



INSTALLATION INSTRUCTIONS

Z6DWUK

Double-walled

These instructions are to be left with the user for the home user pack.

The ZypHO Z6DWUK should only be installed by a competent plumber who has the expertise to be guided by this manual. Please read the entire manual before commencing the installation process. Should you have any technical questions do not hesitate to contact us.

CONTENTS

1. Introduction	4
2. Product Technical Data	5
2.1. Dimensions	5
2.2. Technical Specifications	5
2.3. Performance	6
3. Pre-installation Requirements	6
3.1. Principle of Operation	6
3.2. Installation Configuration	6
3.3. Requirements for Recognition within SAP Calculations	7
3.3.1. DWELLING EVALUATION	7
3.3.2. DRAINAGE CONNECTIONS	7
3.3.3. PLUMBING CONNECTIONS	8
3.3.4. INSTALLATION LOCATION	8
4. Installation	8
4.1. Package Contents	8
4.2. Installation Procedure	10
5. Safety	11
5.1. Tested for drinking Water Consumption	11
5.2. Legionella Prevention	11
6. Maintenance	12
7. Warranty	12

1. INTRODUCTION

You have purchased a “Zypho Z6DWUK” heat recovery product for the shower drain water and we thank you for the trust you have placed in us.

This unit is designed to provide you with energy savings on your domestic water heating.

Indeed, shower water that goes down to the drain stays hot at a temperature of about 35 °C.

Your Zypho Z6DWUK will allow you to recover the heat contained in the drained water and to transfer this heat to the cold water before it goes to the shower mixer tap and/or water heater device.

There is no contact between the water supply and the drain water.

The transfer of heat is achieved through a double-walled copper heat exchanger in accordance with the regulations EN 1717.

With your Zypho Z6DWUK, you will achieve significant savings on your energy costs for the production of hot water for your showers.

To achieve hot water at approximately 38°C, your shower mixer valve mixes very cold water (usually 10°C) with a significant amount of hot water from your heating device.

When utilizing the Zypho Z6DWUK, the cold water feeding into your mixer valve or heater device is pre-heated to approximately 20 - 25°C, an increase of approximately 15°C (depending on the type of configuration and flow of the shower), the result is a significant energy saving.

Depending on the system configuration and conditions of use, it is possible to achieve as much as 24% energy savings on hot water for the shower (according to the tests made by the independent agency - KIWA Netherlands).

IMPORTANT!

Please note that this manual contains important information, read it carefully before starting the installation or use of the product.

- Installation and associated work on this equipment must be carried out by a competent professional.

- Non-compliance with the recommendations for installation and use may void any warranty.

- Keep this manual in a safe place for easy reference when required throughout the life of the product.

NCM/SAP recognition

For the recognition of the ZYPHO Z6DWUK energy saving performance within the National Calculation Method (NCM) for energy rating of dwellings known as SAP (Standard Assessment Procedure) it is vital to comply with the following:

- a) This instruction manual
- b) The system design checklist
- c) The Installation checklist
- d) The Certificate of installation

b, c & d are supplied as a single document and are attached to this document and also available at: www.ncm-pcdb.org.uk/sap (under ‘Technical Documents’) – A signed copy of each should:

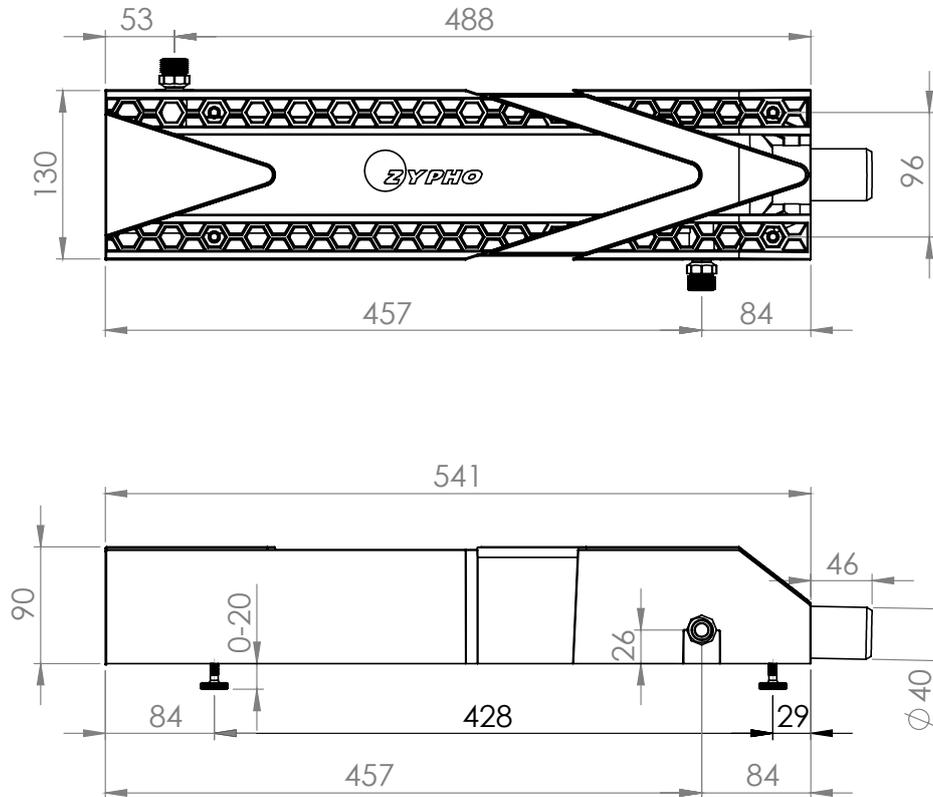
1. Be left with the home user pack (for the home owner)
2. Retained by the installer
3. A copy sent to Solarking Commercial (See company details on Page 16).

(Note: Building control officers may also request a copy)

A NCM (SAP) identifier label is permanently fixed to the Zypho Z6DWUK unit and a second label attached to a nearby boiler or service cupboard. The ‘model qualifier’ denotes the system installation configuration System A, B or C. For the permanent label, the model qualifier will state “Refer to installation certificate, if unknown assume System B”. The actual system configuration will be recorded on the system design checklist, installation checklist/ certificate of installation and the second NCM (SAP) identifier label.

2. PRODUCT TECHNICAL DATA

2.1. Dimensions



2.2. Technical specifications

Description	Unit	Value
Heat exchanger material	-	copper
Body material	-	ABS
Weight	kg	5.0
Temperature range	°C	0 - 60
Maximum shower flow	L/min	30.0
Maximum mains water inlet pressure	Bar	16.0
Minimum mains water inlet pressure	Bar	1.0
Heat exchanger pressure drop at 9.2 L/min — mains water	Bar	0.28
Heat exchanger pressure drop at 12.5 L/min — mains water	Bar	0.47

2.3. Performance

Shower Flow Rate at 40°C	System A		System B		System C	
	Efficiency	Recovered Energy	Efficiency	Recovered Energy	Efficiency	Recovered Energy
9.0 L/m	23.9%	4.48 kWh	20.2%	-	22.7%	-
9.2 L/m	23.6%	4.56 kWh	-	-	-	-
11.0 L/m	22.4%	5.22 kWh	19.30%	-	21.2%	-
12.5 L/m	21.8%	5.72 kWh	-	-	-	-

Recovered Energy kWh figures are calculated by the independent agency KIWA Nederland B.V.

3. PRE-INSTALLATION REQUIREMENTS

3.1. Principle of Operation

The Zypho Z6DWUK is a Waste Water Heat Recovery Unit (WWHRU).

The Zypho Z6DWUK recovers the heat contained in the shower drain water and transfers this heat to the cold mains water prior to reaching the shower mixer tap and/or Domestic Hot Water heater (DHW). The DHW heater could be a combination boiler, an unvented cylinder, a heat interface unit on a district heating scheme* or a thermal store.*

(*) mains pressure DHW delivery

3.2. Installation Configuration

The Zypho Z6DWUK should be located horizontally on a suitable base below the shower, with the desired separation.

