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Herz Oxford Domestic Hot Water Heat Interface Unit

kiwa approved

UK WATER REGULATION 4

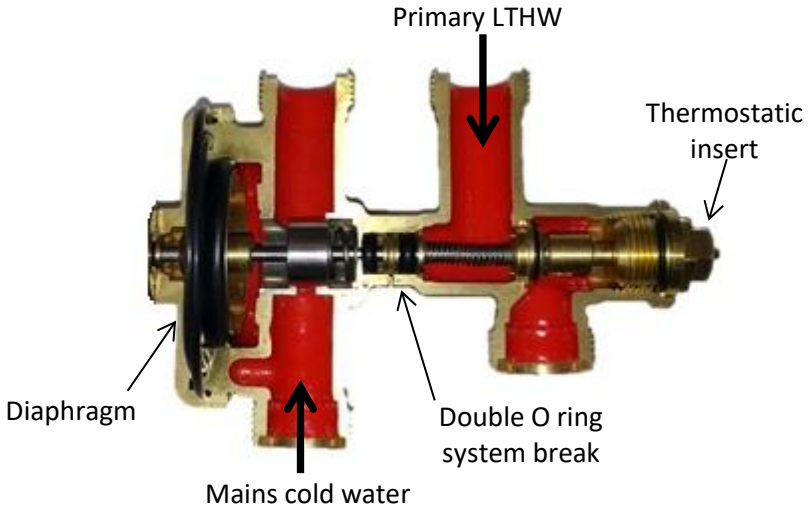
General Description

The Herz Oxford DHW only HIU is suitable for all community schemes and enables LTHW from a central plant to provide DHWS to each dwelling with complete hydraulic separation between the LTHW primary and the DHW systems.

The HIU is a complete package comprising of all components mounted on a frame, factory assembled and tested.

Main Components

Pressure Temperature Control Valve



As a hot water tap is opened the pressure temperature control valve reacts to the difference in pressure via a diaphragm and opens allowing the cold and primary heating water to flow through the heat exchanger. In order to prolong the life of the DHW heat exchanger and prevent lime scale build up, the temperature of the domestic hot water is controlled by a thermostat fitted to the pressure temperature control valve. Using an immersion sensor, this thermostat controls the temperature of the hot water that exits the heat exchanger and regulates the pressure temperature control valve thus maximising the energy efficiency of both the HIU and the primary system.

Thermostatic Bypass Valve

The Thermostatic circulation bypass valve utilises a return temperature limiter head fitted to a thermostatic valve installed in a bypass between the primary flow and return pipework within the HIU. This maintains a minimum primary temperature when the heat exchanger is not in use and ensures a quick response time at the hot tap.

HIU Ball Valves

The Herz Oxford HIU is fitted with special ball valves designed specifically for the purpose. The ball valves are delivered fitted to the HIU but can be removed and installed at first fix if required. The HIU ball valves are fitted with drain valves to facilitate draining with integral test points fitted on the primary flow and return valves to aid additional temperature or pressure measurement if required. The ball valves have union connections for convenience and to allow the HIU to be easily removed for servicing.

Flushing Bypass

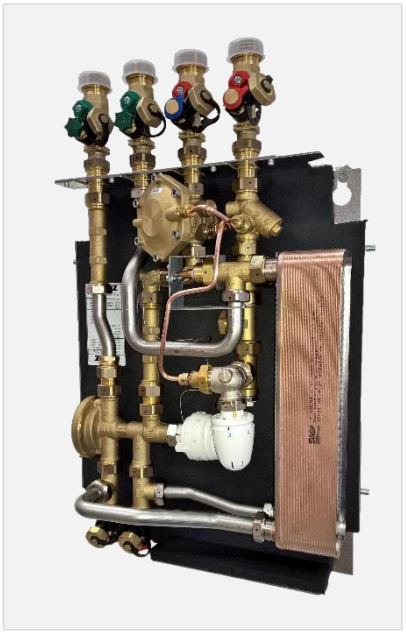
The Herz Oxford HIU can be fitted with a Herz HIU flushing bypass, this is a custom made valve designed to facilitate the flushing of the primary system without the water circulating through the HIU as recommended in BSRIA Guide BG 62/2015. The flushing bypass valve can be connected directly to the HIU ball valves at first fix so that primary flushing can be carried out before the HIU is fitted.

