



Paragon Rapid Technologies **Group**

Services and Capabilities

2021

updated 04.08.2021



www.paragon-rt.com



Technology:
Digital Light Synthesis™

Print Area (mm):
189 x 118 x 326

Application:
Production of multiples of small, functional prototypes and end-use parts with properties similar to, or improving, on injection moulding. For automotive, industrial products, medical and consumer products.

Materials:

Medical and engineering grade production materials, including rigid and flexible polyurethanes, epoxy, cyanate esters and silicone. Offering heat and impact resistance.

Machines:
Carbon M2 x 3

Quantity:
1 - 10000+

DLS



Technology:
Multi Jet Fusion (MJF)

Print Area (mm):
380 x 284 x 380

Application:
Ideal for mid-volume production requirements. Functional, detailed end-use parts with consistent isotropic repeatability. For automotive, healthcare, industrial and consumer products.

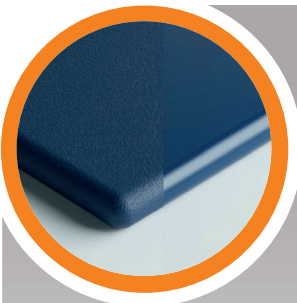
Materials:

PA 12 and PA 11 Nylons are strong, flexible, biocompatible and impact resistant. Can be dyed.

Machines:
HP Jet Fusion 5200
HP Jet Fusion 4200

Quantity:
1 - 10000+

MJF



Technology:
PolyShot Surfacing

Application:
PolyShot Surfacing (PSS) is an efficient process to achieve excellent end-use part finishes. No materials are removed, and the process is effective across all geometries. Cycle times are short, and capacity is substantial, enabling cost efficiencies to be passed on to the customer.

Materials:

Most effective on PA 11 and PA 12 Nylons.

Machines:
DyeMansion PowerShot x 2

Quantity:
1 - 1000s

MJF

Paragon AM Technologies capabilities, continued



Technology:
Colouring/dying

Machines:
DyeMansion DM60

MJF

Quantity:
1 - 1000s

Application:
Over 170 RAL colours to be applied to MJF component parts. Can be applied with Poly Shot Surfacing to achieve a smooth finish similar to injection moulded parts. Available for other technologies. Please enquire.

Materials:
Includes ISO-certified colours for skin contact, as well as colours for light- and heat-resistant parts such as those in automotive interiors.



PARAGON
CNC Technologies

Precision CNC Engineering



Technology:
CNC Milling 5- and 3-axis

Machines:
HAAS UMC 750
CMS ANTARES
HAAS VF-5 with 5 AXIS TRUNNION TABLE
HAAS VF6 SS
HAAS SUPER MINI MILL
HURCO VM20



Maximum build size (mm):
2500 x 1500 x 1200

Quantity:
1 - 1000s

Application:
Low to high volume manufacturing of machined components from customer data and models in line with BSI quality assurance levels. Management of materials and subcontract processes as per your requirements.

Materials:
Carbon steel, stainless, low alloys and engineering steels, nickel alloys, plastics and high density model board.



Technology:
CNC Turning

Machines:
HAAS ST - 25Y with 76mm
HAAS BAR FEED



Maximum build size (mm):
254 x 533

Quantity:
1 - 1000s

Application:

Low to high volume manufacturing of machined components from customer data and models in line with BSI quality assurance levels. Management of materials and subcontract processes as per your requirements.

Materials:

Carbon steel, stainless, low alloys and engineering steels, nickel alloys, plastics and high density model board.



Service:
Production part gauges, jigs
and fixtures

Capability:
Concept creation
Design engineering
Manufacturing
Engineering inspection



Application:

Understanding customer GD&T of the master data, we manufacture approved designs with tolerances of up to 0.05mm. Inspection is carried out by our qualified inspectors for verification prior to delivery.

Materials:

Aluminium, steel, composite boards, thermoplastics.



