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|------------------------|--------------|-----------------------|-----------------|
| <i>Customer</i> | | <i>Date</i> | 06/11/23 |
| <i>Project</i> | | <i>Engineer</i> | Miroslav Stibor |
| <i>HEX Type</i> | XB37M-1-60 | <i>Contact Person</i> | |
| <i>Product Code</i> | 004H7293 | <i>E-mail</i> | |
| <i>Units Connected</i> | 1 (Parallel) | | |

| Calculated Parameters | Unit | Side 1 | Side 2 |
|----------------------------------|---------------------|----------------|---------------|
| <i>Flow Type</i> | | CounterCurrent | |
| <i>Heat Load</i> | kW | 35.15 | |
| <i>Inlet Temperature</i> | °C | 50.0 | 41.8 |
| <i>Outlet Temperature Actual</i> | °C | 43.4 | 47.9 |
| <i>Mass Flow Rate</i> | kg/s | 1.43 | 1.38 |
| <i>Volumetric Flow Rate</i> | L/min | 83.33 | 83.33 |
| <i>Total Pressure Drop</i> | kPa | 19.56 | 15.97 |
| <i>Pressure Drop in Port</i> | kPa | 4.84 | 4.53 |
| <i>Surface Margin</i> | % | 0.03 | |
| <i>LMTD</i> | ΔK | 1.8 | |
| <i>HTC (Available/Required)</i> | W/m ² ·K | 5892 / 5891 | |
| <i>Port Velocity</i> | m/s | 3.34 | 3.34 |
| <i>Shear Stress</i> | Pa | 27.70 | 22.10 |

| Properties of Fluid | Unit | Side 1 | Side 2 |
|------------------------------------|-------------------|-----------------------|---------------|
| <i>Fluid</i> | | Ethylene glycol (35%) | Water |
| <i>Liquid Viscosity</i> | mPa·s | 1.2524 | 0.6002 |
| <i>Liquid Density</i> | kg/m ³ | 1031.9190 | 991.0494 |
| <i>Liquid Heat Capacity</i> | kJ/kg·K | 3.7216 | 4.1763 |
| <i>Liquid Thermal Conductivity</i> | W/m·K | 0.4675 | 0.6332 |

| Specifications | Unit | Side 1 | Side 2 |
|------------------------------------|----------------|---------------|---------------|
| <i>HEX Type</i> | | XB37M-1-60 | |
| <i>Number of Plates</i> | | 60 | |
| <i>Grouping</i> | | 1*29M/1*30M | |
| <i>Plate Material</i> | | AISI316L | |
| <i>Effective Area</i> | m ² | 3.25 | |
| <i>Brazing Material</i> | | Cu | |
| <i>Volume</i> | l | 2.5 | 2.6 |
| <i>Weight, empty/operating</i> | kg | 12.20 / 17.27 | |
| <i>Connection</i> | | | |
| <i>Inlet</i> | | G 1 Thread | G 1 Thread |
| <i>Outlet</i> | | G 1 Thread | G 1 Thread |
| <i>Certification/Approval Type</i> | | | |
| <i>Minimum Design Temperature</i> | °C | -10.0 | |
| <i>Maximum Design Temperature</i> | °C | 180.0 | |
| <i>Maximum Design Pressure</i> | bar(g) | 25.0 | 25.0 |
| <i>H420.2-1.3.21</i> | | | |