# EIS ENERGY SAVE

High efficiency Heat Pumps

Versatile

**Water Tanks** 

Modern

Fan Coils



### Contents

Introduction	
Features	4
The AW-R32-M V8 and AW-R32-S V8 Heat Pumps	6
Advanced LED Touch Screen Controller	8
Heat Pumps	{
Heat Pump Stand	18
Drain Pan Kit	18
Technical Specification, Heat Pumps	20
Fan Coils	26
Buffer Tanks	27
Multifunctional Tanks	28
Diverting Valves	29
Electrical Heaters	29
Dirtmagplus Filter	30
ES Products in a System	3





# ES Heat pumps and system solutions for maximum savings

Whether you are heating your property with electricity, oil, wood, pellets or district heating today, you can use a highly efficient ES air-to-water heat pump as a starting point to create great savings, functionality and security in a modern, open and future-proof heating system – with the ability to change and complement the system in the future as your needs change!

Energy Save develops and offer cost effective, smart and flexible solutions for maximum energy savings to the market.

# Be smart - and green!



### **Green ECO-friendly refrigerant**

New ES heat pump line AW-R32 uses an ECO friendly R32 refrigerant. The conventional refrigerants used for inverter heat pumps today has a global warming potential (GWP) more then three times higher than R32 refrigerant which is used for the new ES heat pump line. The units have also less refrigerant volume for the

same or even higher heating capacities. With this refrigerant we fulfil the EU norms that are not mandatory yet, but will become in the future. It also contributes to a high efficiency working of the heat pump.



### Low noise units

AW-R32 units use a special variable speed fan motor and fan blades with innovative blade design to reduce the sound level from the heat pump. The compressor is placed in an extra compartment that is insulated with sound absorbing materials. With these

technologies we achieve low sound levels that makes the units almost not hearable, even running at maximum speeds. The units can also be set to work during the night in even lower sound levels via weekly timers.



### **High efficiency heat pumps**

ES heat pumps are equipped with the latest technology on the market that is designed specifically for heat pumps, to insure the best performances and low heating costs. Components used in the ES heat

pumps are from worldwide known producers, that are making innovations in this field, with a long and successful history.



### **Reliable and efficient technology**

All ES heat pumps have a 5-year warranty on the compressor due to the use of highly efficient and reliable compressor technology, that also makes the unit low noise and helps reduce the heating costs to a minimum.



#### **Remote control**

ES heat pumps can be connected to an external monitoring and controlling system via a Modbus connection such as a Building management system (BMS). This allows full control of the ES heat pumps with climate control systems currently used in the building.



### **Control via internet**

Each ES heat pump is equipped with an internet connection that allows the customer monitor and adjust the settings of the heat pump at any given time and place. The unit connects to the internet and can be controlled by any smart device or PC.



### **KEYMARK** certification

The AW-R32 series proudly carries the European KEYMARK certification – a guarantee of the highest quality and performance. This independent marking, which is voluntary, ensures that our heat pumps meet the strictest European standards through third-party testing and the European Heat Pump Association's (EHPA) quality and efficiency standards. KEYMARK certification is ratified by most countries in the EU as the highest certification and implies:

- Transparency: Builds trust in the market.
- Energy Efficiency: Up to 300 % efficiency.
- Sustainability: Contributes to reduced CO<sub>2</sub> emissions and promotes renewable energy.

Choose AW-R32 for quality, sustainability, and a greener future.

# The AW-R32-M V8 Series

The AW-R32-M V8 heat pump series uses the latest technologies for maximum efficiency and minimum environmental impact. The units are very quiet thanks to the special designed fans and a noise shielded compressor compartment.

The R32 refrigerant is more eco-friendly, and more efficient then other types of refrigerants. The "M" in the name stands for Monobloc, which means the refrigerant system is a factory sealed circuit. The connection between indoor system and outdoor unit, a hydraulic connection, provides an easier installation.

The series contains three different types of indoor units, AWC-version that enables to dock the outdoor unit directly to any given heating system or buffer tank. The AWT/AWST versions have a 250 liter tank for domestic hot water (DHW). AWT has DHW heated through coils in the water volume and AWST has a DHW storage tank. AWT/AWST versions have diverting valve, 3–9 kW electric heater, expansion vessels, etc. while the AWC indoor unit have terminals for connecting a variety of pumps, and valves. The outdoor units have an anti-freezing device, to prevent freezing damage in case of any failure.

Heating power ranges from 6–19 kW. We call the tank versions "All in One" as they are a complete heating/cooling/hot water source you need for your house.

See full range, page 9–14.





# The AW-R32-S V8 Series

The AW R32-S V8 units are highly efficient heat pumps that use te eco-friendly R32 refrigerant. The heat pumps are designed with the latest technology for high performance and long lifespan.

The "S" in the name stands for a Split type connection which means that the hydraulic system is connected to the indoor unit. The connection between the indoor and the outdoor unit is made with refrigerant piping. In case of power failure over longer time there is no risk of water freezing in the outdoor unit.

Heating power ranges from 6–12 kW. There are two types, the AWH and the AWST version. The The AWH has an indoor unit containing the controls, heat exchanger and water pump, suitable for adapting to any existing heating system. The AWST has a so called All-In-One indoor unit, with a water tank for preparing fresh sanitary water. The AWST has a DHW storage tank in stainless steel.

The AW-R32-S V8 heat pumps will make your home warm and cosy.





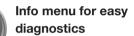
# **Advanced LED Touch Screen Controller**

All ES heat pumps use an advanced LED Touch Screen controller which allows a big range of installation options, ensuring the best performance to reduce heating costs and offer sophisticated safety features for a carefree working of the heat pump.

The state-of-the-art controller has 22 languages and enables you to further maximize your savings and comfort. It has hourly and weekly timer for reduced/increased set point, hot water storage or extra silent mode.

#### **Key features**

- Heating, cooling and DHW mode
- Two mixing heating/cooling circuits
- Night mode
- Controlling additional heating sources
- Dual temperature settings for DHW
- Vacation mode
- Floor curing
- Anti-Legionella function



The Info menu makes an easy diagnostic of the working of the heat pump with a hydraulic and refrigerant scheme containing all needed data at one place.





