

The image shows a laser ablation chamber, split into two views. The left side is a blue-tinted, semi-transparent view of the internal mechanical components, including a stage and various optical elements. The right side is a clear view of the chamber's interior, showing a stage with several circular targets (one yellow, one blue, and two silver) and a clear tube. The chamber has a metallic frame with several screws around the perimeter.

TwoVol2

UNSURPASSED POSITIONAL
REPRODUCIBILITY
& STAGE ACCURACY

The highest performing laser
ablation chamber on the market

Features

Typhoon purge

Stage return accuracy $<1.5 \mu\text{m}$

Compatible with NWR193, NWR213,
NWRfemto, and NWRimage

Efficient Typhoon purge mechanism enables
stable operation after just 5 minutes and
spatial reproducibility of $<2\%$ RSD

Non-cantilevered stages to accurately target
features with minimal wear

Leak free operation with no complex corner
seal and accessible tubing for easy
replacement

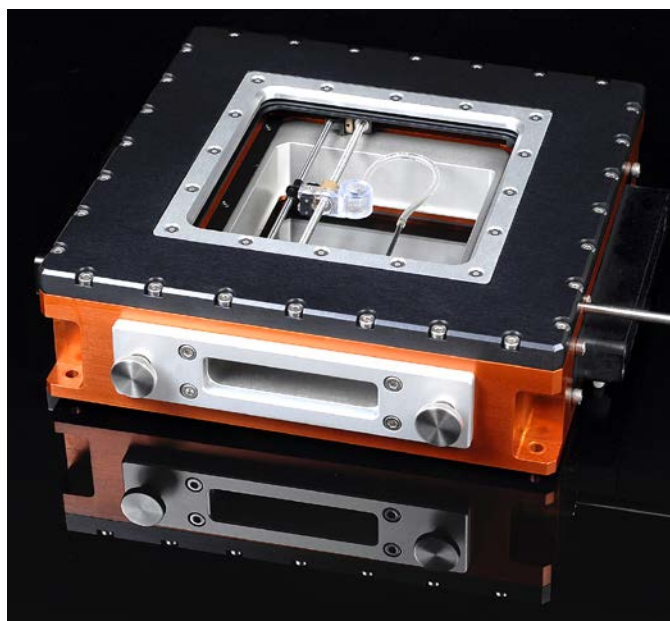
TwoVol2

Specifications summary



Performance Specifications

Positional Reproducibility	<2% RSD for a wide suite of elements in all positions in the chamber
Stage Return Accuracy	<1.5 μm short term <4 μm long term <1 μm long term with ImageLock
Working area	100 mm x 100 mm
Washout time	700 ms for 2 orders of magnitude of peak decay
Stages	High precision cross-roller with 0.16 μm step resolution
Chamber Mount	Direct without cantilever for consistent loading at all stage positions
Purge	Typhoon purge with dedicated bottom purge outlet for complete purge <5 minutes using only positive pressure
Gas handling	Pinch valve for minimal aerosol disruption and easy cleaning compared to solenoids
Tubing	Constant curvature from ablation site to torch
Dual-camera compatible	Compatible with main and wide-angle viewing systems for easy navigation

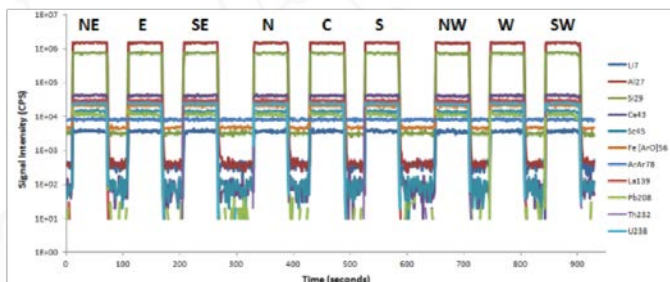


Compatibility

Platforms	NWR193, NWR213, NWRfemto, NWRimage
-----------	------------------------------------

Additional Options

CryoCell	For wet tissue and fluid inclusion analysis
Dual Concentric Injector (DCI)	For 10X improved washout times
Large Format	150 mm x 150mm option available
Signal Smoothers	Glass signal smoother and Sentinel signal smoother
Sample Chamber Inserts	Spring-loaded options and custom inserts available



Positional reproducibility experiment on 9 NIST612 samples in edges, corners, and center of the chamber with <2% RSD

