

Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	
GMAW	Manual CV	Other	None	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	
	CV	3XX Stainless	.035 in	90% He 7.5% Ar 2.5% CO ₂	100 to 800 in/min	Pinch -10.0 to 10.0	N/A	
				98% Ar 2% CO ₂				
				98% Ar 2% O ₂				
				Ar-Mix				
			Tri-Mix (He)					
			.040 in	90% He 7.5% Ar 2.5% CO ₂				
				98% Ar 2% CO ₂				
				98% Ar 2% O ₂				
				Ar-Mix				
			Tri-Mix (He)					
			.045 in	90% He 7.5% Ar 2.5% CO ₂				75 to 645 in/min
				98% Ar 2% CO ₂				75 to 745 in/min
		98% Ar 2% O ₂		75 to 645 in/min				
		Ar-Mix		75 to 645 in/min				
		MCW Steel	.045 in	75% Ar 25% CO ₂	100 to 650 in/min			
				80% Ar 20% CO ₂	100 to 610 in/min			
				85% Ar 15% CO ₂	100 to 610 in/min			
				90% Ar 10% CO ₂	100 to 610 in/min			
		Ar-Mix	100 to 610 in/min					
		Steel	.035 in	100% CO ₂	75 to 800 in/min			
				75% Ar 25% CO ₂	100 to 815 in/min			
				80% Ar 20% CO ₂	100 to 815 in/min			
				85% Ar 15% CO ₂	100 to 815 in/min			
				90% Ar 10% CO ₂	100 to 815 in/min			
	Ar-Mix			100 to 815 in/min				
	.040 in			100% CO ₂	100 to 800 in/min			
				75% Ar 25% CO ₂	100 to 760 in/min			
				80% Ar 20% CO ₂	100 to 800 in/min			
				85% Ar 15% CO ₂	100 to 800 in/min			
				90% Ar 10% CO ₂	100 to 800 in/min			
				Ar-Mix	100 to 800 in/min			
	.045 in		100% CO ₂	50 to 800 in/min				
			75% Ar 25% CO ₂	50 to 780 in/min				
			80% Ar 20% CO ₂	50 to 615 in/min				
			85% Ar 15% CO ₂	50 to 615 in/min				
			90% Ar 10% CO ₂	50 to 615 in/min				
			Ar-Mix	50 to 615 in/min				
	HyperFill® ¹		MCW Steel	.045 in	90% Ar 10% CO ₂	150 to 330 in/min	UltimArc® -10.0 to 10.0	N/A
					Ar-Mix	150 to 330 in/min		
			Steel	.035 in	90% Ar 10% CO ₂	150 to 585 in/min		
					Ar-Mix	150 to 585 in/min		
				.040 in	90% Ar 10% CO ₂	100 to 410 in/min		
					Ar-Mix	100 to 410 in/min		
	HyperFill® STT® ¹	Steel	.035 in	75% Ar 25% CO ₂	100 to 250 in/min	UltimArc® -10.0 to 10.0	N/A	
				80% Ar 20% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
Ar-Mix								
.040 in			75% Ar 25% CO ₂	75 to 200 in/min				
		80% Ar 20% CO ₂						
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
Ar-Mix		75 to 200 in/min						

Weld Set Reference: Z245402
PipeFab® (Imperial Units)



Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	
GMAW	Low Fume Pulse™	MCW Steel	.052 in	90% Ar 10% CO ₂ Ar-Mix	60 to 650 in/min	UltimArc® -10.0 to 10.0	N/A	
		Steel	.035 in	90% Ar 10% CO ₂ Ar-Mix	75 to 815 in/min	UltimArc® -10.0 to 10.0	N/A	
			.040 in	90% Ar 10% CO ₂ Ar-Mix	75 to 800 in/min			
			.045 in	90% Ar 10% CO ₂	100 to 800 in/min			
				Ar-Mix				
		Smart Pulse®	3XX Stainless	.035 in	90% He 7.5% Ar 2.5% CO ₂	125 to 800 in/min	UltimArc® -10.0 to 10.0	N/A
					98% Ar 2% CO ₂			
					98% Ar 2% O ₂			
	Ar-Mix							
	.040 in			90% He 7.5% Ar 2.5% CO ₂	100 to 800 in/min			
				98% Ar 2% CO ₂				
				98% Ar 2% O ₂				
				Ar-Mix				
	.045 in			90% He 7.5% Ar 2.5% CO ₂	100 to 765 in/min			
				98% Ar 2% CO ₂	100 to 750 in/min			
				98% Ar 2% O ₂	100 to 750 in/min			
				Ar-Mix	100 to 765 in/min			
	MCW Steel		.045 in	90% Ar 10% CO ₂	100 to 650 in/min	UltimArc® -10.0 to 10.0	N/A	
				Ar-Mix				
				80% Ar 20% CO ₂				
				85% Ar 15% CO ₂				
	Steel		.035 in	80% Ar 20% CO ₂	100 to 800 in/min	UltimArc® -10.0 to 10.0	N/A	
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				Ar-Mix				
		.040 in	80% Ar 20% CO ₂	100 to 800 in/min				
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
			Ar-Mix					
		.045 in	80% Ar 20% CO ₂	100 to 700 in/min				
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
Ar-Mix								

