Why Vaillant? Quality accessories create perfect solutions.









| About Vaillant | 4 |
|-------------------------------|------|
| Why Vaillant? | .5 |
| Choosing you perfect solution | .6 |
| Pre-plumbed uniSTOR | .7 |
| Pre-plumbed slimline uniSTOR | . 11 |
| Non-plumbed uniSTOR | .15 |



| Large capacity uniSTOR | .19 |
|----------------------------|------|
| Large capacity auroSTOR | |
| Training | . 29 |
| Service and spares support | .30 |
| Article numbers | .31 |

Please note the information contained in this guide is for the use of competent and qualified heating engineers in the UK. We always recommend attending a training course provided by Vaillant to ensure complete knowledge of the appliance and/or accessories you are installing. The Vaillant Group does not warrant the accuracy or completeness of any of the information provided in this brochure. Should you require any clarification or further information, please speak with your Regional Business Manager or call our technical helpline. The Vaillant Group does not accept liability or responsibility resulting from the installer's failure to comply with the guides or otherwise. For more detailed information, please refer to the installation manual for each product you are using.



The Vaillant Group

Vaillant UK is proud to be part of the worldwide heating and hot water corporation Vaillant Group, a family-owned business that was founded by Johann Vaillant in his workshop in Remscheid, Germany in 1874.

In 1894, Johann patented a new closed-system gas-fired bathroom boiler. Over the years, Johann's technical innovations continued and in 1924, he launched the world's first central heating boiler. Since these revolutionary inventions, Vaillant continues to drive the evolution of heating technologies, launching the first ever combi boiler in 1967, and the game changing aroTHERM plus in 2020.

Today, Vaillant is still setting the standard in the heating marketplace, developing market leading products that work seamlessly together, to provide a full systems solution. With a growing focus on developing products that use renewable energy, Vaillant became the first boiler manufacturer in the UK to launch a heat pump production line, which opened at their headquarters in Belper, 2022. This, together with the research and development of on-going hydrogen trials, marks a huge milestone for Vaillant in supporting the brands mission to create a better climate, inside each home and the world around it.

Why Vaillant?



The entire uniSTOR high recovery heat pump cylinder range has been designed to work in harmony with Vaillant heat pumps, to provide highly efficient heating and hot water systems.

A uniSTOR's large surface area and smooth coil design maximises heat transfer, to ensure connected Vailllant heat pumps run at their optimum efficiency. This reduces running costs and increases hot water performance.

Ranging from 150 up to 800 litres, our uniSTOR heat pump cylinders are available in both pre-plumbed (150-300 litres only) and standard options, giving you and your customers even more flexibility. In addition to this, the 250 and 300 litre cylinders have an increased coil size making them compatible with a wider range of ground source heat pump systems.

uniSTOR cylinders have a Global Warming Potential (GWP) of less than five. This is thanks to thermal injected insulation, as well as a 100% recyclable stainless steel tank with an ultra hard-wearing outer shell. These elements of the design contribute to a highly efficient and sustainable heating system. What's more, Vaillant cylinders come with a 25-year guarantee on the outer shell, giving extra added peace of mind.

Choosing your perfect solution

Cylinder compatibility matrix chart

The following cylinder compatibility matrix is provided to help guide you during the specification stages of a heat pump system. Vaillant cylinders provide excellent efficiency, durability and ensure optimum system performance when combined with Vaillant heat pumps. For further information and support, please speak to one of our technical advisors on 0330 100 3540.

| aroTHERM plus | uniSTOR 150 litre cylinder | uniSTOR 200 litre cylinder | uniSTOR 250 litre cylinder | uniSTOR 300 litre cylinder | uniSTOR 500 litre cylinder | auroSTOR 500 litre cylinder* | uniSTOR 800 litre cylinder |
|------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|----------------------------------|
| 3.5kW | \checkmark | \checkmark | | | | | |
| 5kW | \checkmark | \checkmark | \checkmark | | | | |
| 7kW | \checkmark | \checkmark | \checkmark | \checkmark | | | |
| 10kW | | \checkmark | \checkmark | \checkmark | \checkmark | | |
| 12kW | | \checkmark | \checkmark | \checkmark | \checkmark | | \checkmark |

Air-to-water heat pumps

| | aroTHERM split | uniSTOR 150 litre cylinder | uniSTOR 200 litre cylinder | uniSTOR 250 litre cylinder | uniSTOR 300 litre cylinder | uniSTOR 500 litre cylinder | auroSTOR 500 litre cylinder* | uniSTOR 800 litre cylinder |
|---|-------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|----------------------------------|
| | 3.5kW | ✓ | ✓ | | | | | |
| - | 5kW | \checkmark | \checkmark | | | | | |
| | 7kW | ✓ | \checkmark | \checkmark | \checkmark | | | |
| | 10kW | | \checkmark | \checkmark | \checkmark | \checkmark | | |
| | 12kW | | \checkmark | \checkmark | \checkmark | ✓ | | ✓ |

Ground-source heat pump

| flexoTHERM | uniSTOR 150 litre cylinder | uniSTOR 200 litre cylinder | uniSTOR 250 litre cylinder | uniSTOR 300 litre cylinder | uniSTOR 500 litre cylinder | auroSTOR 500 litre cylinder* | uniSTOR 800 litre cylinder |
|------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|------------------------------------|----------------------------------|
| 5kW | ✓ | ✓ | ✓ | | | | |
| 8kW | | \checkmark | \checkmark | \checkmark | | \checkmark | |
| 11kW | | | \checkmark | \checkmark | \checkmark | \checkmark | |
| 15kW | | | \checkmark | \checkmark | \checkmark | | |
| 19kW | | | | | | | \checkmark |

* auroSTOR 500 litre cylinder for combined heat pump and solar thermal systems.

Pre-plumbed uniSTOR



Overview

The pre-plumbed uniSTOR high recovery heat pump cylinder range comes in 200, 250, and 300 litre capacities. The pre-plumbed range is designed to simplify installation and comes with inline connections and a mounting plate for controls, all sized to accommodate the heat pump interface.

Features & benefits



Includes 28mm three-way valve Allows cost saving by reducing number of valves.



Supplied with expansion vessel and sensor To provide a complete system solution.



Large diameter, smooth bore coil technology Provides quiet operation, reduces build-up of scale and aids in long term efficiency through automatic descaling.



Thermal injected polyurethane insulation combined with vacuum panels Superior insulation and efficiency.



Factory fitted immersion heater Emergency backup in case of main heat source failure.



Global Warming Potential less than five and ozone depletion of zero Designed to have minimal environmental impact.



Automatic air vent included Simplifies installation.



Adjustable feet Makes on-site installation easier.

Pre-plumbed uniSTOR technical specification

| Technical data | Unit | 200 litre pre-plumbed uniSTOR | 250 litre pre-plumbed uniSTOR | 300 litre pre-plumbed uniSTOR |
|--|---------|-------------------------------------|-------------------------------------|-------------------------------------|
| Article number | | 0020237130 | 0020237131 | 0020237132 |
| Total tank capacity | I | 198.4 | 249.2 | 288.7 |
| Actual capacity (without coil volume) | I | 190.7 | 236.3 | 273.5 |
| Hot water capacity / draw off* | I | 172.5 | 211.0 | 208 |
| Standby losses | kWh/24h | 1.2 | 1.4 | 1.6 |
| Energy-related Products | A+ - F | В | В | В |
| Reheat time (70%)* | Minutes | 14.2 | 10.6 | 7.5 |
| Coil rating | kW | 26.0 | 40.7 | 52.5 |
| Heat exchanger volume | I | 7.7 | 12.9 | 15.2 |
| Heat exchanger surface | m² | 1.4 | 2.4 | 2.8 |
| Primary flow rate | l/h | 900 | 900 | 1300 |
| Heat exchanger pressure drop | mbar | 100 | 170 | 200 |
| Maximum operating DHW temperature | °C | 85 | 85 | 85 |
| Maximum operating heat circuit temperature | °C | 95 | 95 | 95 |
| Quantity of temperature sensor tubes | qty | 1 | 1 | 1 |
| Size of supplied expansion vessel | I | 18 | 25 | 25 |
| Immersion heater rating | kW | 3.0 | 3.0 | 3.0 |
| Immersion heater cable size | mm | 1.5 | 1.5 | 1.5 |
| Immersion heater current | А | 13 | 13 | 13 |

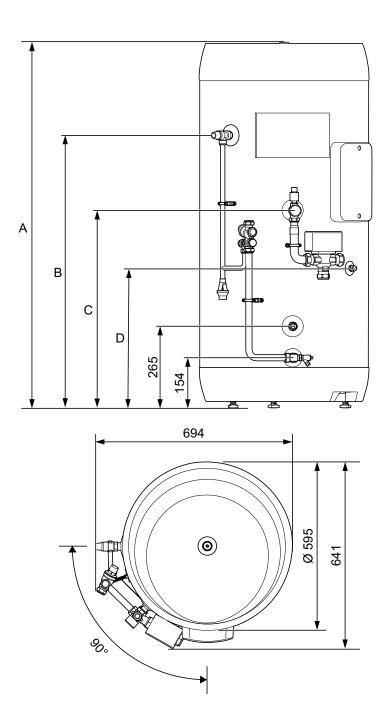
* Calculation from test EN 12897.

| Dimensions | Unit | 200 litre pre-plumbed uniSTOR | 250 litre pre-plumbed uniSTOR | 300 litre pre-plumbed uniSTOR |
|--------------------------------|------|-------------------------------------|-------------------------------------|-------------------------------------|
| Outer diameter with insulation | mm | 595 | 595 | 595 |
| Height with insulation | mm | 1265 | 1535 | 1745 |
| Net weight empty cylinder | kg | 58.0 | 73.3 | 80.6 |
| Weight of filled cylinder | kg | 249.4 | 313.6 | 369.4 |
| Insulation thickness | mm | 50 | 50 | 50 |

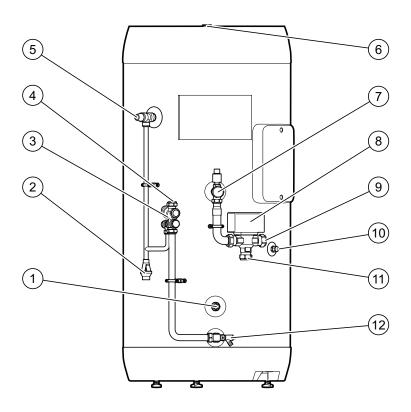
| Connections | Unit | 200 litre pre-plumbed uniSTOR | 250 litre pre-plumbed uniSTOR | 300 litre pre-plumbed uniSTOR |
|---|------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Primary heat exchanger flow & return connection | BSP female | 3/4" | 3/4" | 3⁄4" |
| Cold & hot water connection | BSP female | 3/4" | 3/4" | 3⁄4" |
| Temperature sensor sleeve diameter | mm | 8 | 8 | 8 |
| Immersion heater boss diameter | BSP female | 1 1⁄4" | 1 1⁄4" | 1 1⁄4" |

Pre-plumbed uniSTOR

Dimensions



| Heat pump cylinder | Unit | А | В | С | D |
|-------------------------------|------|-------|-------|-----|-----|
| 200 litre pre-plumbed uniSTOR | mm | 1,265 | 940 | 675 | 470 |
| 250 litre pre-plumbed uniSTOR | mm | 1,535 | 1,210 | 865 | 565 |
| 300 litre pre-plumbed uniSTOR | mm | 1,745 | 1,420 | 865 | 565 |



| Item | Description |
|------|---|
| 1 | Cylinder heating return |
| 2 | Tundish |
| 3 | Unvented cylinder kit |
| 4 | Cold water inlet |
| 5 | Temperature and pressure expansion relief valve |
| 6 | Hot water outlet |
| 7 | Cylinder heating inlet |
| 8 | Three-way motorised valve |
| 9 | Heating circuit heating flow |
| 10 | Cylinder dry pocket for sensor |
| 11 | Heating flow from the heat pump |
| 12 | Drain valve |

NOTE: The expansion vessel is included with the cylinder. The tundish, three-way motorised valve, and unvented cylinder kit are pre-installed on the cylinder.

