

# Varian 400 MHz WB (Widebore) NMR Magnet

## PREMIUM SHIELDED PERFORMANCE



*The Varian 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<sup>2</sup> (22 ft<sup>2</sup>) gives greater flexibility in where the magnet can be sited.
- ▶ **Reduced operation costs.** The 400 MHz WB magnet has an exceptional 270-day helium refill interval.

NOTICE: This document contains references to Varian. Please note that Varian, Inc. is now part of Agilent Technologies. For more information, go to [www.agilent.com/chem](http://www.agilent.com/chem).



**Agilent Technologies**

# Varian 400 MHz WB (Widebore) NMR Magnet

The Varian 400 MHz WB NMR magnet consists of a highly homogeneous superconducting magnet (400 MHz  $^1\text{H}$ , 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.

## 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   | 140 cm/55.1 in.                                     |
| Magnet radius (including flanges)          | 43 cm/16.9 in.                                      |
| Axial 5 G height above floor               | 253 cm/99.6 in.                                     |
| Axial 5 G depth below floor                | 27 cm/10.6 in.                                      |
| System weight, operational                 | 850 kg/1,875 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                    | 270 days (9 months)                                 |
| Liquid nitrogen refill volume              | 67 L  |
| Liquid nitrogen hold time                  | 14 days   |

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

## Ordering Information, separate sale

| Description  | Part Number |
|--|-------------|
| Varian WB Premium Shielded NMR Magnet, 400 MHz, 89-mm bore | 0191631900  |

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