# **Heat Pumps**

#### **AWC6** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.74

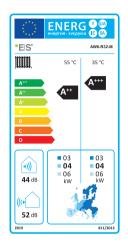
Heating capacity: 6.50 kW

**COP:** 4.70

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C Sound power level: 52 dB(A)

Refrigerant: R32

Technical specifications, see page 20.



















### **AWC9** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.73

Heating capacity: 9.20 kW

**COP:** 4.71

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C Sound power level: 53 dB(A)

Refrigerant: R32

Technical specifications, see page 20.























......





### **AWC12** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++/A++

**SCOP:** 4.71

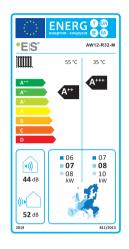
Heating capacity: 11.60 kW

**COP:** 4.90

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C Sound power level: 52 dB(A)

Refrigerant: R32

Technical specifications, see page 20.



















#### **AWC15** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.98

Heating capacity: 15.30 kW

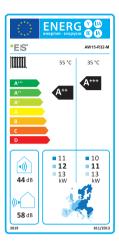
**COP:** 5.06

Max. temperature outlet: 58 °C
Working range: -25 °C to +65 °C

Sound power level: 58 dB(A)

Refrigerant: R32

Technical specifications, see page 21.























120320 120315





120315

120319

### **AWC19** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.85

Heating capacity: 18.50 kW

**COP:** 5.01

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C Sound power level: 61 dB(A)

Refrigerant: R32

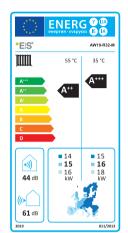
Technical specifications, see page 21.







120321 120315



















#### **AWT6** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.74

Heating capacity: 6.50 kW

**COP:** 4.70

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C

Sound power level: 52 dB(A)

Tank: 250 liter

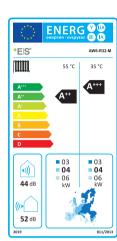
Tank type: Stainless steel

Refrigerant: R32

Technical specifications,

see page 22.























### **AWT9** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.73

Heating capacity: 9.20 kW

**COP:** 4.71

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C Sound power level: 53 dB(A)

Tank: 250 liter

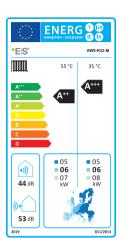
Tank type: Stainless steel

Refrigerant: R32

Technical specifications,

see page 22.





















### **AWT12** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.71

Heating capacity: 11.60 kW

**COP:** 4.90

Max. temperature outlet: 58 °C Working range: -25 °C to +65 °C

Sound power level: 52 dB(A)

Tank: 250 liter

Tank type: Stainless steel

Refrigerant: R32

Technical specifications,

see page 22.





•EIS°

■ 06 ■ **07** ■ 08 kW

**08** 













120319

120296

#### **AWST6** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.74

Heating capacity: 6.50 kW

**COP:** 4.70

Max. temperature outlet: 58  $^{\circ}\mathrm{C}$ 

Working range: –30  $^{\circ}\text{C}$  to +65  $^{\circ}\text{C}$ 

Sound power level: 52 dB(A)

**Tank:** 250 liter "DHW storage type"

Tank type: SUS316 Steel

Tap profile: L

Tap water efficiency: A+

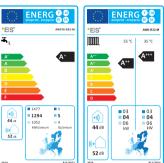
Refrigerant: R32

Technical specifications,

see page 23.







0.2















### **AWST9** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.73

Heating capacity: 9.20 kW

**COP:** 4.71

Max. temperature outlet: 58 °C Working range: -30 °C to +65 °C

Sound power level: 53 dB(A)

Tank: 250 liter "DHW storage type"

Tank type: SUS316 Steel

Tap profile: ∟

Tap water efficiency: A+

Refrigerant: R32

Technical specifications,

see page 23.



120318















#### **AWST12** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.71

Heating capacity: 11.60 kW

**COP:** 4.90

Max. temperature outlet: 58 °C Working range: -30 °C to +65 °C

Sound power level: 52 dB(A)

Tank: 250 liter "DHW storage type"

Tank type: SUS316 Steel

Tap profile: ∟

Tap water efficiency: A+

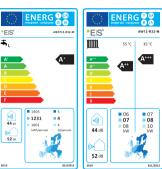
Refrigerant: R32

Technical specifications,

see page 23.







10.5

















#### **AWST15** – R32-M-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.98

Heating capacity: 15.30 kW

**COP:** 5.06

Max. temperature outlet: 58 °C

Working range: -30 °C to +65 °C

Sound power level: 58 dB(A)

Tank: 250 liter "DHW storage type"

Tank type: SUS316 Steel

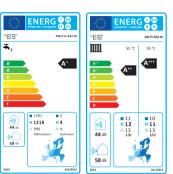
Tap profile: L

Tap water efficiency: A+

Refrigerant: R32







Technical specifications, see page 23.

Bease ..

















#### **AWH6** – R32-S-V8

Controller: Touch screen

Energy efficiency: A+++/A++

**SCOP:** 4.74

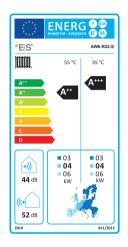
Heating capacity: 6.50 kW

**COP:** 4.70

Max. temperature outlet: 58 °C Working range: -30 °C to +65 °C Sound power level: 52 dB(A)

Refrigerant: R32

Technical specifications, see page 24.

















### **AWH9** – R32-S-V8

Controller: Touch screen

Energy efficiency: A+++/A++

**SCOP:** 4.73

Heating capacity: 9.20 kW

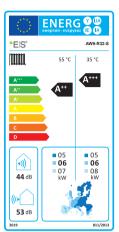
**COP:** 4.71

Max. temperature outlet: 58 °C Working range: -30 °C to +65 °C

Sound power level: 53 dB(A)

Refrigerant: R32

Technical specifications, see page 24.



























