

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"																							
			C100 100% CO2		.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					
					.035"												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	24.5/515		
	C10 90% Argon/10% CO2	.024"	15.0/130	15.5/160	15.7/170	17.5/325	19.5/480	20.0/535	21.0/580	21.2/600				15.0/130	15.5/160	15.7/170	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					
Stainless Steel	Stainless Steel 308L	DCEP	C2 98% Argon/2% CO2	25 - 35 CFH	.030"																							
					.035"																							
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															
					.035"																							
					.045"																							

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"																						
					.030"																						
Aluminum (Spoolmate 150)	Aluminum ER4043	DCEP	100% Argon	25 - 45 CFH	.035"				13.5/305	14.5/350	15.5/420	19.8/500															
					.030"																						
	Aluminum ER5356				.035"							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					

TIG Welding Parameters

Material		Polarity	Shielding Gas*	Flow Rate	Tungsten 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, Stainless Steel		DCEN	100% Argon	15 - 25 CFH	1/16"	25	30	35	50	60	75	125	135	25	30	35	50	60	75	125	135						
				15 - 25 CFH	3/32"	25	30	35	50	60	75	125	135	25	30	35	50	60	75	125	135	175					

STICK Welding Parameters

Material		Polarity	Electrode Type	Electrode Size	Welding Parameters for 120V input power											Welding Parameters for 240V input power													
					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. (Amps)	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, Stainless Steel		DCEP	6011	3/32"				40	50	60	90								40	50	60	90							
				1/8"																	65	80	100						
				5/32"																				130	140	150	160		
			6013	3/32"				40	55	70	90											45	55	70	90				
				1/8"																				60	80	95	115	130	155
				5/32"																				120	140	155	165	165	
7018	3/32"							60	70	95	100										60	70	95	100					
	1/8"																						105	120	125	130	140		
	5/32"																						125	145	170	180	190		