

MIG & Flux-Cored Steel Wire Welding Parameters

Material		Polarity	Shielding Gas*	Flow Rate	Wire Size	Welding Parameters for 120V input power										Welding Parameters for 240V input power									
						24 ga. (V/IPM)	22 ga. (V/IPM)	20 ga. (V/IPM)	18 ga. (V/IPM)	16 ga. (V/IPM)	14 ga. (V/IPM)	1/8 in. (V/IPM)	3/16 in. (V/IPM)	24 ga. (V/IPM)	22 ga. (V/IPM)	20 ga. (V/IPM)	18 ga. (V/IPM)	16 ga. (V/IPM)	14 ga. (V/IPM)	1/8 in. (V/IPM)	3/16 in. (V/IPM)	1/4 in. (V/IPM)	5/16 in. (V/IPM)	3/8 in. (V/IPM)	
Steel	Solid Wire ER70S-6	DCEP	C25 75% Ar/25% CO2	25 - 35 CFH	.024"	15.0/145	15.5/160	16.0/170	17.8/325	20.0/520	20.2/550	21.2/565	22.0/600	15.0/145	15.5/160	16.0/170	17.8/325	20.0/520	20.2/550	21.2/565	22.0/600				
					.030"	14.2/98	14.5/100	15.2/110	16.2/145	17.0/215	17.8/265	20.0/315	20.3/340	14.2/98	14.5/100	15.2/110	16.2/145	17.0/215	17.8/265	20.0/315	20.3/340	21.0/425	21.5/470	22.5/515	
					.035"		14.8/75	15.0/80	15.8/115	16.5/140	17.5/175	18.5/210	20.0/235		14.8/75	15.0/80	15.8/115	16.5/140	17.5/175	19.0/230	20.0/275	20.8/350	21.5/420	22.6/450	
			C100 100% CO2	25 - 35 CFH	.024"	17.8/165	18.0/190	19.2/250	20.4/300	21.0/425	22.0/560	22.4/600		17.8/165	18.0/190	19.2/250	20.4/300	21.0/425	22.0/560	22.4/600					
					.030"		16.5/95	17.2/100	17.5/145	19.5/180	20.0/215	22.0/310	22.5/340		16.5/95	17.2/100	17.5/145	19.5/180	20.0/215	22.0/310	22.5/340	23.0/375	24.0/425	24.5/515	
					.035"		16.7/90	17.0/95	18.5/120	19.3/150	20.7/215	21.0/220	21.5/240		16.7/90	17.0/95	18.5/120	19.3/150	20.7/215	21.5/248	23.2/292	23.5/325	24.0/375	25.0/410	
	C10 90% Argon/10% CO2	25 - 35 CFH	.024"	15.0/130	15.5/160	15.5/170	17.5/325	19.5/480	20.0/535	21.0/580	21.2/600	15.0/130	15.5/160	15.5/170	17.5/325	19.5/480	20.0/535	21.0/580	21.2/600						
			.030"	14.4/70	14.8/80	15.7/95	16.5/125	17.0/175	17.8/230	19.0/315	19.6/340	14.4/70	14.8/80	15.7/95	16.5/125	17.0/175	17.8/230	19.0/315	19.6/365	29.5/560	29.7/575	30.0/600			
			.035"		15.2/90	15.7/95	16.5/125	16.7/150	17.4/190	18.0/205	18.5/230		15.2/90	15.7/95	16.5/125	16.7/150	17.4/190	18.0/205	18.5/230	29.2/440	29.5/460	30.0/500			
	Silicon Bronze	DCEP	100% Argon	25 - 35 CFH	.030"	12.7/159	13.8/187	14.2/212	14.8/252	15.2/292	15.5/320			12.7/159	13.8/187	14.2/212	14.8/252	15.2/292	15.5/320						
					.035"		13.5/180	13.7/190	14.2/230	14.7/260	15.7/300	16.9/335		13.5/180	13.7/190	14.2/230	14.7/260	15.7/300	16.9/335						
	Stainless Steel	Stainless Steel 308L	DCEP	C2 98% Argon/2% CO2	25 - 35 CFH	.024"		16.2/190	16.5/200	17.0/240	18.0/350	19.0/450	20.0/550		16.2/190	16.5/200	17.0/240	18.0/350	19.0/450	20.0/550	20.5/600				
.030"							14.8/100	15.0/105	16.5/150	17.2/225	18.5/310	20.0/400		14.8/100	15.0/105	16.5/150	17.2/225	18.5/310	20.0/400	20.6/475	26.0/550	26.5/575	27.5/600		
.035"							14.8/80	15.0/90	15.5/105	16.2/130	17.4/215	18.5/285		14.8/80	15.0/90	15.5/105	16.2/130	17.4/215	18.5/285	19.5/340	27.8/475	28.8/525	29.5/550		
Steel	Flux-Cored E71T-11	DCEN	No Shielding Gas	25 - 35 CFH	.030"				14.0/95	15.5/140	17.0/200	18.3/280	18.3/300				14.0/95	15.5/140	17.0/200	21.8/360	22.2/380	23.2/422			
					.035"				14.0/82	16.5/130	17.8/192	18.2/234	18.3/250				14.0/82	16.5/130	17.8/192	22.0/311	22.2/325	22.8/375	23.1/400	23.3/444	
					.045"												14.8/65	15.8/85	20.0/155	21.0/175	21.5/200	22.0/210	22.5/230		

