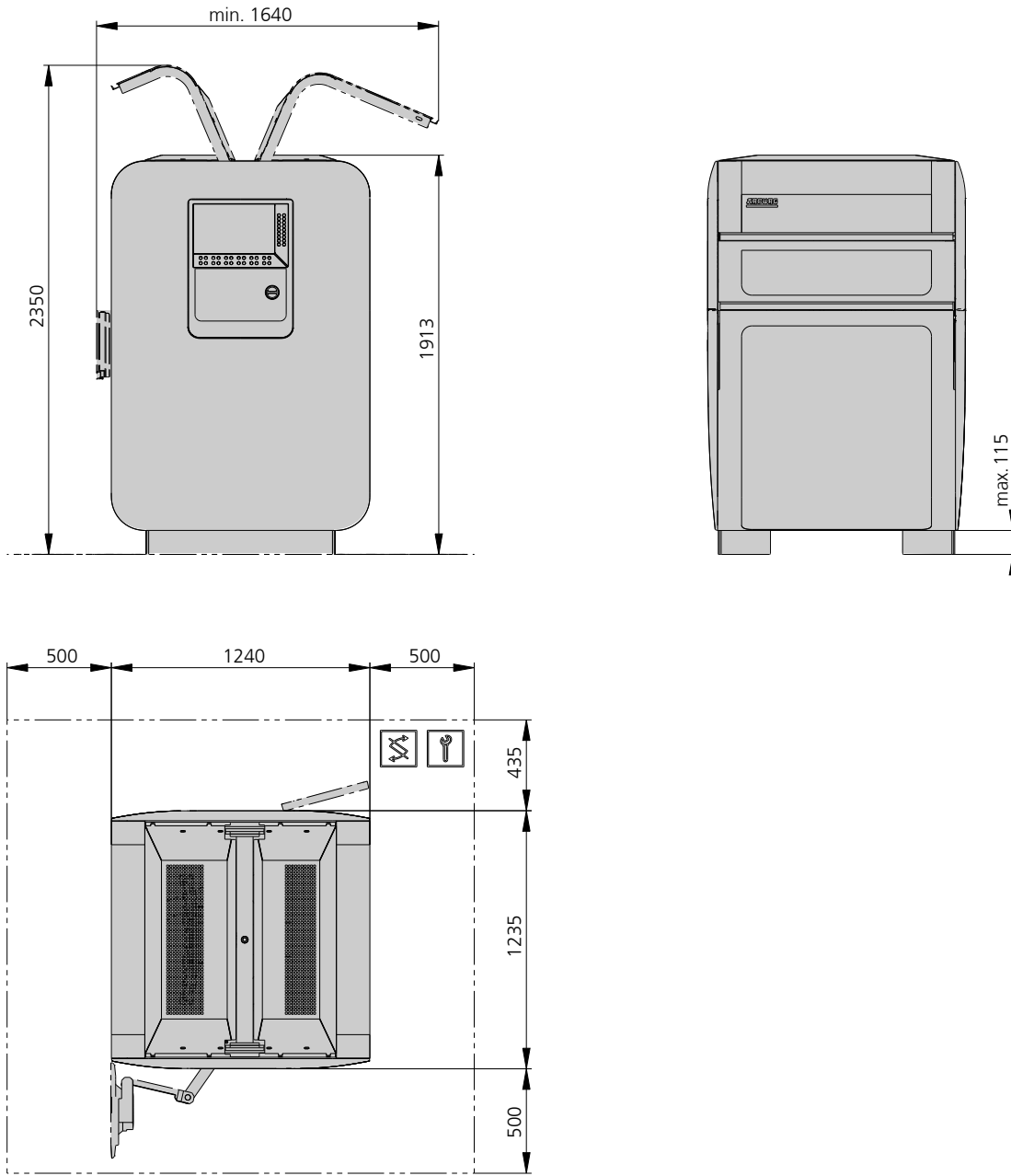


## freeformer 300-3X

Usable build chamber space: max. 234 x 134 x 230 mm  
Build chamber temperature: max. 120 °C  
Discharge units: 2-3

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# INSTALLATION DIMENSIONS | FREEFORMER 300-3X



Process data for reference materials <sup>1)</sup>			
Material class	Reference material	Support materials	
		armat 11 (water soluble)	armat 21 (alkaline-soluble)
ABS	Terluran GP-35	x	x
TPU	Elastollan C78 A 15		x
PC	Makrolon 2805	x	x
PA10	Grilamid XE 4010	x	x

1) Further material data sets available. More detailed information is available on request.

