joule

ZENITH ZERO
Manufactured by joule

Zenith Zero Installation and Maintenance Manual

REGISTER THIS PRODUCT ONLINE WITHIN 28 DAYS OF COMMISSIONING

UNITED KINGDOM / IRELAND

https://joule.ie/register-products/

HN-ZEN-ZERO-ML_01

Table Of Contents

Indoor Units

Introduction

These instructions have been prepared to ensure the Zenith Zero cylinders, designed and constructed by Joule Group Limited, is installed, operated, and maintained efficiently and safely.

This manual provides essential information regarding safe handling, installation, operation, and maintenance of the equipment and should be read in conjunction with the vendor manuals and other information that forms part of the Documentation Pack supplied with this equipment.

Failure to read and follow these instructions could result in personal injury or equipment damage.

Operation of this equipment outside the original design parameters and contrary to the instructions contained in the manual, or following any modification to the equipment without the prior agreement of Joule Group Limited, is forbidden.

No responsibility can be assumed by Joule Group Limited for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the equipment supplied.

Every effort has been made to ensure the accuracy of information contained within this manual.

Please contact Joule Group Limited regarding any errors or omissions along with any questions regarding this manual that requires further clarification.

A copy of this manual must be always kept with the equipment throughout its service life for ready consultation.

Should the manual become lost or damaged, please contact Joule Group Limited for a replacement.

Joule Group Limited reserves the right to change the content of this manual without prior notice.

Safety Information

DANGER	DANGER indicates a hazardous situation that will result in death or severe injury if the hazard situation is not prevented.
WARNING	WARNING indicates a hazardous situation that can result in death or severe injury if the hazard situation is not prevented.
CAUTION	CAUTION indicates a hazardous situation that can result in minor or moderate injury if the hazard situation is not prevented.
NOTICE	NOTICE is used for practical information outside the context of possible personal injury.
SAFETY INSTRUCTIONS	Safety instructions or similar terms indicate specific safety-related instructions or processes.

WARNING	The appliance unit must be in an upright position only.
WARNING	All external controls are 230V AC connections.
DANGER	The installers, inspector, commissioner and service eingineer must have a G3 qualification in line with the Building Regulations 2010 before conducting any work.
DANGER	No untrained person shall remove or tamper with any part of the equipment as it may result in death or severe injury.
CAUTION	You can be injured if you do not obey the safety instructions as indicated on warning labels.
CAUTION	Observe all safety instructions and warnings attached to the equipment.
WARNING	Disconnect mains supply at isolator prior to carrying out maintenance or repair to the appliance. Turn off the cold-water supply valve. Open hot water tap. Open the drain valve. The unit will drain. **NOTE:** water draining from the appliance may be hot.
WARNING	Before carrying out any work on electrical components, isolate them from the power supply (230 V AC) (fuse, circuit breaker) and secure against unintentional reconnection.
WARNING	Do not use this equipment with guards removed or incorrectly fastened.
WARNING	Do not use this equipment with safety devices adjusted or removed.
NOTICE	It is recommended that the equipment is regulary serviced to ensure that this equipment operates as efficiently and as safely as possible. See Section on "Maintenance" for futher details.
WARNING	Do not connect any pressure-relief device to the vent pipe of this water heater.

CAUTION

Prior to starting any maintenance work, ensure the sourrounding is clear of all unnecessary components, debris, trip hazards and people.

CAUTION

Use authorised replacements parts, the use of unauthorised components could cause injury or damage to the appliance.

CAUTION

All safety devices temporarily removed for set up, maintenance or repair purposes must be refitted and checked immediately upon completion of the maintenance and repair work prior to operation.

CAUTION

The electrical equipment must be inspected and checked at regular intervals. Defects such as loose connections or scorched or otherwise damaged cables must be rectified immediately.

CAUTION

Be aware that the water can be hot if maintained too soon after use.

CAUTION

Leaks from pipework or seals must be repaired prior to use.

- Water may drip from the discharge pipe of the pressure-relief device and that this pipe must be left open to the atmosphere. (Tundish)
- The pressure-relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.
- A discharge pipe connected to the pressure-relief device is to be installed in a continuously downward direction and in a frost-free environment
- The rated pressure must be marked
- The (supplied) inlet group must be fitted on the incoming water to the unit, to ensure that the pressure is kept below 0.6 Mpa (6bar)

CAUTION

Appliance to be permanently connected to the mains supply and not connected by use of a hose set.

WARNING

The thermostat in this unit can disconnect both supply conductors (live and neutral) by a single initiating action. It has a safety resettable cut out mechanism which prevents excessive temperatures. In case the normal sensing device fails, the over temperature safety device will act to limit the water overtemperature.

To reset the thermostat after an intervention of the safety device:

- Switch off the heater by isolating the power supply
- Allow the water in the cylinder to cool down sufficiently
- Remove the cover and press the button on the top of the thermostat.

