

ENERSTORE

Vented Hot Water
Storage System

INSTRUCTIONS

PLEASE LEAVE WITH
HOUSEHOLDER

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IMPORTANT GUIDANCE

We cannot emphasize enough, the importance of the store temperature and draw off flow rates, especially in winter months where the cold water temperature is lower. All control thermostats including boiler thermostat and appropriate timers may need increasing to cope with the differential between the summer and winter periods.

Introduction

Your “Enerstore” thermalstore domestic hot water supply system offers you a highly efficient and effective means of providing a high pressure hot water service direct from your mains cold water supply.

Water from the mains cold supply is admitted to the cylinder via a high efficiency “finned” copper coil heat exchanger that gathers the accumulated heat in the “store”. This, now hot, mains pressure water is then passed through a thermostatic mixing valve, where it is blended with cold water to your desired temperature.

The heating of the “store” of water can be achieved in a variety of ways either singly or in combination:-

DIRECT

- (a) By way of immersion heaters normally using the Economy 7 tariff or similar.
- (b) Using hot water produced by a boiler or woodburner.

INDIRECT

- (a) By exchanging the heat produced by a boiler via a copper coil heat exchanger.
- (b) By exchanging the heat produced by solar panels via a copper coil heat exchanger.

To assist maintaining the temperature of the heat store and to minimise heat loss, the unit is provided with an extra-thick layer of factory applied foam insulation to a specification in excess of the requirements of Part L of the Building Regulations.

Important Installation Advice

1. The installation of your “Enerstore” Thermalstore hot water system should only be undertaken by a competent person and should be controlled & vented accordingly.
2. The unit should be handled with care to ensure that the unit and particularly the blending matrix remain undamaged. **DO NOT** carry or lift by the external pipework assembly.
3. The unit should be installed on a level base capable of withstanding the weight of the unit when filled.

As a guide the filled weights of our standard units are as follows:-

CYLINDER

140 litres	175 kg
180 litres	215 kg
210 litres	250 kg
250 litres	290 kg

COMBINATION TANK

140 litres	180 kg
180 litres	225 kg
210 litres	255 kg
250 litres	300 kg

4. Sufficient space should be available to make and maintain the plumbing connections and blending matrix and service the ball valve (combination tank) and install / replace the immersion heaters.

5. Incoming mains pressure should not exceed 3.5 bar. It is recommended that all installations include a pressure reducing valve on the incoming cold mains set to a maximum of 3.5 bar. Pressure reducing valves are available as an optional extra from Newark Copper Cylinder Co. Ltd.

Avoid excessive use of flux as this can damage the unit and particularly the valves. Ensure the system is thoroughly flushed of any debris or flux before final fill.

The introduction of an approved system additive is **highly recommended**.

Maintenance

The "Enerstore" is relatively maintenance free. We do strongly recommend, however, that the thermostatic mixing valve be serviced every three or four months to avoid in particular the potential build-up of limescale detrimental to its operation.

For similar reason the inline filters/strainer should be cleaned out on a regular basis.

In hard water areas we recommend that some form of anti-scaling device be fitted. Please note that some water softening devices may reduce the pressure of the incoming cold water.

Solar Coil (if applicable)

The solar coil, which is manufactured from high efficiency finned tube with a large surface area, is positioned at the bottom of the cylinder with either 15mm or 22mm flow and return connections. Two solar thermostat pockets are provided and are positioned one above the solar return and one in the higher proportion of the cylinder body.

Inhibitor

It is highly recommended that a suitable scale and corrosion inhibitor be added to your new Thermalstore hot water system. This will keep the system cleaner and will give more resistance against corrosion. It can be introduced into the system by pouring it into the header tank which feeds cold water into the bottom of the cylinder. This is, of course, perfectly safe, as the potable water that is drawn from the taps is separated from this main, contaminated body of water by a heat exchanger coil or in some cases, a plate heat exchanger.

Please be aware that, if your Thermalstore incorporates a coil for a separate system, for example a radiator circuit, it would be necessary to add an inhibitor to this system as well.

Connection positioning and size information

Due to the fact that 99% of the cylinders that we manufacture are made specifically for each customer's requirements, we do not include a drawing for each unit. Specific positioning and size information for this,

X **mm**

Thermalstore Cylinder

can be obtained from us at
Newark Copper Cylinder Co. Ltd,
by giving us a call on:

01636 678437

Or Email: sales@newarkcoppercylinder.co.uk

Please quote this cylinder's reference number,

during any correspondence.

NEWARK COPPER CYLINDER CO. LTD - THERMALSTORE 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. All installations of pressurised thermalstores should be notified to Local Area Building Control (LABC) either directly or through a Competent Persons Scheme. The LABC will then issue a Building Regulations Compliance Certificate to the customer. If this unit is open vented, this checklist should be left with 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. If you have any suggestions on how this form might be improved, we would appreciate your feedback.

Installer Info	
Cylinder Reference N°	
Commissioned By	
Company Name & Address	
Telephone N°	
Date Commissioned	/ /
Building Regulation N°	

Heating System Types			
Gas/Oil Boiler	Yes	Pressurised?	
Biomass Boiler	Yes	Pressurised?	
Solid Fuel Appliance	Yes	Pressurised?	
Heat Pump	Yes	Pressurised?	
Solar Panels	Yes	Pressurised?	
Immersion Heater	Yes	Pressurised?	
Other (Please Specify)			

Mains Pressure DHW Coil

Incoming Pressure BAR

Has a pressure reducing valve been fitted so as to give a balanced pressure of 3 bar across all hot & cold draw-off points?

