

Weld Set Reference: Z223724
Power Wave® 300C (Imperial units)



(§) Requires Advanced machine

Process type	Wire type	Wire size	Waveform	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	Wave Control 3
GMAW	Manual CV	None	CV	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	N/A
	3XX Stainless	.035 in	CV	90% He 7.5% Ar 2.5% CO ₂	100 to 800 in/min	Pinch -10.0 to 10.0	N/A	N/A
				98% Ar 2% CO ₂				
				98% Ar 2% O ₂				
				Ar-Mix				
			Precision Pulse™	90% He 7.5% Ar 2.5% CO ₂	100 to 600 in/min			
				98% Ar 2% CO ₂				
				98% Ar 2% O ₂				
				Ar-Mix				
			Pulse	98% Ar 2% CO ₂	100 to 800 in/min			
				98% Ar 2% O ₂				
				Ar-Mix				
				Tri-Mix (He)				
			Rapid X® (§)	98% Ar 2% CO ₂	100 to 800 in/min			
				98% Ar 2% O ₂				
				Ar-Mix				
				Tri-Mix (He)				
			RapidArc®	98% Ar 2% CO ₂	100 to 800 in/min			
				98% Ar 2% O ₂				
				Ar-Mix				
				Tri-Mix (He)				
			Smart Pulse® (§)	90% He 7.5% Ar 2.5% CO ₂	125 to 800 in/min			
				98% Ar 2% CO ₂				
				98% Ar 2% O ₂				
				Ar-Mix				
	STT® (Root Pass) (§)	90% He 7.5% Ar 2.5% CO ₂	100 to 350 in/min					
		98% Ar 2% CO ₂						
		98% Ar 2% O ₂						
		Ar/CO ₂ /H						
	.040 in	CV	90% He 7.5% Ar 2.5% CO ₂	100 to 800 in/min	Pinch -10.0 to 10.0			
			98% Ar 2% CO ₂	100 to 690 in/min				
			98% Ar 2% O ₂	100 to 800 in/min				
			Ar-Mix	100 to 800 in/min				
		Precision Pulse™	90% He 7.5% Ar 2.5% CO ₂	100 to 750 in/min	60 to 600 in/min	UltimArc® -10.0 to 10.0		
			98% Ar 2% CO ₂	100 to 750 in/min				
			98% Ar 2% O ₂	100 to 750 in/min				
Ar-Mix			100 to 750 in/min					
Pulse		98% Ar 2% CO ₂	100 to 600 in/min					
		98% Ar 2% O ₂						
		Ar-Mix						
		Tri-Mix (He)						
Rapid X® (§)	98% Ar 2% CO ₂	100 to 800 in/min						
	98% Ar 2% O ₂							
	Ar-Mix							
	Tri-Mix (He)							

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GMAW	3XX Stainless	.040 in	RapidArc®	98% Ar 2% CO ₂	100 to 800 in/min	UltimArc® -10.0 to 10.0			
				98% Ar 2% O ₂					
				Ar-Mix					
			Smart Pulse® (§)	90% He 7.5% Ar 2.5% CO ₂					
				98% Ar 2% CO ₂					
				98% Ar 2% O ₂					
			STT® (Root Pass) (§)	90% He 7.5% Ar 2.5% CO ₂					100 to 300 in/min
				98% Ar 2% CO ₂					
				98% Ar 2% O ₂					
		.045 in	CV	90% He 7.5% Ar 2.5% CO ₂	75 to 525 in/min	Pinch -10.0 to 10.0			
				98% Ar 2% CO ₂	75 to 575 in/min				
				98% Ar 2% O ₂					
				Ar-Mix	75 to 525 in/min				
				Tri-Mix (He)					
				90% He 7.5% Ar 2.5% CO ₂			60 to 400 in/min		
	Precision Pulse™		98% Ar 2% CO ₂	50 to 500 in/min					
			98% Ar 2% O ₂						
			Ar-Mix						
			Tri-Mix (He)		60 to 400 in/min				
	Pulse		98% Ar 2% CO ₂	75 to 500 in/min					
			98% Ar 2% O ₂						
	Rapid X® (§)		98% Ar 2% CO ₂	100 to 600 in/min					
			98% Ar 2% O ₂						
			Ar-Mix						
	RapidArc®		98% Ar 2% CO ₂	100 to 645 in/min					
			98% Ar 2% O ₂						
			Ar-Mix						
	Smart Pulse® (§)	90% He 7.5% Ar 2.5% CO ₂	100 to 625 in/min						
		98% Ar 2% CO ₂	100 to 645 in/min						
		98% Ar 2% O ₂							
		Ar-Mix							
	STT® (Root Pass) (§)	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)									
AI 4XXX	.035 in	AC Precision Pulse™ (§)	125 to 700 in/min	UltimArc® -10.0 to 10.0	N/A	N/A			
		CV	150 to 750 in/min	Pinch -10.0 to 10.0					
		Precision Pulse™	125 to 800 in/min	UltimArc® -10.0 to 10.0					