Weld Set Reference: Z245402
PipeFab® (Imperial Units)



Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2
GMAW	STT® (Root Pass)	3XX Stainless	.035 in	90% He 7.5% Ar 2.5% CO ₂	100 to 350 in/min	UltimArc® -10.0 to 10.0	N/A
				98% Ar 2% CO ₂			
				98% Ar 2% O ₂			
				Ar/CO ₂ /H			
				Ar/CO ₂ /N			
				Ar-Mix			
			Tri-Mix (He)				
			.040 in	90% He 7.5% Ar 2.5% CO ₂	100 to 300 in/min		
				98% Ar 2% CO ₂			
				98% Ar 2% O ₂			
				Ar-Mix			
				Tri-Mix (He)			
		Tri-Mix (He)					
		.045 in	90% He 7.5% Ar 2.5% CO ₂	90 to 250 in/min			
			98% Ar 2% CO ₂				
			98% Ar 2% O ₂				
			Ar-Mix				
			Tri-Mix (He)				
			Tri-Mix (He)				
		MCW Steel	.045 in	Ar-Mix	90 to 225 in/min	UltimArc® -10.0 to 10.0	N/A
				75% Ar 25% CO ₂			
				80% Ar 20% CO ₂			
				85% Ar 15% CO ₂			
		Steel	.035 in	100% CO ₂	125 to 250 in/min	UltimArc® -10.0 to 10.0	N/A
75% Ar 25% CO ₂	100 to 350 in/min						
80% Ar 20% CO ₂							
85% Ar 15% CO ₂							
90% Ar 10% CO ₂							
Ar-Mix							
95% Ar 5% O ₂							
.040 in	100% CO ₂		100 to 250 in/min	100 to 275 in/min			
	75% Ar 25% CO ₂						
	80% Ar 20% CO ₂						
	85% Ar 15% CO ₂						
	90% Ar 10% CO ₂						
	Ar-Mix						
.045 in	100% CO ₂	100 to 200 in/min	90 to 250 in/min	UltimArc® -10.0 to 10.0	N/A		
	75% Ar 25% CO ₂						
	80% Ar 20% CO ₂						
	85% Ar 15% CO ₂						
	90% Ar 10% CO ₂						
	Ar-Mix						
95% Ar 5% O ₂	90 to 300 in/min						

Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	
FCAW-G	Manual CV	Other	None	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	
	Gas-Shielded	3XX Stainless	.045 in	100% CO ₂	175 to 600 in/min	Pinch -10.0 to 10.0	N/A	
				75% Ar 25% CO ₂				
				80% Ar 20% CO ₂				
			Ar-Mix					
			1/16 in	100% CO ₂				
				75% Ar 25% CO ₂				
		80% Ar 20% CO ₂						
		Steel	.045 in	100% CO ₂	175 to 600 in/min	Pinch -10.0 to 10.0	N/A	
				75% Ar 25% CO ₂				
				Ar-Mix				
			.052 in	100% CO ₂				150 to 500 in/min
				75% Ar 25% CO ₂				
	Ar-Mix							
	1/16 in	100% CO ₂	125 to 400 in/min					
		75% Ar 25% CO ₂						
		Ar-Mix						
	HyperFill® ¹	Steel	.045 in	100% CO ₂	100 to 335 in/min	N/A	N/A	
				75% Ar 25% CO ₂	100 to 360 in/min	Pinch -10.0 to 10.0	N/A	
				80% Ar 20% CO ₂				
Ar-Mix								
Gouge	Arc Gouge	Carbon Arc	N/A	Compressed Air	60 to 405 A	N/A	N/A	
GTAW	HF TIG	N/A	N/A	Helium, Argon	5 to 405 A	N/A	N/A	
	Touch Start TIG							
	HF TIG Pulse					Frequency 0.3 to 35.6 Hz	Background 20 to 100 %	
	Touch Start TIG Pulse							
SMAW	Crisp (EXX10)	Stick	N/A	No Gas	15 to 405 A	Arc Force -10.0 to 10.0	Hot Start 0.0 to 10.0	
	Soft (EXX18)							
	Stainless (E3XX)							

¹HyperFill® & Process HDT™ Waveform Activation Capability with Power Wave® and PIPEFAB™ Systems

Your purchase of a Lincoln Power Wave or PIPEFAB Welding System comes with (i) a license to use Lincoln Electric standard Power Wave / PIPEFAB waveforms, and (ii) HyperFill & Process HDT waveform capability, which requires a separate license. Without the separate license, the HyperFill and Process HDT waveforms are not available for use on these machines, and only the standard Power Wave / PIPEFAB waveforms are usable.