

**Weld Set Reference: Z223703**  
**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 <sub>2</sub>	100 to 800 in/min	Pinch -10.0 to 10.0	N/A	N/A		
				Tri-Mix (He)						
				98% Ar 2% CO <sub>2</sub>						
				98% Ar 2% O <sub>2</sub>						
			Ar-Mix							
			Precision Pulse™	90% He 7.5% Ar 2.5% CO <sub>2</sub>					100 to 600 in/min	
				Tri-Mix (He)						
				98% Ar 2% CO <sub>2</sub>						
				98% Ar 2% O <sub>2</sub>						
			Pulse	98% Ar 2% CO <sub>2</sub>						100 to 800 in/min
				98% Ar 2% O <sub>2</sub>						
				Ar-Mix						
		Rapid X® (§)	98% Ar 2% CO <sub>2</sub>	100 to 800 in/min						
			98% Ar 2% O <sub>2</sub>							
			Ar-Mix							
		RapidArc®	98% Ar 2% CO <sub>2</sub>		100 to 800 in/min					
			98% Ar 2% O <sub>2</sub>							
			Ar-Mix							
		Smart Pulse™ (§)	90% He 7.5% Ar 2.5% CO <sub>2</sub>			125 to 800 in/min				
			Tri-Mix (He)							
			98% Ar 2% CO <sub>2</sub>							
			98% Ar 2% O <sub>2</sub>							
		STT® (Root Pass) (§)	90% He 7.5% Ar 2.5% CO <sub>2</sub>						100 to 350 in/min	
			Tri-Mix (He)							
	98% Ar 2% CO <sub>2</sub>									
	98% Ar 2% O <sub>2</sub>									
		.040 in	CV	90% He 7.5% Ar 2.5% CO <sub>2</sub>			100 to 800 in/min	Pinch -10.0 to 10.0		
				Tri-Mix (He)	100 to 690 in/min					
				98% Ar 2% CO <sub>2</sub>						
				98% Ar 2% O <sub>2</sub>						
			Ar-Mix							
Precision Pulse™			90% He 7.5% Ar 2.5% CO <sub>2</sub>	100 to 750 in/min		UltimArc® -10.0 to 10.0				
		Tri-Mix (He)	60 to 600 in/min							
		98% Ar 2% CO <sub>2</sub>								
		98% Ar 2% O <sub>2</sub>								
Pulse		98% Ar 2% CO <sub>2</sub>		100 to 600 in/min						
		98% Ar 2% O <sub>2</sub>								
		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	3XX Stainless	.040 in	Rapid X® (§)	98% Ar 2% CO <sub>2</sub>	100 to 800 in/min	UltimArc® -10.0 to 10.0		
				98% Ar 2% O <sub>2</sub>				
				Ar-Mix				
			RapidArc®	98% Ar 2% CO <sub>2</sub>				
				98% Ar 2% O <sub>2</sub>				
				Ar-Mix				
			Smart Pulse™ (§)	90% He 7.5% Ar 2.5% CO <sub>2</sub>				
				Tri-Mix (He)				
				98% Ar 2% CO <sub>2</sub>				
		98% Ar 2% O <sub>2</sub>						
		STT® (Root Pass) (§)	90% He 7.5% Ar 2.5% CO <sub>2</sub>	100 to 300 in/min				
			Tri-Mix (He)					
			98% Ar 2% CO <sub>2</sub>					
			98% Ar 2% O <sub>2</sub>					
		.045 in	CV	90% He 7.5% Ar 2.5% CO <sub>2</sub>	75 to 525 in/min	Pinch -10.0 to 10.0		
	Tri-Mix (He)							
	98% Ar 2% CO <sub>2</sub>			75 to 575 in/min				
	98% Ar 2% O <sub>2</sub>							
	Precision Pulse™		90% He 7.5% Ar 2.5% CO <sub>2</sub>	60 to 400 in/min	N/A			
			Tri-Mix (He)					
			98% Ar 2% CO <sub>2</sub>	50 to 500 in/min				
			98% Ar 2% O <sub>2</sub>					
	Pulse		98% Ar 2% CO <sub>2</sub>	75 to 500 in/min				
			98% Ar 2% O <sub>2</sub>					
	Rapid X® (§)		98% Ar 2% CO <sub>2</sub>	100 to 600 in/min		UltimArc® -10.0 to 10.0		
			98% Ar 2% O <sub>2</sub>					
			Ar-Mix					
	RapidArc®		98% Ar 2% CO <sub>2</sub>					
			98% Ar 2% O <sub>2</sub>					
		Ar-Mix						
Smart Pulse™ (§)	90% He 7.5% Ar 2.5% CO <sub>2</sub>	100 to 645 in/min						
	Tri-Mix (He)							
	98% Ar 2% CO <sub>2</sub>	100 to 625 in/min						
	98% Ar 2% O <sub>2</sub>							
STT® (Root Pass) (§)	90% He 7.5% Ar 2.5% CO <sub>2</sub>	90 to 250 in/min	UltimArc® -10.0 to 10.0					
	Tri-Mix (He)							
	98% Ar 2% CO <sub>2</sub>							
	98% Ar 2% O <sub>2</sub>							
			Ar-Mix					

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**Power Wave® 300C (Imperial 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	Al 4XXX	.035 in	AC Precision Pulse™ (§)	100% Ar	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				
		3/64 in	AC Precision Pulse™ (§)		125 to 500 in/min	Pinch -10.0 to 10.0				
			CV		125 to 590 in/min					
