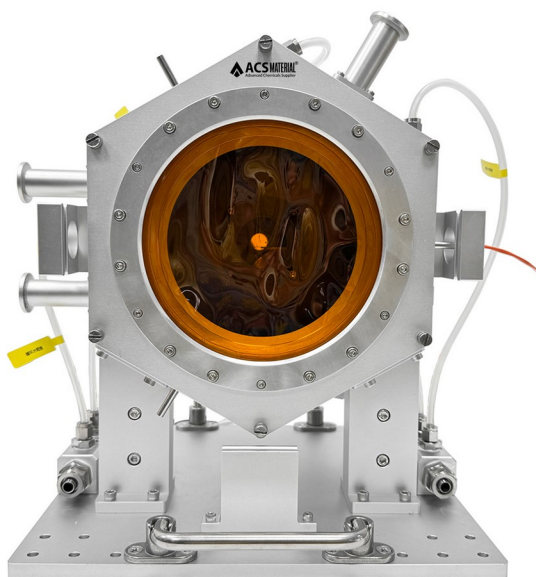


TECHNICAL DATA SHEET

InSitu Pro[™] Synchrotron IR Furnace AIH1600-SR

Synchrotron infrared heating · RT to 1600 °C · max heating 30 °C/s · ± 0.5 °C · transmission optics



InSitu Pro[™] AIH1600-SR — front view. The transmission light path runs from the $\phi 15$ mm entrance window to the $\phi 130$ mm exit window.

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ACS Material, LLC

959 E Walnut Street #100
Pasadena, CA 91106, USA
(866)-227-0656

contact@acsmaterial.com
www.acsmaterial.com

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SECTION I

Product Description

InSitu Pro™ AIH1600-SR is a synchrotron infrared heating furnace designed for studying the microstructural evolution of materials at high temperature: phase transitions such as melting and solidification can be analyzed by synchrotron-radiation scanning, and samples of various shapes — sheets, blocks, rods — are supported. Its innovative infrared focusing heating structure achieves ultra-fast heating control up to 30 °C/s over an RT to 1600 °C range at ± 0.5 °C stability, with a controllable cooling rate, on a platinum $\phi 10$ mm sample stage.

The furnace chamber is specified for vacuum / atmosphere operation; a vacuum system is listed as an option, and the intended operating atmosphere and final configuration are confirmed at quotation. Transmission optics run from a $\phi 15$ mm entrance window to a $\phi 130$ mm exit window — entrance and diffraction windows use Kapton film, and the JGS2 quartz-glass window (transmission band 220–2500 nm) can be manually removed and replaced. The core heat-source components use a modular design that supports rapid removal and replacement, and the body measures 300 × 300 × 350 mm at a net weight of 13.5 kg.

SECTION II

Specifications

InSitu Pro™ AIH1600-SR — Specifications	
Model #	AIH1600-SR
SKU #	EIAH16SR
Heating Method	Infrared heating
Temperature Range	RT ~ 1600 °C
Temperature Stability	± 0.5 °C
Temperature Control Rate	Max heating 30 °C/s · cooling rate controllable
Sample Stage	Platinum · $\phi 10$ mm
Optics	Transmission
Entrance Window Size	$\phi 15$ mm
Exit Window Size	$\phi 130$ mm
Entrance & Diffraction Window Material	Kapton film
Window Material	JGS2 quartz glass (220–2500 nm) · manually replaceable
Chamber	Vacuum / Atmosphere
Dimensions	300 × 300 × 350 mm
Net Weight	13.5 kg

SECTION III

Application Fields

- Synchrotron-radiation scanning analysis at high temperature
- Melting and solidification phase-transition studies
- Microstructural-evolution research from RT to 1600 °C
- Ultra-fast heating ramps at up to 30 °C/s
- Experiments under vacuum or in an atmosphere chamber
- Samples of various shapes: sheets, blocks, and rods

SECTION IV

Configuration & Software

Basic configuration (per furnace): 1 × main unit (AIH1600-SR infrared heating furnace), 1 × temperature controller, 1 × water-circulation system, 1 × temperature-control software, plus connection cables, tubing and accessories. Options include adapter plates, custom water circulators, a vacuum system, host PCs, and custom temperature-control software. Final applicability and configuration are confirmed at quotation.

Temperature-control software is included in the standard configuration; available software functions and integration interfaces are confirmed at quotation. The furnace is supplied by quotation: request via the product page or the InSitu Pro™ Stage Selector at www.acsmaterial.com, and our engineers confirm the installation and configuration for your beamline and reply with pricing and lead time.

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