

ecoAIR

Monoblock air source heat pumps



ecoAIR

Monoblock Inverter air source

The ecoAIR range is the Ecoforest range of air-to-water heat pumps. These heat pumps use Inverter technology and are also capable of offering all the services required in a HVAC system in an integrated way: DHW, Heating, Pool and Cooling.



All ecoAIR heat pumps make use of Inverter technology, which allows them to modulate their power in order to adapt to the thermal demands of the installation with the highest efficiency. This translates into a very considerable reduction in electrical consumption and great savings. The ecoAIR EVI heat pumps make a unique use of EVI technology to guarantee unique performances in any operating condition, and the ecoAIR PRO heat pumps use a natural refrigerant, being the only propane monobloc aérothermal heat pumps that have modulation ranges greater than 80%. Thanks to the technology and control strategies developed by Ecoforest, the installation of ecoAIR heat pumps in combination with the HK and HK-Compact indoor units also becomes simpler, more compact and cheaper than those of other heat pumps on the market, since it allows to dispense with certain components that would be necessary in traditional heat pump installations.

INDEX

ecoAIR PRO	4
Indoor units CM / HK / HK-Compact	6
ecoAIR 1-7 PRO	8
ecoAIR 3-12 PRO	10
 ecoAIR EVI	 12
Indoor units CM / HK / HK-Compact	14
ecoAIR EVI 3-12	16
ecoAIR EVI 4-20	18

ecoAIR PRO

Domestic range

Power ranges

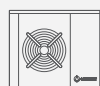
ecoAIR 1-7 kW PRO



ecoAIR 3-12 kW PRO



Monoblock heat pump



Outdoor unit
ecoAIR PRO



Indoor unit
CM / HK



Indoor unit
HK-Compact

Services



DHW



Heating



Cooling



Pool

Indoor units

CM	HK	HK-S	HK-EH	HK-EH-S	HK-Compact-EH	HK-Compact-EH-S
Controller	Controller	Controller	Controller	Controller	Controller	Controller
Display	Display	Display	Display	Display	Display	Display
	Filling kit & filter	Filling kit & filter	Filling kit & filter	Filling kit & filter	Filling kit & filter	Filling kit & filter
	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve
		Heat exchanger & circulation pump	Support electrical heater	Support electrical heater	Support electrical heater	Support electrical heater
				Heat exchanger & circulation pump	165l stainless steel DHW tank	Heat exchanger & circulation pump
					Expansion vessel & safety valve	165l stainless steel DHW tank
						Expansion vessel & safety valve



Inverter technology

Power ranges: 1-7 kW / 3-12 kW

Natural refrigerant: R290

Hot water production temperatures up to 75°C

Domestic hot water production

Heating and pool production

Integrated active cooling production

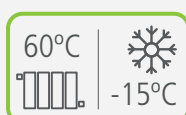
Modulating speed fan

Internet connection through the ecoSMART Easynet

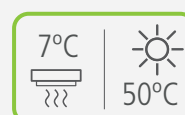
Photovoltaic hybridization through ecoSMART e-manager & e-system energy managers

Single-phase (230V) or three-phase (400V) power supply

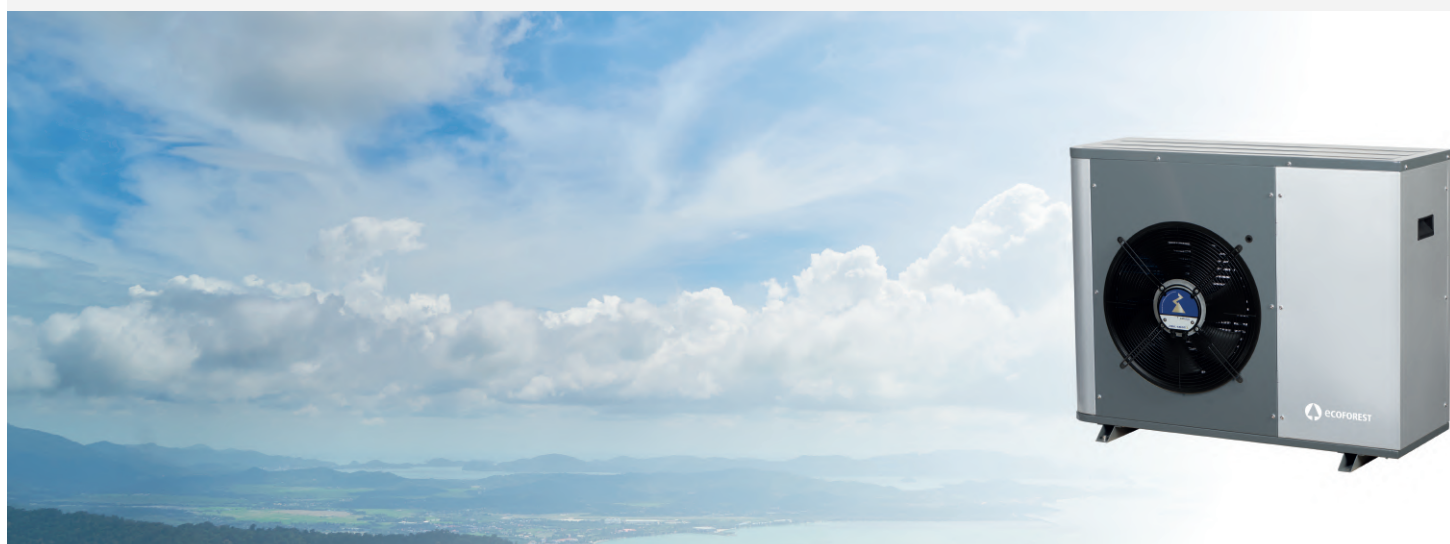
Unique performances



DHW production and Heating



Cooling



Indoor units

CM / HK / HK-Compact

- Indoor hydraulic units to be used in combination with ecoAIR PRO monoblock aerothermal heat pumps.
- CM, HK & HK-Compact: including the electrical box that allows to control the heat pump.
- HK & HK-Compact: including the main hydraulic components of the installation in several combinations.
- HK-Compact: integrating a 165l stainless steel DHW tank.
- Plug&play compact units that make the hydraulic system simpler and the installation easier.
- Single-phase control electrical box.
- Single-phase or Three-phase optional support electrical heater.

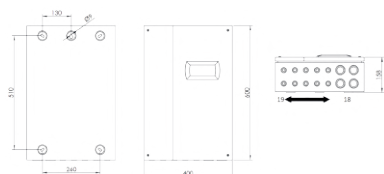
SPECIFICATIONS ecoAIR PRO INDOOR UNITS		UNITS	CM	HK				HK-Compact	
				HK	HK-S	HK-EH	HK-EH-S	HK-Compact-EH	HK-Compact-EH-S
APPLICATION	Place of installation	-		Indoors					
	DHW	-	✓	✓	✓	✓	✓	✓	✓
	Heating and Pool	-	✓	✓	✓	✓	✓	✓	✓
	Cooling	-	✓	✓	✓	✓	✓	✓	✓
INTEGRATED HYRAULIC COMPONENTS	Filling kit and filter	-	-	✓	✓	✓	✓	✓	✓
	DHW three-way valve	-	-	✓	✓	✓	✓	✓	✓
	Support electrical heater	-	-	-	-	✓	✓	✓	✓
	Separation plate heat exchanger	-	-	-	✓	-	✓	-	✓
	Secondary circuit circulation pump	-	-	-	✓	-	✓	-	✓
	Stainless steel DHW tank	-	-	-	-	-	-	✓	✓
OPERATION LIMITS	Primary / Secondary expansion vessel	-	-	-	-	-	-	✓(12l)	✓(8l) / ✓(12l)
	Production circuit pressure	bar	-	0,5 - 3,0					
	DHW tank volume	l	-	-	-	-	-	165	
	DHW tank maximum pressure	bar	-	-	-	-	-	8,0	
	DHW tank maximum temperature	°C	-	-	-	-	-	80	
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ¹	-		✓					
	Recommended external protection	-		C5A					
	Transformer primary circuit fuse	A		0,5					
	Transformer secondary circuit fuse	A		2,5					
ELECTRICAL DATA: INTEGRATED SUPPORT ELECTRICAL HEATER	Supply: 1/N/PE 230Vac / 50-60 Hz ¹	-	-	-	-	✓			
	Número de elementos	-	-	-	-	1 ² / 1-2-3			
	Recommended external protection 1-2-3	-	-	-	-	C16A ² / C10A-C16A-C20A			
	Maximum power consumption 1-2-3	kW	-	-	-	2,0 ² / 1,3-2,7-4,0			
	Maximum current consumption 1-2-3	A	-	-	-	10,0 ² / 6,3-12,6-18,9			
	Supply: 3/N/PE 400Vac / 50-60 Hz ¹	-	-	-	-	✓			
	Recommended external protection	-	-	-	-	C10A			
	Maximum power consumption	kW	-	-	-	4,0			
	Maximum current consumption	A	-	-	-	6,3			
DIMENSIONS/WEIGHT	Correction of cosine Ø	-	-	-	-	0,96/1			
	Height x width x depth	mm	600x400x158	713x525x305				1770x595x678	
	Empty weight (without assembly)	kg	15	37	41 ² / 40	40 ² / 44	43 ² / 47	130	145

