

PHOENIX NMR PROBE HEAD

Utilizing a user interchangeable module approach which packages all of the necessary rotor and RF-specific components right into the head itself, the Phoenix NMR Probe Head allows you to work off a single Phoenix NMR Probe Base and then change out only the probe head according to your research needs. This method allows you to expand your NMR capabilities at a much lower cost than you could with a traditional probe purchase that requires the complete replacement of both probe head and base. Below are several options that are available within Phoenix NMR's Probe Head product set.



Spinning Module Option: When you consider the spinning module, there are many options for a Phoenix NMR probe. For example, we can outfit your new probe head with a Revolution-style spinning system. Or, if you have primarily Varian/Agilent-style existing probes we can provide a spinning module that will interface with those rotors as well. The same holds true if you have mainly Bruker-style probes. And if you don't need spinning at all, we also offer static probe heads.

Lock Channel Option: This option allows the addition of a separate ^2H channel coil to be added to 1.6mm or 3.2mm spinning systems, thus enabling lock channel operations for both traditional field locking as well as low power ^2H decoupling.

Low $^1\text{H}/^{13}\text{C}$ Background Probe Heads: We can provide material selection choices that will minimize the ^1H and ^{13}C (via Cross Polarization) background signals. Alternatively we can provide material choices to minimize the ^{19}F background, but this will dramatically increase the ^1H and ^{13}C background signals.

Low or High VT Range Options: Through the same material selections associated with background, the high temperature range of the probe head can be optimized. Effectively, low $^1\text{H}/^{13}\text{C}$ materials have inherently lower maximum temperature limits (100C), whereas the low ^{19}F options have much higher maximum temperature ranges available (~200C).

AVAILABLE PROBE HEAD FEATURES:

Option	400 MHz	500 MHz	600 MHz	700 MHz	800 MHz	900 MHz
² H LOCK	✓	✓	✓	✓	ASK	ASK
LOW GAMMA	✓	✓	✓	✓	✓	✓
1.6mm	✓	✓	✓	✓	✓	✓
3.2mm	✓	✓	✓	✓	✓	✓
4.5,6mm	✓	✓	✓	ASK	ASK	ASK
OTHER ROTOR SIZE/STYLE	ASK	ASK	ASK	ASK	ASK	ASK
STATIC	✓	✓	✓	✓	✓	✓

Typical probe head specifications:

- ▮ Variable Temperature Range: -125 to +200 Celsius (depends on spinning module choice, presence of LN₂ cooling options, etc.)
- ▮ Spinning module spinner sizes: 1.6mm through to 6mm.
- ▮ Tuning modes: HXY, FXY, HFX, HX, FX, HFX (HF modes require H&F probe base option)
- ▮ HXY, FXY, HFX mode X tuning range: ¹³P to ²⁹Si
- ▮ HXY, FXY, HFX mode Y tuning range: ²³Na to ¹⁵N, +Low gamma with optional add-on accessory
- ▮ HX, FX, HFX mode X tuning range: ³¹P to ¹⁴N, +Low gamma with optional add-on accessory
- ▮ Magic Angle adjust range +/- 5 degrees, Resolution ~ +/- 0.02 Degree