Agilent 400 MHz WB (Widebore) NMR Magnet

Premium shielded performance

Data Sheet

Introduction

The Agilent 400 MHz WB Premium Shielded magnet features outstanding fringe field containment to minimize laboratory space requirements. The 89 mm bore magnet features a larger homogeneous volume over the standard 54 mm product, giving greater flexibility for applications.

External field perturbations are efficiently attenuated, and pneumatic anti-vibration support legs (supplied as standard) allow siting in a wide range of environments.

Key Benefits

- **Flexible**–The 89 mm (3.5 in) diameter room temperature bore accommodates a broad range of probes and sample conditions. It is ideal for micro-imaging, as well as liquid and solid-state NMR applications.
- **Save laboratory space**–The radial 5 Gauss (G) fringe field extends to a maximum of 40 cm (15.75 in) from the exterior of the cryostat. The small 5 G footprint of only 2.0 m^2 (22 ft^2) gives greater flexibility in where the magnet can be sited.
- **Reduced operation costs**–The 400 MHz WB magnet has an exceptional 300-day helium refill interval.

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The Agilent 400 MHz WB NMR magnet consists of a highly homogeneous superconducting magnet (400 MHz ^{1}H, 9.4 Tesla), housed within a low-loss helium cryostat with a nominal room temperature bore of 89 mm. A selection of room temperature shim systems is available to optimize magnet performance for popular applications.

The magnet features excellent fringe field characteristics, improved magnet shielding from external perturbations and minimized ceiling height. These facilitate ease of system siting and improve operational safety.

System Includes

- Main magnet housed within a low-loss cryostat
- Set of anti-vibration legs
- Liquid helium and nitrogen level probes and readout unit
- Liquid helium transfer siphon and extension tube
- Braided liquid nitrogen transfer line
- Helium and nitrogen gas flow meters

Technical Specifications

NMR frequency	400 MHz
Drift	10 Hz/hr
Superconducting shim coils	Z^1, Z^2, Z^3, X, Y, ZX, ZY, XY, X^2-Y^2
Radial 5 G stray field from magnet center	80 cm/31.5 in
Axial 5 G stray field from magnet center	130 cm/51.2 in
Magnet radius (including flanges)	43 cm/16.9 in
Axial 5 G height above floor	243 cm/95.6 in
Axial 5 G depth below floor	17 cm/6.7 in
System weight, operational	865 kg/1,910 lb
Vibration isolation using pneumatic legs	Included as standard
Minimum ceiling height	300 cm/118.1 in
Minimum ceiling height (optional transfer)	278 cm/109.5 in
Liquid helium refill volume	128 L
Liquid helium hold time	300 days
Liquid nitrogen refill volume	67 L
Liquid nitrogen hold time	14 days

Ordering Information, Separate Sale

Description	Part number
Agilent WB Premium Shielded NMR Magnet, 400 MHz, 89-mm bore	0191631900

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