Dual Orientation

The Herz Oxford HIU has been designed so that it can be installed with the ball valve connections at the top or at the bottom. The fully insulated cover will fit onto the HIU regardless of the installed orientation. An optional ball valve cover is available if required, this can be fitted to the top or bottom of the cover as appropriate to the orientation of the HIU.

Oxford HIU for bottom entry installation

Oxford HIU for bottom entry installation inc cover with optional ball valve cover



Oxford HIU for top entry installation

Oxford HIU for top entry installation with cover

Other Features

- Instantaneous hot water to properties
- Low primary return temperature maximises system efficiency
- Fully insulated cover and back board
- Option for heat meter (110mm Spool piece provided as standard)
- Option for water meter (110mm Spool piece provided as standard)
- UK Water Reg 4 Compliant
- 18mm stainless steel pipe work
- Lockable cover with security fixing screw
- Dual orientation for ease of connection
- Optional ball valve cover available if required

Function

Domestic hot water is generated via the DHW heat exchanger mounted in the HIU and provides instantaneous hot water on demand.

The temperature of the DHW is controlled by a thermostatic head with an immersion sensor, this head controls the temperature of the hot water that exits the heat exchanger and regulates the primary water flowrate.

When a hot water tap is opened the drop in pressure in the hot water pipe will open the 4 port pressure temperature control valve which in turn will allow primary hot water into the heat exchanger.

When the hot water demand ceases the pressure temperature control valve will immediately stop the primary flow into the heat exchanger. Therefore there is no drain on the primary heating when there is no demand, so no “extra energy usage” when residents are on holiday for example.

A thermostatic circulation bypass valve is fitted to maintain a minimum primary temperature when there is no demand for hot water and the heat exchanger is not in use. This provides a quick DHW response and avoids unnecessary energy usage for the occupier.

Energy Metering

A battery powered energy meter can be provided as an option.

The meter will measure flow using the ultrasonic principle with an accuracy complying with EN1434 and MID in Class 2.

The heat meter will have options for M bus or radio.

Pre-payment options are available on request.

Oxford HIU Technical Data

Description	Data
Maximum DHW output Oxford	55 kW
Maximum primary supply temperature	90°C
Maximum DHW temperature	55°C
Maximum DHW flowrate Oxford	20 l/min
Minimum DP at 85°C	30 kPa
Maximum working pressure primary side	10 bar
Maximum working pressure DHW side	10 bar
Min cold water pressure for max output	2.5 bar
Ball valve connections	22mm/15mm compression
Dimensions H x W x D	490mm x 400mm x 160mm
Dimensions H x W x D (with ball valve cover)	600mm x 400mm x 160mm

Oxford HIU Flow Data

DHW		50/10°C	50/10°C	50/10°C	50/10°C	50/10°C	DHW Temperature
Output	**Flowrate**	**60°C**	**65°C**	**70°C**	**75°C**	**80°C**	**Primary Flow Temperature**
28 kW	10 l/min	16.1	14.1	13.0	12.2	11.7	Primary Return Temp (°C)
		540	463	411	375	340	Primary Flowrate (l/h)
42 kW	15 l/min	16.0	14.4	13.9	13.0	12.5	Primary Return Temp (°C)
		762	693	620	564	523	Primary Flowrate (l/h)
55 kW	20 l/min	14.8	14.4	13.9	13.4	12.8	Primary Return Temp (°C)
		887	837	775	717	664	Primary Flowrate (l/h)