Pre-plumbed slimline uniSTOR



Overview

The pre-plumbed slimline uniSTOR high recovery cylinder has been designed with the installer in mind. Its smaller size makes it perfect for space sensitive installations, as well as improving installation times. The cylinder has a specifically designed smooth bore coil, which is purposefully placed to ensure optimum heat transfer within the compact cylinder. The slimline cylinder still offers high performance with a low standby loss of 1.8kW per 24 hours ensuring the hot water stays hot all day long.

Features & benefits



Slim design

Fits into compact spaces allowing for flexible siting.



28mm three-way valve supplied Allows cost saving by reducing number of valves.



Expansion vessel and sensor included with product Complete system solution offering.



Smooth bore coil technology

Provides quiet operation, reduces build-up of scale and aids in long term efficiency through automatic descaling.



Thermal injected polyurethane insulation combined with vacuum panels Superior insulation and efficiency.



Factory fitted immersion heater Emergency backup in case of main heat source failure.



Global Warming Potential less than five and ozone depletion of zero Designed to have minimal environmental impact.



Adjustable feet Simplifies installation.

Pre-plumbed slimline uniSTOR technical specification

| Technical data | Unit | 150 litre pre-plumbed slimline uniSTOR |
|--|---------|--|
| Article number | | 0020237129 |
| Total tank capacity | 1 | 145.1 |
| Actual capacity (without coil volume) | I | 139.5 |
| Hot water capacity / draw off* | 1 | 127.0 |
| Standby losses | kWh/24h | 1.8 |
| Energy-related Products | A+ - F | C |
| Reheat time (70%)* | Minutes | 12.9 |
| Coil rating | kW | 21.7 |
| Heat exchanger volume | I | 5.6 |
| Heat exchanger surface | m² | 1.0 |
| Primary flow rate | l/h | 900 |
| Heat exchanger pressure drop | mbar | 70 |
| Maximum operating DHW temperature | °C | 85 |
| Maximum operating heat circuit temperature | °C | 95 |
| Quantity of temperature sensor tubes | qty | 1 |
| Size of supplied expansion vessel | 1 | 12 |
| Immersion heater rating | kW | 3.0 |
| Immersion heater cable size | mm | 1.5 |
| Immersion heater current | А | 13 |

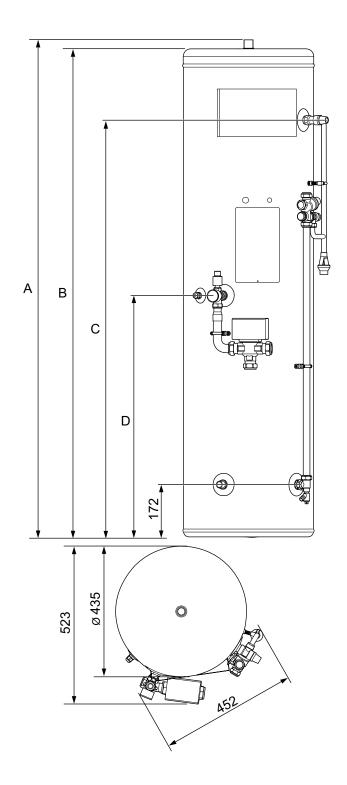
* Calculation from test EN 12897.

| Dimensions | Unit | 150 litre pre-plumbed slimline uniSTOR |
|--------------------------------|------|--|
| Outer diameter with insulation | mm | 435 |
| Height with insulation | mm | 1667 |
| Net weight empty cylinder | kg | 54.5 |
| Weight of filled cylinder | kg | 193.9 |
| Insulation thickness | mm | 40 |

| Connections | Unit | 150 litre pre-plumbed slimline uniSTOR |
|---|------------|--|
| Primary heat exchanger flow & return connection | BSP female | 3⁄4" |
| Cold & hot water connection | BSP female | 3/4" |
| Temperature sensor sleeve diameter | mm | 8 |
| Immersion heater boss diameter | BSP female | 1" |

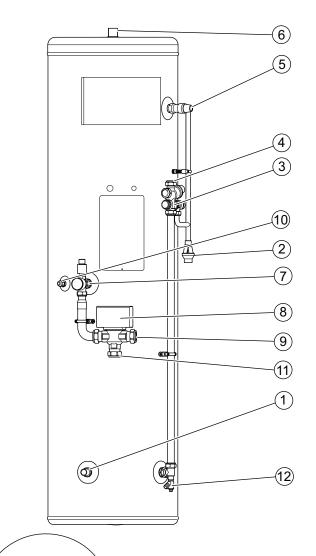
Pre-plumbed slimline uniSTOR

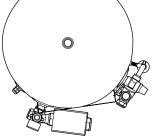
Dimensions



| Heat pump cylinder | Unit | А | В | С | D |
|--|------|-------|-------|-------|-----|
| 150 litre pre-plumbed slimline uniSTOR | mm | 1,642 | 1,613 | 1,377 | 797 |

Connections





| Item | Description |
|------|---|
| 1 | Cylinder heating return |
| 2 | Tundish |
| 3 | Unvented cylinder kit |
| 4 | Cold water inlet |
| 5 | Temperature and pressure expansion relief valve |
| 6 | Hot water outlet |
| 7 | Cylinder heating inlet |
| 8 | Three-way motorised valve |
| 9 | Heating circuit heating flow |
| 10 | Cylinder dry pocket for sensor |
| 11 | Heating flow from heat pump |
| 12 | Drain valve |

NOTE: The expansion vessel is included with the cylinder. The tundish, three-way motorised valve, and unvented cylinder kit are pre-installed on the cylinder.