NB: This cut out is a safety device, if this is found to be operating frequently then we recommend consulting a qualified electrician to investigate the nature of the problem as the thermostat may need to be replaced.

SAFETY INSTRUCTIONS

This manual provides information regarding the Zenith Zero Cylinder and must be read in conjunction with any other material supplied within the Documentation Pack. A copy of Documentation Pack must be available for any persons installing, using, maintaining or repairing this equipment.

Installation and operation must only be undertaken by authorised competent persons (G3 qualification) who fully understand the information provided within the Documentation Pack.

The procedures outlined in this operating and maintenance instruction must always be followed. If in doubt ask, do not take personal risk.

Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the approval

- It is the responsibility to ensure that all the equipment fitted is installed and commissioned in accordance with the O.E.M's instructions and recommendations.
- The manufacturer shall provide the end-user and or installer with the necessary operating settings, and operating parameters as appropriate for all non -electrical and electrical parts fitted to the equipment.
- The manufacturer is required to install all the marking symbols listed in section 9 of this report.
- The manufacturer shall provide the end-user a copy of the Declaration of Conformity with a copy of the Original Instructions Manual.

Conditions of Safe Use

The following conditions relate to the safe installation and/or use of the equipment.

1. The installers, inspector, commissioner, and service engineer must have a G3 qualification in line with the Building Regulations 2010.
2. The installer shall ensure that any discharge from safety devices is safely conveyed to where it is visible but will not cause a danger to persons in or about the building.
3. The following electrical tests are conducted upon assembly as part of the production process and again on commissioning of the equipment when installed.
4. Verification that the electrical equipment complies with its technical documentation.
5. ***Verification of electrical continuity of the protective bonding circuit which shall be measured with a current between at least 0,2 A and approximately 10 A.***
6. All pipework should be checked for earth continuity to avoid the formation of a galvanic cell.
7. The functions of electrical equipment shall be tested.
8. The hydraulic system shall be subjected to a combination of inspection and testing to verify that:
   - the identification of systems and components conforms to the system's specifications;
   - the connection of components in the system complies to the circuit diagram;
   - the system, including all safety components, functions correctly;
   - there is no unintended leakage on any component other than slight wetting insufficient to form a drop on any cylinder rod after multiple cycles.
9. The appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved
   - children being supervised not to play with the appliance.

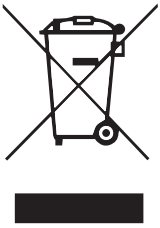
Pre-Installation Notes

Store the manual in a safe place in order to be able to use it as reference after installation. For maximum safety installers should always carefully read the following warnings.
Store the provided manual in a safe location with the end user after installation, and remember to hand it over to the new end user if the appliance unit is sold or transferred.
The manufacturers shall not be responsible for damage originating from unauthorised changes or the improper connection of electric and hydraulic lines.
Do not use units if you see some damages on the units and recognise something untoward such as loud noise, smell or burning.
In order to prevent electric shocks, fires or injuries, always stop the unit, disable the protection switch and contact Joule's technical support if the unit produces smoke, if the power cable is hot or damaged, or if the unit is very noisy.
Always remember to inspect the unit, electric connections and protections regularly. These operations shall be performed by qualified personnel only.
The unit contains moving parts and electrical parts which should always be kept out of the reach of children.
Do not attempt to repair, move, alter or reinstall the unit by unauthorised personnel. These operations may cause product damage, electric shock and fires.
Do not place containers with liquids or other objects on the unit.
All the materials used for the manufacture and packaging are recyclable.
Wear protective gloves to unpack, move, install, and service the unit to avoid your hands being injured by the edge of the parts. Do not touch the internal parts (water pipes, refrigerant pipes, heat exchangers, etc) while running the units. If you need to adjust and touch the units, allow sufficient time for the unit to cool and be sure to wear protective gloves.

Corrosion Protection

Joule cylinders are made using duplex stainless steel which is extremely corrosion resistant. They also undergo an internal process which removes all impurities and leaves the cylinder with an internal passive chromium oxide film. This protective film does not require any maintenance.

WEEE Declaration



Disposal of Waste Equipment by Users in Private Household in the European Union.

This symbol on the product indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.

For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the company where this product was purchased.

Technical information

Product Codes

No.	Description
HUZNZ – SL-15030	150/30L Zenith Zero PP (Slim)
HUZNZ – SL-18030	180/30L Zenith Zero PP (Slim)
HUZNZ – SD-18050	180/50L Zenith Zero PP (Standard)
HUZNZ – SD-20050	200/50L Zenith Zero PP (Standard)
HUZNZ – MX-25070	250/70L Zenith Zero PP (Max)
HUZNZ – MX-30070	300/70L Zenith Zero PP (Max)

