+20+20	15+15+20
Capacity coils, kW total	kW	4.90	16.30	17.90	
R50 connector	pcs	1	1	2	
Electric heater	kW	-	3	3	
Connections Tank /spirals		1 " female			

ES Heat Pump Stand

All V8 series outdoor units are delivered with a low heat pump stand, or feet. With these feet the outdoor units can be mounted on an ES Heat Pump Stand. This way the outdoor unit can be placed a little higher above the ground.

Just one ES Heat Pump Stand model is needed for the whole range of V8 heat pumps, from 6 kW up to 19 kW. The heat pump stand comes in the same light grey colour as the heat pumps and can be complimented with the ES Drain Pan Kit.

- Robust and weather resistant construction.
- The stands have an adjustable width to fit any size heat pump. The stands also have adjustable feet so that the heat pump can be placed on a surface that is not completely flat yet it remains horizontal.
- Vibration dampers prevent the amplification of the sound level mitigating the spread of vibration to the floor and facade.



Stand mounted on heat pump.

Heat Pump Stand outdoor unit, light grey

Model	Outdoor stand 8, 12 and 15
Article number	120711

ES Drain Pan Kit

The ES Drain Pan Kit collects the condensation water from the outdoor unit into a centralized drain meaning ice sheets cannot be formed underneath the unit.

The drain pans are available for the entire V8 unit range coming in three different sizes. It is also recommended that a suitable self-adjusting electric heater be installed in cooler climates.

- Moulded from an insulating EPS material keeps the condensation water from freezing.
- The pan can be placed directly on the ground where the 2-inch drainage hole is located directly on top of the drain.
- Can be used in combination with the ES Heat Pump Stand where the drain pan kit can be mounted between the outdoor unit and the ES Heat Pump Stand.



Drain pan mounted on heat pump.

Drain Pan outdoor unit

Model	DP-M8/M12-R290-V8	DP-M15-R290-V8
Article number	120712	120714

ES Fan Coils

The ES Fan Coils can be thought of as a radiator combined with a fan. Air is circulated where the heat is then distributed over a larger surface and as it can be used for both heating and cooling they are a lot more efficient than your traditional radiator.

By circulating the air around the heat exchanger, the heat transfer to air increases dramatically. For heating purposes this means that the water temperature in the heating system can be lowered considerably whilst keeping the desired room temperature stable. Lower water temperatures also increase the efficiency of the heating system.

- Heating, cooling and dehumidifying capabilities where an air circulation mode is also available.
- An automatic keylock activates after 10 seconds without operation.
- Additional functions include a timer, night mode for silent operation, adjustable fan speed and room temperature setting.



Easy to use control display.



ES Fan Coil	Unit	FCF1550-V3	FCF3100-V3	FCF4600-V3	FCF6300-V3
Article number		120265	120266	120267	120268
Cooling capacity at 12°C (1)	kW	0.75	1.50	2.20	3.10
Heating capacity at 50°C (2)	kW	0.99	2.00	2.80	4.20
Heating capacity at 70°C (3)	kW	1.55	3.10	4.60	6.30
Water flow	l/hour	162	343	471	600
Pressure drop	kPa	7.00	7.50	19.00	25.00
Volume heat exchanger	l	0.48	0.85	1.15	1.48
Max. water pressure	Bar	10			
Water connection	inch	G1/2			
Air flow min/max	m³/hour	50/160	150/320	200/460	300/580
Power supply	V/Ph/Hz	230/1/50			
Power consumption	W	14	23	27	33
Sound level min/max (4)	dB(A)	20/39	18/40	19/42	21/42
Net dimensions, W x H x D	mm	694 x 580 x 129	894 x 580 x 129	1094 x 580 x 129	1294 x 580 x 129
Weight	kg	16	22	28	34

(1) Cooling. Water in/out 7/12°C; room temperature DB/WB 27/19°C. (2) Heating. Water inlet 50°C; room temperature 20°C
 (3) Heating. Water inlet 70°C; room temperature 20°C. (4) Sound pressure is tested in accordance to EN12102-2008 and ISO3745:201

Diverting Valve

The LK 525 Multizone 3W diverting valve is a motorized 3-way zone valve for ON/OFF control. The diverting valve is recommended when your installation requires both heating and cooling.

