SE-AH … S SERIES · DOMESTIC SPLIT

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# SE-AH-7|500S

Split heat pump water heater: the compressor and fan stand outdoors, the 500 L enamel-lined cylinder indoors, and only refrigerant passes between them. Hot water to 55 °C on the heat pump, 75 °C with the heater. R134a, single-phase.

HEATING CAPACITY
**7.2** kW
Rated, heat pump

COP
**4.11**
Rated

STORAGE
**500** L
Enamelled steel cylinder

HOT WATER OUTPUT
**154.8** L/h
15 → 55 °C, heat pump alone

## Performance
Rated figures, and what they mean in litres

| **Rated duty** heat pump mode | |
|---|---|
| Heating capacity | **7,200** W |
| Input power | **1,750** W |
| COP | **4.11** |

| **Hot water** derived | |
|---|---|
| Output, 15 → 55 °C | **154.8** L/h |
| Full tank, 15 → 55 °C | **≈ 3.2** h |
| Temperature rise | **40** K |

| **Maximum** for the electrician | |
|---|---|
| Max input power | **2,600** W |
| Max current | **12** A |
| Back-up heater | **2** kW |

## Technical specifications
SE-AH-7|500S

| OUTDOOR UNIT | | |
|---|---|---|
| Heating capacity | W | **7,200** |
| Rated input power | W | **1,750** |
| COP | | **4.11** |
| Maximum input power | W | **2,600** |
| Maximum current | A | **12** |
| Power supply | | **220 V / 1 Ph / 50 Hz** |
| Refrigerant | | **R134a** |
| Compressor | | **Highly, rotary** |
| Noise level | dB(A) | **55** |
| Ingress protection | | **IPX4** |
| Ambient operating range | °C | **−5 to 43** |
| Dimensions (L × W × H) | mm | **800 × 300 × 540** |
| Weight | kg | **48** |

| CYLINDER | | |
|---|---|---|
| Storage volume | L | **500** |
| Shell | mm | **2.5 enamelling-grade steel** |
| Lining | | **Glass enamel, 0.3–0.5 mm** |
| Heat exchanger | | **Micro-channel, outside the tank** |
| Electric back-up heater | kW | **2** |
| Rated working pressure | MPa | **0.7** |
| Inlet / outlet / drain | | **DN 20** |
| Insulation (polyurethane) | mm | **50** |
| Standing loss, 24 h | K | **< 6** |
| Size (ø × H) | mm | **700 × 1940** |
| Weight, empty | kg | **130** |
| Fittings | | **Mg anode, relief valve** |
| Water temperature | °C | **55 HP · 75 heater** |

### RATED FIGURES

Heating capacity, input power and COP are the manufacturer's rated figures; the source does not name the ambient they were measured at, so they are published as **rated values**. Ask us before sizing to a cold-weather duty.

**Derived:** hot water output is for a 40 K rise (15 → 55 °C) — heating capacity × 0.86 ÷ output gives exactly 40 K. Full-tank time = volume ÷ output.

### INSTALLATION REQUIREMENT

Dedicated single-phase supply on its own MCB, sized by a licensed electrician for the **12 A** maximum current, plus the **2 kW** heater if it is wired to the same circuit.
**3 m copper interconnecting pipe** is supplied; tell us before ordering if the run or the height difference is longer.
Fit the **pressure relief valve** supplied and pipe its discharge to a drain.