			Precision Pulse™		85 to 600 in/min					
		1/16 in	AC Precision Pulse™ (§)		100 to 350 in/min	UltimArc® -10.0 to 10.0				
			CV		75 to 340 in/min					
			Precision Pulse™		Pinch -10.0 to 10.0					
	Al 5XXX	.035 in	AC Precision Pulse™ (§)	100% Ar	150 to 800 in/min	UltimArc® -10.0 to 10.0	N/A	N/A		
			CV		175 to 750 in/min	Pinch -10.0 to 10.0				
			Precision Pulse™		150 to 800 in/min	UltimArc® -10.0 to 10.0				
		3/64 in	AC Precision Pulse™ (§)		100 to 700 in/min	Pinch -10.0 to 10.0				
			CV		125 to 750 in/min					
			Precision Pulse™		85 to 700 in/min					
		1/16 in	AC Precision Pulse™ (§)		100 to 400 in/min	UltimArc® -10.0 to 10.0				
			CV		125 to 470 in/min					
			Precision Pulse™		100 to 400 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						
		.045 in		75% Ar 25% He	75 to 500 in/min					
				Ar/He-Mix						
	Metal Core	.045 in	CV	75% Ar 25% CO <sub>2</sub>	100 to 525 in/min	Pinch -10.0 to 10.0	N/A	N/A		
				80% Ar 20% CO <sub>2</sub>	100 to 490 in/min					
				85% Ar 15% CO <sub>2</sub>						
				90% Ar 10% CO <sub>2</sub>						
				Ar-Mix						
				Precision Pulse™					80% Ar 20% CO <sub>2</sub>	75 to 490 in/min
									85% Ar 15% CO <sub>2</sub>	
									90% Ar 10% CO <sub>2</sub>	
			Ar-Mix							
			Pulse	80% Ar 20% CO <sub>2</sub>	75 to 495 in/min					
				85% Ar 15% CO <sub>2</sub>						
				90% Ar 10% CO <sub>2</sub>						
				Ar-Mix						
			Rapid X® (§)	80% Ar 20% CO <sub>2</sub>	75 to 800 in/min					
85% Ar 15% CO <sub>2</sub>										
90% Ar 10% CO <sub>2</sub>										
Ar-Mix										
RapidArc®			80% Ar 20% CO <sub>2</sub>	75 to 760 in/min						
			85% Ar 15% CO <sub>2</sub>							
			90% Ar 10% CO <sub>2</sub>							
			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	.045 in	Smart Pulse™ (§)	80% Ar 20% CO <sub>2</sub>	100 to 510 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
			Ar-Mix					
			75% Ar 25% CO <sub>2</sub>	90 to 225 in/min				
			80% Ar 20% CO <sub>2</sub>					
		85% Ar 15% CO <sub>2</sub>						
		Ar-Mix						
		.052 in	Low Fume Pulse (§)	90% Ar 10% CO <sub>2</sub>	60 to 610 in/min			
			Ar-Mix					
	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 <sub>2</sub>	75 to 300 in/min	Balance 0 to 100 %	UltimArc® -10.0 to 10.0	N/A
				80% Ar 20% CO <sub>2</sub>				
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
				Ar-Mix				
			CV	100% CO <sub>2</sub>	75 to 800 in/min			
				75% Ar 25% CO <sub>2</sub>	100 to 815 in/min			
				80% Ar 20% CO <sub>2</sub>				
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
			Ar-Mix					
			Low Fume Pulse (§)	90% Ar 10% CO <sub>2</sub>	75 to 815 in/min			
				Ar-Mix				
			Precision Pulse™	80% Ar 20% CO <sub>2</sub>	100 to 800 in/min			
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
Ar-Mix								
Pulse			80% Ar 20% CO <sub>2</sub>	75 to 800 in/min				
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
Rapid X® (§)		80% Ar 20% CO <sub>2</sub>	75 to 800 in/min					
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
		Ar-Mix						
RapidArc®	80% Ar 20% CO <sub>2</sub>	75 to 800 in/min						
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							
	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 <sub>2</sub>	100 to 800 in/min	UltimArc® -10.0 to 10.0	N/A	N/A
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
			Ar-Mix	100 to 350 in/min				
			75% Ar 25% CO <sub>2</sub>					
			80% Ar 20% CO <sub>2</sub>					
		STT® (Root Pass) (§)	85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
			Ar-Mix					
		AC STT® (§)	75% Ar 25% CO <sub>2</sub>	75 to 250 in/min	Balance 0 to 100 %	UltimArc® -10.0 to 10.0		
			80% Ar 20% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
		CV	Ar-Mix	100 to 725 in/min	Pinch -10.0 to 10.0			
			100% CO <sub>2</sub>	100 to 595 in/min				
