



Millermatic® 255 Auto-Line™

Quick Reference Guide

Scan this code or visit
MillerWelds.com for
more information.



1-800-4-A-Miller
MillerWelds.com

Miller Recommends



Auto-Set™ Mode

- 1 Press Auto-Set™ button
Button will illuminate
- 2 Select Wire/Gas
- 3 Select Wire Diameter
- 4 Select Material Thickness
- 5 (Optional) Select Pulse
- 6 Fine tune parameters if needed

Manual Mode

- 1 Press Setup button to access manual menu
- 2 Rotate left knob to select feature
- 3 Rotate right knob to change setting
- 4 Press Home button or pull trigger to return to welding

Inductance Pro-Set 50

Pulsed MIG

- 1 Press Pulse button
Button will illuminate
- 2 Press Setup button
- 3 Rotate left knob to select Wire/Gas
- 4 Rotate right knob to change setting
- 5 Rotate left knob to select Wire Diameter
- 6 Rotate right knob to change setting
- 7 Press Home button or pull trigger to return to welding

Arc Length Pro-Set 50

Arc Control Pro-Set 25

Parameter (P) Chart

- 1 Press P. Chart button to access electronic parameter chart
A physical version of the P. Chart is located within Section 6 of the Owner's Manual.
Scan this code to view electronic P. Chart.
- 2 Press Wire/Gas button
- 3 Rotate left knob to select Wire/Gas type being used
- 4 Rotate right knob to select Wire Diameter being used
- 5 Press Load button
- 6 Rotate right knob to select Material Thickness
- 7 Press Load button

P. CHART MIG

Program Mode

- 1 Press Program button to access program menu
- 2 Determine where you would like to save the setting
- 3 Press and hold that Program button for two seconds
Use 4 Program buttons to recall saved weld settings
- 4 Press Home button to exit Program Mode and return to Manual Mode

Welding Glossary

Auto-Set™: Offers predefined weld parameters to increase ease of use with the ability to fine tune the parameters if needed.

Inductance (Pro-Set 50): Changes the fluidity of the weld puddle. Increasing inductance produces a flatter bead and more fluid puddle and decreasing inductance produces a higher crown and stiffer arc.

Pro-Set™: Highlights in blue recommended factory setting for easy setup and recall.

Pulsed MIG: A modified spray transfer process that produces minimal spatter, because the wire does not touch the weld puddle.

Arc Length (Pro-Set 50): Varies the length of the welding arc cone.

Arc Control (Pro-Set 25): Will add or reduce the amount of power which will vary the width and height of the welding arc cone.

FasTrack™: Reduces arc start time by automatically increasing the run-in wirefeed speed when doing repetitive arc starts.

Changing Polarity

DCEP (Reverse)
(Direct Current Electrode Positive)
for Solid Wire

DCEN (Straight)
(Direct Current Electrode Negative)
for Self Shielded Flux-Cored Wire

Drive Roll Kits

Steel/Stainless Steel

- 087131 Drive Roll .023 V-GR (0.6 mm)
- 079594 Drive Roll .030 V-GR (0.8 mm)
- 079595 Drive Roll .035 V-GR (0.9 mm)
- 079596 Drive Roll .045 V-GR (1.2 mm)

204579 Drive Roll (Standard)
Combination .030/.035 V-GR (0.8/0.9 mm)

190300 Drive Roll
Combination .035/.045 V-GR (0.9/1.2 mm)

Aluminum

- 044749 Drive Roll .035 U-GR (0.9 mm)
- 079599 Drive Roll .047 U-GR (1.2 mm)

Flux Core

- 079606 Drive Roll .035 VK-GR (0.9 mm)
- 079607 Drive Roll .045 VK-GR (1.2 mm)

Steel/Stainless Steel
V-Groove Drive Roll

Aluminum
U-Groove Drive Roll

Flux Core
V-Knurled Drive Roll

Gun Consumables

Bernard® AccuLock™ S

Contact Tips (10 per package)

- T-A023CH .023 in. (0.6 mm)
- T-A030CH .030 in. (0.8 mm)
- T-A035CH .035 in. (0.9 mm)
- T-A039CH .039 in. (1.0 mm)
- T-A045CH .045 in. (1.2 mm)

Nozzles

- N-A5800C Copper, 5/8 in. ID, flush, standard
- N-A5818C Copper, 5/8 in. ID, 1/8 in. recess
- N-A5814C Copper, 5/8 in. ID, 1/4 in. recess

Diffuser D-MA250

Monocoil 15 ft. Replacement Liners

- LM1A-15 .023/.030 in. (0.6/0.8 mm)
- LMD2A-15 .030/.035 in. (0.8/0.9 mm)
- LMD3A-15 .035/.045 in. (0.9/1.2 mm)

402854-A

* RoHS
COMPLIANT *

MATERIAL: WAUSAU SEMIGLOSS W/1.2 MIL CLEAR LAMINATE ADHESIVE EMULSION ACRYLIC
COLORS: 4/C Process: Match blue to PMS 300C

Cyan outline = hole layout/dieline – does not print

Labels containing Rating, Serial Number and Precautionary (Safety) information shall meet requirements within Miller Electric Specification 226533 and Design Guidelines 261133.

