Pro machine: Theory of Operation

S1-PRO | Blaide product line | 17 November 2026 | Design only: nothing built or tested

The Pro is the printer's own parametric model with sixteen dimensions changed. Because the bed moves front to back, depth grows by twice the extra travel while width grows once. The bridge is stiff enough at the longer span; the bed is the constraint, since heating all of it would need more than twice the supply, so only a zone the size of the small printer's bed is heated.

Design

- Built from the same model with 16 dimensions changed: 550 x 640 x 330 mm
- Bridge span 510 mm; calculated sag under the carriage 0.018 mm
- Heat a 180 x 140 mm zone, not the whole bed, to stay on the 250 W supply