

• **EIS**® ENERGY SAVE

High efficiency

Heat Pumps

Versatile

Water Tanks

Modern

Fan Coils



SWEDISH INGENUITY

REDUCED ENERGY COSTS – INCREASED ENVIRONMENTAL BENEFITS

Contents

Introduction..... 4

Features..... 6

The AW-R32-M and
NP-V7-S Heat Pumps 6

Advanced LED Touch
Screen Controller 8

Heat Pumps 9

Heat Pump Stand 19

Drain Pan Kit..... 19

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..... 31





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 / 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 AB develop and offer cost effective, smart and flexible solutions for maximum energy savings to the market.

It's good to 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 than 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 given up 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 world-wide known producers, that are making innovations in this field, with a long and successful history.



R410A refrigerant

NP-V7-S units use a R410A refrigerant, which is used for inverter heat pumps for several years and it has proven that it is a reliable and efficient medium for Air-Water heat pump systems as well as for Air conditioning units.



Control via internet

Each ES heat pump is equipped with an internet module that allows the customer to have full control 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.



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.

The AW-R32-M Series

The AW-R32-M 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.

With R32 as refrigerant the units are not just more eco-friendly, but even more efficient than units using other types of refrigerants. The “M” in the name stands for Monobloc, which describes the connection between indoor and outdoor unit – a hydraulic connection which provides an easier installation.

The units have an additional heater that serves as a back up to prevent freezing of the water in the outdoor unit. Its power supply is separate from the heat pump and will kick-in only in real emergency cases. Heating power ranges from 6–19 kW and there are two different types. The AWC has a small indoor control box and the AWT is a so called All-In-One indoor unit, with a water tank for preparing hot sanitary water. The AWT contains most of the elements needed for an installation into your home (switching valve, expansion vessel, etc...).

For your home, an ES AW-R32-M Heat Pump is a solution for the future.

See full range, page 9–12.



SWEDISH INGENUITY

The NP-V7-S Series

The ES NP-V7-S units are highly efficient heat pumps that use a traditional R410A refrigerant. Designed 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 an emergency there is no risk of water freezing in the outdoor unit.

Heating power ranges from 6–13 kW. There are three types, the NPH, NPT and NPET version. The NPH has an indoor unit containing the controls and water pump, suitable for adapting to any existing heating system. The NPT and NPET are so called All-In-One indoor units, with a water tank for preparing fresh sanitary water. The NPT has a water tank in stainless steel that heats the fresh sanitary water through a coil, on demand. The NPET has an enamelled water tank that is used as a 250 liter hot water storage. This system ensures that there is always enough water waiting to be used.

The NP-V7-S heat pumps will make your home warm and cosy.

See full range, page 13–18.



SWEDISH INGENUITY

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.

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



Info menu for easy diagnostics

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

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,74

Heating capacity: 6,50 kW

COP: 4,70

Max. temperature outlet: 58 °C

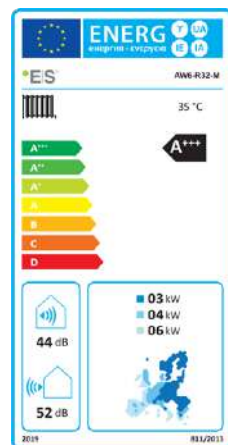
Working range: -25°C to +65 °C

Power supply: 230 V

Sound power level: 52 dB(A)

Refrigerant: R32

Technical specifications, see page 20.



AWC9 – R32-M

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,73

Heating capacity: 9,20 kW

COP: 4,71

Max. temperature outlet: 58 °C

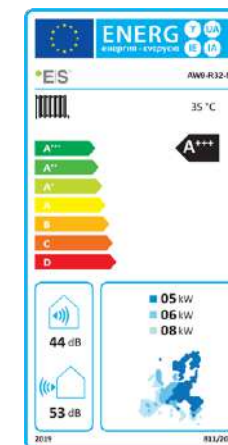
Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 53 dB(A)

Refrigerant: R32

Technical specifications, see page 20.



AWC12 – R32-M

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,71

Heating capacity: 11,60 kW

COP: 4,90

Max. temperature outlet: 58 °C

Working range: -25°C to +65 °C

Power supply: 230 V

Sound power level: 52 dB(A)

Refrigerant: R32

Technical specifications, see page 20.



A+++

>dB
Low noise



BMS
compatibility



AWC15 – R32-M

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,98

Heating capacity: 15,30 kW

COP: 5,06

Max. temperature outlet: 58 °C

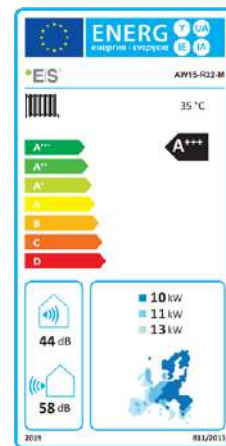
Working range: -25°C to +65 °C

Power supply: 400 V

Sound power level: 58 dB(A)

Refrigerant: R32

Technical specifications, see page 21.