1. The admissible voltage range for proper operation of the heat pump is $\pm 10\%$.
2. Data to be considered in case of HK or HK-Compact for ecoAIR 1-7kW PRO models.

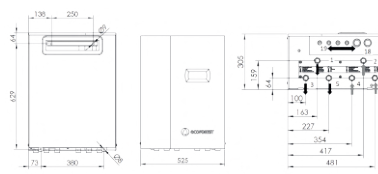
Dimensions and hydraulic connections

Indoor unit - CM / HK / HK-Compact

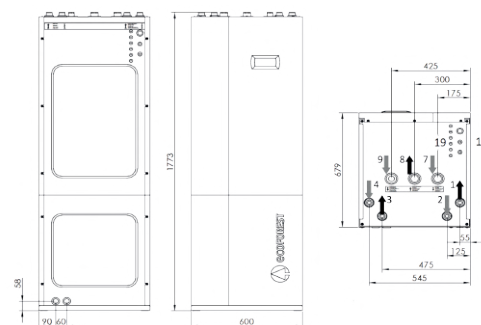
CM



HK



HK-Compact



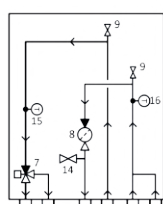
1. Outlet towards ecoAIR outdoor unit - 1" M
2. Inlet from ecoAIR outdoor unit - 1" M
3. Heating/Cooling Outlet - 1" M
4. Heating/Cooling Inlet - 1" M

5. DHW System Outlet - 1" M
6. DHW System Inlet - 1" M
7. DCW Inlet - 1" H
8. DHW Outlet - 1" H

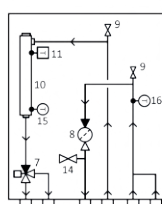
9. DHW Recirculation Inlet - 3/4" H
18. Power supply wiring Inlet
19. Control wiring Inlet

Hydraulic characteristics

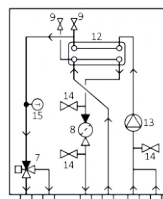
Hydraulic layouts



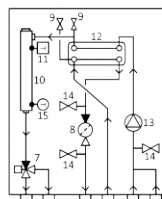
HK



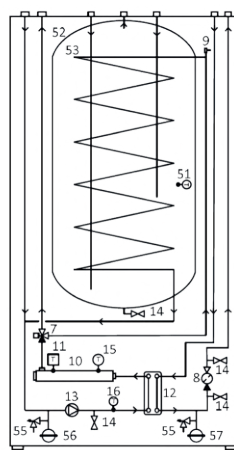
HK-EH



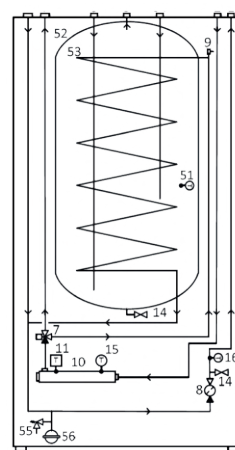
HK-S



HK-EH-S



HK-Compact-EH-S

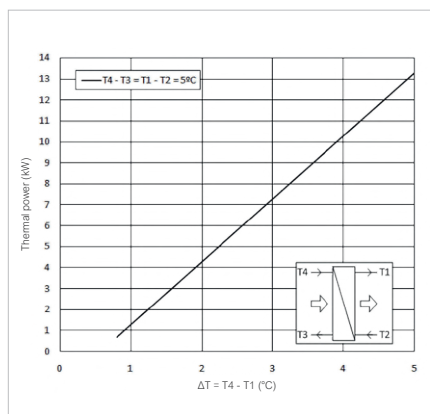


HK-Compact-EH

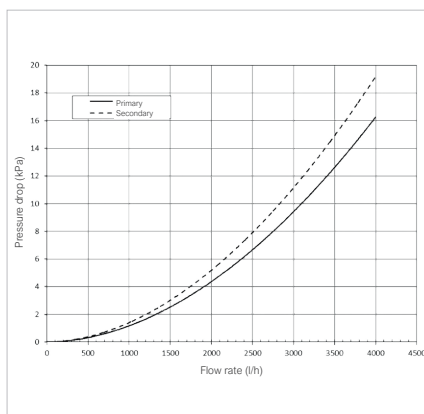
7. DHW three-way valve
8. Filterball
9. Manual air vent
10. Outlet support electrical heater
11. Safety thermostat
12. Separator plate heat exchanger
13. Secondary circuit circulation pump
14. Filling / Emptying valve
52. 165l stainless steel DHW tank
53. Stainless steel tank coil
55. Safety valve
56. 12l expansion vessel
57. 8l expansion vessel

Models including hydraulic separation : HK-S / HK-EH-S / HK-Compact-EH-S

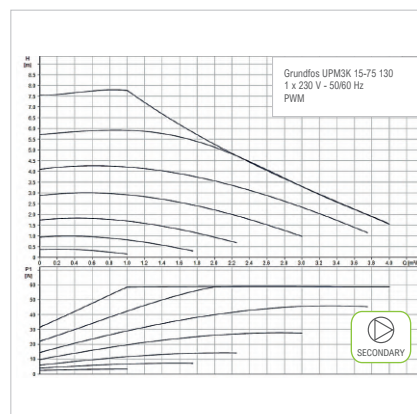
Separation plate heat exchanger
Thermal power



Separation plate heat exchanger
Pressure drop



Secondary circuit circulation pump
Pressure drop, thermal power and flow rate



ecoAIR 1-7 PRO

R290

- Modulating thermal power control within a wide range (17-100%) and modulating flow rate control of the production circuit (20-100%).
- Natural refrigerant R290 : GWP 3.
- Inverter technology and scroll compressor.
- Compact design including the production circulation pump in the outdoor unit. Hydraulic connection within the outdoor unit and the indoor unit.
- Integrated management of up to 3 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
- Integrated management of simultaneous heating/cooling emission, according to scheme.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
- Integrated active cooling.
- Selection of the indoor unit depending on the installation needs.
- Single-phase version available.
- Compatible with ecoSMART e-manager and ecoSMART e-system.
- Integrated energy meters to measure the electrical consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.