ERP Product Fiche Information
Unit Specifications

Model	HUZNZ-SL-15030	HUZNZ-SL-18030	HUZNZ-SD-18050	HUZNZ-SD-20050	HUZNZ-MX-25070	HUZNZ-MX-30070
Type	Slim	Slim	Std	Std	Max	Max
Height (mm)	1898	2045	1758	1939	1980	2183
Rated Volume (L)	180	210	230	250	345	385
Actual Volume (L)	171	201	222	243	333	368
Weight (kg)	62	65	64	68	85	89
Coil Rating (kW)	33.7	34.1	31.3	30.0	32.9	32.1
Standing Heat Loss (kW/24h)	1.44	1.56	1.39	1.49	1.73	1.97
Standing Heat Loss (W)	60	65	58	62	72	82
Energy Efficiency Class	C	C	B	C	C	C
Coil Surface Area [m2]	1.8	2.0	2.0	2.0	2.5	2.5
Coil Volume (L)	8.9	9.1	10.8	10.8	12.4	12.4
V40 (L)	269	320	314	347	446	498
Pressure Drop Through The Primary Heat Exchanger (Bar)	0.0285	0.03	0.03	0.03	0.033	0.033

Technical Data

Material Specification	
Tank Shell Material	LDX 2101
Tank Boss Material	316L Stainless Steel
Coil Body Material	316L Stainless Steel
Tank Casing Material	DX52D + Z100 +OC
Foam Insulation Material	Dense PU Foam
Foam Insulation Thickness	45mm
Immersion Sheath Material	Incoloy

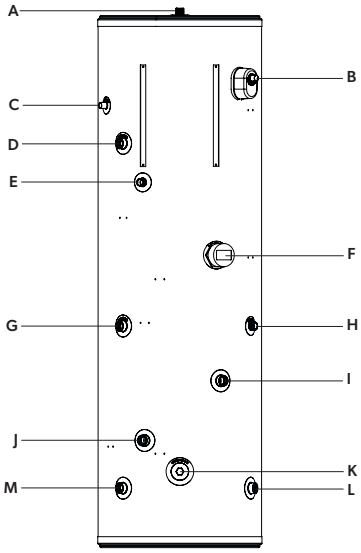
Product Specification

Max Mains Water Supply Pressure	1.0MPa / 10 bar
Operating Pressure Secondary Circuit (PRV Setting)	0.3MPa / 3 bar
Expansion Vessel Design Pressure	0.28MPa / 2.8 bar (0.2 bar below operating pressure)
Expansion Relief Valve Setting	0.6MPa / 6 bar
Maximum Design Pressure of the Secondary Circuit	0.55MPa / 5.5 bar
Maximum Expansion Vessel Pressure	1.0MPa / 10 bar
T&P Relief Valve Settings	0.7MPa / 7 bar & 90°C
Operating Pressure of Primary Circuit	0.3MPa / 3 bar
Immersion Heater Spec	3 kW @ 230Vac
Immersion Heater Thermostat	F.70/ S.78
Indirect Coil Ratings	See Specification Tables
Pressure Drop Ratings Across the Indirect Coils	See Specification Tables

Pipe work

Zenith Zero Cylinder Pipework

Reference	Description
A	Hot Water Outlet - 22mm Compression Fitting Male
B	T&P Relief Valve - 1/2" Female
C	Aquastat Pocket - 22mm Male
D	Heat Pump Flow - 1" Female
E	Secondary Return - 22mm Compression Fitting Male*
F	Immersion Heater - 1 3/4" Female
G	Heat Pump Return - 1" Female
H	Cold Water Inlet - 22mm Compression Fitting Male
I	Heating Flow - 1" Female
J	Direct Tapping - 1" Female
K	Buffer Immersion Heater - 1 3/4" Female
L	Heating Return - 1" Female
M	Heat Pump Return - 1" Female



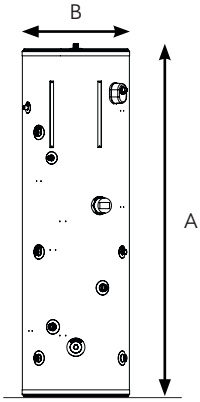
* Only available on cylinder sizes 200-50L and above.

Upon filling and commissioning, ensure all connections are completely watertight.

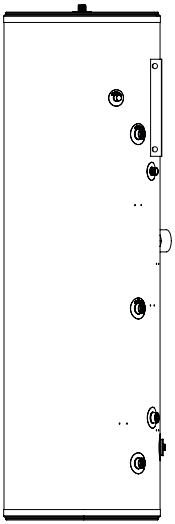
Zenith Zero Cylinder

Product Schematics

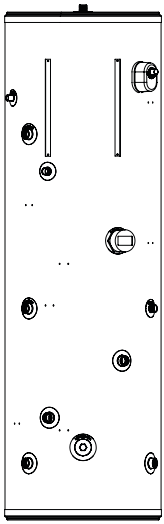
	150L/30L	180L/30L	180L/50L	200L/50L	250L/70L	300L/70L
A	1898	2045	1758	1939	1980	2183
B	475	475	530	530	600	600
C	475	475	530	530	600	600



