

## SPECIFICATION FOR HERZ ECOSSE HEAT INTERFACE UNITS

### 1.0 General requirements

- a) Heat Interface Units (HIU) shall enable LTHW from the central plant to provide heating to each apartment and provide complete hydraulic separation with a single brazed stainless steel heat exchanger between the LTHW primary and the secondary heating as **Herz Ecosse** pattern HIU. Furthermore the secondary heating flow temperatures and flow rates shall be controlled.
- b) The secondary heating supply from the HIU can be utilised for space heating and DHW cylinder storage in an “S Plan” configuration if required, or alternatively can be used for single use, either for space heating or for DHW storage systems.
- c) The HIU shall be a complete package comprising of all components and controls mounted on a frame, factory assembled and tested.
- d) A first fix rail with isolating ball valves shall be provided with each HIU to allow the shell and core pipework to be installed and tested before introducing the HIU. Each ball valve shall have a drain valve to facilitate draining and have test points fitted to aid additional temperature or pressure measurement if required.
- e) The mounting frame shall be sufficient to support all the components of the HIU. Excess support and metal plate shall be avoided to reduce unnecessary and unwanted heat emission.
- f) The option should be provided to insulate all components in the HIU where practical to reduce heat loss and to reduce heat rise in the cupboard.
- g) Integral strainers shall be included in the primary flow and secondary return of the HIU.
- h) A white powder coated casing shall incorporate a viewing window to allow meter reading without casing removal, the casing shall be lockable to prevent non-permissible access.
- i) If DHW cylinder storage is to be used with the **Herz Ecosse** pattern HIU, all cylinders, pipework and controls required should be supplied separately by the contractor.
- j) All distribution pipe work within the HIU shall be 18mm stainless steel.
- k) A WRAS Approved temporary filling loop with double check valve shall be provided as a loose item.

### 2.0 Apartment Heating System (LTHW)

- a) The primary flow to the plate heat exchanger shall be controlled by a two port on/off actuated valve linked to the room thermostat and will close when the room temperature setting has been achieved or when the heating system is not in use.

Flow rate through the heat exchanger will be controlled via a **Herz** thermostatic temperature limiting valve which will prevent the return temperature from rising above a set level as per CIBSE/ADE CP1 3.5.7

b) A **Herz** fixed spring differential pressure control valve shall be fitted across the primary flow and return circuits on **each** HIU to protect the control valves from excessive differential pressure and to govern the primary flow rate. The differential pressure control valve shall form part of the assembled **Ecosse** HIU as per BSRIA Guide BG 62/2015.

c) The secondary heating circuit shall be provided with a 7.5 litre expansion vessel, pressure relief safety valve and a variable speed secondary space heating pump selected to provide a constant DP to assist in setting the correct flow rates to each radiator as per CIBSE/ADE CP1 3.4.10 & BSRIA BG 62/2015.

d) A **Herz** programmable room thermostat (Fig 1 7791 23) shall be provided separately for each apartment and shall be mounted within the apartment living area. The programmable room thermostat shall be set for day/night/summer/winter operation and will close the two port actuated valve and stop the secondary domestic heating pump during the heating off periods.

e) If an S Plan system is used, a zone valve (not supplied by Herz) shall be installed in the common heating circuit which will be activated via a room thermostat and a programmer.

f) If an S Plan system is used, a **Herz** room thermostat (Fig 1 7790 15) shall be provided separately for each apartment and shall be mounted within the apartment living area.

### **3.0 Apartment Domestic Hot Water (DHW)**

a) Domestic hot water (DHW) for each apartment shall be provided via a hot water storage cylinder (not supplied by Herz) with the primary feed obtained from the common secondary heating circuit which also supplies the space heating system.

A zone valve (not supplied by Herz) shall be installed in the primary return from the cylinder and will be controlled via a cylinder mounted thermostat and programmer

### **4.0 Energy Metering**

If required the HIU may be provided with a built in energy meter mounted in the primary heating return pipe.

The meter should meet the following minimum specification

a) Flow measurement using the ultrasonic principle

b) Measuring accuracy meets EN1434 Class 2

c) Heat calculator to have read out in kW/hr

d) 2 x Pt500 sensors mounted in the pipework

e) Battery operated with 12 year life battery

f) 24 month data storage

g) Data collection shall be via M-bus or remote reading via hand held scanner