Non-plumbed uniSTOR



Overview

The non-plumbed uniSTOR high recovery heat pump cylinder is available in 150, 200, 250, and 300 litres. Each cylinder uses the latest thermal injected insulation for the lowest heat losses in its class, with as little as 1kW per 24 hours. The strategically positioned large diameter smooth bore coil provides optimum hot water performance and automatically de-scales to ensure long term efficient hot water generation.

Features & benefits



Heat loss from as low as 1kW/24 hours Reduce energy bills for homeowners.



28mm three-way valve supplied Allows cost saving by reducing number of valves.



Expansion vessel and sensor included with product Complete system solution offering.



Large diameter, smooth bore coil technology Provides quiet operation, reduces build-up of scale and aids in long term efficiency through automatic descaling.



Thermal injected polyurethane insulation combined with vacuum panels Superior insulation and efficiency.



Factory fitted immersion heater Emergency backup in case of main heat source failure.



Global Warming Potential less than five and ozone depletion of zero Designed to have minimal environmental impact.



Adjustable feet Makes on-site installation easier.

Non-plumbed uniSTOR technical specification

| Technical data | Unit | 150 litre non-plumbed uniSTOR | 200 litre non-plumbed uniSTOR | 250 litre non-plumbed uniSTOR | 300 litre non-plumbed uniSTOR |
|--|----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Article number | | 0020235271 | 0020235272 | 0020235273 | 0020235274 |
| Total tank capacity | I | 148.6 | 198.4 | 249.2 | 288.7 |
| Actual capacity (without coil volume) | I | 143.8 | 190.7 | 236.3 | 273.5 |
| Hot water capacity / draw off* | I | 127.0 | 172.5 | 211.0 | 230.9 |
| Standby losses | kWh/24h | 1.0 | 1.2 | 1.4 | 1.6 |
| Energy-related Products | A+ - F | В | В | В | В |
| Reheat time (70%)* | Minutes | 13.8 | 14.6 | 10.6 | 7.5 |
| Coil rating | kW | 20.8 | 26.0 | 40.7 | 52.5 |
| Heat exchanger volume | I | 5.5 | 7.7 | 12.9 | 15.2 |
| Heat exchanger surface | m ² | 1.0 | 1.4 | 2.4 | 2.8 |
| Primary flow rate | l/h | 900 | 900 | 900 | 1300 |
| Heat exchanger pressure drop | mbar | 44 | 100 | 170 | 200 |
| Maximum operating DHW temperature | °C | 85 | 85 | 85 | 85 |
| Maximum operating heat circuit temperature | °C | 95 | 95 | 95 | 95 |
| Quantity of temperature sensor tubes | qty | 1 | 1 | 1 | 1 |
| Size of supplied expansion vessel | I | 12 | 18 | 25 | 25 |
| Immersion heater rating | kW | 3.0 | 3.0 | 3.0 | 3.0 |
| Immersion heater cable size | mm | 1.5 | 1.5 | 1.5 | 1.5 |
| Immersion heater current | А | 13 | 13 | 13 | 13 |

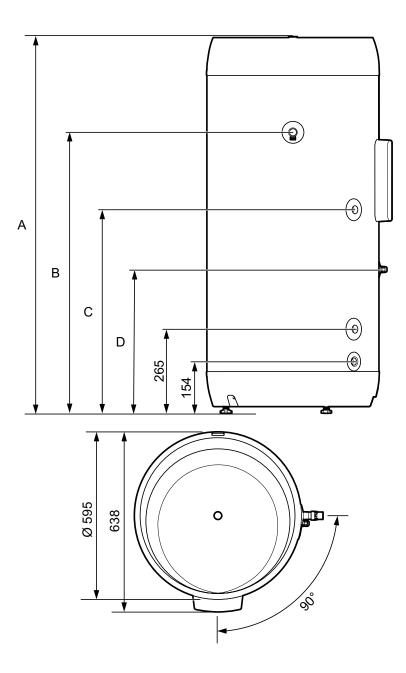
* Calculation from test EN 12897

| Dimensions | Unit | 150 litre non-plumbed uniSTOR | 200 litre non-plumbed uniSTOR | 250 litre non-plumbed uniSTOR | 300 litre non-plumbed uniSTOR |
|--------------------------------|------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Outer diameter with insulation | mm | 595 | 595 | 595 | 595 |
| Height with insulation | mm | 1000 | 1265 | 1535 | 1745 |
| Net weight empty cylinder | kg | 38.0 | 46.0 | 61.0 | 67.6 |
| Weight of filled cylinder | kg | 181.3 | 237.4 | 301.3 | 356.8 |
| Insulation thickness | mm | 50 | 50 | 50 | 50 |

