



Heat Interface Units

Product Features

- High energy efficiency
- Instantaneous hot water availability
- Electronic temperature control
- Optimised heating temperature control as standard
- Standby mode temperature control
- Low return temperatures back to the network
- Low carbon heat networks – Compatible with renewable energy sources
- Weather compensation option available
- Includes low energy pump
- Suitable for radiators or underfloor heating systems
- Requires minimal maintenance reducing running costs
- Conforms to the British Standard BS EN132-01
- WRAS Approved product

Heat Interface Units

The Mibec Xi Compact Features

Proven Performance

The Mibec Xi Compact has been independently tested and approved; conforms to the British Standard BS EN132-01 - 'Gas fired domestic appliances producing hot water – Appliances not exceeding 70 kW heat input and 300 lt water storage capacity – Part 1, assessment of performance of hot water deliveries'.

Product Overview

The Mibec Xi Compact is compact and requires very little space in the property and is easy to install. The design meets all varying demands of the home.

In many respects a HIU is like a combi boiler, providing central heating and instantaneous hot water, but without combustion or needing a flue.

Special Features

- High energy efficiency
- Instantaneous hot water availability
- Electronic temperature control
- Optimised heating temperature control as standard
- Standby mode temperature control
- Low return temperatures back to the network
- Low carbon heat networks – Compatible with renewable energy sources
- Weather compensation option available

Product Range

Mibec Xi45 Compact INDIRECT HIU 45DHW/10HTG
Mibec Xi60 Compact INDIRECT HIU 60DHW/10HTG
Mibec Xi60L Compact INDIRECT HIU 60DHW/15HTG
Mibec Xi70 Compact INDIRECT HIU 70DHW/15HTG



The Mibec Xi Compact HIU Product Details

Description - Mibec Xi Compact Indirect HIU

- Fitted with two Plate Heat Exchangers (PHE) one for heating (CH) and one for hot water (DHWS)
- The electronics provide 'PROPORTIONAL' reactive control to demand. PID electronic controller
- Integral PICV (Pressure Independent Control Valve). One PICV replaces three separate valves that would otherwise be required to maintain the maximum level of system control so the HIU can operate effectively
- Maximum efficiency with lowest return temperatures back into the network reducing running costs
- Safety with high temperature limits enforced even without an electricity supply on
- Systems can be designed with little requirement for expensive commissioning
- Simple to maintain, the plate heat exchangers can be accessed and removed in just minutes
- Plate Heat Exchangers access from the front
- Insulated with a tamperproof steel casing
- High quality Wilo low energy pump, fixed or variable speed
- Automatic air vent and 3 drain points
- 3 bar safety relief valve on the secondary heating side
- Large surface area strainer mesh for extended maintenance schedules
- Sealed system heating
- Thermostatic high temperature protection.
- Flat face union, 3/4" connections



Proportional Control

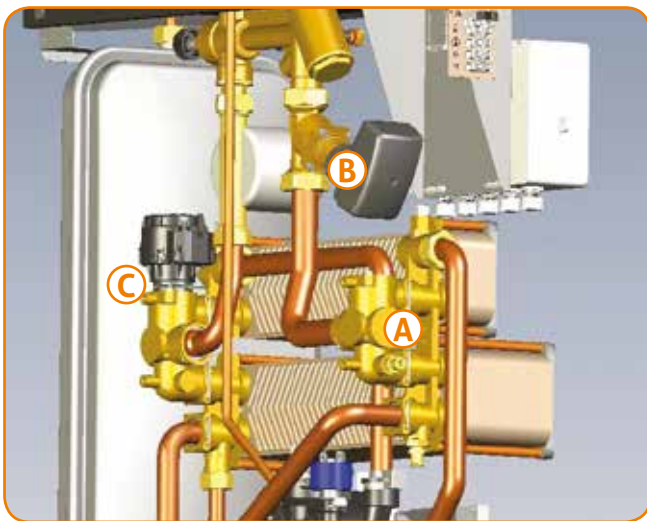
A proportional control system is not simply turning the CH and DHWS on and off, it feeds in the supply from the District side in proportion to the demand. This gives stable hot water supply temperatures, even at very low demands.

The heating is similarly controlled for maximum efficiency, as the room warms up the controller starts to lower the amount of heat being allowed into the PHE supplying the central heating always maintaining minimum energy usage.

Temperature and flow sensors in the unit send constant information back to the PID (Proportional-Integral-Derivative) control unit which in turn signals the PICV to modulate as required to meet the demand and maintain temperature stability.

Design and Construction

The unit is designed for the plate heat exchangers to be at the front to allow easy access. These are mounted onto purpose made brass blocks which contain the integral waterways and component connection points. Inter-connecting pipework is kept to a minimum.



