

The arc series: 3D Metal Printers for industrial manufacturing

The **arc series** combines the technically mature and proven arc-welding method with the CAD drawings of the product designers and engineers in a completely new production system. Either 3 or 5 motion axes offer maximum flexibility in terms of the component volume and enable the additive production of high-quality metal parts.

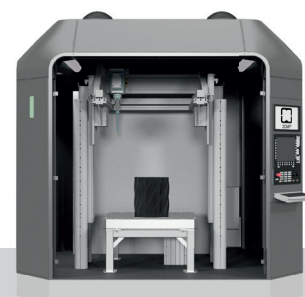
Innovative features that inspire

- Process monitoring via camera
- Machine access at ground level with a sliding working table for easy loading and unloading by crane
- Actively cooled base plate
- Soundproof housing
- Integrated case ventilation and welding fume extraction
- User-friendly control unit
- High-end components of well-known manufacturers

Optional equipment

The **arc series** offers even more performance for your needs thanks to a range of optional equipment.

- Temperature tracking by integrated Sensortherm pyrometer
- **arc** cooling system for local cooling by cooling gas
- Automatic welding torch cleaning system
- Quality Monitoring feature
- Titanium modul



Working space

Max. size of producible parts (x - y - z) in mm inch	800 - 1200 - 1500 31.5 - 47.2 - 59.1 *
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Linear axes

Linear speed (x - y - z) in m/min ft/min	10 - 10 - 5 32.8 - 32.8 - 16.4
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Components

Power source	Fronius TPS 400i PULSE
Control	SIEMENS 840Dsl
Interface	HMI via control panel and machine operating panel with additional industrial keyboard and monitor for process observation
Data acquisition	Process data acquisition via an integrated Beckhoff-Industry-PC and graphical user interface for parameter visualization
Electrical cabinet	2 control cabinet units for measuring and power electronics
Cooling	5 kW cooling capacity

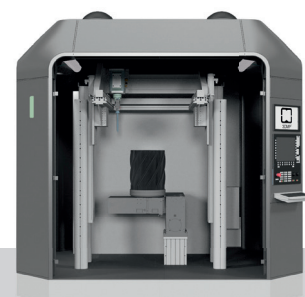
Welding table

Title	arc403-welding table with integrated cooling system
Max. table payload in kg lb	800 1763.7

Additional information/Local requirements

Outer machine dimensions (depth x width x height) in mm inch	2300 x 3000 x 3100 90.6 - 118.1 - 122.0
Power connection in A	1 x 63
Compressed air in bar MPa	1 x 6 1 x 0.6
Weight in kg lb	ca. 5000 11023.1 (mass with max. part weight)

* Maximum values, depending on the variant & options selected, there may be deviations.



Working space

Max. size of producible parts (\emptyset - z) in mm inch	Table position 1: 400 - 600 15.7 x 23.6 *
	Table position 2: 720 - 450 28.3 x 17.7*
	* When using the maximum swivel range of 90°

Linear axes

Linear speed (x - y - z) in m/min ft/min	10 - 10 - 5 32.8 - 32.8 - 16.4
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Components

Power source	Fronius TPS 400i PULSE
Control	SIEMENS 840Dsl
Interface	HMI via control panel and machine operating panel with additional industrial keyboard and monitor for process observation
Data acquisition	Process data acquisition via an integrated Beckhoff-Industry-PC and graphical user interface for parameter visualization
Electrical cabinet	2 control cabinet units for measuring and power electronics
Cooling	5 kW cooling capacity

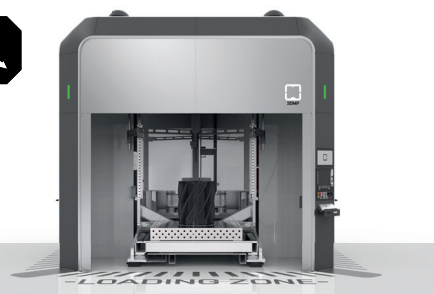
Welding table

Title	arc405-welding table with integrated cooling system
Max. table payload in kg lb	150 330.7
Max. dimension cooling plate (\emptyset) in mm inch	400 15.7
Swiveling range in ° (degree)	-100/10 **
Rotating range in ° (degree)	360
Rotational speed A-axis in m ⁻¹ rpm	21
Rotational speed C-axis in m ⁻¹ rpm	50