SPECIFICATIONS ecoAIR 1-7 PRO		UNITS	
APPLICATION	Place of installation	-	Outdoors
	Type of brine system ¹	-	Air source
	DHW, Heating and Pool	-	✓
	Integrated Active cooling	-	✓
PERFORMANCE	Modulation range of the compressor	%	15 to 100
	Heating power output ^{2, 10} , A7W35	kW	1,0 to 7,0
	COP ^{2, 10} , A7W35	-	5,2
	Potencia calefacción ^{2, 10} , A7W55	kW	1,0 to 6,5
	COP ^{2, 10} , A7W55	-	3,3
	Active cooling power output ^{2, 10} , A35W7	kW	1,0 to 5,6
	EER ^{2, 10} , A35W7	-	5,5
	Max. DHW temperature without / with support ⁵	°C	75 / 80
	Noise power emission level ^{6, 10}	db	55
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 181% / 4,63
	Energy label / rjs / SCOP W55 average climate control	-	A++ / -% / -
OPERATION LIMITS	Distribution / Set heating outlet temperature range	°C	10 to 75 / 20 to 75
	Distribution / Set cooling outlet temperature range	°C	5 to 30 / 7 to 30
	Outdoor temperature range	°C	-22 to 50
	Minimum / Maximum refrigerant circuit pressure	bar	0,5 / 31,5
	Production circuit pressure	bar	0,5 to 3,0
	R290 Refrigerant load	kg	0,75
WORKING FLUIDS	Compressor oil type / load	kg	PZ46M / 0,3
	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
CONTROL ELECTRICAL DATA	Maximum recommended external protection ⁹	-	C5A
	Transformer primary circuit fuse	A	0,5
	Transformer secondary circuit fuse	A	2,5
	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
ELECTRICAL DATA: SINGLE-PHASE	Maximum recommended external protection ⁹	-	C25A
	Maximum consumption ² , B0W35	kW / A	1,5 / 7,6
	Consumo máximo ² , B0W55	kW / A	2,0 / 9,8
	Maximum consumption ² , B0W55	A	1,1 / 1,3
	Correction of cosine Ø	-	0,96/1
	Height x width x depth	mm	823x1040x435
DIMENSIONS/WEIGHT	Empty weight (without assembly)	kg	115

1. Outdoor air-to-water monoblock unit.

2. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

3. Considering brine and production flow rates in compliance with EN 14511.

4. Considering a heat slope from 20°C to 50°C in absence of consumption.

5. Considering support provided by the emergency electrical heater or the HTR system. Maximum DHW temperature with the HTR system can be limited by the compressor discharge temperature.

6. In compliance with EN 12102, this includes the acoustic insulation kit of the compressor.

7. Starting current depends on the working conditions of the hydraulic circuits.

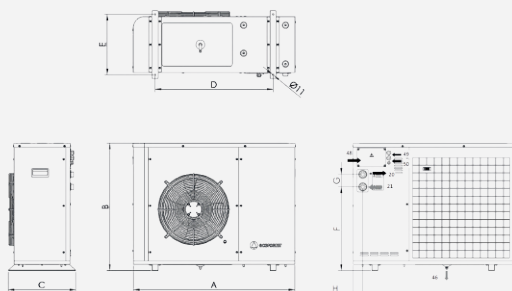
8. The admissible voltage range for proper operation of the heat pump is ±10%.

9. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

Dimensions and hydraulic connections

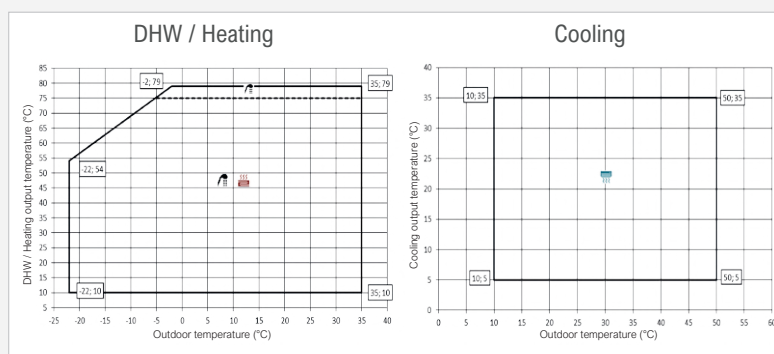
Outdoor unit - ecoAIR



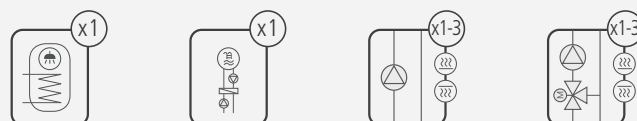
MODEL	DIMENSIONS (mm)							
	A	B	C	D	E	F	G	H
ecoAIR 1-7kW PRO	1040	823	435	760	390	540	80	60

20. Heating/Cooling Outlet - 1" M
21. Heating/Cooling Inlet - 1" M
46. Drain - 15 mm
48. Electrical connections box
49. Power supply wiring Inlet
50. Control wiring Inlet

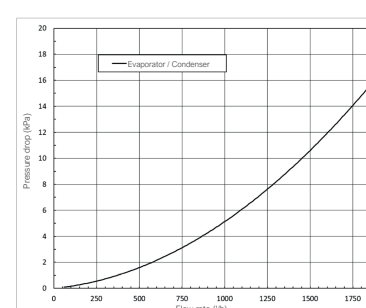
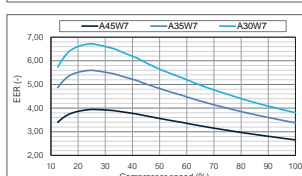
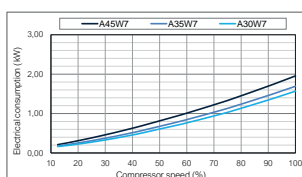
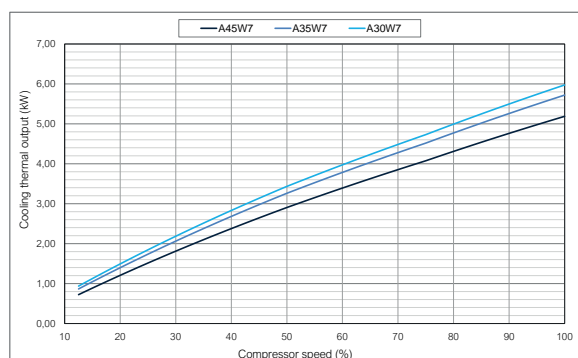
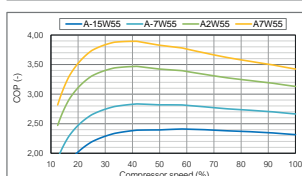
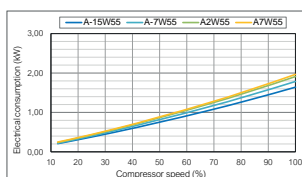
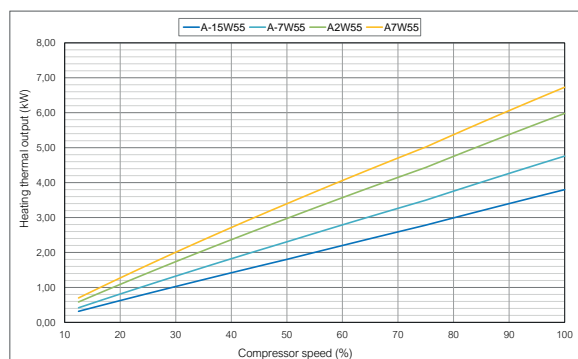
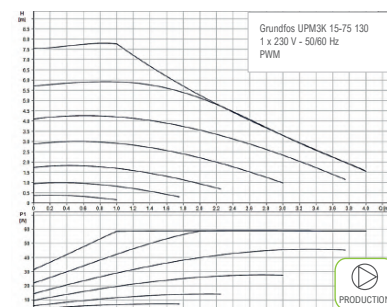
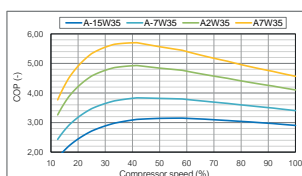
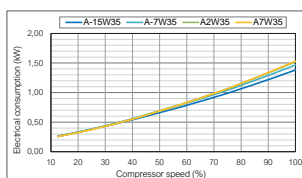
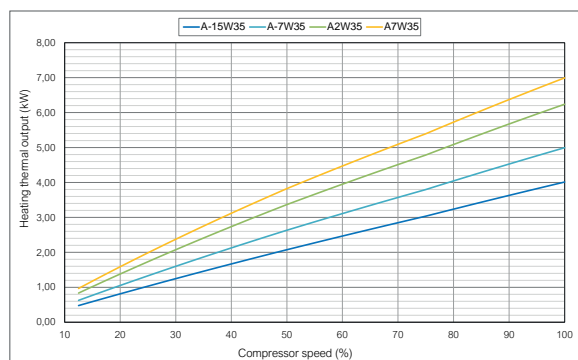
Operational chart



Installation management



Performance curves



ecoAIR 3-12 PRO

R290

- Modulating thermal power control within a wide range (17-100%) and modulating flow rate control of the production circuit (20-100%).
- Natural refrigerant R290 : GWP 3.
- Inverter technology and scroll compressor.
- Compact design including the production circulation pump in the outdoor unit. Hydraulic connection within the outdoor unit and the indoor unit.
- Integrated management of up to 3 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
- Integrated management of simultaneous heating/cooling emission, according to scheme.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
- Integrated active cooling.
- Selection of the indoor unit depending on the installation needs.
- Single-phase and Three-phase versions available.
- Compatible with ecoSMART e-manager and ecoSMART e-system.
- Integrated energy meters to measure the electrical consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.

