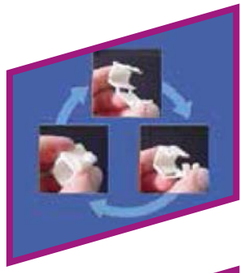
MIMOS
rapid prototyping centre

Material Types

PLASTIC



DuraForm EX
- Offers toughness of injection-molded ABS and polypropylene
- Outstanding toughness
- Excellent impact resistance
- Repeatable mechanical properties
- Easy-to-process

PLASTIC

DuraForm GF
- Glass Filled Polyamide (nylon) material for real-world physical testing and functional use
- Excellent mechanical stiffness
- Elevated temperature resistance
- Dimensionally stable
- Easy-to-process

PLASTIC

DuraForm PA
- Durable polyamide (nylon) material for physical testing and functional use
- Excellent surface resolution and feature detail
- Compatible with autoclave sterilisation
- Good chemical resistance and low moisture absorption

PLASTIC

DuraForm HST
- Functional prototypes and end-use parts that require high stiffness and/or elevated thermal resistance
- Non-conductive and RF transparent
- Elevated temperature resistance
- High Specific Stiffness

METAL

LaserForm A6
- Create complex metal parts suitable for Rapid Tooling and Rapid Manufacturing
- Compatible with machining, EDM processing and polishing
- High surface hardness
- Excellent thermal conductivity

RUBBER

DuraForm Flex
- Durable with good tear resistance
- Vary Shore A hardness (45-75)
- Good powder recycle characteristics
- Good surface finish and texture

Process Flow

Rapid Prototype Machine
Synthethic Laser Sintering (SLS)

Build up size
250mm (X) X 250mm (Y) X 300mm (Z)

Varieties of thermoplastic material
Metal
Rubber

B.O.S System
Break Operation System

B.O.S system
Post processes for plastic material

Laser-Form Oven
Post processes for metal material

Sand Blasting Machine
Post processes for metal and plastic material

Spray Painting
Cosmetic and appearance for metal and plastic material

PROTOTYPING

MIMOS

Details

The ATOS II with its compact light sensor head and fast measurement procedure has been developed for the highest degree of flexibility. The available measuring areas span over a large range and can even be extended by switching to the "SO" configuration.

The ATOS II captures the data from the two 1.4 million pixel cameras within 1 second.

The SO system point distances is less than 0.02 mm and even smallest details can be measured.

Output data in form of polygon mesh can be used either for Reverse Engineering (RE) or for parts accuracy inspection.

Specifications

Measured Points	: 1 400 000
Measurement Time (seconds)	: 1
Measuring Area (mm)	: 30 x 24 - 250 x 200
Point Spacing (mm)	: 0.02 - 0.17
Sensor Dimensions (mm)	: 490 x 300 x 170
Laser Positioning Pointers	: Included

FOR ENQUIRIES
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Process Flow

SYSTEM INFO

This system accurately scans with detailed resolution at high speeds. ATOS delivers three-dimensional measurement data either for parts inspection or 3D surface reverse engineering.

PREPARATION

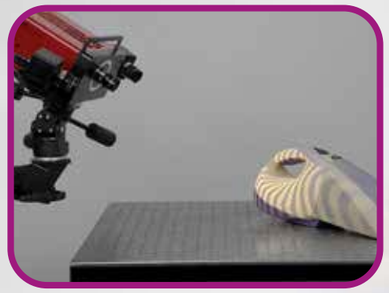
Object to be scanned must be prepared for scanning.
eg. Putting markers at places where both camera can see and spraying with white powder to eliminate object glossiness.

CALIBRATION

Before scanning projector and camera lenses need to be adjust ed, changed and calibrated to maximise scanning accuracy.

SCANNING

Scanning process would normally take time from an hour to a day depending on surface area and object complexity.



OUTPUT

Once the object is scanned the data need to go through poly-gonization process which converts binary data to polygon mesh data eg. *.stl

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3D SCANNING

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