Service:
Inspection

Technology:
Portable FaroArm® Edge



Chamber (mm):
to 2400 in diameter

Application:

Inspection and verification of customer components and assemblies in line with the highest of industry standards. We supply inspection reporting of our work produced in custom formats, depending upon our customer requirements.



3D PRINTING



Technology:

Selective Laser Sintering (SLS)

Print Area (mm):

330 x 380 x 457

Application:

Suitable for intricate part printing without the need for support structures. Can be used to create small volumes of robust, functional parts with similar properties to injection moulding.

Materials:

Standard and glass-filled PA12 nylons are strong, impact resistant and heat resistant up to 134°C. Can be dyed in a variety of colours.

Machines:

Sinterstation 2500 HiQ x 3

Quantity:

1 - 100+

SLS



Technology:

Stereolithography (SLA)

Print Area (mm):

800 x 800 x 600
500 x 500 x 500

Application:

Large bed printing producing fine details and superior finishes. Suitable for low volume manufacturing, functional and concept models and master patterns.

Materials:

SOMOS® resins of varying thermal and mechanical properties, clarity, water resistance and ABS-like properties.

Machines:

NEO800 x 3
SLA 5000

Quantity:

1 - 100+

SLA



Technology:

Fuse Filament Fabrication (FFF)

Print Area (mm):

320 x 132 x 154

Application:

Perfect for re-enforced engineering applications and functional non-visual components, nests, jaws and interface points on engineering fixtures or assembly lines.

Materials:

Rigid plastic - Onyx re-inforced with carbon fibre

Machines:

MarkForged Mk II

Quantity:

1 - 100s

FFF

TRADITIONAL PROTOTYPING AND LOW VOLUME MANUFACTURING



Technology:
Vacuum Casting

Chamber (mm):
520 x 445 x 425
1720 x 800 x 450

Application:

For prototyping and low volume manufacturing, to simulate injection moulded products, including 2 Shot simulation, overmoulding and multiple shot lenses.

Materials:

30 + materials, offering a variety of thermoplastics and rubbers, including 42 – 95 Shore A rubbers and rigids simulating PP, GFN, VO and ABS grades, and specialist materials. Can be pigmented to RAL, BS and Pantones.

Machines:
MTT001 x 1, MTT501 x 3
MTT004 (1.2m ext. chamber)
MTT504 x 1

Quantity:
1 - 30/mould

VAC



Technology:
Reaction Injection Moulding (RIM)

Application:

For prototyping and low volume manufacturing of larger components. Silicone RIM tools are quick to manufacture, with a yield of 50 – 80 parts. Model board machined tools yield several hundred parts. Applications include trim, enclosures and housings of industrial products.

Materials:

High impact and high temperature polyurethanes and glass-filled nylons. Silicone, epoxy and machined model board tooling.

Machines:
METERMIX PAR50 x3

Quantity:
1 - 100+

RIM



Technology:
Silicone Casting

Application:

Suitable for gaiters, seals, hoses, masks, protective boots, keypads, grommets, diaphragms and more.

Materials:

A variety of silicones, from 10 Shore A to 70 Shore A hardness, including medical and erosion-proof grades.

Machines:
Compression moulding using
3D printed and CNC-cut tooling

Quantity:
1 - 100+

SIL

MODELMAKING AND FINISHING



Service:
15 in-house model makers

Machines:
All

Quantity:
1 - 100s



Application:

Product finishing and painting (including VDI textures and surface finishes) of 3D printed components and fabrication of concept models utilising acrylics, polyurethanes, and other plastics. Expert creation of exhibition models, cutaways, scale models, concept models, full scale lightweight replicas, TV and film models, including graphics, motorisation and lighting.



PARAGON
Rapid Technologies

Dedicated account management



Dedicated project engineers

Customer service, quality, cost efficiency, transparent management, tight collaboration and a focussed approach are the cornerstones of our business. This ensures that from the moment you submit an RFQ to the moment you receive your products, our customer service will be exemplary.

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