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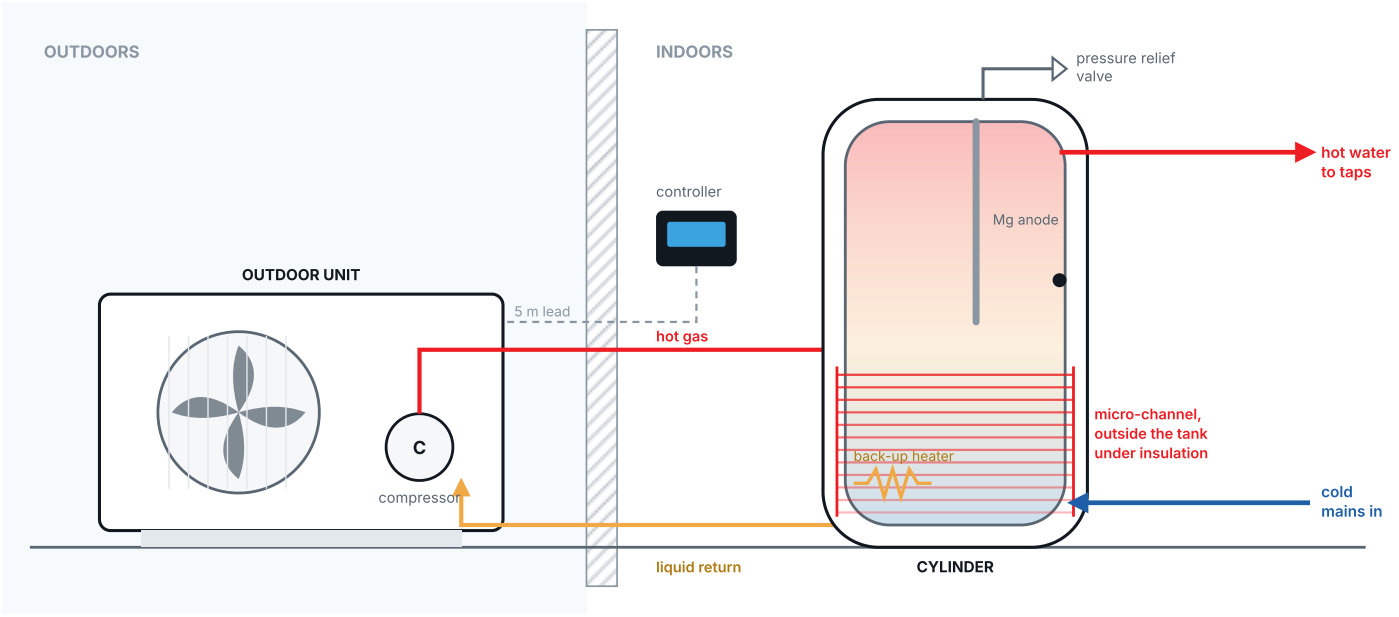
Specifications are subject to change without prior notice.

## Site installation schematic

Outdoor unit outside, cylinder inside — only refrigerant crosses the wall




Hot gas / hot water · Liquid refrigerant return · Cold mains water · Controller lead

**1 Outdoors, heat from the air**
The fan draws outdoor air over the coil; the refrigerant picks up its heat even on a cool morning.

**2 Compressed and sent in**
The compressor raises the refrigerant's temperature and sends it through the wall as hot gas.

**3 Heat into the water**
The micro-channel wrapped round the outside of the tank gives that heat to the water through the steel — refrigerant and water never meet.

**4 Back out, round again**
The cooled liquid returns to the outdoor unit. Nothing but two thin refrigerant lines crosses the wall.

Schematic — not to scale. Mount the outdoor unit where air moves freely; keep the cylinder close to the bathrooms it serves.

## Choosing a size

Size on the people and the draw-off, not on the heat pump

### THIS MODEL

Allow roughly **40–60 litres of hot water per person per day**. A 500 L cylinder suits about **8–12 people**.

From cold it heats the full tank in about **3.2 h** on the heat pump alone (15 → 55 °C), and keeps up with about **155 L/h** of draw-off after that.

Send us the occupancy and the fittings and we will confirm the size.

### WHY SPLIT

The cylinder can stand indoors, in a utility room or loft, while the outdoor unit sits on a balcony or terrace like an air conditioner.

No hot water runs through the wall, nothing that holds water stands in the weather, and a refrigerant leak cannot reach the potable water.

The 2 kW heater covers a cold morning or a full house and takes the tank to 75 °C when wanted.

