

Innovation. Quality. Partnership.

Additive manufacturing systems

WEBER
— Additive —



Innovation. Quality. Partnership.

Tradition and innovation for 100 years

WEBER is a medium-sized family business that represents perfection in mechanical engineering, delivering the highest levels of reliability to our customers worldwide. Innovation, quality and partnership reflect our values and philosophy.

In addition to the high level of vertical integration at our plant in Kronach, a close and long-term relationship with our customers is the basis for developing optimal solutions for every application. The combination of tradition, experience and innovative power makes WEBER your ideal

partner in the fields of extrusion, grinding technology, robotics and additive manufacturing.

WEBER Additive aims to provide its customers with machine solutions, that help them achieve a fast and cost efficient use of large scale 3D printing technology. Our ability to deliver high material output from the extruder as well as processability of a wide range of thermoplastic materials are the ideal combinations for meeting our customer's technical requirements.



Proof-of-concept projects

Let yourself be convinced

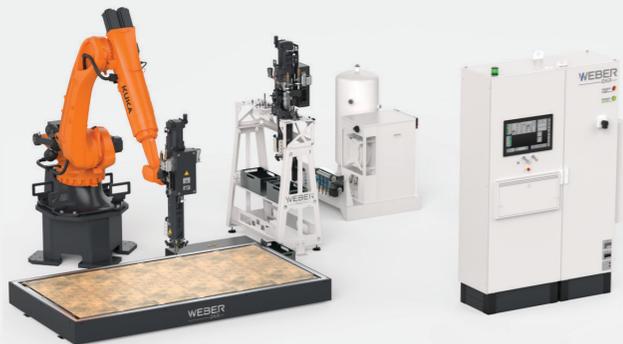
We offer you the opportunity to print your ideas or test parts of your planned application in our technical center. Customer specific plastic compounds or resins from specific suppliers can be evaluated on request.

A selection of our standard print materials

- Sabic AC004XXAR1 (ABS with 20% CF)
- UPM Formi 3D 20/19 (PLA with 20% cellulose fibre)
- LehVoss LUVOCOM 3F PP CF 9928 BK (PP with 15% CF)
- Reflow R-PETG
- MCPP FGF CARBON-P (PETG with 15% CF)
- MCPP PLA
- Rotfeld PX-DIPROmid T50.4CH2GF5-9200F (PA with 25% GF)
- Trinseo Magnum 3504 (ABS)

We are able to print parts up to 2.4 m in length, 1.2 m in width and 1.3 m in height. The printability depends on several factors. Please contact us with you specific inquiry!





WEBER DXR

WEBER DX 025

Optional features

- KUKA robot with AiSync available
- Variety of build table systems to suit your requirements
- Adaptable enclosure of robotic cell according to customer's requirements
- Enclosed utility compartment for additional component, e.g. material dryer, vacuum pump etc.
- Chiller for closed loop water cooling
- Material dryer of different sizes available
- Surveillance cameras for print monitoring

Build volume [WxDxH]	2400 × 1200 × 1000 mm ³ (Adaptable)
Kinematics	6-axis industry robot (KUKA, ABB)
Machine control system	Windows IPC Siemens S7-1500 PLC Robot controller
Extruder	AE Series extruders
Max. build plate temp.	300°C
Dimensions [WxDxH]	Modular, adaptable

Build volume [WxDxH]	1600 × 1200 × 1300 mm ³
Kinematics	High precision BoschRexroth linear units
Control system	CNC control BoschRexroth MTX std
Print head	AE 20 15.5D (~4.5 kg/h) / AE 16 15.5D (~2 kg/h)
Max. build plate temp.	300°C *
Max. build chamber temp.	100°C (heated, controlled)
Dimensions [WxDxH]	3360 × 2300 × 2740 mm ³

* depending on print surface and table system



Optional features

- Thermal insulation
- Variety of build table systems to suit your requirements
- Integrated vacuum system for a vacuum table
- Custom print surfaces
- Pellet dryer available in different sizes
- Surveillance cameras for print monitoring

AE Series

Our extruders for the DX and DXR systems

AE series, designed for dynamics: light weight, optimised for variable output, with powerful servo motor and compact material feeder.

The right configuration and size of the pellet extruder depends on many factors:

- Typically required extrusion speed
- Desired layer and wall thickness
- Material and material composition

We are able to process a broad range of thermoplastic materials (up to 450°C process temperature) through the open process recipe system of our machines.

Get in touch with our experts and find your personal machine configuration!