The zone valve is designed with a turning slide which allows it to withstand a larger pressure difference and reduce the risk of stalling after long intermissions.

This makes it especially suited for heat pump applications where there can be long intermissions between the changes to the direction of the flow during the warmer seasons.



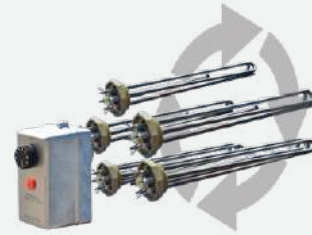
LK 525 MultiZone 3W Diverting Valve

Article number (G1"/G1 1/4"), LK-cable 2 m, LK-actuator	066106 / 066107 / 066232 / 066060
Working temperature	Min. 5 °C/Max. 80 °C (90 °C briefly)
Ambient temperature	Min. 1 °C/Max. 60 °C
Max. working pressure	1.0 MPa (10 bar)
Max. differential pressure	100 kPa (1 bar)
Leakage	< 0.1% of KVS at 100 kPa
Angle of rotation	60°/360°
Media 1	Water – Glycol/Ethanol mixture max. 50%
Hydraulic connection	G1" or G1 1/4"
Thread standard	G – male thread
Actuator	7 VA, 230 VAC, 50 Hz or 7 VA, 24 VAC, 50 Hz
Operation time	8 seconds (60°)
Electrical connection	Fixed wire alternatively Molex®-compatible connector
Signal connector	Single pole SPST
Protection class	IP 40 (Molex®) / IP 44 (Cable)
Material, external cover	Brass EN 12164 CW614N
Material, slide/spindle	PPS Composite
Cable specification	Dimension 3 x 0.75 mm ²
Wire colours	Blue, brown, black
External insulation	PVC
Connection	Molex® or Molex®-compatible connector, 6-circuit

Electrical Heating Elements

Our electrical heating elements are designed to be added to our range of ES buffer tanks for when you have irregular energy needs such as during the peak of winter. The electrical heating elements can also be used for back-up purposes and for increasing the temperature of your heat pump above 55 °C eliminating the need for an additional heat pump.

The control box is ordered in combination with the heating elements.



The heating elements are designed to fit one common control box that contains a thermostat for manual control and overheat protection, along with a contactor which enables fully automatic control via an ES Heat Pumps. The heating capabilities of the elements range from 1.5 kW up to 9 kW allowing for the optimal solution for your home. The elements are suitable for both a 230 V and a 400 V connection. We recommend the elements be placed as close to the centre of the buffer tanks as possible to ensure an even heat transfer.

Control Box G2"



FEATURES	ARTICLE NUMBER	SUITABLE FOR
<ul style="list-style-type: none"> • Automatic control via heat pump • Manual control via thermostat • Overheat protection 	11245KP	Heating elements with G2" connection (whole range).

Heating Elements G2"



LENGTH	ARTICLE NUMBER	OUTPUT POWER	CONNECTION
280 mm	121001	6.0 kW	G2"
390 mm	11081	4.5 kW	G2"
390 mm	11082	6.0 kW	G2"
390 mm	11084	9.0 kW	G2"
485 mm*	112311	4.5 kW	G2"
485 mm*	112312	6.0 kW	G2"
485 mm*	112314	9.0 kW	G2"

* Inactive 150 mm

Heating elements for AWT and AWST units

ES indoor units AWT and AWST have a standard built-in 9 kW Inline back up electrical heater. Those can be modified to a lower power with the 270 mm heating elements to 6 kW or even 3 kW according to local regulations.



