

AH AHD AHDS

Air to water heat pump

AH 290 / AHD 290 / AHDS 290



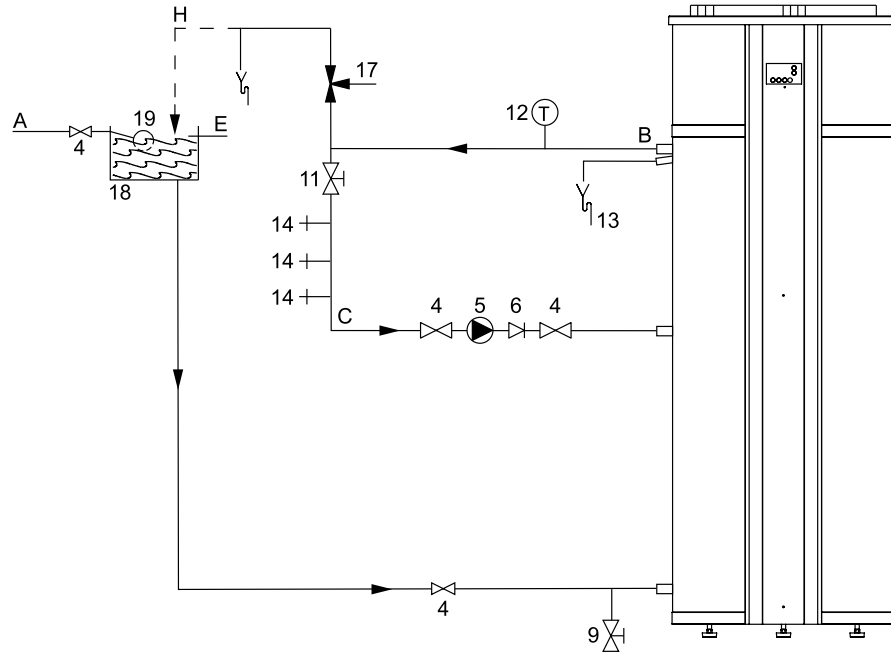
Air to water heatpump • Storage capacity 285 liter • Very high COP of 3,2 / 3,5 • Suitable for air temperatures between -5°C - 35°C (depending on the model) • Plug-and-play installation • Easy and user friendly control • Water temperature with the heat pump up to 55°C • Additional electric element of 1,5 kW standard • Water temperature with additional electric element up to 65°C • Very silent operation • AH 290 basic version with air intake and air outlet indoors • AHD 290 with air intake and air outlet from outside the building and defrost function • AHDS 290 with additional integrated solar heat exchanger for thermal solar applications

Technical specifications

| | | AH 290 | AHD 290 | AHDS 290 |
|--|-------------------|---------------------------|----------|----------|
| Functioning parameters | | | | |
| Minimum air temperature | °C | 8 | -5 | - |
| Maximum air temperature | °C | 35 | 35 | - |
| Air flow per hour | m ³ /h | 200 | 250 | - |
| Electrical data | | | | |
| Main electric connection | VAC/Hz | 230(-15%/+10%)/50 (± 1Hz) | | |
| Motor | | AC | AC | - |
| Power consumption | W | 628 | 628 | - |
| Electric connection | A | 10 | 10 | - |
| COP | - | 3,2 | 3,5 | - |
| Power consumption electric element | kW | 1,5 | 1,5 | - |
| General/Cooling info | | | | |
| Heat capacity | kW | 1,96 | 1,52 | - |
| Refrigerant | | R 134 a | R 134 a | - |
| Refrigerant filling | kg | 1,0 | 1,0 | - |
| Maximum working pressure tank | kPa(bar) | 1000(10) | 1000(10) | - |
| Sound level (1 meter in front of the unit) | dB | 50 | 50 | - |
| Anodes | - | 1 | 1 | - |
| Draw-off capacity | | | | |
| Storage capacity | l | 285 | 285 | - |
| Maximum temperature setting heat pump | °C | 55 | 55 | - |
| Maximum temperature setting heat pump + electric element | °C | 65 | 65 | - |
| T_{cold} = 10°C / T_{set} = 55°C (Heat pump function only) | | | | |
| 30 min ΔT = 28 °C | l | 394 | 394 | - |
| 60 min ΔT = 28 °C | l | 424 | 424 | - |
| 90 min ΔT = 28 °C | l | 454 | 454 | - |
| 120 min ΔT = 28 °C | l | 484 | 484 | - |
| Continuous ΔT = 28 °C | l/h | 60 | 47 | - |
| Heating-up time ΔT= 28°C | min | 284 | 366 | - |
| T_{cold} = 10°C / T_{set} = 55°C (Heat pump function only) | | | | |
| 30 min ΔT = 45 °C | l | 245 | 245 | - |
| 60 min ΔT = 45 °C | l | 264 | 264 | - |
| 90 min ΔT = 45 °C | l | 282 | 282 | - |
| 120 min ΔT = 45 °C | l | 301 | 301 | - |
| Continuous ΔT = 45 °C | l/h | 37 | 29 | - |
| Heating-up time ΔT= 45°C | min | 457 | 589 | - |
| T_{cold} = 10°C / T_{set} = 65°C (Heat pump + electric element) | | | | |
| 30 min ΔT = 55 °C | l | 252 | 252 | - |
| 60 min ΔT = 55 °C | l | 279 | 279 | - |
| 90 min Δ = 55°C | l | 306 | 306 | - |
| 120 min ΔT = 55 °C | l | 333 | 333 | - |
| Continuous ΔT = 55°C | l/h | 54 | 47 | - |
| Heating-up time ΔT= 55°C | min | 391 | 429 | - |
| Shipping data | | | | |
| Empty weight | kg | 105 | 105 | - |
| Weight including packaging | kg | 117 | 117 | - |
| Maximum weight | kg | 390 | 390 | - |
| Width packaging | mm | 700 | 700 | - |
| Height packaging | mm | 1945 | 1945 | - |
| Depth packaging | mm | 770 | 770 | - |

