



Product Range 2021

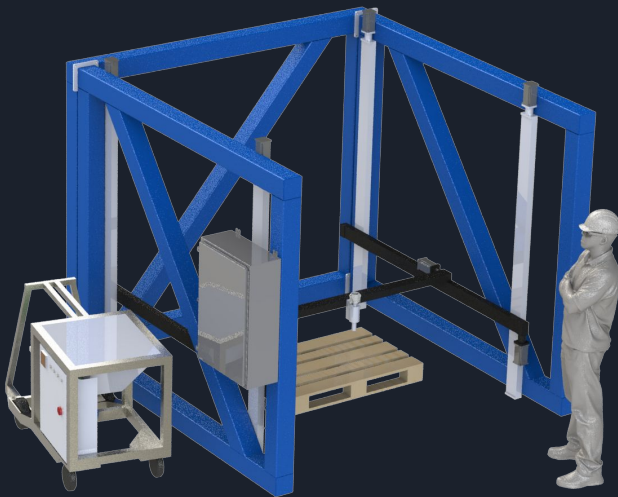


Twente Additive Manufacturing

SMALL/MEDIUM FORMAT 3D PRINTERS

These printers are intended for use in a controlled production environment or for use directly on-site. These extended build volumes facilitate 24/7 continuous production and large single element creation.

Kebbekinator- 2



- 3- Axis Cartesian printer
- Configurations available up to 4mx4mx4m build volumes
- Simple operation for research and small scale printing

Hofen-2



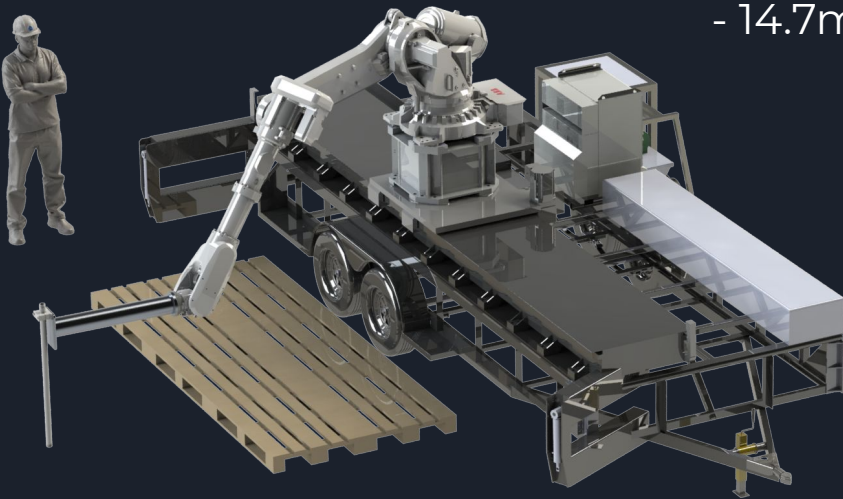
- 6-Axis Robotic arm printer
- Configurations available from 1.5m Reach up to 3.2m Reach
- Using 6-Axis motion, creativity of the designer can be fully expressed in the prints

MOBILE 3D CONCRETE PRINTERS

These printers are intended for use in a mobile capacity or for use directly on-site. They allow for very quick setup and tear down of the system.

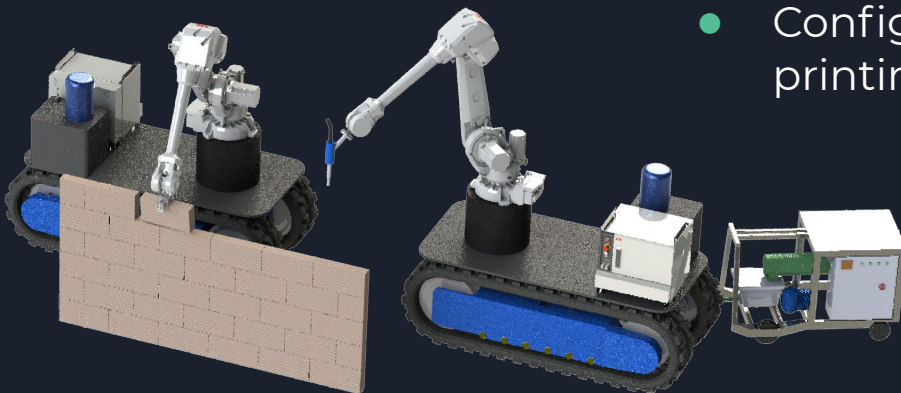
Tilikum-1

- Mobile printing unit on 6m flatbed trailer
- 6-Axis robot with 3.2m reach
- Configurable linear track with 4.7 - 14.7m travel



