Easy-to-use, high quality dental metal printers

3D metal printing for dental applications

Manufacture dense, complex dental prostheses with excellent surface quality and short post-processing at high productivity.

COMPLETE SOLUTION

Streamline your workflow with an integrated solution of metal 3D printers, certified material and high-performance dental software. 3D Systems' CoCr Dental powder is certified as medical device in compliance with three local regulations: Europe (CE marking), USA (FDA registered), Canada (Health Canada homologated)

Highly flexible
• Build what you need, when you need

Highly accurate
• Superior surface quality
• Excellent fit

Safe operation
• Gloves and airlock

Highly productive DMP Dental 100:
• 100 units in 4 hours
• 4 partials in 7 hours

ProX® DMP 200 Dental:
• 200 units in 9 hours
• 10 partials in 9.5 hours

DMP Dental 100 and ProX® DMP 200 Dental Printers

Enables to use Direct Metal Printing (DMP) to produce high-quality, metal dental prostheses.

DMP DENTAL PRINTERS
WORKFLOW-OPTIMIZED SOFTWARE SOLUTIONS
CERTIFIED DENTAL MATERIAL

DMP Dental Pro

Workflow-optimized software solution

DMP Dental Pro software is a high performance software solution from dental file to production.

Partials   Copings, Crowns, Bridges

Certified dental material

LaserForm® CoCr (C) is a certified Nickel-free CoCr alloy for dental use.

Material specification

The powder LaserForm® CoCr(C) is a type 5 (according to ISO 22674) CoCr dental alloy developed for the manufacturing of fixed dental prostheses such as caps, crowns and bridges and removable dental prostheses.

ELEMENTS		QUANTITIES
Cobalt	Co	Balance
Chromium	Cr	29.0%
Molybdenum	Mo	5.50%
	Mn, Si, Fe	< 1.00%
	Ni	<< 0.10%
	Pb, Cd, Be	<< 0.02%

PROPERTIES according to ISO 22674, ISO 9693	VALUES	
Yield strength (Rp0.2)	815	MPa
Elongation (A%)	10	%
Vickers hardness	375	HV 5
Modulus of elasticity	229	GPa
Density	8.336	gcm^{-3}
Corrosion resistance	< 4	μgcm^{-2}
Thermal expansion (25-500°C)	14.5	$10^{-6} K^{-1}$
Tarnish-proof		

POST TREATMENT	VALUES	
Heat treatment	800°C	30 min max.

Manufacturer

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CE 0120   FDA REGISTERED   HEALTH CANADA HOMOLOGATED

Printer specification

	DMP Dental 100	ProX® DMP 200 Dental
SPECIFICATIONS		
Laser Power Type	100 W/Fiber laser	300 W/Fiber laser
Laser Wavelength	1070 nm	
Build Volume (X x Y x Z)	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)
Layer Thickness	10 μm - 100 μm	
LaserForm® metal alloy	LaserForm® CoCr (C)	
Material Deposition	Roler	
Repeatability	x=20 μm, y=20 μm, z=20 μm	
Minimum Feature Size	x=100 μm, y=100 μm, z=20 μm	
Typical Accuracy	± 0.1-0.2% with ± 50 μm minimum	

	DMP Dental 100	ProX® DMP 200 Dental
SPECIFICATIONS		
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)
Weight, uncrated	1300 kg (2870 lbs)	1500 kg (3300 lbs)

	DMP Dental 100	ProX® DMP 200 Dental
FACILITY REQUIREMENTS		
Electrical Requirements	230 V / 2.7 KVA / single phase	400 V / 8 KVA / 3 phase
Compressed Air Requirements	6-8 bar	
Gas Requirements	Nitrogen, 6-8 bar	
Water Cooling	Not required, air cooling included	Chiller included in printer

	DMP Dental 100	ProX® DMP 200 Dental
CONTROL SYSTEM AND SOFTWARE		
Software Tools	DMP Dental Pro (included)	
Input Data File Formats	STL	
Control Software	PX Control V3	PX Control V2
Operating System	Windows 10	Windows 7
Network Type and Protocol	Ethernet 1 Gbps, RJ-45 Plug	

CERTIFICATION	CE marked

3D SYSTEMS®
Additive Manufacturing Solutions