Aluminum Wire Welding Parameters (With Spoolmate Spoolgun)

Material		Polarity	Shielding Gas*	Flow Rate	Wire Size	Welding Parameters for 120V input power										Welding Parameters for 240V input power									
						24 ga. (V/IPM)	22 ga. (V/IPM)	20 ga. (V/IPM)	18 ga. (V/IPM)	16 ga. (V/IPM)	14 ga. (V/IPM)	1/8 in. (V/IPM)	3/16 in. (V/IPM)	24 ga. (V/IPM)	22 ga. (V/IPM)	20 ga. (V/IPM)	18 ga. (V/IPM)	16 ga. (V/IPM)	14 ga. (V/IPM)	1/8 in. (V/IPM)	3/16 in. (V/IPM)	1/4 in. (V/IPM)	5/16 in. (V/IPM)	3/8 in. (V/IPM)	
Aluminum (Spoolmate 100)	Aluminum ER4043	DCEP	100% Argon	25 - 45 CFH	.030"				13.5/305	14.5/350	15.5/420	19.8/500													
					.035"					14.5/285	15.5/340	20.5/420													
Aluminum (Spoolmate 150)	Aluminum ER4043				.030"				13.5/305	14.5/350	15.5/420	19.8/500													
					.035"					14.5/285	15.5/340	20.5/420													
Aluminum (Spoolmate 150)	Aluminum ER5356				.030"					13.4/355	14.9/480	15.5/515	19.9/600												
					.035"					14.5/400	15.5/445	20.8/555													

Pulsed MIG Welding Parameters

Material		Polarity	Shielding Gas*	Flow Rate	Wire Size	Welding Parameters for 120V input power										Welding Parameters for 240V input power									
						24 ga. (V/IPM)	22 ga. (V/IPM)	20 ga. (V/IPM)	18 ga. (V/IPM)	16 ga. (V/IPM)	14 ga. (V/IPM)	1/8 in. (V/IPM)	3/16 in. (V/IPM)	24 ga. (IPM)	22 ga. (IPM)	20 ga. (IPM)	18 ga. (IPM)	16 ga. (IPM)	14 ga. (IPM)	1/8 in. (IPM)	3/16 in. (IPM)	1/4 in. (IPM)	5/16 in. (IPM)	3/8 in. (IPM)	
Steel	Solid Wire ER70S-6	DCEP	C10 90% Argon/10% CO2	25 - 35 CFH	.035"																				
	Silicon Bronze	SCEP	100% Argon	25-35 CFH	.035"									130	150	170	180	200	300	365					
Stainless Steel	Stainless Steel 308L	DCEP	C2 98% Argon/2% CO2	25 - 35 CFH	.035"											90	115	150	245	310	395	450	525		
Aluminum 4XXX		DCEP	100% Argon	25 - 45 CFH	.035"											140	180	220	400	470	550	575	600		
Aluminum 5XXX		DCEP	100% Argon	25 - 45 CFH	.035"											170	240	330	600						