#### **AWH12** – R32-S-V8

Controller: Touch screen

Energy efficiency: A+++/A++

**SCOP:** 4.71

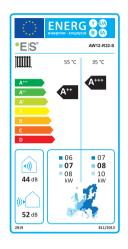
Heating capacity: 11.60 kW

**COP:** 4.90

Max. temperature outlet: 58 °C Working range: -30 °C to +65 °C Sound power level: 52 dB(A)

Refrigerant: R32

Technical specifications, see page 24.



















### **AWST6** – R32-S-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.74

Heating capacity: 6.50 kW

**COP:** 4.70

Max. temperature outlet:  $58\ ^{\circ}\text{C}$ 

Working range:  $-30\,^{\circ}\text{C}$  to  $+65\,^{\circ}\text{C}$ 

Sound power level: 52 dB(A)

Tank: 250 liter "DHW storage type"

Tank type: Stainless steel

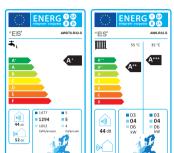
Refrigerant: R32

Technical specifications,

see page 25.







Bessell ...



















120334



.\_00\_0

#### **AWST9** – R32-S-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.73

Heating capacity: 9.20 kW

**COP:** 4.71

Max. temperature outlet: 58 °C

Working range: -30 °C to +65 °C

Sound power level: 53 dB(A)

**Tank:** 250 liter "DHW storage type"

**Tank type:** Stainless steel

Refrigerant: R32

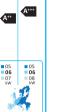
Technical specifications,

see page 25.



120325 120335







A+++

>dB

Low noise





### **AWST12** – R32-S-V8

Controller: Touch screen

Energy efficiency: A+++ / A++

**SCOP:** 4.71

Heating capacity: 11.60 kW

**COP:** 4.90

Max. temperature outlet: 58 °C

Working range: -30 °C to +65 °C

Sound power level: 52 dB(A)

**Tank:** 250 liter "DHW storage type"

Tank type: Stainless steel

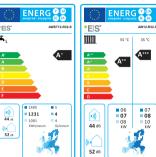
Refrigerant: R32

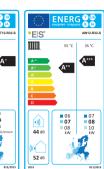
Technical specifications,

see page 25.

























# **ES Heat Pump Stand**

All AW-R32-V8 outdoor units are delivered with a low heat pump stand, or "feet". With these feet the outdoor unit can be mounted on an ES heat pump stand. This way the outdoor unit can be placed a little higher above the ground.

ES heat pump stands are made from a robust and weather resistant material. The width can be adjusted according to the heat pump model. With adjustable feet the heat pump can be positioned also on not so straight floor surface to a horizontal position. Vibration dampers prevent amplification of the sound level and spreading of the vibrations to the floor.

Just one ES stand model is needed for the whole range of AW-R32-V8 heat pumps from 6 kW and up to 19 kW. The heat pump stand come in the same light grey color as the heat pump's outdoor units, and can be supplemented with the ES Drain Pan Kit.

#### **OUS-V8** Light Grey



Stand mounted on heat pump.

#### **Outdoor unit standing**

Model	OUS-6/19kW-V8-LG
Article number	120269

### **ES Drain Pan Kit**

The drain pan kit collects the condensing water from the outdoor unit to a centralized drain, so no ice sheet can form under the unit. It is designed for an easy and fast installation for all AW-R32-V8 outdoor units.

The drain pan EPS R32 is molded in the heat pump shape in an insulating EPS material that isolates for the cold. It can be an "on the ground" system where the two inch drain hole is put directly on top to the drain in the ground, or as a supplement to the heat pump stand where the drain pan can be mounted between the outdoor unit and the heat pump stand.

The drain pan kit comes in three different sizes to fit the whole range of AW-R32-V8 outdoor units.

Suitable self-adjusting electric heater is recommended in cold area operations.

#### **DP-EPS-V8**



Drain Pan mounted on heat pump.

#### Drain pan outdoor units

Model	DP-EPS-6kW-V8	DP-EPS-9/12kW-V8	DP-EPS-15/19kW-V8
Article number	120343	120344	120345



# **Technical Specification** Heat Pumps

### AWC - R32-M-V8 (6-12 kW)

	Unit	AWC6-R32-M-V8	AWC9-R32-M-V8	AWC12-R32-M-V8	
Article number (indoor/outdoor unit)		120315/120317	120315/120318	120315/120319	
ErP Energy efficiency class		A+++ / A++	A+++ / A++	A+++ / A++	
SCOP 35°C (floor heating) EN 14825		4.74	4.73	4.71	
Heating mode (A7/W35)					
Heating capacity (1)	kW	3.50-6.50	4.30-9.20	5.50-11.60	
COP max - Coefficient of Performance (1)		4.74	4.73	4.71	
Rated input power (1)	kW	0.75 – 1.41	0.92 – 2.10	1.10 – 2.68	
Max. temperature of heating water	°C		58		
Operating range heating	°C		-25 to +65		
DHW Tank					
Туре		/	/	/	
Volume	1	/	/	/	
Cooling mode					
Cooling capacity (2)	kW	6.22 – 7.45	6.70 – 9.50	7.00 – 9.80	
EER max - Energy Efficiency Ratio (2)		4.45	4.60	3.80	
Min. temperature of cooling water	°C		7		
Operating range cooling	°C		0 to +65		
Power supply - specifications					
Outdoor unit	V/ph/fuse	230V / 1-ph / 10 A/C	230V / 1-p	h / 16 A/C	
Indoor unit	V/ph/fuse		230V / 1-ph / 6A/C		
Anti freeze protection outdoor	V/ph/fuse	230V / 1-ph / 6A/C			
Refrigerant specification					
Type / Mass of refrigerant	kg	R32 / 0.90	R32 / 1.40	R32 / 1.80	
Type of connection between indoor- outdoor unit		Hydraulic connection			
Dimensions of hydraulic pipes connectors		G1"			

<sup>(1)</sup> Measured according to standard EN 14511. Heating condition: water inlet/outlet temperature 30 °C/35 °C, ambient temperature DB/WB 7 °C/6°C.