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Process type	Wire type	Wire size	Waveform	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	Wave Control 3			
GMAW	Al 4XXX	1/16 in	AC Precision Pulse™ (§)	100% Ar	100 to 350 in/min	Pinch -10.0 to 10.0 UltimArc® -10.0 to 10.0	N/A	N/A			
			CV		75 to 340 in/min						
			Precision Pulse™		125 to 500 in/min						
		3/64 in	AC Precision Pulse™ (§)		125 to 590 in/min						
			CV		85 to 600 in/min						
			Precision Pulse™		150 to 800 in/min						
	Al 5XXX	.035 in	100% Ar	AC Precision Pulse™ (§)	175 to 750 in/min	Pinch -10.0 to 10.0 UltimArc® -10.0 to 10.0	N/A	N/A			
				CV	150 to 800 in/min						
				Precision Pulse™	100 to 400 in/min						
			1/16 in	AC Precision Pulse™ (§)	125 to 470 in/min						
				CV	100 to 400 in/min						
				Precision Pulse™	100 to 700 in/min						
		3/64 in	AC Precision Pulse™ (§)	125 to 750 in/min							
			CV	85 to 700 in/min							
			Precision Pulse™	100 to 700 in/min							
		Copper	.035 in	Pulse	75% Ar 25% He	100 to 700 in/min			UltimArc® -10.0 to 10.0	N/A	N/A
					Ar/He-Mix	75 to 500 in/min					
			.045 in		75% Ar 25% He						
	Ar/He-Mix										
	MCW Steel	.045 in	CV	75% Ar 25% CO ₂	100 to 625 in/min	Pinch -10.0 to 10.0	N/A	N/A			
				80% Ar 20% CO ₂	75 to 500 in/min						
				85% Ar 15% CO ₂							
				90% Ar 10% CO ₂							
				Ar-Mix							
				Precision Pulse™					80% Ar 20% CO ₂	75 to 495 in/min	
									85% Ar 15% CO ₂		
									90% Ar 10% CO ₂		
									Ar-Mix		
				Pulse					80% Ar 20% CO ₂	75 to 780 in/min	
									85% Ar 15% CO ₂		
									90% Ar 10% CO ₂		
			Ar-Mix								
Rapid X® (§)			80% Ar 20% CO ₂	75 to 760 in/min							
			85% Ar 15% CO ₂								
			90% Ar 10% CO ₂								
			Ar-Mix								
RapidArc®			80% Ar 20% CO ₂	100 to 510 in/min							
			85% Ar 15% CO ₂								
			90% Ar 10% CO ₂								
			Ar-Mix								
Smart Pulse® (§)			80% Ar 20% CO ₂	90 to 225 in/min							
			85% Ar 15% CO ₂								
			90% Ar 10% CO ₂								
	Ar-Mix										
STT® (Root Pass) (§)	75% Ar 25% CO ₂										
	80% Ar 20% CO ₂										
	85% Ar 15% CO ₂										
	Ar-Mix										

