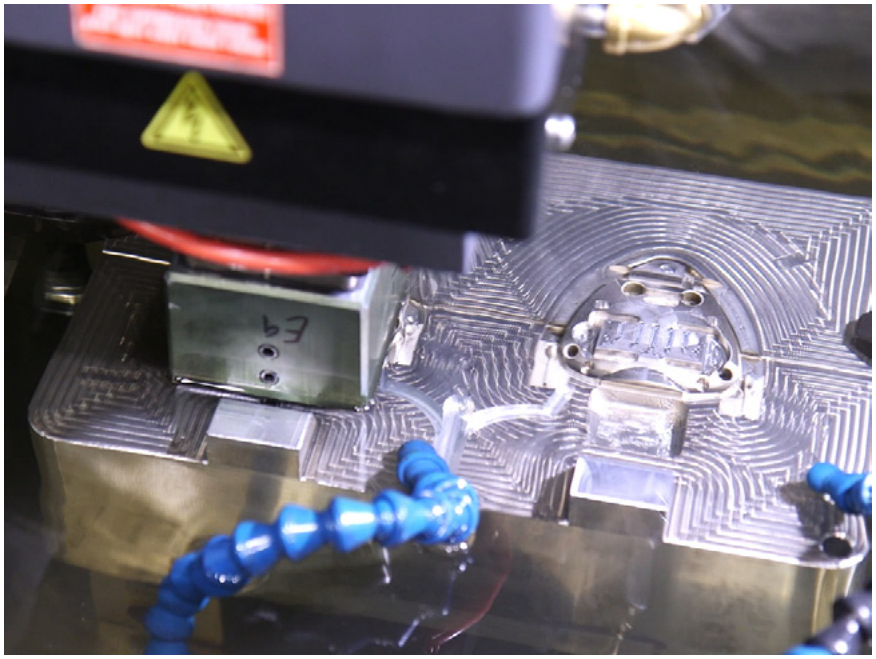
01 / TOOLMAKING

Toolmaking & Precision Machining

In-house machining and EDM support prototype, validation and production mold development, modifications and maintenance. Tooling materials include QC10 aluminum, P20 steel and stainless steel, selected for the application.

EXPLORE INJECTION MOLD TOOLING ↗
catalystpdg.com/injection-mold-tooling/

PRECISION TOOLROOM



CNC MACHINING
Haas VM-3, VF-5, VF-2 (2)

SINKER EDM
Mitsubishi EA12D

WIRE EDM
Mitsubishi MV1200S-M800

PRECISION FINISHING
Surface preparation & tool fit

ADDITIONAL MACHINING RESOURCES

EQUIPMENT	INSTALLED MACHINES
Chevalier / Falcon FM-3VK	4 CNC knee mills
TRAK TRM	2 bed mills
TRAK 1630SX	1 CNC lathe
Chevalier FSG-618M	2 surface grinders

02 / INJECTION MOLDING

Production Injection Molding

Six JSW production presses support custom thermoplastic components and assemblies. Press selection depends on tooling, resin, geometry and process requirements.

EXPLORE PLASTIC MOLDING ↗
catalystpdg.com/plastic-molding/

PRODUCTION PRESS CAPACITY

JSW MODEL	CLAMP CLASS	SHOT / oz PS	MAX. MOLD SIZE
J50ADS	50-ton class	1.98	17” x 17” x 16”
J85AD	93.7 US tons	4.8	22” x 20” x 16”
J140AD	154 US tons	5.6	30” x 26” x 17”
J165EII	165 US tons	11.8	29” x 29” x 17”
J385ELIII	385 US tons	34.0	42” x 42” x 26”
J500EII	496 US tons	53.3	46” x 46” x 29”

BENCHTOP INJECTION MOLDING

APSX-PIM electric system | Small thermoplastic parts; prototype and limited production runs

03 / MATERIAL & PROCESS SUPPORT

Material Preparation & Control

Drying, material handling, temperature control and inspection resources support project-specific resin and molding requirements.

