



# Hard Wood Cutting Data

APPLICATION	GOOD	BETTER	BEST
Single Pass	52-900/57-900	52-200/57-200	60-300/60-350
Roughing	60-800	60-000	60-850
Finishing		60-300/60-350	60-200

**DEPTH OF CUT:** 1 x D Use recommended chip load  
 2 x D Reduce chip load by 25%  
 3 x D Reduce chip load by 50%

## CHIP LOAD PER TOOTH

		Cutting Edge Diameter															
Series	Cut	1/16	3/32	1/8	5/32	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	3/4	7/8	1
12-00	1 x D			.002-.004	.002-.004	.002-.004	.003-.005	.003-.005	.004-.006	.004-.006	.005-.007	.005-.007	.005-.007	.006-.008	.007-.009	.010-.012	.011-.013
12-80	1 x D			.002-.004		.003-.005		.004-.006	.004-.006	.004-.006		.005-.007					
30-00	Varies	.0005-.0015	.001-.002	.001-.003	.001-.003	.001-.003	.001-.003	.001-.003	.002-.004	.002-.004	.002-.004	.002-.004	.003-.005	.003-.005	.004-.006	.005-.007	.006-.008
37-50/60	1/2 CED					.002-.004		.002-.004		.002-.004		.003-.005			.005-.007		.007-.009
38-00	1/2 CED			.001-.003		.002-.004		.002-.004		.002-.004		.003-.005					
38-50/60	1/2 CED			.001-.003		.002-.004		.002-.004		.002-.004		.003-.005		.004-.006	.005-.007		
39-00	1/2																.004-.006
40-50	1 1/2											.003-.005					
40-000	1 x D			.006-.008	.006-.008	.007-.009	.007-.009	.008-.010	.008-.010	.009-.007		.010-.012					
40-100	1 x D			.004-.006		.005-.007	.005-.007	.005-.007	.006-.008	.006-.008		.007-.009			.009-.011		
40-300	1 x D			.004-.006	.003-.005	.005-.007		.005-.007		.006-.008		.007-.009					
48-000	1 x D					.004-.006	.005-.007	.005-.007	.005-.007	.005-.007		.006-.008	.006-.008	.007-.009	.008-.010	.009-.011	.010-.012
48-500	1 x D							.005-.007		.005-.007		.006-.008			.008-.010		
52-200/57-200	1 x D			.003-.005	.003-.005	.004-.006	.004-.006	.005-.007	.005-.007	.006-.008	.006-.008	.007-.009	.007-.008	.008-.010	.009-.011		
52-400/57-400	1 x D				.004-.006	.004-.006		.005-.007	.005-.007	.006-.008		.007-.009	.007-.009	.008-.010	.009-.011	.010-.012	
52-900	1 x D							.006-.008		.007-.009		.007-.009					
56-200	1 x D			.003-.005	.003-.005	.004-.006	.004-.006	.005-.007	.005-.007	.006-.008	.006-.008	.007-.009		.008-.010	.009-.011		
57-900	1 x D							.005-.007		.006-.008		.007-.009					
60-000	1 x D									.013-.015		.014-.016		.016-.018	.017-.019		
60-000	1 x D									.015-.017		.017-.019		.019-.021	.021-.023		
60-090	1 x D													.005-.007			
60-100	1 x D			.010-.012		.012-.014		.014-.016		.016-.018		.018-.020		.020-.022	.022-.024		
60-100DE	1 x D							.014-.016		.016-.018		.018-.020		.020-.022	.022-.024		
60-1003E	1 x D									.016-.018		.018-.020			.022-.024		
60-100C	1 x D									.019-.021		.021-.023		.023-.025	.025-.027		
60-200/67-470	1 x D							.002-.004		.004-.006		.005-.007			.009-.011		
60-300/60-400	1 x D									.019-.021		.021-.023		.023-.025	.025-.027		
60-350/60-430	1 x D									.016-.018		.018-.020			.022-.024		
60-450	1 x D								.003-.005	.004-.006		.005-.007		.007-.009	.008-.010		
60-500/500M	1 x D											.013-.015		.015-.017	.016-.018		
60-600	1 x D											.018-.020		.020-.022	.022-.024		
60-700	1 x D											.018-.020		.020-.022	.022-.024		
60-900	1 x D									.015-.017		.017-.019					
60-950	1 x D									.019-.021		.021-.023					
61-200	1 x D			.007-.009		.008-.010		.009-.011	.009-.011	.010-.012		.011-.013					
62-200/63-200	1 x D			.010-.012		.011-.013		.012-.014	.012-.014	.013-.015		.014-.016					
64-000/65-000	1 x D	.001-.003		.002-.004		.003-.005		.004-.006		.005-.007							
60-800	1 x D									.017-.019		.019-.021		.021-.023	.023-.025		
60-850	1 x D									.017-.019		.019-.021					

**FORMULAS:** Chip Load = Feed Rate / (RPM x # of cutting edges)  
 Feed Rate = RPM x # of cutting edges x chip load  
 Speed (RPM) = Feed Rate / (# of cutting edges x chip load)

## Chipload Instructions and Example

### Instructions

1. Find the cutting data for the material being cut
2. Find the series number of the selected tool under the series column
3. Move across until you find the cutting edge diameter of the tool
4. Note the chipload range.

### Example

60-311 selected to cut Hard Wood

60-300 series

1/2" diameter tool

.021" - .023" chipload range

Feedrate = RPM x # of cutting edges x chipload.

$18,000 \times 2 \times .021 = 756 \text{ IPM}$

$18,000 \times 2 \times .023 = 828 \text{ IPM}$

(RPM = tools are recommended to cut at 18,000 RPM but the customer can vary it based on their machine)