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# BOD2

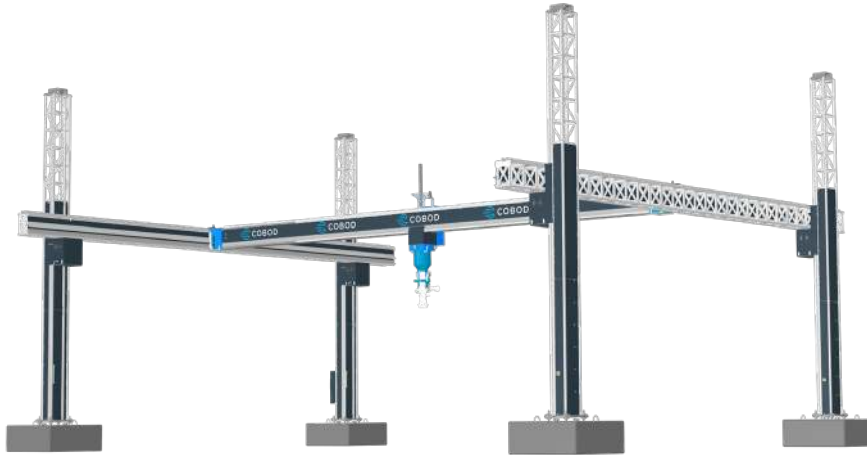
## 3D CONSTRUCTION PRINTING

TECHNICAL SPECIFICATIONS 2021



## MACHINE INFORMATION

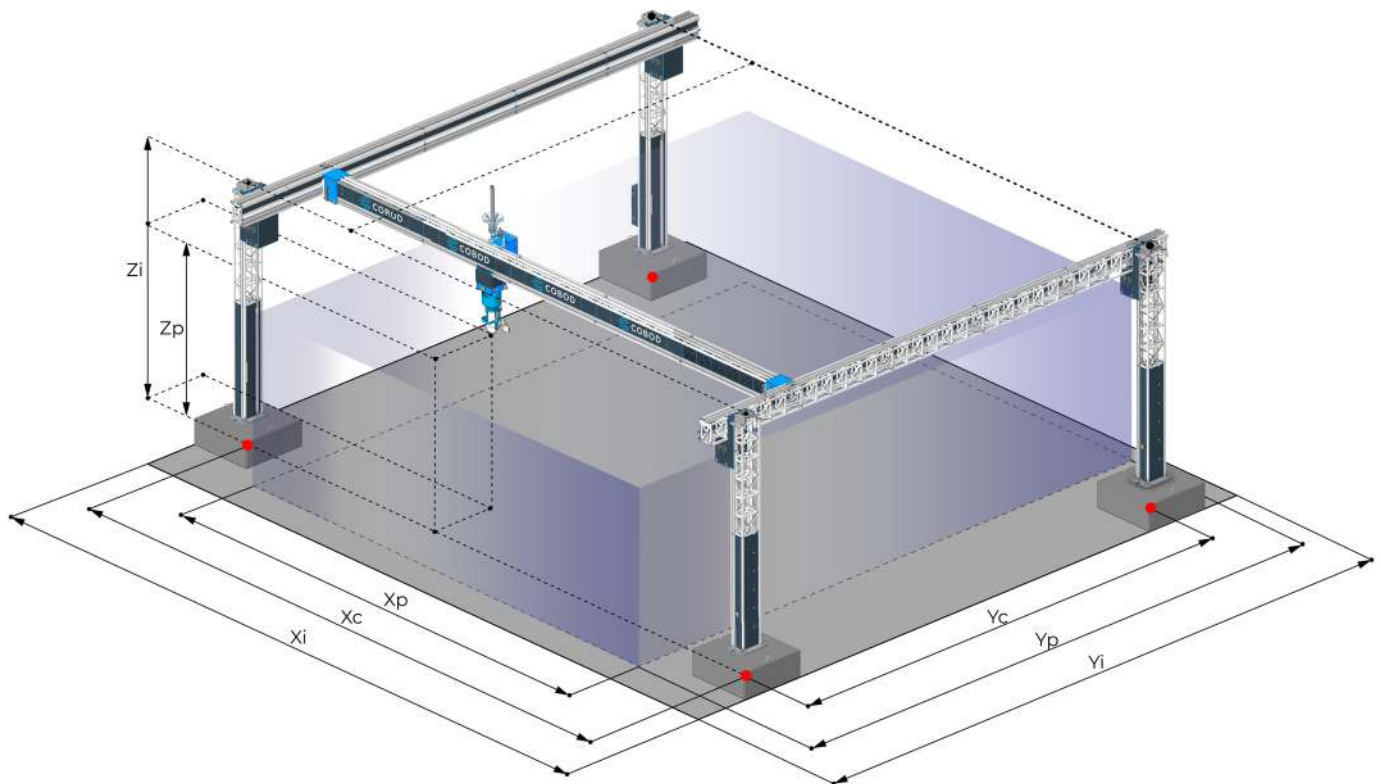
The COBOD BOD2 3D Construction Printer is a gantry based printer that is especially designed for onsite concrete printing of large 3D objects.





