

Weld Set Reference: Z223704
Power Wave® 300C (Metric 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	3XX Stainless	0.8 mm	Manual CV	CV	Unspecified	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	N/A
			CV	98% Ar 2% CO ₂	2.54 to 20.32 m/min	Pinch -10.0 to 10.0	N/A	N/A	
				98% Ar 2% O ₂					
				Ar-Mix					
			Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	2.54 to 15.24 m/min	N/A	N/A	N/A	
				Tri-Mix (Ar)					
				98% Ar 2% CO ₂					
				98% Ar 2% O ₂					
				Ar-Mix					
				Ar-Mix					
			Pulse	98% Ar 2% CO ₂	2.54 to 20.32 m/min	N/A	N/A	N/A	
				98% Ar 2% O ₂					
				Ar-Mix					
			Rapid X® (§)	98% Ar 2% CO ₂	2.54 to 20.32 m/min	N/A	N/A	N/A	
				98% Ar 2% O ₂					
				Ar-Mix					
			RapidArc®	98% Ar 2% CO ₂	2.54 to 20.32 m/min	N/A	N/A	N/A	
				98% Ar 2% O ₂					
		Ar-Mix							
		Smart Pulse™ (§)	62.2% Ar 35% He 2.8% CO ₂	3.81 to 15.24 m/min	N/A	N/A	N/A		
			Tri-Mix (Ar)						
			98% Ar 2% CO ₂						
			98% Ar 2% O ₂						
		STT® (Root Pass) (§)	62.2% Ar 35% He 2.8% CO ₂	3.17 to 8.89 m/min	N/A	N/A	N/A		
Tri-Mix (Ar)									
98% Ar 2% CO ₂	3.17 to 10.16 m/min								
98% Ar 2% O ₂									
CV	98% Ar 2% CO ₂	2.54 to 17.53 m/min	N/A	N/A	N/A				
	98% Ar 2% O ₂								
	Ar-Mix								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								
Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.52 to 15.24 m/min	N/A	N/A	N/A				
	Tri-Mix (Ar)								
	98% Ar 2% CO ₂								
	98% Ar 2% O ₂								

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Power Wave® 300C (Metric units)



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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	3XX Stainless	1.0 mm	Pulse	98% Ar 2% CO ₂	2.54 to 15.24 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A
				98% Ar 2% O ₂				
				Ar-Mix				
			Rapid X® (§)	98% Ar 2% CO ₂	2.54 to 20.32 m/min			
				98% Ar 2% O ₂				
				Ar-Mix				
			RapidArc®	98% Ar 2% CO ₂	2.54 to 19.30 m/min			
				98% Ar 2% O ₂				
				Ar-Mix				
			Smart Pulse™ (§)	62.2% Ar 35% He 2.8% CO ₂	2.54 to 19.30 m/min			
				Tri-Mix (Ar)				
				98% Ar 2% CO ₂				
	98% Ar 2% O ₂							
	STT® (Root Pass) (§)	62.2% Ar 35% He 2.8% CO ₂	2.54 to 7.62 m/min					
		Tri-Mix (Ar)						
		98% Ar 2% CO ₂						
		98% Ar 2% O ₂						
	1.2 mm	CV	98% Ar 2% CO ₂	1.90 to 14.60 m/min	Ultimarc® -10.0 to 10.0			
			98% Ar 2% O ₂					
			Ar-Mix					
		Precision Pulse™	62.2% Ar 35% He 2.8% CO ₂	1.27 to 11.18 m/min				
			Tri-Mix (Ar)					
			98% Ar 2% CO ₂					
			98% Ar 2% O ₂					
Pulse		98% Ar 2% CO ₂	1.90 to 11.81 m/min					
		98% Ar 2% O ₂						
		Ar-Mix						
Rapid X® (§)		98% Ar 2% CO ₂	2.54 to 15.24 m/min					
		98% Ar 2% O ₂						
	Ar-Mix							
RapidArc®	98% Ar 2% CO ₂	2.54 to 13.46 m/min						
	98% Ar 2% O ₂							
	Ar-Mix							
Smart Pulse™ (§)	62.2% Ar 35% He 2.8% CO ₂	2.54 to 13.46 m/min						
	Tri-Mix (Ar)							
	98% Ar 2% CO ₂							