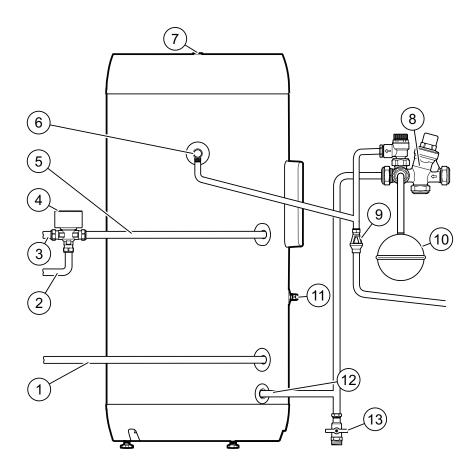
| Connections | Unit | 150 litre non-plumbed uniSTOR | 200 litre non-plumbed uniSTOR | 250 litre non-plumbed uniSTOR | 300 litre non-plumbed uniSTOR |
|---|------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Primary heat exchanger flow & return connection | BSP female | 3⁄4" | 3/4" | 3/4" | 3⁄4" |
| Cold & hot water connection | BSP female | 3⁄4" | 3⁄4" | 3⁄4" | 3⁄4" |
| Temperature sensor sleeve diameter | mm | 8 | 8 | 8 | 8 |
| Immersion heater boss diameter | BSP female | 1 1⁄4" | 1 1⁄4" | 1 1⁄4" | 1 1⁄4" |

Non-plumbed uniSTOR

Dimensions



| Heat pump cylinder | Unit | А | В | с | D |
|-------------------------------|------|-------|-------|-----|-----|
| 150 litre non-plumbed uniSTOR | mm | 1,000 | 675 | 520 | 393 |
| 200 litre non-plumbed uniSTOR | mm | 1,265 | 940 | 675 | 470 |
| 250 litre non-plumbed uniSTOR | mm | 1,535 | 1,210 | 865 | 565 |
| 300 litre non-plumbed uniSTOR | mm | 1,745 | 1,420 | 865 | 565 |



| Item | Description |
|------|---|
| 1 | Heat pump return |
| 2 | Heating flow from heat pump |
| 3 | Heating circuit heating flow |
| 4 | Three-way motorised valve |
| 5 | Cylinder heating inlet |
| 6 | Temperature and pressure expansion relief valve |
| 7 | Hot water outlet |
| 8 | Unvented cylinder kit |
| 9 | Tundish |
| 10 | Expansion vessel |
| 11 | Cylinder dry pocket for sensor |
| 12 | Cold water inlet |
| 13 | Drain valve |

NOTE: Standard uniSTOR cylinders come with tundish, three-way motorised valve, unvented cylinder kit, expansion vessel and 3/4" x 28mm MI-copper compression fitting. The 250 and 300 litre standard uniSTOR comes with secondary return T piece connection.

Large capacity uniSTOR



Overview

The Vaillant cylinder range includes two large capacity cylinders and a complete range of accessories. The 500 and 800 litre models have impressive coil sizes, of 4.7 m^2 and 7 m^2 which are manufactured using high grade stainless steel, and pass the highest Vaillant standards and quality control requirements. In addition, a comprehensive range of accessories are available which includes a choice of unvented cylinder kits, compatible expansion vessels, and a 7.5kW immersion (800 litre only). This provides the installer and specifier with maximum flexibility during design and installation.

Both cylinders can also be easily cascaded to generate higher requirements for hot water. Vaillant's dedicated technical designers can advise on any project for additional support and peace of mind.

Features & benefits



Single guarantee for all components Complete peace of mind from one manufacturer.



Large diameter, smooth bore coil technology Provides quiet operation, reduces build-up of scale and aids in long term efficiency through automatic descaling.



Global Warming Potential less than five and ozone depletion of zero

Designed to have minimal environmental impact.



In-built lifting eye Easy to move over any terrain.



Unvented cylinder kit, expansion vessel and sensor available as an accessory Complete system solution offering whilst meeting all building regulations.



Factory fitted T & P valve Ensures safety requirements to meet regulations.



Large 7.5kW single phase immersion available Emergency backup in case of main heat source failure (800 litre only).



Inspection port included Meets requirement of many commercial specifications (800 litre only).

Large capacity uniSTOR technical specification

| Technical data | Unit | 500 litre uniSTOR | 800 litre uniSTOR |
|--|----------------|----------------------------|----------------------------|
| Article number | | 0010019228 | 0010019229 |
| Total tank capacity | I | 541.4 | 784.0 |
| Actual capacity (without coil volume) | 1 | 512.0 | 740.0 |
| Hot water capacity / draw off* | I | 460.0 | 635.0 |
| Standby losses | kWh/24h | 2.5 | 3.0 |
| Energy-related Products | A+ - F | С | С |
| Reheat time (70%)* | Minutes | 20.0 | 18.3 |
| Coil rating at 15 litres per minute* | kW | 36.2 | 54.3 |
| Coil rating at 30 litres per minute* | kW | 50.5 | 74.5 |
| Coil rating at 60 litres per minute* | kW | 71.4 | 104.7 |
| Heat exchanger volume | I | 29.0 | 44.0 |
| Heat exchanger surface | m ² | 4.7 | 7.0 |
| Primary flow rate | l/h | 1800 | 1800 |
| Heat exchanger pressure drop at 15 litres per minute | bar | 0.02 | 0.006 |
| Heat exchanger pressure drop at 30 litres per minute | bar | 0.03 | 0.02 |
| Heat exchanger pressure drop at 60 litres per minute | bar | 0.2 | 0.1 |
| Peak performance of heat pump (10 minutes) at 60°C | I | 656 | 953 |
| Peak performance of heat pump (10 minutes) at 40°C | I | 1093 | 1588 |
| Peak performance of heat pump (60 minutes) at 60°C | 1 | 1380 | 2021 |
| Peak performance of heat pump (60 minutes) at 40°C | I | 2300 | 3368 |
| Peak performance of boiler (10 minutes) at 60°C | 1 | 421 | 604 |
| Peak performance of boiler (10 minutes) at 40°C | 1 | 702 | 1007 |
| Peak performance of boiler (60 minutes) at 60°C | 1 | 842 | 1208 |
| Peak performance of boiler (60 minutes) at 40°C | 1 | 1404 | 2014 |
| Maximum operating DHW temperature | °C | 85 | 85 |
| Maximum operating heat circuit temperature | °C | 95 | 95 |
| Quantity of temperature sensor tubes | qty | 2 | 2 |
| Size of expansion vessel | I | 50 (supplied as accessory) | 80 (supplied as accessory) |
| Immersion heater rating | kW | 5.0 | 7.5 |
| Immersion heater cable size | mm | 4.0 | 6.0 |
| Immersion heater current | А | 32 | 40 |