DESCRIPTION	UNIT	VALUE
Product	-	3D Construction Printer
Model	-	BOD2
Measurements (length x width x height)	[m]	See the pricelist/price guide
Weight*	[kg]	5390
Current	[A]	32
Voltage	[V]	380-480 3 phases, + N + PE (WYE)
Frequency	[Hz]	50/60
Short circuit current, I <sub>k</sub> min	[A]	500
Short circuit current, I <sub>k</sub> max	[A]	1200
Leakage current	[mA]	300
Max. speed (X-axis)	[mm/s]	250
Max. speed (Y-axis)	[mm/s]	250
Max. speed (Z-axis)	[mm/s]	50
Sound level	[dB(A)]	Less than 70
Required bed plate flatness	[mm/m]	10
Power consumption (normal operation)	[W]	1000
Power consumption (peak)	[W]	8000
Power consumption (idle)	[W]	50
Movement System	-	Servo
Safety Elements	-	<p>The emergency stop function includes emergency stop push-buttons as input components, which are located in the following locations of the machine:</p> <ul style="list-style-type: none"> <li>• 1x on each of the Z-axis</li> <li>• 3x on the printhead</li> <li>• 1x on the operator's controller panel</li> <li>• 1x on the main E-box</li> </ul>
Connection	-	Wifi or LAN
Software	-	Soft-NA and COBOD Web Control Interface
Interface	-	Web Client (through browsers like Chrome, Safari)
Recommended operating temperature	[°C]	5-35

\*The printer weight depends on the selected printer size. This example is based on a BOD2 2-2-2

## MACHINE OPERATION



 PRINTABLE AREA	 COLUMN CENTER	XP/YP/ZP XC/YC XI/YI/ZI	PRINTABLE AREA Z COLUMN DIMENSIONS MAXIMUM INSTALLATION AREA
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The BOD2 printer allows the operator to move a printhead that extrudes the building material with in 3 dimensions. The printhead moves along the X-axis (width), the X-axis moves on the two Y-axes (length), and the whole X/Y-axes group moves up and down the four Z-columns (height). Thereby, the gantry principle allows the printer to access any position within the printable area (PA), while providing complete freedom of movement within the volume.

DESCRIPTION	UNIT	VALUE
Max printing length	[m]	No limit
Max printing width	[m]	14.6
Max printing height	[m]	8.1 + height of the concrete feet to which the printer can be mounted
Max printing speed	mm/s	Up to 1000 (1 m/s)
Layer height	[mm]	5-40
Layer width	[mm]	30-300
Material flow	[m <sup>3</sup> /h]	Up to 7.2 (at 1000 mm/s speed with a 5 cm wide and 4 cm height print)
Max aggregate size	[mm]	10
Printer setup time	[h]	4-6
Printer takedown time	[h]	2-3
Manning		<p>We recommend a team of 3-4 people</p> <p>1x Printer operator 1x Material Operator 1x Material Operator Helper</p> <p>(Additional hands-on helpers is recommended)</p>