DEVELOPED IN SWEDEN

ES Air-to-Water Heat Pump

ES M40 R290

Monobloc

The heat pump converts energy from the outdoor air to heat and domestic hot water for your warehouse, residential, office or industrial building
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. The ES M R290 residential and commercial series is developed to replace or complete an existing heat source and for new production with demands for higher inlet temperatures.

ES M R290 series is developed to provide the biggest possible energy saving and quiet operation
Components from leading manufacturers and smart control enables big energy savings and quiet operation. All ES M R290 models have an A+++ rating.

Top quality defrost – nano-coated outdoor evaporator unit
Large volumes of air circulate through 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 drains faster from the outdoor unit. When multiple outdoor units are installed, defrosting in cascade is possible, minimizing power losses.

Complete heat control of your heating system
Connected to the ES NordFlex Controller, the heat pumps and your energy system can be controlled locally or remotely via ES Cloud. 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 via remote access.

Keep your old boiler
All correctly designed heat pump systems need backup to manage the energy needs during the coldest days of the year. The ES M R290 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.

- The dockable solution means that the heat pump can be connected to the other heating device, which can fulfill 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 annual energy demand.

SG Ready · MCS CERTIFIED · KEYMARK certificate · A+++ · 5 years COMPRESSOR WARRANTY · >dB Low noise · R290 · ES CLOUD

ES ENERGY SAVE

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Swedish Ingenuity

- Designed in Sweden
- Economic and effective air-to-water heat pump, designed for a Nordic climate
- Monobloc, no F-gas certification required
- Components from leading brands
- Environmentally friendly R290 refrigerant with low GWP (3)
- Cascade control of heat pumps – one operation panel can control up to 16 units
- SG Ready
- KEYMARK and MCS certified

Comfortable and Efficient

- High energy efficiency and stable performance, reaches A+++ rating
- COP up to 4.6 and SCOP of 4.86
- Low noise solution at 62 dB
- Supply high water temperature up to 70 °C
- Four mixing circuit zone contol for different temperature zones
- Heating/cooling curve control – automatically adjusted water temperature based on ambient temperature
- Enabling heating, cooling and DHW at the same time

E-Readiness

- Internet connection via LAN cable
- Fleet management system for control and support via ES Cloud
- Integration made easy – connect to BMS or integrated with all kinds of additional heating sources
- Electrical Grid Protection (EGP) functionality
- Smart defrosting in cascade

ES NordFlex Controller		
Article number		120233
IP rating		IP 43
Power supply		
Indoor unit	V/Hz	230 / 50
Rated power	W	1380
Fuse size	A/type	6/1 P included 10/1P for external el. box
Communication		Modbus RTU/TCP
Key components		
User interface		7" touch screen
Dimensions and packaging		
Net dimensions (L × W × H)	mm	400 × 200 × 400
Net weight	kg	11.80
Packaging dimensions (L × W × H)	mm	500 × 250 × 500
Gross weight	kg	12.16

ES M40 R290

Article number		120722
IP rating		IPX4
SEER min/max	W	3.92 / 5.70
Average climate, 35 °C[1]		
ErP energy efficiency class		A+++
SCOP		4.86
Seasonal space heating efficiency	%	192
Average climate, 55 °C[2]		
ErP energy efficiency class		A++
SCOP		3.72
Seasonal space heating efficiency	%	146
Heating mode (A7/W35)[3]		
Min/max heating capacity	kW	12.7–38.6
Min/max input power	kW	2.8–12.3
COP min/max	W/W	3.15 / 4.58
Heating mode (A7/W45)[4]		
Min/max heating capacity	kW	11.9–38.2
Min/max input power	kW	3.3–12.8
COP min/max	W/W	2.9 / 3.6
Heating mode (A7/W55)[5]		
Min/max heating capacity	kW	7.5–37.5
Min/max input power	kW	4.3–9.7
COP min/max	W/W	1.77 / 2.05
Cooling mode (A35/W18)[6]		
Min/max cooling capacity	kW	12.1–34.2
Min/max input power	kW	2.8–9.1
EER	W/W	3.75 / 4.32
Cooling mode (A35/W7)[7]		
Min/max cooling capacity	kW	4.5–25.1
Min/max input power	kW	2.9–9.4
EER	W/W	1.56 / 2.67
Temperature & flow specifications		
Min/max ambient working temperature in heating mode	°C	-25–43
Min/max ambient working temperature in cooling mode	°C	15–43
Max flow temperature in heating mode	°C	70
Min flow temperature in heating mode	°C	20
Min flow temperature in cooling mode	°C	7
Nominal water flow (heating mode)	m³/h – l/m	6.88–114.7

Power supply			
Outdoor unit		V/ph/Hz	380 / 3 / 50
Fuse outdoor unit		A/type	40/3P
Electric shock class			I
Refrigerant specifications			
Type			R290
Charge		kg	4.2
GWP		C O_2/kg	3
Type of piping connection heating / cooling water outlet			G2"
Type of piping connection heating / cooling water inlet			G2"
Type of piping connection for the check valve			G2"
Sound power level			
Sound power level LwA, 35 °C		dB(A)	60
Sound power level LwA, 55 °C		dB(A)	62
Sound power level at a distance	1 m	dB(A)	54
	5 m	dB(A)	40
	10 m	dB(A)	34
	15 m	dB(A)	30
Key components			
Plate heat exchanger			
Manufacturer			Danfoss
Water pressure drop		kPa	100
Fan			
Quantity		pcs	1
Airflow		m³/h	13 000
Rated power		W	1100
Blade diameter		mm	760
Compressor			
Manufacturer			Copeland
Type			Scroll
Flow switch			Included in OU
Safety valve water side		bar	Included in OU, max pressure 3 bar
Dimensions and packaging			
Net dimensions (L x W x H)		mm	1170 x 970 x 1620
Net weight		kg	366
Packaging dimensions (L x W x H)		mm	1300 x 1100 x 1835
Gross weight		kg	434

All data is subject to change without prior notice. We disclaim any liability for potential printing errors or inaccuracies.

1 According to EN 14825. **2** According to EN 14825. **3** Water inlet/outlet temperature: 30 °C / 35 °C; ambient temperature: DB 7 °C / WB 6 °C. **4** Water inlet/outlet temperature: 40 °C / 45 °C; ambient temperature: DB 7 °C / WB 6 °C. **5** Water inlet/outlet temperature: 50 °C / 55 °C; ambient temperature: DB 7 °C / WB 6 °C. **6** Water inlet/outlet temperature: 23 °C / 18 °C; ambient temperature: DB 35 °C / WB 34 °C. **7** Water inlet/outlet temperature: 12 °C / 7 °C; ambient temperature: DB 35 °C / WB 34 °C.

With reservation for any printing errors

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