



# Agilent 600 MHz PremiumCOMPACT NMR Magnet

Step up in technology • Step down in size

Data Sheet



## Introduction

The Agilent 600 MHz PremiumCOMPACT NMR magnet is a further refinement in Agilent's Premium Shielded magnet technology. The modest fringe field footprint of the 600 MHz magnet is further reduced and the radial 5 Gauss field boundary is now contained to within 30 cm (11.8 in.) of the cryostat.

## Key Benefits

- **Save laboratory space**—Because the 5 Gauss (G) fringe field extends to only 0.70 m (2.30 ft) radially, or 0.27 m (0.89 ft) from the outside of the cryostat, you have greater flexibility in where you can position the magnet in your laboratory. The 5 G magnetic footprint is only 1.54 m<sup>2</sup> (16.6 ft<sup>2</sup>).
- **Convenient**—On-site commissioning is easier since the magnet is now smaller and lighter, requires a smaller quantity of cryogenics to install and can be sited within a ceiling height of 2.98 m (9.78 ft).
- **Minimize operation costs**—The PremiumCOMPACT cryostat reduces liquid helium and nitrogen cryogen consumption.



**Agilent Technologies**

The Agilent 600 MHz NMR magnet system consists of a highly homogeneous PremiumCOMPACT magnet (600 MHz 1H, 14.1 Tesla), housed within an ultra low-loss helium cryostat with a nominal room temperature bore of 54 mm.

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
- Room temperature shim set
- Helium and nitrogen gas flow meter

## Technical Specifications

NMR frequency	600 MHz
Drift	10 Hz/hr
Superconducting shim coils	Z <sup>1</sup> , Z <sup>2</sup> , Z <sup>3</sup> , X, Y, ZX, ZY, XY, X <sup>2</sup> -Y <sup>2</sup>
Radial 5 G stray field from magnet center	70 cm/27.6 in
Axial 5 G stray field from magnet center	125 cm/49.2 in
Magnet radius (including flanges)	43 cm/16.9 in
Axial 5 G height above floor	240 cm/94.5 in
Axial 5 G depth below floor	10 cm/3.9 in
System weight, operational	950 kg/2,100 lb
Vibration isolation using pneumatic legs	Included as standard
Minimum ceiling height	320 cm/126.0 in
Minimum ceiling height (optional transfer)	298 cm/117.3 in
Liquid helium refill volume	66 L*
Liquid helium hold time	120 days*
Liquid nitrogen refill volume	83 L
Liquid nitrogen hold time	15 days

\*Annual refill option available, which only requires one helium refill every 365 days.

## Ordering Information, Separate Sale

Description	Part number
Agilent PremiumCOMPACT NMR Magnet System, 600 MHz, 54-mm bore	0192220400

[www.agilent.com](http://www.agilent.com)

Product specifications and descriptions in this document are subject to change without notice.

© Agilent Technologies, Inc., 2011  
Published in USA, March 3, 2011  
Publication Number SI-1763



**Agilent Technologies**