Shindaga-1

- Tracked printers with 6-axis robot mounted to a mobile base
- Configurations for bricklaying and printing available

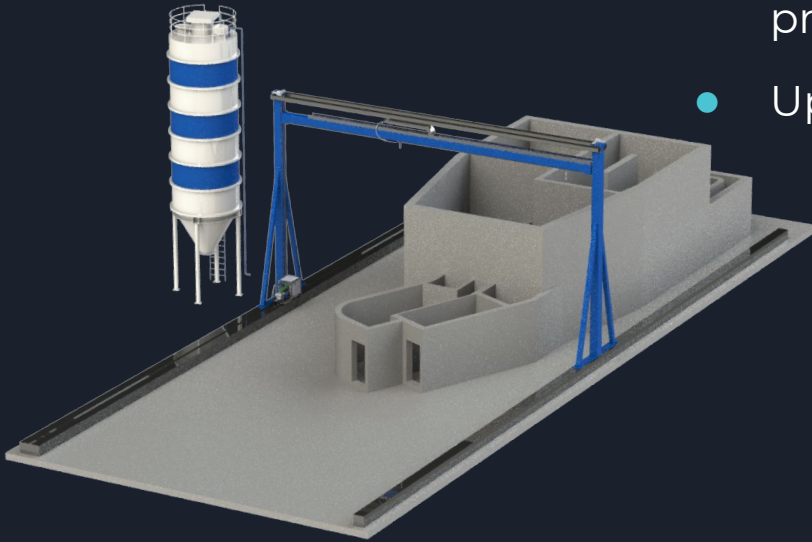


LARGE FORMAT 3D PRINTERS

These printers are intended for use in a controlled production environment or for use directly on-site. These extended build volumes facilitate 24/7 continuous production and large single element creation.

