

GAS ANALYSIS FOR YOUR PROCESS!



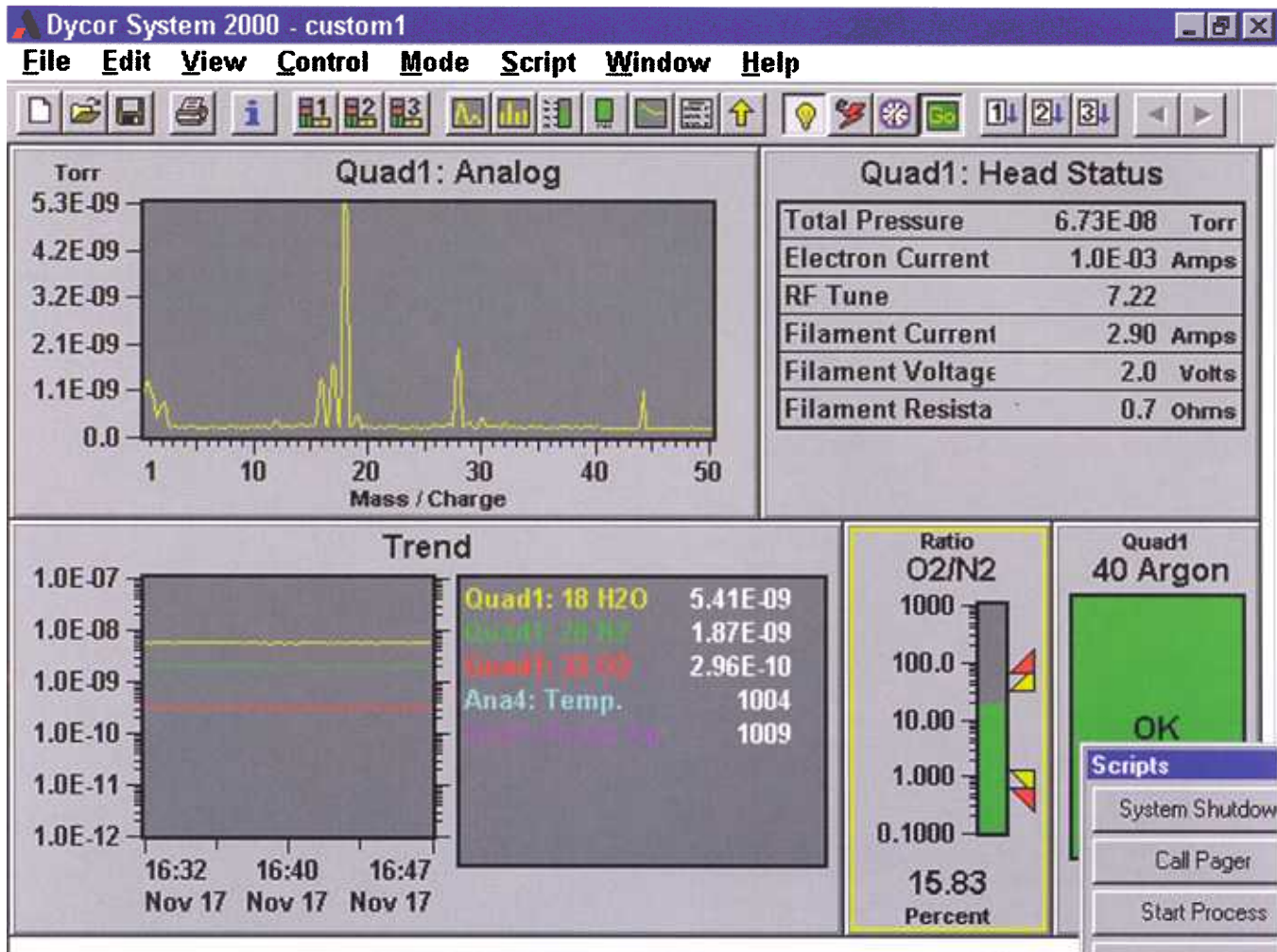
DYCOR DYMATION MASS SPECTROMETER

The Dycor Dymaxion smart sensor offers the latest quadrupole technology, providing distributed control and simultaneous multiplexing of multiple analyzer head locations from a single PC.

Dymaxion electronics comes with choice of ion source best suited for your application, as well as 1-100, 1-200, or 1-300 AMU mass range.

Key features include:

- Zero Foot Print *Smart Sensor*
- Optional *On-Board Analog and Digital I/O* for monitoring and control of *other sensor inputs*.
- *Zero Drift Electrometer Amplifier* technology provides *repeatable data*
- *On-board Diagnostics* provides *data integrity*
- *RS-232 and RS-485* communication ports for *local and network control*.
- *No need to match Electronics* with Analyzer Head offers *maximum versatility*



DYCOR SYSTEM 2000 SOFTWARE

The Dycor System 2000 software is a 32 bit multi-threaded program developed to take full advantage of the capabilities of Windows 95 and NT, and is intended for real time process control.

Dycor System 2000 Upgrades

All Dycor Analyzers, M/MA Series, System 1000, and QuadLink, can be upgraded to operate with the Dycor System 2000 software for Windows 95 and NT.

