

**Weld Set Reference: Z254531**  
**PipeFab® (Metric units)**



Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	
GMAW	Manual CV	Any	N/A	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	
	CV	3XX Stainless	0.9 mm	98% Ar 2% CO <sub>2</sub>	2.54 to 20.32 m/min	Pinch -10.0 to 10.0	N/A	
				98% Ar 2% O <sub>2</sub>				
				Ar-Mix				
			1.0 mm	98% Ar 2% CO <sub>2</sub>				
				98% Ar 2% O <sub>2</sub>				
				Ar-Mix				
		MCW Steel	1.2 mm	98% Ar 2% CO <sub>2</sub>	1.90 to 18.92 m/min			
				98% Ar 2% O <sub>2</sub>				
				Ar-Mix				
				75% Ar 25% CO <sub>2</sub>		2.54 to 16.51 m/min		
				80% Ar 20% CO <sub>2</sub>				
				82% Ar 18% CO <sub>2</sub>				
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
		92% Ar 8% CO <sub>2</sub>						
		CV	Steel	0.9 mm	100% CO <sub>2</sub>	2.54 to 20.70 m/min	Pinch -10.0 to 10.0	N/A
					75% Ar 25% CO <sub>2</sub>			
					80% Ar 20% CO <sub>2</sub>			
	82% Ar 18% CO <sub>2</sub>							
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							
	92% Ar 8% CO <sub>2</sub>							
	Ar-Mix							
	1.0 mm			100% CO <sub>2</sub>	2.54 to 20.32 m/min			
				75% Ar 25% CO <sub>2</sub>				
				80% Ar 20% CO <sub>2</sub>				
				82% Ar 18% CO <sub>2</sub>				
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
	92% Ar 8% CO <sub>2</sub>							
	Ar-Mix							
	1.2 mm		100% CO <sub>2</sub>	2.54 to 15.37 m/min				
			75% Ar 25% CO <sub>2</sub>					
			80% Ar 20% CO <sub>2</sub>					
			82% Ar 18% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
	92% Ar 8% CO <sub>2</sub>							
	Ar-Mix							
	HyperFill® <sup>1</sup>	MCW Steel	1.2mm	80% Ar 20% CO <sub>2</sub>	3.81 to 8.64 m/min	UltimArc® -10.0 to 10.0	N/A	
				Ar-Mix				
		Steel	0.9 mm	80% Ar 20% CO <sub>2</sub>				
	Ar-Mix							
	HyperFill-RA® <sup>1</sup>	Stainless	0.9mm	80% Ar 20% CO <sub>2</sub>	3.81 to 15.11 m/min	UltimArc® -10.0 to 10.0	N/A	
Ar-Mix								
80% Ar 20% CO <sub>2</sub>								
HyperFill® STT® <sup>1</sup>	Steel	0.9 mm	Ar-Mix	2.54 to 11.05 m/min	UltimArc® -10.0 to 10.0	N/A		
			80% Ar 20% CO <sub>2</sub>					
			75% Ar 25% CO <sub>2</sub>					
			80% Ar 20% CO <sub>2</sub>					
			82% Ar 18% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
		90% Ar 10% CO <sub>2</sub>						
		92% Ar 8% CO <sub>2</sub>						
		Ar-Mix						
		1.0 mm	100%CO <sub>2</sub>	1.90 to 4.45 m/min				
			75% Ar 25% CO <sub>2</sub>					
			80% Ar 20% CO <sub>2</sub>					
	82% Ar 18% CO <sub>2</sub>							
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							
	92% Ar 8% CO <sub>2</sub>							
	Ar-Mix							
	Stainless	1.0mm	Ar-Mix	2.54 to 7.62 m/min	UltimArc® -10.0 to 10.0	N/A		
Tri-Mix (Ar)								
98% Ar 2% O <sub>2</sub>								
98% Ar 2% CO <sub>2</sub>								
62.2% Ar 35% He 2.8% CO <sub>2</sub>								
Ar-Mix								
1.2mm	Ar-Mix	2.54 to 7.62 m/min						
	Tri-Mix (Ar)							
	98% Ar 2% O <sub>2</sub>							
	98% Ar 2% CO <sub>2</sub>							
	62.2% Ar 35% He 2.8% CO <sub>2</sub>							
	Ar-Mix							