SPECIFICATIONS ecoAIR 3-12 PRO		UNITS	
APPLICATION	Place of installation	-	Outdoors
	Type of brine system ¹	-	Air source
	DHW, Heating and Pool	-	✓
	Integrated Active cooling	-	✓
PERFORMANCE	Modulation range of the compressor	%	17 to 100
	Heating power output ^{2, 10} , A7W35	kW	3,0 to 11,0
	COP ^{2, 10} , A7W35	-	4,8
	Potencia calefacción ^{2, 10} , A7W55	kW	3,0 to 10,0
	COP ^{2, 10} , A7W55	-	3,0
	Active cooling power output ^{2, 10} , A35W7	kW	1,8 to 9,0
	EER ^{2, 10} , A35W7	-	3,7
	Max. DHW temperature without / with support ⁵	°C	70 / 80
	Noise power emission level ^{6, 10}	db	55
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 218% / 5,35
OPERATION LIMITS	Energy label / rjs / SCOP W55 average climate control	-	A++ / -% / -
	Distribution / Set heating outlet temperature range	°C	10 to 70 / 20 to 70
	Distribution / Set cooling outlet temperature range	°C	5 to 30 / 7 to 30
	Outdoor temperature range	°C	-22 to 50
	Minimum / Maximum refrigerant circuit pressure	bar	0,5 / 27,5
	Production circuit pressure	bar	0,5 to 3,0
WORKING FLUIDS	R290 Refrigerant load	kg	0,85
	Compressor oil type / load	kg	HXL4467 / 0,74
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C5A
	Transformer primary circuit fuse	A	0,5
	Transformer secondary circuit fuse	A	2,5
ELECTRICAL DATA: SINGLE-PHASE	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C25A
	Maximum consumption ² , B0W35	kW / A	2,8 / 13,8
	Consumo máximo ² , B0W55	kW / A	3,5 / 17,7
	Maximum consumption ² , B0W55	A	4,4 / 5,3
	Correction of cosine Ø	-	0,93/1
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C25A
	Maximum consumption ² , B0W35	kW / A	2,8 / 4,6
	Consumo máximo ² , B0W55	kW / A	3,5 / 5,9
	Maximum consumption ² , B0W55	A	1,5 / 1,8
	Correction of cosine Ø	-	0,93/1
DIMENSIONS/WEIGHT	Height x width x depth	mm	970x1140x475
	Empty weight (without assembly)	kg	134

1. Outdoor air-to-water monoblock unit.

2. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

3. Considering brine and production flow rates in compliance with EN 14511.

4. Considering a heat slope from 20°C to 50°C in absence of consumption.

5. Considering support provided by the emergency electrical heater or the HTR system. Maximum DHW temperature with the HTR system can be limited by the compressor discharge temperature.

6. In compliance with EN 12102, this includes the acoustic insulation kit of the compressor.

7. Starting current depends on the working conditions of the hydraulic circuits.

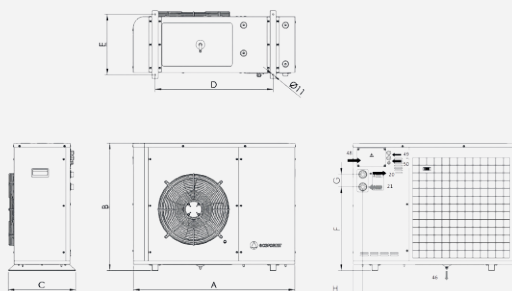
8. The admissible voltage range for proper operation of the heat pump is ±10%.

9. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

Dimensions and hydraulic connections

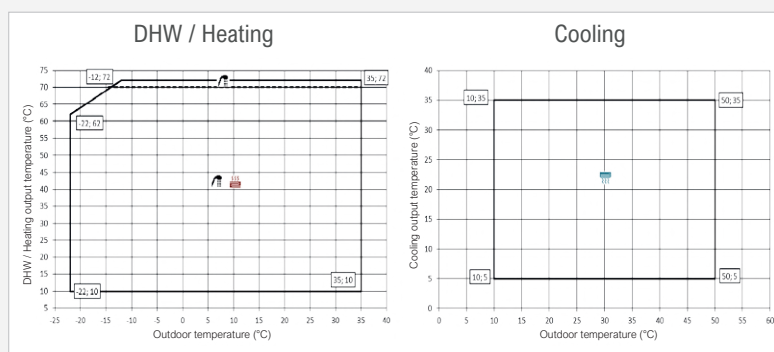
Outdoor unit - ecoAIR



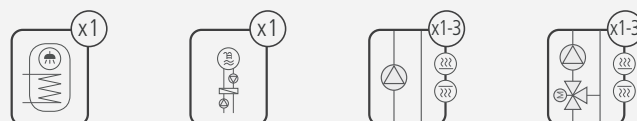
MODEL	DIMENSIONS (mm)							
	A	B	C	D	E	F	G	H
ecoAIR 3-12kW PRO	1140	971	475	800	430	684	80	53

20. Heating/Cooling Outlet - 1" M
 21. Heating/Cooling Inlet - 1" M
 46. Drain - 15 mm
 48. Electrical connections box
 49. Power supply wiring Inlet
 50. Control wiring Inlet

