Cryofree® extra large dilution refrigerator designed for quantum computing with extended sample space and enhanced cooling power

Triton™XL

3 years comprehensive warranty
Why choose TritonXL?

The TritonXL range of dilution refrigerators enables higher cooling power, more sample space and achieves colder base temperatures than any other Cryofree dilution refrigerator on the market (3.3 mK has been demonstrated). TritonXL comes with two different dilution units based on the choice of base temperatures and cooling power:

- **TritonXL 1000** with a guaranteed base temperature of < 5 mK (< 4 mK expected) and cooling power of 900 μW at 100 mK
- **TritonXL 500** with a guaranteed base temperature of < 10 mK (< 7 mK expected) and cooling power of 450 μW at 100 mK

**Lowest base temperature on the market**

- Less than 5 mK base temperature
- 5 μW of cooling power at 10 mK
- 25 μW of cooling power at 20 mK
- Accepts up to two 1.5 W pulse tube refrigerators

**Large sample space and extended wiring capacity**

- 430 mm diameter mixing chamber sample plate
- 100 mm central line-of-sight port for semi-rigid coaxes or a top loading exchange mechanism
- Six 50 mm line-of-sight ports for semi-rigid coaxes
- A total of up to 70 semi-rigid coaxes with SMA connectors can be installed
- Compatible with high density coax stick, allowing 36 microwave lines per line-of-sight port

**Complete magnet integration**

- Integrates magnets up to 16 T
- Fully designed, built, tested and guaranteed by Oxford Instruments

**Low vibration**

- To ensure low vibration, the PTR coldhead is isolated at the system top plate, at intermediate plates, and at 4 K stages
- The new rigid support structure reduces the amplitude of low frequency modes, resulting in low vibration within the sample space

**Fast sample loading**

- Patented, unique top and bottom-loading sample puck design for best-in-class wiring capability and fast sample change
- Proven 10 mK sample temperatures with multiple semi-rigid coaxes
- Up to 28 RF connections plus 100 DC connections
- Fast cool-down within 15 hours

All Triton systems come with 3 years comprehensive warranty including all supplied third party components, such as the pulse-tube cooler, pumps and electronics – all backed by our expert regional service teams.