Performance Difference Between MicroCool MDT- ILPF and Forged Round Pins

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MDT: 44.3°C

Forged: 47.7°C
Results Pressure

MicroCool Inline Pin
Pressure Drop: 0.0131bar

Forged Round Pin
Pressure Drop: 0.0159bar
Results Velocity

MicroCool Inline Pin

Forged Round Pin
**Results Summary**

6 l/min of 50/50EGW at 20°C with 300 watts

<table>
<thead>
<tr>
<th></th>
<th>MicroCool Cu Inline Pin</th>
<th>MicroCool Al Inline Pin</th>
<th>MicroCool Clad Inline Pin</th>
<th>Forged Cu Round Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temp CP Surface (°C)</td>
<td>32.80</td>
<td>38.53</td>
<td>36.12</td>
<td>36.23</td>
</tr>
<tr>
<td>Temp Junction (°C)</td>
<td>44.35</td>
<td>49.66</td>
<td>47.79</td>
<td>47.73</td>
</tr>
<tr>
<td>Temp Outlet Fluid (°C)</td>
<td>20.89</td>
<td>20.84</td>
<td>20.91</td>
<td>20.90</td>
</tr>
<tr>
<td>Pressure Drop (bar)</td>
<td>0.0131</td>
<td>0.0131</td>
<td>0.0131</td>
<td>0.0159</td>
</tr>
</tbody>
</table>

- As expected MicroCool Clad is performance is in between that of pure aluminum and pure copper.
- When MicroCool Clad with inline pin fin offers the same performance as the forged copper part but with 17% less pressure drop.
- MDT has 8% better thermal performance and 17% less pressure drop than Forged pins.