BOSS™

Plate Heat Exchangers

Plate Heat Exchangers

BSS Industrial can now design and supply a comprehensive range of BOSS™ heat exchangers for HVAC applications from the following ranges:

BOSS™ Blue Gasketed Plate Heat Exchangers
Maximum working pressure 10 Barg*
Maximum working temperature 120°C*

BOSS™ i-Series Gasketed Plate Heat Exchangers
Maximum working pressure 10 Barg*
Working temperature 0°C - 100°C*

BOSS™ Brazed Plate Heat Exchangers
Working pressure up to 32 Barg*
Working temperature up to 225°C*

The BOSS™ heat exchanger has been developed in conjunction with the market leaders in plate heat exchanger technology and design, allowing us to offer the highest quality components and manufacture.

The BOSS™ heat exchangers are suitable for a wide range of primary and secondary media such as MTHW, LTHW, chilled water, water/glycol solutions, thermal oils and domestic hot water services (DHW). BSS can design the BOSS™ heat exchanger to suit your requirements based on flow rate, physical properties of the fluids, pressure drop and temperature program.

Contact your local BSS branch for full details

*Note: Actual maximum conditions will be determined by the duty profile which may limit operating pressure and/or temperature.

BT/BTL/BM

i-Series

Brazed

Blue Gasketed Plate Heat Exchangers

Design Features

The BOSS™ blue gasketed plate heat exchangers provide thermally efficient solutions for most heat transfer requirements. The units are flexible in design and easy to service and maintain.

The BOSS™ range offers many advantages over traditional methods of heat transfer:

- **Compact design** - due to a high heat transfer co-efficient
- **Low liquid hold-up volume** - due to instantaneous heat transfer
- **Pressure drop** - can be designed to meet your system requirements
- **Low fouling** - due to turbulent flow patterns and self cleaning properties
- **Close approach temperatures** - due to a large effective heat transfer area, allowing a temperature cross which is not available with shell & tube heat exchangers
- **Easy inspection & cleaning** - free access to heat transfer surfaces within the footprint of the heat exchanger
- **Easily extended** - due to frame construction further plates can be added in situ

Range information

- BT, BTL, BM models
- Each BOSS™ gasketed plate heat exchanger can be supplied with
  - 304 or 316 stainless steel channel plates
  - Clip-on EPDM or Nitrile gaskets
- Mounting feet as standard (except BT2)

Operating Parameters

- Maximum working pressure 10 Barg*
- Maximum working temperature 120°C*

Optional Accessories

- Insulation Jackets

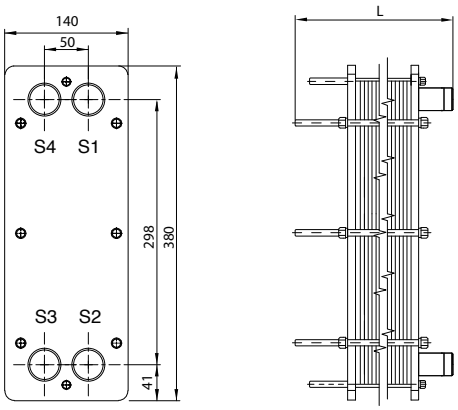
*Note: Actual maximum conditions will be determined by the duty profile which may limit operating pressure and/or temperature.

Applications

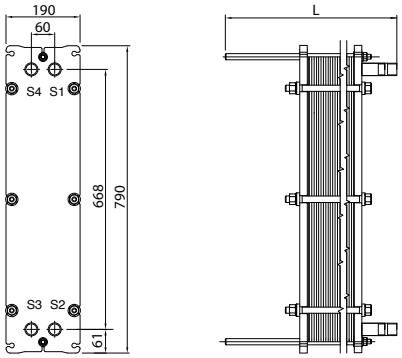
- **Hot water heating** – the plate heat exchanger is ideally suited for domestic hot water (DHW) generation in hotels, hospitals, nursing homes, restaurants, leisure centres, military bases, prisons etc. (BSS also supply tap water modules for this application – please refer to our BOSS™ Tap Water Modules catalogue)
- **System/pressure break** – used to separate a boiler circuit from high pressure or dirty systems to provide protection to the boiler(s) with very little drop in operating temperature to the system
- **Process hot water** – where instantaneous hot water is required for 'Washdown' applications or manufacturing processes eliminating the need for large volumes of stored water
- **Swimming pool heating** - used to maintain swimming pools at the required temperatures without the need for high specification boilers capable of handling chlorinated water
- **Heat recovery** – minimising heat wastage by recovering the maximum amount of heat energy from waste product
- **Chilled water systems** – used to protect expensive chillers from system debris whilst maintaining system temperatures very close to those leaving the chiller
- **Oil cooling and heating**