Heating Elements DN40

LENGTH	ARTICLE NUMBER	OUTPUT POWER	CONNECTION
270 mm	SP201024	3 kW (3 x 1.0 kW)	DN40
270 mm	SP201025	6 kW (3 x 2.0 kW)	DN40

ES Wireless Thermostat

The ES Wireless Thermostat for the ES M R290 series can be installed anywhere in your household. It is possible to install up to two thermostats to cover multiple zones depending on your preferences. The ES RF Gateway is needed for the wireless thermostat to work.

With continuous monitoring of the current temperature, the desired room temperature can be adjusted on the easy-to-use screen that also includes child lock capabilities.

Installation and commissioning is simple where the long battery life supported by the energy efficiency of the devices give you peace of mind.

- **Wireless communication to your heat pump, can be installed anywhere in the household without any wiring.**
- **Easy installation and commissioning.**
- **Monitors the room temperature where the desired room temperature can be easily adjusted.**
- **It runs on a long-life battery.**
- **Child lock function is also implemented.**



Wireless Thermostat

Model	WT-1
Article number	120716

ES RF Gateway

Specifically developed for the ES M R290 series, the ES Wireless Thermostat and ES RF Gateway work together to enable wireless communication to your heat pump.

The RF Gateway is connected to and powered by the indoor unit and is used to enable a fast and reliable connection between your indoor unit and the ES Wireless Thermostat(s) in your home.

The installation of the ES RF Gateway is straightforward where the blinker indicates the quality of the connection.



RF Gateway

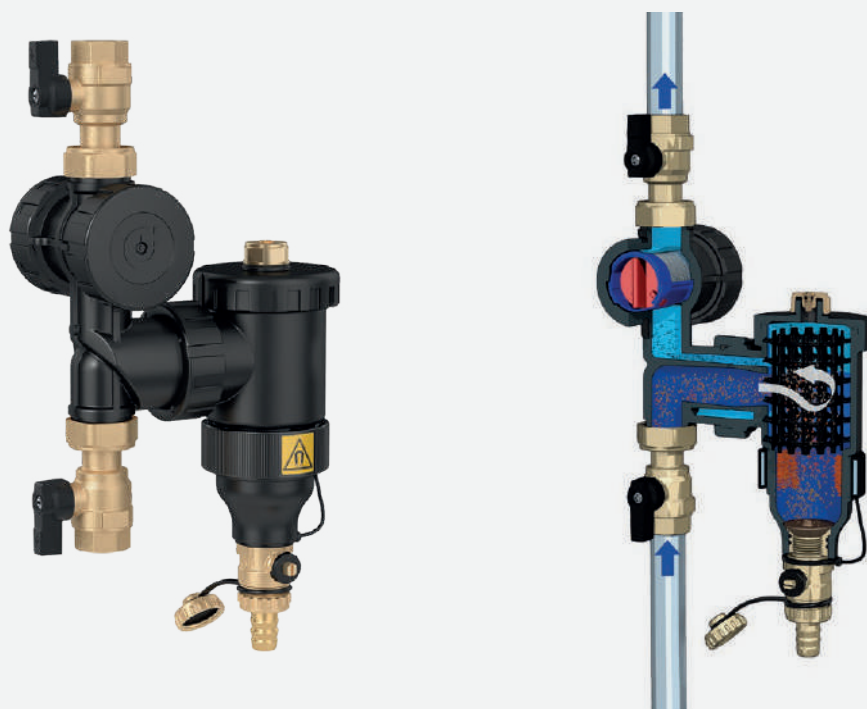
Model	RFG-1
Article number	120717

Dirtmagplus Filter

The DIRTMAGPLUS filter supports the transfer of heat while filtering out dirt and magnetic impurities that are typically generated in the hydraulic circuit.

The DIRTMAGPLUS filter is a multifunctional device that consists of two separate components arranged in series: a dirt separator and an interchangeable strainer.

