



Brazed plate heat exchangers for high-pressure CO₂ cooling applications

SWEP provides a complete range of reliable and compact brazed plate heat exchangers (BPHE's) that are designed for optimal performance under extreme pressure. Our range of BPHE's are designed to operate at high pressures in CO₂ cooling applications. The range is optimized for environmentally friendly CO₂ systems and provides energy savings, reliability and a lowered footprint.

Benefits:

- CO₂ refrigerants fulfill legislative requirements as they are non-toxic and non-flammable.
- CO₂ refrigerants are an economical alternative to other refrigerants.
- Excellent performance in tap water heating, in supermarket freezing and heat recovery.
- CO₂ is the most efficient refrigerant in the low temperature systems.

Brazed plate heat exchangers for high-pressure CO₂ cooling applications

Our ranges of high pressure brazed plate heat exchangers are designed to operate at high pressures in CO₂ cooling applications. The range is optimized for CO₂ systems and provides energy savings, reliability and lowered footprint.

U-class

For applications operating up to 140 bar at 135°C. Suitable for use as a gas cooler, evaporator, economizer, and suction gas heat exchanger in CO₂ transcritical applications.

B9



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|---------------------|--------------------|
| Max working pressure at 20°C (68°F) | 145 bar (2103 PSIG) | 50 bar (725 PSIG) |
| Max working pressure at 135°C (275°F) | 134 bar (1943 PSIG) | 47 bar (681 PSIG) |
| Test pressure | 207 bar (3002 PSIG) | 72 bar (1044 PSIG) |

A: 378.7 mm (14.91") B: 78.7 mm (3.1")

B18



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|---------------------|---------------------|
| Max working pressure at 20°C (68°F) | 140 bar (2030 PSIG) | 107 bar (1551 PSIG) |
| Max working pressure at 135°C (275°F) | 129 bar (1870 PSIG) | 99 bar (1435 PSIG) |
| Test pressure | 200 bar (2900 PSIG) | 153 bar (2219 PSIG) |

A: 377 mm (14.84") B: 119.5 mm (4.7")

B16DW



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|---------------------|---------------------|
| Max working pressure at 20°C (68°F) | 140 bar (2030 PSIG) | 140 bar (2030 PSIG) |
| Max working pressure at 135°C (275°F) | 140 bar (2030 PSIG) | 140 bar (2030 PSIG) |
| Test pressure | 200 bar (2900 PSIG) | 200 bar (2900 PSIG) |

A: 377 mm (16.42") B: 119.5 mm (6.28")

B185



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|---------------------|---------------------|
| Max working pressure at 20°C (68°F) | 158 bar (2291 PSIG) | 116 bar (1682 PSIG) |
| Max working pressure at 135°C (275°F) | 131 bar (1899 PSIG) | 96 bar (1392 PSIG) |
| Test pressure | 226 bar (3277 PSIG) | 166 bar (2407 PSIG) |

A: 452 mm (16.74") B: 203 mm (8")

D-class

For applications operating at 60 bar up to 100°C. Suitable for use as an evaporator, condenser, suction gas heat exchanger and for cascade operations.

B12L, B12MT, B12H



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|--------------------|--------------------|
| Max working pressure at 20°C (68°F) | 61 bar (884 PSIG) | 61 bar (884 PSIG) |
| Max working pressure at 135°C (275°F) | 56 bar (812 PSIG) | 56 bar (812 PSIG) |
| Test pressure | 88 bar (1276 PSIG) | 88 bar (1276 PSIG) |

A: 287 mm (11.29") B: 117 mm (4.6")

25H



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|--------------------|--------------------|
| Max working pressure at 20°C (68°F) | 61 bar (884 PSIG) | 61 bar (884 PSIG) |
| Max working pressure at 135°C (275°F) | 56 bar (812 PSIG) | 56 bar (812 PSIG) |
| Test pressure | 88 bar (1276 PSIG) | 88 bar (1276 PSIG) |

A: 524 mm (20.62") B: 117 mm (4.6")

E-class

For sub-critical applications operating at 56 bar up to 100°C. Suitable for use as an evaporator, condenser, and for cascade operations.