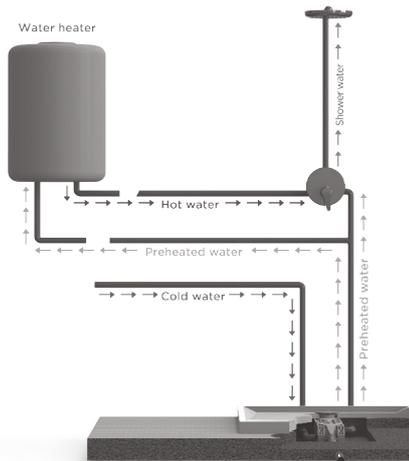
The mains cold water is connected to the Zypho Z6DWUK inlet and the preheated water from the Zypho Z6DWUK is connected in one of the following 3 configurations:

System A: To the shower mixing valve (mains cold water) inlet and the DHW heater inlet. This will provide the maximum amount of recovered energy.

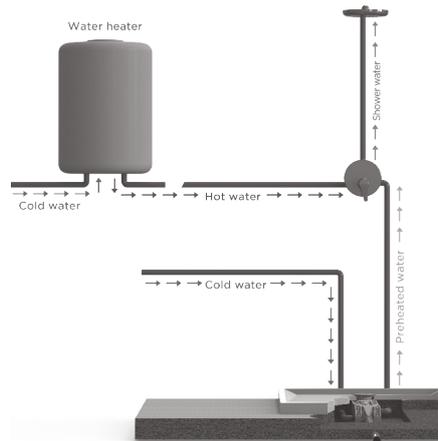
System B: To the shower mixing valve (mains cold water) inlet ONLY. We recommend this configuration if the connection to the DHW heater involves too much work or it is too far.

System C: To the DHW heater inlet ONLY.

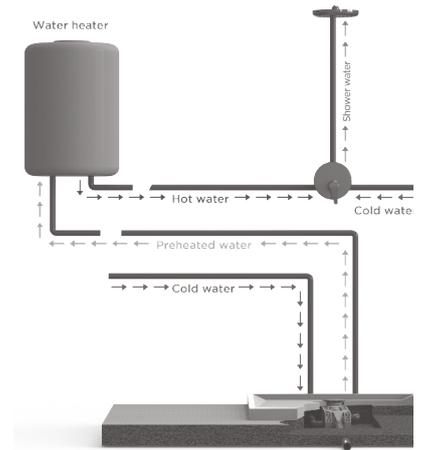
SAP calculation recognises the performances of Systems A, B & C. System A will provide the highest efficiencies (see section 2.3 for different system performances). Note: kWh calculations are estimates and are not calculated by SAP



System A Configuration



System B Configuration



System C Configuration

3.3. Requirements for Recognition within SAP Calculations

3.3.1. DWELLING EVALUATION

The following dwelling requirements must be satisfied in order for the WWHRS to be recognised in SAP calculations:

- Supply water pressure and flow rate must be sufficient to ensure satisfactory DHW performance after installation of the Zypho Z6DWUK.
- The domestic hot water system (DHW) must be a mains pressure system;
- If not installed in System B configuration, the DHW heater must accept a preheated water inlet (Max. 30°C).
- The shower(s) must use a thermostatic mixing valves.
- The Zypho Z6DWUK must be installed within the dwelling heated envelope.

NOTE: Whilst the Zypho Z6DWUK can be connected to Instantaneous electric showers, such combinations are not recognised in SAP calculations

3.3.2. DRAINAGE CONNECTIONS

The length of the drain pipe between the shower and the Zypho Z6DWUK must be minimised, preferably to less than 3 metres.

With reference to Approved Document - Part H (2002) of the Building Regulations, an appropriate method for preventing the ingress of foul sewer gases as a result of the WWHRS installation must be devised. Aeration valve is not required.

