

A Guide to Guillotining Paper and Board

When guillotining paper and board, it is essential that all edges be back trimmed. That is to say, all material to be subsequently converted, ie printed, should be taken from behind the knife. The material in front of the knife will have been pushed forward and sideways, dragging fibres and/or coating from the cut edge. This debris will remain loose on the edge of the cut sheet and if not removed by back trimming can cause hickies during the subsequent printing operation.

Clamp setting is important as incorrect pressure can lead to either an under or an over cut edge, as well as increasing the potential for creating debris, even on the edge behind the knife.

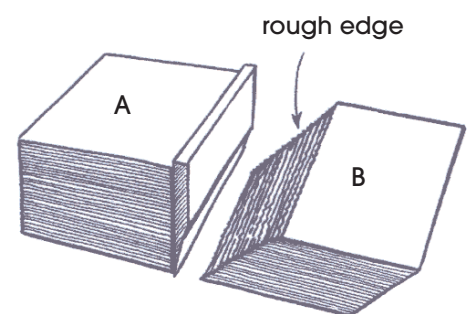
The clamp pressure should only be sufficient to prevent the material moving during the cutting action. Insufficient pressure can create an undercut edge owing to excess compressibility of the stack. Too much clamp pressure can create an overcut edge owing to blade deflection, as well as increasing the potential for creating debris, even on the edge behind the knife.

- Soft materials require high clamp pressure. Hard materials require low clamp pressure.
- The angle of the knife is important – soft materials require a narrow angle, hard materials a wide angle. For the printer who cuts a variety of materials, a double bevel knife is recommended. This maintains a slender cutting angle to ensure good material flow and also creates an initial wider angle which is required to ensure hard materials, ie coated papers, are cut correctly.
- It is essential that the knife is sharp and correctly honed.
- It is important when guillotining certain printed materials such as display board, multiply boards and certain plastics, ie polypropylene, that a double cut procedure is adopted in order to minimise splitting or chipping of the board at the edges, the final cut to be no greater than 2-3 mm from the edge. A higher clamp pressure should be used, stack heights should be kept to a minimum of 2.5-4.0 mm approximately and the blade angle should be between 19° and 22°. It is essential that a very sharp knife is used, preferably made from Swedish steel as it tends to be more durable.
- When printing work and tumble it is strongly recommended that the long edges of the stock are trimmed prior to printing to ensure that the sheets are exactly the same size.

Recommendations

Material	Angle	Clamp pressure in kgs
Art Paper	22°	2500
Gummed Paper	22°	2500
Label Paper	22°	2500
NCR	19°	2000
Silk Paper	19°	2000
Cast Coated	22°	2000
Post Card	22°	2500

First cut



Back trim