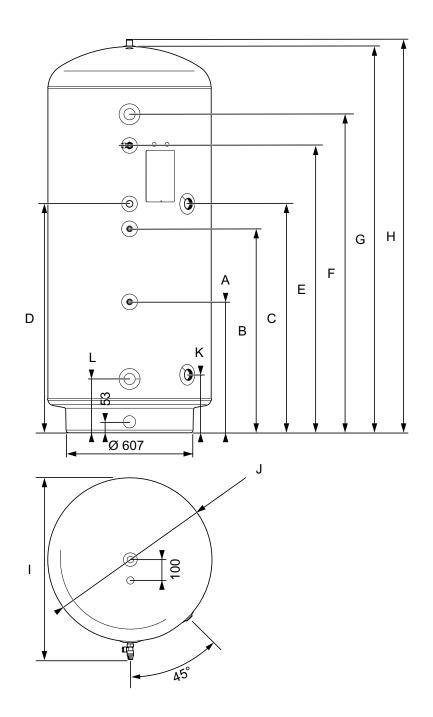
 * Calculation from test EN 12897. NOTE: Calculated figures are based on the heat pump flow temperature of 60°C and boiler flow temperatures of 80°C.

| Dimensions | Unit | 500 litre uniSTOR | 800 litre uniSTOR |
|--------------------------------|------|-------------------|-------------------|
| Outer diameter with insulation | mm | 785 | 986 |
| Height with insulation | mm | 1.9 | 1.9 |
| Net weight empty cylinder | kg | 140 | 231 |
| Weight of filled cylinder | kg | 690 | 1015 |
| Insulation thickness | mm | 65 | 100 |

| Connections | Unit | 500 litre uniSTOR | 800 litre uniSTOR |
|---|------------|-------------------|-------------------|
| Primary heat exchanger flow & return connection | BSP female | 1 1⁄2" | 1 1⁄2" |
| Cold & hot water connection | BSP female | 1 1/2" | 1 1⁄2" |
| Temperature sensor sleeve diameter | mm | 8 | 8 |
| Immersion heater boss diameter | BSP female | 1 1⁄4" | 1 1⁄4" |

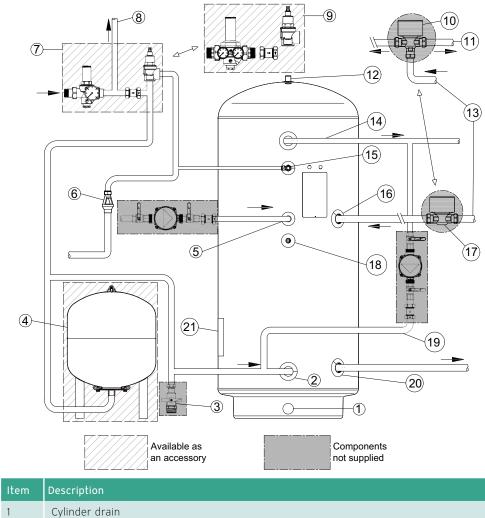


Dimensions



| Heat pump cylinder | Unit | А | В | С | D | E | F | G | Н | I | J | К | L |
|--------------------|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|
| 500 litre uniSTOR | mm | 649 | 979 | 1,099 | 1,099 | 1,379 | 1,529 | 1,843 | 1,919 | 872 | 785 | 279 | 259 |
| 800 litre uniSTOR | mm | 745 | 1,180 | 1,130 | 1,280 | 1,381 | 1,480 | 1,871 | 1,908 | 1,071 | 986 | 310 | 310 |

Connections



| ncenn | |
|-------|--|
| 1 | Cylinder drain |
| 2 | Cold water inlet |
| 3 | System drain valve (not supplied) |
| 4 | Expansion vessel |
| 5 | Secondary circulation (not supplied) |
| 6 | Tundish |
| 7 | Safety group (available as an accessory) |
| 8 | Balanced cold water |
| 9 | 2" Safety group supplied with additional pressure gauge |
| 10 | Heat pump connection method: three-way motorised diverter valve (not supplied) |
| 11 | Heating circuit heating flow |
| 12 | Non-removable lifting eye (manual vent behind lifting eye) |
| 13 | Heating flow from heat source |
| 14 | Domestic hot water outlet |
| 15 | Temperature-pressure relief valve |
| 16 | Cylinder heating flow |
| 17 | Boiler connection method: motorised valve (not supplied) |
| 18 | Temperature sensor pocket |
| 19 | Legionella protection loop (not supplied) |
| 20 | Cylinder heating return |
| 21 | Inspection hatch (800 litre only) |

NOTE: Large capacity auroSTOR cylinders come with a tundish. Unvented cylinder kits and expansion vessels are available in a range of sizes as accessories (see page 26).

Large capacity auroSTOR



Overview

The large capacity 500 litre twin coil auroSTOR cylinder has been specifically designed to accommodate both a heat pump and solar thermal system. The 500 litre twin coil auroSTOR cylinder utilises two smooth coils to ensure a quick heat recovery and prolonged life, due to its automatic de-scaling properties.

auroSTOR has a multitude of accessories to complete the Vaillant system including a choice of unvented cylinder kits and a compatible expansion vessel.

auroSTOR completes a Vaillant renewable system by enabling solar thermal options.

Features & benefits



Single guarantee for all components Complete peace of mind from one manufacturer.