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Process type	Wire type	Wire size	Waveform	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	Wave Control 3
GMAW	MCW Steel	.052 in	Low Fume Pulse™ (§)	90% Ar 10% CO ₂ Ar-Mix	60 to 610 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
	NiCr Alloy	.035 in	Pulse	100% Ar	75 to 800 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
				75% Ar 25% He				
				Ar/He-Mix				
		Tri-Mix (Ar)		75 to 600 in/min				
		100% Ar						
		75% Ar 25% He						
	.045 in	Ar/He-Mix						
		Tri-Mix (Ar)						
	Si Bronze	.035 in	RapidArc®	100% Ar	125 to 500 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
			STT® Braze (§)		140 to 450 in/min			
		.040 in	RapidArc®		100 to 450 in/min			
			STT® Braze (§)		120 to 350 in/min			
		.045 in	RapidArc®		75 to 400 in/min			
			STT® Braze (§)		90 to 300 in/min			
	Steel	.035 in	AC STT® (§)	75% Ar 25% CO ₂	75 to 300 in/min	Balance 0 to 100 %	UltimArc® -10.0 to 10.0	N/A
				80% Ar 20% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
			CV	Ar-Mix	75 to 800 in/min	Pinch -10.0 to 10.0		
				100% CO ₂				
				75% Ar 25% CO ₂				
				80% Ar 20% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
			Low Fume Pulse™ (§)	Ar-Mix	75 to 815 in/min	UltimArc® -10.0 to 10.0		
				90% Ar 10% CO ₂				
			Precision Pulse™	Ar-Mix	100 to 800 in/min			
				80% Ar 20% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
			Pulse	Ar-Mix	75 to 815 in/min			
80% Ar 20% CO ₂								
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
Rapid X® (§)			Ar-Mix	75 to 800 in/min				
			80% Ar 20% CO ₂					
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
RapidArc®	Ar-Mix	75 to 800 in/min						
	80% Ar 20% CO ₂							
	85% Ar 15% CO ₂							
	90% Ar 10% CO ₂							
			Ar-Mix					

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Process type	Wire type	Wire size	Waveform	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	Wave Control 3
GMAW	Steel	.035 in	Smart Pulse® (§)	80% Ar 20% CO ₂	100 to 800 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
			Ar-Mix	125 to 250 in/min				
			100% CO ₂					
			75% Ar 25% CO ₂					
		STT® (Root Pass) (§)	80% Ar 20% CO ₂	100 to 350 in/min				
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
			Ar-Mix					
			75% Ar 25% CO ₂		75 to 250 in/min			
			80% Ar 20% CO ₂					
	85% Ar 15% CO ₂							
	90% Ar 10% CO ₂							
	Ar-Mix							
	AC STT® (§)	100% CO ₂	100 to 725 in/min	Pinch -10.0 to 10.0				
		75% Ar 25% CO ₂	100 to 595 in/min					
		80% Ar 20% CO ₂	100 to 615 in/min					
		85% Ar 15% CO ₂						
	90% Ar 10% CO ₂							
	Ar-Mix							
	CV	90% Ar 10% CO ₂	75 to 800 in/min					
		Ar-Mix						
	Low Fume Pulse™ (§)	80% Ar 20% CO ₂	75 to 600 in/min					
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
Precision Pulse™	Ar-Mix	100 to 600 in/min						
	80% Ar 20% CO ₂							
	85% Ar 15% CO ₂							
Pulse	90% Ar 10% CO ₂	75 to 800 in/min						
	Ar-Mix							
	80% Ar 20% CO ₂							
Rapid X® (§)	85% Ar 15% CO ₂	100 to 670 in/min						
	90% Ar 10% CO ₂							
	Ar-Mix							
RapidArc®	80% Ar 20% CO ₂	100 to 670 in/min						
	85% Ar 15% CO ₂							
	90% Ar 10% CO ₂							
Smart Pulse® (§)	Ar-Mix	100 to 670 in/min						
	80% Ar 20% CO ₂							
	85% Ar 15% CO ₂							
.040 in	Rapid X® (§)	80% Ar 20% CO ₂	75 to 800 in/min					
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
	RapidArc®	Ar-Mix	100 to 670 in/min					
		80% Ar 20% CO ₂						
		85% Ar 15% CO ₂						
Smart Pulse® (§)	90% Ar 10% CO ₂	100 to 670 in/min						
	Ar-Mix							
	80% Ar 20% CO ₂							