	Unit	AWC6-R32-M-V8	AWC9-R32-M-V8	AWC12-R32-M-V8
Controller				
Controller Type			LCD Touch Screen	
LCD Size			4.3″	
Controller features		2x Mixing Hea	ting Circuit + 2x Mixing + DHW Heating	Cooling Circuit
Internet connection			Serial Integrated	
Sound power and sound pressure level				
Sound power level LwA - Indoor unit	dB(A)	/	/	/
Sound power level LwA - Outdoor unit (3)	dB(A)	52	53	52
Sound pressure level on distance				
Outdoor unit – 1 m	dB(A)	44	45	44
Outdoor unit – 5 m	dB(A)	30	31	30
Outdoor unit – 10 m	dB(A)	24	25	24
Outdoor unit – 15 m	dB(A)	20	21	20
Net dimensions				
Indoor unit (WxDxH)	mm		380 × 115 × 450	
Outdoor unit (WxDxH)	mm	1 025 × 397 × 750	1 207 × 412 × 900	1 207 ×412 × 900
Net weight				
Indoor unit / Outdoor unit	kg	9 / 79.5	9 / 98.5	9 / 105
Serial integrated components				
Electrical flow heater	kW/ph	/	/	/
Circulation water pump - A energy class	type		W25-130/9-87/IPWM1	
Temperature Sensors			Serial Integrated - All	
3-way diverting valve for DHW tank		/	/	/
Expansion vessel heating water	I	/	/	/

<sup>(2)</sup> Measured according to standard EN 14511.

Cooling condition: water inlet/outlet temperature 18°C and ambient temperature 35°C

<sup>(3)</sup> Measured according to standard EN 12102.

### AWC - R32-M-V8 (15 & 19 kW)

	Unit	AWC15-R32-M-V8	AWC19-R32-M-V8	
Article number (indoor/outdoor unit)		120315/120320	120315/120321	
ErP Energy efficiency class		A+++ / A++	A+++ / A++	
SCOP 35°C (floor heating) EN 14825		4.98	4.85	
Heating mode (A7/W35)				
Heating capacity (1)	kW	6.00-15.30	9.20 – 18.50	
COP max - Coefficient of Performance (1)		5.06	5.01	
Rated input power (1)	kW	1.22-3.20	1.83 – 4.14	
Max. temperature of heating water	°C	5	58	
Operating range heating	°C	-25 t	0 +65	
DHW Tank				
Туре		/	/	
Volume	ı	/	/	
Cooling mode				
Cooling capacity (2)	kW	7.20 – 18.50	8.50 – 22.50	
EER max – Energy Efficiency Ratio (2)		5.42	5.12	
Min. temperature of cooling water	°C		7	
Operating range cooling	°C	0 to	+65	
Power supply – specifications				
Outdoor unit	V/ph/fuse	400V / 3-p	oh / 16 A/C	
Indoor unit	V/ph/fuse	e 230V / 1-ph / 6A/C		
Anti freeze protection outdoor	V/ph/fuse 230V / 1-ph / 6A/C			
Refrigerant specification				
Type / Mass of refrigerant	kg	R32 / 2.55	R32 / 2.60	
Type of connection between indoor-outdoor unit	Hydraulic connection			
Dimensions of hydraulic pipes connectors		G1-	1/4"	

	Unit	AWC15-R32-M-V8	AWC19-R32-M-V8	
Controller				
Controller Type		LCD Touc	ch Screen	
LCD Size		4.	.3″	
Controller features		2x Mixing Heating Circuit - + DHW	+ 2x Mixing Cooling Circui Heating	
Internet connection		Serial In	tegrated	
Sound power and sound pressure level				
Sound power level LwA - Indoor unit	dB(A)	/	/	
Sound power level LwA - Outdoor unit (3)	dB(A)	58	61	
Sound pressure level on distance				
Outdoor unit – 1 m	dB(A)	50	53	
Outdoor unit – 5 m	dB(A)	36	39	
Outdoor unit – 10 m	dB(A)	30	33	
Outdoor unit – 15 m	dB(A)	27	30	
Net dimensions				
Indoor unit (WxDxH)	mm	380 × 1	15 × 450	
Outdoor unit (WxDxH)	mm	1 106 × 4	16 × 1 498	
Net weight				
Indoor unit / Outdoor unit	kg	9 / 157	9 / 166	
Serial integrated components				
Electrical flow heater	kW/ph	/	/	
Circulation water pump - A energy class	type	25-130/9-	87/IPWM1	
Temperature Sensors		Serial Integrated - All		
3-way diverting valve for DHW tank		/	/	
Expansion vessel heating water	1	/	/	

<sup>(1)</sup> Measured according to standard EN 14511. Heating condition: water inlet/outlet temperature 30°C/35°C, ambient temperature DB/WB 7°C/6°C.

<sup>(2)</sup> Measured according to standard EN 14511. Cooling condition: water inlet/outlet temperature 18°C and ambient temperature 35°C

<sup>(3)</sup> Measured according to standard EN 12102.

### AWT - R32-M-V8 (6-12 kW)

	Unit	AWT6-R32-M-V8	AWT9-R32-M-V8	AWT12-R32-M-V8	
Article number (indoor/outdoor unit)		120296/120317	120296/120318	120296/120319	
ErP Energy efficiency class		A+++ / A++	A+++ / A++	A+++ / A++	
SCOP 35°C (floor heating) EN 14825		4.74	4.73	4.71	
Heating mode (A7/W35)					
Heating capacity (1)	kW	3.50-6.50	4.30-9.20	5.50-11.60	
COP max - Coefficient of Performance (1)		4.74	4.73	4.71	
Rated input power (1)	kW	0.75-1.41	0.92-2.10	1.10-2.68	
Max. temperature of heating water	°C		58		
Operating range heating	°C		-25 to +65		
DHW Tank					
Туре		Stainles	s steel tank – fresh wate	r system	
Volume	1		250		
Cooling mode					
Cooling capacity (2)	kW	6.22 – 7.45	6.70-9.50	7.00-9.80	
EER max – Energy Efficiency Ratio (2)		4.45	4.60	3.80	
Min. temperature of cooling water	°C		7		
Operating range cooling	°C		0 to +65		
Power supply – specifications					
Outdoor unit	V/ph/fuse	230V / 1-ph / 10A/C	230V / 1- <sub>F</sub>	oh / 16A/C	
Indoor unit + electric flow heater	V/ph/fuse	230V /3-p	oh / 25A/C or 400V / 3-p	oh / 16A/C	
Anti freeze protection outdoor	V/ph/fuse		230V / 1-ph / 6A/C		
Refrigerant specification					
Type / Mass of refrigerant	kg	R32 / 0.90	R32 / 1.40	R32 / 1.80	
Type of connection between indoor- outdoor unit		Hydraulic connection			
Dimensions of hydraulic pipes connectors		G1"			

<sup>(1)</sup> Measured according to standard EN 14511. Heating condition: water inlet/outlet temperature 30°C/35°C, ambient temperature DB/WB 7°C/6°C.

