

# MagStation II™

Process NMR analyzer for research and quality control applications



The MagStation II Nuclear Magnetic Resonance (NMR) process analyzer is part of the world renowned range of products from Progression.

The MagStation II provides off-line measurement and ensures quality control for scalable method development for on-line manufacturing applications utilizing Progression's on-line MagModule II™ product line.

The MagStation II is the only magnetic resonance system suited for advanced material analysis with no manual sample preparation such as pre-heating or pre-weighing. Patented data analysis methods provide the highest performance capable from an NMR spectrometer. Analysis of hydrogen, fluorine, phosphorus and lithium provide research and development, quality control, and other factory staff superior performance in material analysis technology.

## Magneflow®

### Benefits

- Highest performance off-line NMR technology available
- Large sample volume for more representative results
- Fast, non-destructive analysis
- Scalable to on-line MagModule II
- Optimized measurement accuracy with automatic sample temperature conditioning
- On-site calibration, operator training, commissioning, and start up assistance

### Advantages

- Active internal sample conditioning
- Improved measurement performance from enhanced magnet performance
- Fully integrated chemometric analysis
- Worldwide support/training

### Applications

- Polypropylene production
  - Xylene solubles
  - Tacticity
  - Decalin solubles
  - Melt flow
  - Ethylene content
  - Flex modulus
  - Heptane insolubles
- Polyethylene production
  - Crystallinity
  - Density
  - Melt index
- Phosphate mining and chemicals
  - BPL
  - P<sub>2</sub>O<sub>5</sub>
  - Fluorine
- Energy
  - Fuel oil viscosity
  - BTU
  - Biofuel qualification



# Specification

<b>Magnet System</b>	The permanent magnet system is housed in a fully insulated, temperature-controlled enclosure. Magnetic field adjustment coils provide fine automatic or manual control of field strength before measurement.
<b>NMR Frequency</b>	20 MHz nominal: 2 – 60 MHz available
<b>Probe System</b>	The probe provides active sample temperature conditioning. This results in fast sample conditioning and analysis in about 5 minutes as compared to 30 – 40 minutes in systems without active conditioning. Variable temperature probe is standard.
<b>Standard Sample Diameter</b>	0.710" (18 mm) (larger diameters available)
<b>Typical Sample Volume</b>	20 ml
<b>Measurement Temperature Range</b>	Ambient to 100°C standard (wider ranges available)
<b>Overall Dimensions</b>	60"W x 30"L x 55"H (152 x 76 x 140 cm)
<b>Curve Fitting</b>	Automatic and manual curve fitting of the free induction decay (FID) is included. A number of curve-fitting models including exponential, Gaussian, modified Gaussian and Weibull are provided. Outputs to third party software for chemometric analysis are available.
<b>AutoSampler Carousel</b>	Optional 16-station carousel provides automatic multiple measuring of up to 16 samples.
<b>Receiver Gain</b>	Adjustable over 55 dB range in 1 dB steps
<b>Electronics Unit</b>	Digital frequency synthesizer for RF pulse generation Effective resolution at 1 Msps: 15 bit, at 200 ksps: 16 bit Event resolution: 33 ns
<b>Sample Heat Time</b>	Adjustable in one second intervals
<b>Pulse Sequences</b>	Standard single- and multi-pulse sequences Customized phase cycling and pulse schemes available
<b>Utility Requirements</b>	
<b>Electrical</b>	85 – 132/180 – 264 VAC autoranging 50/60 Hz 10/5 A
<b>Instrument Air</b>	Dry and filtered, 80 psig minimum (5.5 barg), 150 SCFH (4250 l/hr)
<b>Communication</b>	Direct dial, outside phone line for sufficient quality is needed for reliable modem communication for support, training and remote diagnostics.  Covered by one or more of the following patents: USA: #5,530,350, #5,596,275, #5,675,253, #5,408,181, #5,420,508, #5,015,954, #5,049,819, #5,302,896, #5,162,103, #5,319,308, #5,302,897. Canada: #2,170,640. Germany, France, UK, Netherlands: #576,421. Other patents pending.



**Analyze with integrity.™**

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