ES AW air-to-water heat pumps with EVI

AW 30, 45 & 90 kW Mono bloc

Economic and effective air-to-water heat pump, designed for a Nordic climate

- High energy efficiency and stable performance. With inverter + EVI technology, it reaches A++ energy level and COP up to 4,5
- Mono bloc design for easy installation.
- Low noise solution with EC fan motor and improved air duct system.
- Supply high water temperature up to 60 °C.
- Cascade control of heat pumps – one operation panel can control up to 16 units.
- Can be connected to ES NordFlex for total control of your energy system.
- Modbus – easy to communicate with BMS for smart building.
- Control via Wi-Fi – easy for service.
- Two mixing circuits control for different temperature zones.
- Heating curve – adjust water temperature based on ambient temperature automatically.
- Run in rotation – when two or more units are connected in the system, every unit runs alternately.
- Smart defrosting in cascade – maximum 1/3 of the units may defrost at the same time, for stable temperature of the whole system.
- Emergency operation – if master unit is off-line, by turning on the emergency switch, each heat pump unit can work individually according to last working settings.

A++

5 years COMPRESSOR WARRANTY

ES ENERGY SAVE

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The heat pump converts energy from the outdoor air to heat and domestic hot water for your warehouse, residential, office or industrial building

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ES ENERGY SAVE

By converting the energy from the outdoor air, you lower your energy cost in an environmentally friendly way at the same time you create the perfect indoor climate. AW-EVI-M series is developed to replace or complete an existing heat source and for new production with demands for higher inlet temperatures.

AW-EVI-M series is developed to give biggest possible energy saving and quiet operation Components from leading manufacturers and smart control enables big energy savings and quiet operation. All AW-EVI-M series are labelled A++.

Top quality defrost – nano-coated outdoor evaporator unit

Large volumes of air circulate thru the outdoor unit and energy is collected from this air. This results in ice forming on the outdoor unit's heat exchanger. With the nano-coating the condensing water drain faster from the outdoor unit.

Complete heat control of your heating system

Connected to ES NordFlex, the heat pumps and your energy system can be controlled locally or remotely via smartphone or computer. On the user-friendly display, you can make all the necessary settings for an effective and problem free operation and at the same time control present status of your system. Even when you are not on site you have total control through smartphone or laptop.

Keep your old boiler

All correctly designed heat pump systems need back up to manage the energy needs during the coldest days of the year. The AW-EVI-M series enables you to keep your current electric, oil, pellet, or wood boiler.

If your present system works – keep it as backup. Under normal circumstances the heat pump capacity should be enough to provide approximately half of the necessary heat on the coldest days.

- T he dockable solution means that the heat pump can be connected to the other heating device, which can deliver the heat demand alone.
- If the heat pump can deliver half of the heat demand on the coldest days, then it is usually capable of fulfilling 80–90% of the heat demand on every day of the year.