- The presence of both the dirt separator and interchangeable strainer allows for continuous protection of the overall system from any impurities that form in the hydraulic circuit both at the time of start-up and during normal operating conditions.
- Ferrous impurities are also trapped inside the body of the filter via the two magnets that are located in the removable outer ring.
- The filter can be rinsed and cleaned without disrupting the operation of the system.



Dirtmagplus Filter

Article number	120309
Medium	Water, glycol solutions
Max. percentage of glycol	30%
Maximum working pressure	3 bar
Working temperature range	0–90°C
Ring system magnetic induction	2 x 0.30 T
Initial cleaning strainer mesh size (blue supplied) Ø	0.30 mm
Maintenance strainer mesh size (grey-spare part code F49474/GR) Ø	0.80 mm
Device internal volume	0.40 l

Electrical Meter

The electrical meter measures the used electrical power in your installation enabling for efficient energy management. By installing it before the fuses that supply the indoor and outdoor unit, it measures the whole electrical consumption of the system – the heat pump, any additional electrical heating sources connected to it, all the water pumps and valves connected to the heat pump.

Some markets require active control over the electrical consumption where the efficiency, consumption and heat production data needs to be available to you as the user.

By using the electrical meter:

- The heat pump can display the energy consumption values, the heat production values and the efficiency.
- The EGP (electric grid function also known as Paragraph 14a) can be used, because this function requires a measurement of the actual and current electrical consumption.

- By installing the electrical meter, you are able to optimize your system based on your energy management data leading to cost efficiencies.
- Troubleshooting is made simpler.
- Digital activation of the EGP function is possible with the use of the electrical meter.