Additional information/Local requirements

Outer machine dimensions (depth x width x height) in mm inch	2300 x 3000 x 3100 90.6 - 118.1 - 122.0
Power connection in A	1 x 63
Compressed air in bar MPa	1 x 6 1 x 0.6
Weight in kg lb	ca. 5000 11023.1 (mass with max. part weight)

** Maximum values, depending on the variant & options selected, there may be deviations.



Working space

Max. size of producible parts (x - y - z) in mm inch	1 100 - 1 400 - 1 550 43.3 - 55.1 - 61.0 *
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Linear axes

Linear speed (x - y - z) in m/min ft/min	25 - 25 - 25 82 - 82 - 82
Unloading Travel System (y) in mm inch	1 450 57.1

Components

Power source	Fronius TPS 400i PULSE
Control	SIEMENS 840Dsl
Interface	HMI via control panel and machine operating panel with additional industrial keyboard and monitor for process observation
Data acquisition	Process data acquisition via an integrated Beckhoff-Industry-PC and graphical user interface for parameter visualization
Electrical cabinet	2 control cabinet units for measuring and power electronics
Cooling	5 kW cooling capacity

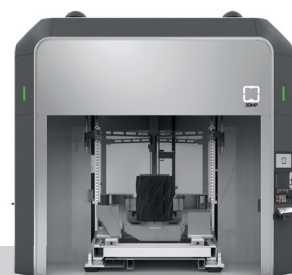
Welding table

Title	arc603-welding table with integrated cooling system
Max. dimension cooling plate (ø) in mm inch	1 500 x 1 500 59.1 x 59.1
Max. table payload in kg lb	3 000 6 613.9

Additional information/Local requirements

Outer machine dimensions (depth x width x height) in mm inch	4 500 x 4 500 x 4 330 177.2 x 177.2 x 170.5
Power connection in A	1 x 63
Compressed air in bar MPa	1 x 6 1 x 0.6
Weight in kg lb	16 000 35 274 (mass with max. part weight)

* Maximum values, depending on the variant & options selected, there may be deviations.



Working space

Max. size of producible parts (\emptyset - z) in mm inch	900 - 700 35.4 - 27.6 *
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Linear axes

Linear speed (x - y - z) in m/min ft/min	25 - 25 - 25 82 - 82 - 82
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Komponenten

Power source	Fronius TPS 400i PULSE
Control	SIEMENS 840Dsl
Interface	HMI via control panel and machine operating panel with additional industrial keyboard and monitor for process observation
Data acquisition	Process data acquisition via an integrated Beckhoff-Industry-PC and graphical user interface for parameter visualization
Electrical cabinet	2 control cabinet units for measuring and power electronics
Cooling	5 kW cooling capacity

Welding table

Title	arc605-welding table with integrated cooling system
Max. dimension cooling plate (\emptyset) in mm inch	800 31.5
Max. table payload in kg lb	420 925.9
Swiveling range in ° (degree)	-100/10 *
Rotating range in ° (degree)	360
Rotational speed A-axis in m^{-1} rpm	15
Rotational speed C-axis in m^{-1} rpm	36

Additional information/Local requirements

Outer machine dimensions (depth x width x height) in mm inch	4 500 x 4 500 x 4 330 177.2 x 177.2 x 170.5
Power connection in A	1 x 63
Compressed air in bar MPa	1 x 6 1 x 0.6
Weight in kg lb	16 000 35 274 (mass with max. part weight)

* Maximum values, depending on the variant & options selected, there may be deviations.



Strong partner for the machine production

With the acquisition of a minority share in GEFERTEC GmbH, additive manufacturing with metal materials, and thus the 3DMP® process, has been part of the EMAG Group's product portfolio since autumn 2018.

Within the strategic partnership the EMAG Group is focusing on the professional production and further development of the arc machine portfolio, while the further development of the core technology remains entirely with GEFERTEC, the Berlin specialists for additive manufacturing.