

EES

Electrical residential / light commercial water heater

EES - 30/40/52/66/80/120



Vertical electric water heater for residential / light commercial applications • Two replaceable Incoloy-sheathed elements • Each element is provided with an independent control thermostat (adjustable: 43 - 77 °C) • Secondary protection is provided by a high-limit thermostat with manual reset • PermaGlas Ultra Coat second-generation glass coating technology to prevent corrosion • Replaceable magnesium anode • Optional ancillaries: Unvented kits • Destratification pump kit • Powered anodes • Time controller

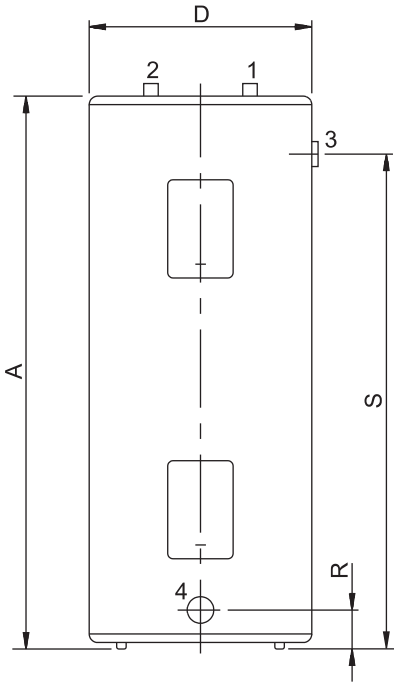
Technical specifications

| | | EES 30 | EES 40 | EES 52 | EES 66 | EES 80 | EES 120 |
|---|-----------|-----------------------------------|--------|--------|--------|--------|---------|
| Electrical data | | | | | | | |
| Input | kW | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Current | A | 11-13 | 11-13 | 11-13 | 11-13 | 11-13 | 11-13 |
| Elements | - | 2 | 2 | 2 | 2 | 2 | 2 |
| Power supply | VAC/Hz | 240 Vac (-15/+10%)/50 Hz (+/-1Hz) | | | | | |
| General | | | | | | | |
| Weight empty | kg | 36 | 43 | 48 | 64 | 80 | 125 |
| Maximum weight | kg | 151 | 198 | 238 | 314 | 380 | 575 |
| Storage capacity | l | 115 | 155 | 190 | 250 | 300 | 450 |
| Max. temperature setting | °C | 77 | 77 | 77 | 77 | 77 | 77 |
| Maximum working pressure | kPa (bar) | 800 (8) | | | | | |
| Draw-off capacity | | | | | | | |
| T_{cold} = 10°C / T_{set} = max. temp. setting | | | | | | | |
| 30 min. ΔT=44°C | l | 147 | 189 | 227 | 291 | 344 | 504 |
| 60 min. ΔT=44°C | l | 174 | 216 | 254 | 318 | 371 | 531 |
| 90 min. ΔT=44°C | l | 201 | 243 | 281 | 345 | 398 | 558 |
| 120 min. ΔT=44°C | l | 228 | 270 | 308 | 371 | 425 | 585 |
| Continuous ΔT=44°C | l/h | 54 | 54 | 54 | 54 | 54 | 54 |
| Heating-up time ΔT=44°C | min. | 128 | 137 | 212 | 279 | 334 | 501 |
| 30 min. ΔT=50°C | l | 129 | 167 | 200 | 256 | 303 | 443 |
| 60 min. ΔT=50°C | l | 153 | 190 | 223 | 280 | 326 | 467 |
| 90 min. ΔT=50°C | l | 177 | 214 | 247 | 303 | 350 | 491 |
| 120 min. ΔT=50°C | l | 200 | 238 | 271 | 327 | 374 | 515 |
| Continuous ΔT=50°C | l/h | 47 | 47 | 47 | 47 | 47 | 47 |
| Heating-up time ΔT=50°C | min. | 146 | 196 | 241 | 317 | 380 | 570 |
| 30 min. ΔT=55°C | l | 117 | 152 | 181 | 233 | 275 | 403 |
| 60 min. ΔT=55°C | l | 139 | 173 | 203 | 254 | 297 | 425 |
| 90 min. ΔT=55°C | l | 161 | 195 | 224 | 276 | 318 | 446 |
| 120 min. ΔT=55°C | l | 182 | 216 | 246 | 277 | 340 | 468 |
| Continuous ΔT=55°C | l/h | 43 | 43 | 43 | 43 | 43 | 43 |
| Heating-up time ΔT=55°C | min. | 160 | 216 | 265 | 348 | 418 | 627 |
| Shipping data | | | | | | | |
| Weight incl. packaging | kg | 42 | 49 | 55 | 72 | 90 | 137 |
| Width packaging | mm | 580 | 580 | 580 | 620 | 680 | 770 |
| Height packaging | mm | 1000 | 1190 | 1440 | 1600 | 1620 | 1710 |
| Depth packaging | mm | 650 | 650 | 650 | 680 | 740 | 840 |