- A - Brass Manifold Blocks
- B - Diverting Valve
- C - PICV with Electronic Modulating Actuator



Heat Interface Units

The Mibec Xi Compact Features

PID Control Unit

(Proportional-Integral-Derivative) maintains the efficiency of the HIU. Provide stable temperatures under varying load conditions. Unique algorithms constantly recalculate the amount and the speed of modulation required for maximum efficiency.

Pressure Independent Control

Integral PIC valve with electric actuator giving proportional modulating control as instructed by the PID Controller, 100% authority, (regardless of pressure fluctuations in the district heating supply). Unlike many other HIU, further control valves (for example Differential Pressure Control Valves) are not required.

Anti-Scale Control

In the Domestic Hot Water (DHW) Plate Heat Exchanger (PHE) - the flow is always diverted away from the DHW PHE into the HTG PHE reducing the scale formation potential.

Automatic Fault Diagnostics

The control unit can identify faults to components within the HIU and issues an identifying fault code on the display. Once the fault or error has been rectified the control unit will automatically reset and resume normal operation.

Heating Flow Automatic Limitation

Decreasing the possibility of starving the Domestic Heating (DH) circuit when extreme demands are made on the entire network. For example in cold weather when a large heating demand is made on the network the control unit does not allow 100% opening on start up and prevents the 'over demand' causing disruptions.

Instant Hot Water Response

Instant water response is guaranteed by keeping heat (supplied by the district supply) close at hand to the HIU at all times. At regular intervals (factory set to 20 minutes), the controller opens (factory set to 2 min) the PIC valve to deliver a low flow of about 100 l/hr, then closes the valve again. This repeats whenever the HIU is on standby when there is no demand.

Optimised Heating Control

The return temperatures are automatically monitored and controlled. The controller of the HIU uses this information to maintain the optimum flow temperature and keep the DISTRICT return temperature as low as possible. This can be seen on the display screen as AUTO and is the factory setting.

DHWS Priority

Domestic Hot Water Supply (DHWS) is the priority operation of the HIU. A flow switch detects the demand at the HIU (if in heating mode) and switches to DHW production. Even if the heating system is in fault mode, the HIU will still produce DHWS.

High DHW temperature safety

If for whatever reason un-managed hot water at extreme temperature were to pass through the Plate Heat Exchanger (PHE), there is a thermostatic limiting valve on the DHW exit. This is locked and factory set to 60C. Being non-electrical this still maintains the safety feature even when electric supply to the HIU is cut.

Proven reliable components

Low energy Erp (Energy Related Products) compliant pump. Unique inlet Block with By Pass, test points, meter sensor port and a uniquely design strainer with increased surface area for longer operation without blocking or reduced performance over a standard pattern Y Strainer.

Low & High Pressure protection for the HIU

Low pressure switch will stop the circulating pump should the secondary system drop below 0.7 Bar. The HIU is fitted with a Safety Relief valve set at 3 bar for high pressure protection.

Underfloor Heating

The unit is fully compatible with low temperature systems such as those in UFH. The installer simply sets the required value for temperature on installation. Full details are available in the installation manual.

Insulation

The HIU panels are all fully insulated including the backplate to prevent overheating of the surrounding area.

Prepayment Billing

Can be accommodated with an accessory kit to shut down the unit when the tenant is no longer in credit.

Security

The metal casing can be closed to prevent unauthorised tampering with optional fixing bolts available on request.

HIU Hibernation mode

Press the start button and hold for 3 seconds and the HIU will shut-down. The PICV valve will shut, and heating, hot water and standby functions will be disabled. Press the start button to resume normal operation. This is a function for when the apartment is unoccupied or for the tenant during holiday periods.

Heat Interface Units

The Mibec Xi Compact Features

Communal Heat Networks

A central boiler house or renewable source will generate heat which is distributed through a network of pipe to each separate property in the building. Each home or apartment has its own Heat Interface Unit (HIU) installed, which uses heat distributed from the central network to provide heating and hot water for use in the home, replacing the requirement for individual boilers in each property.

Advantages for Designers, Developers and Architects

- Individual gas supply to each property is not required when using HIUs
- No flues are required to evacuate exhaust combustion, saving costs
- Storage cylinders are not required, reducing costs and increasing available space
- Meets low emission and efficiency targets

Advantages for Installers

- Easy to install, add only a programmable room thermostat to complete the system
- Compact and lightweight
- Minimal installation requirements for pipe work
- Simple maintenance and easy access to all components inside the box

Advantages for Landlords

- Reduced service and maintenance costs compared to individual boilers
- Metered energy usage for fairer tenant billing
- Practical for combining with lower cost renewable technologies for the central heat source
- No individual flues to maintain for health and safety laws

Advantages for the Homeowner or Tenant

- Shared maintenance costs across the properties on the network
- No boiler worries
- Efficiently controlled heating and hot water supply
- Accurate billing for only the actual energy used
- Awareness of energy consumption promotes energy saving in the home

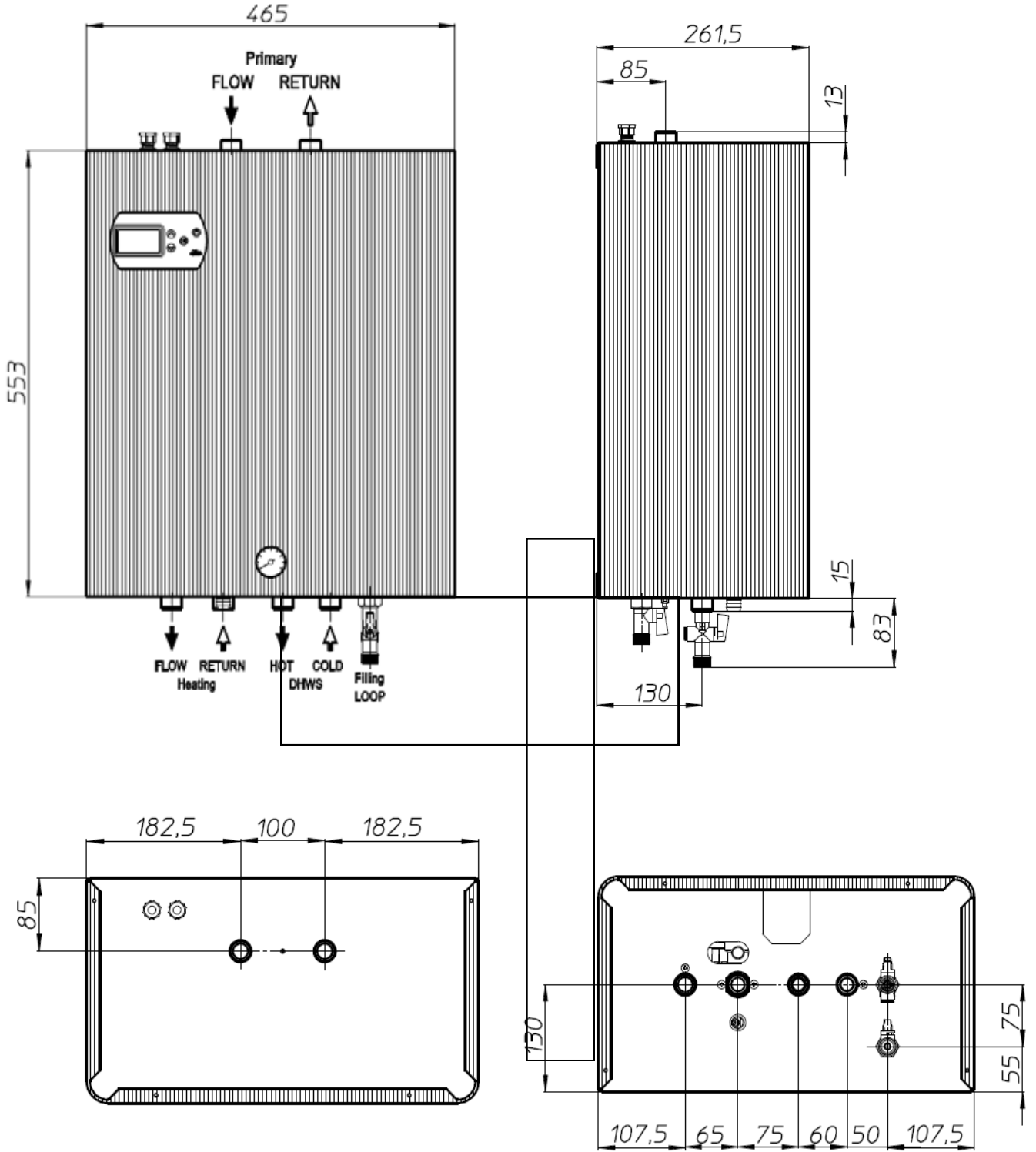
The Mibec Xi Compact HIU Technical Specification for Xi45 and Xi60