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Process type	Wire type	Wire size	Waveform	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	Wave Control 3
GMAW	Steel	.040 in	STT® (Root Pass) (§)	100% CO ₂	100 to 250 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
				75% Ar 25% CO ₂	100 to 275 in/min			
				80% Ar 20% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
		Ar-Mix	AC STT® (§)	75% Ar 25% CO ₂	75 to 200 in/min	Balance 0 to 100 %	UltimArc® -10.0 to 10.0	
		80% Ar 20% CO ₂						
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
		Ar-Mix		CV				
		75% Ar 25% CO ₂	50 to 595 in/min					
		80% Ar 20% CO ₂	50 to 490 in/min					
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
		Ar-Mix	Low Fume Pulse™ (§)	90% Ar 10% CO ₂	100 to 680 in/min			
		Ar-Mix						
		Ar-Mix		Precision Pulse™		80% Ar 20% CO ₂	75 to 400 in/min	
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
		Ar-Mix	Pulse	80% Ar 20% CO ₂	75 to 475 in/min			
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
		Ar-Mix		Rapid X® (§)		80% Ar 20% CO ₂	75 to 690 in/min	
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
		Ar-Mix	RapidArc®	80% Ar 20% CO ₂	75 to 675 in/min			
		85% Ar 15% CO ₂						
		90% Ar 10% CO ₂						
Ar-Mix	Smart Pulse® (§)	80% Ar 20% CO ₂	100 to 660 in/min					
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
Ar-Mix	STT® (Root Pass) (§)	100% CO ₂	100 to 200 in/min	UltimArc® -10.0 to 10.0				
75% Ar 25% CO ₂		90 to 250 in/min						
80% Ar 20% CO ₂								
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
Ar-Mix								

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Process type	Wire type	Wire size	Waveform	Gas Type	Workpoint Limits	Wave Control 1	Wave Control 2	Wave Control 3	
GMAW	Steel	.052 in	CV	100% CO ₂	50 to 390 in/min	Pinch -10.0 to 10.0	N/A	N/A	
				75% Ar 25% CO ₂	50 to 335 in/min				
				80% Ar 20% CO ₂	50 to 320 in/min				
				85% Ar 15% CO ₂					
				90% Ar 10% CO ₂					
			Ar-Mix	75 to 355 in/min					
			80% Ar 20% CO ₂		UltimArc® -10.0 to 10.0				
			85% Ar 15% CO ₂						
			90% Ar 10% CO ₂						
			Ar-Mix						
FCAW-S	Self-Shielded	None	Self-Shielded	No gas		10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	N/A
FCAW-G	Manual CV	None	Gas-Shielded	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	N/A	
	Steel	.045 in	Gas-Shielded	100% CO ₂	175 to 600 in/min	Pinch -10.0 to 10.0	N/A	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	125 to 375 in/min						
		Ar-Mix							
GTAW	GTAW	N/A	HF TIG (§)	Helium, Argon	5 to 350 A	N/A	N/A	N/A	
			Touch Start						
			HF TIG Pulse (§)			Frequency 0.3 to 35.6 Hz	Background 20 to 100 %		
			Touch Start TIG Pulse						
			HF AC TIG (§)			10 to 350 A	AC Frequency 50 to 200 Hz		AC Balance 35 to 85 %
			Touch Start AC TIG (§)			10 to 350 A			
SMAW	Stick	N/A	AC SMAW (§)	No gas	15 to 350 A	Arc Force -10.0 to 10.0	Hot Start 0.0 to 10.0	AC Frequency 20 to 100 Hz	
			Crisp (EXX10)					N/A	
			DCEN SMAW (§)						
			Soft (EXX18)						
			Stainless (E3XX)						
Gouge	Carbon Arc	N/A	Arc Gouge	No gas	60 to 350 A	N/A	N/A	N/A	