Has the thermostatic mixer valve been tested and if necessary, adjusted to give a draw-off water temperature of 55 - 60°C at the nearest outlet?

Has a check valve been fitted in a suitable position in the system so as to prevent the possibility of backflow?

Has a secondary return circuit been incorporated into the system?

Has a water scale reducer been fitted?

If yes, what type of scale reducer has been fitted?

The hot water system complies with the appropriate Building Regulations

The system has been installed and commissioned in accordance with the manufacturer's instructions

The unit and it's connections have been checked for leaks prior to leaving the installation

The system controls have been demonstrated to and understood by the customer

The manufacturer's literature has been explained to and left with the customer

Commissioning Engineer's Signature

Customer Signature

Troubleshooting

Whilst the “Enerstore” is essentially trouble free problems may occasionally arise. To assist in their resolution we offer a checklist of problems and their causes.

PROBLEM

POSSIBLE CAUSE

Lack of hot water:

- (a) **Heat source(s) unavailable-**
Check whether appliance(s) which should be providing heat to the store are operational (if in any doubt have a plumber or heating engineer check for correct operation)

- (b) **Control thermostats for heat source(s) not working or incorrectly set -**
A store temperature of around 70° C should be adequate under normal circumstances, however, if large volumes of hot water are required over a long period of time, you may wish to consider setting the thermostats higher (but to no more than 80° C).

- (c) **Flow rate too high -**
Despite the high efficiency of the finned coil heat exchanger, a certain amount of time is needed to heat up the incoming cold water as it is passing through the heat store.

Excessive flow rates will reduce the time between the cold water entering and exiting the heat exchanger coil, diminishing the heat exchange performance. Reduce flow rates to achieve optimum performance.

Insufficient Pressure:

- (a) **Incoming cold water mains pressure inadequate -**
Refer to water authority.

- (b) **Incoming cold water mains pressure reducing valve set incorrectly or malfunctioning -**
Check setting and adjust as appropriate.

- (c) **In line filters / strainer blocked -**
Clean out!!

Overflow (Applicable to “combination” type Thermalstores only):

In the event of the float valve failing, water will continue to fill the header tank. To prevent the header tank from overflowing, an overflow pipe **MUST** be fitted, which should discharge to a **visible** and suitable place outside, so that a problem with the float valve can be easily identified.

Installation Details

Date of Installation :

Installers Details :

Name

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Address

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Telephone

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Comments

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Notes on maintenance undertaken

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Manual Handling

As our cylinders can vary massively in both size and weight, it is important to know the correct way to handle the item;

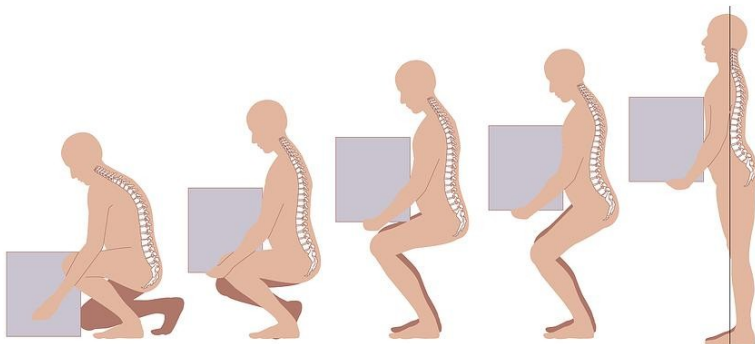
Firstly it is important that the item is not lifted or moved using the auxiliary pipe work; this can bend the fittings and break the braze which can cause leakage.

It is recommended that any weight over 25kg should be lifted by 2 persons. Larger items may obstruct vision so ensure that there is a clear path which is free from any slip or trip hazards. Footing should be shoulder width apart so that there is full balance both forward and sideways.

Your back should be straight and kept rigid as to not put strain on the weaker lower back muscles and ensure you don't move in a jerking motion or any way which involves twisting your back. Elbows should be kept close to the body and upper arms should be straight with your body. There are not many areas to grab on a cylinder that won't cause damage so it is advised to carry the unit on its side with each person holding onto either end.

If possible remember to wear gloves when lifting as bosses and connections may have sharp edges.

If the item is too heavy for multiple people to lift safely, it is advised to seek alternative methods such as using a crane or forklift.



Hot Water Association Charter

As members of the Hot Water Association, we are pleased to uphold the Association's Charter's Code of Practice that requires us;

- To supply fit for purpose products clearly and honestly described.
- To supply products that meet, or exceed appropriate standards and building and water regulations.
- To provide pre and post sales technical support.
- To provide clear and concise warranty details to customers.

In this regard we are happy to provide pre and post sales technical support by way of telephone calls on 01636678437, email on sales@newarkcoppercylinder.co.uk, letter or indeed by personal contact.

Our warranty currently extends to a period of twenty four months from the date of installation; the full detail of this warranty is contained at the reverse of our delivery note and invoice.



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