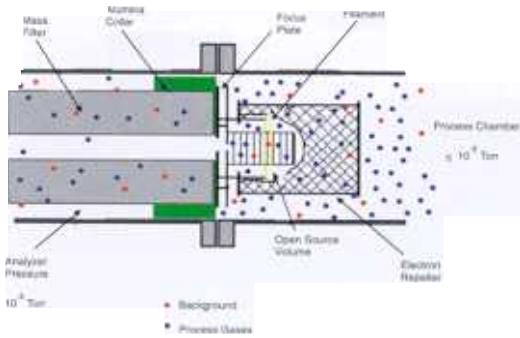
We are pleased to provide all our existing customers with this capability of protecting their investment while maintaining compatibility with the new Dymaxion line of RGA's. With a System 2000 Upgrade, even the oldest Dycor instrument can operate using the latest Windows 95 or NT software.

Please contact us or your local Dycor Sales Representative for a price quotation for your instant upgrade to the latest performance and software features.

Key Features include:

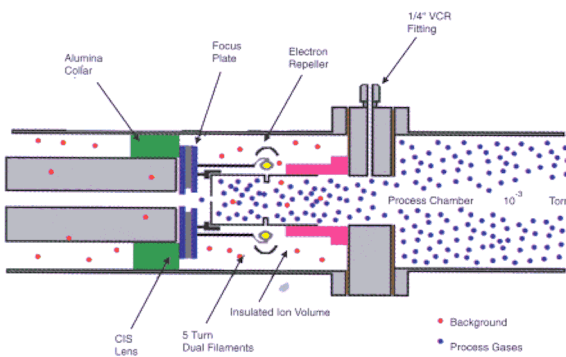
- Extensive *systems integration* capability
 - * Visual Basic *Scripting*
 - * DDE and OLE *Automation*
- *Auto-tune* capabilities ensure *high quality, repeatable data*
- *Real time calculations* can be applied to quadrupole or other input data
- Powerful *scripting* capability *automates equipment and process monitoring*
- *Spectral Interpretation* suggests what gas species could be contributing to your spectra.
- *Customized Displays* can be created and saved *without programming*
- Supports *Analog and Digital I/O* for *monitoring and control* of your process
- *Simulation mode* facilitates *user training and application development*

DYCOR OPEN ION SOURCE



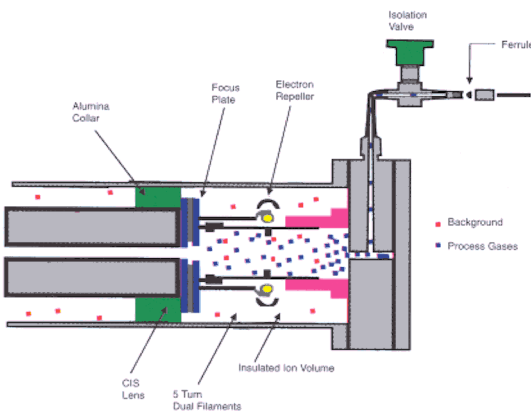
- Excellent for UHV and Leak Detection
- Simple design and construction reduces maintenance requirements
- Lowest cost ionizer option
- Applications include: HV & UHV Systems, MBE Systems, Ion Implant Systems, Load Lock/Transfer Chambers, Wafer Preheat Stations

DYCOR CONDUCTANCE LIMITED ION SOURCE



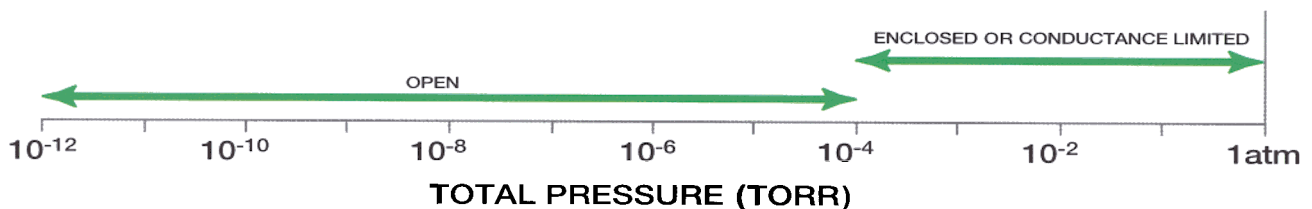
- Ideal for PVD applications
- Increases signal to noise by 100x over open ion source
- Background interferences are minimized since filament does not contact sample
- Works best with aprotic (non-hydrogen containing) gases
- Applications include: PVD, Sputter, High Purity Gas Analysis