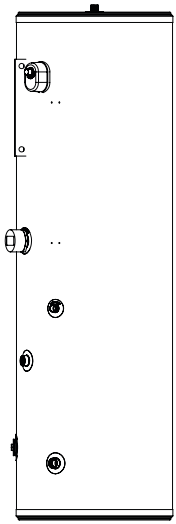
Left Side View

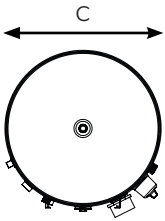


Front View



Right Side View





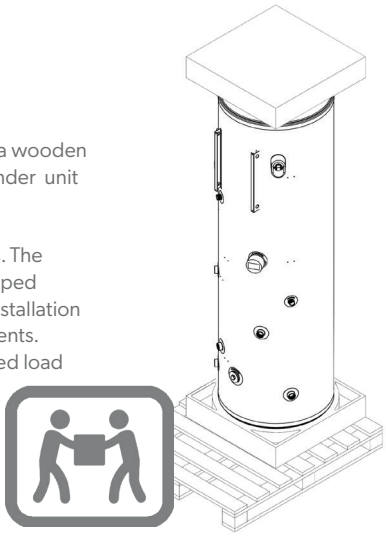
Top View

Transporting the unit

Transport and Handling

The Zenith Zero unit is delivered fully packaged and fixed to a wooden pallet base. Care should be taken when transporting the cylinder unit ensuring that the casing is not damaged by impact.

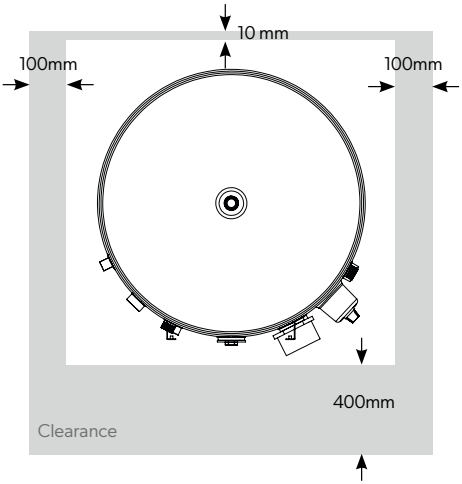
At least two people should lift the cylinder to prevent injuries. The cylinder must be stored in a dry area and must never be dropped during handling. Packaging should only be removed at the installation location. This will help protect the structure and the components. The cylinder must be installed on a level floor with the required load bearing capability.



The cylinder unit must be transported in an upright position only.

Suitable Location

Care should be taken that there is a minimum distance in front of the unit for service and maintenance works to be carried out. Enough access to allow maintenance of the valves should be considered. In addition, the immersion heater is 400mm in length and this distance should be considered to allow withdrawal for servicing if required.

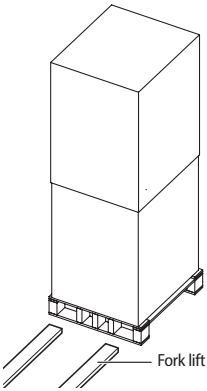


Install the cylinder unit where it is not exposed to water/excessive moisture. Particular attention is needed if sitting in a garage or outbuilding as the unit should be protected from frost. All exposed pipework must be insulated. The unit must be installed upright on a base capable of supporting its weight when full (please see the technical specification section for weights).

Installing the unit

Moving the Indoor unit

- Select the moving route in advance.
- Be sure that moving route is safe from weight of the cylinder.

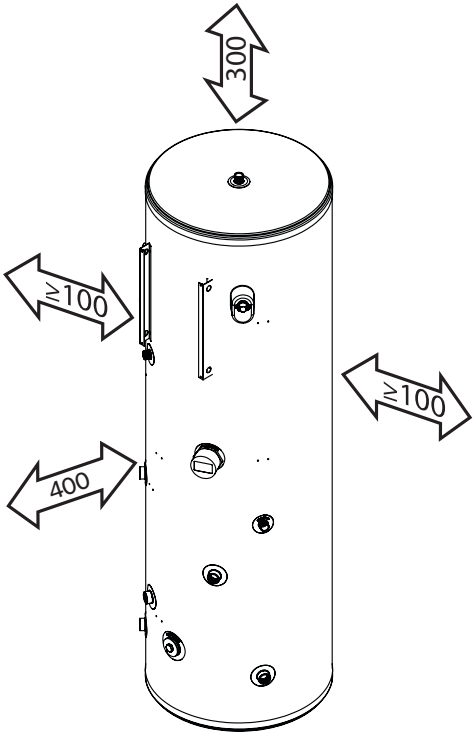


Moving the Indoor unit with a fork lift.

- Insert the fork into the wooden pallet at the bottom of the cylinder carefully. Be careful that the fork does not damage the indoor unit.
- When moving the cylinder, be careful to not damage the cylinder by impact. Do not remove the packaging until cylinder has reached its final installation location.