BOSS™ Plate Heat Exchanger Dimensions

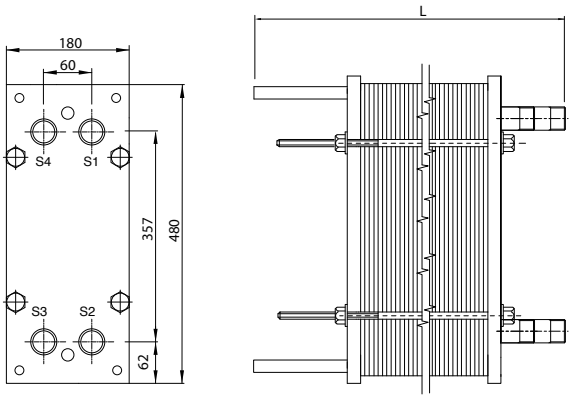
Overall length (L) will vary according to the required duty. Please contact BSS for details



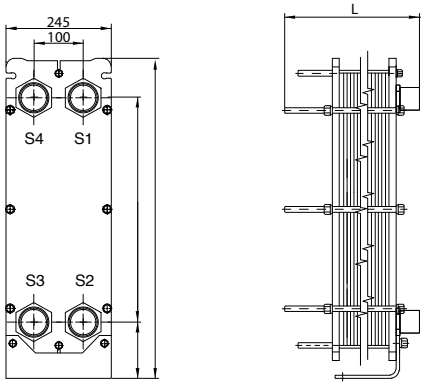
BOSS™ Model BT2 Plate Heat Exchanger



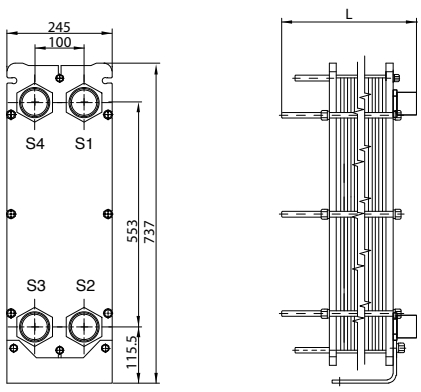
BOSS™ Model BTL3 Plate Heat Exchanger



BOSS™ Model BM3 Plate Heat Exchanger



BOSS™ Model BT5B Plate Heat Exchanger



BOSS™ Model BT5M Plate Heat Exchanger

Operating Parameters

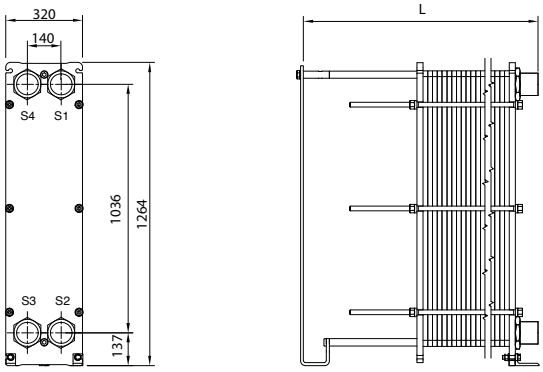
Maximum Working Pressure	10 Barg*
Maximum Working Temperature	120˚C

*Note:

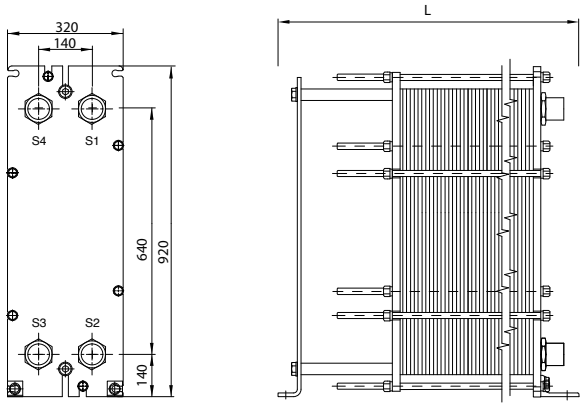
Actual maximum conditions will be determined by the duty profile which may limit the maximum operating pressure and/or temperature.

BOSS™ Plate Heat Exchanger Dimensions

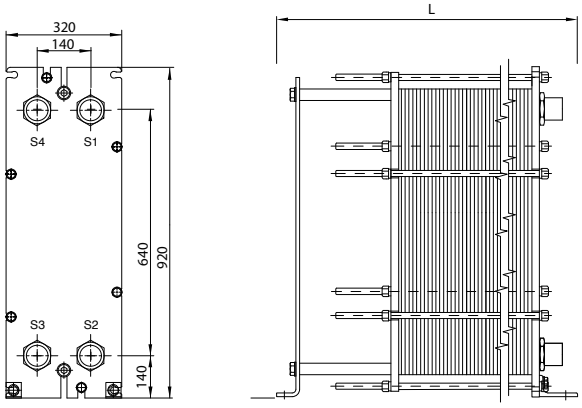
Overall length (L) will vary according to the required duty. Please contact BSS for details



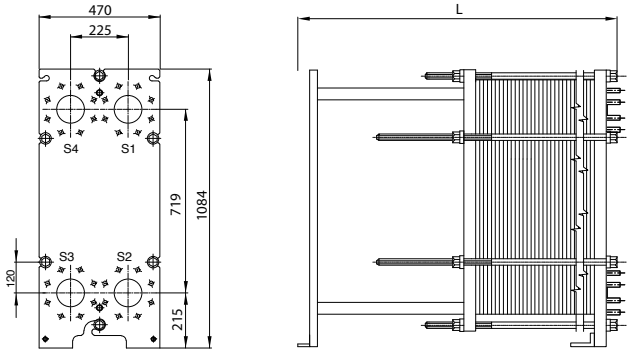
BOSS™ Model BTL6 Plate Heat Exchanger



BOSS™ Model BM6 Plate Heat Exchanger



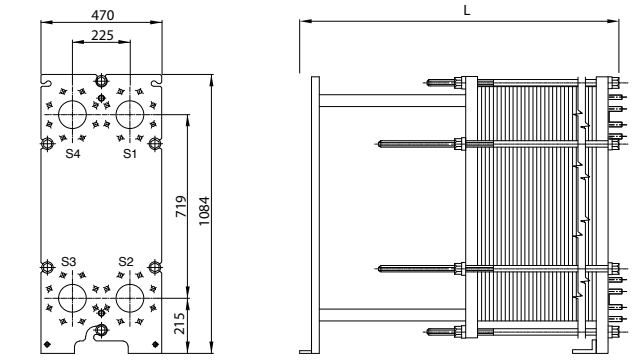
BOSS™ Model BM6M Plate Heat Exchanger



BOSS™ Model BM10B Plate Heat Exchanger

Connections

BT2	20mm Screwed BSP (M)
BM3	32mm Screwed BSP (M)
BTL3	32mm Screwed BSP (M)
BT5B/M	50mm Screwed BSP (M)
BM6/M	50mm Screwed BSP (M)
BTL6	50mm Screwed BSP (M)
BM10B/M	100mm Studded PN10



BOSS™ Model BM10M Plate Heat Exchanger

i-Series Gasketed Plate Heat Exchangers

Design Features

The BOSS™ i-Series gasketed plate heat exchangers have been developed to offer a price competitive product whilst maintaining the highest quality of design.