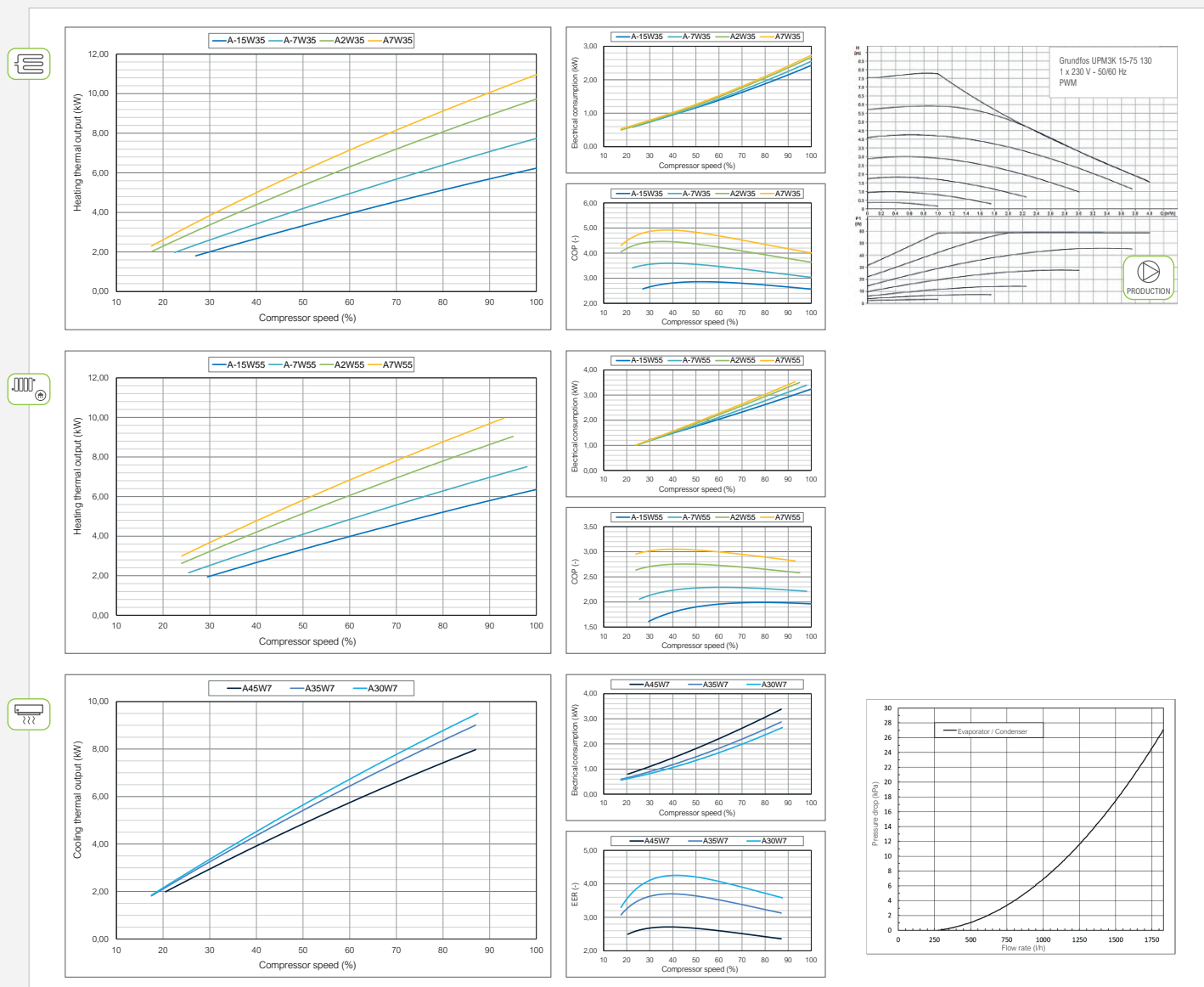
Operational chart



Installation management



Performance curves



ecoAIR EVI

Domestic range

Power ranges

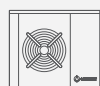
ecoAIR EVI 3-12 kW



ecoAIR EVI 4-20 kW



Monoblock heat pump



Outdoor unit
ecoAIR EVI



Indoor unit
CM / HK



Indoor unit
HK-Compact

Services



DHW



Heating



Cooling



Pool

Indoor units

CM	HK	HK-S	HK-EH	HK-EH-S	HK-Compact-EH	HK-Compact-EH-S
Controller	Controller	Controller	Controller	Controller	Controller	Controller
Display	Display	Display	Display	Display	Display	Display
	Filling kit & filter	Filling kit & filter	Filling kit & filter	Filling kit & filter	Filling kit & filter	Filling kit & filter
	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve	DHW 3-way valve
		Heat exchanger & circulation pump	Support electrical heater	Support electrical heater	Support electrical heater	Support electrical heater
				Heat exchanger & circulation pump	165l stainless steel DHW tank	Heat exchanger & circulation pump
					Expansion vessel & safety valve	165l stainless steel DHW tank
						Expansion vessel & safety valve



Inverter technology

Power ranges: 3-12 kW / 4-20 kW

Unique EVI technology by means of the Flash Tank system allowing to offer the best performances even in the most unfavourable conditions

Hot water production temperatures up to 65°C

Domestic hot water production

Heating and pool production

Integrated active cooling production

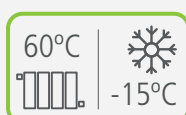
Modulating speed fan

Internet connection through the ecoSMART Easynet

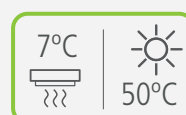
Photovoltaic hybridization through ecoSMART e-manager & e-system energy managers

Single-phase (230V) or three-phase (400V) power supply

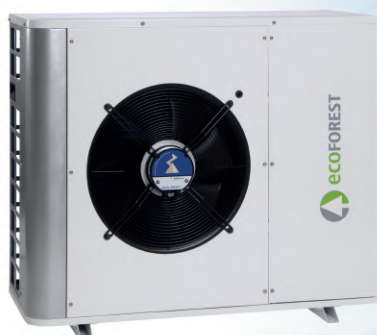
Unique performances



DHW production and Heating



Cooling



Indoor units

CM / HK / HK-Compact

- Indoor hydraulic units to be used in combination with ecoAIR EVI monoblock aérothermal heat pumps.
- CM, HK & HK-Compact: including the electrical box that allows to control the heat pump.
- HK & HK-Compact: including the main hydraulic components of the installation in several combinations.
- HK-Compact: integrating a 165l stainless steel DHW tank.
- Plug&play compact units that make the hydraulic system simpler and the installation easier.
- Single-phase control electrical box.
- Single-phase or Three-phase optional support electrical heater.

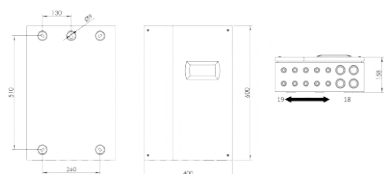
SPECIFICATIONS ecoAIR EVI INDOOR UNITS		UNITS	CM	HK				HK-Compact	
				HK	HK-S	HK-EH	HK-EH-S	HK-Compact-EH	HK-Compact-EH-S
APPLICATION	Place of installation	-		Indoors					
	DHW	-	✓	✓	✓	✓	✓	✓	✓
	Heating and Pool	-	✓	✓	✓	✓	✓	✓	✓
	Cooling	-	✓	✓	✓	✓	✓	✓	✓
INTEGRATED HYDRAULIC COMPONENTS	Filling kit and filter	-	-	✓	✓	✓	✓	✓	✓
	DHW three-way valve	-	-	✓	✓	✓	✓	✓	✓
	Support electrical heater	-	-	-	-	✓	✓	✓	✓
	Separation plate heat exchanger	-	-	-	✓	-	✓	-	✓
	Secondary circuit circulation pump	-	-	-	✓	-	✓	-	✓
	Stainless steel DHW tank	-	-	-	-	-	-	✓	✓
OPERATION LIMITS	Primary / Secondary expansion vessel	-	-	-	-	-	-	✓(12l)	✓(8l) / ✓(12l)
	Production circuit pressure	bar	-	0,5 - 3,0					
	DHW tank volume	l	-	-	-	-	-	165	
	DHW tank maximum pressure	bar	-	-	-	-	-	8,0	
	DHW tank maximum temperature	°C	-	-	-	-	-	80	
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ¹	-		✓					
	Recommended external protection	-		C5A					
	Transformer primary circuit fuse	A		0,5					
	Transformer secondary circuit fuse	A		2,5					
ELECTRICAL DATA: INTEGRATED SUPPORT ELECTRICAL HEATER	Supply: 1/N/PE 230Vac / 50-60 Hz ¹	-	-	-	-	✓			
	Número de elementos	-	-	-	-	1-2-3			
	Recommended external protection 1-2-3	-	-	-	-	C10A-C16A-C20A			
	Maximum power consumption 1-2-3	kW	-	-	-	1,3-2,7-4,0			
	Maximum current consumption 1-2-3	A	-	-	-	6,3-12,6-18,9			
	Supply: 3/N/PE 400Vac / 50-60 Hz ¹	-	-	-	-	✓			
	Recommended external protection	-	-	-	-	C10A			
	Maximum power consumption	kW	-	-	-	4,0			
	Maximum current consumption	A	-	-	-	6,3			
DIMENSIONS/WEIGHT	Correction of cosine Ø	-	-	-	-	0,96/1			
	Height x width x depth	mm	600x400x158	713x525x305				1770x595x678	
	Empty weight (without assembly)	kg	15	37	40	44	47	130	145

1. The admissible voltage range for proper operation of the heat pump is $\pm 10\%$.

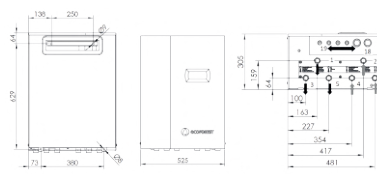
Dimensions and hydraulic connections

Indoor unit - CM / HK / HK-Compact

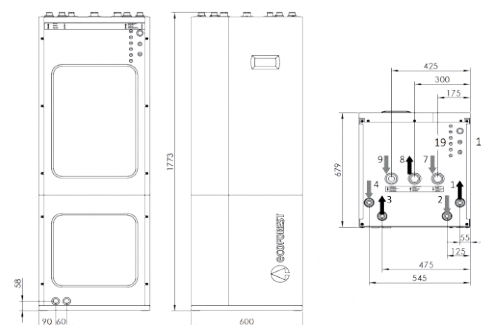
CM



HK



HK-Compact



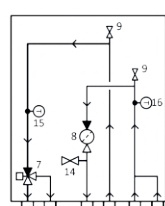
1. Outlet towards ecoAIR outdoor unit - 1" M
2. Inlet from ecoAIR outdoor unit - 1" M
3. Heating/Cooling Outlet - 1" M
4. Heating/Cooling Inlet - 1" M

