



BI-METAL SPEED CHART

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FOR CUSTOMIZED BAND SAW RECOMMENDATIONS

	MATERIALS		BAND SPEED	
	TYPE	GRADE	FEET/ MIN	METER/ MIN
ALUMINUM / NON-FERROUS	Aluminum Alloys	2024, 5052, 6061, 7075	300+	85+
	Copper Alloys	CDA 220	210	65
		CDA 360	295	90
		Cu Ni (30%)	200	60
		Be Cu	160	50
Bronze Alloys	AMPCO 18	180	55	
	AMPCO 21	160	50	
	AMPCO 25	110	35	
	Leaded Tin Bronze	290	90	
	Al Bronze 865	150	45	
	Mn Bronze	215	65	
Brass Alloys	932	280	85	
	937	250	75	
	Cartridge Brass, Red Brass (85%)	220	65	
	Naval Brass	200	60	
CARBON STEELS	Leaded, Free Machining Low Carbon Steels	1145	270	80
		1215	325	100
		12L14	350	105
	Low Carbon Steels	1008, 1018	270	80
		1030	250	75
	Medium Carbon Steels	1035	240	75
		1045	230	70
High Carbon Steels	1060	200	60	
	1080	195	60	
	1095	185	55	
STRUCTURAL STEEL	Structural Steel	A36	250	75
ALLOY STEEL	Mn Steels	1541	200	60
		1524	170	50
	Cr-Mo Steels	4140	225	70
		41L50	235	70
		4150H	200	60
	Cr Alloy Steels	6150	190	60
		5160	195	60
Ni-Cr-Mo Steels	4340	195	60	
	8620	215	65	
	8640	185	55	
	E9310	160	50	
BEARING STEEL	Cr Alloy Steels	52100	160	50
MOLD STEEL	Mold Steels	P-3	180	55
		P-20	165	50
STAINLESS STEEL	Stainless Steels	304	115	35
		316	90	25
		410, 420	135	40
		440A	80	25
		440C	70	20
	Precipitation Hardening Stainless Steels	17-4 PH	70	20
		15-5 PH	70	20
Free Machining Stainless Steels	420F	150	45	
	301	125	40	
TOOL STEEL	Low Alloy Tool Steel	L-6	145	45
	Water-Hardening Tool Steel	W-1	145	45
	Cold-Work Tool Steel	D-2	90	25
	Air-Hardening Tool Steels	A-2	150	45
		A-6	135	40
		A-10	100	30
	Hot Work Tool Steels	H-13	140	40
		H-25	90	25
	Oil-Hardening Tool Steels	O-1	140	40
		O-2	135	40
	High Speed Tool Steels	M-2, M-10	105	30
		M-4, M-42	95	30
		T-1	90	25
T-15		60	20	
Shock Resistant Tool Steels	S-1	140	40	
	S-5, S-7	125	40	
TITANIUM ALLOY	Titanium Alloys	CP Titanium	85	25
		Ti-6Al-4V	65	20
NICKEL BASED ALLOY	Nickel Alloys	Monel® K-500	70	20
		Duranickel 301	55	15
	Iron-Based Super Alloys	A286, Incoloy® 825	80	25
		Incoloy® 600	55	15
		Pyromet X-15	70	20
	Nickel-Based Alloys	Inconel® 600, Inconel® 718,	60	20
		Nimonic 90, NI-SPAN-C 902, RENE 41	60	20
Inconel® 625		80	25	
Hastalloy B, Waspalloy		55	15	
Nimonic 75, RENE 88		50	15	
OTHER	Cast Irons	A536 (60-40-18)	225	70
		A536 (120-90-02)	110	35
		A48 (Class 20)	160	50
		A48 (Class 40)	115	35
		A48 (Class 60)	95	30

The Speed Chart recommendations apply when cutting 4" wide (100mm), annealed material with a bi-metal blade and flood sawing fluid:

ADJUST BAND SPEED FOR DIFFERENT SIZED MATERIALS

MATERIAL	BAND SPEED
1/4" (6mm)	Chart Speed + 15%
3/4" (19mm)	Chart Speed + 12%
1-1/4" (32mm)	Chart Speed + 10%
2-1/2" (64mm)	Chart Speed + 5%
4" (100mm)	Chart Speed - 0%
8" (200mm)	Chart Speed - 12%

ADJUST BAND SPEED FOR DIFFERENT FLUID TYPES

FLUID TYPES	BAND SPEED
Spray lube	Chart Speed - 15%
No fluid	Chart Speed - 30-50%

ADJUST BAND SPEED FOR HEAT TREATED MATERIALS

ROCKWELL	BRINELL	DECREASE BAND SPEED
Up to 20	226	-0%
22	237	-5%
24	247	-10%
26	258	-15%
28	271	-20%
30	286	-25%
32	301	-30%
36	336	-35%
38	353	-40%
40	371	-45%

Reduce band speed 50% when sawing with carbon blades