The most important features of our AE Series

- Controlled via the central machine control
- Optimal screw geometry for linear output characteristic
- Interchangeable nozzle
- Tempered feeding zone with water cooling

Optional

- Up to 450°C processing temperature for high temperature materials
- Wear protection solutions for the processing of fibre reinforced materials
- Workpiece cooling on the extruder



The models of the AE Series

Extruders for the additive manufacturing

AE 16 15.5D



Lightweight and compact

For fast and precise jobs
Output ~2 kg/h*

AE 20 15.5D



The allrounder

Versatile in use
Output ~4.5 kg/h*

AE 30 15.5D (30D)



High output

For hybrid production
Output ~8 kg/h (~20 kg/h)*

* reference value, depending on material, nozzle and screw geometry

Advanced path planning and monitoring

with Ai Build's AiSync platform

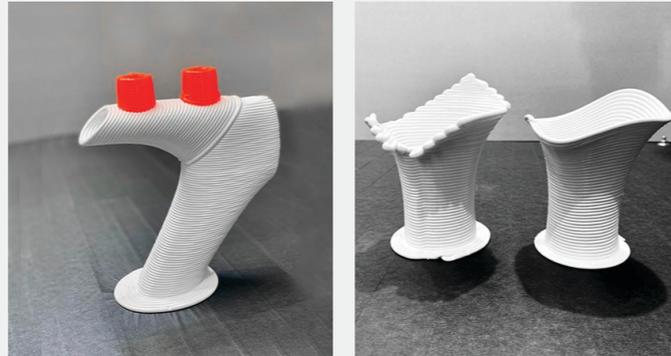
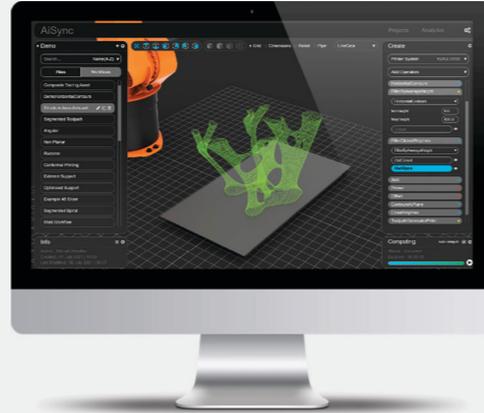
Ai Build provides enterprise software for manufacturers to automate and optimise the large format 3D printing process, unlike traditional 3D printing which is error prone and laborious. The London based company works with a network of innovative clients, partners and investors (including Boeing) to bring their cutting edge technology into a wide range of industrial applications.

Ai Build unique capabilities

- Planar / non-planar / multi-planar path planning
- Segmented slicing strategies
- Programmable slicing schemes
- Online process monitoring
- Web based visualisation



For further information contact: info@ai-build.com



Hybrid Manufacturing

with Reichenbacher Hamuel GmbH

Over the last seven decades, REICHENBACHER HAMUEL has become synonymous with trend-setting innovations in the development of high-quality CNC machining centres. Known for its 5-axis portal milling machines for wood, plastics, aluminium and composite processing, the Coburg-based company is now breaking new ground by collaborating with WEBER.

Together with the division WEBER Additive, machine solutions have been developed which provide full additive and subtractive fabrication capabilities. The process of CNC machining perfects the previously printed parts which is particularly important when accuracy and a high-quality surface finish are required.

For more information visit:

www.reichenbacher.de



Dr. Alexander Kawalla-Nam
Head of Additive
Manufacturing Technology

«Our innovative hybrid system solutions enable the combined use of thermoplastic 3D printing and 5-axis milling for the quick production of large-volume components such as formworks in the construction industry or tools in mould making industries.»



Our hybrid machines work according to the same principle: plastic granulate is melted directly and is followed by the build-up of the component layer by layer. Thanks to the integrated full-fledged milling unit, machining of the parts is immediately possible in the same machine.

Hybrid Manufacturing

HybriDX-LT

With a robust portal frame, stationary machining table, 5-axis milling and 3-axis extrusion head, this compact manufacturing cell enables our customers to enter the world of high precision hybrid fabrication at low costs.



Build volume [WxDxH]	1600 x 1000 x 650 mm³
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Printer kinematics	3-axis
Milling kinematics	5-axis

Control system	CNC control Siemens Sinumerik ONE
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Print head	AE 20 15.5D (~4,5 kg/h)
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Milling head	4,6 kW
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Milling tool change	7 tools
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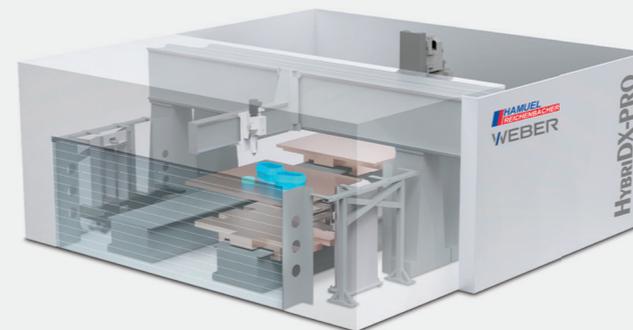
Max. build plate temp.	120°C
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Machining table	w/ vacuum clamping system incl. vacuum pump and vacuum container
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Hybrid Manufacturing

HybriDX-PRO

The PRO system has a machine concept for very large parts and offers maximum flexibility. Two separate machining areas make the simultaneous use of both technologies possible. Alternatively, a technology with double installation space can be used.



Build volume [WxDxH]	2500 x 2000 x 1000 mm³
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Printer kinematics	3-axis
Milling kinematics	5-axis

Control system	CNC control Siemens Sinumerik ONE
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Print head	AE 30 15.5D (~8 kg/h) or AE 30 30D (~20 kg/h)
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Milling head	4,6 – 55 kW
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Milling tool change	12- to 80-tool slots
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Max. build plate temp.	200°C
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WEBER

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