

Trouble shooting guide - Drilling

Problem	Cause
Pure hole wall quality	<ul style="list-style-type: none"> Chip load to low Spindle speed to high Drilling into back-up to deep Excessive tool life Improper tool design Back-up material to hard Uncured laminate
Nailheading	<ul style="list-style-type: none"> Excessive in feed rate or retract rate Excessive tool life Spindle speed to high Improper tool design Back-up material to hard Uncured laminate
Resin smear	<ul style="list-style-type: none"> Chip load to low Spindle speed to high Spindle speed to high Improper tool design Uncured laminate
Breakage	<ul style="list-style-type: none"> Spindle speed too slow Excessive tool life Improper tool design Excessive in feed rate or retract rate Defect pressure foot Damaged entry material surface Entry material to hard or too thick Copper content too high Stack movement Depth into backer material too deep Excessive spindle run out
Drill wander	<ul style="list-style-type: none"> In feed too low Excessive tool life Improper tool design Excessive spindle run out Defect pressure foot Damaged entry material surface Stack height too high Material to course for drill size Entry material movement Excessive spindle run out
Burrs (entry & exit)	<ul style="list-style-type: none"> Excessive in feed rate or retract rate Excessive tool life Entry material too thin Back-up material too soft Defect pressure foot

If you have any questions, please do not hesitate to contact us.

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