Installation space

- Ensure to leave the appropriate space as indicated in the drawing.
- Adhering to the installation space guidelines will ensure adequate ventilation so that the components of indoor unit will not be damaged from overheating.
- During installation rotate the filter unit to accommodate the existing installation location based on the previous spacing guidelines and to allow for ease of servicing.



Temperature & Pressure Relief Valve

Connect the tundish and route the discharge pipe which must be routed in accordance with Building Regulations - Part G3 of schedule 1.

When operating normally water will not be discharged from the temperature and pressure relief valve. Water discharge from the temperature and pressure valve will only occur under fault conditions. The tundish is pre-fitted as shown below.

The discharge pipe (D2) coming from the tundish should terminate in a safe place where there is no risk to persons near the discharge, be of metal and:

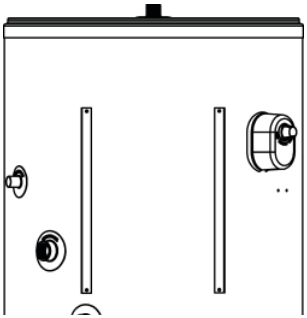
- Be at least one pipe size larger than the nominal outlet size of the safety device unless its total equivalent hydraulic resistance exceeds that of a straight pipe 9m long, i.e. discharge pipes between 9m and 18m equivalent resistance length should be at least two sizes larger than the nominal outlet size of the safety device, between 18 and 27m at least 3 sizes larger, and so on.
- Bends must be taken into account in calculating the flow resistance. Refer to Table 1 and the worked example. An alternative approach for sizing discharge pipes would be to follow BS6700 Specification for design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages.
- Be installed with a continuous fall. The discharge must be visible at the final point of discharge.

TABLE 1

	G1/2			G3/4			G1		
Min. size of discharge pipe D1	15mm			22mm			28mm		
Min. size of discharge pipework D2 from tundish	22mm	28mm	35mm	28mm	35mm	42mm	35mm	42mm	54mm
Max. length of straight pipe (no bends or elbows)	Up to 9mm	Up to 18mm	Up to 27mm	Up to 9mm	Up to 18mm	Up to 27mm	Up to 9mm	Up to 18mm	Up to 27mm
Deducts the following from the maximum length for each bend or elbow in the discharge pipe	0.8m	1m	1.4m	1.0m	1.4m	1.7m	1.4m	1.7m	2.3m

Sizing of copper discharge pipe (D2) for a temp, relief valve with a G1/2 outlet size (as supplied)

Example of Discharge Arrangements



Heating System Connection

Connecting To The Cylinder

If plastic pipes are used, they must be approved temperature resistant to 95°C at a pressure of 10 bar. A thermostatic mixer is recommended be installed in the system to prevent the risk of scalding.

Heat Pump Primary Connections

Connect the primary connections as shown below. In the Zenith Zero the hot water motorised valve is pre fitted.

Heating System Pipe Conenctions

Connect the heating zone connections as shown below. In the Zenith Zero. The circulating pump for the heating system is pre-installed.

All heating zone returns should be joined at the cylinder and return via heating return as shown below.

Inlet Control Group

Fitting the Inlet Control Group

The cold inlet must be piped into the top of the inlet control group. It is recommended to install a full bore isolation valve on the cold inlet for maintenance and servicing of the appliance.

The water supply should be checked to ensure it can meet these requirements. If necessary, consult the local water authority regarding the likely pressure and flow rate availability. Consideration should be given to upgrading existing 1⁄2" (15mm) cold mains pipework to a larger size if the recommended minimum pressure / flow rate is not being achieved. Joule™ recommend that primary pipework used has a minimum diameter of 22mm to ensure low pressure loss.

Excess pressure can lead to the cylinder bursting. The inlet control set supplied has an expansion relief valve with a 15mm connection to allow it to be connected to a tundish. Make sure that there is enough space for future maintenance. The Inlet Control Group Pressure Reducing Valve is pre-set to 3-bar. In cases where the DYNAMIC (working) pressure is less than this, the pressure reducing valve should be set to match the DYNAMIC (working) pressure. This is required to prevent noise at the expansion vessel when water is drawn off, caused by higher STATIC pressures coming through the Inlet Control Group.

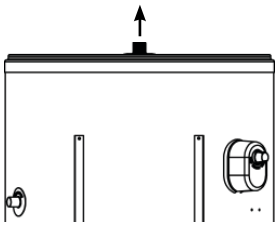
A high static (no flow) mains pressure is no guarantee of good flow availability. In a domestic installation 1.5bar and 25ltr/min should be regarded as the minimum. The maximum mains pressure that the inlet control set can cope with is 10bar.

Potable Expansion Vessel

The expansion vessel receives the increased water volume when expansion takes place as the system heats up and it maintains a positive pressure in the system. The expansion vessel contains a flexible diaphragm, which is initially charged on one side with nitrogen, but can be topped up with air when required. Select a suitable position for the expansion vessel. Mount it to the wall using the bracket provided (0-24L only, 35L and above are floor standing) and hard fix into pipework and insulate. Ensure that the top of the vessel is accessible for servicing. The pipe connecting the expansion vessel to the system should have a diameter of not less than 15mm and must not contain any restrictions.