	98% Ar 2% O 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	3XX Stainless	1.2 mm	STT® (Root Pass) (§)	62.2% Ar 35% He 2.8% CO ₂	2.29 to 5.72 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A					
				Tri-Mix (Ar)									
				98% Ar 2% CO ₂	2.29 to 6.35 m/min								
				98% Ar 2% O ₂									
			Ar-Mix										
	Al 4XXX	1.0 mm	AC Precision Pulse™ (§)	100% Ar	3.81 to 17.78 m/min	3.81 to 17.78 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A				
					CV		3.17 to 20.32 m/min			Pinch -10.0 to 10.0			
					Precision Pulse™	3.17 to 12.70 m/min	Ultimarc® -10.0 to 10.0						
		1.2 mm	AC Precision Pulse™ (§)		3.17 to 14.99 m/min	3.17 to 14.99 m/min	Pinch -10.0 to 10.0						
					Precision Pulse™		2.16 to 15.24 m/min			Ultimarc® -10.0 to 10.0			
					AC Precision Pulse™ (§)	2.54 to 8.89 m/min	Ultimarc® -10.0 to 10.0						
		1.6 mm	CV		1.90 to 8.64 m/min	1.90 to 8.64 m/min	Pinch -10.0 to 10.0						
					Precision Pulse™		Ultimarc® -10.0 to 10.0						
					AC Precision Pulse™ (§)								
		Al 5XXX	1.0 mm		AC Precision Pulse™ (§)	100% Ar	3.17 to 17.78 m/min			3.17 to 17.78 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A
							CV				4.45 to 19.05 m/min		
							Precision Pulse™			3.81 to 20.32 m/min	Ultimarc® -10.0 to 10.0		
	1.2 mm		AC Precision Pulse™ (§)	2.54 to 17.78 m/min	2.54 to 17.78 m/min		Pinch -10.0 to 10.0						
				Precision Pulse™			3.17 to 19.05 m/min	Pinch -10.0 to 10.0					
				AC Precision Pulse™ (§)	2.16 to 17.78 m/min		Ultimarc® -10.0 to 10.0						
	1.6 mm		CV	2.54 to 10.16 m/min	2.54 to 10.16 m/min		Pinch -10.0 to 10.0						
				Precision Pulse™			3.17 to 11.94 m/min	Pinch -10.0 to 10.0					
				AC Precision Pulse™ (§)	2.54 to 10.16 m/min		Ultimarc® -10.0 to 10.0						
	Copper		1.0 mm	Pulse	75% Ar 25% He		1.90 to 12.70 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A			
					Ar-Mix								
			1.2 mm		75% Ar 25% He								
		Ar-Mix											
	Metal Core	1.2 mm	CV	75% Ar 25% CO ₂	2.54 to 14.86 m/min	Pinch -10.0 to 10.0	N/A	N/A					
80% Ar 20% CO ₂													
82% Ar 18% CO ₂													
85% Ar 15% CO ₂													
90% Ar 10% CO ₂													
92% Ar 8% CO ₂													
Ar-Mix													
Precision Pulse™			80% Ar 20% CO ₂	1.90 to 13.59 m/min	Ultimarc® -10.0 to 10.0								
			82% Ar 18% CO ₂										
			85% Ar 15% CO ₂										
			90% Ar 10% CO ₂										
			92% Ar 8% CO ₂										
			Ar-Mix										
			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	Metal Core	1.2 mm	Pulse	80% Ar 20% CO ₂	1.90 to 11.94 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Ar-Mix					
			Rapid X® (§)	80% Ar 20% CO ₂	1.90 to 20.32 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Ar-Mix					
			RapidArc®	80% Ar 20% CO ₂				
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Ar-Mix					
			Smart Pulse™ (§)	80% Ar 20% CO ₂	2.54 to 12.95 m/min			
				82% Ar 18% CO ₂				
	85% Ar 15% CO ₂							
	90% Ar 10% CO ₂							