A+++

>dB
Low noise



BMS
compatibility



AWC19 – R32-M

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,85

Heating capacity: 18,50 kW

COP: 5,01

Max. temperature outlet: 58 °C

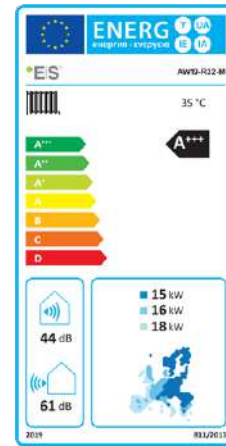
Working range: -25°C to +65°C

Power supply: 400 V

Sound power level: 61 dB(A)

Refrigerant: R32

Technical specifications, see page 21.



AWT6 – R32-M

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,74

Heating capacity: 6,50 kW

COP: 4,70

Max. temperature outlet: 58 °C

Working range: -25°C to +65 °C

Power supply: 230 V

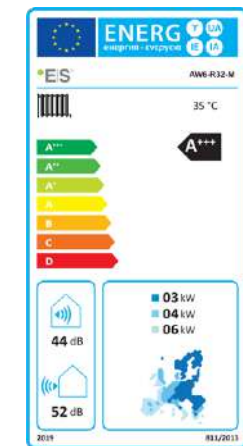
Sound power level: 52 dB(A)

Tank: 250 liter

Tank type: Stainless steel

Refrigerant: R32

Technical specifications, see page 22.



AWT9 – R32-M

- Controller:** Touch screen
- Energy efficiency:** A+++
- SCOP:** 4,73
- Heating capacity:** 9,20 kW
- COP:** 4,71
- Max. temperature outlet:** 58 °C
- Working range:** -25°C to +65 °C
- Power supply:** 230 V
- Sound power level:** 53 dB(A)
- Tank:** 250 liter
- Tank type:** Stainless steel
- Refrigerant:** R32

Technical specifications,
see page 22.



AWT12 – R32-M

- Controller:** Touch screen
- Energy efficiency:** A+++
- SCOP:** 4,90
- Heating capacity:** 11,60 kW
- COP:** 4,90
- Max. temperature outlet:** 58 °C
- Working range:** -25°C to +65°C
- Power supply:** 230 V
- Sound power level:** 52 dB(A)
- Tank:** 250 liter
- Tank type:** Stainless steel
- Refrigerant:** R32

Technical specifications,
see page 22.



NPH6 – V7-S

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,47

Heating capacity: 6,21 kW

COP: 5,87

Max. temperature outlet: 55 °C

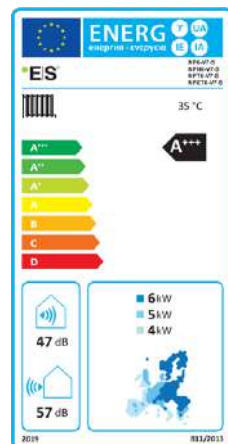
Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 57 dB(A)

Refrigerant: R410A

*Technical specifications,
see page 23.*



NPH9 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 3,99

Heating capacity: 10,10 kW

COP: 4,65

Max. temperature outlet: 55 °C

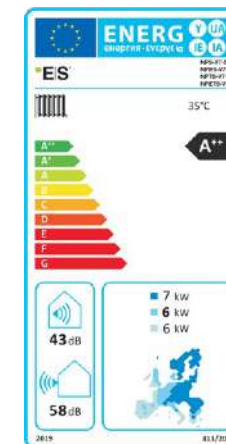
Working range: -25°C to +65 °C

Power supply: 230 V

Sound power level: 58 dB(A)

Refrigerant: R410A

*Technical specifications,
see page 23.*



NPH11 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 3,92

Heating capacity: 11,50 kW

COP: 5,05

Max. temperature outlet: 55 °C

Working range: -25°C to +65 °C

Power supply: 230 V

Sound power level: 58 dB(A)

Refrigerant: R410A

Technical specifications, see page 23.



NPH13 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 4,08

Heating capacity: 12,60 kW

COP: 4,77

Max. temperature outlet: 55 °C

Working range: -25°C to +65 °C

Power supply: 230 V

Sound power level: 59 dB(A)

Refrigerant: R410A

Technical specifications, see page 23.



