

SinterCast Mini-System 4000

The newly upgraded 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 Improvements

- **OCM Display:** Larger graphical display allows increased content and layout flexibility.
- **Computing Power:** Faster, more powerful CPU with increased disk size and new Windows® embedded operating system.
- **Re-engineered SAM:**
 - Updated ejection mechanism for a more robust and stronger Sampling Cup ejection.
 - Improved Thermocouple Holder to simplify the installation and alignment of the Thermocouple Pair.
 - Thermocouple Pair mounting and fastening improved to ensure correct and consistent location with easy removal.
- **Operator Box:** SAM Operator Box upgraded to ethernet based communication to increase speed and flexibility of information exchange. Improved display to provide information to operators in local language.
- **Signal Lamp:** SAM Signal Lamp Assembly with increased visibility and flexibility for colour signals and indicators.
- **Remote Access:** real-time result viewing on any internet-connected device.



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



Figure 3: Re-engineered SAM with improved Thermocouple Holder

Manual Wirefeeder



Figure 4: SinterCast Manual Wirefeeder

Manual Wirefeeder Specifications

Dimensions (LxWxH)	Cabinet 700 x 500 x 280 mm Head 780 x 630 x 800 mm
Weight	Cabinet 39 kg Head 214 kg
Power Supply	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.