3.3.3. PLUMBING CONNECTIONS

The pipework between the Zypho Z6DWUK preheated water outlet and the water heater and/or shower cold water inlet(s) (depending on installation configuration) must be:

- Labelled to indicate that no other services can be interconnected, to prevent the future connection of any other service points, such as taps;
- Insulated in accordance with the specification for DHW primary circulation pipes defined in 'Domestic Building Services Compliance Guide - 2013 Edition'.
- The WWHRS preheated water outlet is only connected to the water heater and shower cold water inlet(s), but not any other service points, such as taps.
- If shut-off valves are specified for the Zypho Z6DWUK unit inlet and/or outlet, they must be 'full flow' (non-restricting) shut-off valves.

3.3.4. INSTALLATION LOCATION

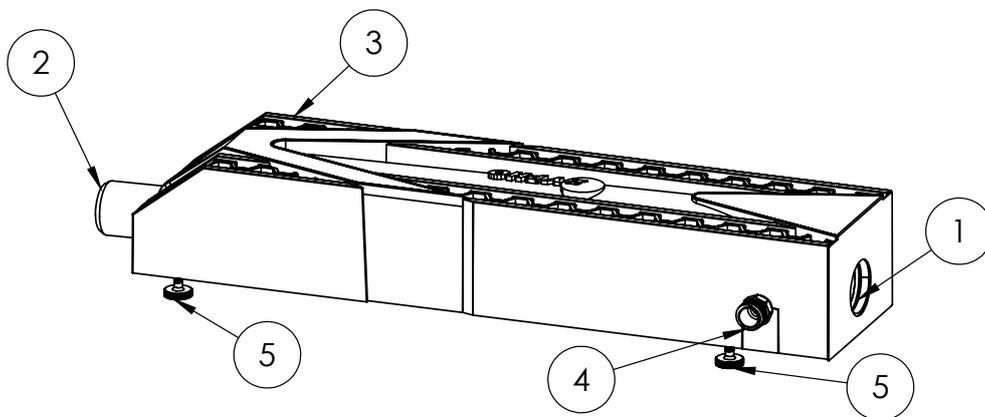
The location must allow access to all parts and easily allow any maintenance, such as cleaning.

The installation location for the Zypho Z6DWUK should not normally exceed 25°C.

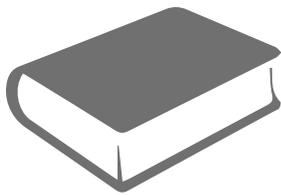
The Zypho Z6DWUK installation should ensure compliance with Approved Document Part H (2002) of the Building Regulations.

4. INSTALLATION

4.1. Package contents



Nº	Description	Material	Connection	Quantity
1	Shower drain water input connection	ABS	Ø40mm Female	1
2	Shower drain water output connection	PVC	Ø40mm Male	1
3	Mains water input connection	Brass	1/2" Male	1
4	Mains water output connection	Brass	1/2" Male	1
5	Adjustable foot	Steel/Plastic	-	4