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Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2
GMAW	Low Fume Pulse™	Steel	1.0 mm	80% Ar 20% CO <sub>2</sub> Ar-Mix	1.90 to 20.70 m/min	UltimArc® -10.0 to 10.0	N/A
			1.2 mm	80% Ar 20% CO <sub>2</sub> Ar-Mix	1.52 to 20.32 m/min		
	3XX Stainless	0.9 mm	62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)	3.81 to 20.32 m/min	UltimArc® -10.0 to 10.0	N/A	
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
		1.0 mm	62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)	2.54 to 20.32 m/min			
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
			62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)				
	1.2 mm	62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)	2.54 to 15.11 m/min				
		62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)					
		62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)					
		62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)					
		62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)					
		62.2% Ar 35% He 2.8% CO <sub>2</sub> 98% Ar 2% CO <sub>2</sub> 98% Ar 2% O <sub>2</sub> Ar-Mix Tri-Mix (Ar)					
	Smart Pulse®	MCW Steel	1.2 mm	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix	2.54 to 16.51 m/min	UltimArc® -10.0 to 10.0	N/A
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
		Steel	0.9 mm	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix	2.54 to 20.32 m/min	UltimArc® -10.0 to 10.0	N/A
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
			1.0 mm	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix	2.54 to 20.32 m/min		
				80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix			
80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix							
80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix							
1.2 mm	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix	2.54 to 15.37 m/min					
	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix						
	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix						
	80% Ar 20% CO <sub>2</sub> 82% Ar 18% CO <sub>2</sub> 85% Ar 15% CO <sub>2</sub> 90% Ar 10% CO <sub>2</sub> 92% Ar 8% CO <sub>2</sub> Ar-Mix						

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Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	
GMAW	STT® (Root Pass)	3XX Stainless	0.9 mm	62.2% Ar 35% He 2.8% CO <sub>2</sub>	2.54 to 8.89 m/min	UltimArc® -10.0 to 10.0	N/A	
				98% Ar 2% CO <sub>2</sub>				
				98% Ar 2% O <sub>2</sub>				
			Ar-Mix					
			Tri-Mix (Ar)					
			1.0 mm	62.2% Ar 35% He 2.8% CO <sub>2</sub>				2.54 to 7.62 m/min
				98% Ar 2% CO <sub>2</sub>				
				98% Ar 2% O <sub>2</sub>				
			1.2 mm	Ar-Mix				2.29 to 6.35 m/min
		Tri-Mix (Ar)						
		98% Ar 2% CO <sub>2</sub>						
		MCW Steel	1.2 mm	75% Ar 25% CO <sub>2</sub>	2.29 to 5.72 m/min	UltimArc® -10.0 to 10.0	N/A	
				80% Ar 20% CO <sub>2</sub>				
				82% Ar 18% CO <sub>2</sub>				
				85% Ar 15% CO <sub>2</sub>				
				Ar-Mix				
		Steel	0.9 mm	75% Ar 25% CO <sub>2</sub>	2.54 to 8.89 m/min	UltimArc® -10.0 to 10.0	N/A	
				80% Ar 20% CO <sub>2</sub>				
				82% Ar 18% CO <sub>2</sub>				
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
				92% Ar 8% CO <sub>2</sub>				
			Ar-Mix					
			1.0 mm	100% CO <sub>2</sub>	2.54 to 6.35 m/min			
				75% Ar 25% CO <sub>2</sub>				
				80% Ar 20% CO <sub>2</sub>				
				82% Ar 18% CO <sub>2</sub>				
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
			1.2 mm	92% Ar 8% CO <sub>2</sub>	2.29 to 5.08 m/min			
Ar-Mix								
100% CO <sub>2</sub>								
75% Ar 25% CO <sub>2</sub>								
80% Ar 20% CO <sub>2</sub>								
82% Ar 18% CO <sub>2</sub>								
85% Ar 15% CO <sub>2</sub>								
90% Ar 10% CO <sub>2</sub>								
92% Ar 8% CO <sub>2</sub>								
Ar-Mix								

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Process Type	Waveform	Wire Type	Wire Size	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2
FCAW-G	Manual CV	Any	N/A	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A
	Gas-Shielded	3XX Stainless	1.2 mm	100% CO <sub>2</sub>	4.45 to 15.24 m/min	Pinch -10.0 to 10.0	N/A
				75% Ar 25% CO <sub>2</sub>			
				80% Ar 20% CO <sub>2</sub>			
				Ar-Mix			
		Steel	1.2 mm	100% CO <sub>2</sub>	4.45 to 15.24 m/min	Pinch -10.0 to 10.0	N/A
				75% Ar 25% CO <sub>2</sub>			
				80% Ar 20% CO <sub>2</sub>			
				Ar-Mix			
		Steel	1.4 mm	100% CO <sub>2</sub>	3.81 to 12.70 m/min	Pinch -10.0 to 10.0	N/A
				75% Ar 25% CO <sub>2</sub>			
				80% Ar 20% CO <sub>2</sub>			
				Ar-Mix			
	Steel	1.6 mm	100% CO <sub>2</sub>	3.17 to 10.16 m/min	Pinch -10.0 to 10.0	N/A	
			75% Ar 25% CO <sub>2</sub>				
			80% Ar 20% CO <sub>2</sub>				
			Ar-Mix				
HyperFill® <sup>1</sup>	Steel	1.2 mm	100% CO <sub>2</sub>	2.54 to 8.51 m/min	N/A	N/A	
			75% Ar 25% CO <sub>2</sub>	2.54 to 7.62 m/min	Pinch -10.0 to 10.0		
			80% Ar 20% CO <sub>2</sub>				
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
Touch Start TIG		Frequency 0.3 to 35.6 Hz					Background 20 to 100 %
HF TIG Pulse							
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)						

<sup>1</sup>HyperFill® & 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.