



Ascend™

● The Next Generation of NMR Magnets

The Ascend™ series of compact NMR magnets makes medium and high-field NMR even more powerful, and at the same time more convenient and accessible to more NMR laboratories. This new magnet line combines the key advantages of Bruker's well-established UltraShield™ Plus magnets with further innovations for superior performance, greater convenience, and operational cost savings.

The Ascend magnet design features advanced superconductor technology, enabling the design of smaller magnet coils, thus resulting in a significant reduction in physical size and magnetic stray fields. Ascend magnets are therefore easier to site, safer to run and less expensive to operate.

Cutting-edge superconducting wire technology and magnet design enable robust, stable and very compact magnets from 400 up to 850 MHz. Bruker's improved Electromagnetic Disturbance Suppression (EDS) technology makes Ascend magnets ideal for challenging urban environments and space-restricted laboratories.



● Maximizing performance

- Unique jointing technology leading to the lowest drift rates for outstanding field stability
- External Disturbance Suppression (EDS) providing up to 99% screening efficiency against external magnetic field disturbances
- Minimum stray fields

Easy to Site with Lower Preparation Costs

- Easier magnet access and rigging due to smaller size and weight
- Reduced physical and magnetic footprint in the lab
- Reduced ceiling height requirements



Ascend 500 equipped with SampleCase for easy automation

Automation and Compatibility

Access for sample changing has now become much easier with the optional and unique SampleCase™ and SampleMail™ accessories.

Ascend magnets are compatible with the complete range of recent Bruker NMR probes, spectrometers, automation technology and software for the integrated high performance NMR systems used in structural biology, small molecule and materials research applications.



Ascend 700 MHz equipped with SampleMail for easy and safe sample submission

● **Ascend – Sustainable Benefits with Enhanced Convenience**



BNL and BSNL Refrigeration Solutions

Due to their smaller size and weight, Ascend magnets consume significantly less Helium and Nitrogen, reducing operational costs compared to previous generations of magnets.

Further demonstrating our determined commitment to increased sustainability, and in response to customers' concerns regarding the availability and rising price of cryogenics, we have also developed innovative refrigeration solutions that eliminate N₂ fills.

This additional feature maximizes convenience and system flexibility by enabling longer term experiments with no interruption, whilst lowering the cost of ownership without compromising on performance.

The BSNL is dedicated to systems equipped with a CryoProbe, while the BNL has been developed for use with all other Bruker NMR systems.

Ascend 600 with N₂ fill eliminating technology

Specifications

	Ascend 400	Ascend 500	Ascend 600	Ascend 700	Ascend 750	Ascend 800	Ascend 850
Minimum ceiling height	2.52 m	2.52 m	2.85 m	3.0 m	3.23 m	3.60 m	3.60 m
5 Gauss – radial distance from magnetic center	< 0.5 m	< 0.6 m	< 0.7 m	< 0.8 m	< 1.0 m	< 1.5 m	< 1.6 m
Weight	484 kg	560 kg	850 kg	1,446 kg	1,874 kg	3,500 kg	3,500 kg
Cryogen savings (% of less He consumption)	13% less He	23% less He	42% less He	38% less He	50% less He	44% less He	44% less He

● **Bruker BioSpin**

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