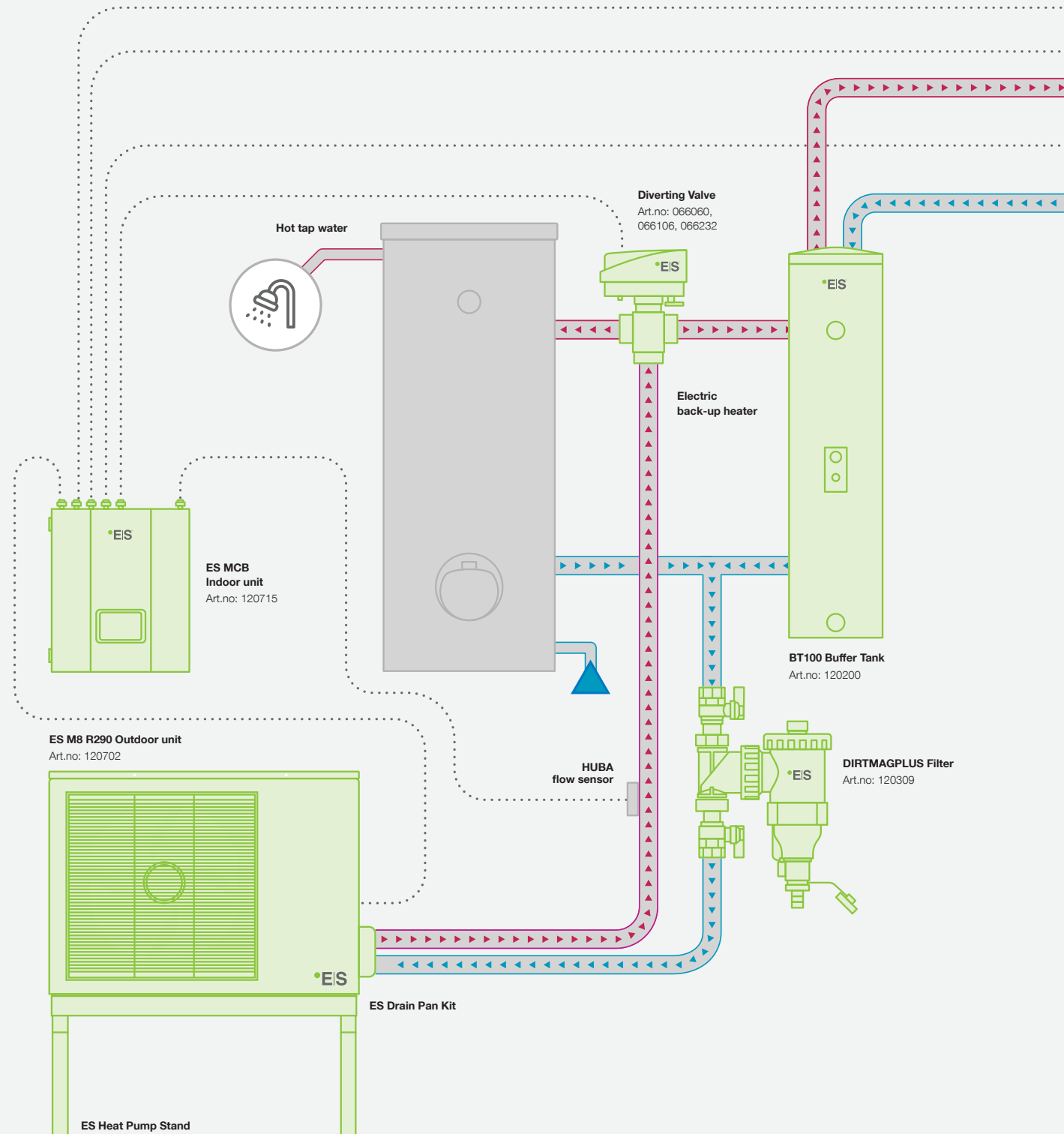


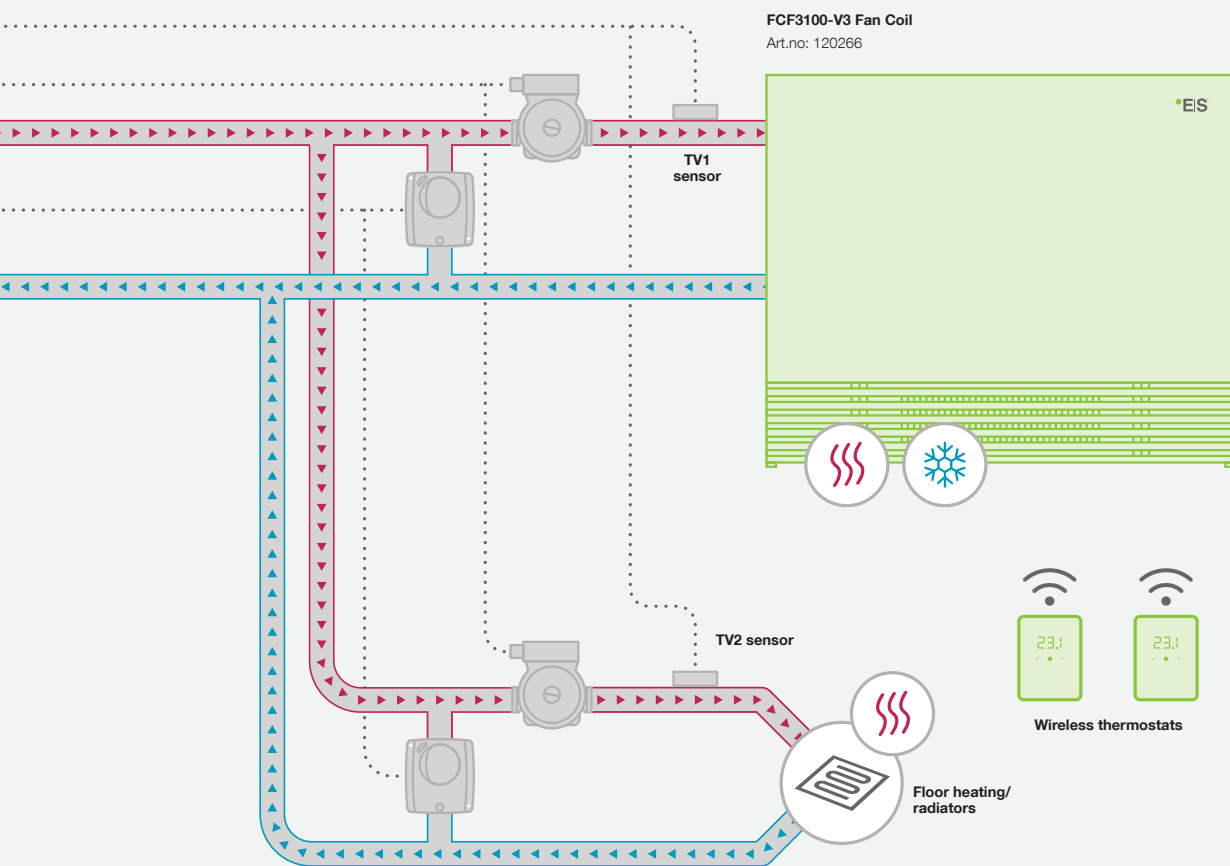
Electrical Meter

Article number		ET340	ET112
Rated inputs	Current type	3-phase loads, direct connection	1-phase loads, direct connection
	Current range	5 (100) A	
	Nominal voltage	230 VLN AC (AV0 option) 120 VLN (AV1 option)	
Energies	Active energy	Class 1 according to EN62053-21	
	Reactive energy	Class 2 according to EN62053-23	
Start-up current		20 mA (self consumption is not measured)	40 mA (AV0, AV1) (self consumption is not measured)
Start-up voltage		90 VLN	84 VLN (AV1); 161 VLN (AV0)
Current		0.001 A	
Voltage		0.1 V	
Power		0.1 W or var	
Frequency		0.1 Hz	
PF		0.001	
Energies (positive)		0.1 kWh or kvarh	
Energies (negative)		0.1 kWh or kvarh	
Run hour meter		0.01 h	
Current overloads	Continuous	65 A at 50 Hz	100 A at 50 Hz
	For 10 ms	8450 A	3000 A
Communication protocol		Modbus	

ES Products in an Installation

Monobloc System





-  Heating water
-  Return
-  Communication

Want to know more?

ES Energy Save offers climate-smart and cost-effective heat pump systems for residential, commercial or temporary heating solutions.

Our strengths include Swedish engineering combined with a scalable production capacity. We have the ability to create value in fleet management, connectivity, control systems and application design.

Our hardware and software solutions are modular, scalable, prefabricated and can be integrated with existing systems.

Benefits of our heat pump systems

- Able to convert energy from outdoor air, reducing your energy costs and contributing to a more sustainable climate.
- Economical and efficient.
- Developed in Sweden for the Nordic climate.
- Enable connectivity that allows you to control and monitor your pump via your mobile phone.
- Whether the property is heated by electricity, oil, wood, pellets or district heating, our efficient heat pumps provide the basis for significant savings.
- Our open and future-proof heating systems give you the ability to change and complement your system in the future according to your needs.

About Energy Save

ES Energy Save Holding AB (publ) is an innovative Swedish energy technology company that, through cost-effective and smart air/water heat pump systems, contributes to a sustainable energy transition in Europe. The company has been supplying heat pumps to the European market since 2009 and is listed on the Nasdaq First North Growth Market.

Sweden, headquarters

ES Energy Save Holding AB
Metallgatan 2-4, SE-441 32 Alingsås, Sweden

Norway

Energy Save AS
Kirkeveien 50, 1396 Hvalstad, Norway

Slovenia

Energy Save Nordic D.O.O.
Ulica heroja Nandeta 37, 2000 Maribor, Slovenia

www.energysave.se