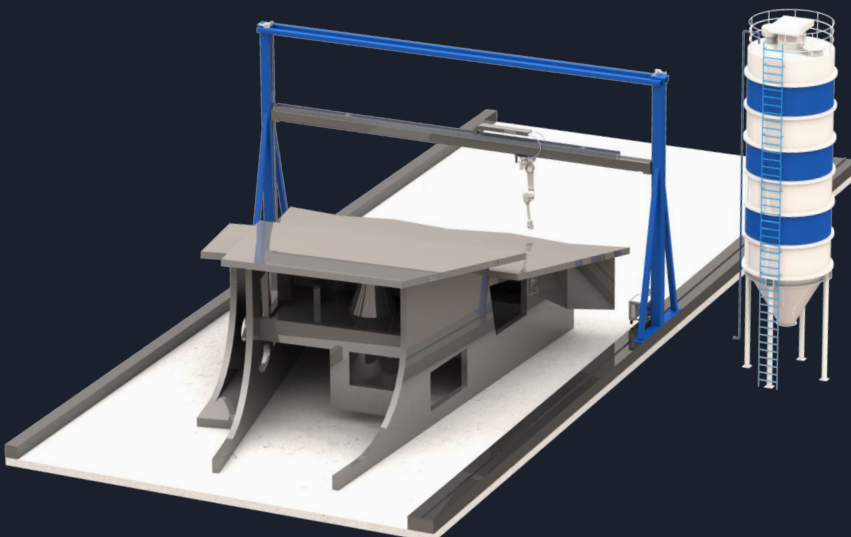
Berlin-1

- 3-axis Cartesian flying gantry printer
- Up to 40x15x9m build volume



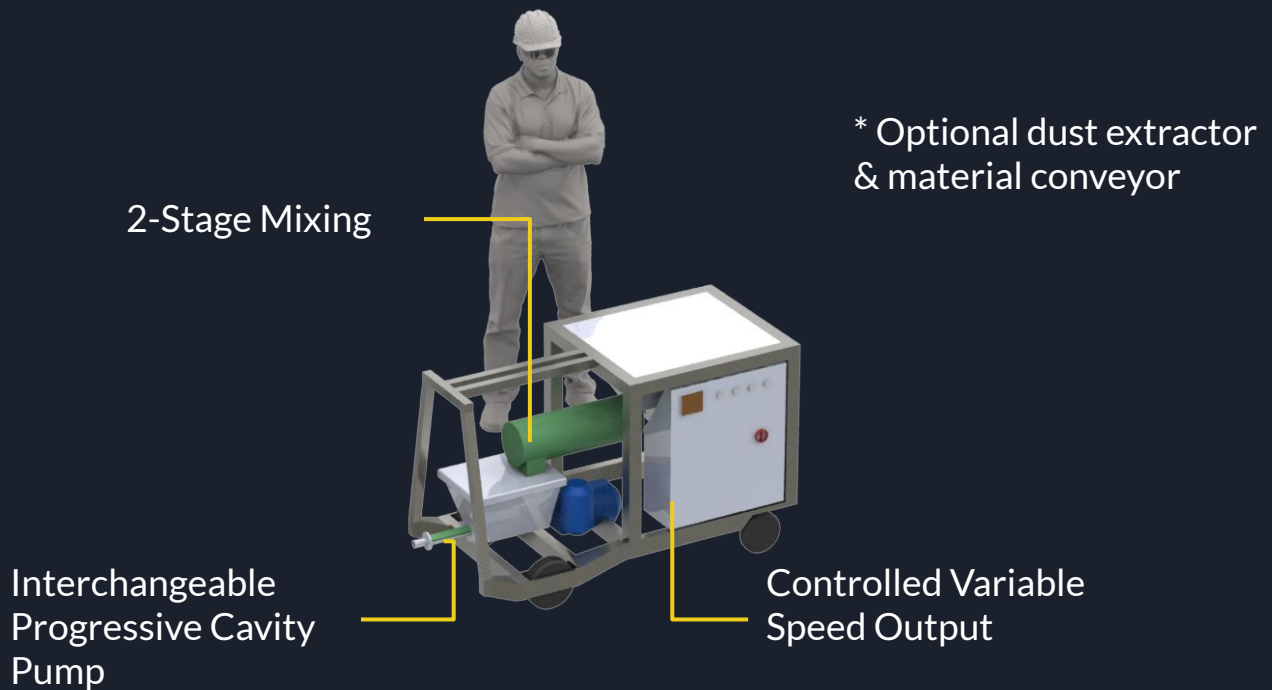
Leonardo-2

- 9-axis printer composed of a 6-Axis robot mounted to a 3-axis Cartesian flying gantry
- Up to 40x15x9m + 2.5m reach build volume



MATERIAL HANDLING SYSTEM

Our TAM certified Material Handling Systems enable semi-continuous mixing and pumping of 3D printable mortars. All systems have been rigorously tested and are compatible with all printing systems.



