



"Veterans in Business - Still Serving America"

MACHINE TOOLS SOUTH

Machine Tools South

3179 Green Valley Road, Birmingham, AL 35243

O: (205) 968-3570 | F: (205)-968-1503

E: guy@machinetoolssouth.com | W: machinetoolssouth.com

- Cage Code: 5LVJ6
- ORCA & Vet Biz Certified
- D&B 789439879
- Primary NAICS Codes 423830 423840 811310

BAND SPEED AND RECOMMEND CUTTING RATES FOR BI-METAL SAWING APPLICATIONS

Regardless of them type of steel you're working with, the Saw Blade Speed and Feed Chart can help you determine the right blade speed and cutting rate for your cutting operation. It's easy-to-read format and wide range of metal options makes it a useful resource for shops around the nation.

The Band Saw Blade Speed and Feed Chart is divided primarily by material size: Up to one inch, one to three inches, three to six inches, and over six inches. Below the material size is the suggested tooth pitch for that material size. Beneath tooth pitch, the chart lists the blade speed and cutting rate for each type of material size. Each column of blade speeds and cutting rates is arranged by row according to material type.

Each category of material has its different varieties listed beneath it. Metal categories include a huge range of steels, nickel and titanium alloys, copper, and pure titanium.

Material Size	Up to 1"		From 1" to 3"		From 3" to 6"		Over 6"	
Suggested tooth pitch	10/14, 8/12		8/12, 6/10, 5/8		5/8, 4/6, 3/4		3/4, 2/3, 1.5/1.9, 1.1/1.4	
	Blade Speed	Cuttin g Rate	Blade Speed	Cuttin g Rate	Blade Speed	Cuttin g Rate	Blade Speed	Cuttin g Rate





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	(SFPM)	(SIPM)	(SFPM)	(SIPM)	(SFPM)	(SIPM)	(SFPM)	(SIPM)
Carbon Steel:								
1008-1013	250	8-10	275	9-12	280	12-15	250	9-12
1015-1018	250	8-10	275	9-12	250	12-15	230	12-15
1048-1065	200	5-7	200	5-7	175	5-10	150	5-10
1065-1095	200	4-6	200	5-7	150	6-8	120	6-8
Free Machining Steels								
1108-1111	300	9-11	330	12-14	275	13-15	220	11-14
1112-1113	300	8-11	330	11-13	275	12-15	220	12-15
1115-1132	300	7-10	330	10-13	275	13-16	220	11-14
1137-1151	275	6-8	250	8-10	250	8-11	200	7-10





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1212-1213	300	8-10	320	11-13	300	13-15	255	11-14
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Manganese

Steels:

1320-1330	250	5-7	250	5-8	200	8-11	175	7-10
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1335-1345	250	5-7	225	5-7	200	7-9	175	5-8
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Nickel Steels:

2317-	270	4-5	270	4-6	250	5-7	230	4-6
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2330-2345	220	2-3	220	3-5	190	3-5	170	3-5
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2512-2517	200	2-3	200	3-5	160	4-6	150	4-6
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Nickel Chrome

Steels:

3115-3130	260	4-6	260	5-7	230	5-7	225	5-7
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3135-3150	220	4-6	200	4-7	180	5-7	160	4-6
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Molybdenum

Steels:

4017-4024	300	3-5	270	4-7	250	6-8	220	5-8
4032-4042	300	3-5	270	4-7	250	6-8	230	5-8
4047-4068	250	3-5	220	4-6	200	5-7	180	3-5

Chrome Moly

Steels:

4130-4140	280	4-6	250	5-8	250	8-10	220	6-8
4142-4150	230	3-5	200	4-6	200	5-7	170	4-6

Nickel Chrome

Moly steels:

4317-4320	250	3-5	225	4-6	200	5-7	170	4-6
4337-4340	230	3-4	200	4-5	200	4-6	170	4-5





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8615-8627	250	4-5	230	6-7	230	6-8	200	6-7
8630-8645	250	3-5	230	4-6	230	5-7	180	4-6
8647-8660	220	2-4	200	3-5	200	4-6	150	3-5
8715-8750	250	3-5	220	4-6	220	5-7	180	4-6
9310-9317	200	1-3	160	2-3	160	2-4	150	2-3
9437-9445	250	4-5	230	4-5	230	5-6	180	4-5
9747-9763	250	4-5	230	3-5	200	4-6	180	3-5
9840-9850	240	4-5	220	4-6	200	5-7	180	4-6
Nickel Moly								
Steels:								
4608-4621	250	3-5	220	5-6	220	6-7	200	5-6
4640-	220	3-5	200	4-6	200	5-7	170	4-6



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4812-4820	200	3-5	180	3-5	180	4-6	160	4-5
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Chrome Steels:

5045-5046	280	4-6	250	5-7	250	8-10	200	7-8
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5120-5135	280	4-6	250	6-7	240	7-8	180	5-8
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5140-5160	250	3-5	230	4-6	230	5-7	200	4-6
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50100-52100	180	2-4	160	3-5	150	4-6	100	3-5
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Chrome Vanadium steels:

6117-6210	225	4-5	225	5-7	200	6-8	170	5-7
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6145-6152	225	3-4	200	4-5	200	5-6	150	4-5
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Silicon Steels:

9255-9260	200	2-4	180	3-5	180	3-5	150	3-5
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9261-9262	200	1-3	160	2-3	160	2-4	150	2-3
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High Speed Tool Steels:

T-1, T-2	130	1-2	110	2-3	100	2-4	90	2-3
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T-4, T-5	110	1-2	100	1-2	90	2-3	80	1-2
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T-6, T-8	110	1-2	100	1-2	80	1-2	70	1-2
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T-15	80	1	80	1	70	1	50	1
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M-1	150	1-3	140	2-4	130	3-5	110	2-4
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M-2, M-3	120	1-2	110	2-3	100	3-4	80	2-3
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M-4, M-10	100	1-2	90	1-2	80	1-3	60	1-2
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Die Steels:

A-2	210	2-3	200	3-4	190	3-4	180	2-3
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D-2, D-3	110	1-2	100	1-2	90	1-2	80	1-2
D-7	90	1	80	1	70	1	70	1
O-1, O-2	240	3-4	210	4-5	190	5-6	170	4-5
O-6	230	3-4	200	4-6	180	5-7	150	4-6

Hot Work

Steels:

H-12, H-13, H-21	150	2-4	125	3-5	125	2-4	125	2-4
H-22, H-24, H-25	150	1-3	125	1-3	125	1-3	125	1-3

Shock Resisting

Tool Steels:

S-1	220	2-4	180	3-5	165	3-5	150	2-4
S-2, S-5	170	1-3	150	2-4	120	2-4	100	1-3





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Special Purpose

Tool Steels:

L-6	200	2-4	180	3-5	170	3-5	150	2-4
L-7	200	2-4	180	3-5	150	3-5	100	2-4

Stainless

Steels:

201, 202, 302, 304	120	2-4	100	2-4	100	2-4	100	1-3
303, 303F	140	2-4	120	2-4	100	3-5	100	2-4
308, 309, 310, 330	90	1	70	1	60	2	60	1
314, 316, 317	90	1	80	1	70	2	60	1
321, 347	130	1-3	110	1-3	100	2-4	80	1-3
410, 420, 420F	150	1-3	130	1-3	120	2-4	100	1-3





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416, 430F	200	3-5	180	4-6	170	5-7	150	4-6
430, 446	100	1-3	90	2-4	80	2-4	80	1-3
440 A.B.C	120	1-3	100	1-3	90	2-4	70	1-3
A-7	100	1-3	100	1-3	120	2-4	100	1-3
17-4PH, 17-7PH	100	2-3	90	2-4	80	3-4	80	2-3
Beryllium								
Copper:								
BHN-100-120	350	4-6	300	5-7	275	6-8	225	5-7
BHN-220-250	250	2-4	225	3-5	200	4-6	175	3-5
BHN-310-340	200	1-2	160	1-2	140	2-3	100	1-2
Nickel Based								
Alloys:								
Monel	100	1-2	100	1-2	80	1-2	60	1



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R Monel	140	2-3	140	2-4	125	2-4	75	2-3
Inconel	110	1-2	100	1-3	80	1-3	80	1-2
Inconel X	90	1	80	1	70	1	60	1
Hastelloy A	120	1-2	100	1-2	85	1-2	75	1-2
Hastelloy B	110	0-1	100	1-2	90	1-2	75	0-1
Hastelloy C	100	0-1	90	0-1	70	0-1	60	0-1
Rene 41	90	1	90	1	90	1-2	90	1-2
Udimit	100	1	90	1-2	90	0-1	90	1-2
Waspalloy	90	1	90	1-2	90	1-2	90	1-2
Titanium	100	1-2	100	2-3	100	2-3	100	2-3

Titanium Alloys:



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TI-4AL-4MO alpha beta alloy	100	0-1	90	0-1	80	0-1	70	0-1
TI-14OA 2CR-2MO	100	0-1	90	0-1	80	0-1	60	0-1
TI-150A	100	0-1	90	0-1	80	0-1	60	0-1
MST-6AL-4V	100	0-1	90	0-1	80	0-1	60	0-1
99% pure titanium	100	0-1	90	0-1	80	0-1	60	0-1

Remember that while this chart is a practical asset to your workshop, there are a lot of factors it doesn't take into account. The state of your band saw machine, for example, is essential to making accurate, successful cuts: Be sure that it's properly maintained in order to achieve the premium results. Experienced band saw machine operators are also important to attaining the best outcome.

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