	Unit	AWT6-R32-M-V8	AWT9-R32-M-V8	AWT12-R32-M-V8		
Controller						
Controller Type			LCD Touch Screen			
LCD Size			4.3″			
Controller features		2x Mixing Hea	ting Circuit + 2x Mixing + DHW Heating	Cooling Circuit		
Internet connection			Serial Integrated			
Sound power and sound pressure level						
Sound power level LwA - Indoor unit	dB(A)	/	/	/		
Sound power level LwA - Outdoor unit (3)	dB(A)	52	53	52		
Sound pressure level on distance						
Outdoor unit – 1 m	dB(A)	44	45	44		
Outdoor unit – 5 m	dB(A)	30	31	30		
Outdoor unit – 10 m	dB(A)	24	25	24		
Outdoor unit – 15 m	dB(A)	20	21	20		
Net dimensions						
Indoor unit (WxDxH)	mm		600 x 680 x 1 780			
Outdoor unit (WxDxH)	mm	1 025 × 397 × 750	1 207 × 412 × 900	1 207 × 412 × 900		
Net weight						
Indoor unit / Outdoor unit	kg	125 / 79.5	125 / 98.5	125 / 105		
Serial integrated components						
Electrical flow heater	kW	6 (9) kW - 2x 3kW (+ 3 kW)				
Circulation water pump – A energy class	type	Wilo Para 25-130/9-87/IPWM1				
Temperature Sensors		Serial Integrated - All				
3-way diverting valve for DHW tank			Serial Integrated			
Expansion vessel heating water	ı		11			

<sup>(2)</sup> Measured according to standard EN 14511. Cooling condition: water inlet/outlet temperature 18°C and ambient temperature 35°C

<sup>(3)</sup> Measured according to standard EN 12102.

### AWST - R32-M-V8 (6-15 kW)

	Unit	AWST6 - R32-M-V8	AWST9 - R32-M-V8	AWST12 - R32-M-V8	AWST15 - R32-M-V8
Article number (indoor/outdoor unit)		120316/120317	120316/120318	120316/120319	120316/120320
ErP Energy efficiency class		A+++ / A++	A+++ / A++	A+++ / A++	A+++ / A++
SCOP 35°C (floor heating) EN 14825		4.74	4.73	4.71	4.98
Tap water profile			L/i	A+	
Heating mode (A7/W35)					
Heating capacity (1)	kW	3.50-6.50	4.30-9.20	5.50-11.60	6.00-15.30
COP max - Coefficient of Performance	(1)	4.70	4.71	4.90	5.06
Rated input power (1)	kW	0.75 – 1.41	0.92-2.10	1.10-2.68	1.22-3.20
Max. temperature of heating water	°C		5	8	
Operating range heating	°C		-30 to	o +45	
DHW Tank					
Туре		SUS316 Steel, DHW storage type			
Volume	1		25	50	
Cooling mode					
Cooling capacity (2)	kW	6.22-7.45	6.7050	7.00-9.80	7.20 – 18.50
EER max – Energy Efficiency Ratio (2)		4.45	4.60	3.80	5.42
Min. temperature of cooling water	°C		-	7	
Operating range cooling	°C		0 to	+65	
Power supply - specifications					
Outdoor unit	V/ph/fuse	230V / 1-ph / 10A/C	230V / 1-p	oh / 16A/C	400V / 3-ph / 16A/C
Indoor unit + electric flow heater	V/ph/fuse	230\	//3-ph/25A/C d	or 400V / 3-ph / 10	6A/C
Anti freeze protection outdoor	V/ph/fuse	230V / 1-ph / 6A/C			
Refrigerant specification					
Type / Mass of refrigerant	kg	R32 / 0.90	R32 / 1.40	R32 / 1.80	R32 / 2.55
Type of connection between indoor- outdoor unit		Hydraulic connection			
Dimensions of hydraulic pipes connector	s		G1"		G1-1/4"

<sup>(1)</sup> Measured according to standard EN 14511. Heating condition: water inlet/outlet temperature 30°C/35°C, ambient temperature DB/WB 7°C/6°C.

<sup>(2)</sup> Measured according to standard EN 14511. Cooling condition: water inlet/outlet temperature 18°C and ambient temperature 35°C

	Unit	AWST6 - R32-M-V8	AWST9 - R32-M-V8	AWST12 - R32-M-V8	AWST15 - R32-M-V8
Controller					
Controller Type			LCD Touc	ch Screen	
LCD Size			4	.3″	
Controller features		2x Mixir	ng Heating Circuit + DHW	+ 2x Mixing Coolir Heating	ng Circuit
Internet connection			Serial In	tegrated	
Sound power and sound pressure lev	el				
Sound power level LwA – Indoor unit	dB(A)	44	45	45	45
Sound power level LwA – Outdoor unit (3)	dB(A)	52	53	52	58
Sound pressure level on distance					
Outdoor unit – 1 m	dB(A)	44	45	44	50
Outdoor unit – 5 m	dB(A)	30	31	30	36
Outdoor unit – 10 m	dB(A)	24	25	24	30
Outdoor unit – 15 m	dB(A)	20	21	20	27
Net dimensions					
Indoor unit (WxDxH)	mm		600 × 70	7 × 1 720	
Outdoor unit (WxDxH)	mm	1 025 × 397 × 750	1 207 × 412 × 900	1 207 × 412 × 900	1 106 × 416 × 1 498
Net weight					
Indoor unit / Outdoor unit	kg	108 / 79.5	108 / 98.5	108 / 105	108 / 157
Serial integrated components					
Electrical flow heater	kW	6 (9) kW - 2x 3kW (+ 3 kW)			
Circulation water pump - A energy class	type	Wilo Para 25-130/9-87/IPWM1			
Temperature Sensors			Serial Integ	grated – All	
3-way diverting valve for DHW tank			Serial In	tegrated	
Expansion vessel heating water	I		1	1	

<sup>(3)</sup> Measured according to standard EN 12102.