# TECHNICAL DATA | FREEFORMER 300-3X

Part carrier		3-axis
Positioning accuracy of axes	mm	+/- 0,022
Build chamber temperature	max. °C	120 [200]
<b>Material preparation</b>		
Processing temperature	max. °C	350
<b>Discharge unit</b>		
Material pressure	max. bar	800
Nozzle	mm	0,2
Discharge rate <sup>3)</sup>	max. cm <sup>3</sup> /h	2-14
<b>Basic specifications for parts</b>		
Usable build chamber space (x, y, z) <sup>4)</sup>	max. mm	234 x 134 x 230
Layer thickness <sup>5)</sup>	mm	0,2
Wall thickness <sup>5)</sup>	min. mm	0,6
Absolute part precision (x and y) according to VDI Guideline 3405 Sheet 7 <sup>3)</sup>	mm	+/- 0,1
<b>Connection and operation</b>		
Net weight	kg	1550
Electrical connection <sup>1)</sup>	kW	5
	A	16
Energy requirement	kWh/h	1,6
Energy requirement with dryers	kWh/h	[---]
Sound pressure level   Uncertainty <sup>2)</sup>	dB(A)	---
Permissible temperature range	°C	15-25
Permissible relative air humidity	max. %	50
Compressed air connection	bar	[6-10]
Compressed air oil content (to ISO 8573-1)	mg/m <sup>3</sup>	[<= 0,01]
Compressed air, pressure dew point (according to ISO 8573-1)	°C	[<= -20]
Compressed air, particle quantity 1-5µm (according to ISO 8573-1)		[<= 100.000]

All specifications relate to the basic machine version. Deviations are possible depending on options, process settings and material type.

- 1) Specifications are related to 400 V/50 Hz
  - 2) Detailed info in the operating instructions.
  - 3) Specifications based on reference data set for ABS Terluran GP-35
  - 4) Starting from a weight of 500 g, it is necessary to reduce the speed of the dynamic axle system.
- [ ] Values apply to alternative equipment.

# EQUIPMENT | FREEFORMER 300-3X



Electrical connection



Multi-touch screen



Two-piece build chamber door

<b>Electrical systems and interfaces</b>	<ul style="list-style-type: none"> <li>- Liquid-cooled control cabinet and drives according to safety standard DIN EN 60204</li> <li>- Heat exchanger with closed cooling circuit (secondary fluid circuit)</li> <li>- CEE three-phase connector (cable length 5 m). Note: Type B residual-current device to IEC 60755 A2 required for connection</li> <li>- USB port</li> <li>- Dryer interface</li> <li>- Host computer interface (OPC UA)</li> </ul>	■
<b>Operating panel with GESTICA control system</b>	<ul style="list-style-type: none"> <li>- High-performance industrial PC with multi-touch screen</li> <li>- Operator authorisation via transponder cards (RFID)</li> <li>- Data storage on CompactFlash cards</li> <li>- Intuitive operation by means of gestures</li> </ul>	■
<b>freeformer software</b>	<ul style="list-style-type: none"> <li>- Integrated data processing (slicing) of 3D geometries in STL format</li> <li>- System requirements: 2 GB free hard drive memory, 16 GB main memory, CPU Intel Core i7 or AMD Phenom II X4/X6 with SSE2 technology with 3 GHz or higher, Windows 10 operating system (64-bit)</li> </ul>	■
<b>Build chamber</b>	<ul style="list-style-type: none"> <li>- Two-piece build chamber door</li> </ul>	■
<b>Part carrier</b>	<ul style="list-style-type: none"> <li>- Part carrier movable on three axes</li> <li>- Liquid-cooled linear motors with high-resolution position measurement (glass scale)</li> <li>- Part mounting via structured carrier plates</li> <li>Note: Optimum adhesion during the construction process and easy, non-destructive release of the finished parts</li> <li>- Rapid, reversible securing of the carrier plate by means of an integrated vacuum device</li> </ul>	■
<b>Material processing and Discharge unit</b>	<ul style="list-style-type: none"> <li>- Homogeneous material preparation with short three-zone screw and precisely closing non-return valve</li> <li>- Energy-efficient servo-motors with absolute position encoders</li> <li>- Precise, maintenance-free planetary roller screw drive</li> <li>- Processing of up to three components with up to three material preparation units</li> <li>- Pulsed nozzle closure with piezo technology</li> <li>- Lifting of the nozzle for thermal separation</li> </ul>	■
<b>Granulate drying process</b>	<ul style="list-style-type: none"> <li>- Integrated granulate drying process for the respective material preparation</li> <li>- Protection against excessive drying</li> <li>- Fully integrated in GESTICA</li> </ul>	□
<b>Electrical systems and interfaces</b>	<ul style="list-style-type: none"> <li>- Robot interface according to Euromap 67</li> </ul>	□
<b>Increased build chamber temperature</b>	<ul style="list-style-type: none"> <li>- max. 200°C</li> </ul>	□

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■ Standard  
□ Option