Installation diagrams

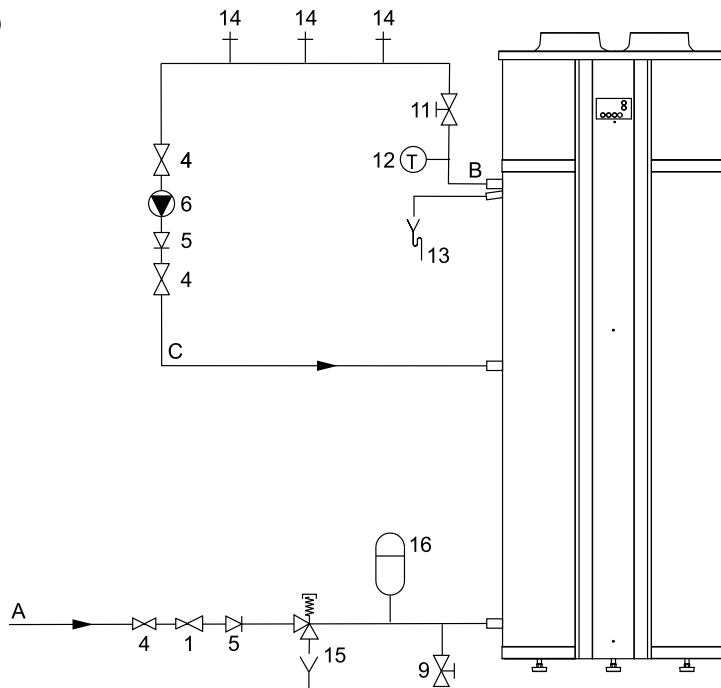
Vented (AH)



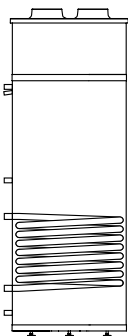
- A Cold water
- B Hot water
- C Return circulation

- 1 Pressure reducing valve
- 4 Stop valve
- 5 Non return valve
- 6 Circulation pump
- 9 Drain valve
- 11 Service valve
- 12 Temperature meter
- 13 Condensate drain
- 14 Hot water tap
- 15 Expansion valve
- 16 Expansion vessel
- 17 Three-way valve
- 18 Water cistern
- 19 Float valve

Unvented (AHD)



Vented (AHDS)

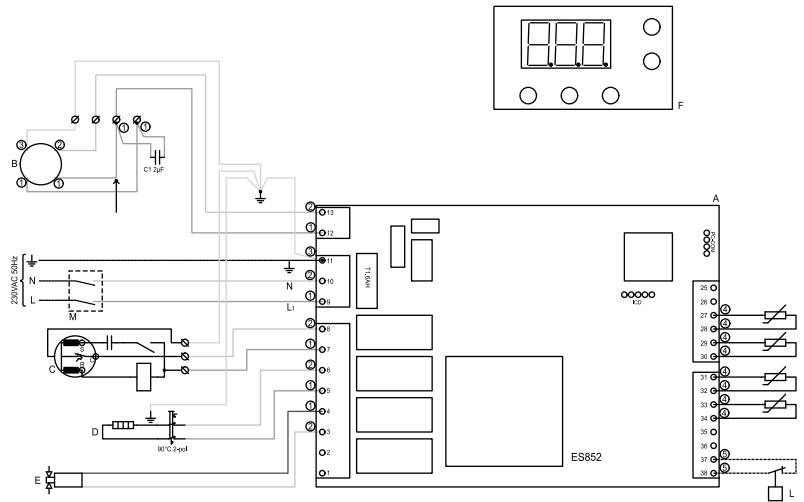


At this moment the AHDS for solar applications is being fine-tuned by our Engineering Department. For more information, please contact our Technical Support Group.



