VERSATEX®
INCH AND A HALF SHEET
MAX™

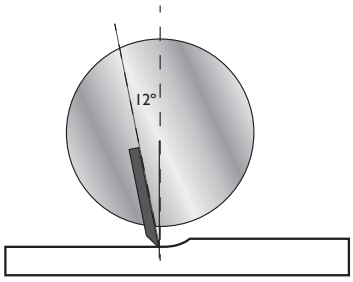
2X Best Practices and learnings: Moulding Equipment

Sweet spot of every moulder - Correlation between RPM of cutter head and feed rate of piece into machine

- On 1 1/2" sheet or boards at 12,000 RPM the optimal feed rate is 70 to 80 FPM.
- 8,000 RPM optimal feed rate 30 - 40 FPM.
- 6,000 RPM optimal feed rate 15 - 20 FPM.
- OEM must find this sweet spot for their machine.

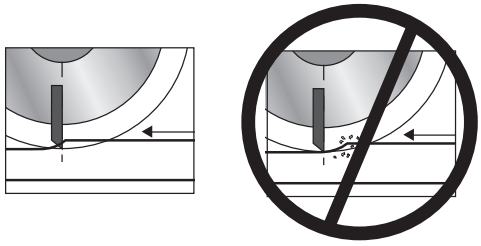
Critical factors in processing 2X cellular PVC material through a moulder

Hook angle (the angle of the cutter as it sits in the cutter head) 12 degrees



HOOK ANGLE

- Steeper angles lessen tear out by reducing the lift of the cutter that occurs when angle is 20 degrees or more.
- Steeper angles allows less fines and chips to be collected between cutter and the material.
- Fines and chips will cause heat build-up, soften core and may lead to tear out.


NO CHIPS BETWEEN CUTTER AND SUBSTRATE

Good dust collection

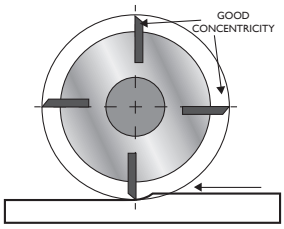
- Must have very good removal of dust and chips to minimize heat build-up on substrate and tooling.

Cutter inserts must be sharp

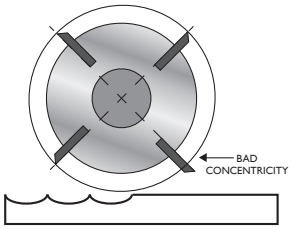
- Dull blades increase heat build-up and will cause tear out.

Concentricity or positioning of the cutters within the cutter head

- The more concentric the cutters, the smoother and better the cut.
- Concentric alignment of each cutter enables each blade cutter to do work with each revolution.



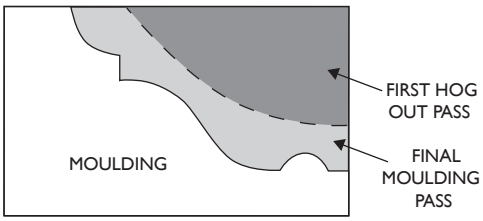
GOOD CONCENTRICITY



BAD CONCENTRICITY

Using Hog out technique (removing material prior to final moulder pass for profile desired)

- Use when trying to remove too much material in one pass.
- Profile requires deep penetration into the PVC substrate.
- Extra pass can assure a smoother cut, better surface quality and significantly reduce tear out.



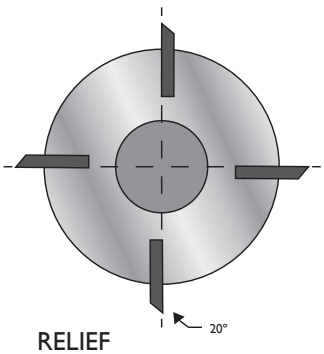
HOG OUT

Type of material for cutter blade construction

- Carbide tooling should be used for longer runs - 3,000 LF or greater.
- M-2 steel for smaller run quantities.
- Other steels will require sharpening. every 750 to 1,000 LF.

Relief angle of cutter blade (angle at which end of blade is ground)

- OEM's have used 15 to 20 degrees.



RELIEF ANGLE

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