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Industrial part and powder management

Technical data

Powder removal station

Sieving station

Powder silo

SHORT OVERVIEW			
FUNCTIONAL OVERVIEW	Unpacking station for reliable, external unpacking of components in a glove box by extracting the powder	Vibration sieve machine with ultrasonic cleaning incl. vacuum conveyor, scale, and electrical cabinet for filling the supply cylinders	Standardized storage and transport container
CONTENTS	Glove box with glove ports Illumination of work area Electrical lift axis Rotary bearing Control	Sieve machine Scale Electrical cabinet Oxygen sensor (optional)	Powder silo incl. pipe bend with air supply Modular expansions available Oxygen sensor (optional)
COMPATIBILITY	TruPrint 3000 TruPrint 5000	TruPrint 2000 TruPrint 3000 TruPrint 5000	TruPrint 3000 TruPrint 5000
DRIVE	Electric stroke; manual rotation	-	-
PERFORMANCE DATA			
SIEVE CAPACITY	-	Up to approx. 100 l/h; approx. 400 kg/h ²	-
SIEVE INSERT	-	Sieve surface 2800 cm ² ; 63 µm mesh size ³	-
CAPACITY	to approx. 100 l/h ¹	to approx. 100 l/h ¹	to approx. 100 l/h ¹
VOLUME OF POWDER CONTAINERS	-	-	Silo volume: 30/80/130/180 l
CONNECTION AND CONSUMPTION			
ELECTRICAL CONNECTION (VOLTAGE)	325 - 525 V	208 - 550 / 230 - 400 V	-
ELECTRICAL CONNECTION (CURRENT INTENSITY)	16 A	16 A	-
ELECTRICAL CONNECTION (LINE FREQUENCY)	50 Hz / 60 Hz	50 Hz / 60 Hz	-
COMPRESSED AIR	7 bar	6 bar	6 bar
SHIELDING GAS	-	Argon, nitrogen (optional)	Argon, nitrogen (optional)
STRUCTURAL DESIGN			
WORK AREA (W X H X D)	990 mm x 965 mm x 990 mm	-	-
DIMENSIONS (W X H X D)	1100 mm x 2100 mm x 1000 mm	2000 mm x 2300 mm x 1000 mm	670 mm x 1600 mm x 600 mm
WEIGHT	750 kg	500 kg	max. 800 kg ⁴

Powder preparation station

SHORT OVERVIEW	
FUNCTIONAL OVERVIEW	Powder preparation station for supplying and sieving the powder
CONTENTS	Sieve machine Scale Powder protection cover
COMPATIBILITY	TruPrint 2000 TruPrint 3000 TruPrint 5000

DRIVE

-

Powder preparation station

PERFORMANCE DATA

SIEVE CAPACITY	Up to approx. 15 l/h; ~ 50 kg/h ²
SIEVE INSERT	Sieve surface 600 cm ² ; 63 µm mesh size ³
CAPACITY	-
VOLUME OF POWDER CONTAINERS	-

CONNECTION AND CONSUMPTION

ELECTRICAL CONNECTION (VOLTAGE)	100 - 230 V
ELECTRICAL CONNECTION (CURRENT INTENSITY)	7.5 / 3.5 A
ELECTRICAL CONNECTION (LINE FREQUENCY)	50 Hz / 60 Hz
COMPRESSED AIR	-
SHIELDING GAS	Argon, nitrogen (optional)

STRUCTURAL DESIGN

WORK AREA (W X H X D)	-
DIMENSIONS (W X H X D)	1008 mm x 2090 mm x 755 mm
WEIGHT	400 kg

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Footnotes

1 — in conjunction with vacuum conveyor

2 — depending on the material

3 — further mesh sizes on request (80 μm , 100 μm)

4 — Permissible filled weight, tare weight 35 kg

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TruPrint 1000

Technical data



TruPrint 1000

EFFECTIVE BUILD VOLUME (STANDARD) Diameter 98 mm x 100 mm Height

EFFECTIVE BUILD VOLUME (OPTION: BUILD VOLUME REDUCTION) Diameter 48 mm x 100 mm Height

PROCESSABLE MATERIALS

Metal powders for welding, such as stainless steels, tool steels, and aluminum [1], nickel basis, cobalt-chrome, copper, titanium [1] or precious metal alloys, amorphous metals. Current availability of materials and their parameters available on request. [1] Only with option glove box + oxygen sensor, high resolution.