	92% Ar 8% CO ₂							
	Ar-Mix							
	STT® (Root Pass) (§)	75% Ar 25% CO ₂	2.29 to 5.72 m/min					
		80% Ar 20% CO ₂						
		82% Ar 18% CO ₂						
		85% Ar 15% CO ₂						
Ar-Mix								
Si Bronze	1.0 mm	RapidArc®	100% Ar	2.54 to 11.43 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A	
		STT® Braze (§)		3.05 to 8.89 m/min				
	1.2 mm	RapidArc®		1.90 to 10.16 m/min				
		STT® Braze (§)		2.29 to 7.62 m/min				
Steel	0.8 mm	AC STT® (§)	75% Ar 25% CO ₂	2.54 to 8.89 m/min	Balance 0 to 100 %	Ultimarc® -10.0 to 10.0	N/A	
			80% Ar 20% CO ₂					
			82% Ar 18% CO ₂					
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
			92% Ar 8% CO ₂					
		Ar-Mix						
		CV	100% CO ₂	3.17 to 20.32 m/min				
			75% Ar 25% CO ₂					
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	0.8 mm	CV	82% Ar 18% CO ₂	3.17 to 20.32 m/min	Pinch -10.0 to 10.0	N/A	N/A
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
				Ar-Mix				
			Precision Pulse™	80% Ar 20% CO ₂	3.17 to 15.24 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Pulse	80% Ar 20% CO ₂	2.54 to 15.24 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Rapid X® (§)	80% Ar 20% CO ₂	1.90 to 20.32 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			RapidArc®	80% Ar 20% CO ₂	1.90 to 20.32 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Smart Pulse™ (§)	80% Ar 20% CO ₂	3.17 to 20.32 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
STT® (Root Pass) (§)	75% Ar 25% CO ₂	3.17 to 10.16 m/min						
	80% Ar 20% CO ₂							
	82% Ar 18% CO ₂							
	85% Ar 15% CO ₂							
	90% Ar 10% CO ₂							
	92% Ar 8% CO ₂							
Ar-Mix								

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GMAW	Steel	1.0 mm	AC STT® (§)	75% Ar 25% CO ₂	1.90 to 6.35 m/min	Balance 0 to 100 %	Ultimarc® -10.0 to 10.0	N/A
				80% Ar 20% CO ₂				
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Ar-Mix	2.54 to 18.41 m/min	Pinch -10.0 to 10.0			
			100% CO ₂					
			75% Ar 25% CO ₂			2.54 to 15.62 m/min		
			80% Ar 20% CO ₂					
			82% Ar 18% CO ₂					
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
			92% Ar 8% CO ₂					
			Ar-Mix	1.90 to 20.70 m/min	Ultimarc® -10.0 to 10.0			
			80% Ar 20% CO ₂					
			Ar-Mix	1.90 to 14.60 m/min	N/A			
			80% Ar 20% CO ₂					
			82% Ar 18% CO ₂					
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
			92% Ar 8% CO ₂					
			Ar-Mix	2.54 to 15.24 m/min	N/A			
			80% Ar 20% CO ₂					
			82% Ar 18% CO ₂					
			85% Ar 15% CO ₂					
			90% Ar 10% CO ₂					
			92% Ar 8% CO ₂					
Ar-Mix	1.90 to 20.32 m/min	N/A						
80% Ar 20% CO ₂								
82% Ar 18% CO ₂								
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
92% Ar 8% CO ₂								
Ar-Mix	1.90 to 20.32 m/min	N/A						
80% Ar 20% CO ₂								
82% Ar 18% CO ₂								
85% Ar 15% CO ₂								
90% Ar 10% CO ₂								
92% Ar 8% 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	1.0 mm	Smart Pulse™ (§)	80% Ar 20% CO ₂	2.54 to 18.80 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A	