			75% Ar 25% CO <sub>2</sub>	100 to 615 in/min				
			80% Ar 20% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
		Low Fume Pulse (§)	90% Ar 10% CO <sub>2</sub>	75 to 800 in/min	UltimArc® -10.0 to 10.0			
			Ar-Mix					
		Precision Pulse™	80% Ar 20% CO <sub>2</sub>	75 to 600 in/min	N/A			
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
		Pulse	Ar-Mix	100 to 600 in/min	N/A			
			80% Ar 20% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
		Rapid X® (§)	Ar-Mix	75 to 800 in/min	UltimArc® -10.0 to 10.0			
			80% Ar 20% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
90% Ar 10% CO <sub>2</sub>								
RapidArc®	Ar-Mix	75 to 800 in/min	UltimArc® -10.0 to 10.0					
	80% Ar 20% CO <sub>2</sub>							
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							
Smart Pulse™ (§)	Ar-Mix	100 to 670 in/min	N/A					
	80% Ar 20% CO <sub>2</sub>							
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							

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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) (§)	75% Ar 25% CO <sub>2</sub>	100 to 275 in/min	Ultimarc® -10.0 to 10.0	N/A	N/A
				80% Ar 20% CO <sub>2</sub>				
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
				Ar-Mix				
		AC STT® (§)	75% Ar 25% CO <sub>2</sub>	75 to 200 in/min	Balance 0 to 100 %	UltimArc® -10.0 to 10.0		
			80% Ar 20% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
			Ar-Mix					
		CV	100% CO <sub>2</sub>	50 to 585 in/min	Pinch -10.0 to 10.0	N/A		
			75% Ar 25% CO <sub>2</sub>	50 to 595 in/min				
			80% Ar 20% CO <sub>2</sub>	50 to 490 in/min				
			85% Ar 15% CO <sub>2</sub>					
			90% Ar 10% CO <sub>2</sub>					
		Low Fume Pulse (§)	90% Ar 10% CO <sub>2</sub>	100 to 680 in/min	UltimArc® -10.0 to 10.0			
	Ar-Mix							
	Precision Pulse™	80% Ar 20% CO <sub>2</sub>	75 to 400 in/min					
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
		Ar-Mix						
	Pulse	80% Ar 20% CO <sub>2</sub>	75 to 475 in/min					
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
		Ar-Mix						
	Rapid X® (§)	80% Ar 20% CO <sub>2</sub>	75 to 690 in/min					
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
		Ar-Mix						
	RapidArc®	80% Ar 20% CO <sub>2</sub>	75 to 675 in/min					
		85% Ar 15% CO <sub>2</sub>						
		90% Ar 10% CO <sub>2</sub>						
Ar-Mix								
Smart Pulse™ (§)	80% Ar 20% CO <sub>2</sub>	100 to 660 in/min						
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							
	Ar-Mix							
STT® (Root Pass) (§)	75% Ar 25% CO <sub>2</sub>	90 to 250 in/min						
	80% Ar 20% CO <sub>2</sub>							
	85% Ar 15% CO <sub>2</sub>							
	90% Ar 10% CO <sub>2</sub>							
	Ar-Mix							
		.045 in						

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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 <sub>2</sub>	50 to 390 in/min	Pinch -10.0 to 10.0	N/A	N/A
				75% Ar 25% CO <sub>2</sub>	50 to 335 in/min			
				80% Ar 20% CO <sub>2</sub>	50 to 320 in/min			
				85% Ar 15% CO <sub>2</sub>				
				90% Ar 10% CO <sub>2</sub>				
			Ar-Mix	75 to 355 in/min	UltimArc® -10.0 to 10.0			
			80% Ar 20% CO <sub>2</sub>					
			85% Ar 15% CO <sub>2</sub>					
90% Ar 10% CO <sub>2</sub>								
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 <sub>2</sub>	175 to 600 in/min	Pinch -10.0 to 10.0	N/A	N/A
				75% Ar 25% CO <sub>2</sub>				
				Ar-Mix				
		.052 in		100% CO <sub>2</sub>	150 to 500 in/min			
				75% Ar 25% CO <sub>2</sub>				
				Ar-Mix				
	1/16 in	100% CO <sub>2</sub>	125 to 400 in/min					
		75% Ar 25% CO <sub>2</sub>	125 to 375 in/min					
	GTAW	GTAW	N/A	HF TIG (§)	Helium, Argon	5 to 350 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 %	DC Offset -30 to 30 %
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