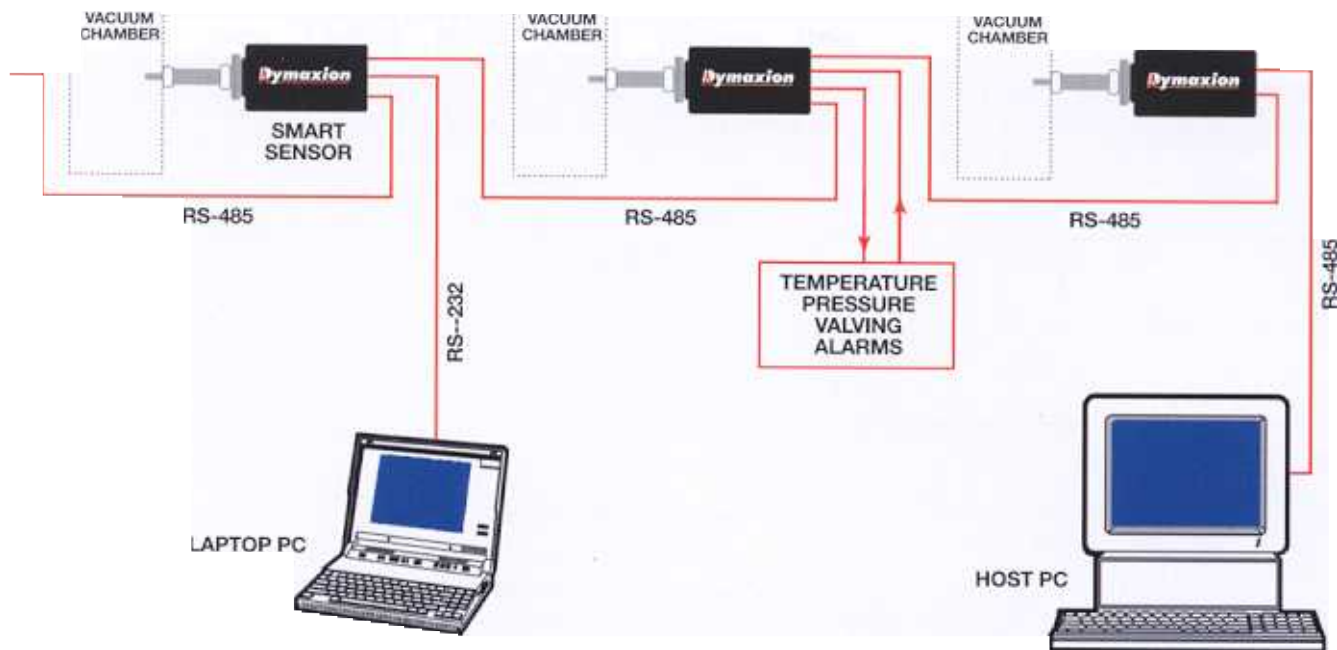
DYCOR ENCLOSED ION SOURCE



- Excellent for CVD and Atmospheric Pressure sampling applications
- Can accommodate wide range of sample inlet pressures
- Less pumping speed required than Conductance Limited source lowers overall cost
- Works better than Open and Conductance Limited sources in reactive gases
- No problems with hydrogen containing gases
- Applications include: CVD, Vacuum Furnaces, Fermentation Off-gas, Atmospheric Sampling, Process Stream Sampling, Etch, TGA

ION SOURCE/PRESSURE RANGE SUMMARY





Use a laptop to control a single analyzer, or use RS-485 network to control multiple analyzers and analog/digital I/O. With the System 2000 software, any number of analyzers can be linked for true simultaneous data acquisition and control from one PC.

SPECIFICATIONS

Mass Range: 1-100, 1-200, and 1-300 AMU

Operating Pressure Range: 10^{-4} Torr to ultra-high vacuum

Minimum Detectable Partial Pressure: 5×10^{-12} Torr
(5×10^{-14} Torr for electron multiplier units)

Resolution: Adjustable to constant peak width
(0.5 AMU at 10% height)

Emission Current: .1 to 10 mA; 50 mA to degas

Electron Energy: 30 to 150 volts to operate; 200 volts to degas

Ion Energy: 1-10 volts

Source Sensitivity (Faraday Cup): 2×10^{-4} Amps per torr at detector (measured with nitrogen at mass 28) with peak width = 0.5 at 10% height and 1×10^{-3} amps emission current)

Power Requirements: 24 volts DC @ 3 amps.;
110/220 VAC, 50/60 Hz Adapter Available

Stability: Mass stability: ± 0.1 AMU after 30 minutes warm-up; Peak height: $\pm 2\%$ after 30 minute warm-up.

Minimum PC Requirements: Pentium, 60 MHz microprocessor, 16 MB RAM, with Windows 95 or NT.

RS-232 Serial Communications Interface: Isolated; Baud Rate Selection of 1200 to 38,400; 9-pin, female D-connectors

RS-485 Addressable Communications Interface: Isolated; Baud Rate Selection of 1200 to 38,400; programmable addresses; two pin, female D-connectors

Optional Analog/Digital I/O Board: Includes Two Analog Inputs, Two Analog Outputs, Six Relay Contact Closures, Four Digital Inputs

Dymaxion Physical Dimensions: Weight - 4.6 lbs (2.1 kg) without quad head, 7.4 lbs (3.4 kg.) with quad head, Width - 4.5" (11.4 cm); Length - 9" (22.9 cm); Height - 5.25" (13.3 cm)

AMETEK®

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