NPT6 – V7-S

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,47

Heating capacity: 6,21 kW

COP: 5,87

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 57 dB(A)

Tank: 250 liter

Tank type: Stainless steel

Refrigerant: R410A

*Technical specifications,
see page 24.*



NPT9 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 3,99

Heating capacity: 10,10 kW

COP: 4,65

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

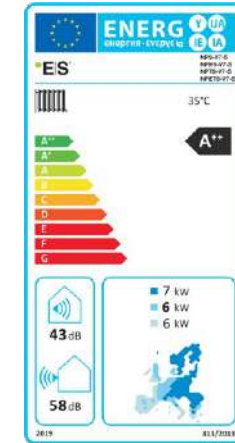
Sound power level: 58 dB(A)

Tank: 250 liter

Tank type: Stainless steel

Refrigerant: R410A

*Technical specifications,
see page 24.*



NPT11 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 3,92

Heating capacity: 11,50 kW

COP: 5,05

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 58 dB(A)

Tank: 250 liter

Tank type: Stainless steel

Refrigerant: R410A

*Technical specifications,
see page 24.*



NPT13 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 4,08

Heating capacity: 12,60 kW

COP: 4,77

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 59 dB(A)

Tank: 250 liter

Tank type: Stainless steel

Refrigerant: R410A

*Technical specifications,
see page 24.*



NPET6 – V7-S

Controller: Touch screen

Energy efficiency: A+++

SCOP: 4,47

Heating capacity: 6,21 kW

COP: 5,87

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 57 dB(A)

Tank: 250 liter

Tank type: Enamelled

Refrigerant: R410A

*Technical specifications,
see page 25.*



NPET9 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 3,99

Heating capacity: 10,10 kW

COP: 4,65

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

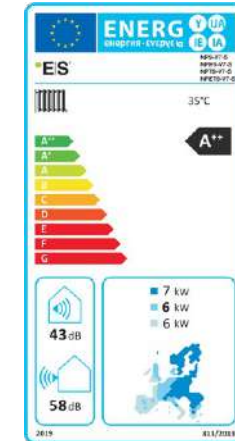
Sound power level: 58 dB(A)

Tank: 250 liter

Tank type: Enamelled

Refrigerant: R410A

*Technical specifications,
see page 25.*



NPET11 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 3,92

Heating capacity: 11,50 kW

COP: 5,05

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 58 dB(A)

Tank: 250 liter

Tank type: Enamelled

Refrigerant: R410A

*Technical specifications,
see page 25.*



NPET13 – V7-S

Controller: Touch screen

Energy efficiency: A++

SCOP: 4,08

Heating capacity: 12,60 kW

COP: 4,77

Max. temperature outlet: 55 °C

Working range: -25°C to +65°C

Power supply: 230 V

Sound power level: 59 dB(A)

Tank: 250 liter

Tank type: Enamelled

Refrigerant: R410A

*Technical specifications,
see page 25.*



ES Heat Pump Stand

ES heat pump stands are made from a robust and weather resistant materials. 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 two ES Stand models are needed for a range of heat pumps from 6kW and up to 20kW.

The stands come in two colour variations, silver and in dark grey.

OUS40-45 Silver



OUS40-45 Gray

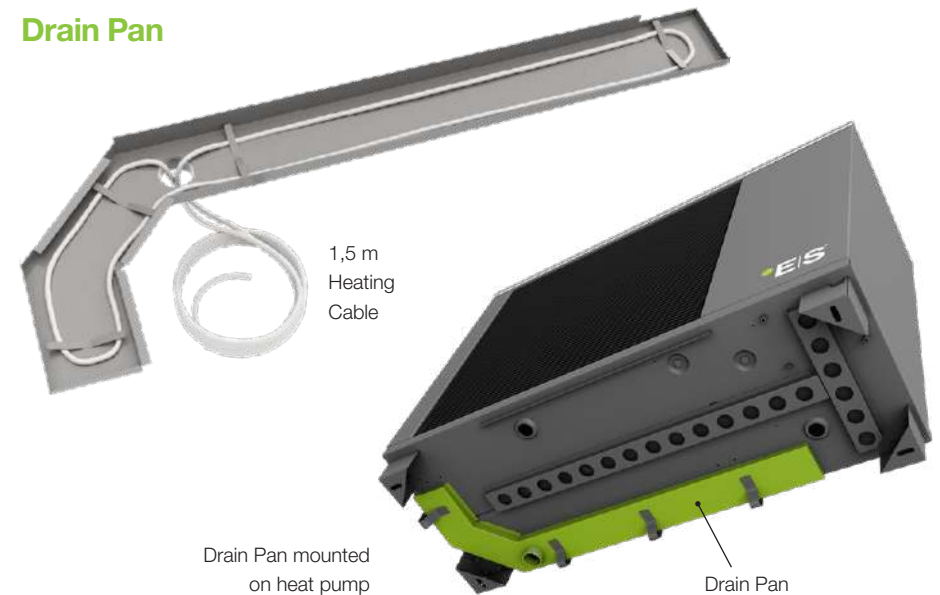


ES Drain Pan Kit

The drain pan kit collects the condensing water from the outdoor unit to a centralized drainage, so no ice sheet can form under the unit. It is designed for an easy and fast installation by using quick hooks for installation and a "T" connector to connect the power supply for the electrical heating cable. The collective output for the condensing water is 5/4" through which a heating cable is routed. The 140 W heating cable is heating the drain pan and it extends out to heat the draining piping for up to 1,5 m.

The ES drain pan kit is suitable both for the NP-V7-S series as for the AW-R32-M series of ES heat pumps.

