



\* Machine guarding not shown.

## THE NEXT STEP FOR 3D SAND **MOLD & CORE BUILDING**

### **IRV-BUILDER™**

3D sand mold and core building is now affordable & economical, faster, and greener, enabling leaner processes and lighter castings. The IRV-BUILDER is sand agnostic, utilizes BlueNano binder, infrared lamps, and bidirectional single pass building for maximum efficiency. The removable job box enables swap-out, swap-in continuous production, and the optional de-sanding station simplifies build clean out. No post processing in microwaves or ovens is required.

### With **BLUENANO™**

Industry's first and only water soluble, organic, plant-based, domestically sourced, non-toxic, no VOC, sustainable binder. BlueNano delivers physical strengths as good or better than other binder systems, offers extremely good shakeout and casting finish with all alloys, and is thermally reclaimable at low temperature (below 1000°F) after building/casting.



## TECHNICAL DATA

Job box (L x W x H)	48 x 20 x 10 in (1219 x 508 x 254 mm)	External dimensions (L x W x H)	13 x 6 x 7 ft (3962 x 1829 x 2134 mm)
Build volume	5.6 ft <sup>3</sup> (157 l)	Binder system	BlueNano
Build rate*	Up to 7 ft <sup>3</sup> /h (200 l/h)	Print media	Sand
Layer height	0.01 - 0.02 in (0.3 - 0.5 mm)	Build resolution	600 DPI
		Electrical requirements**	460 V, 3 ph, 100 amps

Specifications are subject to change without notice. Some data may be dependent on other factors such as material or utilization.

\* Depending on job box utilization, sand type, layer height, resolution & environmental conditions.

\*\* Compressed air not required.

## SYSTEM BENEFITS

### FASTER

- Bidirectional single pass building
- Faster build speeds
- Streamlined prototyping and lead-times
- Low volume/small batch production
- Easier build clean-out

### AFFORDABLE & ECONOMICAL

- Lower capital investment
- Lower operating costs
  - Untreated/Reclaimed sand
  - Lower cost binder
  - Easy de-sanding & shakeout
  - No post-processing required (ovens, microwaves, etc)
- No expensive hard tooling to procure or warehouse
- Greater design freedom for lightweight, integral, near net shape castings

### GREENER

- Sand can be raw/untreated/uncoated and/or reclaimed
- Sand is reclaimable at low temperature after building/casting
- Plant-based, unregulated binder
- Zero VOCs, no unpleasant/hazardous odors

### LEANER & LIGHTER

- Cloud warehouse for easy access
- Advanced design geometries, degrees of freedom for lightweight casting designs
  - No draft
  - Undercuts
  - Integral cores
  - Nearer net shape to minimize post-processing

Warranty/Disclaimer: The performance characteristics of these products may vary according to every individual case. LightSpeed Concepts assumes no liability for the actual marketability of the products, as well as for the applicability of the products in individual cases. ©LightSpeed Concepts. All rights reserved. The designations of LightSpeed Concepts, IRV-Builder, IRV-Claimer, and BlueNano are registered trademarks of LightSpeed Concepts. Specifications subject to change without notice.