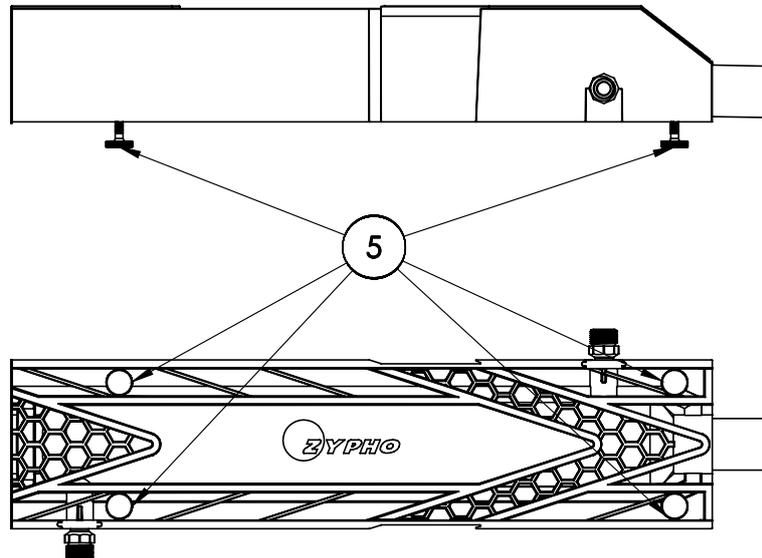


Version	Description
Z6DWUK	Installation instructions
10/11 - 27.06.12	Design and Installation instructions
Z6DWUK	NCM (SAP) Identifier label

4.2. Installation procedure

The location for the unit should provide sufficient space for the Zypho Z6DWUK installation.

Using a spirit level, and 4 adjustable feet (item n°5), adjust the Zypho Z6DWUK height and position it horizontally in its final location.



The internal evacuation of the Zypho Z6DWUK already has a slope of 2% to ensure the correct flow of waste water from the shower.

Connect the mains cold water inlet (item n.º 3) and preheated mains water outlet (item n.º 4) to the shower's mains cold water inlet and/or domestic water heater (depending on installation configuration). Use both of the provided Male 1/2" fittings and proceed to their sealing in accordance with good plumbing practice.

Connect the shower waste water outlet from the shower to the Zypho Z6DWUK drain water input connection (item n.º 1) and connect the Zypho Z6DWUK drain water output connection (item n.º 2) to the drain pipe sewer/floor drain.

Prior to the Zypho Z6DWUK cold mains water inlet (item n.º 3) and after the Zypho Z6DWUK preheated mains water outlet (item n.º 4), there should be installed a 'full flow' (non-restricting) shut-off valves and they should be accessible. The shut-off valves are not supplied.

Finally, before use carry out the following checks:

1) Perform a leak test on the mains water circuit and on the drain water circuit to ensure integrity of the inlet and outlet connections;

2) Double check that the unit is in the horizontal position;

3) Ensure that the installation has been completed in accordance with one of the three installation configurations (A, B or C);

4) Ensure that the pipework between the Zypho Z6DWUK preheated water outlet and the water heater and/or shower mains cold water inlet(s) (depending on installation configuration) is insulated in accordance with the specification for DHW primary circulation pipes defined in 'Domestic Building Services Compliance Guide - 2013 Edition';

5) Ensure that the pipework between the Zypho Z6DWUK preheated water outlet and the water heater and/or shower cold water inlet(s) (depending on installation configuration) is labelled to indicate that no other services can be interconnected.

6) Note: The NCM (SAP) Identifier label must be marked appropriately with the Installation Configuration (System A, B or C within the 'Model Qualifier' field) that has been used and then affixed to the nearby service/boiler cupboard or similar and must be visible without dismantling of any other systems using tools.