MAXIMUM LASER POWER AT THE WORKPIECE (TRUMPF FIBER LASER) 200 W

BEAM DIAMETER (STANDARD) 80 μm

BEAM DIAMETER (MOTORIZED OPTICS) 55/80 μm

LAYER THICKNESS 20 - 60 μm

BUILD RATE 10 - 50 cm^3/h

CONNECTION AND CONSUMPTION

ELECTRICAL CONNECTION (VOLTAGE) 230 V

ELECTRICAL CONNECTION (CURRENT INTENSITY) 7 A

ELECTRICAL CONNECTION (CURRENT INTENSITY - MULTILASER OPTION) 9 A

ELECTRICAL CONNECTION (FREQUENCY) 50/60 Hz

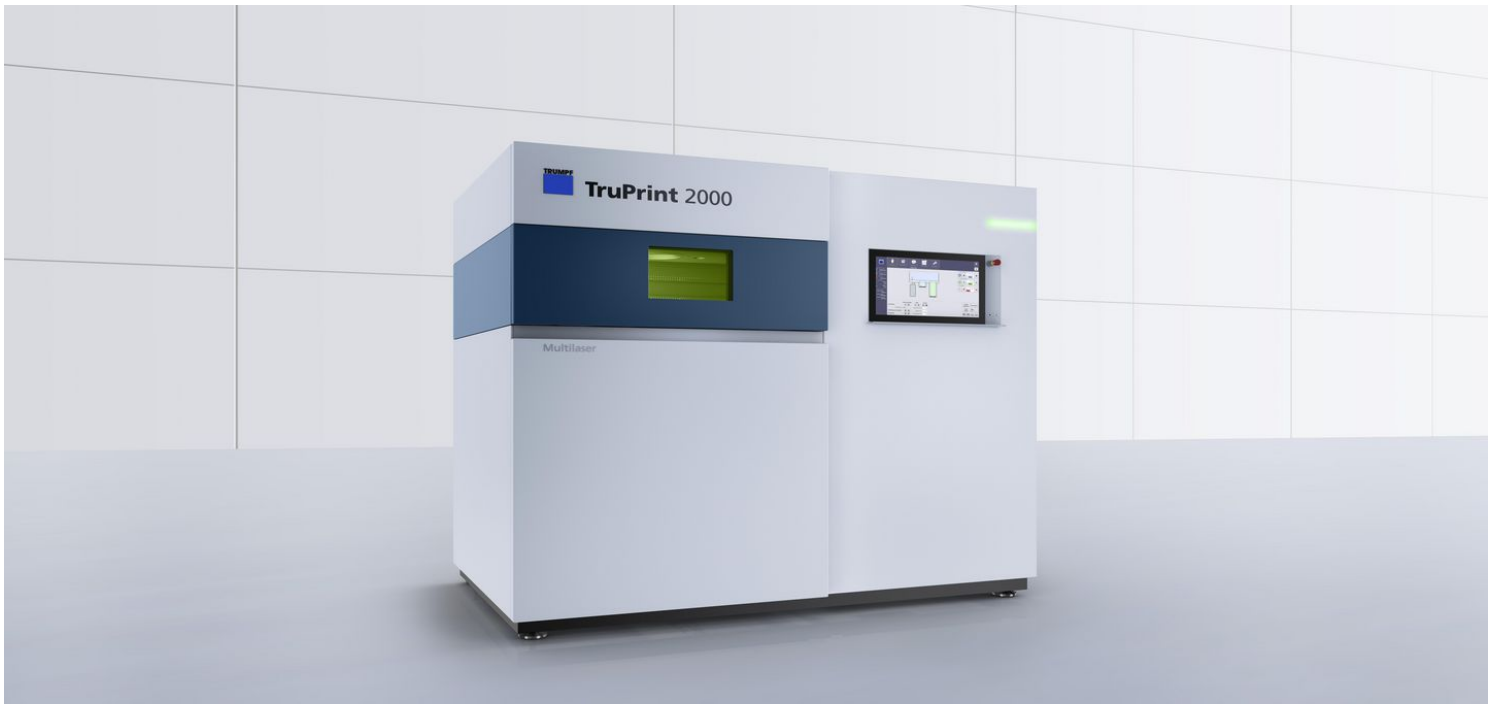
SHIELDING GAS Nitrogen, argon

STRUCTURAL DESIGN

DIMENSIONS (W X H X D) 780 mm x 2050 mm x 1160 mm

WEIGHT (WITH MULTILASER OPTION) Max. 900 kg

Subject to changes. The details in our offer and order confirmation are definitive.



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TruPrint 2000

Technical data



TruPrint 2000

BUILD VOLUME (CYLINDER) Diameter 200 mm x 200 mm Height

EFFECTIVE BUILD VOLUME (STANDARD) Diameter 200 mm x 200 mm Height

PROCESSABLE MATERIALS

Metal powders for welding, such as stainless steels, tool steels, and aluminum, nickel-based, cobalt-chrome or titanium alloys, amorphous metals.
Current availability of materials and their parameters available on request.

