Tecnológico de Monterrey

RAPID 3D LAB

EXPEDITION

RAPID PRODUCT INNOVATION AND REALIZATION LAB

RAPID 3D Lab provides a one-stop-shop for companies, students and teachers in the field of design, realization and validation of functional prototypes, achievable only through advanced manufacturing technologies.

Industry

Technological Entrepreneurship

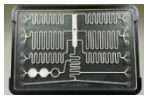
Project at Tec21 and postgraduate estudies

MID-RANGE 3D PRINTING

MELTIO M450

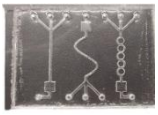
- **Materials:** Stainless Steel, Carbon Steel, Titanium alloys and Nickel alloys
- **Build volume:** 145 x 168 x 390 mm
- **Wire diameter:** 0.8 – 1.2 mm

ASIGA PRO 4K 80 XL



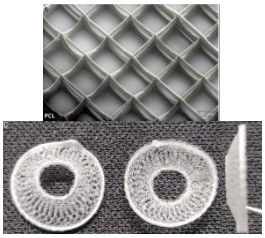
- **Materials:** Asiga has an Open Material Architecture manufacturing a wide range of materials for digital dentistry, audiology, and digital manufacturing.
- **Build volume**: 217 × 122 × 400 mm
- **Resolution:** x-y**:** 56 µm

FORM 3L



- **Materials:** Wide range of photocurable resins with various mechanical, elastic and optical properties
- **Build volume:** 335 x 200 x 300 mm
- **Resolution:** x-y**:** 25 µm

MELT ELECTROWRITING MACHINE (MEW)



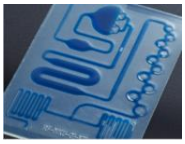
- **Materials:** PCL and Bioresorbable polymers
- **Build volume:** 250 × 250 × 380 mm
- **Resolution x-y:** 7 µm

THERMOFORMING MOLDING

MAYKU MULTIPLIER

Creation of molds and duplicates of objects with great detail

- **Materials:** UHMV, ABS, PMMA, PETG, EVA, HIPS (1-4 mm of thickness)
- **Work volume:** Φ 400 x 160 mm
- **Resolution x-y:** 100 µm



CURING FURNACE COMPOSITES

OV301 EASY COMPOSITES

Ideal for improving mechanical properties of parts.

- **Materials:** Carbon fibers, Glass fibers, Kevlar, Epoxy Resin Matrix
- **Build volume:** 217 × 122 × 400 mm

MICRO-INJECTION MOLDING FOR PLASTICS

BABY PLAST 6/12

Ideal for producing molded small parts

- **Materials:** TPU, PP, POM, PC, PEEK, LCP
- **Injection volume:** 15mm^3

RHEOLOGY

ANTON PAAR MCR 302E

Flexible rheometer for precise measurement of material flow and deformation, ideal for research and quality control.

- **Minimum and Maximum torque range:** 0.5 nNm | 230 mNm

Lubricants

Plastics

PORTABLE 3D LASER SCANNER

SIMSCAN 30

ultra-compact handheld 3D scanner designed to capture precise details in confined spaces, ideal for reverse engineering.

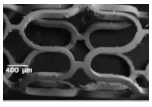
- **Precision:** Up to 0.020 mm
- **Measurement rate**: Up to 1.250,000 measures/s
- **Scanning area:** 650 × 550 mm

LASER MICRO WELDING & CUTTING

PRECO MEDPRO-ST2000

Cutting and welding in a wide range of metal alloys

- **Materials**: NiTi, Mg alloys, Stainless steels and CoCr alloys
- **Build volume:** 145 x 168 x 390 mm



VACUUM CASTING SYSTEM

KLM V400 m

- **Casting volume**: 600/1000 m
- **Materials:** Silicones, resins and waxes
- **Mold cavity dimensions:** 360 x 400 x 460 mm

Contact:

Director — rapid3dlab@servicios.tec.mx

Lab specialists — Ciro Ángel Rodríguez, cynthia_pamela@tec.mx, oscar.abrego@tec.mx

Av. Eugenio Garza Sada 2501 Sur,
Tecnológico, 64700 Monterrey,
Nuevo León, México