

# SinterCast Mini-System 4000

The Mini-System 4000 is a purpose-built thermal analysis system for product development, prototyping and niche volume production. The Mini-System 4000 uses the same sampling technology and software as the fully automated System 4000 but is based on a simplified hardware platform. The Mini-System 4000 does not include an integrated wirefeeder. The foundry can source a separate wirefeeder and manually input the magnesium and inoculant wire addition results provided on the operator display screen. As with the fully automated System 4000, all analysis results and thermal analysis process parameters are available to foundry supervisors and engineers.

All product calibrations developed using the Mini-System 4000 can be directly transferred to the fully automated System 4000 to provide continuity as products evolve to series production.

## Mini-System 4000 Specifications

Components	Operator Control Module (OCM) Sampling Mechanism SAM Lighthouse Operator Box
Foot-print	1,400 x 550 mm
Max Height	1,630 mm
Weight	190 kg
Power Supply	110–120V, 50–60Hz, 2kW max 220–240V, 50–60Hz, 2kW max Single Phase To be specified on order



Figure 1: SinterCast Mini-System 4000

## Mini-System 4000 Features

- **Accuracy:** Proven, high resolution SinterCast thermal analysis.
- **User-Friendliness:** Display of magnesium, inoculant and carbon equivalent results as histogram run-charts with all information in the local language.
- **Process Database:** Collection of melting and pouring data into a single database, including thermal analysis results and process data for advanced traceability.
- **Consistency:** Re-useable Thermocouple Pair can perform up to 250 measurements, providing accuracy and traceability.
- **Independent Control:** Supervisor-level access to process parameters, directly at the Supervisor's desktop computer.
- **Remote Support:** VPN access by SinterCast for technical support and maintenance.
- **Flexible:** Cart-mounted. Roll out to the foundry floor when ready to pour CGI, roll it back to the Lab for safe storage and post-processing of data.



Figure 2: Large graphical OCM display for user-friendly operator interaction



Figure 3: Re-engineered SAM with improved Thermocouple Pair Holder



Figure 4: SinterCast Manual Wirefeeder

## Manual Wirefeeder Specifications

<b>Dimensions</b> (L x W x H)	Cabinet 700 x 500 x 280 mm Head 780 x 630 x 800 mm
<b>Weight</b>	Cabinet 39 kg Head 214 kg
<b>Power Supply</b>	380–415V, 3kW max Three phase Dry oiled compressed air 5–10 bar

The Mini-System 4000 calculates the amounts of magnesium and inoculant required to correct the iron to the calibrated start-cast coordinates and displays these results on the OCM screen at the conclusion of every analysis. The required length of magnesium and inoculant wire can be manually entered on the wirefeeder control panel and thereafter the start button is pressed to activate feeding of the magnesium and inoculant wires in sequence. All wirefeeding parameters are configurable for optimum wire recovery and reproducibility, depending on the ladle size and shape. The Manual Wirefeeder provides full fault detection to ensure the corrections are conducted without error.