### AWH - R32-S-V8 (6-12 kW)

	Unit	AWH6-R32-S-V8	AWH9-R32-S-V8	AWH12-R32-S-V8	
Article number (indoor/outdoor unit)		120334/120324	120334/120325	120334/120326	
ErP Energy efficiency class		A+++ / A++	A+++ / A++	A+++ / A++	
SCOP 35°C (floor heating) EN 14825		4.74	4.73	4.71	
Heating mode (A7/W35)					
Heating capacity (1)	kW	3.50-6.50	4.30-9.20	5.50 – 11.60	
COP max - Coefficient of Performance (1)	W/W	4.70	4.71	4.90	
Rated input power (1)	kW	0.75 – 1.41	0.92-2.10	1.10-2.68	
Max. temperature of heating water	°C		58		
Operating range heating	°C		-30 to +45		
DHW Tank					
Туре		/	/	/	
Volume	1	/	/	/	
Cooling mode					
Cooling capacity (2)	kW	6.22-7.45	6.70-9.50	7.00-9.80	
EER max – Energy Efficiency Ratio (2)		4.45	4.60	3.80	
Min. temperature of cooling water	°C		7		
Operating range cooling	°C		+8 to +65		
Power supply – specifications					
Outdoor unit	V/ph/fuse	230V / 1-ph / 10A/C	230V / 1-p	oh / 16A/C	
Indoor unit or (indoor + outdoor unit)	V/ph/fuse	230V / 1-ph / 6A/C or (230V / 1-ph / 16A/C)			
Refrigerant specification					
Type / Mass of refrigerant	kg	R32 / 0.90	R32 / 1.40	R32 / 1.80	
Type of connection between indooroutdoor unit		Refrigerant flare connection			
Dimensions of refrigerant pipes connectors	Inch	1/4 and 1/2 3/8 and 5/8			

	Unit	AWH6-R32-S-V8	AWH9-R32-S-V8	AWH12-R32-S-V8	
Controller					
Controller Type		LCD Touch Screen			
LCD Size			4.3″		
Controller features		2x Mixing Heating	Circuit + 2x Mixing Coo Heating	ling Circuit + DHW	
Internet connection			Serial Integrated		
Sound power and sound pressure level					
Sound power level LwA - Indoor unit	dB(A)	44	45	45	
Sound power level LwA - Outdoor unit (3)	dB(A)	52	53	52	
Sound pressure level on distance					
Outdoor unit – 1 m	dB(A)	49	50	50	
Outdoor unit – 5 m	dB(A)	35	36	36	
Outdoor unit – 10 m	dB(A)	29	30	30	
Outdoor unit – 15 m	dB(A)	26	26	26	
Net dimensions					
Indoor unit (WxDxH)	mm		410 × 260 × 700		
Outdoor unit (WxDxH)	mm	1 025 × 397 × 750	1 207 × 412 × 900	1 207 × 412 × 900	
Net weight					
Indoor unit / Outdoor unit	kg	31 / 83.5	31 / 90	31 / 93.5	
Serial integrated components					
Electrical flow heater	kW/ph	/	/	/	
Circulation water pump – A energy class	type	e UPM 25-75 180			
Temperature Sensors		Serial Integrated - All			
3-way diverting valve for DHW tank		/	/	/	
Expansion vessel heating water	I	/	/	/	

<sup>(1)</sup> Measured according to standard EN 14511. Heating condition: water inlet/outlet temperature 30°C/35°C, ambient temperature DB/WB 7°C/6°C.

<sup>(2)</sup> Measured according to standard EN 14511. Cooling condition: water inlet/outlet temperature 12°C/7°C and ambient temperature 35°C

<sup>(3)</sup> Measured according to standard EN 12102.

Unit AWST6-R32-S-V8 AWST9-R32-S-V8 AWST12-R32-S-V8

	Unit	AWST6-R32-S-V8	AWST9-R32-S-V8	AWST12-R32-S-\
Article number (indoor/outdoor unit)		120335/120324	120335/120325	120335/120326
ErP Energy efficiency class		A+++ / A++	A+++ / A++	A+++ / A++
SCOP 35°C (floor heating) EN 14825		4.74	4.73	4.71
Heating mode (A7/W35)				
Heating capacity (1)	kW	3.50-6.50	4.30-9.20	5.50 – 11.60
COP max - Coefficient of Performance (1)	W/W	4.70	4.71	4.90
Rated input power (1)	kW	0.75 – 1.41	0.92-2.10	1.10-2.68
Max. temperature of heating water	°C		58	
Operating range heating	°C		-30 to +45	
DHW Tank				
Туре		SUS	316 Steel, DHW storage	e type
Volume	- 1		250	
Cooling mode				
Cooling capacity (2)	kW	6.22-7.45	6.70-9.50	7.00-9.80
EER max - Energy Efficiency Ratio (2)		4.45	4.60	3.80
Min. temperature of cooling water	°C		7	
Operating range cooling	°C		+8 to +65	
Power supply - specifications				
Outdoor unit	V/ph/fuse	230V / 1-ph / 10A/C	230V / 1-	ph / 16A/C
Indoor unit + electric flow heater + (outdoor unit) (3)	V/ph/fuse	230V / 3-ph / 25A/C or 400V / 3-ph / 16A/C		
Refrigerant specification				
Type / Mass of refrigerant	kg	R32 / 0.90	R32 / 1.40	R32 / 1.80
Type of connection between indoor-outdoor unit		Refrigerant flare connection		on
Dimensions of refrigerant pipes connectors	Inch	1/4 and 1/2 3/8 and 5/8		nd 5/8

<sup>(1)</sup> Measured according to standard EN 14511. Heating condition: water inlet/outlet temperature 30°C/35°C, ambient temperature DB/WB 7°C/6°C.