## The range at a glance

SE-AH-7|500S is marked

| MODEL | TANK L | HEATING KW | COP | L/H* | FULL TANK H* | HEATER KW | OUTDOOR UNIT MM | CYLINDER Ø × H MM |
|---|---|---|---|---|---|---|---|---|
| SE-AH-4\|150S | 150 | 3.3 | 4.10 | 71 | 2.1 | 1.5 | 765 × 260 × 530 | 500 × 1330 |
| SE-AH-5\|200S | 200 | 5 | 4.17 | 107.5 | 1.9 | 1.5 | 765 × 260 × 530 | 500 × 1680 |
| SE-AH-5\|300S | 300 | 5 | 4.17 | 107.5 | 2.8 | 2 | 765 × 260 × 530 | 560 × 1805 |
| SE-AH-7\|400S | 400 | 7.2 | 4.11 | 154.8 | 2.6 | 2 | 800 × 300 × 540 | 700 × 1590 |
| **SE-AH-7\|500S** | **500** | **7.2** | **4.11** | **154.8** | **3.2** | **2** | **800 × 300 × 540** | **700 × 1940** |

* Derived: hot water output for a 15 → 55 °C rise, and the time to heat a full tank through that rise on the heat pump alone. A 100 L model (SE-AH-4|100S) also sells on the price list; no rated data has been issued for it yet.

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## Installation steps

Follow in order; fill the cylinder before switching on

1. **Place the cylinder** on a level floor that takes its filled weight, close to the bathrooms, with access to the anode and heater.
2. **Mount the outdoor unit** on a bracket or plinth with free air on the coil face and the fan side, where its noise will not disturb anyone.
3. **Refrigerant lines.** Run the copper pair through a sleeved hole in the wall, insulated, without kinks. 3 m is supplied as standard.
4. **Vacuum and open** the service valves as the installation manual describes; check the joints for leaks.
5. **Water.** Cold mains to the bottom inlet through an isolation valve and non-return valve; hot to the taps from the top outlet.
6. **Relief valve.** Fit the supplied valve and pipe its discharge to an open drain — never cap it.
7. **Electrical.** Dedicated single-phase supply and MCB; earth bonded; controller lead (5 m) between the cylinder and the unit.
8. **Commission.** Fill and vent the cylinder before switching on, set the water temperature, and check the unit runs and the tank heats.

## Site checklist

What has to be true before the unit arrives

| SITE | |
|---|---|
| Floor | **Level, and takes ≈ 630 kg filled (130 kg + 500 L)** |
| Cylinder space | **700 × 1940 mm, plus room to service the anode and heater** |
| Outdoor unit | **800 × 300 × 540 mm · 48 kg, on a bracket or plinth** |
| Distance | **3 m of refrigerant pipe standard — ask for longer** |
| Ambient | **−5 to 43 °C at the outdoor unit** |
| Supply | **220 V single-phase, 12 A max + heater** |
| Drain | **For the relief valve discharge and the cylinder drain** |

### PROTECTIONS BUILT IN

- High voltage protection
- Compressor over-heating protection
- Hot water over-heating protection
- Circuit failure protection
- Refrigerant high pressure protection
- Refrigerant low pressure protection

### CONTROLLER & WARRANTY

Intelligent wired controller: shows the water temperature and switches the electric heater. 5 m lead.

**2 years** on the heat pump · **5 years** on the cylinder.

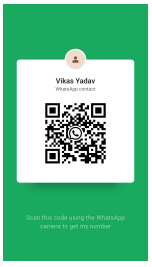
## Talk to Sunniva

Scan with a phone camera to open a WhatsApp chat

### TALK TO SUNNIVA

Sales and service desks

**Sales**
Enquiries & orders




**Service**
Breakdowns & spares

### FOR A QUOTATION

Tell us

- how many people
- bathrooms and kitchen points
- where the cylinder and the outdoor unit will go
- the distance between them
- your city

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