Hot Water Outlet

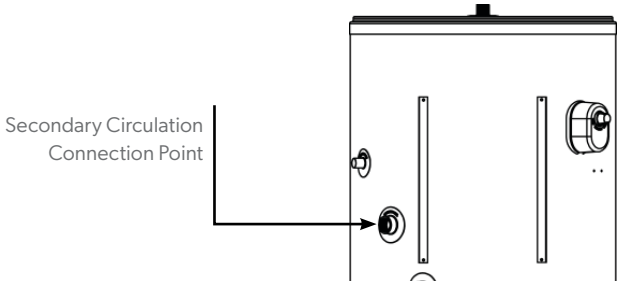
Run the first part of the hot water distribution pipework in Outlet (pipe size is 22mm). This can be reduced to 15mm and 10mm as appropriate for the type of tap etc. Your aim should be to reduce the volume of the hot draw-off pipework to a practical minimum so that the time taken for the hot water is as quick as possible. Do not use monobloc mixer tap or showers if the balanced cold connection is not provided. Outlets of this type can back pressurise the unit and result in discharge.



Inlet Control Group

Secondary Circulation

On larger installations long pipe runs to draw-off points can cause significant volumes of water to be drawn off before an acceptable temperature can be reached. Secondary pumped circulation using a stainless steel or a bronze pump and combined with effective time and temperature controls can overcome this problem. Where secondary return circulation is required the pipework should be run in 15mm pipe and the pipework must be insulated to prevent excessive heat loss, leading to high running costs. A check valve must also be installed to prevent back flow. The secondary circulation tank connection can be seen diagram below.



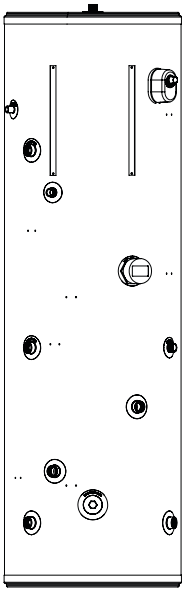
Commissioning

Potable System

First the precharge pressure in the expansion vessel must be checked to verify it is 0.3 bar below the inlet group setting ex. 3 bar inlet = 2.7 vessel. The valve is of the Schrader car tyre type. The adjusting of the presure should be done with the water side of the vessel open to atmosphere (before connection).

Check all the connections for water tightness including any factory-made connections such as the immersion heater and the temperature and pressure relief valve.

Prior to filling, open the hot tap furthest away from the cylinder to expel air. Open the cold main isolation valve and allow the unit to fill. Once the cylinder has been fully commissioned it should be heated to its normal operating temperature.



Maintenance

General

Servicing should only be carried out by competent installers and any spare parts must be purchased from Joule

Never bypass any safety devices or operate the unit without being fully operational.

Draining

Switch the electrical power off (important to avoid damage to element). Isolate the power supply to the unit. Turn off the cold water supply valve. Open hot water tap. Open the drain valve. The unit will drain.

Water drained off may be very hot!

Annual Maintenance

The Cylinder/ Indoor unit require annual servicing in order to ensure safe working and optimum performance. It is essential that the following checks are performed by a competent installer on an annual basis. This is commonly done at the same time as the annual heat pump service.

