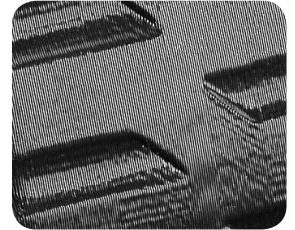


The Stratasys Smoothing Station™ and Burnishing Station™ utilize semi-automated processes that improve the surface finish of FDM thermoplastic parts to near the surface finish of an injection molded part without the time and cost associated with traditional manual finishing techniques. The Smoothing Station and Burnishing Station are optimized to work with the entire Stratasys FDM family of ABS thermoplastic materials including, ABS-P400, ABSi, ABS*plus*, ABS-M30 and ABS-M30i.

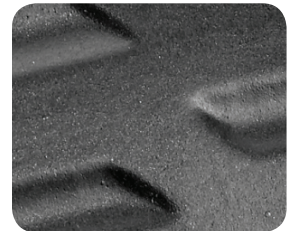
The Smoothing Station improves the surface finish of the part in a quick two part process that requires virtually no preparation — just expose the part in the smoothing chamber and allow the part to cure. The entire process involves only a few minutes of labor; the part is dry to touch in 30-45 minutes and fully cured in 12-18 hours.

The surface can be further improved by creating a matte finish with the Burnishing Station. This optional, but highly recommended step is often preferred as the improved surface finish more closely represents the satin look and finish typical of injection molded parts.

Combined with the durability of the FDM family of ABS thermoplastics, Stratasys Finishing Stations create a surface finish on a part that is ideal for painting, electroplating, or vacuum metallization. Smoothed parts also work well as mold masters for silicone molding, sand casting, or investment casting. Finally, smoothed parts are watertight and can be employed for applications requiring moderate air or water pressure.



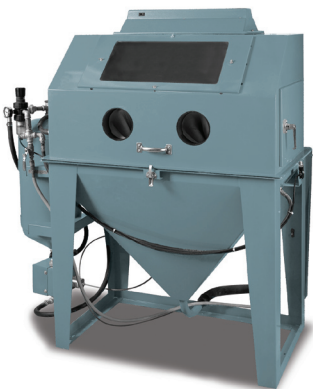
Before smoothing



After smoothing:  
 • Small layer lines removed  
 • Surface finish close to injection molded part



Smoothing Station



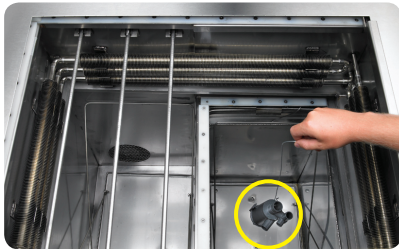
Burnishing Station

System Specifications	Smoothing Station	Burnishing Station
<b>System Size (XYZ)</b>	52 x 34 x 48 inches (1320 x 864 x 1219 mm)	55 x 65 x 42 inches (1397 x 1650 x 1067mm)
<b>Smoothing/Burnishing Chamber Size (XYZ)</b>	13 x 16 x 20 inches (330 x 406 x 508 mm)	40 x 22 x 20 inches (1016 x 559 x 508 mm)
<b>Compatible FDM Materials</b>	ABS-M30, ABS-M30i, ABSi, ABS <i>plus</i> , ABS-P400	ABS-M30, ABS-M30i, ABSi, ABS <i>plus</i> , ABS-P400
<b>Smoothing/Burnishing Solution</b>	Dupont Vertrel SDG <ul style="list-style-type: none"> <li>• Purchase direct from Dupont: <a href="http://www2.dupont.com/Vertrel/en_US">www2.dupont.com/Vertrel/en_US</a></li> </ul> Local regulations for use of industrial solvents must be observed.	Armex Flow Formula M Sodium Bicarbonate <ul style="list-style-type: none"> <li>• Purchase material direct from Armex: <a href="http://www.armex.com">www.armex.com</a></li> </ul>
<b>Operator Attendance</b>	Intermittent operator attendance to expose parts.	Operator attendance required to perform operation.
<b>Operating Environment</b>	Requires 4 in (102 mm) exhaust to outside Well ventilated area Maximum room temperature of 85°F (29.4°C) Maximum room humidity of 85% RH	Maximum room temperature of 85°F (29.4°C) Maximum room humidity of 85% RH
<b>Power Requirements</b>	208-230 VAC, 50/60 Hz, 30 amps	Two 110VAC, 60 Hz, 20 amp
<b>Regulatory Compliance</b>	CE	CE
<b>Additional Requirements</b>	Compressed Air Required <ul style="list-style-type: none"> <li>• Compressed air minimum of 5 CFM @ 30 psi</li> </ul>	Compressed Air Required <ul style="list-style-type: none"> <li>• Dry compressed air minimum 15CFM @ 60 psi</li> </ul>

## Finishing Process for FDM Parts

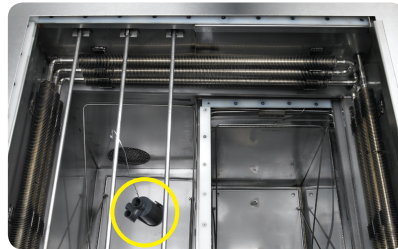
### 1 Smooth Part Surface (Smoothing Station)

- Expose FDM part in the smoothing chamber 10-30 seconds
- Remove from smoothing chamber, review surface finish
- Repeat until desired surface finish reached (typically 2-4 times)



### 2 Cure Part (Smoothing Station)

- Hang part in the curing chamber of the Smoothing Station
- Part will be dry to touch in 30-45 minutes
- Part will be fully cured in 12-18 hours



### 3 Burnish Part Surface (Burnishing Station)

- Lightly blast the part with sodium bicarbonate, giving surface matte finish
- Rinse with water to remove any remaining sodium bicarbonate



## Target Applications

Stratasys Finishing Stations are ideal for applications where a **smooth surface finish** is desired:

- Mold masters
- Finish painting
- Electroplating
- Vacuum Metallization



Or applications that required a **sealed surface**:

- Liquid applications
- Moderate air pressure applications
- Moderate water pressure applications



## Part Accuracy Study

An independent study was conducted by the University of Texas-El Paso to test part accuracy after the smoothing process. Ultimately, the study found negligible dimensional change on smoothed parts.

### Study Details:

Before smoothing, 49 measurements were recorded on 6 test parts manufactured on an FDM system. After three 20 second exposures in the smoothing chamber, the mean deviation of pre-smoothing dimensions versus post smoothing dimensions determined that the smoothing process changed the parts by only .0009 inches (.023 mm). As a result, researchers concluded that the smoothing process has an insignificant effect on part accuracy.

For more information about Stratasys systems and materials, contact your representative at +1 888.480.3548 or visit [www.stratasys.com/FinishingStations](http://www.stratasys.com/FinishingStations)

**Stratasys Inc.**  
7665 Commerce Way  
Eden Prairie, MN 55344  
+1 888 480 3548 (US Toll Free)  
+1 952 937 3000  
+1 952 937 0070 (Fax)  
[www.stratasys.com](http://www.stratasys.com)  
[info@stratasys.com](mailto:info@stratasys.com)

**Stratasys GmbH**  
Weismüllerstrasse 27  
60314 Frankfurt am Main  
Germany  
+49 69 420 9943 0 (Tel)  
+49 69 420 9943 33 (Fax)  
[europe@stratasys.com](mailto:europe@stratasys.com)