			AW 30-EVI-M	AW 45-EVI-M	AW 90-EVI-M
Min/max heating capacity (1)		kW	15,2–28,7	13,7–43,7	27,4–89,6
Min/max input power (1)		kW	3,5–7,5	3,3–12,1	6,7–24,3
COP min/max (1)		W/W	3,83–4,43	3,62–4,42	3,68–4,5
Min/max heating capacity (2)		kW	12,2–29,4	13,6–43,2	28,2–89,5
Min/max input power (2)		kW	3,8–9,0	4,2–14,3	8,2–28,3
COP min/max (2)		W/W	3,26–3,43	2,99–3,38	3,16–3,48
SCOP – Average climate, low temperature (1)		W	4,21	4,18	4,14
Energy class (1)			A++	A++	A++
SCOP – Average climate, high temperature (6)		W	3,31	3,62	3,62
Energy class (6)			A++	A++	A++
Min/max cooling capacity (3)		kW	15,2–26,8	17,7–32,0	36,4–66
Min/max input power (3)		kW	3,3–8,8	3,15–11,6	6,9–23,5
E.E.R min/max (3)			3,06–4,68	2,72–5,09	3,16–3,48
Min/Max cooling capacity (4)		kW	7,3–21,2	11,2–29,9	23,4–61,2
Min/Max input power (4)		kW	3,1–8,0	3,5–11,6	6,9–23,5
E.E.R min./max. (4)		W/W	2,33–2,84	2,6–3,3	2,6–3,4
Min/Max ambient working temperature in heating mode		°C	-30–55°	-30°–55°	-30°–55°
Min/Max ambient working temperature in cooling mode		°C	15°–55°	15°–55°	15°–55°
Max flow temperature in heating mode		°C	60°	60°	60°
Min flow temperature in heating mode		°C	20°	20°	20°
Min flow temperature in cooling mode		°C	7°	7°	7°
Sound power level LwA – Average climate, low temperature (1)	Outdoor	dB (A)	66	71	74
Sound power level LwA – Average climate, high temperature (6)	Outdoor	dB (A)	71	72	75
Fan	Quantity	pcs	2	1	2
	Airflow	m^3/h	5 250 x 2	13 500	13 500 x 2
	Rated power	W	93 x 2	800	800 x 2
	Blade diameter	mm	552 x 2	760	760 x 2
Plate heat exchanger	Water press. drop	kPa	60	80	100
	Pipe connection	inch	1 1/2" female	2" female	DN65 Flange
Refrigerant	Type		R410A	R410A	R410A
	Charge	kg	5,2	8	8 x 2
	GWP	Co_2/kg	2088	2088	2088

(1) Heating conditions: water inlet/outlet temperature in/out: 30°C/35°C, Ambient temperature: DB 7°C /WB 6°C

(2) Heating conditions: water inlet/outlet temperature in/out: 40°C/45°C, Ambient temperature: DB 7°C /WB 6°C

(3) Cooling conditions: water inlet/outlet temperature in/out: 23°C/18°C, Ambient temperature: DB 35°C /24°C

(4) Cooling conditions: water inlet/outlet temperature in/out: 12°C/7°C, Ambient temperature: DB 35°C /24°C

(5) A part of Mitsubishi Group

(6) Heating conditions: water inlet/outlet temperature in/ out: 50°C/55°C, Ambient temperature: DB 7°C /WB 6°C

	t CO_2 Equiv		10,9	16,7	33,4
Compressor	Manufacturer		Panasonic, twin rotary	SIAM (5)	SIAM (5)
	Type		Inverter + EVI	Inverter + EVI	Inverter + EVI
Power supply – Outdoor unit		V/Ph/Hz	400V/3N/50	400V/3N/50	400V/3N/50
Fuse Outdoor unit		A	3p/25A/C	3p/40A/C	3p/80A/C
Electrical compressor heater		W	30	30	30 x 2
Nominal water flow		m^3/h	5,2	8	16
Hydraulic connections		inch	1 $^1/_2$" female	2" female	DN65 Flange
Flow switch			Yes	Yes	Yes
Net dimensions (L x D x H)	Outdoor unit	mm	1295 x 455 x 1447	1010 x 1158 x 1645	2158 x 1158 x 1645
	Indoor unit	mm	389 x 476 x 165	389 x 476 x 165	389 x 476 x 165
Packaging dimensions (L x D x H)	Outdoor unit	mm	1325 x 475 x 1580	1110 x 1260 x 1865	2180 x 1220 x 1865
	Indoor unit	mm	400 x 490 x 180	400 x 490 x 180	400 x 490 x 180
Net weight	Outdoor unit	kg	191	330	682
	Indoor unit	kg	9	9	9
Packaging weight	Outdoor unit	kg	215	390	717
	Indoor unit	kg	10	10	10
Article number	Outdoor unit		120314	120300	120307
	Indoor unit	AWC30-4590-EVI-M	120301	120301	120301