© Miller Electric Mfg. LLC ("Miller"). This document/file and the information contained therein ("Material") is Miller proprietary and confidential information and shall not be duplicated or distributed without Miller's express written consent. This material shall be used solely for the purpose set forth by Miller and shall be returned to Miller upon request.



APPROVED LABEL CONSTRUCTIONS:

TITLE: Label, Quick Reference Guide

SIZE: 17.25" x 13"

HOLE LAYOUT: 282551-A

REV	DATE	BY	ECO	REVISION DESCRIPTION

DRAWN BY: jes

DATE: 5/22/26

FONT
Swis721 BT

DRAWING NO.

402854

REV

A

Miller[®] 255 Auto-Line[™] Parameter Chart

Steel & Stainless Steel Wire Welding (MIG/Flux-Cored) Parameters

Material	Polarity	Shielding Gas*	Wire Type	Wire Size	MIG - GMAW											Pulsed MIG - GMAW-P													
					24 ga (V/WFS)	22 ga (V/WFS)	20 ga (V/WFS)	18 ga (V/WFS)	16 ga (V/WFS)	14 ga (V/WFS)	1/8" (V/WFS)	3/16" (V/WFS)	1/4" (V/WFS)	5/16" (V/WFS)	3/8" (V/WFS)	1/2" (V/WFS)	24 ga (WFS)	22 ga (WFS)	20 ga (WFS)	18 ga (WFS)	16 ga (WFS)	14 ga (WFS)	1/8" (WFS)	3/16" (WFS)	1/4" (WFS)	5/16" (WFS)	3/8" (WFS)	1/2" (WFS)	
Steel	DCEP	C25	Solid Wire ER70S-6	0.024"	14.4/125	14.6/165	15.9/211	16.8/271	17.0/302	17.2/415	19.2/533	20.9/600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
				0.030"	-	14.4/111	15.5/130	16.2/195	17.1/218	17.6/295	18.0/340	19.8/390	20.5/452	21.6/524	22.1/545	-	-	-	-	-	-	-	-	-	-	-	-	-	
				0.035"	-	14.1/105	14.3/113	14.7/170	15.8/233	16.2/240	18.3/293	19.5/351	20.4/384	21.8/422	22.3/442	26.8/524	-	-	-	-	-	-	-	-	-	-	-	-	
				0.045"	-	-	-	15.0/100	15.7/113	16.9/162	17.4/193	19.2/230	20.6/249	28.6/376	29.3/400	29.8/409	-	-	-	-	-	-	-	-	-	-	-	-	
		C10		0.030"	-	13.9/120	14.5/124	16.0/195	16.5/231	17.0/277	18.6/363	19.1/453	26.6/502	27.0/540	27.6/570	-	-	-	-	-	-	-	-	-	-	-	-		
				0.035"	-	14.2/98	14.5/146	14.7/149	15.9/217	16.5/221	17.5/304	18.2/360	26.9/453	27.4/462	28.0/490	28.9/520	-	-	-	130	160	215	270	330	435	500	600	700	
				0.045"	-	-	-	-	15.3/121	15.7/135	17.6/181	18.6/224	27.3/332	28.3/343	28.5/363	29.5/412	-	-	-	-	100	125	150	200	250	275	300	400	
		C100		0.030"	-	16.5/110	17.0/121	17.2/168	17.4/200	17.8/220	19.5/249	20.5/376	21.5/420	22.5/460	23.1/480	-	-	-	-	-	-	-	-	-	-	-	-	-	
				0.035"	-	16.3/92	16.3/92	16.6/153	17.2/187	17.6/217	18.6/244	19.9/305	21.5/342	21.6/357	21.7/371	23.3/387	-	-	-	-	-	-	-	-	-	-	-	-	
				0.045"	-	-	-	-	-	18.4/101	18.5/128	19.7/160	20.4/177	21.4/200	21.7/224	23.2/232	-	-	-	-	-	-	-	-	-	-	-	-	
		82% Argon/18% CO ₂		0.030"	-	13.9/120	14.5/124	16.0/195	16.5/231	17.0/277	18.6/363	19.1/453	26.6/502	27.0/540	27.6/570	-	-	-	-	-	-	-	-	-	-	-	-	-	
				0.035"	-	14.2/98	14.5/146	14.7/149	15.9/217	16.5/221	17.5/304	18.2/360	26.9/453	27.4/462	28.0/490	28.9/520	-	-	-	130	160	180	290	365	440	500	600	700	
				0.045"	-	-	-	14.7/117	15.3/121	15.7/135	17.6/181	18.6/224	27.3/332	28.3/343	28.5/363	29.5/412	-	-	-	-	100	125	150	200	250	275	300	400	
		Argon	Silicon Bronze	0.030"	12.4/135	14.0/163	14.0/196	14.0/235	14.0/292	15.1/362	15.1/401	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				0.035"	12.9/120	14.0/135	14.0/154	14.0/165	15.0/245	15.5/275	16.0/375	-	-	-	-	-	-	-	-	140	150	170	180	190	285	380	-	-	-
	75% Argon/25% CO ₂	Flux-Cored Gas Shielded	0.045"	-	-	-	-	-	-	-	21.4/213	21.8/247	22.9/263	23.8/324	25.5/401	27.5/500	-	-	-	-	-	-	-	-	-	-	-	-	
	90% Argon/10% CO ₂	Metal Cored	0.045"	-	-	-	-	-	-	-	16.0/170	17.4/233	22.8/237	23.1/247	23.8/250	24.5/271	-	-	-	80	85	100	150	190	250	300	325	350	
DCEN	-	Flux-Cored Self Shielded E71T-11	0.035"	-	-	-	13.0/82	15.1/84	15.8/133	18.8/272	21.3/330	22.3/356	22.8/388	23.1/388	-	-	-	-	-	-	-	-	-	-	-	-	-		
			0.045"	-	-	-	-	-	14.7/86	17.6/130	18.6/175	20.3/207	21.0/214	21.6/223	-	-	-	-	-	-	-	-	-	-	-	-	-		
Stainless Steel	DCEP	Tri-Mix 90% He/7.5% Ar/ 2.5% CO ₂	Stainless Steel 308L	0.024"	-	-	18.6/255	19.3/293	19.7/423	20.1/443	22.0/520	23.7/640	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
				0.030"	-	-	18.3/208	19.2/242	19.4/324	19.7/370	21.3/485	21.9/550	24.3/600	24.7/620	25.4/630	-	-	-	-	-	-	-	-	-	-	-			
				0.035"	-	-	16.9/121	18.5/180	19.0/210	19.4/230	21.0/282	21.7/418	23.4/450	25.1/475	25.6/485	-	-	-	-	-	-	-	-	-	-	-	-		
				0.045"	-	-	-	-	17.8/141	18.5/170	20.4/226	21.0/260	22.8/283	24.0/290	24.7/300	25.7/310	-	-	-	-	-	-	-	-	-	-	-		
		98% Argon/2% CO ₂	Stainless Steel 308L	0.035"	-	-	14.1/121	14.8/172	15.8/210	16.0/230	17.0/305	17.4/346	24.6/450	25.4/475	25.7/485	-	-	-	100	125	150	235	300	400	450	500	-		
				0.045"	-	-	-	-	14.9/141	15.2/170	16.7/211	17.6/260	24.3/283	24.7/290	25.0/300	25.4/310	-	-	-	-	75	105	135	175	215	275	285	300	
		Tri-Mix 65% Ar/33% He/2% CO ₂	Stainless Steel 308L	0.035"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	125	150	235	300	400	450	500	-	
				0.045"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	75	90	125	140	175	225	250	300	