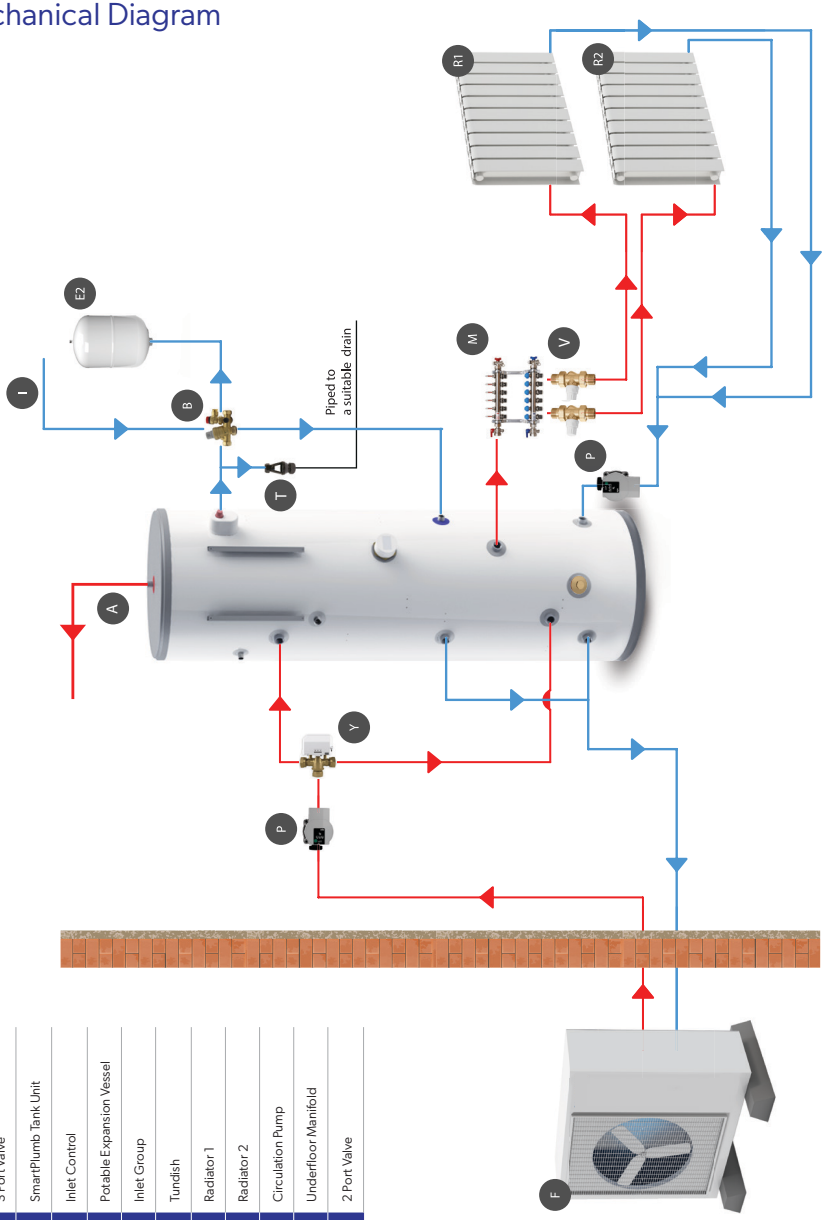
- Twist the cap for the expansion relief valve on the inlet control set and allow water to flow for 5 seconds. Release and make sure it resets correctly.
- Repeat with the pressure/temperature relief valve. In both cases check that the discharge pipework is carrying the water away adequately. If not, check for blockages etc. and clear.
- Check that any immersion heaters fitted are working correctly and that they are controlling the water at a temperature between 55°C and 65°C.
- Check the pressure in the expansion vessel is charged correctly. Turn off the water supply to the unit and open a hot tap first. The air valve on expansion vessel is a Schrader (car tyre) type.
- Air or CO2 may be used to charge the expansion vessel. Unscrew the head on the inlet control set and clean the mesh filter within.

The Service Log Book supplied with this unit should be updated at each service.

Your guarantee may be void if you cannot produce proof of annual servicing.

Zenith Zero

Mechanical Diagram

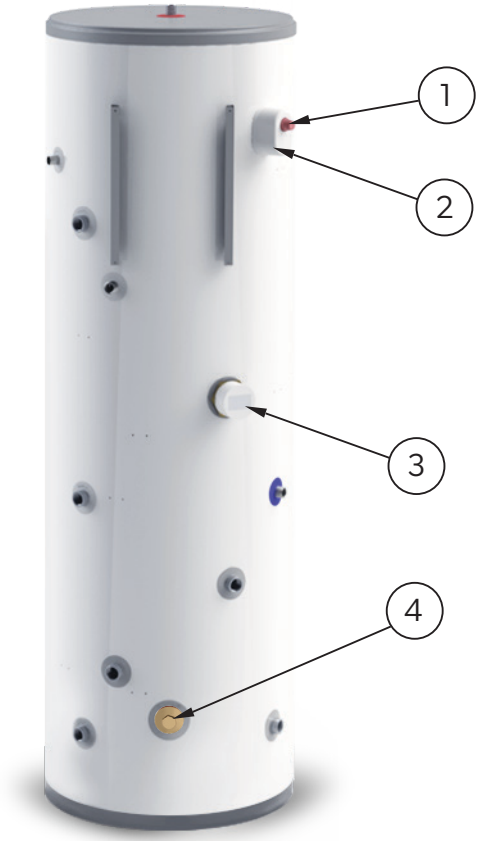


F	Outdoor Unit
Y	3 Port Valve
A	SmartPlumb Tank Unit
B	Inlet Control
E2	Potable Expansion Vessel
I	Inlet Group
T	Tundish
R1	Radiator 1
R2	Radiator 2
P	Circulation Pump
M	Underfloor Manifold
V	2 Port Valve

Spare Parts List

Zenith Zero - Exploded Parts

Ref		Description	Qty per	Unit
1		T&P - 90 Deg - 7 Bar - 1/2" (Std) V1 w/o PTFE Ring	1	Each
2		Grey T&P Relief Valve Cover	1	Each
3		IMMER INCLOY 14" 1.75" 3KW 1PH REV 3 - HIGH GAIN	1	Each
4		Buffer tank Immersion blank	1	Each



Warranty

Joule Zenith Zero

The **JOULE Zenith Zero** stainless steel vessel carries a fully transferable 25-year guarantee against faulty materials or manufacture provided that:

- It has been installed in the United Kingdom or the Republic of Ireland as per the instructions provided in the installation manual provided with the cylinder and in accordance with all of the relevant standards, regulations and codes of practice in force at the time.
- It has not been modified in any way, other than by JOULE
- It has not been misused, tampered with or subjected to neglect.
- The system is fed from the public mains water supply.
- It has only been used for the storage of potable water.
- It has not been subjected to frost damage.
- The unit has been serviced annually.
- The Service Log Book has been completed after each annual service.
- The warranty card is filled in and a copy is sent by email to warranty@joule.ie

Exclusions

The guarantee does not cover cylinders affected by the following;

- The effects of scale build up on the cylinder.
- Any labour charges associated with replacing the unit or its parts.
- Any consequential losses caused by the failure or malfunction of the unit.

Please note that invoices for servicing may be requested to prove that the unit has been serviced annually.

Unvented Kit & Other Components

The expansion vessel and cold water controls supplied with JOULE models carry a 2-years guarantee. All other components that are fitted to, or supplied, with the unit carry a 1-year guarantee.

Notes

Notes

SYSTEM COMMISSIONING CHECKLIST

This Commissioning Checklist is to be completed in full by the competent person who commissioned the storage system as a means of demonstrating compliance with the appropriate Building Regulations and then handed to the customer to keep for future reference.

Failure to install and commission this equipment to the manufacturer's instructions may invalidate the warranty but does not affect statutory rights.

Customer Name _____ Telephone Number _____

Address _____

Cylinder Make and Model _____

Cylinder Serial Number | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Commissioned by (print name) _____ Registered Operative ID Number _____

Company Name _____ Telephone Number _____

Company Address _____

_____ Commissioning Date _____

To be completed by the customer on receipt of a Building Regulations Compliance Certificate*:

Building Regulations Notification Number (if applicable) _____

ALL SYSTEMS PRIMARY SETTINGS (indirect heating only)

Is the primary circuit a sealed or open vented system?	Sealed ☐	Open ☐
What in the maximum primary flow temperature?		°C

ALL SYSTEMS

What is the incoming static cold water pressure at the inlet to the system?				bar
Has a strainer been cleaned of installation debris (if fitted)?		Yes ☐	No ☐	
Is the installation in a hard water area (above 200oom)?		Yes ☐	No ☐	
If yes, has a water scale reducer been fitted?		Yes ☐	No ☐	
What type of scale reducer has been fitted?				
What is the hot water thermostat set temperature?				°C
What is the maximum hot water flow rate at set thermostat temperature (measured at high flow outlet)?				l/min
Time and temperature controls have been fitted in compliance with Part L of the Building Regulations?			Yes ☐	
Type of control system (if applicable)	Y Plan ☐	S Plan ☐	Other ☐	
Is the cylinder solar (or other renewable) compatible?		Yes ☐	No ☐	
What is the hot water temperature at the nearest outlet?				°C
All appropriate pipes have been insulated up to 1 metre or the point where they become concealed			Yes ☐	

UNVENTED SYSTEMS ONLY

Where is the pressure reducing valve situated (if fitted)?			
What is the pressure reducing valve setting?			bar
Has a combined temperature and pressure relief valve and expansion valve been fitted and discharge tested?	Yes ☐	No ☐	
The tundish and discharge pipework have benn connected and terminated to Part G of the Building Regulations		Yes ☐	
Are all energy sources fitted with a cut out device?	Yes ☐	No ☐	
Has the expansion vessel or internal air space been checked?	Yes ☐	No ☐	

THERMAL STORES ONLY

What store temperature is achievable?		°C
What in the maximum primary flow temperature?		°C

ALL INSTALLATIONS

The hot water system complies with the appropriate Building Regulations	Yes ☐
The system has been installed and commissioned in accordance with the manufacturer's instructions	Yes ☐
The system controls have been demonstrated to and understood by the customer	Yes ☐
The manufacturer's literature, including Benchmark Checklist and Service Record, has been explained and left with the customer	Yes ☐

Commissioning Engineer's Signature

Customer's Signature

(To confirm satisfactory demonstration and receipt of manufacturer's literature)

*All installations in England and Wales must be notfied to Local Authority Building Control (LABC) either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer.

JOULE IE

mail **Unit 407 NW Business Park**,
Cappagh Road, Ballycoolin,
Blanchardstown,
Dublin 15, D11HD36

tel +353 (1) 623 7080
email info@joule.ie
web **www.joule.ie**

JOULE UK

mail **Unit 3, Leftfield Park**,
Park Road, Pontefract
West Yorkshire,
WF8 4PS

tel 0330 808 8488
email sales@jouleuk.co.uk
web **www.jouleuk.co.uk**

JOULE PL

mail Strzegomska 55D
53-611 Wroclaw
Polska

tel +48 (0) 128811171
email projekty@joule-pl.pl
web **www.joule-pl.pl**

HN-ZEN-ZERO-ML_01