<sup>(2)</sup> Measured according to standard EN 14511. Cooling condition: water inlet/outlet temperature 12°C/7°C and ambient temperature 35°C.

	Unit	AWS10-R32-S-V8	AVV519-H32-5-V8	AWS112-R32-S-V	
Controller					
Controller Type			LCD Touch Screen		
LCD Size			4.3″		
Controller features		2x Mixing Heating	g Circuit + 2x Mixing Coo Heating	oling Circuit + DHW	
Internet connection			Serial Integrated		
Sound power and sound pressure level					
Sound power level LwA – Indoor unit	dB(A)	44	45	45	
Sound power level LwA - Outdoor unit (4)	dB(A)	52	53	52	
Sound pressure level on distance					
Indoor unit – 1 m	dB(A)	42	32	37	
Outdoor unit – 1 m	dB(A)	49	50	50	
Outdoor unit – 5 m	dB(A)	35	36	36	
Outdoor unit – 10 m	dB(A)	29	30	30	
Outdoor unit – 15 m	dB(A)	26	26	26	
Net dimensions					
Indoor unit (WxDxH)	mm		600 × 707 × 1 720		
Outdoor unit (WxDxH)	mm	1 025 × 397 × 750	1 207 × 412 × 900	1 207 × 412 × 900	
Net weight					
Indoor unit / Outdoor unit	kg	118 / 83.5	118 / 90	118 / 93.5	
Serial integrated components					
Electrical flow heater	kW	6 (9) kW – 2x 3kW (+ 3 kW)			
Electrical heater in tank	kW		0.5		
Circulation water pump - A energy class	type		UPM 25-75 180		
Temperature Sensors			Serial Integrated – All		
3-way diverting valve for DHW tank			Serial Integrated		
Expansion vessel heating water	1		11		

<sup>(3)</sup> If outdoor unit is powered from indoor unit, the electric backup is reduced from 9 to 6 kW heating capacity.

<sup>(4)</sup> Measured according to standard EN 12102.

### **ES Fan Coils**

ES Fan Coils used for heating purposes, is basically a radiator with a fan that circulates the air around the heat exchanger.

The fan coil uses water as medium and can be used both for heating and cooling. By circulating the air around the heat exchanger, the heat transfer to the air increases dramatically. For heating purposes this means that the water temperature in the heating system can be lowered quite much and keep the desired room temperature. Lower water temperature also increases the efficiency of the heating system.

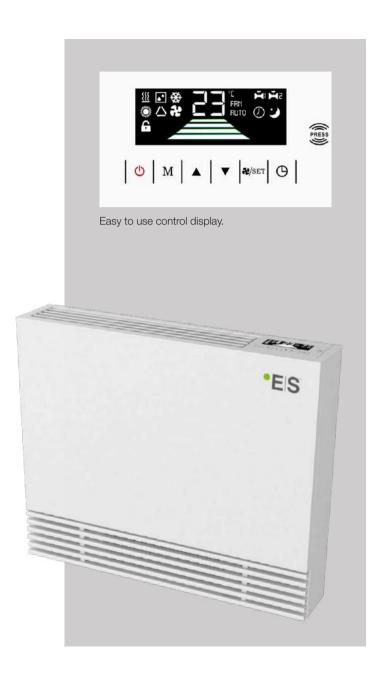
## The following functions are available and can be adjusted:

- Heating, cooling, dehumidifying and air circulation mode
- Timer operation
- Night mode / silent working
- Fan speed
- Room temperature setting

Automatic keylock activates after 10 seconds without operation.

MODEL	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	1	0.48	0.85	1.15	1.48
Max. water pressure	Bar	10			
Water connection	inch		G <sup>-</sup>	1/2	
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	1 094 x 580 x 129	1 294 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



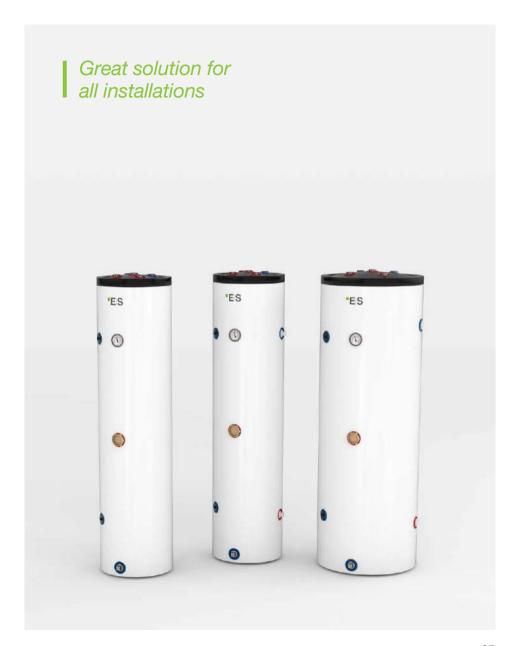
### **ES Buffer Tanks**

ES Buffer Tanks are manufactured from high performance stainless steel for longer lifespan and for high performance. Due to the chosen construction material the system connected to it is not being polluted with particles that could affect other components in the system, as it may happen with traditional black steel buffer tanks.

The slim design of the ES Buffer Tanks makes sure that the space usage is as less as possible. Both the 100 liter and the 200 liter version need less then 0.2 m² of space when installed. The 100 liter versions includes a wall bracket, so that it can also be mounted on the wall for even less space usage.

Both the 100 and 200 liter models have an additional coil inside to have the possibility for connecting additional heating sources or for preheating the sanitary water.

