SF RANGE PART PROCESSING DESIGN GUIDELINES

Applies to: SFX · SF2X · SF50 · SF100



JULY 2026 // V1.1

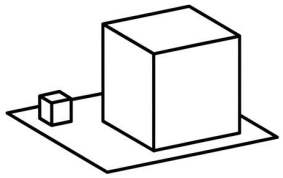
DESIGN PARAMETERS

Follow these guidelines to achieve consistent results across all PostPro SF systems.

MAX PART SIZE

SFX: 130 × 130 × 260 mm
SF2X: 190 × 190 × 330 mm
SF50: 340 × 340 × 240 mm
SF100: 340 × 340 × 540 mm

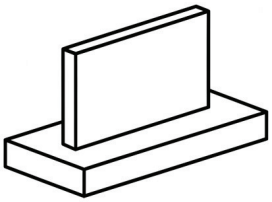
Parts must fit within the chamber of the machine being used. These dimensions represent the full usable area. For best results, allow sufficient clearance around parts to ensure vapour can circulate freely across all surfaces.



WALL THICKNESS

Light processing: 1.0 mm minimum
Standard processing: 1.5 mm recommended

Consistent wall thickness gives the most predictable finish. Thin walls below 1.5 mm are challenging to smooth evenly. Where wall thickness varies significantly across a part, expect uneven results.



LARGE FLAT PARTS

Maximum size: ~A4 paper

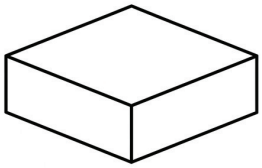
Flat components are prone to warping during both printing and processing. The larger the flat area, the harder it is to maintain dimensional accuracy and surface flatness after smoothing.



SHARP CORNERS

Minimum Radius: 0.5 mm

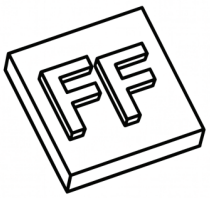
A small radius may naturally form at sharp corners and edges during processing.



TEXT & FINE DETAIL

Embossed features: min 0.8 mm
Recessed features: min 0.4 mm

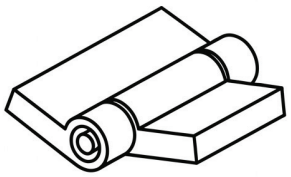
Fine surface features can be lost if they fall below these thresholds. This applies to both the height of raised text and the width and depth of recessed features.



INTEGRATED CLEARANCE

Minimum gap: 0.5 mm

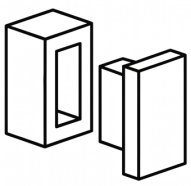
Hinged or interlocking parts printed as a single assembly can fuse during processing if the clearance between moving faces is too small. Keep contact areas to a minimum to reduce this risk.



ASSEMBLY CLEARANCE

Close fit: 0.15 mm
Free fit: 0.25 mm

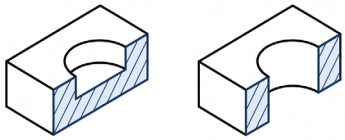
Vapour smoothing redistributes surface material, which can alter final dimensions slightly. Account for this when designing parts intended for assembly after processing.



BLIND & THROUGH HOLES

Minimum diameter: 2 mm
Depth scaling: +2 mm per 10 mm depth

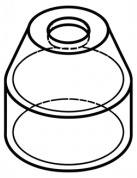
Blind holes are more likely to block than through holes. As hole depth increases, so must the diameter, vapour needs enough space to enter, circulate and fully smooth the internal surface. The required clearance will also vary depending on whether the hole is straight or has a complex profile.



CAVITIES & HOLLOW PARTS

Min opening diameter: 50 mm

Hollow parts require a large enough opening for vapour to reach all internal surfaces. Avoid enclosed or non-line-of-sight cavities, these trap unsintered powder and prevent effective processing.



BEFORE PROCESSING

Print parts in line with your printer manufacturer's recommendations. Poor print quality will affect the smoothing result and cannot be corrected in process. Parts must be fully depowdered before loading; residual powder will contaminate the machine and affect results. Use gloves when handling parts and keep the working area clean. Surface contamination such as oils, dust or debris can interfere with the smoothing process. Do not process parts with embedded electronics, or heat-sensitive components.



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