Aluminum Wire Welding (MIG) Parameters

Material	Polarity	Shielding Gas*	Wire Type	Wire Size	MIG - GMAW										Pulsed MIG - GMAW-P														
					24 ga (V/WFS)	22 ga (V/WFS)	20 ga (V/WFS)	18 ga (V/WFS)	16 ga (V/WFS)	14 ga (V/WFS)	1/8" (V/WFS)	3/16" (V/WFS)	1/4" (V/WFS)	5/16" (V/WFS)	3/8" (V/WFS)	1/2" (V/WFS)	24 ga (WFS)	22 ga (WFS)	20 ga (WFS)	18 ga (WFS)	16 ga (WFS)	14 ga (WFS)	1/8" (WFS)	3/16" (WFS)	1/4" (WFS)	5/16" (WFS)	3/8" (WFS)	1/2" (WFS)	
Aluminum**	DCEP	Argon	ER4043	0.035"	-	-	-	-	14.4/327	15.7/386	21.0/429	23.6/468	25.7/590	26.0/600	26.6/715	-	-	-	-	137	183	250	380	520	600	700	775	-	
				0.047"	-	-	-	-	-	-	20.2/208	22.3/260	25.0/340	25.9/400	25.9/419	26.0/444	-	-	-	-	77	112	167	255	335	375	400	425	450
Aluminum**			ER5356	0.035"	-	-	-	-	13.4/370	14.4/466	21.0/530	22.3/639	23.3/750	-	-	-	-	-	-	-	157	223	300	500	680	750	-	-	-
				0.047"	-	-	-	-	-	-	20.9/362	22.3/377	24.0/482	25.7/522	26.3/583	-	-	-	-	95	140	205	295	450	525	560	580	600	

*Please see Owner's Manual for detailed information on welding gas selection and mixtures.

**Parameters may vary based off gun selection.