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# SINGLE PHASE - DESIGN
# 2 HEAT EXCHANGERS : E6THx30/1P

SWEP DThermX

**Date: 04/02/2026**

**Number of parallel units:** 2

**SSP Alias:** E6T

| DUTY REQUIREMENTS | | Side 1 | | Side 2 |
|---|---|---|---|---|
| Fluid | | **Water** | | **Water** |
| Flow type | | | **Counter-Current** | |
| Circuit | | Inner | | Outer |
| Heat load | kW | | **27.00** | |
| Inlet temperature | °C | **75.0** | | **45.0** |
| Outlet temperature | °C | **55.0** | | **65.0** |
| Flow rate | kg/s | 0.3223 | | 0.3227 |
| Pressure drop (Design PD) | kPa | 1.25 **(30.00)** | | 1.14 **(30.00)** |
| Thermal length | | 2.00 | | 2.00 |

| PLATE HEAT EXCHANGER | | Side 1 | | Side 2 |
|---|---|---|---|---|
| Total heat transfer area | m² | | 0.784 | |
| Heat flux | kW/m² | | 34.4 | |
| Mean temperature difference | K | | 10.0 | |
| Overall heat transfer coefficient required | W/m²,°C | | 3440 | |
| Pressure drop - total* | kPa | 1.25 | | 1.14 |
| - in ports | kPa | 0.317 | | 0.317 |
| Port diameter (up/down) | mm | 16.0/16.0 | | 16.0/16.0 |
| Number of channels per pass | | 14 | | 15 |
| Number of plates | | | 30 | |
| Oversurfacing | % | | 0 | |
| Fouling factor | m²,°C/kW | | -0.005 | |
| Reynolds number | | 727.3 | | 584.4 |
| Port velocity (up/down) | m/s | 0.817/0.817 | | 0.814/0.814 |
| Channel velocity | m/s | 0.0804 | | 0.0748 |
| Shear stress | kPa | 4.43e-3 | | 3.90e-3 |
| Average wall temperature | °C | 60.4 | | 59.9 |
| Largest wall temperature difference | K | | 0.8 | |
| Min./Max. wall temperature | °C | 50.6/70.6 | | 49.7/69.7 |

**Excluding pressure drop in connections.*

## NOTES

*i This result consists of 2 units in parallel*

| PHYSICAL PROPERTIES | | Side 1 | Side 2 |
|---|---|---|---|
| Reference temperature | °C | 65.0 | 55.0 |
| Dynamic viscosity | cP | 0.434 | 0.504 |
| Density | kg/m³ | 980.5 | 985.7 |
| Heat capacity | kJ/kg,°C | 4.188 | 4.183 |
| Thermal conductivity | W/m,°C | 0.6590 | 0.6492 |
| Film coefficient | W/m²,°C | 7660 | 7140 |

| TOTALS | | Side 1 | Side 2 |
|---|---|---|---|
| Total weight empty (no connections)* | kg | 3.21 | |
| Total weight filled (no connections)* | kg | 3.95 | |
| Hold-up volume (Inner Circuit) | dm³ | 0.36 | |
| Hold-up volume (Outer Circuit) | dm³ | 0.39 | |
| Port size F1/P1 | mm | 16 | |
| Port size F2/P2 | mm | 16 | |
| Port size F3/P3 | mm | 16 | |

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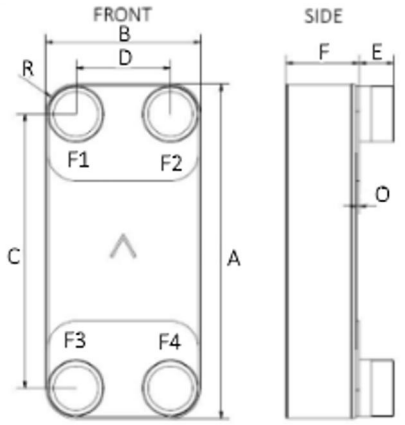
| TOTALS | | Side 1 | Side 2 |
|---|---|---|---|
| Port size F4/P4 | mm | | 16 |

**Weight depends on the selected product.*

## DIMENSIONS




| | | | |
|---|---|---|---|
| A | mm | 210 ±2 |
| B | mm | 73 ±1 |
| C | mm | 172 ±1 |
| D | mm | 40 ±1 |
| E | mm | 12 (opt. 20) ±1 |
| F | mm | 64.72 +4%/-3.3% |
| G | mm | 7 ±1 |
| Q | mm | 2 |
| R | mm | 16 |

**This is a schematic sketch. For correct drawings please use the order drawing function or contact your SWEP representative.*

| CARBON FOOTPRINT | Unit | Value |
|---|---|---|
| Sweden - Landskrona | kg $CO_2e$ | 16.5 |
| USA - Tulsa | kg $CO_2e$ | 17.3 |
| Slovakia - Košice | kg $CO_2e$ | 18.8 |
| Malaysia - Kuala Lumpur | kg $CO_2e$ | 26.2 |
| China - Suzhou | kg $CO_2e$ | 44.9 |

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