PREHEATING (STANDARD) Up to 200 °C

MAXIMUM LASER POWER AT THE WORKPIECE (TRUMPF FIBER LASER) 300 W

BEAM DIAMETER (STANDARD) 55 µm

LAYER THICKNESS 20 - 100 µm

CONNECTION AND CONSUMPTION

ELECTRICAL CONNECTION (VOLTAGE) 400/460 V

ELECTRICAL CONNECTION (CURRENT INTENSITY) 32 A

ELECTRICAL CONNECTION (LINE FREQUENCY) 50 Hz / 60 Hz

SHIELDING GAS Nitrogen, argon

STRUCTURAL DESIGN

DIMENSIONS (W X H X D) 2180 mm x 2030 mm x 1400 mm

WEIGHT (INCLUDING POWDER) 3200 kg

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TruPrint 3000

Technical data



TruPrint 3000

BUILD VOLUME (CYLINDER)

Diameter 300 mm x 400 mm Height

PROCESSABLE MATERIALS

Metal powders for welding, such as stainless steels, tool steels, and aluminum alloys, nickel-based alloys, or titanium alloys. Current availability of materials and their parameters available on request.

PREHEATING (STANDARD)

Up to 200 °C

MAXIMUM LASER POWER AT THE WORKPIECE (TRUMPF FIBER LASER)

700 W

BEAM DIAMETER (STANDARD)

80 µm

LAYER THICKNESS

20 - 150 µm

BUILD RATE

5 - 120 cm³/h

MINIMUM MEASURABLE OXYGEN LEVEL

Up to 100 ppm

CONNECTION AND CONSUMPTION

ELECTRICAL CONNECTION (VOLTAGE)

400/460 V

ELECTRICAL CONNECTION (CURRENT INTENSITY)

32 A

ELECTRICAL CONNECTION (FREQUENCY)

50/60 Hz

SHIELDING GAS

Nitrogen, argon

STRUCTURAL DESIGN

DIMENSIONS (INCLUDING FILTER) (W X H X D)

3385 mm x 1750 mm x 2070 mm

WEIGHT (INCLUDING POWDER)

4300 kg

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TruPrint 5000

Technical data



TruPrint 5000

BUILD VOLUME (CYLINDER)	Diameter 300 mm x 400 mm Height
EFFECTIVE BUILD VOLUME (WHEN PREHEATING > 200 °C)	Diameter 290 mm x 400 mm Height
PROCESSABLE MATERIALS	Metal powders for welding, such as stainless steels, tool steels, and aluminum alloys, nickel-based alloys, titanium alloys. Current availability of materials and their parameters available on request.
PREHEATING (STANDARD)	Up to 200 °C
PREHEATING (OPTION)	Up to 500 °C
MAXIMUM LASER POWER AT THE WORKPIECE (TRUMPF FIBER LASER)	500 W
BEAM DIAMETER (STANDARD)	80 µm
LAYER THICKNESS	30 - 150 µm
BUILD RATE	5 - 180 cm ³ /h ¹
CONNECTION AND CONSUMPTION	
ELECTRICAL CONNECTION (VOLTAGE)	400 V
ELECTRICAL CONNECTION (CURRENT INTENSITY)	32 A
ELECTRICAL CONNECTION (FREQUENCY)	50 Hz
SHIELDING GAS	Nitrogen, argon
STRUCTURAL DESIGN	
WEIGHT (INCLUDING FILTER, ELECTRICAL CABINET, POWDER)	7085 kg
DIMENSIONS (INCLUDING FILTER, ELECTRICAL CABINET) (W X H X D)	4616 mm x 1645 mm x 2038 mm
DIMENSIONS (INCLUDING FILTER, ELECTRICAL CABINET) (W X D X H) WITH 500 °C PREHEATING OPTION	5266 mm x 1645 mm x 2038 mm

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1 — The actual build rate consisting of exposure and coating. Dependent on the configuration of the system, the process parameters, material and fill level.

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TruPrint 5000 Green Edition

Technical data



TruPrint 5000 Green Edition

BUILD VOLUME (CYLINDER) Diameter 300 mm x 400 mm Height

PREHEATING (STANDARD) Up to 200 °C

MAXIMUM LASER POWER AT THE WORKPIECE (TRUMPF DISK LASER) 800 W

BEAM DIAMETER (STANDARD) 210 µm

LAYER THICKNESS 30 - 150 µm

BUILD RATE Up to 100 cm³/h

CONNECTION AND CONSUMPTION

ELECTRICAL CONNECTION (VOLTAGE) TruPrint 5000: 400 V
TruDisk 1020: 400 V

ELECTRICAL CONNECTION (CURRENT INTENSITY) TruPrint 5000: 32 A
TruDisk 1020: 16 A

ELECTRICAL CONNECTION (FREQUENCY) TruPrint 5000: 50 Hz
TruDisk 1020: 50 Hz

SHIELDING GAS Nitrogen, argon

STRUCTURAL DESIGN

WEIGHT (INCLUDING POWDER) TruPrint 5000: 7007 kg
TruDisk 1020: 530 kg

DIMENSIONS (INCLUDING FILTER, ELECTRICAL CABINET) (W X H X D) 4616 mm x 2038 mm x 4234 mm

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