Direct Metal Printers

Metal Additive Manufacturing with the DMP printer series

DMP Flex 100

ProX® DMP 200

ProX® DMP 300

ProX® DMP 320

Specifications				
Laser Power Type[5]	100 W/Fiber laser	300 W/Fiber laser	500 W/Fiber laser[4]	500 W/Fiber laser[4]
Laser Wavelength	1070 nm	1070 nm	1070 nm	1070 nm
Build Volume (X x Y x Z)[1]	3.94 x 3.94 x 3.15 in (100 x 100 x 80 mm)	5.51 x 5.51 x 3.94 in (140 x 140 x 100 mm)	9.84 x 9.84 x 12.01 in (250 x 250 x 300 mm)	10.82 x 10.82 x 14.96 in (275 x 275 x 380 mm)
Layer Thickness	10µm - 100µm Preset: 30		Preset: 40 µm	10µm - 100µm Preset: 30 and 60 µm
LaserForm® metal alloy choices with developed print parameters:	LaserForm CoCr (B) LaserForm 17-4PH (B) LaserForm CoCr (C)	LaserForm CoCr (B) LaserForm 17-4PH (B) LaserForm Maraging Steel (B) LaserForm AlSi12 (B)	LaserForm CoCr (B) LaserForm 17-4PH (B) LaserForm Maraging Steel (B) LaserForm AlSi12 (B)	LaserForm Ti Gr1 (A)[2] LaserForm Ti Gr5 (A)[2] LaserForm Ti Gr23 (A)[2] LaserForm AlSi10Mg (A)[2] LaserForm Ni625 (A)[3] LaserForm Ni718 (A)[3] LaserForm 17-4PH (A)[3] LaserForm CoCrF75 (A)[3] LaserForm 316L (A)[3] LaserForm Maraging Steel (A)[3]
Material Deposition	Roller	Roller	Roller	Scraper
Repeatability	x=20 µm, y=20 µm, z=20 µm			
Minimum Feature Size	x=100 µm, y=100 µm, z=20 µm			100 µm
Typical Accuracy	± 0.1-0.2% with ± 50 µm minimum	± 0.1-0.2% with ± 50 µm minimum	± 0.1-0.2% with ± 50 µm minimum	± 0.1-0.2% with ± 50 µm minimum
Space Requirements				
Dimensions, uncrated (WxDxH)	48 x 68 x 83 in (121 x 172 x 210 cm)	48 x 59 x 77 in (120 x 150 x 195 cm)	95 x 87 x 95 in (240 x 220 x 240 cm)	93 x 91 x 91 in (235 x 230 x 230 cm)
Weight, uncrated	1300 kg (2870 lbs)	Approx. 1500 kg (3300 lbs)	Approx. 5000 kg (11000 lbs)	Approx. 4700 kg (10500 lbs)
Facility Requirements				
Electrical Requirements	230 V / 2.7 KVA / single phase	400 V / 8 KVA / 3 phase	400 V / 15 KVA / 3 phase	400V / 10 KVA / 3 phase
Compressed Air Requirements	6-8 bar	6-8 bar	6-8 bar	4-8 bar
Gas Requirements	Nitrogen or Argon, 6-8 bar	Nitrogen or Argon, 6-8 bar	Nitrogen or Argon, 6-8 bar	Argon, 1.5-4 bar
Water Cooling	Not required, air cooling included	Chiller included in printer	Chiller included in printer	Chiller supplied with printer
Control System and Software				
Software Tools	3DXpert™ all-in-one software solution for metal additive manufacturing - DMP Dental for dental applications			
Control Software	PX Control V3	PX Control V2	PX Control V2	DMP Software suite
Operating System	Windows 7	Windows 7	Windows 7	Windows 7, 64 bit
Input Data File Formats	All CAD formats, e.g. IGES, STEP, STL, native read formats incl PMI data, all Mesh formats			
Network Type and Protocol	Ethernet 1 Gbps, RJ-45 Plug			Ethernet 1 Gbps, RJ-45 plug
Accessories				
Recycling System	Optional external system	Optional external system	Automatic	Optional external system
Optional Accessories				Optional secondary module for fast material exchange
Handling				
Material Loading	Manual	Semiautomatic	Automatic	Manual
Interchangeable Build Modules	No	No	No	Yes
Certification	CE marked	CE marked, TUV	CE marked, TUV	CE marked, TUV

[1] Maximum available part size using standard build plate [2] Set up A [3] Set up B [4] Maximum laser power at powder layer is typical 450W for 500W lasers
[5] Lasers embedded in Class 1 laser products

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