120TH



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|--------------------|--------------------|
| Max working pressure at 20°C (68°F) | 56 bar (812 PSIG) | 56 bar (812 PSIG) |
| Max working pressure at 135°C (275°F) | 52 bar (754 PSIG) | 52 bar (754 PSIG) |
| Test pressure | 81 bar (1174 PSIG) | 81 bar (1174 PSIG) |

A: 525 mm (20.66") B: 243 mm (9.56")

400H



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|--------------------|--------------------|
| Max working pressure at 20°C (68°F) | 56 bar (812 PSIG) | 56 bar (812 PSIG) |
| Max working pressure at 135°C (275°F) | 52 bar (754 PSIG) | 52 bar (754 PSIG) |
| Test pressure | 81 bar (1174 PSIG) | 81 bar (1174 PSIG) |

A: 694 mm (27.32") B: 304 mm (11.96")

H-class

For sub-critical applications operating at 53 bar up to 100°C. Suitable for use as evaporator or condenser when CO₂ is on the inner circuit.

80



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|--------------------|-------------------|
| Max working pressure at 20°C (68°F) | 63 bar (913 PSIG) | 39 bar (565 PSIG) |
| Max working pressure at 135°C (275°F) | 52 bar (754 PSIG) | 36 bar (522 PSIG) |
| Test pressure | 81 bar (1174 PSIG) | 56 bar (812 PSIG) |

A: 526 mm (20.71") B: 119 mm (4.69")

250AS



| Working conditions | Inner circuit | Outer circuit |
|---------------------------------------|--------------------|-------------------|
| Max working pressure at 20°C (68°F) | 61 bar (884 PSIG) | 37 bar (536 PSIG) |
| Max working pressure at 135°C (275°F) | 50 bar (725 PSIG) | 31 bar (449 PSIG) |
| Test pressure | 87 bar (1261 PSIG) | 53 bar (768 PSIG) |

A: 620 mm (24.41") B: 202 mm (7.95")

D310 – Dual circuit



| Working conditions | Inner circuit | Outer circuit | Inner circuit |
|---------------------------------------|--------------------|-------------------|--------------------|
| Max working pressure at 20°C (68°F) | 61 bar (884 PSIG) | 28 bar (406 PSIG) | 61 bar (884 PSIG) |
| Max working pressure at 135°C (275°F) | 50 bar (725 PSIG) | 23 bar (333 PSIG) | 50 bar (725 PSIG) |
| Test pressure | 87 bar (1261 PSIG) | 40 bar (580 PSIG) | 87 bar (1261 PSIG) |

A: 525 mm (20.67") B: 243 mm (9.57")

D400 – Dual circuit



| Working conditions | Inner circuit | Outer circuit | Inner circuit |
|---------------------------------------|--------------------|-------------------|--------------------|
| Max working pressure at 20°C (68°F) | 61 bar (884 PSIG) | 35 bar (507 PSIG) | 61 bar (884 PSIG) |
| Max working pressure at 135°C (275°F) | 50 bar (725 PSIG) | 29 bar (420 PSIG) | 50 bar (725 PSIG) |
| Test pressure | 87 bar (1261 PSIG) | 50 bar (725 PSIG) | 87 bar (1261 PSIG) |

A: 694 mm (27.32") B: 304 mm (11.97")

D650 – Dual circuit



| Working conditions | Inner circuit | Outer circuit | Inner circuit |
|---------------------------------------|--------------------|-------------------|--------------------|
| Max working pressure at 20°C (68°F) | 61 bar (884 PSIG) | 28 bar (406 PSIG) | 61 bar (884 PSIG) |
| Max working pressure at 135°C (275°F) | 50 bar (725 PSIG) | 23 bar (333 PSIG) | 50 bar (725 PSIG) |
| Test pressure | 87 bar (1261 PSIG) | 40 bar (580 PSIG) | 87 bar (1261 PSIG) |

A: 744.6 mm (29.31") B: 365.6 mm (14.39")

PSIG values are related to UL.
All products in the CO₂ range are PED approved.