

# Brazed Plate Heat Exchangers

## Description

Model BPX brazed plate heat exchangers offer the highest level of thermal efficiency and durability in a compact, low cost unit. The corrugated plate design provides very high heat transfer coefficients, resulting in a more compact design. The unit's stainless steel plates are vacuum brazed together to form a durable, integral piece that can withstand high pressure and temperature.

The BPX heat exchangers offer a compact design compared to shell and tube exchangers

- 1/6 the size of shell and tube
- 1/5 the weight of shell and tube
- 1/8 the liquid required of shell and tube
- 1/3 to 1/5 of the surface area required

BPX units are ideal for a wide variety of hydronic applications such as:

- Radiant Floor Heating
- Domestic Water Heating
- Snow melt Systems
- Swimming Pool Heating

## Operating Data

Design pressure . . . . . 435 psi (30 bar)  
 Design temperature . . . . . 450°F (232°C)  
 Plates . . . . . Stainless Steel  
 Braze Material . . . . . Copper  
 Connections . . . . . From 1/2 inch to 4 inch  
 Capacity . . . . . Up to 800 GPM  
 Construction Codes .UL, CRN, ASME Code Stamp Option



## Radiant Floor Heating

Selection Schedule Basis

Boiler Side: Water 180°F supply, 160°F return  
 Radiant Floor Side: Water 120°F supply, 100°F return

| Model Number | Heat Exchanger BTU/Hr | Boiler Side |               | Radiant Floor Side |               |
|--------------|-----------------------|-------------|---------------|--------------------|---------------|
|              |                       | Flow        | Pressure Drop | Flow               | Pressure Drop |
|              |                       | GPM         | PSI           | GPM                | PSI           |
| BP400-10     | 60,000                | 6.2         | 8.6           | 6.1                | 5.9           |
| BP400-20     | 125,000               | 12.9        | 7.9           | 12.6               | 6.8           |
| BP400-30     | 175,000               | 18.0        | 7.1           | 17.7               | 6.5           |
| BP400-40     | 225,000               | 23.2        | 7.3           | 22.7               | 6.9           |
| BP411-20     | 350,000               | 36.1        | 6.3           | 35.3               | 5.6           |
| BP411-30     | 500,000               | 51.5        | 7.4           | 50.5               | 7.1           |

Larger Models are Available Upon Request

## Snow Melt Application

Selection Schedule Basis

Boiler Side: Water 180°F supply, 160°F return  
 Snow Melt Side: 40% P. G. 130°F supply, 100°F return

| Model Number | Heat Exchanger BTU/Hr | Boiler Side |               | Snow Melt Side |               |
|--------------|-----------------------|-------------|---------------|----------------|---------------|
|              |                       | Flow        | Pressure Drop | Flow           | Pressure Drop |
|              |                       | GPM         | PSI           | GPM            | PSI           |
| BP400-10     | 60,000                | 6.2         | 8.7           | 4.3            | 3.5           |
| BP400-20     | 125,000               | 12.9        | 8.2           | 8.9            | 4.2           |
| BP400-30     | 175,000               | 18.0        | 7.8           | 12.5           | 4.2           |
| BP400-40     | 225,000               | 23.2        | 8.4           | 16.1           | 4.6           |
| BP412-20     | 250,000               | 25.8        | 8.4           | 17.9           | 4.0           |
| BP412-30     | 350,000               | 36.0        | 7.7           | 25.0           | 3.9           |
| BP412-40     | 450,000               | 46.4        | 8.1           | 32.1           | 4.2           |
| BP412-50     | 500,000               | 51.5        | 7.6           | 35.7           | 4.0           |

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## Domestic Water Heating

Selection Schedule Basis

Boiler Side: Water 180°F supply, 130°F return  
 Domestic Water Side: Water 50°F supply, 140°F return

| Model Number | Heat Exchanger BTU/Hr | Boiler Side |               | Domestic Water Side |               |
|--------------|-----------------------|-------------|---------------|---------------------|---------------|
|              |                       | Flow        | Pressure Drop | Flow                | Pressure Drop |
|              |                       | GPM         | PSI           | GPM                 | PSI           |
| BP400-10     | 60,000                | 2.5         | 1.6           | 1.3                 | 0.3           |
| BP400-20     | 150,000               | 6.2         | 2.1           | 3.3                 | 0.6           |
| BP400-30     | 225,000               | 9.3         | 2.2           | 5.0                 | 0.7           |
| BP400-40     | 350,000               | 14.4        | 3.4           | 7.8                 | 1.0           |
| BP410-30     | 400,000               | 16.5        | 4.9           | 8.9                 | 1.4           |
| BP411-30     | 500,000               | 20.6        | 7.6           | 11.1                | 2.2           |

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