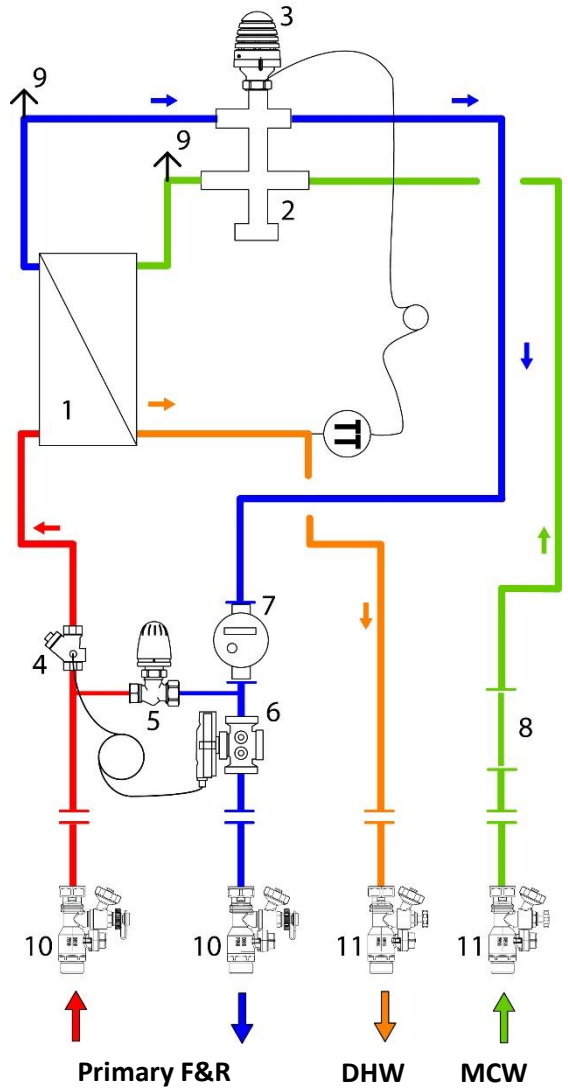
Water Quality

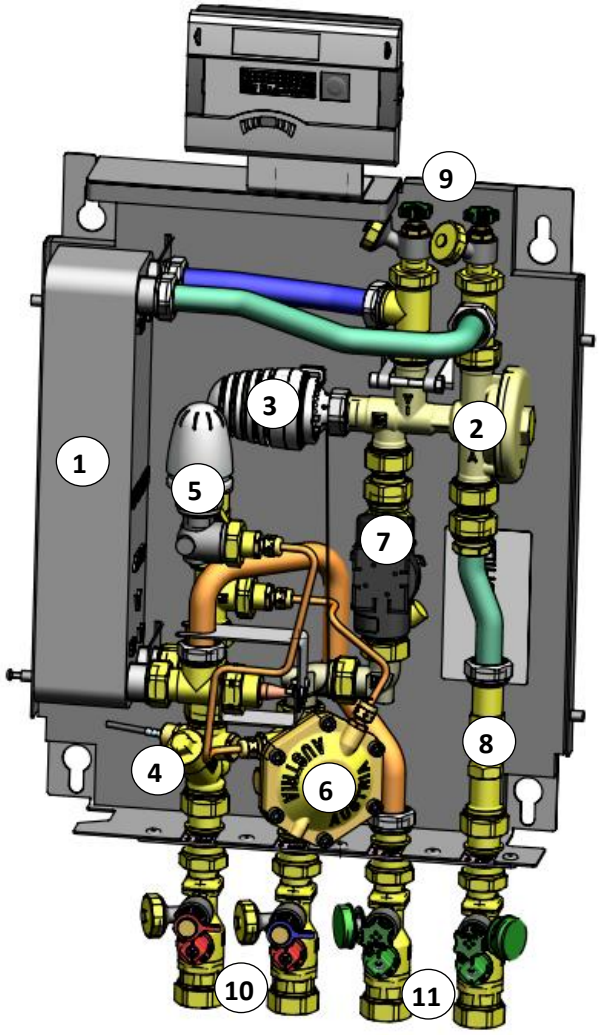
Consideration should be given to the use of a scale prevention device when aggressive water supplies are present.

