

# Aluminum Milling Tests

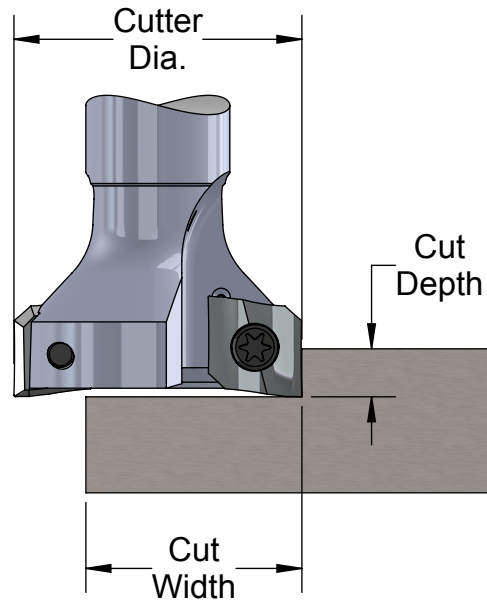
**Faster CIM metal removal rates in aluminum depend more on IPM feed rates, horsepower and the cutter geometry than RPM.**

You'll get higher CIM with smaller cutters, (assuming you're rough milling with cutters about one inch in diameter and larger). On tests 5, 6 and 8, with full diameter cuts, the one inch gets 46 CIM, the 1-1/4 gets 42 CIM and the two inch gets 37 CIM.

You'll get higher CIM with a cut width that is about 3/4 of the cutter diameter than with a full diameter cut width, (a long accepted machinist's rule).

Compare Tests 1 versus 3 and 6 versus 7.

You can get the same CIM with fewer flutes, plus reduced insert costs; see Test 8.



See inside back cover for SH750 along with back cover for all shank style Shear-Hogs.

Test No.	Cutter	Cutter Dia.	RPM	Cut Width	Cut Depth	IPM Feed	No. Flutes	IPT Chip	CIM
1.	SH750	.750	7500	.750	.375	150	1	.020	42
2.	*below	.750	7500	.750	.375	130	2	.008	36
3.	SH750	.750	7500	.600	.250	315	1	.042	46
4.	*below	.750	7500	.600	.250	275	2	.018	41
5.	SH100	1.0	6500	1.0	.125	370	1	.057	46
6.	SH125	1.25	6500	1.25	.125	275	2	.027	42
7.	SH125	1.25	6500	1.0	.250	375	2	.037	47
8.	SH200	2.0	6500	2.0	.250	75	2 & 3	.006/.004	37

\* A major brand solid carbide, 2 flute end mill, with High Rake for aluminum.

All tests were run on a recent model Haas VF1 based on the highest Inches Per Minute possible with the load meter showing 100%. Haas estimates 7.5 actual spindle HP at 6500 RPM.



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