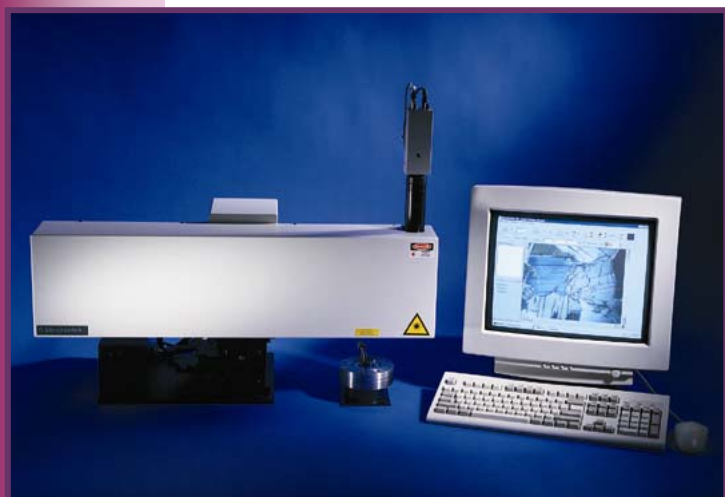


MIR 10-30

Laser Fusing and Heating System



Laser Fusing and Heating Systems

MIR10-30 is a compact laser system that provides a versatile method of sampling and analyzing solids for noble gas and isotope-ratio mass spectrometry. MIR 10-30 system “floats” above the sample chamber enabling the use of non-flexible tubing to the extraction line for stronger signals and lower blanks. Bake-out ovens can remain under the sample chamber. The MIR10-30 Laser Fusing and Heating System is a complete, integrated instrument providing full computer control of all laser, beam-delivery, sample-observation and sample-manipulation functions. The 30 watt laser output power, is sufficient for micro-feature (in-situ) and bulk analysis (rapid heating diffused – RHD) sampling of difficult materials such as sanidine, feldspar and zircon. The long working distance, joystick control and 1,024 steps of output-power resolution yield optimal results.

The MIR10-30 Advantages

- Gantry mounted system “floats” over stationary sample chamber; ready to use for optimal results
- On-axis viewing and lasing at 90° to sample
- Long working distance accommodates most sample cell designs
- >20W minimum power to the sample, continuously adjustable for power “ramping”
- Automated variable spot sizes below 100µm for *in-situ* analysis and up to 3000µm for rapid heating diffused (RHD) fusions
- Software controlled iris “flattens” beam
- Software control of all functions, including sample mosaic navigation function
- Joystick control for tactile “chasing” of grains in wells

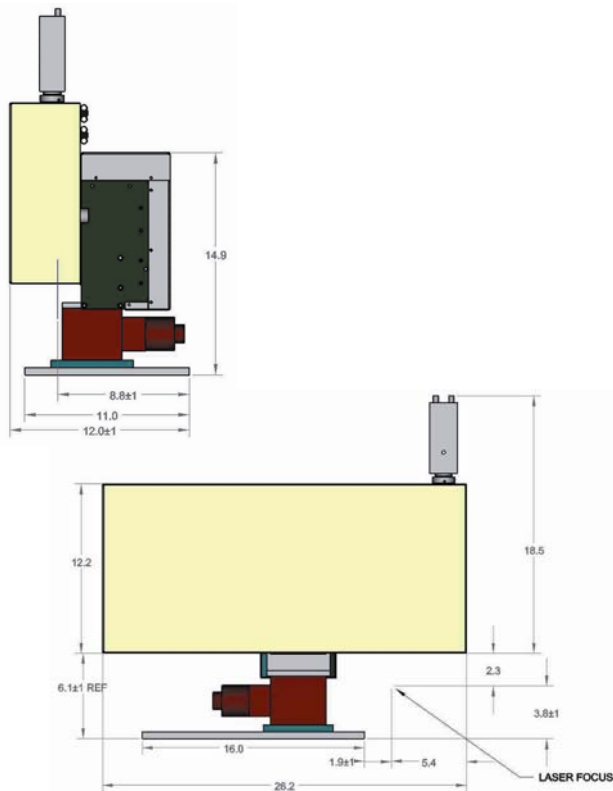
Applications

For ICP, ICP-MS noble gas or stable isotope mass spectrometry. The MIR10-30 excels in:

- Laser fluorination (e.g. 18O/16O, 17O/16O, 34S/32S and 33S/32S)
- Laser heating (e.g. 13C/12C and 18O/16O)
- Rare-gas isotope ratio measurements (e.g. 40Ar/39Ar dating)
- Ocean circulation dating using Pb isotopes
- Atmospheric chemistry through isotopic analysis of rocks
- In-situ dating of geological materials by 40Ar/39Ar
- Tracing paleoclimates through isotopic analysis of mammal teeth



NEW WAVE[™]
R E S E A R C H



All dimensions shown are in inches.

Dimensions (nominal)

Laser Module

Depth	27" / 67 cm
Width	12" / 31 cm
Height	24" / 61 cm
Weight	90 lb. / 41.4 kg

Laser Power Supply

Depth	11" / 28 cm
Width	10" / 24 cm
Height	8" / 19 cm
Weight	20 lb. / 9 kg
Voltage	100 - 120 VAC, 10A, 50/60 Hz 220 - 240 VAC, 5A, 50/60 Hz

System Configuration

- 30W CO₂ laser with exceptional beam quality and stability
- High-resolution color, CCD camera shows true colors of samples
- Computer-controlled and motorized variable spot size and iris
- 6x computer-controlled zoom for wide field-of-view and viewing samples under high magnification
- Built-in laser power meter for real-time measurements
- Coolant safety flow switch (water supply not included)
- X-Y-Z stages with gantry mount mechanism providing 52mm travel and sub-micron resolution on all axes
- Options include computer and monitor (does not include sample chamber and extraction line)

Limited Warranty

One year — call for limited warranty statement.

Other IRMS and Noble Gas MS Products

Universal Platform – YAG based UV laser-ablation systems at 266nm, 213nm or 193 nm.

MicroMill – sample prep micro-drill system for milling incremental growth bands and other features on carbonates, apatites and silicates.

This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any hardware and software, feature, or service offered or to be offered by New Wave™ Research. Specifications and product offering subject to change without notice.



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