EDGE-TC2 Heat Interface Unit Specification Text

**Heat Interface Unit**

* Twin plate heat exchangers for instantaneous domestic hot water, and secondary space heating:
* Primary circuit: 16 bar maximum working pressure, 4 bar maximum differential pressure and 90oC maximum flow temperature
* DHW circuit: 16 bar maximum working pressure
* Secondary space heating circuit: 3 bar maximum operating pressure
* 2-Port proportional electronic control valves for independent temperature control of hot water and heating circuits:
* Control valves must be tamperproof and leak tight
* Control valves must feature a visual indicator of ‘actual’ valve position, without needing to connect to the controller on-site or remotely
* DPCV fitted within HIU primary return for 4 bar dP protection of HIU, and balance of index circuits
* Strainers on all inlets, air vents at highest points, and drain cocks at lowest points as standard
* Fully insulated using insulation shells and Armaflex pipe insulation where necessary to limit heat loss
* On-board sensors for on-site visibility of the following:

o Primary flow & return temperature

o Mains cold water inlet temperature

o Domestic hot water delivery temperature, and flow rate

o Secondary space heating flow & return temperatures, pressure, and flow rate

* Modulating ‘A’-rated pump for efficient variable flow of secondary space heating circuits
* Secondary space heating pressure gauge which can be read without taking the case off
* Secondary space heating pressure sensor to prevent pump running dry when circuit pressure is less than 0.5 bar (configurable pre-set)
* 8 litre expansion vessel for secondary space heating, with safety pressure relief valve set at 3 bar
* Class II MID approved energy meter with MBUS output and detachable screen for remote placement external to HIU if required
* WRAS approved components in contact with potable water
* Essco HIU controller:
* P2P (pier-to-pier) Wi-Fi on board for connection to controller through any Wi-Fi enabled device without the need for app download
* Hot water priority so only heating or hot water will operate at any one time, with priority given to hot water
* No flow through HIU when keep-warm and demand for domestic hot water or heating satisfied
* Billing neutral, with meter connection for billing company using traditional MBUS network and data logger, or into billing controller with 4G SIM etc
* Pre-configuration of setpoints for heating flow/return, hot water delivery, and keep-warm target temperatures. No valves to manually set on site
* Capable of working with any heating programmer with mains enable (by others / Essco as option)

## Pre-plumbing Jig Kit

* Primary top and secondary bottom connections as standard, with optional setback rails for either ‘all-top’ or ‘all-bottom’ connections, as necessary
* Insulated isolation valves for isolation of primary, secondary space heating, cold water inlet and hot water outlet circuits
* Insulated detachable flushing bypass for primary circuit. Bypass pipe to be removed after flushing and replaced with binder test points to allow measurement of dP across primary circuit
* Secondary space heating filling loop with double check valve

## Quality

* The HIU should be factory pressure and electrically tested and have test stamps confirming the test results within the HIU
* HIU manufacturer to provide on-site installation and commissioning training to site operatives and issue training certificates if needed
* HIU manufacturer to have tested units thoroughly and via a recognised UK BESA standard
* Warranty:
* 2-year parts and labour warranty as standard
* Extended to 5-years with installation of Elysator to meet VDI-2035 water quality standards in Plant Room (CIBSE CP1 recommended)

**JULY 2022**