



sintermask

flash black : cut through

ZORRO

High Productivity System for Additive Manufacturing

The Zorro® System is designed for continuous 3-shift operation and a high throughput of parts. The unique Selective Mask Sintering (SMS) technology from Sintermask® exposes the complete layer in one powerful flash of infrared light (IR). The layer time is constant and independent of the number of parts or the volume of the parts in the build.

Powder is transferred to the powder bed by a high speed Powder Shuttle. The powder is preheated in the shuttle. Via the integrated active temperature control in the bottom of the Powder Shuttle the powder bed is set to the operating temperature in order to guarantee a homogeneous melt. The built parts have an excellent interconnection between the layers and excellent material properties with very low internal stress.

The build tank is a stand-alone device and prepared for automation. It is attached to the machine during the build and can be transferred to the individual post processing stations after the build cycle is completed without losing the reference and calibration.

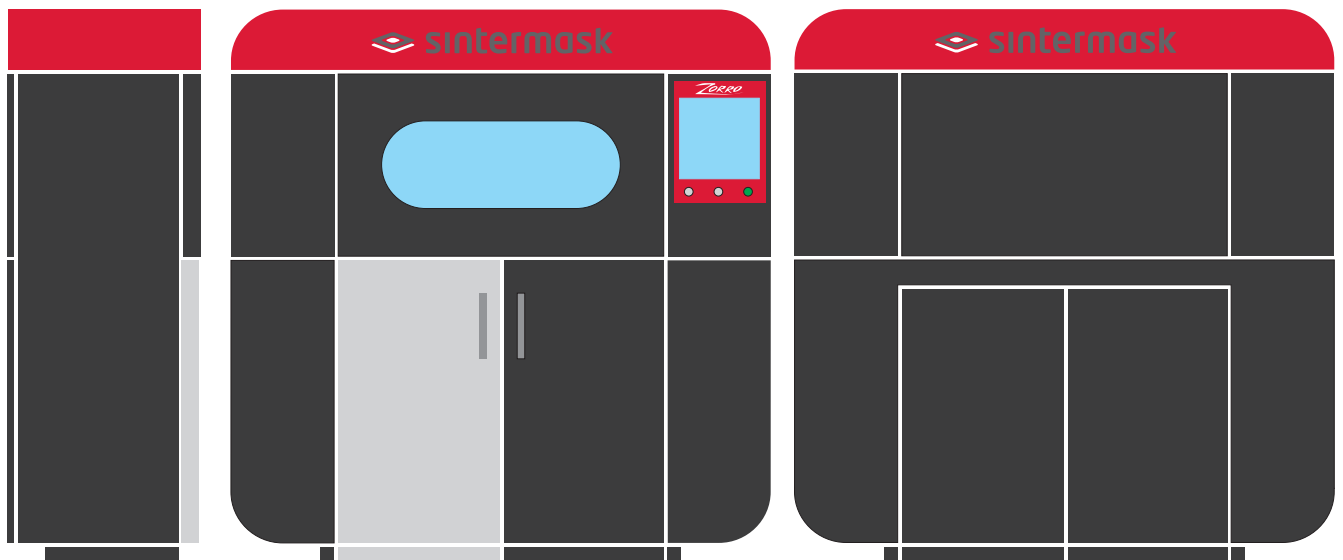
The Zorro machine is designed for Total Quality Management (TQM). The control device of the Zorro System is connected to a database environment. Traceability of every part can be implemented.

The Zorro®+ System operates under vacuum, therefore no inert gas is needed. Very fine powders can be used and the powder can be applied very fast to expose the next layer without dust.

Options for Zorro System

For 3-shift operations additional build tanks are recommended. For most efficient material usage additional build tanks are available in versions with lower build heights and smaller building areas. Customized tanks shaped for serial production are available on request.

- ➔ An inert gas generator can be included in the system.
- ➔ Different automatic material filling systems are available for material supply on request
- ➔ For total quality control an IR measurement system can be included in the system control
- ➔ A high temperature option is available for the Zorro+ System to melt powders up to 450°C



	Zorro	Zorro +
Size (l x w x h)	2.100mm x 850mm x 2260mm 83" x 34" x 85"	2.100mm x 850mm x 2260mm 83" x 34" x 85"
Max. build volume	300mm x 210mm x 800mm 11,8" x 8,3" x 31,5"	300mm x 210mm x 800mm 11,8" x 8,3" x 31,5"
Power supply	400V 32A 50Hz	400V 64A 50Hz
IR-beam	> 7 kW	> 10 kW
Max. melting temperature	250°C 480°F	250°C /450°C optional 480°F / 840°F optional
Layer thickness	20µm - 200µm; 0,8 - 8 mil	20µm - 200µm; 0,8 - 8 mil
Resolution of mask	15000 dots x 10000 dots < 25 µm; 1 mil	15000 dots x 10000 dots < 25 µm; 1 mil
Min. cycle time per layer	10 seconds	5 seconds
Full build 50µm	0,5 per day (45h per job)	1 per day (23h per job)
Full build 100µm	1 per day (22h per job)	2 per day (11h per job)
Full build 150µm	1 per day (15h per job)	3 per day (8h per job)