

## MINI HEAT EXCHANGER WITH EITHER TUBES OR PLATES



- No Steam Supply Required
- Designed for continuous heat treatment
- Meaningful and repeatable results
- Small batch sizes
- Variable flow rate
- Minimum 20 LPH, Maximum 100 LPH
- Holding tubes of any time
- Homogenisation upstream or downstream
- Fully mobile unit
- Built in CIP
- CIP flow minimum 1.5 mtr per second
- SIP optional
- Hygienic design
- System pressure 10 Bar with 20 bar option
- Hot fill or cold fill
- Temperature range controllable to maximum 150 Deg C at stated flow
- Electrically heated hot water units
- Built in chiller option
- Simple operation and easy set up
- Only needs power, water and air
- Computer interface and software for real time monitoring and data storage
- Individual corrugated tubes
- Positive displacement pump
- Non bonded gaskets for plates
- Conforms to latest safety standards and carries the CE mark

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# MINI HEAT EXCHANGER WITH EITHER TUBES OR PLATES

## Description

### Mini Plate Heat Exchanger

The Mini Plate Heat Exchanger system has been designed to replicate industrial scale Plate Heat Exchangers on a smaller scale. Individual plate packs are used to provide separate heating and cooling units allowing for a wide variety of processes to be replicated.

### Tube in Tube Heat Exchanger

Individual tubes are utilised to give a wide variety of heating and cooling duties. All tubes are our own corrugated design profile to give added heat transfer area and a degree of turbulence to the product at the lower flow rates.

Options for inner tube diameter (process side) of 8 mm or 14 mm.

### Both systems

Available as Plate only system, Tube only system or a combined Plate and Tube system so any types of products can be processed. Each system requires a very small sample volume so many tests can be conducted in one day.

In line Homogeniser can be added, either upstream or downstream. Additional benefit is the Clean Bench option for Aseptic sampling.

Plates or Tubes, temperatures can be set to a maximum of 150 Deg C, with flow rates from 20 to 100 litre per hour. All heating temperatures are controlled by PID electronic controllers, and can be set at any set point for accurate and precise heating.

Cooling is available in 2 stages, room temperature or 5 Deg C by using the built in chiller, available as an option.

Holding tubes are manufactured individually, so holding times of any length are available.

All machines are manufactured to meet customers specific requirements giving full flexibility.

Data logging with real time chart recorder. Data capture to PC.

Only hygienic valves and fittings are used on the product side. All contact surfaces are FDA approved material.

### Cleaning

All machines have built in CIP as standard. The CIP flowrate of 1.5 Mts per second minimum flow ensures the whole system is cleaned without the need to open any pipe joints.

### Options

\*Different pump options for different processes \*Highly accurate electromagnetic flowmeter

\*Additional heating units \* Refrigerated cooling \* Regeneration sections \* Any holding time

\* Additional heating section and protein hold \* Additional cooling sections \*Clean Bench \*

Homogeniser

\* PLC with Touch Screen control \* Different cabinet sizes to suit your working space

### Technical Information

Electrical power 200v, 3 phase. 380v, 3 phase, 415v, 3 phase. Other voltages available by request. 50/60 Hz

Amperage dependant on number of heating and cooling units.

Air supply of 6 bar minimum, 7 bar maximum. Main water supply minimum 500 litre per hour, 2 bar.

### Dimensions

Minimum 120 cm wide x 90 cm deep x 175 cm high for a 20 litre per hour machine.

\*Dimensions will be specified with each machine dependent on flowrate, number of heating and cooling units etc.

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