				82% Ar 18% CO ₂					
				85% Ar 15% CO ₂					
				90% Ar 10% CO ₂					
				92% Ar 8% CO ₂					
			Ar-Mix						
			STT® (Root Pass) (§)	75% Ar 25% CO ₂	2.54 to 6.99 m/min				
				80% Ar 20% CO ₂					
				82% Ar 18% CO ₂					
				85% Ar 15% CO ₂					
		90% Ar 10% CO ₂							
		92% Ar 8% CO ₂							
		Ar-Mix							
		AC STT® (§)	75% Ar 25% CO ₂	1.90 to 5.08 m/min	Balance 0 to 100 %	Ultimarc® -10.0 to 10.0			
			80% Ar 20% CO ₂						
			82% Ar 18% CO ₂						
			85% Ar 15% CO ₂						
			90% Ar 10% CO ₂						
			92% Ar 8% CO ₂						
			Ar-Mix						
			CV	100% CO ₂			2.54 to 11.56 m/min		Pinch -10.0 to 10.0
				75% Ar 25% CO ₂			2.54 to 12.83 m/min		
				80% Ar 20% CO ₂			2.54 to 10.92 m/min		
		82% Ar 18% CO ₂							
		85% Ar 15% CO ₂							
		90% Ar 10% CO ₂							
		92% Ar 8% CO ₂							
		Ar-Mix							
Low Fume Pulse™ (§)	80% Ar 20% CO ₂	1.52 to 17.78 m/min	Ultimarc® -10.0 to 10.0						
	Ar-Mix								
Precision Pulse™	80% Ar 20% CO ₂	1.90 to 14.10 m/min							
	82% Ar 18% CO ₂								
	85% Ar 15% CO ₂								
	90% Ar 10% CO ₂								
	92% Ar 8% CO ₂								
Ar-Mix									
Pulse	80% Ar 20% CO ₂	1.90 to 11.30 m/min							
	82% Ar 18% CO ₂								
	85% Ar 15% CO ₂								
	90% Ar 10% CO ₂								
	92% Ar 8% 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	1.2 mm	Rapid X® (§)	80% Ar 20% CO ₂	1.90 to 17.15 m/min	Ultimarc® -10.0 to 10.0	N/A	N/A
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Ar-Mix					
			RapidArc®	80% Ar 20% CO ₂	1.90 to 16.26 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
				92% Ar 8% CO ₂				
			Ar-Mix					
			Smart Pulse™ (§)	80% Ar 20% CO ₂	2.54 to 12.57 m/min			
				82% Ar 18% CO ₂				
				85% Ar 15% CO ₂				
				90% Ar 10% CO ₂				
92% Ar 8% CO ₂								
Ar-Mix								
STT® (Root Pass) (§)	75% Ar 25% CO ₂	2.29 to 5.72 m/min						
	80% Ar 20% CO ₂							
	82% Ar 18% CO ₂							
	85% Ar 15% CO ₂							
	90% Ar 10% CO ₂							
	92% Ar 8% CO ₂							
Ar-Mix								
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	1.2 mm	Gas-Shielded	100% CO ₂	4.45 to 15.24 m/min	Pinch -10.0 to 10.0	N/A	N/A
				75% Ar 25% CO ₂				
				80% Ar 20% CO ₂				
		Ar-Mix						
		1.4 mm		100% CO ₂	3.81 to 12.70 m/min			
				75% Ar 25% CO ₂				
				80% Ar 20% CO ₂				
		Ar-Mix						
		1.6 mm		100% CO ₂	3.17 to 9.91 m/min			
	75% Ar 25% CO ₂							
	80% Ar 20% CO ₂							
	Ar-Mix							
FCAW_S	Self-Shield	None	Self-Shielded	No gas	10.0 to 45.0 V	Pinch -10.0 to 10.0	N/A	N/A

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GTAW	GTAW	N/A	HF TIG (§)	Helium, Argon	5 to 350 A	N/A	N/A	N/A
			Touch Start					
			HF TIG Pulse (§)		10 to 350 A	AC Frequency 50 to 200 Hz	AC Balance 35 to 85 %	DC Offset -30 to 30 %
			Touch Start TIG Pulse					
			HF AC TIG (§)					
Touch Start AC TIG (§)								
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