Drain Pan



Technical Specification Heat Pumps

AWC – R32-M (6–12 kW)

	Unit	AWC6-R32-M	AWC9-R32-M	AWC12-R32-M
ErP Energy efficiency class		A+++	A+++	A+++
SCOP 35°C (floor heating) EN 14825		4,74	4,73	4,71
Heating mode (A7/W35)				
Heating capacity*	kW	3,50 - 6,50	4,30 - 9,20	5,50 - 11,60
COP max - Coefficient of Performance*		4,70	4,71	4,90
Rated input power*	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 +45		
DHW Tank				
Type		/	/	/
Volume	l	/	/	/
Cooling mode				
Cooling capacity**	kW	6,22 – 7,45	6,70 – 9,50	7,00 – 9,80
EER max - Energy Efficiency Ratio**		4,45	4,60	3,80
Min. temperature of cooling water	°C	7		
Operating range cooling	°C	0 to +65		
Power supply - specifications				
Voltage (outdoor unit)	V/Hz/ph	220-240/50/1		
Fuse for heat pump only (outdoor unit)	A/type	10A/C	16A/C	16A/C
Fuse for indoor unit + electrical flow heater	A/type	/	/	/
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"		

	Unit	AWC6-R32-M	AWC9-R32-M	AWC12-R32-M
Controller				
Controller Type		LCD Touch Screen		
LCD Size		4,3"		
Controller features		2x Mixing Heating Circuit + 2x Mixing Cooling Circuit + DHW Heating		
Internet connection		Serial Integrated		
Sound power and sound pressure level				
Sound power level LwA - Indoor unit	dB(A)	/	/	/
Sound power level LwA - Outdoor unit***	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 (WxHxD)	mm	450 x 380 x 135		
Outdoor unit (WxHxD)	mm	1010 x 735 x 370	1165 x 885 x 370	1165 x 885 x 370
Net weight				
Indoor unit / Outdoor unit	kg	10 / 67	10 / 80	10 / 85
Serial integrated components				
Electrical flow heater	kW/ph	/	/	/
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		/	/	/
Expansion vessel heating water	l	/	/	/

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

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

(***) Measured according to standard EN 12102.

AWC – R32-M (15 & 19 kW)

	Unit	AWC15-R32-M	AWC19-R32-M
ErP Energy efficiency class		A+++	A+++
SCOP 35°C (floor heating) EN 14825		4,98	4,85
Heating mode (A7/W35)			
Heating capacity*	kW	6,00 - 15,30	9,20 - 18,50
COP max - Coefficient of Performance*		5,06	5,01
Rated input power*	kW	1,22 – 3,20	1,83 – 4,14
Max. temperature of heating water	°C	58	
Operating range heating	°C	-25 to +45	
DHW Tank			
Type		/	/
Volume	l	/	/
Cooling mode			
Cooling capacity**	kW	7,20 – 18,50	8,50 – 22,50
EER max - Energy Efficiency Ratio**		5,42	5,12
Min. temperature of cooling water	°C	7	
Operating range cooling	°C	0 to +65	
Power supply - specifications			
Voltage (outdoor unit)	V/Hz/ph	400/50/3	
Fuse for heat pump only (outdoor unit)	A/type	3p 16A/C	
Fuse for indoor unit + electrical flow heater	A/type	/	/
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"	

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

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

	Unit	AWC15-R32-M	AWC19-R32-M
Controller			
Controller Type		LCD Touch Screen	
LCD Size		4,3"	
Controller features		2x Mixing Heating Circuit + 2x Mixing Cooling Circuit + DHW Heating	
Internet connection		Serial Integrated	
Sound power and sound pressure level			
Sound power level LwA - Indoor unit	dB(A)	/	/
Sound power level LwA - Outdoor unit***	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 (WxHxD)	mm	450 x 380 x 135	
Outdoor unit (WxHxD)	mm	1085 x 1450 x 390	
Net weight			
Indoor unit / Outdoor unit	kg	10 / 120	10 / 140
Serial integrated components			
Electrical flow heater	kW/ph	/	/
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		/	/
Expansion vessel heating water	l	/	/

(***) Measured according to standard EN 12102.

AWT – R32-M (6–12 kW)

	Unit	AWT6-R32-M	AWT9-R32-M	AWT12-R32-M
ErP Energy efficiency class		A+++	A+++	A+++
SCOP 35°C (floor heating) EN 14825		4,74	4,73	4,71
Heating mode (A7/W35)				
Heating capacity*	kW	3,50 - 6,50	4,30 - 9,20	5,50 - 11,60
COP max - Coefficient of Performance*		4,70	4,71	4,90
Rated input power*	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 +45		
DHW Tank				
Type		Stainless steel tank – fresh water system		
Volume	l	250		
Cooling mode				
Cooling capacity**	kW	6,22 – 7,45	6,70 – 9,50	7,00 – 9,80
EER max - Energy Efficiency Ratio**		4,45	4,60	3,80
Min. temperature of cooling water	°C	7		
Operating range cooling	°C	0 to +65		
Power supply - specifications				
Voltage (outdoor unit)	V/Hz/ph	220-240/50/1		
Fuse for heat pump only (outdoor unit)	A/type	10A/C	16A/C	16A/C
Fuse for indoor unit + electrical flow heater	A/type	3p 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		Hydraulic connection		
Dimensions of hydraulic pipes connectors		G1"		