Technical Parameters	Xi45	Xi60
PRIMARY (heat supply from communal heat source) MAXIMUM PRESSURE	16 bar	16 bar
PRIMARY (heat supply from communal heat source) MAXIMUM TEMPERATURE	90°C	90°C
PRIMARY (heat supply from communal heat source) MAXIMUM PRESSURE DIFFERENTIAL	4 bar	4 bar
SECONDARY (central heating circuit in the flat, apartment or house) MAXIMUM PRESSURE	3 bar	3 bar
SECONDARY (central heating circuit in the flat, apartment or house) MAXIMUM TEMPERATURE	85°C	85°C
SECONDARY (central heating circuit in the flat, apartment or house) TEMPERATURE ADJUSTMENT	20-85°C	20-85°C
SECONDARY (central heating circuit in the flat, apartment or house) HEATING OUTPUT	10Kw	10Kw
DOMESTIC Hot Water (including cold water supply main) MAXIMUM PRESSURE	10 bar	10 bar
DOMESTIC Hot Water MAXIMUM TEMPERATURE limited by TMV	60°C	60°C
DOMESTIC Hot Water TEMPERATURE ADJUSTMENT	30°C to 65°C	30°C to 65°C
DOMESTIC Hot Water MAXIMUM OUTPUT	45kW	60kW



Heat Interface Units

The Mibec Xi Compact Dimensions



Other Mibec Products

Mibec Product Range

At Mibec we offer a complete range of reliable and high quality renewable energy product solutions specifically tailored to meet the needs of installers & renewables specialists, supported by unrivalled technical knowledge, service and design capabilities. We hold large quantities of stock across all product lines ready for immediate dispatch from the warehouse in Shropshire, which coupled with a fast quote response times make us the ideal partner for your project.



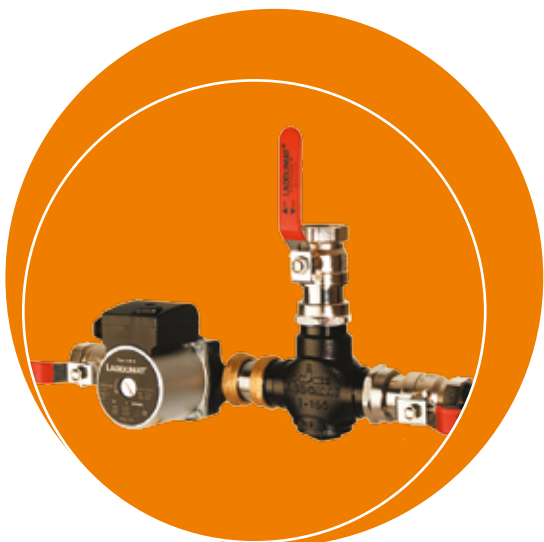
Pre-insulated Pipe

Supply of underground Pre-insulated pipe for the energy efficient distribution of water for point-to-point and district heating projects throughout the UK. We can supply pre-insulated pipe products from leading district heating pipe suppliers like REHAU, and Microflex or our own Mibec DHP pipe. As one of the leading independent Rehau UK pipe suppliers, we can help with the application of both RAUVITHERM and RAUTHERMEX insulated pipe products for use in biomass, biogas, heat pump and district heating projects.

Thermal Storage

We specialise in the specification and supply of buffer and accumulator tank solutions for all aspects of renewable energy systems such as biomass boilers and wood burning stoves, heat pumps and solar powered water systems.

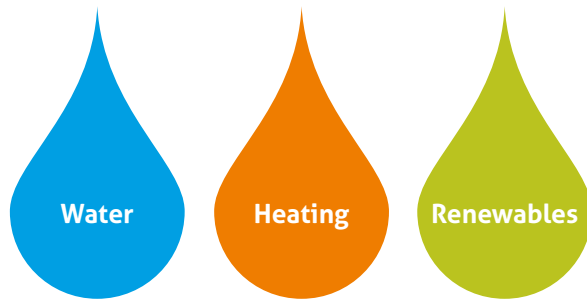
We can help to specify a buffer tank, thermal store or solar hot water cylinder to suit any project, no matter how large or small and hold a large portfolio of tanks and accessories in stock, including Cordivari and our own Mibec Hi-spec and premium ranges. Our range covers anything from simple 100 litre heating water tanks through to 10,000 litre tanks for large commercial or industrial applications; as well as heat storage accumulator tanks from 200 litres to 18,000 litres.



Heating Components

Our heating components range includes products from market leading manufacturers such as Reflex, Termoventiler, Cordivari, Smedegaard and Caleffi, as well as many high quality Mibec branded solutions. Products cover diverse heating applications such as the Laddomat system for more efficient biomass units, to plate heat exchangers for linking of systems where different types of water need to be kept separate. We have an extensive range of expansion vessels, valves, actuators, heat interface units, and pumps; many of which are held in stock in the UK for immediate despatch.





Mibec Limited

Park View Business Centre
Combermere
Whitchurch
Shropshire
United Kingdom
SY13 4AL

Tel: +44 (0)1948 661639
Fax: +44 (0)1948 871794

Web: www.mibec.co.uk