5. DHW System Outlet - 1" M
6. DHW System Inlet - 1" M
7. DCW Inlet - 1" H
8. DHW Outlet - 1" H

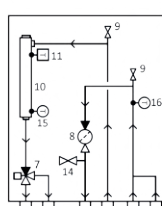
9. DHW Recirculation Inlet - 3/4" H
18. Power supply wiring Inlet
19. Control wiring Inlet

Hydraulic characteristics

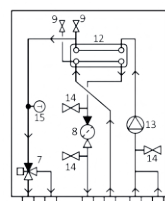
Hydraulic layouts



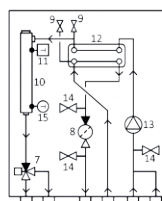
HK



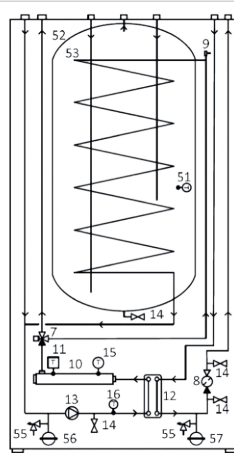
HK-EH



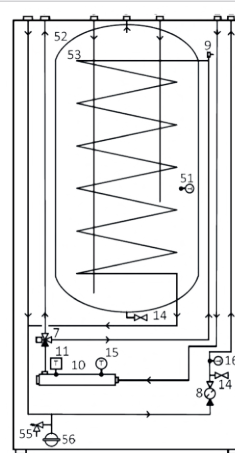
HK-S



HK-EH-S



HK-Compact-EH-S

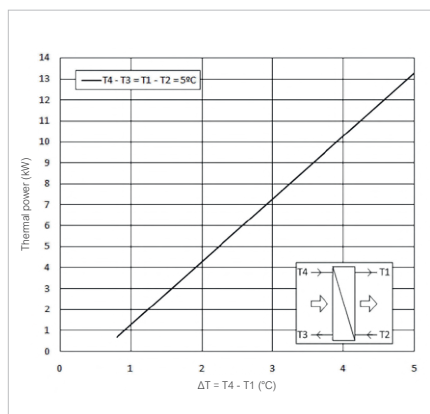


HK-Compact-EH

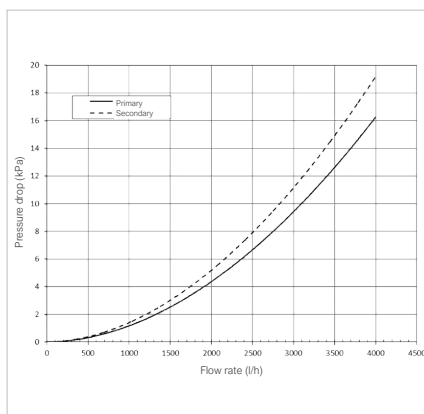
7. DHW three-way valve
8. Filterball
9. Manual air vent
10. Outlet support electrical heater
11. Safety thermostat
12. Separator plate heat exchanger
13. Secondary circuit circulation pump
14. Filling / Emptying valve
52. 165l stainless steel DHW tank
53. Stainless steel tank coil
55. Safety valve
56. 12l expansion vessel
57. 8l expansion vessel

Models including hydraulic separation : HK-S / HK-EH-S / HK-Compact-EH-S

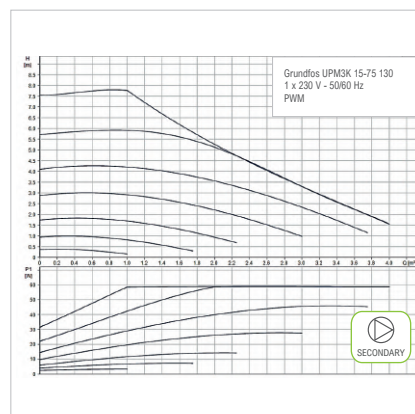
Separation plate heat exchanger
Thermal power



Separation plate heat exchanger
Pressure drop



Secondary circuit circulation pump
Pressure drop, thermal power and flow rate



ecoAIR EVI 3-12

- Modulating thermal power control within a wide range (17-100%) and modulating flow rate control of the production circuit (20-100%).
- EVI technology by means of Flash Tank system.
- Inverter technology and scroll compressor.
- Compact design including the production circulation pump in the outdoor unit. Hydraulic connection within the outdoor unit and the indoor unit.
- Integrated management of up to 3 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
- Integrated management of simultaneous heating/cooling emission, according to scheme.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
- Integrated active cooling.
- Selection of the indoor unit depending on the installation needs.
- Single-phase and Three-phase versions available.
- Compatible with ecoSMART e-manager and ecoSMART e-system.
- Integrated energy meters to measure the electrical consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.

SPECIFICATIONS ecoAIR EVI 3-12		UNITS	
APPLICATION	Place of installation	-	Outdoors
	Type of brine system ¹	-	Air source
	DHW, Heating and Pool	-	✓
	Integrated Active cooling	-	✓
PERFORMANCE	Modulation range of the compressor	%	17 to 100
	Heating power output ² , A7W35	kW	2,0 to 10,5
	COP ² , A7W35	-	4,6
	Potencia calefacción ² , A7W55	kW	4,7 to 10,5
	COP ² , A7W55	-	3,2
	Active cooling power output ² , A35W7	kW	1,8 to 8,8
	EER ² , A35W7	-	3,6
	Max. DHW temperature without / with support ⁵	°C	63 / 70
	Noise power emission level ⁶	db	65
	Energy label / r/s / SCOP W35 average climate control	-	A+++ / 192% / 4,90
OPERATION LIMITS	Energy label / r/s / SCOP W55 average climate control	-	A++ / -% / -
	Distribution / Set heating outlet temperature range	°C	10 to 63 / 20 to 60
	Distribution / Set cooling outlet temperature range	°C	5 to 35 / 7 to 30
	Outdoor temperature range	°C	-15 to 50
	Minimum / Maximum refrigerant circuit pressure	bar	2,0 / 45,0
	Production circuit pressure	bar	0,5 to 3,0
WORKING FLUIDS	R290 Refrigerant load	kg	2,5
	Compressor oil type / load	kg	POE / 1,18
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C5A
	Transformer primary circuit fuse	A	0,5
	Transformer secondary circuit fuse	A	2,5
ELECTRICAL DATA: SINGLE-PHASE	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C32A
	Maximum consumption ² , B0W35	kW / A	2,8 / 12,2
	Consumo máximo ² , B0W55	kW / A	4,1 / 17,8
	Maximum consumption ² , B0W55	A	5,5
	Correction of cosine Ø	-	0,87/1
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C16A
	Maximum consumption ² , B0W35	kW / A	2,8 / 4,1
	Consumo máximo ² , B0W55	kW / A	4,1 / 6,2
	Maximum consumption ² , B0W55	A	1,9
	Correction of cosine Ø	-	0,87/1
DIMENSIONS/WEIGHT	Height x width x depth	mm	970x1140x475
	Empty weight (without assembly)	kg	134

1. Outdoor air-to-water monoblock unit.

2. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

3. Considering brine and production flow rates in compliance with EN 14511.

4. Considering a heat slope from 20°C to 50°C in absence of consumption.

5. Considering support provided by the emergency electrical heater or the HTR system. Maximum DHW temperature with the HTR system can be limited by the compressor discharge temperature.

6. In compliance with EN 12102, this includes the acoustic insulation kit of the compressor.

7. Starting current depends on the working conditions of the hydraulic circuits.

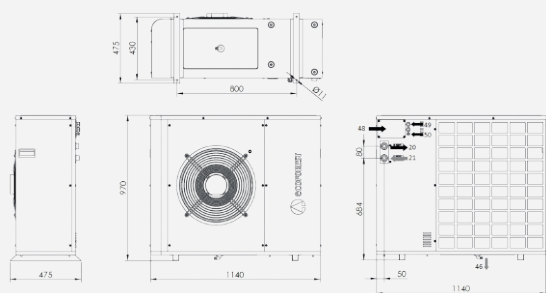
8. The admissible voltage range for proper operation of the heat pump is ±10%.

9. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

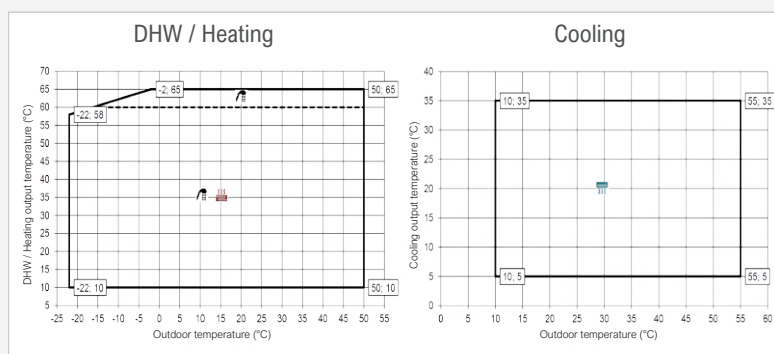
Dimensions and hydraulic connections

Outdoor unit - ecoAIR

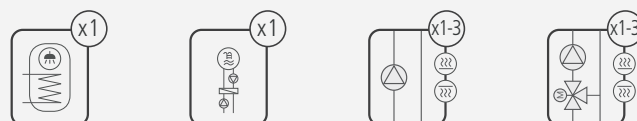


- 20. Heating/Cooling Outlet - 1" M
- 21. Heating/Cooling Inlet - 1" M
- 46. Drain - 15 mm
- 48. Electrical connections box
- 49. Power supply wiring Inlet
- 50. Control wiring Inlet

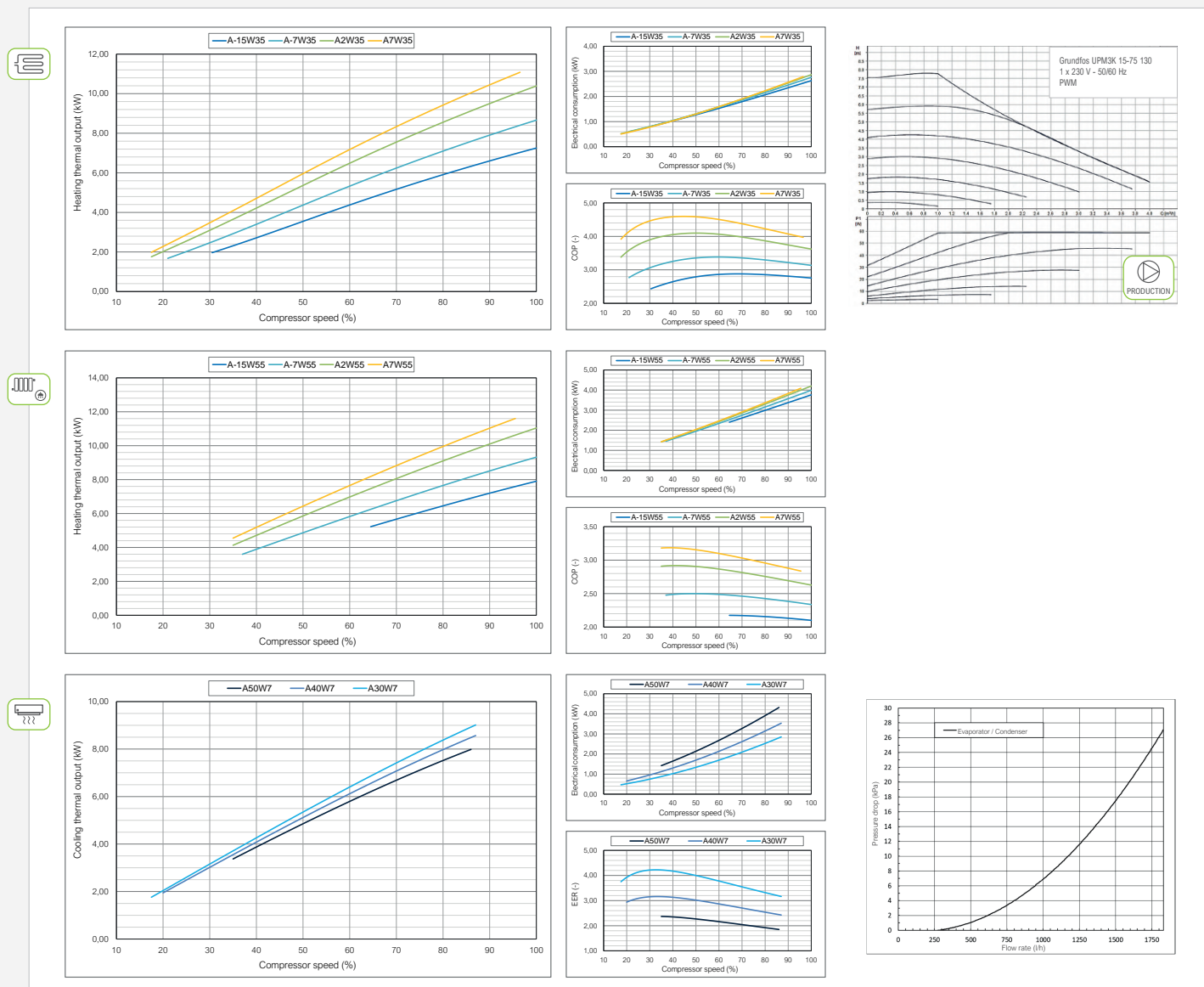
Operational chart



Installation management



Performance curves



ecoAIR EVI 4-20

- Modulating thermal power control within a wide range (17-100%) and modulating flow rate control of the production circuit (20-100%).
- EVI technology by means of Flash Tank system.
- Inverter technology and scroll compressor.
- Compact design including the production circulation pump in the outdoor unit. Hydraulic connection within the outdoor unit and the indoor unit.
- Integrated management of up to 3 different emission temperatures, 2 buffer tanks (heating and cooling), 1 DHW tank, 1 pool and hourly control of DHW recirculation.
- Integrated management of simultaneous heating/cooling emission, according to scheme.
- Integrated management of external On/Off or modulating auxiliary systems, such as electrical heaters, On/Off boilers or modulating boilers.
- Integrated active cooling.
- Selection of the indoor unit depending on the installation needs.
- Single-phase and Three-phase versions available.
- Compatible with ecoSMART e-manager and ecoSMART e-system.
- Integrated energy meters to measure the electrical consumption, the heating/cooling thermal power, the COP and the monthly and annual SPF.

SPECIFICATIONS ecoAIR EVI 4-20		UNITS	
APPLICATION	Place of installation	-	Outdoors
	Type of brine system ¹	-	Air source
	DHW, Heating and Pool	-	✓
	Integrated Active cooling	-	✓
PERFORMANCE	Modulation range of the compressor	%	17 to 100
	Heating power output ² , A7W35	kW	4,4 to 20,5
	COP ² , A7W35	-	5,0
	Potencia calefacción ² , A7W55	kW	8,8 to 20,5
	COP ² , A7W55	-	3,3
	Active cooling power output ² , A35W7	kW	4,0 to 14,8
	EER ² , A35W7	-	3,3
	Max. DHW temperature without / with support ⁵	°C	63 / 70
	Noise power emission level ⁶	db	63
	Energy label / rjs / SCOP W35 average climate control	-	A+++ / 179% / 4,58
OPERATION LIMITS	Energy label / rjs / SCOP W55 average climate control	-	A++ / -% / -
	Distribution / Set heating outlet temperature range	°C	10 to 63 / 20 to 60
	Distribution / Set cooling outlet temperature range	°C	5 to 35 / 7 to 30
	Outdoor temperature range	°C	-15 to 50
	Minimum / Maximum refrigerant circuit pressure	bar	2,0 / 45,0
	Production circuit pressure	bar	0,5 to 3,0
WORKING FLUIDS	R290 Refrigerant load	kg	3,5
	Compressor oil type / load	kg	POE / 1,48
CONTROL ELECTRICAL DATA	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C5A
	Transformer primary circuit fuse	A	0,5
	Transformer secondary circuit fuse	A	2,5
ELECTRICAL DATA: SINGLE-PHASE	1/N/PE 230 V / 50-60 Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C40A
	Maximum consumption ² , B0W35	kW / A	5,3 / 23,0
	Consumo máximo ² , B0W55	kW / A	7,8 / 34,1
	Maximum consumption ² , B0W55	A	10,8
	Correction of cosine Ø	-	0,87/1
ELECTRICAL DATA: THREE-PHASE	3/N/PE 400 V / 50-60Hz ⁸	-	✓
	Maximum recommended external protection ⁹	-	C16A
	Maximum consumption ² , B0W35	kW / A	5,3 / 7,7
	Consumo máximo ² , B0W55	kW / A	7,8 / 11,4
	Maximum consumption ² , B0W55	A	3,6
	Correction of cosine Ø	-	0,87/1
DIMENSIONS/WEIGHT	Height x width x depth	mm	1250x1240x635
	Empty weight (without assembly)	kg	177

