Northmark Climate

INSTALLATION MANUAL

AirSource 9 Installation Manual

Air-to-water heat pump for homes from 80 to 220 m²

Document NM-AS9-IM · Edition 4

For qualified installers

Before you start

This manual covers the outdoor unit, the indoor hydraulic module and the controller of the AirSource 9 air-to-water heat pump. Read every section before installation. Keep the manual with the appliance so the owner and future service engineers can refer to it.

The AirSource 9 delivers up to 9 kW of heating at an outdoor temperature of minus 7 °C and flow temperatures up to 65 °C. It is designed for underfloor heating, radiators sized for low temperature operation, and domestic hot water cylinders of 150 to 300 litres.

What is in the box

- Outdoor unit with factory-charged R290 refrigerant circuit
- Indoor hydraulic module with circulation pump, expansion vessel and safety group
- Wall controller with room sensor and 15 m cable
- Anti-vibration feet, flexible hoses, filter ball valve and this manual

Tools and materials

You will need a torque wrench, a digital manometer, a magnetic dirt separator, insulated pipe for the flow and return lines, and a dedicated 20 A circuit with a type B residual current device.

SAFETY
R290 is a flammable refrigerant. Keep ignition sources at least 1 metre away from the outdoor unit during installation and service. Never braze on the refrigerant circuit.

Choosing the location

Place the outdoor unit on a level, load-bearing base with at least 300 mm of clearance behind and 1,000 mm in front of the fan grille. Avoid corners where cold air can recirculate, and keep the unit at least 500 mm from windows of bedrooms to limit noise.

Clearance	Minimum	Recommended
Rear wall	300 mm	500 mm
Front of fan	1,000 mm	1,500 mm
Left and right	300 mm	600 mm
Above unit	600 mm	1,000 mm

In areas with heavy snowfall, raise the unit on a wall bracket or ground stand at least 300 mm above the expected snow line. Leave a free path for defrost water so it cannot freeze on paths or driveways.

Mounting the outdoor unit

Fit the four anti-vibration feet and fix the unit to the base with M10 anchors. Check that the unit is level in both directions; a slope of more than 2 degrees can affect the drainage of the evaporator.

Tighten the anchor bolts in a cross pattern. Use the torque sequence printed on the base frame label: front left, rear right, front right, rear left, each to 25 Nm. Repeat the sequence once more after the unit has settled for 24 hours.

Condensate drainage

During defrost the AirSource 9 can release up to 40 litres of water per day. Connect the condensate trap supplied with the unit and run the drain to a soakaway or gully. In cold climates, fit the optional trace heater so the drain cannot freeze.

Hydraulic connection

Connect the flow and return between the outdoor unit and the indoor module using 28 mm pipe or the supplied flexible hoses. Insulate the full length with at least 19 mm of closed-cell insulation and protect outdoor sections from UV light.

- Fit the filter ball valve on the return to the outdoor unit.
- Install a magnetic dirt separator on the system return.
- Fill to 1.5 bar cold pressure and vent every high point.
- Flush the system before connecting to existing radiators.

Pipe size	Max. length one way	Pressure drop
22 mm	10 m	18 kPa
28 mm	20 m	11 kPa
35 mm	30 m	6 kPa

Electrical wiring

The outdoor unit needs a dedicated supply of 230 V, 50 Hz, protected by a 20 A type C circuit breaker and a type B residual current device. Use 3 × 4 mm² cable for runs up to 25 metres.

Run the controller cable separately from mains cables. Connect the room sensor to terminals S1 and S2 and the hot water cylinder sensor to terminals T3 and T4. The communication cable between the indoor module and the outdoor unit uses terminals A, B and GND.

> **TIP**
> Label every cable at both ends before you close the terminal covers. It saves time at the first service visit.

Commissioning

Switch on the supply and wait for the controller to finish its self-test. Choose the installation wizard, select the emitter type and enter the design outdoor temperature for the site. The wizard sets a weather compensation curve that you can fine-tune later.

- Run the venting programme for at least 20 minutes.
- Check the flow rate on the controller: at least 18 litres per minute.
- Confirm that the defrost cycle starts and ends without error codes.
- Record the commissioning values on the warranty card.

Hand the controller over to the owner and show them the holiday mode, the hot water boost and how to read the energy meter. Register the installation within 30 days to activate the seven-year parts warranty.