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

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

	Unit	AWT6-R32-M	AWT9-R32-M	AWT12-R32-M
Controller				
Controller Type		LCD Touch Screen		
LCD Size		4,3"		
Controller features		2x Mixing Heating Circuit + 2x Mixing Cooling Circuit + DHW Heating		
Internet connection		Serial Integrated		
Sound power and sound pressure level				
Sound power level LwA - Indoor unit	dB(A)	/	/	/
Sound power level LwA - Outdoor unit***	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 (WxHxD)	mm	600 x 1780 x 680		
Outdoor unit (WxHxD)	mm	1010 x 735 x 370	1165 x 885 x 370	1165 x 885 x 370
Net weight				
Indoor unit / Outdoor unit	kg	125 / 67	125 / 80	125 / 85
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	l	11		

(***) Measured according to standard EN 12102.

NPH – V7-S (6–13 kW)

	Unit	NPH6 V7-S	NPH9 V7-S	NPH11 V7-S	NPH13 V7-S
ErP Energy efficiency class		A+++	A++	A++	A++
SCOP 35°C (floor heating) EN 14825		4,47	3,99	3,92	4,08
Heating mode (A7/W35)					
Heating capacity*	kW	2,19 - 6,21	4,33 - 10,10	4,67 - 11,50	4,20 - 12,60
COP max - Coefficient of Performance*		4,05 - 5,87	4,02 - 4,65	3,83 - 5,05	3,89 - 4,77
Rated input power*	kW	0,54 - 1,53	0,97 - 2,15	0,92 - 3,03	0,92 - 3,07
Max. temperature of heating water	°C	55			
Operating range heating	°C	-25 to +45			
DHW Tank					
Type		/	/	/	/
Volume	l	/	/	/	/
Cooling mode					
Cooling capacity**	kW	1,59 - 4,50	2,34 - 5,05	2,17 - 6,74	2,34 - 7,91
EER max - Energy Efficiency Ratio**		2,52 - 4,32	1,58 - 2,40	2,15 - 3,00	2,33 - 3,12
Min. temperature of cooling water	°C	7			
Operating range cooling	°C	0 to +65			
Power supply - specifications					
Voltage	V/Hz/ph	220-240/50/1			
Fuse for heat pump only	A/type	10A/C	16A/C	16A/C	16A/C
Fuse for heat pump + electrical flow heater	A/type	/	/	/	/
Refrigerant specification					
Type / Mass of refrigerant	kg	R410A / 1,30	R410A / 2,50	R410A / 2,55	R410A / 3,00
Type of connection between indoor-outdoor unit		Refrigerant connection			
Dimensions of refrigerant pipes connectors		1/4" - 1/2"	3/8" - 1/2"	3/8" - 1/2"	3/8" - 5/8"

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

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

	Unit	NPH6 V7-S	NPH9 V7-S	NPH11 V7-S	NPH13 V7-S
Controller					
Controller Type		LCD Touch Screen			
LCD Size		4,3"			
Controller features		2x Mixing Heating Circuit + 2x Mixing Cooling Circuit + DHW Heating			
Internet connection		Serial Integrated			
Sound power and sound pressure level					
Sound power level LwA - Indoor unit	dB(A)	47	43	45	46
Sound power level LwA - Outdoor unit***	dB(A)	57	58	58	59
Sound pressure level on distance					
Outdoor unit - 1 m	dB(A)	49	50	50	51
Outdoor unit - 5 m	dB(A)	35	36	36	37
Outdoor unit - 10 m	dB(A)	29	30	30	31
Outdoor unit - 15 m	dB(A)	26	26	26	27
Net dimensions					
Indoor unit (WxHxD)	mm	410 x 750 x 270			
Outdoor unit (WxHxD)	mm	920 x 730 x 353	947 x 755 x 355	1056 x 765 x 414	1154 x 1195 x 460
Net weight					
Indoor unit / Outdoor unit	kg	29 / 52	31 / 67	31 / 70	31 / 118
Serial integrated components					
Electrical flow heater	kW/ph	/	/	/	/
Circulation water pump - A energy class	type	Grundfos UPM 25-75 180			
Temperature Sensors		Serial Integrated - All			
3-way diverting valve for DHW tank		/	/	/	/
Expansion vessel heating water	l	/	/	/	/

(***) Measured according to standard EN 12102.

NPT – V7-S (6–13 kW)

	Unit	NPT6-V7-S	NPT9-V7-S	NPT11-V7-S	NPT13-V7-S
ErP Energy efficiency class		A+++	A++	A++	A++
SCOP 35°C (floor heating) EN 14825		4,47	3,99	3,92	4,08
Heating mode (A7/W35)					
Heating capacity*	kW	2,19 - 6,21	4,33 - 10,10	4,67 - 11,50	4,20 - 12,60
COP max - Coefficient of Performance*		4,05 - 5,87	4,02 - 4,65	3,83 - 5,05	3,89 - 4,77
Rated input power*	kW	0,54 - 1,53	0,97 - 2,15	0,92 - 3,03	0,92 - 3,07
Max. temperature of heating water	°C	55			
Operating range heating	°C	-25 to +45			
DHW Tank					
Type		Stainless steel tank - fresh water system			
Volume	l	250			
Cooling mode					
Cooling capacity**	kW	1,59 - 4,50	2,34 - 5,05	2,17 - 6,74	2,34 - 7,91
EER max - Energy Efficiency Ratio**		2,52 - 4,32	1,58 - 2,40	2,15 - 3,00	2,33 - 3,12
Min. temperature of cooling water	°C	7			
Operating range cooling	°C	0 to +65			
Power supply - specifications					
Voltage	V/Hz/ph	220-240/50/1			
Fuse for heat pump only	A/type	10A/C	16A/C	16A/C	16A/C
Fuse for heat pump+electrical flow heater	A/type	16A/C (400V) 25A/C (230V)			
Refrigerant specification					
Type / Mass of refrigerant	kg	R410A / 1,30	R410A / 2,50	R410A / 2,55	R410A / 3,00
Type of connection between indoor-outdoor unit		Refrigerant connection			
Dimensions of refrigerant pipes connectors		1/4" - 1/2"	3/8" - 1/2"	3/8" - 1/2"	3/8" - 5/8"

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

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

	Unit	NPT6-V7-S	NPT9-V7-S	NPT11-V7-S	NPT13-V7-S
Controller					
Controller Type		LCD Touch Screen			
LCD Size		4,3"			
Controller features		2x Mixing Heating Circuit + 2x Mixing Cooling Circuit + DHW Heating			
Internet connection		Serial Integrated			
Sound power and sound pressure level					
Sound power level LwA - Indoor unit	dB(A)	47	43	45	46
Sound power level LwA - Outdoor unit***	dB(A)	57	58	58	59
Sound pressure level on distance					
Indoor unit - 1 m	dB(A)	42	32	37	38
Outdoor unit - 1 m	dB(A)	49	50	50	51
Outdoor unit - 5 m	dB(A)	35	36	36	37
Outdoor unit - 10 m	dB(A)	29	30	30	31
Outdoor unit - 15 m	dB(A)	26	26	26	27
Net dimensions					
Indoor unit (WxHxD)	mm	600 x 1780 x 680			
Outdoor unit (WxHxD)	mm	920 x 730 x 353	947 x 755 x 355	056 x 765 x 414	1154 x 1195 x 460
Net weight					
Indoor unit / Outdoor unit	kg	125 / 52	130 / 67	130 / 70	125 / 118
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	Grundfos UPM 25-75 180			
Temperature Sensors		Serial Integrated - All			
3-way diverting valve for DHW tank		Serial Integrated			
Expansion vessel heating water	l	11			

(***) Measured according to standard EN 12102.

NPET – V7-S (6–13 kW)

	Unit	NPET6-V7-S	NPET9-V7-S	NPET11-V7-S	NPET13-V7-S
ErP Energy efficiency class		A+++	A++	A++	A++
SCOP 35°C (floor heating) EN 14825		4,47	3,99	3,92	4,08
Heating mode (A7/W35)					
Heating capacity*	kW	2,19 - 6,21	4,33 - 10,10	4,67 - 11,50	4,20 - 12,60
COP max - Coefficient of Performance*		4,05 - 5,87	4,02 - 4,65	3,83 - 5,05	3,89 - 4,77
Rated input power*	kW	0,54 - 1,53	0,97 - 2,15	0,92 - 3,03	0,92 - 3,07
Max. temperature of heating water	°C	55			
Operating range heating	°C	-25 to +45			
DHW Tank					
Type		Enamelled DHW tank			
Volume	l	250			
Cooling mode					
Cooling capacity**	kW	1,59 - 4,50	2,34 - 5,05	2,17 - 6,74	2,34 - 7,91
EER max - Energy Efficiency Ratio**		2,52 - 4,32	1,58 - 2,40	2,15 - 3,00	2,33 - 3,12
Min. temperature of cooling water	°C	7			
Operating range cooling	°C	0 to +65			
Power supply - specifications					
Voltage	V/Hz/ph	220-240/50/1			
Fuse for heat pump only	A/type	10A/C	16A/C	16A/C	16A/C
Fuse for heat pump + electrical flow heater	A/type	16A/C (400V) 25A/C (230V)			
Refrigerant specification					
Type / Mass of refrigerant	kg	R410A / 1,30	R410A / 2,50	R410A / 2,55	R410A / 3,00
Type of connection between indoor-outdoor unit		Refrigerant connection			
Dimensions of refrigerant pipes connectors		1/4" - 1/2"	3/8" - 1/2"	3/8" - 1/2"	3/8" - 5/8"

