GLOBAL. AHEAD. SUSTAINABLE.

kurtz ersa

Flying Ray® S

New Beam Delivery. Established Process.



Flying Ray® S combines the established laser beam powder bed fusion process for metals (PBF-LB/M) with a new machine architecture for industrial metal production. Laser beam delivery, software and process control are designed to work together as an integrated system.

More flexibility in build preparation

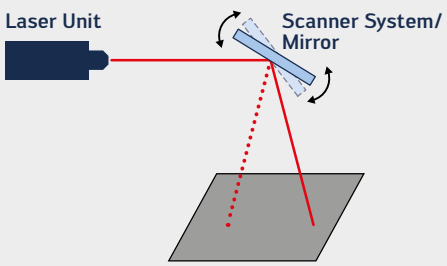
AM teams can position and orient parts freely across the build area, not being limited to specific 'safe zones' with more favourable angles of incidence.

AT A GLANCE

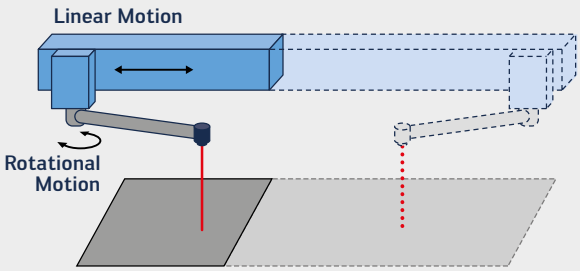
- Build Volume: **250 x 250 x 350 mm**
- Available Material: **316L stainless steel**
- Planned Materials: **IN 718, Ti6Al4V**
- Laser Power: **400 W (optional 2nd laser)**



BEST PRACTICE



FLYING RAY® TECHNOLOGY



Consistent process conditions across the build area

The Pivot Arm maintains a constant angle of incidence across the powder bed. The laser therefore interacts with the metal powder in the same way across the build area, resulting in consistent melting behaviour.

GLOBAL. AHEAD. SUSTAINABLE.

kurtz ersa

Flying Ray® S

Technical Specifications

General

Process	PBF-LB/M
Usable build volume	250 x 250 x 350 mm³
Layer thickness range	20 – 90 µm
Inert gas	N2 / Ar (6 bar)
Inert gas consumption	Purging ~300 l/min, Process ~50 l/min
Compressed air	6 bar, Purging: ~300 l/min
Ambient temperature	20 – 35 °C

Materials

316L stainless steel
Inconel IN 718 in development
Ti6Al4V titanium alloy in development
Further materials on request

Laser and Optic

Laser	Fibre laser, configurable as – 1x or 2x 400 W
Wavelength	1,070 nm
Focused spot diameter	ca. 80 µm, fix
Max. ScanSpeed	1,500 mm/s

Software

System Software	KE.ON version for additives
Exposure planning	Fuse-IQ Data Management

Electrical Specifications

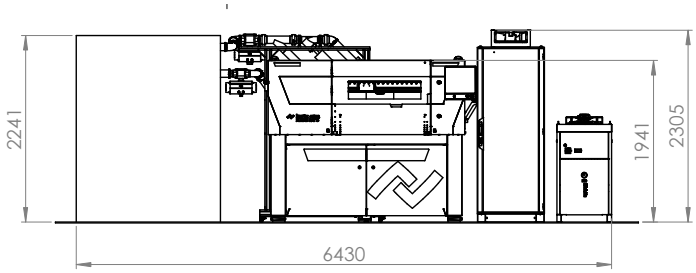
Power supply	230/400 V AC - 3/N/PE 63A
IP rating (electrical cabinet)	IP55
IP rating (machine components)	IP65

Dimensions

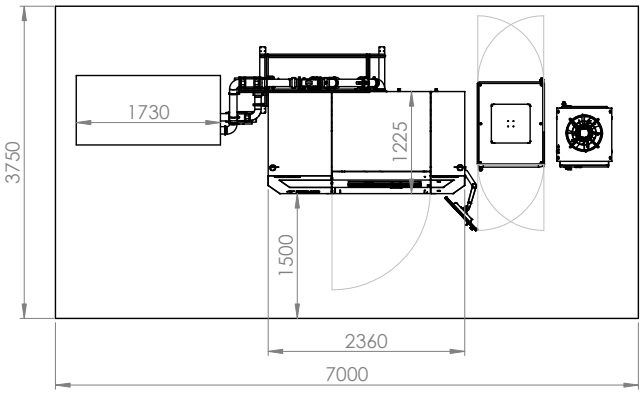
Overall dimensions	see drawing
Total weight	~6,000 kg

Optional Equipment

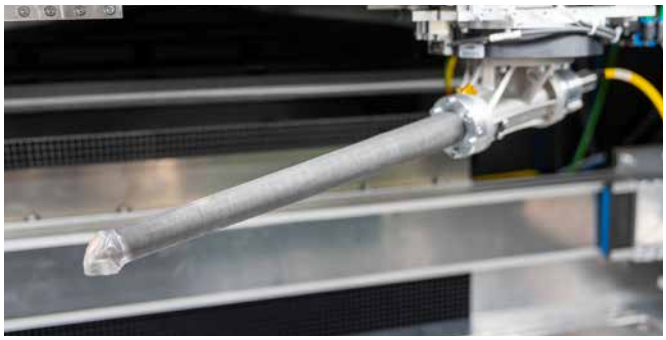
Powder sieving module with conveyor
Glove ports
Material lift



Example layout: Front view of the complete system. Other layouts upon request.



Example layout: Top view showing the required floor space and the operator area. Other layouts upon request.



The Pivot Arm ensures consistent powder melting.



Complete system with filtration unit, control cabinet and cooling unit.

Let's discuss your application.

Kurtz GmbH & Co. KG
Frankenstr. 2, 97892 Kreuzwertheim, Germany
+49 9342 807-0 I info@kurtzersa.de I www.kurtzersa.com

Follow us:

For more information: