

CONCEPTLASER

a GE Additive company

X LINE 2000R Metal laser melting system

LaserCUSING® machine with XXL build envelope!
High-performance production machine with 2 x 1,000 watt lasers
for safe processing of reactive materials.
Maximum productivity due to two build modules and
rotating mechanism for reciprocal use.



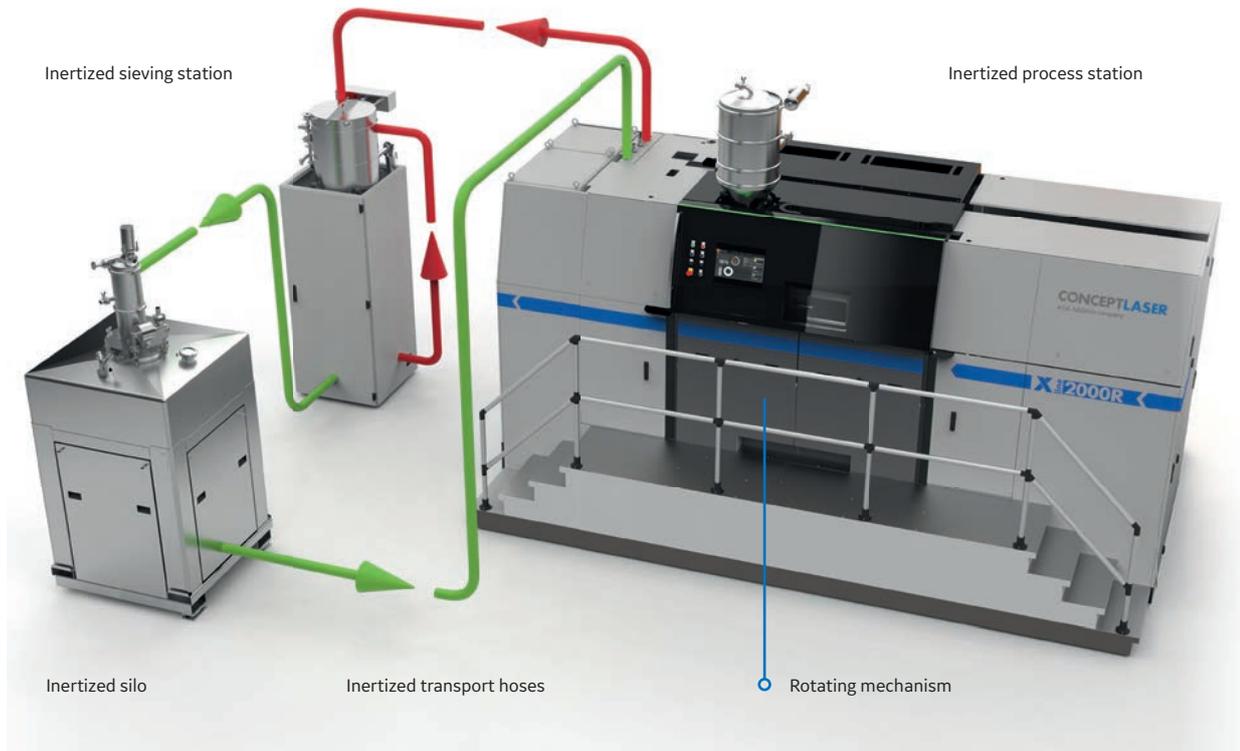
Handling side of the X LINE 2000R



X LINE 2000R 3D METAL PRINTING ON XXL SCALE WITH LaserCUSING®

With a build volume of 160 liters, the X LINE 2000R is **the world's largest metal laser melting machine** for the toolless manufacture of large functional parts and technical prototypes with repeatable material properties. The X LINE 2000R is used for producing large-scale components in the aerospace and automotive industries. The special thing about the machine is **the separation of the process and handling station**, which ensures both **safe operation** of the machine and easier handling.

In addition, the X LINE 2000R also has a **rotating mechanism** which allows **two build modules** to be used reciprocally, thus guaranteeing constant production with minimal downtimes.



MACHINE

- . Build envelope 800 x 400 x 500 mm³
- . Build volume 2 x 160 l
- . Dual laser, 2 x 1,000 watt
- . High build rate: up to 120 cm³/h
- . Maximum safety due to separation of the process and handling station
- . Two build modules for maximum productivity – simultaneous unpacking and setting up alongside ongoing build job
- . Additive manufacturing of parts under inert conditions

POWDER HANDLING

- . Automatic powder handling under inert conditions
- . Protection of the powder from oxidation
- . Machine, sieving station, silo and powder transport hoses are fully inertized
- . Safe contactless powder handling (no need for operation)
- . Maximum operator safety



X LINE PCG OPTIONAL

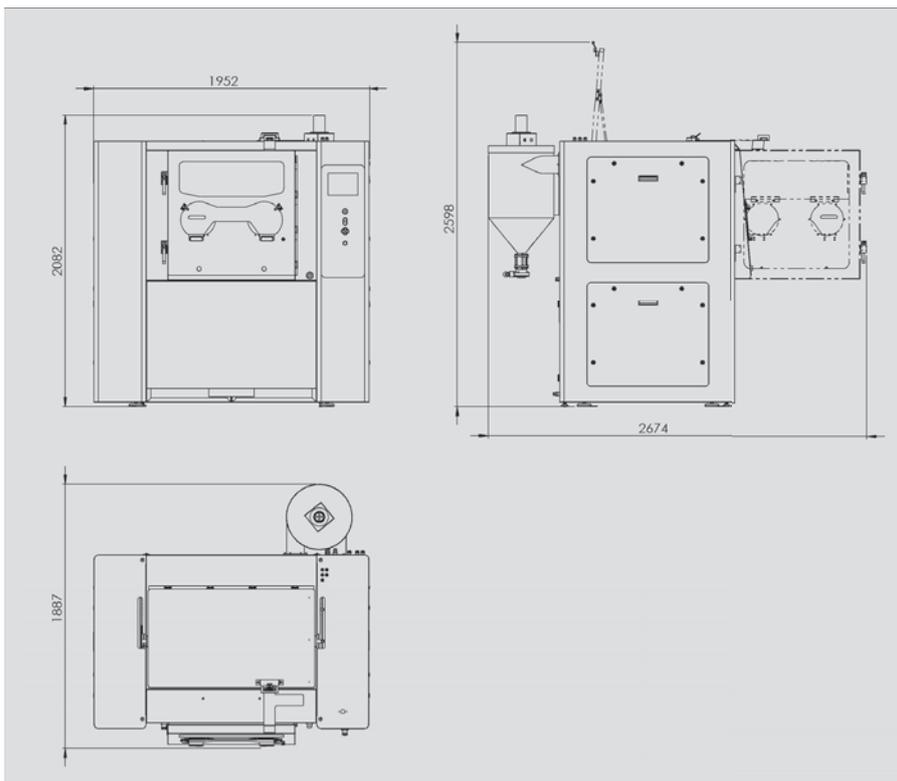
- . X LINE PCG unpacking station as **optional** addition to the X LINE 2000R
- . Cleaning of parts within an inertized process chamber
- . Removal of powder even in complex cavities and open support structures as well as the recirculation into the closed powder cycle for reuse
- . Rotating mechanism for using two build plate sizes (X LINE 1000R and X LINE 2000R)
- . Programmable pivoting about two axes
- . Safety-monitored door system
- . Manual blowing off with inert gas



Rotating mechanism within the X LINE PCG



X LINE PCG unpacking station



X LINE PCG TECHNICAL DATA

Dimensions	(W x H x D)
Closed	1952 x 2082 x 1887 mm ³
Open	1952 x 2674 x 2598 mm ³
Weight	approx. 900 kg
Operating conditions	15 – 25°C

X LINE 2000R TECHNICAL DATA

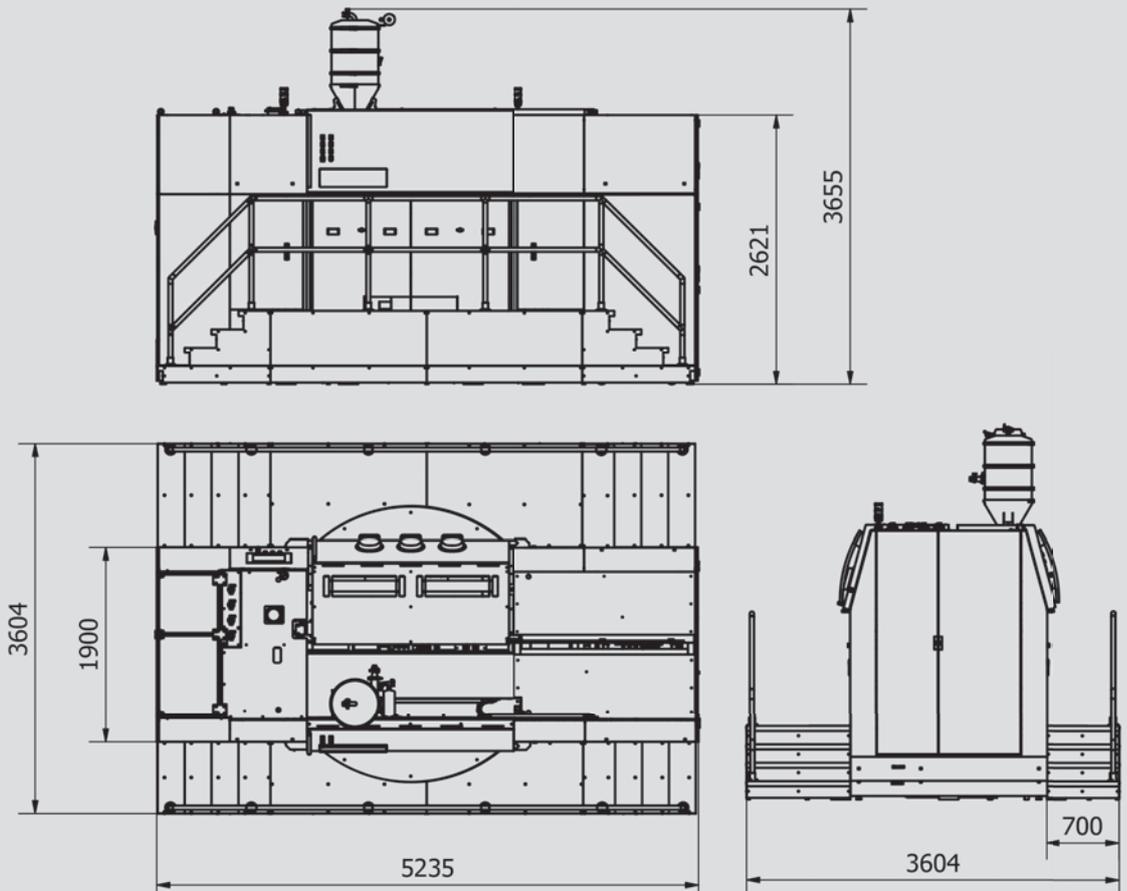
Build envelope LaserCUSING®	800 x 400 x 500 mm ³ (x, y, z)	
Layer thickness LaserCUSING®	30 – 150 µm	
Production speed LaserCUSING®	up to 120 cm ³ /h (depending on material, parameter, geometry)	
Laser system	2 fiber lasers, each 1,000 W (cw)	
Max. scanning speed	7 m/s	
Focus diameter	approx. 100 – 500 µm	
Heating	9 kW, maximum temperature 200°C	
Connected loads	Average power consumption 13 kW Power connection 3/N/PE AC 400 V, 63 A, 50 – 60 Hz	
Inert gas supply	1 gas connection available N ₂ generator, external (optional)	
Inert gas consumption	approx. 17 – 34 l/min *	
Dimensions	5235 x 3655 x 3604 mm ³ (W x H x D)	
Weight	approx. 9200 kg (tare weight)	
Operation conditions	15 – 25°C	
Necessary peripheral equipment	Sieving station, powder silo	
Materials LaserCUSING®	CL 31AL / CL 32AL	Aluminium (AlSi10Mg)
	CL 41TI ELI	Titanium alloy (TiAl6V4 ELI)
	CL 100NB	Nickel-based alloy (Alloy 718)

* Inert gas consumption during the building process with N₂

X LINE 2000R 08/2017

Subject to technical changes.
Photos: uwe-muehlhaeuser.de
Machine layout & 3D graphics: newkon.info
Artwork: brandnew-design.de

X line **2000R**



WINNER 2016
IAMA
INTERNATIONAL ADDITIVE
MANUFACTURING AWARD

Concept Laser GmbH
An der Zeil 8
D 96215 Lichtenfels

T: +49 (0) 95 71. 1679 200
F: +49 (0) 95 71. 1679 299
info@concept-laser.de



www.concept-laser.de