Ecodesign specifications

| | | EES 30 | EES 40 | EES 52 | EES 66 | EES 80 | EES 120 |
|--|------------|--------|--------|--------|--------|--------|---------|
| Energy labeling | | | | | | | |
| Load Profil | - | L | L | XL | XL | XL | XL |
| Energy labeling | - | C | C | C | C | D | D |
| Efficiency | % | 39 | 38 | 38 | 38 | 37 | 37 |
| Annual Electricity Consumption (AEC) | kWh | 2602 | 2679 | 4399 | 4411 | 4430 | 4485 |
| Daily Electricity Consumption | kWh | 11.907 | 12.364 | 20.320 | 20.039 | 21.500 | 20.830 |
| Annual Fuel Consumption (AEC) | GJ GCV | 0 | 0 | 0 | 0 | 0 | 0 |
| Daily Fuel Consumption | kWh GCV | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Nitrogen Dioxide Emission (NO ₂) | mg/kWh GCV | - | - | - | - | - | - |
| Mixed Water of 40°C (according V40) | ltr. | 143 | 187 | 237 | 295 | 368 | 552 |
| Sound Power Level | dB | 15 | 15 | 15 | 15 | 15 | 15 |

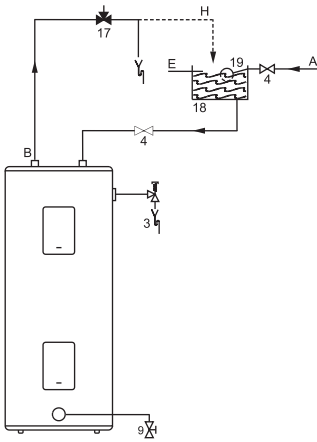
Dimensions



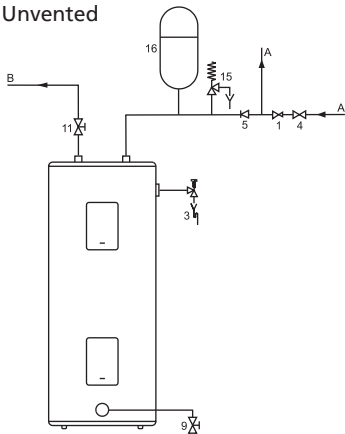
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|-------------------|------------------|--------|------------|--------|--------|---------|
| A | 930 | 1110 | 1370 | 1530 | 1540 | 1620 |
| D | 520 | 520 | 520 | 560 | 610 | 710 |
| R | 110 | 110 | 110 | 110 | 110 | 110 |
| S | 730 | 970 | 1210 | 1360 | 1330 | 1385 |
| 1 | Cold water | | 3/4-14 NPT | | | |
| 2 | Hot water | | 3/4-14 NPT | | | |
| 3 | T&P valve | | 3/4-14 NPT | | | |
| 4 | Tank drain valve | | 3/4-14 NPT | | | |
| Dimensions in mm. | | | | | | |

Installation diagrams

Vented



Unvented



- 1 Pressure reducing valve
- 3 T&P valve
- 4 Stop valve
- 5 Non-return valve
- 9 Drain valve
- 11 Isolating valve
- 15 Expansion relief valve
- 16 Expansion vessel
- 17 Three way valve
- 18 Water tank
- 19 Float valve

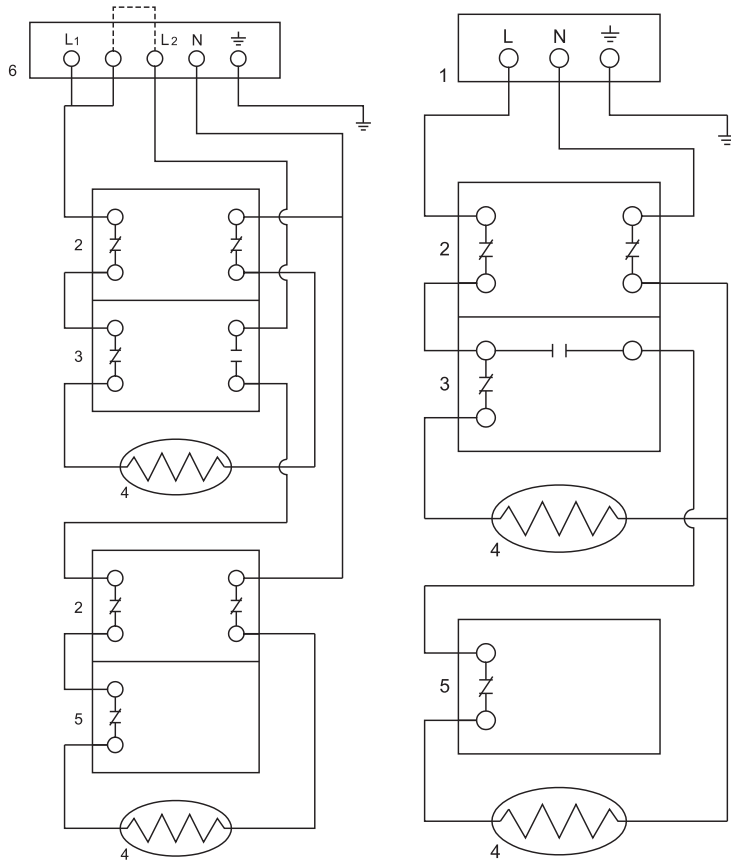
- A Cold water
- B Hot water
- E Overflow pipe
- H Expansion vent pipe

A.O. Smith unvented system kits utilise combination valves.

Further installation and connection details can be found in the Installation & Commissioning Manual.



Electrical diagrams



- 1 Standard electrical supply
- 2 Safety thermostat
- 3 Control thermostat with selector switch
- 4 Heating elements
- 5 Control thermostat
- 6 Off peak electrical supply

In the instruction manual you will find all the necessary information regarding connection, installation and maintenance of the product; including information on the electrical connections.

Information regarding the recycling or disposal of the product can also be found in the manual. This manual is delivered with the appliance and can also be found on our website; www.aosmith.co.uk.