

!!! IMPORTANT !!!

Safety Guidelines for Using Suburban FCS Style Fly Cutters

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If used improperly, any cutting tool can injure or kill. Please follow these guidelines, when using your FCS style fly cutter:

1. Before loading this tool into the machine, make sure the spindle is in neutral or locked out.
2. When loading the cutter into the machine spindle, hold it in a way that your fingers, hands and arms are above and out of reach of the cutting edge. Always assume the machine's spindle could start at any time.
3. Before loading this tool in the machine, check to make sure the three set screws holding the bar are tight. This is especially important, where multiple users have access to the tool.
4. **The FCS style fly cutter is NOT a balanced cutter. The safe rpm limit for each machine will vary based on the size and rigidity of the machine. Never start your spindle at over 650 rpm. Serious vibrations can occur at higher rpm, which could damage the machine and / or cause injury to the operator. If higher rpms are required, start off under 650 rpm and gradually increase the speed, noting machine vibration. NEVER exceed 1200 rpm on any machine that is not FULLY GUARDED.**

!!!! SEE OPPOSITE SIDE FOR SPEED & FEED RECOMMENDATIONS !!!!

5. Never reach in to touch the part or check the finish, while the cutter is running. The tools actual diameter can be visually deceiving, when the cutter is spinning.
6. The safe depth of cut will vary, depending on the rigidity and size of the machine. Always try a light test cut and gradually increase the depth of cut. See chart on opposite side for depth of cut recommendations.
7. If using a CNC tool changer, always check for clearance and possible interference with the machine's other components and tools.
8. Make sure all operators, that will use the tool, have read these safety precautions.



Suburban Tool, Inc.
Taft-Peirce Metrology

4141 North Atlantic Boulevard, Auburn Hills, MI 48326
Telephone: 248-391-7800 Fax: 248-391-7462

website: www.subtool.com
e-mail: tools@subtool.com

**Recommended Speeds, Feeds & Depth of Cut,
When Using Suburban FCS Style Fly Cutters**

**THESE SPEED & FEED RATES SHOULD ONLY BE USED
ON
VERY RIGID, FULLY GUARDED MACHINES.**

**SPEEDS (RPMs) & FEEDS SHOULD BE REDUCED
ON
LESS RIGID MACHINES.**

**THE RATES SHOWN ARE FOR THE 7.5" BAR,
SET TO ITS SMALLEST CUT DIAMETER.**

**SPEED & FEED RATES SHOULD BE REDUCED,
AS LARGER CUT DIAMETERS ARE USED.**

**NEVER EXCEED 1200RPM
ON
AN UNGUARDED MACHINE.**

MATERIAL	RECOMMENDED INSERT	MAXIMUM CUT DEPTH (INCHES)	FEED RATE (INCHES PER MINUTE)	REVOLUTIONS PER MINUTE
Mild Steel	TNMG 432 TIN Coated	0.030	4-15	550-650
Mild Steel	TNMG 432 Ceramic	0.030	5-20	1000-1375
Aluminum	TNMG 432 Uncoated	0.100	5-100	1800-2800
Aluminum	TNMG 432 Ceramic	0.100	5-135	1900-3000
Cast Iron	TNMG 432 Uncoated	0.018	3-10	700-850
4140 PHT Steel	TNMG 432 TIN Coated	0.020	4-12	540-640
4140 PHT Steel	TNMG 432 Ceramic	0.020	5-18	800-1200