1. Outdoor air-to-water monoblock unit.

2. In compliance with EN 14511, this includes the consumption of the circulation pumps and the compressor driver.

3. Considering brine and production flow rates in compliance with EN 14511.

4. Considering a heat slope from 20°C to 50°C in absence of consumption.

5. Considering support provided by the emergency electrical heater or the HTR system. Maximum DHW temperature with the HTR system can be limited by the compressor discharge temperature.

6. In compliance with EN 12102, this includes the acoustic insulation kit of the compressor.

7. Starting current depends on the working conditions of the hydraulic circuits.

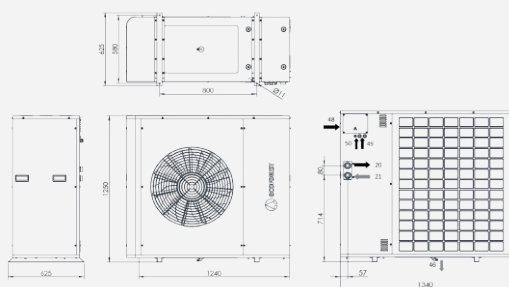
8. The admissible voltage range for proper operation of the heat pump is ±10%.

9. Maximum consumption can vary significantly according to working conditions, or if the compressor's operation range is restricted. Consult the technical service manual for more detailed information.

10. Certification in process.

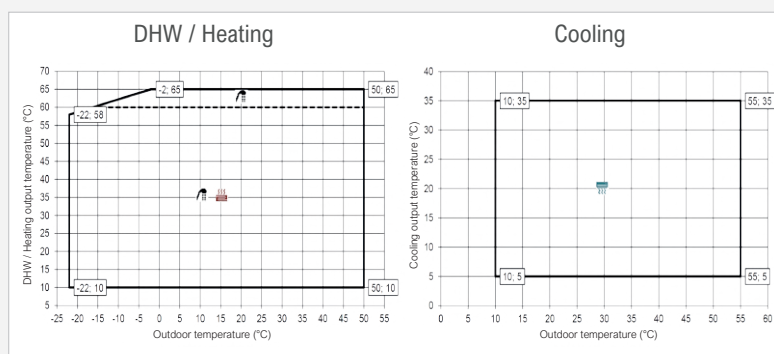
Dimensions and hydraulic connections

Outdoor unit - ecoAIR

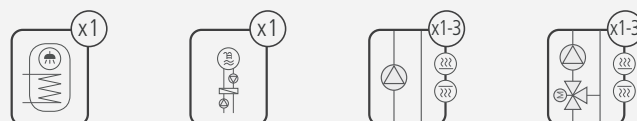


- | | |
|---------------------------------------|--------------------------------|
| 20. Heating/Cooling Outlet - 1 1/4" M | 48. Electrical connections box |
| 21. Heating/Cooling Inlet - 1 1/4" M | 49. Power supply wiring Inlet |
| 46. Drain - 15 mm | 50. Control wiring Inlet |

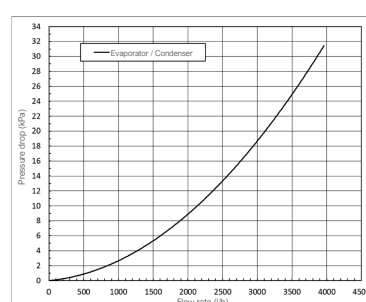
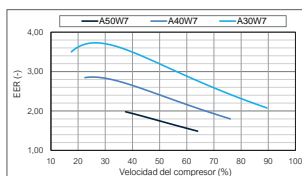
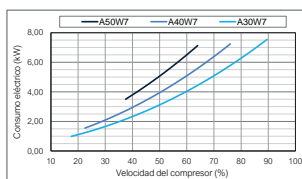
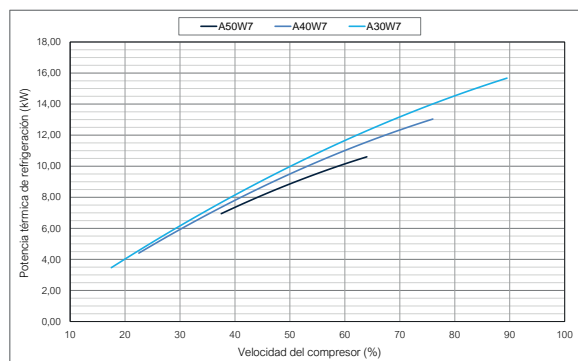
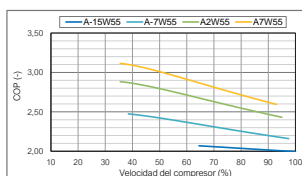
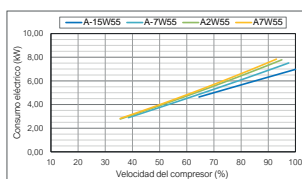
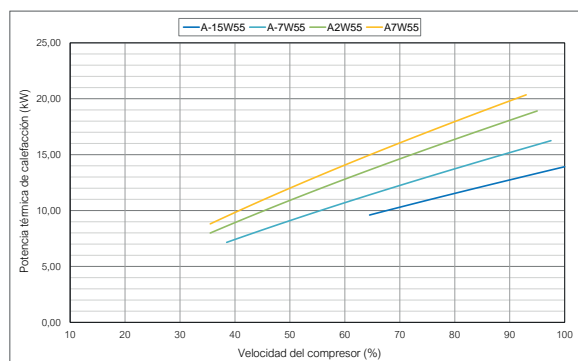
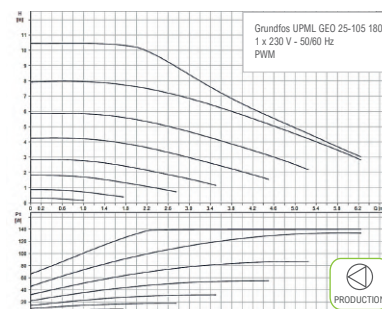
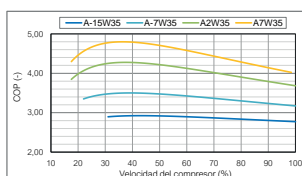
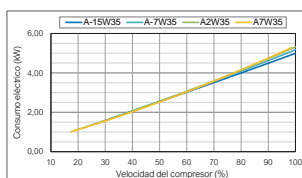
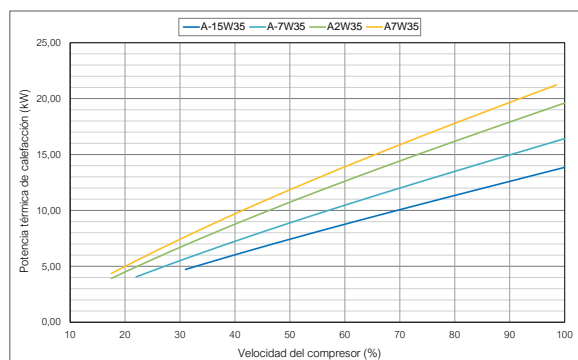
Operational chart



Installation management



Performance curves



Notes

Notes

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