

Tolerance & Fit

Art & Design

How much slack a joint needs, and why parts that measure right still will not fit.

Nominal size is not the made size.

Fit	Clearance	Used for
Clearance	0.2-0.5 mm	Parts that must move
Transition	0 to 0.1 mm	Located but removable
Interference	Negative	Pressed, permanent
Laser-cut ply	Add the kerf, 0.1-0.2	Slot and tab assembly
FDM print	0.3-0.4 mm	Snap fits, sliding parts
Cast material	Allow for shrinkage	Wax, clay, resin

Cut or print a test coupon of the joint before making the whole part.
Every machine and material has its own kerf.