Unvented cylinder kit, expansion vessel and sensor available as an accessory Complete system solution offering whilst meeting all building regulations.



Large diameter, smooth bore coil technology Provides quiet operation, reduces build-up of scale and aids in long term efficiency through automatic descaling.



Global Warming Potential less than five and ozone depletion of zero Designed to have minimal environmental impact.



Factory fitted T & P valve Ensures safety requirements to meet regulations.



Factory fitted immersion heater Emergency backup in case of main heat source failure.

Large capacity auroSTOR technical specification

| Technical data | Unit | 500 litre auroSTOR |
|--|---------|-------------------------------|
| Article number | | 0010019234 |
| Total tank capacity | 1 | 541.4 |
| Actual capacity (without coil volume) | I | 510.0 |
| Hot water capacity / draw off* | 1 | 248.0/438.0 |
| Standby losses | kWh/24h | 2.6 |
| Energy-related Products | band | C |
| Reheat time (70%)* | minutes | 13.8 (upper) / 48.8 (lower) |
| Coil rating at 15 litres per minute | kW | 35.0 (upper) / 19.2 (lower) |
| Coil rating at 30 litres per minute | kW | 52.3 (upper) / 29.8 (lower) |
| Coil rating at 60 litres per minute | kW | 77.2 (upper) / 39.9 (lower) |
| Heat exchanger volume | I | 23.0 (upper) / 8.0 (lower) |
| Heat exchanger surface | m² | 2.3 (upper) / 1.0 (lower) |
| Primary flow rate | l/h | 900 |
| Heat exchanger pressure drop at 15 litres per minute | bar | 0.01 (upper and lower) |
| Heat exchanger pressure drop at 30 litres per minute | bar | 0.03 (upper and lower) |
| Heat exchanger pressure drop at 60 litres per minute | bar | 0.1 (upper and lower) |
| Maximum operating DHW temperature | °C | 85 |
| Maximum operating heat circuit temperature | °C | 95 |
| Quantity of temperature sensor tubes | qty | 2 |
| Size of expansion vessel | 1 | 50 (supplied as an accessory) |
| Immersion heater rating | kW | 5.0 |
| Immersion heater cable size | mm | 4.0 |
| Immersion current | А | 32 |

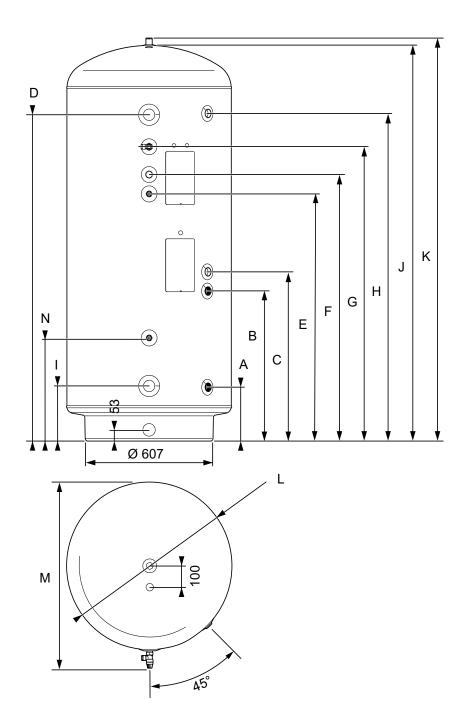
* Calculation from test EN 12897.

| Dimensions | Unit | 500 litre auroSTOR |
|--------------------------------|------|--------------------|
| Outer diameter with insulation | mm | 785 |
| Height with insulation | mm | 1.9 |
| Net weight empty cylinder | kg | 155 |
| Weight of filled cylinder | kg | 705 |
| Insulation thickness | mm | 65 |

| Connections | Unit | 500 litre auroSTOR |
|---|------------|--------------------|
| Primary heat exchanger flow & return connection | BSP female | 1 1⁄2" |
| Cold & hot water connection | BSP female | 1 1⁄2" |
| Temperature sensor sleeve diameter | mm | 8 |
| Immersion heater boss diameter | BSP female | 1 1⁄4" |

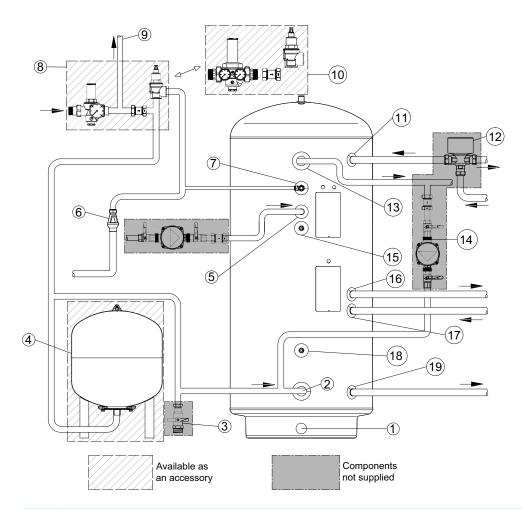
Large capacity auroSTOR

Dimensions



| Heat pump cylinder | Unit | А | В | с | D | E | F | G | н | I. | J | К | L | М | N |
|-----------------------|------|-----|-----|-----|-------|-------|-------|-------|-------|-----|-------|-------|-----|-----|-----|
| 500 litre auroSTOR | mm | 252 | 703 | 793 | 1,529 | 1,158 | 1,249 | 1,379 | 1,529 | 259 | 1,853 | 1,886 | 785 | 872 | 484 |

