

| (Technical Compliance Sheet) | | Tender |
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| for high frequency signal generator with spectrum analyzer | | |
| Sr. | Description / Specifications | Remarks of Vendor |
| 1 | High Field Magnet -Vertical field superconducting magnet comprising of: | |
| 1.a | field greater than 16T | |
| 1.b | Magnetic central bore size > 53mm. In case 53mm bore size cannot be technically provided, the vendors are requested to quote the highest bore size that can be provided. However, based on the offers received, the institute may or maynot consider lower bore size. | |
| 1.c | Central field homogeneity of 0.1% | |
| 1.d | Field homogeneity length of 10mm | |
| 1.e | Bottom loaded magnet to reduce the effective neck diameter | |
| 1.f | Should run at 4.2K for more than 16T | |
| 1.g | Full persistent mode with control | |
| 2 | Low Loss Cryostat for 16T Magnet | |
| 2.a | Non magnetic helium vessel | |
| 2.b | Liquid nitrogen cooled radiation shield | |
| 2.c | Gas cooled secondary radiation shield | |
| 2.d | Optimized multilayer super insulation | |
| 2.e | Liquid nitrogen jacket | |
| 2.f | Aluminium outer vacuum vessel | |
| 2.g | Over pressure relief valve | |
| 2.h | Bellows sealed vacuum evacuation valve | |
| 2.i | Integrated Variable Temperature Insert (VTI) | |
| 2.j | Integrated liquid helium level indicator | |
| 2.k | Cryostat should be fitted with liquid Helium level gauge, temperature sensors (CCS) and a heater at the base of the vessel to remove nitrogen on precooling. | |
| 2.l | The loss should be less than 4 liters/day when the magnet and the VTI are not running. | |
| 2.m | The cryostat must be integrated with a reliquefier having a recondensing rate greater than 27 liters/day. All accessories including the compressor for the reliquefier must be provided. Minimum 3 years warranty must be included for the reliquefier. | |
| 3 | Integred Temperature Insert (VTI) for 16T Magnet | |
| 3.a | Should provide a dynamic temperature control in the range of 1.4 to 325K using an integral heater and calibrated cernox sensor | |
| 3.b | VTI top plate should have the access to an instrumentation port for heater and sensor wiring, a sample space pumping port of NW25KF and an NW50KF sample access port. | |
| 3.c | Dynamic VTI should have an outer diameter of 51mm. | |
| 3.d | Should offer an airlock, gate valve assembly and pressure relief valve corresponding to the VTI | |
| 4 | Vector Field | |
| 4.a | Magnetic field 9T-2T-2T | |
| 4.b | Central bore size ≥ 53mm | |
| 4.c | Central field homogeneity of 0.1% | |
| 4.d | Field homogeneity length of 10mm | |
| 4.e | Bottom loaded magnet to reduce the effective neck diameter | |
| 4.f | Full persistent mode with control for all the three axes | |
| 5 | Low Loss Cryostat for Vector Field | |
| 5.a | Non magnetic helium vessel | |

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| 5.b | Liquid nitrogen cooled radiation shield | |
| 5.c | Gas cooled radiation shields (of high purity Aluminium) | |
| 5.d | Optimized multilayer super-insulation | |
| 5.e | Liquid nitrogen jacket | |
| 5.f | Welded outer can of Aluminium with wear resistant paint | |
| 5.g | Full demountability, using o-ring seals to permit full access to all internal parts | |
| 5.h | Over pressure relief valve | |
| 5.i | Bellows sealed vacuum evacuation valve | |
| 5.j | Integrated Variable Temperature Insert (VTI) | |
| 5.k | Integrated liquid helium level indicator | |
| 5.l | Cryostat should be fitted with liquid Helium level gauge and level meter, temperature sensors (CCS) and a heater at the base of the vessel to remove nitrogen on precooling. | |
| 5.m | The loss should be less than 4 liters/day when the magnet and the VTI are not running. | |
| 5.n | The cryostat must be integrated with a reliquefier having a recondensing rate greater than 27 liters/day. All accessories including the compressor for the reliquefier must be provided. Minimum 3 years warranty must be included for the reliquefier. | |
| 6 | Integrated Temperature Insert (VTI) for Vector Field (Optional) | |
| 6.a | Should provide a dynamic temperature control in the range of 1.6 to 325K using an integral heater and cernox sensor. | |
| 6.b | VTI top plate should have the access to an instrumentation port for heater and sensor wiring, a sample space pumping port of NW25KF and an NW50KF sample access port. | |
| 6.c | Dynamic VTI should have an outer diameter of 51mm. | |
| 6.d | Should offer an airlock, gate valve assembly and pressure relief valve | |
| 7 | Magnet Power Supplies: | |
| 7.a | 20 bit Power supply for 16T magnet | |
| 7.b | Three independent sets of 20 bit power supplies required for 9T-2T-2T vector field. | |
| 7.c | Easy to use front panel push button operation | |
| 7.d | Automatic quench detection and protection with internal energy absorber | |
| 7.e | Accurate ramp with dual set point and pause, with automatic voltage limit for fast ramping | |
| 7.f | Auxiliary analogue and digital interfaces for peripherals (including Cryogenic HLG units for low helium safety, external trip inputs, all available for remote reading via the USB interface) | |
| 7.g | Adjustable switch heater output | |
| 7.h | USB interface as standard. | |
| 8 | Labview Control Automation | |
| 8.a | All the labview based control modules for the magnet controllers must be provided. | |

Terms and Conditions :-

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| 1 | Price - (FOR/FOB/FCA/CIP/CIF-only) | |
| 2 | Validity - (Minimum 90 days) | |
| 3 | Delivery Period - | |
| 4 | Payment terms - (Letter of Credit / Within 30 days after delivery) | |
| 5 | Warranty | |

NB :- Please fill in yellow cell only