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

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

	Unit	NPET6-V7-S	NPET9-V7-S	NPET11-V7-S	NPET13-V7-S
Controller					
Controller Type		LCD Touch Screen			
LCD Size		4,3"			
Controller features		2x Mixing Heating Circuit + 2x Mixing Cooling Circuit + DHW Heating			
Internet connection		Serial Integrated			
Sound power and sound pressure level					
Sound power level LwA - Indoor unit	dB(A)	47	43	45	46
Sound power level LwA - Outdoor unit***	dB(A)	57	58	58	59
Sound pressure level on distance					
Indoor unit - 1 m	dB(A)	42	32	37	38
Outdoor unit - 1 m	dB(A)	49	50	50	51
Outdoor unit - 5 m	dB(A)	35	36	36	37
Outdoor unit - 10 m	dB(A)	29	30	30	31
Outdoor unit - 15 m	dB(A)	26	26	26	27
Net dimensions					
Indoor unit (WxHxD)	mm	600 x 1860 x 730			
Outdoor unit (WxHxD)	mm	920 x 730 x 353	947 x 755 x 355	1056 x 765 x 414	1156 x 1195 x 460
Net weight					
Indoor unit / Outdoor unit	kg	186 / 52	190 / 67	190 / 70	190 / 118
Serial integrated components					
Electrical flow heater	kW	3 kW - 1x 3 kW	6 kW - 2x 3 kW	6 kW - 2x 3 kW	6 kW - 2x 3 kW
Electrical heater in tank	kW	1,5			
Circulation water pump - A energy class	type	Grundfos UPM 25-75 180			
Temperature Sensors		Serial Integrated - All			
3-way diverting valve for DHW tank		Serial Integrated			
Expansion vessel heating water	l	/	/	/	/

(***) 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
(a) Cooling capacity at 12°C	kW	0,75	1,50	2,20	3,10
(b) Heating capacity at 50°C	kW	0,99	2,00	2,80	4,20
(c) Heating capacity at 70°C	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
(d) Sound level min/max	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

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



Easy to use control display.



ES Buffer Tanks

ES buffer tanks are manufacture 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	BT100SC-1	BT200TC-1
Max water pressure	bar	10			
Water temperature Max.	°C	95			
Volume	l	100	100	100	200
Hight	mm	1500			
Diameter	mm	375	375	375	520
Material of inner tank	/	Stainless steel 304			
Material of coil	/	Stainless steel 316			
Insolation - Type / Thickness	mm	Polyurethan / 37,5	Polyurethan / 37,5	Polyurethan / 37,5	Polyurethan / 50,0
Colour	/	White			
Thermometer	/	Yes			
Weight	kg	26,20	29,30	24,60	46,30
Coil	m	/	15	/	20
Coil diameter	mm		22		22
2 inch/ R50 connector	pcs	/	1	1	1
Wall bracket	/	Yes	Yes	Yes	/
Connections	/	On top	On top	On the side	On top
Thermowell	pcs	2			

Great solution for all instantiations



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.

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.

MODEL	Unit	MWT 75.4	MWT 300.4-3H	MWT 500.4-3H
Water pressure Max.	bar	10		
Water temperature Max.	°C	95		
Volume	l	75	300	500
Height	mm	875	1560	1850
Diameter	mm	476	630	708
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
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 " Inv. ghost		



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

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 mm²
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, overhear 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	SUITABLE FOR
• Automatic control via heat pump • Manual control via thermostat • Overheat protection	Heating elements with G2" connection (whole range).

Heating Elements G2"

LENGTH	OUTPUT POWER	CONNECTION
280 mm	6,0 kW	G2"
390 mm	4,5 kW	G2"
390 mm	6,0 kW	G2"
390 mm	9,0 kW	G2"
485 mm*	4,5 kW	G2"
485 mm*	6,0 kW	G2"
485 mm*	9,0 kW	G2"

* Inactive 150 mm

Heating elements for AWT and NPT units

ES indoor units AWT and NPT 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	OUTPUT POWER	CONNECTION
270 mm	3 kW (3 x 1,0 kW)	DN40
270 mm	6 kW (3 x 2,0 kW)	DN40



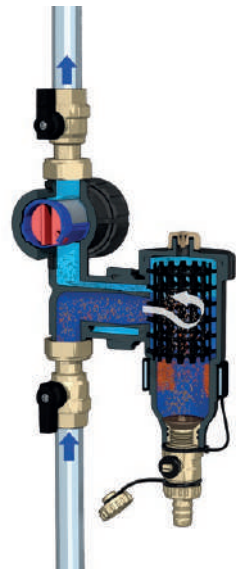
Dirtmagplus Filter

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.

