

Mechatronics Innovation Lab
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**Mechatronics
Innovation Lab**

Technology portfolio

Advanced manufacturing | June 2018

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Creaform / HandySCAN 700

Technology:	Optical coordinate measuring system
Accuracy:	Up to 0.03 mm
Volumetric accuracy:	0.02 + 0.06 mm/m (0.020 mm + 0.015 mm/m with MaxSHOT Next Elite)
Resolution:	0.05 mm
Scanning area:	275 x 250 mm
Depth of field:	250 mm
Part size (recommended):	0.1...4 m
Features:	Stand-alone Self-positioning Automatic mesh output Real-time visualization
Applications:	Inspection Reverse engineering





Creaform | MetraSCAN 750 Elite & HandyPROBE Next Elite

Technology:	Optical coordinate measuring system
Accuracy:	Up to 0.03 mm
Volumetric accuracy:	0.078 mm (0.044 mm + 0.015 mm/m with MaxSHOT Next Elite)
Single point repeatability:	0.058 mm (HandyPROBE)
Resolution:	0.05 mm
Scanning area:	275 x 250 mm
Depth of field:	200 mm
Part size (recommended):	0.2...6 m
Features:	Dynamic referencing Automatic alignment Automatic mesh output Real-time visualization
Applications:	Inspection Reverse engineering





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3D scanning

Creaform / MaxSHOT Next Elite

Technology:	Optical coordinate measuring system
Average deviation:	0.005 mm/m
Volumetric accuracy:	0.015 mm/m 0.020 mm + 0.015 mm/m (with HandySCAN 700) 0.044 mm + 0.015 mm/m (with HandyPROBE Next Elite) 0.044 mm + 0.015 mm/m (with MetraSCAN 750 Elite)
Features:	Automatic feedback on measurement quality
Applications:	Inspection Reverse engineering





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3D composite printer

Markforged | X7

Technology:

Fused Filament Fabrication (extruder)
Continuous Filament Fabrication

Build volume (LxWxH):

330 mm x 270 mm x 200 mm

Layer height:

50 μ m

Matrix material:

Onyx

Nylon

Fiber reinforcement:

Carbon fiber

Kevlar

Fiberglass

HSHT fiberglass (High Strength High
Temperature)





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3D metal printer

SLM Solutions / SLM 280

Technology:	Selective Laser Melting (powder bed)
Build volume (LxWxH):	280 mm x 280 mm x 365 mm
Layer height:	20...75 µm
Material:	Tool steels Stainless steels Aluminium alloys Titanium alloys Nickel alloys Cobalt alloys Copper alloys





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3D hybrid machine

DMG Mori | Lasertec 65 3D Hybrid

Technology:	Laser deposition welding (powder nozzle) 5-axis milling
Max travel (X-Y-Z):	735 mm - 650 mm - 560 mm
Table diameter:	650 mm
Max table load:	600 kg
Materials:	Tool steels Stainless steels Nickel alloys Bronze alloys Brass alloys Chrome-cobalt-molybdenum alloys Tungsten-carbide-matrix materials





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Welding equipment

Migatronik | Sigma Galaxy 400, Omega Yard and PI TIG 350

Technology: MIG/MAG, MMA and TIG welding
Features: Pulse
Sequence and Sequence Repeat
Intelligent Arc Control
Intelligent Gas Control
PowerArc
DUO Plus
Miga Job Control
Miga Log