Connections



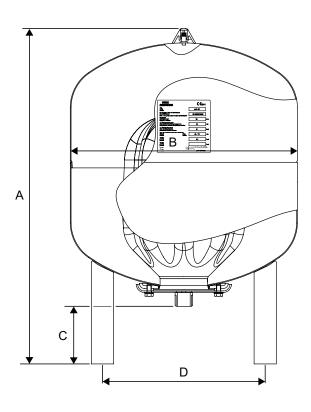
| Item | Description |
|------|--|
| 1 | Cylinder drain |
| 2 | Cold water inlet |
| 3 | System drain valve (not supplied) |
| 4 | Expansion vessel (available as an accessory) |
| 5 | Secondary circulation (not supplied) |
| 6 | Tundish |
| 7 | Temperature-pressure relief valve |
| 8 | Unvented cylinder kit (available as an accessory) |
| 9 | Balanced cold water |
| 10 | 2" unvented cylinder kit supplied with additional pressure gauge (available as an accessory) |
| 11 | Cylinder heating flow |
| 12 | Three-way motorised diverter valve (not supplied) |
| 13 | Hot water outlet |
| 14 | Legionella protection loop (not supplied) |
| 15 | Temperature sensor pocket |
| 16 | Cylinder heating return |
| 17 | Cylinder solar inlet |
| 18 | Solar temperature sensor pocket |
| 19 | Cylinder solar return |

NOTE: Items included with large capacity auroSTOR cylinders are documentation and tundish. Unvented cylinder kits and expansion vessels are available in a range of sizes as an accessory, see page 26.

uniSTOR and auroSTOR accessories

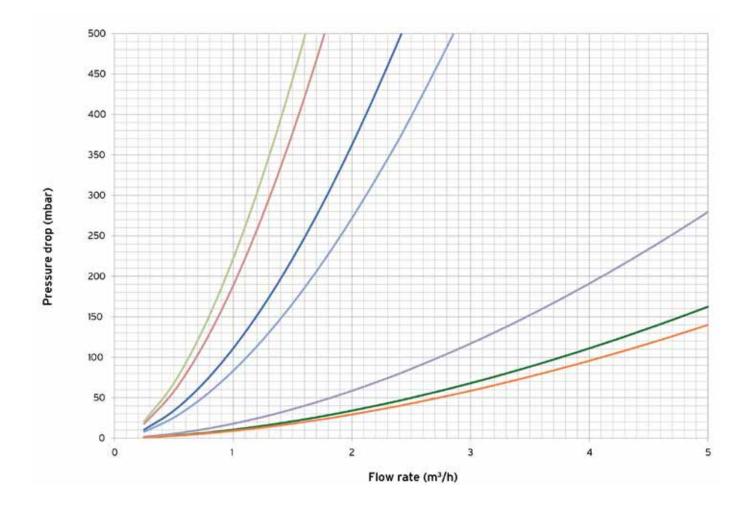
| Description | Article number |
|--|----------------|
| Immersion heater 7kW (800 litre uniSTOR only) | 0020235671 |
| Unvented cylinder kit 1" | 0020235964 |
| Unvented cylinder kit 1¼" | 0020235965 |
| Unvented cylinder kit 11⁄2" | 0020235966 |
| Unvented cylinder kit 2" | 0020235967 |
| Expansion vessel 50 litre (for uniSTOR and auroSTOR 500 litre) | 0020229941 |
| Expansion vessel 80 litre (for uniSTOR 800 litre) | 0020229942 |

Expansion vessel dimensions



| Dimensions | Unit | 50 litre expansion vessel | 80 litre expansion vessel |
|-----------------------|------|---------------------------------|---------------------------------|
| A = Height | mm | 604 | 729 |
| B = Diameter | mm | 409 | 480 |
| C = Connection height | mm | 104 | 152 |
| D = Feet span c/c | mm | 293 | 351 |

Pressure drop chart



- —1.4 m² (Ø22 mm) = uniSTOR 200 litre

- -2.3 m² (Ø35 mm) = auroSTOR 500 litre (upper coil)

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Article numbers

| Cylinders | Article number |
|--|----------------|
| 200 litre pre-plumbed uniSTOR | 0020237130 |
| 250 litre pre-plumbed uniSTOR | 0020237131 |
| 300 litre pre-plumbed uniSTOR | 0020237132 |
| 150 litre pre-plumbed slimline uniSTOR | 0020237129 |
| 150 litre standard uniSTOR | 0020235271 |
| 200 litre standard uniSTOR | 0020235272 |
| 250 litre standard uniSTOR | 0020235273 |
| 300 litre standard uniSTOR | 0020235274 |
| 500 litre uniSTOR | 0010019228 |
| 800 litre uniSTOR | 0010019229 |
| 500 litre auroSTOR | 0010019234 |

| Accessories | Article number |
|--|----------------|
| Immersion heater 7kW (800 litre uniSTOR only) | 0020235671 |
| Unvented cylinder kit 1" | 0020235964 |
| Unvented cylinder kit 1¼" | 0020235965 |
| Unvented cylinder kit 1½" | 0020235966 |
| Unvented cylinder kit 2" | 0020235967 |
| Expansion vessel 50 litre (for uniSTOR and auroSTOR 500 litre) | 0020229941 |
| Expansion vessel 80 litre (for uniSTOR 800 litre) | 0020229942 |

Contacts

Sales enquires

Vaillant sells its products through plumbing and heating merchants in the UK. For further information, contact your local Vaillant sales representative. Phone: **0345 602 2922**

Renewables

For renewable products aftersales service and commissioning. Phone: **0345 602 0262** Email: **aftersales@vaillant.co.uk**

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For information on training centres and courses in your area. Phone: **0345 601 8885** Email: **training@vaillant.co.uk**

Technical enquiries

If you have a technical query, you can contact us by phone or email. Phone: **0344 693 3133** Email: **technical@vaillant.co.uk**

Spares enquiries

If you need helping finding a spare part, you can download our app from the appStore or Google Play. Phone: **01773 596 615** Option 1: Vaillant stock availability Option 2: If you require a part number

Commercial

For commercial products aftersales service and commissioning. Phone: **0330 100 8574**

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