UK Water Reg 4 Compliant

Herz Oxford HIU KUKReg4 Certificate No: 2210712

Oxford HIU Schematic

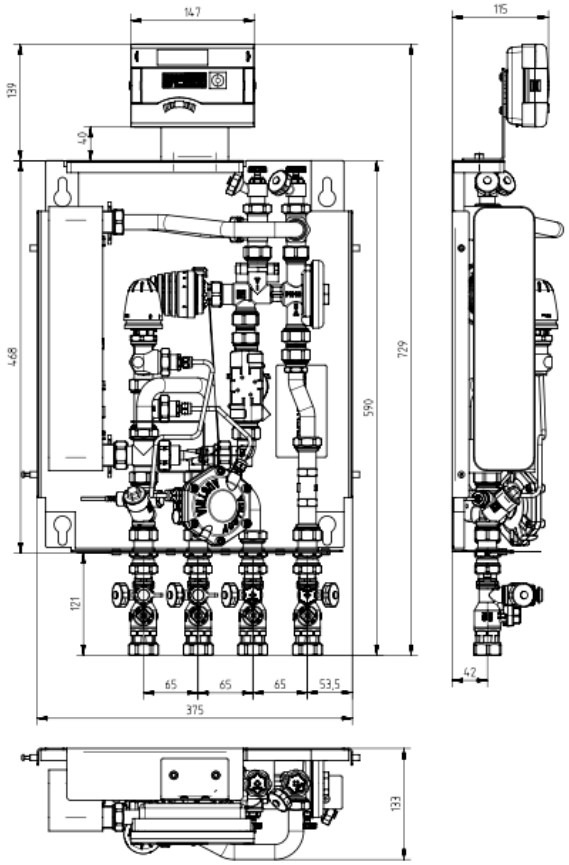




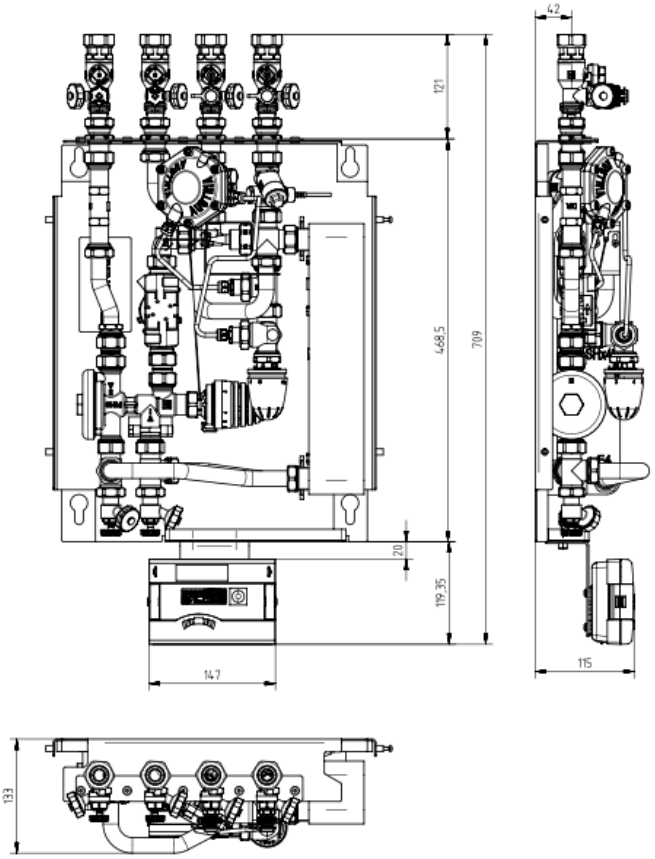
No	Description
1	DHW heat exchanger - Stainless Steel brazed
2	Pressure temperature control valve
3	Thermostatic head with contact sensor
4	Primary strainer 0.5mm mesh
5	Primary thermostatic circulation bypass valve
6	Differential pressure control valve
7	Optional heat meter
8	Optional water meter
9	Drain and vent valves
10	Isolation and drain ball valves with test points
11	Isolation and drain ball valves