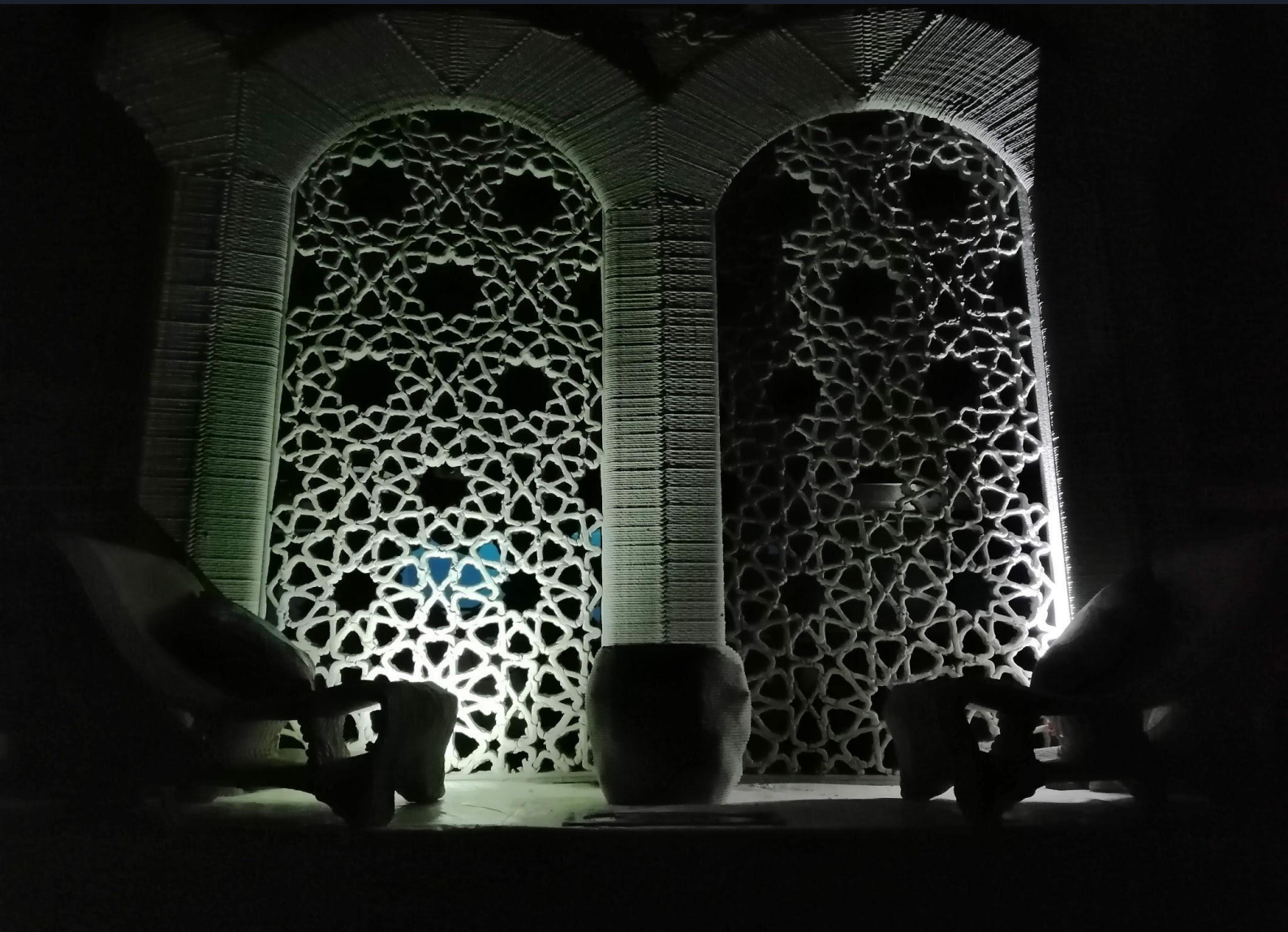
Material Handling System Features

- Controllable flow-rate output
- 2-Stage Mixing Chambers
- Semi-continuous mixing
- Easy clean-up
- Flow regulated water pump
- Optional dust extractor
- Optional material conveyor for automated material feeding

PUMP	
Semi-Continuous Mixing	✓
Progressive Cavity Pump	✓
Accepted Materials	3D Printable Mortars
Default Maximum Aggregate Size (mm)	~2
Material Pump Rate (L/Min)	0-30
Hose Length (m)	10-40
Hose Nominal Diameter (mm)	25-40
Input Voltage (V)	3-Phase 400-480V
Input Frequency (Hz)	50-60

SPECIFICATIONS OVERVIEW

Machine Name	Kebbekinator-2	Hofen-2	Tilikum	Berlin-1	Leonardo-2
Model Number	TC222	TCR145	TC05-R320	TC401509	TC401509-R
MECHANICAL					
X-Axis (m)	2	-	4,7	40	40
Y-Axis (m)	2	-	-	15	15
Z-Axis (m)	2	-	-	9	9
Robot Reach (m)	-	1,45	3,2	-	2,5
Print Speed (mm/s)	~100-300	~300	~300	~300	~300
Available Nozzle Sizes (Dia. - mm)	12-30	12-30	12-40	12-40	12-40
Nominal Bead Ratio W:H	3:01	3:01	3:01	3:01	3:01
Approx. Min-Max Bead Width (mm)	20-50	20-50	20-68	20-68	20-68
Approx. Min-Max Layer Height (mm)	0-20	0-20	0-30	0-30	0-30
PUMP					
Semi-Continuous Mixing	✓	✓	✓	✓	✓
Progressive Cavity Pump	✓	✓	✓	✓	✓
Accepted Materials	3D Printable Mortars	3D Printable Mortars	3D Printable Mortars	3D Printable Mortars	3D Printable Mortars
Default Maximum Aggregate Size (mm)	~2	~2	~2	~2	~2
Material Pump Rate (L/Min)	0-10	0-10	0-30	0-30	0-30
Hose Length (m)	10	10	30	40	40
Hose Nominal Diameter (mm)	25	25	25-40	25-40	25-40
ELECTRICAL					
Input Type (3-phase converters available upon request)	3-Phase 400-480V	3-Phase 400-480V	3-Phase 400-480V	3-Phase 400-480V	3-Phase 400-480V
Input Frequency (Hz)	50-60	50-60	50-60	50-60	50-60
CONTROLS					
Included Motion Control System	Centroid or equivalent	ABB-IRC5	ABB-IRC5	Centroid or equivalent	ABB-IRC5
G-Code Control	✓			✓	
Rapid Code Control		✓	✓		✓
SOFTWARE					
Custom Twente Slicing Software	Additional on request	Additional on request	Additional on request	Additional on request	Additional on request
SERVICES					
Commissioning Time (Business Days)	2	2	2	10	10
Setup Time In Normal Use	4hrs	2hrs	2hrs	1day	1day
On-Site Training	✓	✓	✓	✓	✓
Slicing Training	Additional	Additional	Additional	Additional	Additional



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