(2T, 2T, 2T) 3D Vector Magnet System with optical/beam access

System includes:
• 3D vector magnet system with access in x-, y-, and z- directions
• Sapphire windows on beam and transverse axes. Other window materials available on request
• Re-condensing liquid Helium cryostat
• Low mechanical vibration design
• Helium exchange gas variable temperature insert
• Vertical and rotational sample translation
• System electronics
• LabView® based computer control system

<table>
<thead>
<tr>
<th>Magnetic Field Specifications</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Field on each axis at 4.2 K</td>
<td>2 Tesla</td>
</tr>
<tr>
<td>Maximum Field in vector mode during persistent operation</td>
<td>2 Tesla</td>
</tr>
<tr>
<td>Sweep rate on major axes</td>
<td>Up to 0.2T/min</td>
</tr>
</tbody>
</table>
| Magnetic field homogeneity over 10mm d.s.v | Z axis: 0.5%
X axis: 2%
Y axis: 1% |
| 5 gauss line with all coils at maximum field | Less than 350cm in all directions |
**VTI Specifications**

- **VTI temperature range:** <1.8K – 300K
- **Sample environment:** Helium exchange gas
- **Sample access:** Vertically from above
- **Vertical translation range:** ±20 mm
- **Rotational range:** ±180°
- **Electrical connections to the sample:** 10 DC wires from room temperature

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**Liquid Helium Cryostat Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid helium hold time: during ramping and VTI operation</td>
<td>-30 days</td>
</tr>
<tr>
<td>Liquid helium hold time: static</td>
<td>Indefinite</td>
</tr>
<tr>
<td>Liquid helium refill volume:</td>
<td>55 litre</td>
</tr>
</tbody>
</table>

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*Scientific Magnetics can design and prototype bespoke superconducting magnets and accompanying magnetic flux shields for fundamental science and industrial applications. Please contact us via our website [www.scientificmagnetics.co.uk](http://www.scientificmagnetics.co.uk) to discuss your requirements and obtain a quotation.*

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