MODEL	Unit	BT100TC-1	BT100TC-2	BT200TC-1
Article number	bar	120200	120201	120205
Max water pressure	bar		10	
Water temperature Max.	°C		95	
Volume	ı	100	100	200
Hight	mm		1 500	
Diameter	mm	3	75	520
Material of inner tank			Stainless steel 304	
Material of coil		Not available Stainless steel 3		steel 316
Insolation – Type / Thickness	mm	Polyurethan / 37.5 Polyu		Polyurethan / 50.0
Colour		White		
Thermometer			Yes	
Weight	kg	25	29	46
Coil	m	Not available	15	20
Coil diameter	mm	Not available	2	2
2 inch/ R50 connector	pcs	1		
Wall bracket		Yes Not ava		Not available
Connections		1 inch, top connections		
Thermowell	pcs	2		



### **ES Multifunctional Tanks**

ES Multifunction Tank – designed to efficiently combine several different heat sources and is very well insulated for minimal heat losses and maximum efficiency.

ES Multifunction Tank is a complete heating system for residential and hot water heating. The tank has connections for several sources of energy and becomes the "hub" in the house's heating system. It can be used as a clean electric boiler, or connected to solar collector, pellets, heat pump, water-powered wood stove, etc. in combination.

MODEL	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		98	5			
Volume	I	75	300	50	00		
Height	mm	875	1 560	18	50		
Diameter	mm	476	630	70	700		
Inner tank and coils			Stainless 304 and 316				
Outer tank			Stainless 304, powder-coated				
Insulation		Polyurethane, 50 mm	ne, 70 mm				
Weight (blank)	kg	30	95	12	20		
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	s 1 1			2		
Electric heater	kW	-	3	(	3		
Connections Tank /spirals		1 " female					

ES Multifunction Tanks are constructed in stainless steel. This keeps the system clean, increases efficiency and has a longer lifespan. The tank is therefore approved also as a pure water heater. Corrugated stainless spirals provide maximum heat transfer between the accumulator volume and hot water or solar collector.

The 300 and 500 liter tanks have a 3 kW electric heater built in to increase the capacity of larger hot water needs. This is thermostat regulated from 30–75 °C and it is intended only as a backup for heating hot water.



# **Diverting Valve**

LK 525 MultiZone 3W is a motorized 3-way zone valve for On/Off control. The zone valve is designed with a turning slide which allows it to withstand a larger pressure difference and reduces the risk of it stalling after a long intermission. 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 warm season.



#### LK 525 MultiZone 3W Diverting valve

Article number (G1"/G11/4"), 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 <sup>2</sup>
Wire colours	Blue, brown, black
External insulation	PVC
Connection	Molex® or Molex®-compatible connector, 6-circuit

### **Electrical Heaters**

#### **Customizable heating elements**

The heating elements are designed to fit one common controller that contains a thermostat for manual control, overheat protection and a contactor which enables a fully automatic control via ES heat pumps. Heating capacities of the heating elements range from 1.5 kW and up to 9 kW to provide an optimal solution for each house. Suitable for 230 V and 400 V connection.



#### Control box G2"

FEATURES	ARTICLE NUMBER	SUITABLE FOR
<ul><li>Automatic control via heat pump</li><li>Manual control via thermostat</li><li>Overheat protection</li></ul>	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"



#### 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



# **Dirtmagplus Filter**

# Multifunction device in composite with dirt separator, magnets and strainer.

The DIRTMAGPLUS® multifunction device is composed of two separate components arranged in series: a dirt separator and an interchangeable strainer.

The presence of these two components allows for continuous protection of the generator and devices from any impurities that form in the hydraulic circuit both at the time of system start-up and in normal operating conditions.

Ferrous impurities are also trapped inside the body of the device thanks to the action of the two magnets inserted in a special removable outer ring.

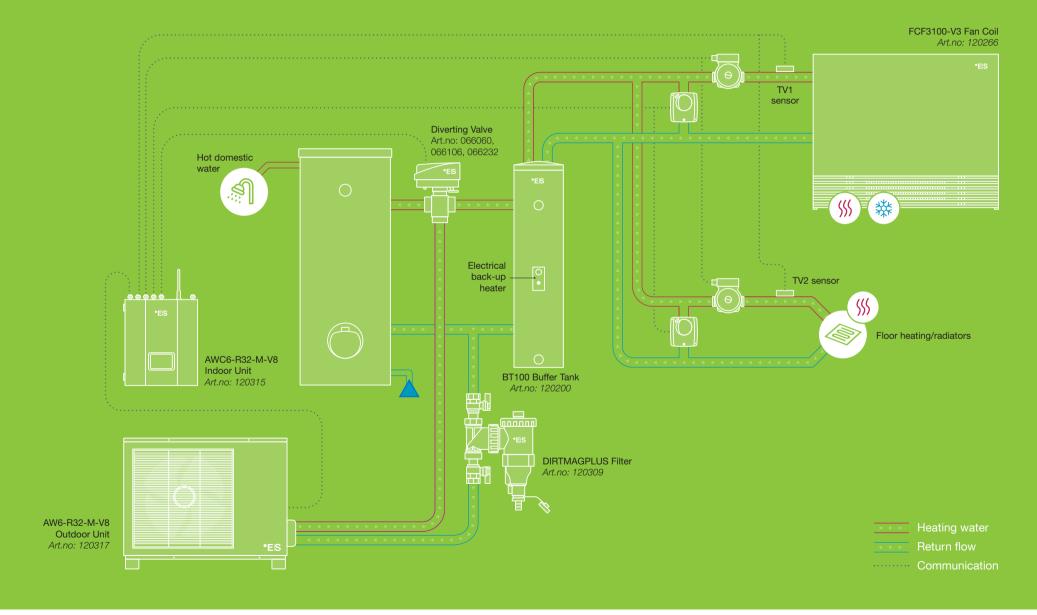


#### **Dirmagplus Filter**

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



# **ES Products in a System**



# What we do

ES products are designed to modernize your existing heating system cost efficiently step by step and therefore provide minimal time to return your investment.

In addition, our products are easy to install and to combine with other ES products as well as the existing heating products of other brands.

Save on your heating costs by adding the heat pump to your existing heating system. Use ES air-to-water heat pumps.

Cost-effective, convenient and environmentally friendly.

### **About Energy Save**

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

Sweden, HQ: ES Energy Save Holding AB (publ) · Nitgatan 2, SE-441 38 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

SWEDISH INGENUITY