AH(D)(DS)

Electrical diagrams



Colour code cables
 ① = brown
 ② = blue
 ③ = yellow/green
 ④ = black
 ⑤ = white

COMPONENTS

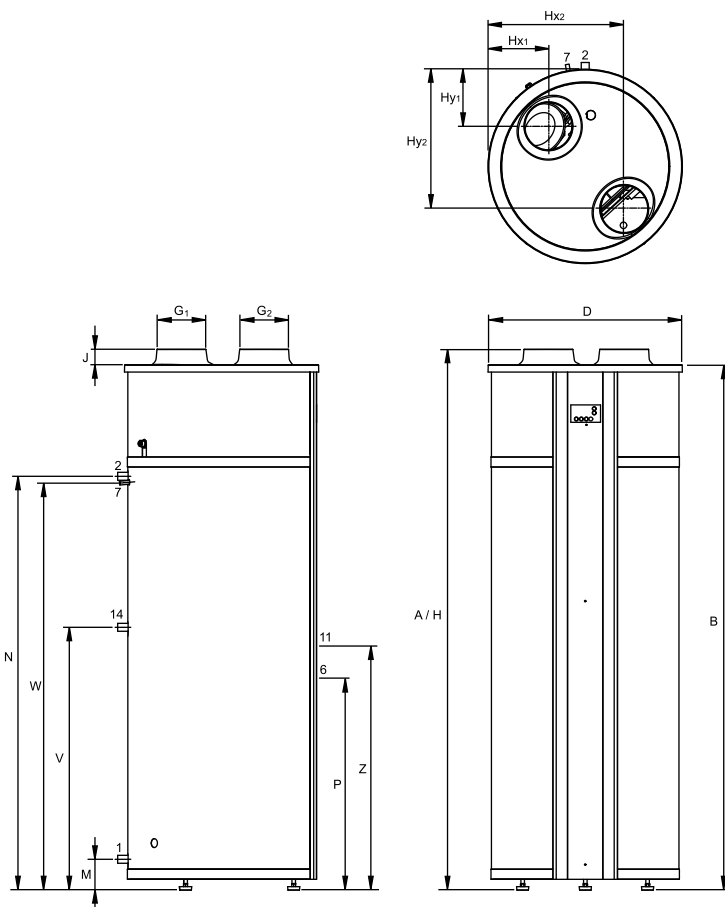
- A Controller
- B Fan
- C Compressor
- D Electric element
- E Magnet valve (short or long circuit)
- F Display (integrated in the control)
- G Temperature sensor (T5 - solar coil)
- H Temperature sensor (T6 - solar coil)
- J Temperature sensor (T7 top of the tank)
- K Temperature sensor (T8 bottom of the tank)
- L High pressure switch
- M Double pole mains switch

CONNECTIONS SOLAR CONTROLLER

| | | |
|----|----------------|--|
| 1 | - | - |
| 2 | - | - |
| 3 | N | Magnet valve |
| 4 | L | (short or long circuit) |
| 5 | L | Electric element |
| 6 | N | |
| 7 | L | Compressor |
| 8 | N | |
| 9 | L ₁ | |
| 10 | N | Power supply |
| 11 | ⏏ | |
| 12 | L | Fan |
| 13 | N | |
| 25 | - | - |
| 26 | - | - |
| 27 | - | Temperature sensor (T5 - solar coil) |
| 28 | - | - |
| 29 | - | Temperature sensor (T6 - solar coil) |
| 30 | - | - |
| 31 | - | Temperature sensor (T7 top of the tank) |
| 32 | - | - |
| 33 | - | Temperature sensor (T8 bottom of the tank) |
| 34 | - | - |
| 35 | - | - |
| 36 | - | - |
| 37 | - | - |
| 38 | - | High pressure switch |

AH(D)(DS)

Dimensions



| | AH 290 | AHD 290 |
|-----------------|--------------------|---------|
| A | 1815 | 1840 |
| B | 1790 | 1800 |
| D | 660 | 660 |
| G ₁ | - | 160 |
| G ₂ | - | 160 |
| H | 1815 | 1840 |
| Hx ₁ | - | 190 |
| Hx ₂ | - | 480 |
| Hy ₁ | - | 200 |
| Hy ₂ | - | 470 |
| J | 60 | 55 |
| M | 110 | 110 |
| N | 1410 | 1410 |
| P | 650 | 650 |
| V | 900 | 900 |
| W | 1345 | 1345 |
| Z | 860 | 860 |
| 1 | Cold water | R ¾" |
| 2 | Hot water | R ¾" |
| 6 | Inspection opening | Ø 110 |
| 7 | Condense drain | Ø 12 |
| 11 | Electric element | G 1½" |
| 14 | Return circulation | R ¾" |

Dimensions in mm.

Data subject to change UK/0810/AH/02
 Terms and conditions apply, please refer to our website.