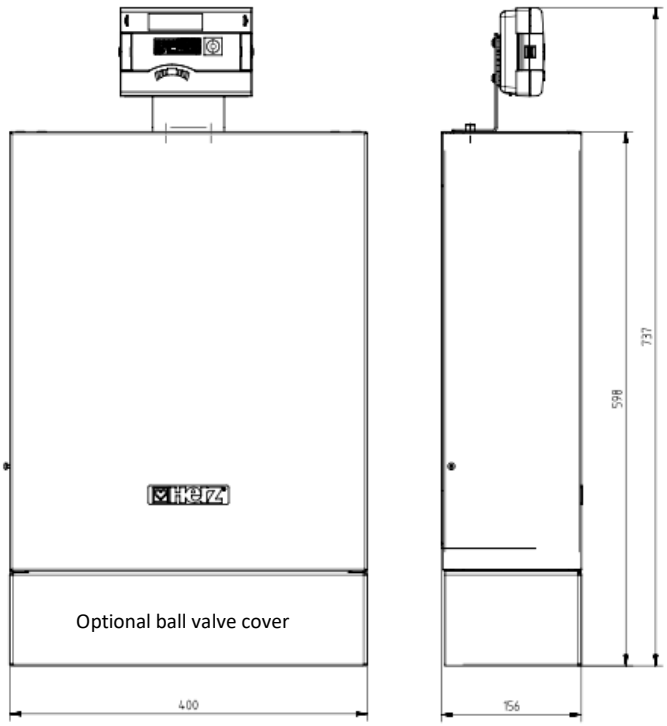
Oxford HIU Drawings

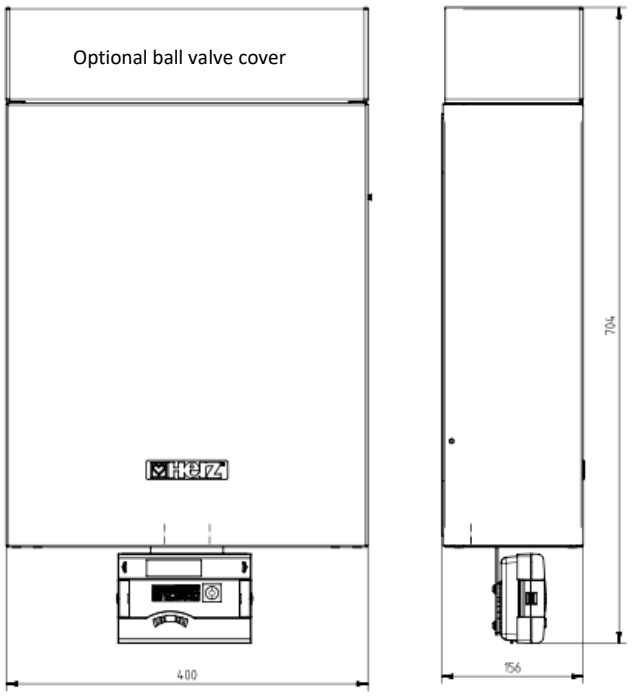
Bottom entry version

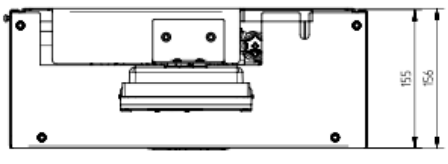


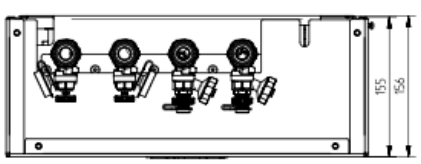
Top entry version











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