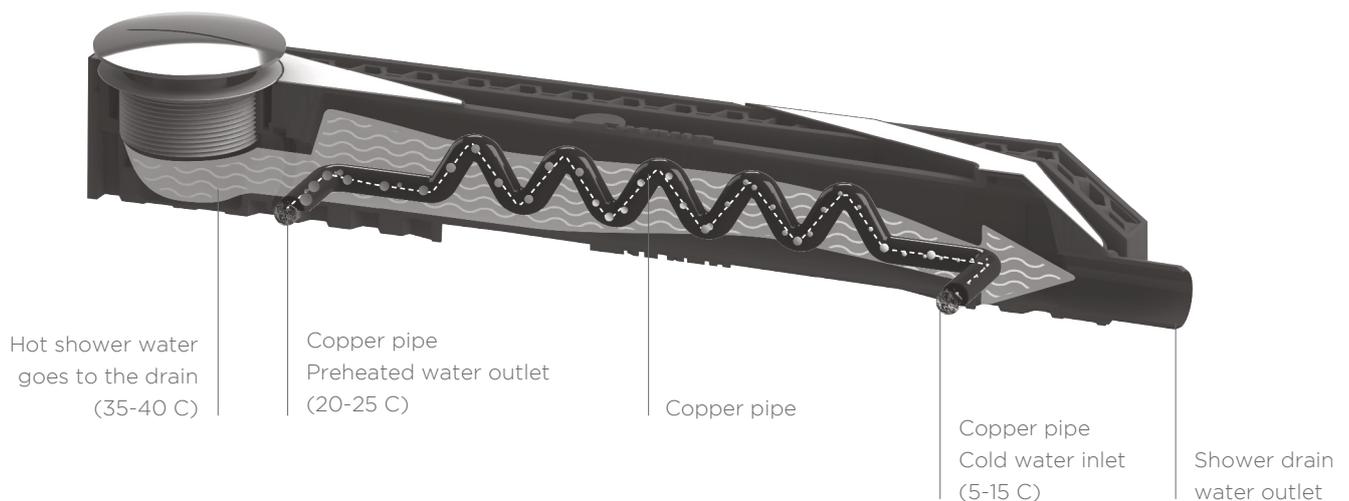
5. SAFETY

5.1. Tested for drinking Water Consumption

The Zypko Z6DWUK complies with the requirements of the United Kingdom Water Supply Regulations and Scottish Water Byelaws: Certificated by WRAS

European regulations EN 1717 (“Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow”) require that double walls must be used to separate drain water and drinking water. The Zypko Z6DWUK heat exchanger’s coil is made by squeezing two copper pipes against each other. This creates a very robust and consistent structure, in which the contact between the pipes does not depend on water pressure.

5.2. Legionella Prevention



The Zypko Z6DWUK design also complies with the Directive Legionella Prevention:

- The unit has no dead spaces and is subject to high flow rates which prevents water from stagnation.
- Drain water never stays a long time inside of the unit since its construction guarantees that it is fully drained out at the end of the shower.
- After shower, fresh water cools down below 25 °C, as recommended by the WHO.
- The Zypko Z6DWUK is always installed relatively close to the shower mixer which minimizes the distance between the unit and shower valve.
- Copper coil itself contributes to reducing Legionella-related risks.

6. MAINTENANCE



The Zypho Z6DWUK has been designed to require little maintenance.

Make sure that the chosen shower tray waste outlet has an efficient hair filter or trap.

To avoid a lower efficiency in the long term it is recommended to clean the Zypho Z6DWUK periodically, to dissolve soap residues on the copper pipes. We recommend cleaning the unit with a drain cleaner and/or a pipe cleaning brush and with hot water.

7. WARRANTY

The Zypho Z6DWUK product must be installed by a qualified professional in accordance with the standards and requirements of these instructions (Installation and all requirements for SAP, if product is to be recognised for energy efficiency calculations).

The appliance must be used in accordance with its intended use, following the guidelines and regulations of good plumbing practices, Building Regulations, and in accordance with the requirements of these instructions.

From the date of invoice, the Zypho Z6DWUK is guaranteed for 10 years against all defects in design, materials or workmanship. Conditional upon copies of the 'design checklist and the installation checklist and certificate' are completed and returned to Solarking Commercial.

In case of defect, after recognition by our distributor or installer, the product is repaired or replaced free of charge, excluding installation or removal labour costs, shipping, moving or any other compensation or extended warranty.

The defective product must be returned to us; postage, packaging, labour and travel expenses will be borne by the user.

Disclaimer of Warranty:

Will be excluded from warranty defects caused by:

- Hot water pressure that exceeds the limits of use
- Use of the Zypho Z6DWUK without siphon or without filter
- A lack of maintenance
- Improper installation of the Zypho Z6DWUK
- Any modification of the Zypho Z6DWUK
- Any misuse of its original use
- All shipping damage or improper storage
- Normal components wear
- Installation in a location subjected to freezing weather

The warranty is valid only in the country of distribution.





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