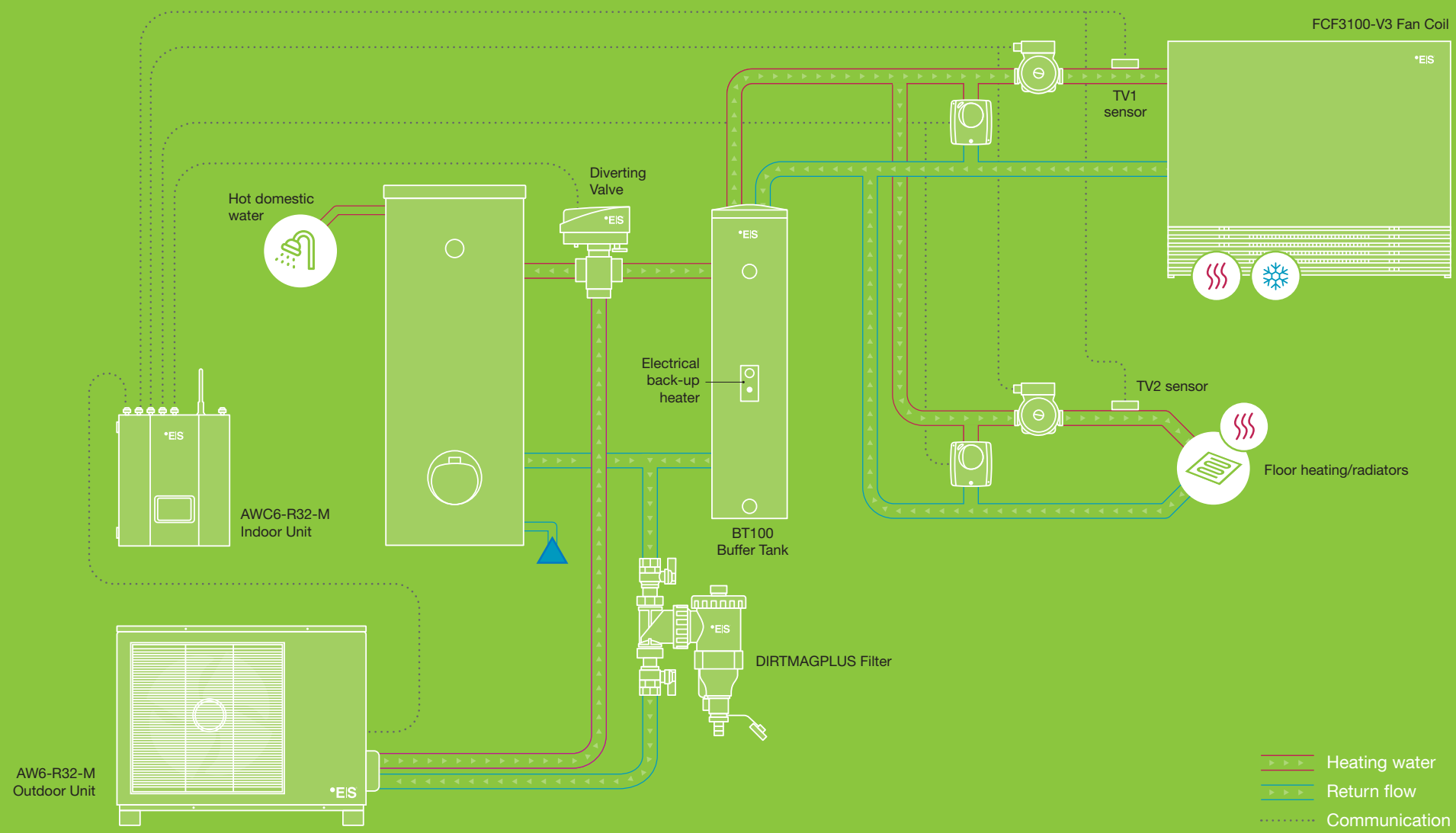
Ferrous impurities are also trapped inside the body of the device thanks to the action of the two magnets inserted in a special removable outer ring.



Dirmagplus Filter

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

ES Products in a System



What we do

SWEDISH INGENUITY



ES products are design 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

Swedish ES Energy Save AB develops and offers cost-effective, smart and flexible products for maximum energy efficiency. We have many years of experience in developing heat pumps for the Nordic market with more than 10,000 units installed. We work with the industries best partners for your building. We package Scandinavian cutting-edge expertise and innovative energy technology through prefabricated energy modules.

Our main target is to always be the market leader offering the best comparison of price to performance ratio to our customers.

Slovenia: Energy Save Nordic D.O.O. · Tržaška cesta 85, 2000 Maribor, Slovenia

Sweden: ES Energy Save Holding AB · Nitgatan 2, SE-441 38 Alingsås, Sweden

Norway: Energy Save AS · Kirkeveien 50, 1396 Hvalstad, Norway

www.energysave.se

•EIS[®] ENERGY SAVE