MATERIAL CONDITIONING

EQUIPMENT	CAPABILITY / QUANTITY
AEC / Whitlock desiccant drying	3 matching 200-lb systems
Large-capacity resin hopper	Dedicated resin drying and preparation
Moretto COMB XD17 1U	3 resin-drying systems
Moisture and dew-point checks	DSC30P; Moretto DPP QU

PROCESS CONTROL & SUPPORT

EQUIPMENT	CAPABILITY / QUANTITY
Novatec MGF-4-ST	3 gravimetric additive feeders
Temptek VTR-275-LS	4 water mold-temperature controllers
Temptek VTO-2100HC	1 hot-oil temperature controller
Temptek CFD-A15 / CFD-A5	2 chillers; one of each model
Cincinnati granulators	2 units
Starrett Sigma HE400	Optical comparator / Quadra-Chek 2000
Branson SW200 spin welder	1 unit / joining & assembly

Supporting consistent material handling and project-specific molding conditions.

04 / ADDITIVE MANUFACTURING

Prototype. Evaluate. Refine.

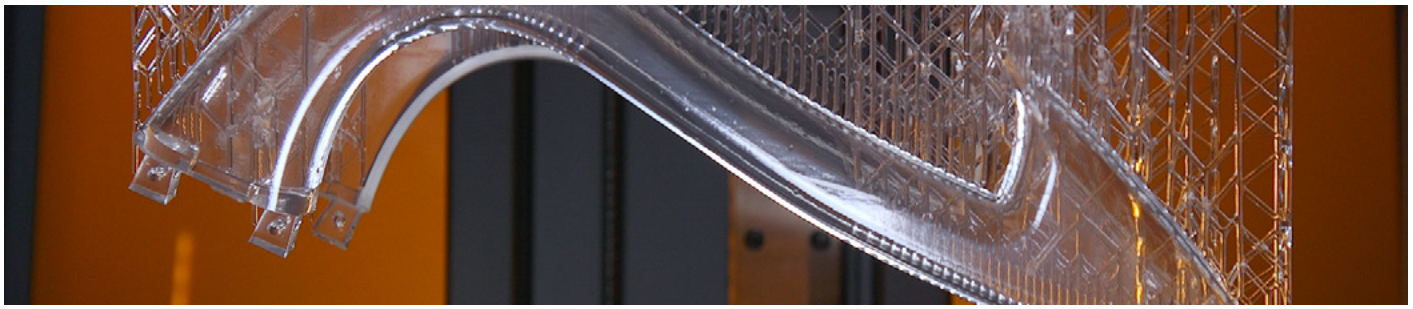
Additive manufacturing and printed tooling support functional evaluation and practical development decisions before production investment.

EXPLORE PROTOTYPING CAPABILITIES ↗
catalystpdg.com/prototyping/

INSTALLED ADDITIVE EQUIPMENT

PROCESS	EQUIPMENT
SLA resin printing	Formlabs Form 3L (1)
FDM filament printing	Bambu Lab X1 (3); Raise3D Pro3 Plus (1)

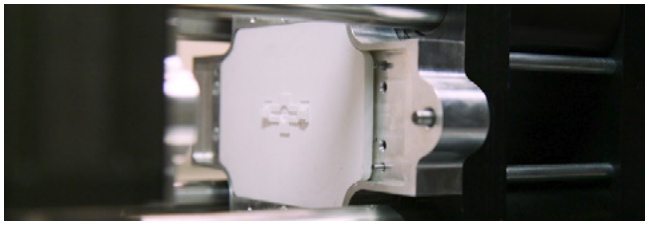
FDM printer lineup: Bambu Lab X1 and Raise3D Pro3 Plus



SLA resin printing / prototype development

FROM PRINTED TOOLING TO MOLDED PARTS

Catalyst frequently pairs 3D-printed molds with injection molding to produce functional thermoplastic parts for evaluation and selected production needs.



3D-printed mold installed in the APSX-PIM injection molding system.

HAVE A PROJECT IN MIND? **CONTACT CATALYST ↗**