The BOSS™ i-Series gasketed plate heat exchanger offers:

- **Very compact design** - Low weight and reduced dimensions allow for optimised customer installation
- **Minimised fouling** - due to optimal distribution over the plate. The patented pattern distributes fluid evenly over the plate avoiding dead corners and allowing full use of the heat transfer area
- **High quality gaskets** - long gasket life-time due to “roof top gasket” design. Clip on design means fastening and sealing are kept separate
- **Cost effective** - a competitively priced product without reducing the quality of the plates or gaskets
- **Fast delivery** - built, tested and dispatched within 7 working days from order placement

Range information

- i-30, i-60, i-100
- Each BOSS™ i-Series gasketed plate heat exchanger is supplied with
  - 316 stainless steel channel plates
  - Clip-on Nitrile gaskets
- Mounting feet as standard
- Flange studs (i-60 & i-100 only)

Operating Parameters

- Maximum working pressure 10 Barg*
- Maximum working temperature 0°C - 100°C*

Optional Accessories

- Removable flexiwrap insulation jackets from stock

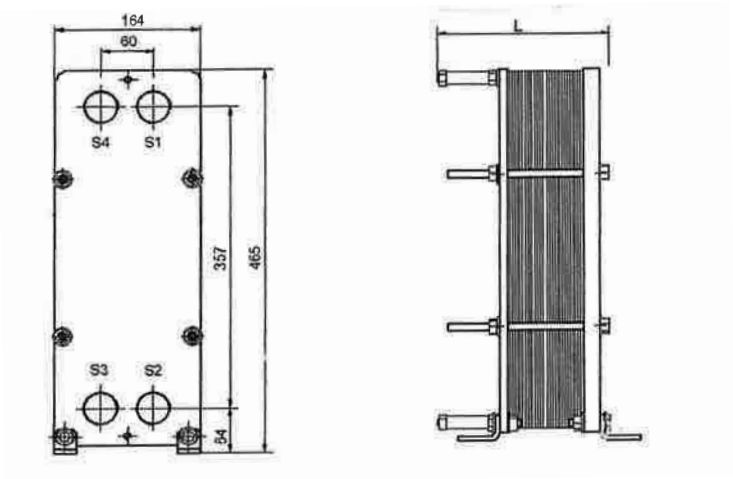
*Note: Actual maximum conditions will be determined by the duty profile which may limit operating pressure and/or temperature.

Applications

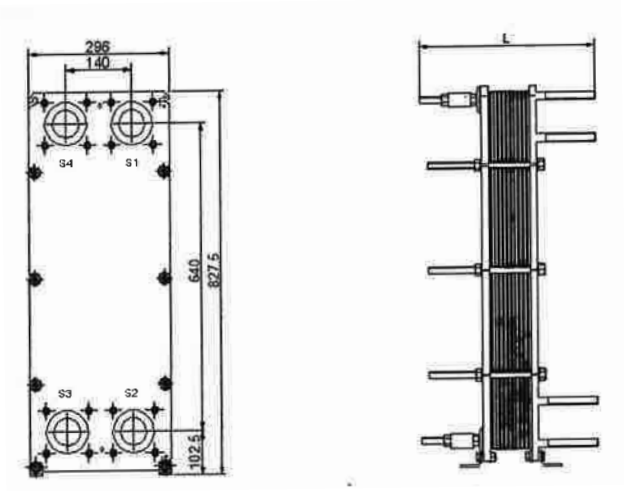
- **System/pressure break** - used to separate a boiler circuit from high pressure or dirty systems to provide protection to the boiler(s) with very little drop in operating temperature to the system
- **General heating and cooling applications** - within stated temperature and pressure range of the unit. This range cannot be used on potable hot water applications.

BOSS™ i-Series Plate Heat Exchanger Dimensions

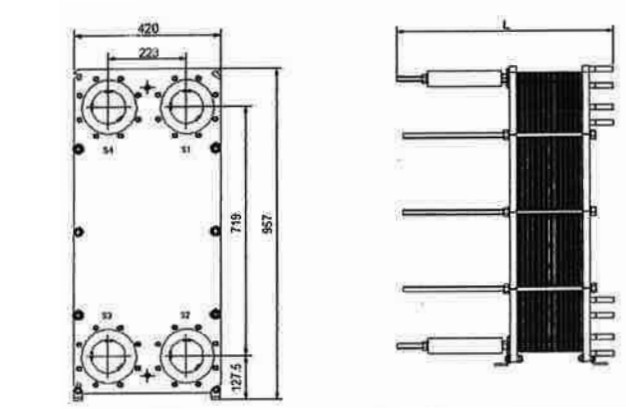
Overall length (L) will vary according to the required duty. Please contact BSS for details



BOSS™ Model i-Series i-30 Plate Heat Exchanger



BOSS™ Model i-Series i-60 Plate Heat Exchanger



BOSS™ i-Series i-100 Plate Heat Exchanger

Operating Parameters

Maximum Working Pressure	10 Barg*
Maximum Working Temperature	100˚C

*Note:

Actual maximum conditions will be determined by the duty profile which may limit the maximum operating pressure and/or temperature.

Minimum working temperature 0˚C

Connections

i-30	32mm Screwed BSP (F)
i-60	50mm Studded PN10
i-100	100mm Studded PN10

Brazed Plate Heat Exchanger

Design Features

The BOSS™ brazed plate heat exchangers feature efficient heat transfer with an extremely small footprint, making them ideal where space is at a premium. Their exceptional heat transfer efficiencies mean they can tackle large-capacity duties in a limited installation space.

The BOSS™ range is available in many sizes and capacities, with varying plate patterns and connections for particular duties and performance specifications. The BOSS™ units can be configured as single-pass, dual-pass or multi-pass, according to project requirements.

BOSS™ brazed plate heat exchangers offer many advantages:

- **High temperature & pressure rating**
- **High efficiency**
- **Small footprint** - They have a compact design which makes their footprint smaller than other comparable solutions
- **Low fouling factors** - due to high turbulence inside the heat exchanger it optimizes its self cleaning effects and reduces scaling
- **Leak resistant** – Due to no gaskets the risk of leakage is virtually non-existent
- **Cost effective solution**

Range information

- Copper brazed for most applications
- Support feet supplied as standard on larger sizes

Operating Parameters

- Working pressure up to 32 Barg*
- Working temperature up to 225°C*

Optional Accessories

- Insulation jackets
- Support feet on smaller sizes

*Note: Actual maximum conditions will be determined by the duty profile which may limit operating pressure and/or temperature.

Applications

- **HVAC heating/cooling** – They are ideally suited for domestic hot water generation and chilled water systems
- **System pressure break** – Used to separate a boiler, solar heating or heat pump circuit from high pressure or dirty systems to provide protection to the boiler(s) both traditional and biomass with very little drop in operating temperature to the system
- **Heat recovery** – Minimising heat wastage by recovering the maximum amount of heat energy from waste products
- **Process heating/cooling** – offer robust long term reliability with minimal maintenance
- **District heating** – offer efficient and reliable heat transfer from the network to the heating circuit
- **Oil cooling and heating**

Design Requirements

To enable BSS to provide a quotation for a suitable unit to meet your requirements, please provide the following information:

Heat Load	(kW)
Primary fluid	(Water, glycol etc.)
Primary flow rate	(l/s / kg/s)
Primary inlet temperature	(ºC)
Primary outlet temperature	(ºC)
Primary working pressure	(Bar)
Max. allowable pressure drop	(Bar / kPa)
Secondary fluid	(Water, glycol etc.)
Secondary flow rate	(l/s / kg/s)
Secondary inlet temperature	(ºC)
Secondary outlet temperature	(ºC)
Secondary working pressure	(Bar)
Max. allowable pressure drop	(Bar / kPa)

BOSS Plate Heat Exchangers are suitable for a wide range of primary and secondary media such as MTHW, LTHW, chilled water, water/glycol solutions, thermal oils and domestic hot water services (DHW), subject to pressure and temperature limitations.

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