

FINISH FDM® PARTS TO NEAR INJECTION-MOLDED QUALITY

The Finishing Touch Smoothing Station uses a semi-automated process to improve the surface finish of FDM parts to near injection-molded quality without the labor and cost associated with traditional manufacturing. In fact, Finishing Touch makes FDM parts 15 times smoother.¹

Real Applications

Whether you're creating concept models, patterns or end use parts, now you can make them even smoother. Use Finishing Touch to give your parts a finish that is ideal for painting, plating, silicone molding, sand casting or investment casting.

- Painted parts
- Mold masters
- Electroplated components
- Vacuum metallization
- Sealed surfaces (contact with liquids or moderate air and water pressure)

And, you can use Finishing Touch with our entire family of ABS thermoplastics including: ABS-P400, ABSi, ABS*plus*, ABS-M30 and ABS-M30i.

Real Smooth

With Finishing Touch you can make FDM concept models, patterns or end use parts 15 times smoother.¹ Small layer lines are easily removed, leaving you with a surface finish close to an injection-molded part.

Real Results

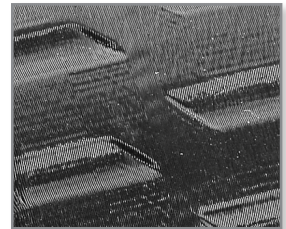
Smoothing with Finishing Touch does not affect part accuracy. An independent study was conducted by the University of Texas-El Paso to test part accuracy after the smoothing process. The study found that the smoothing process made negligible dimensional changes on smoothed parts.

Study Details: Before smoothing, 49 measurements were recorded on 6 test parts manufactured on a Fortus 3D Production System. After three 20-second exposures in the smoothing chamber, the mean deviation of pre-smoothed dimensions versus post-smoothing dimensions determined that the smoothing process changed the parts by only 0.0009 inches (0.023 mm). As a result, researchers concluded that the smoothing process has an insignificant effect on part accuracy.

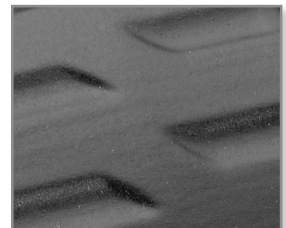


Real Possibilities.

You can smooth parts with detailed surfaces like these tires.



Before smoothing



After smoothing:

- Small layer lines removed
- Surface finish close to injection molded part

¹ Data derived from an independent study conducted by QC Inspection. Parts analyzed were produced with a Fortus 3D Production System using .010 inch slice thickness. On average, surface roughness decreased from Ra 600 to Ra 40 to 60 equating to a 10 to 15 times smoother part surface.

Finishing Touch Smoothing Station Specifications

System Size	Crated: 59.5 x 43 x 58.5 inches (1511.3 x 1092 x 1485.89 mm) Uncrated: 52.5 x 32 x 46 inches (1333.5 x 812.8 x 1168.39 mm)
Weight	Crated: ≈600 lbs (≈272.16 kg) Uncrated: 400 lbs (182 kg)
Chamber Size	13 x 16 x 20 inches (330 x 406 x 508 mm)
Compatible FDM Materials	ABS-P400 ABS-M30i ABSi ABS-M30 ABSplus
Smoothing Station Fluid (SSF)*	Order Smoothing Station Fluid (SSF) directly from: www.SmoothingFluids.com MicroCare Corporation 595 John Downey Drive, New Britain, CT 06051, USA techsupport@microcare.com, 800-638-0125 <i>*Local regulations for use of industrial solvents should be observed.</i>
Operator Attendance	Intermittent operator attendance required to expose parts.
Operating Environment	<ul style="list-style-type: none"> Well ventilated area Maximum room temperature 85°F (29.4°C); humidity < 65% non condensing Maximum altitude of up to 10761 feet (3280 meters)
Power Requirements	200-240 VAC, 50/60 Hz, 20 amp (dedicated circuit), single phase
Additional Requirements	<ul style="list-style-type: none"> 4 in (102 mm) exhaust to outside Compressed air, minimum of 5 CFM @ 80 psi
Safety Standards	CE Certified

Recommended Process: Burnishing

Burnishing gives your parts an even smoother appearance and a matte finish. Although this step is optional, it is recommended when a near injection molded look is desired.

To prep your part for burnishing, first smooth your part using the Smoothing Station, then lightly sand it. Smooth and sand your part again, then smooth it a third time.

For burnishing, sand blasters (sometimes called bead blasters) are available at tool supply stores. Choose one with the following specifications:

- No > 30 psi or 2.068 bar at the spray nozzle
- Envelope size 1016 x 509 x 508 mm (40 x 22 x 20 in)

Stratasys recommends POLYHARD Type III bead media for burnishing inside the sand blaster. Specify 20/30 bead screen size (0.841-0.595 mm or 0.0331- 0.0234 inches).

Order online at www.ustechnology.com/stratasys

HOW IT WORKS

There's virtually no preparation needed to smooth your parts with the Smoothing Station. Just expose your part in the smoothing chamber and allow your part to cure.

It's As Easy As 1-2-3:

1. Place your part in the smoothing chamber for 10-30 seconds. Remove from smoothing chamber and review surface finish.



2. Repeat until desired surface finish is reached (typically 2-4 times.)

3. Hang part in curing chamber and allow to dry (part is dry to the touch in 30-45 minutes).



For more information about Fortus systems, materials and applications, call **888.480.3548** or visit www.fortus.com

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