

Δ Tandem Controller Required

* Range is limited by power source rating, module rating, or feeder configuration

Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)			
All	All	GMAW CV	STD CV		5	Pinch	10 - 45 V			
		GMAW Power	Power Mode®		40	Pinch	0.1 - 40kW			
GMAW	Steel	0.8 mm	GMAW CV	CV	CO ₂	93	Pinch	75 - 1200 ipm		
			Argon Mix	94	75 - 1200 ipm					
		GMAW Pulse	Pulse	Argon Mix	95	UltimArc®	65 - 1200 ipm			
			Precision Pulse™	Argon Mix	410		100 - 600 ipm			
			0.9 mm	GMAW CV	CV		CO ₂	138	Pinch	50 - 1200 ipm
				Argon Mix	139		50 - 1200 ipm			
	GMAW Pulse	Pulse	Argon Mix	140	UltimArc®	60 - 1200 ipm				
		RapidArc®	Argon Mix	141		60 - 1200 ipm				
		Precision Pulse™	Argon Mix	411		100 - 600 ipm				
	1.0 mm	GMAW CV	CV	CO ₂	10	Pinch	50 - 1200 ipm			
		Argon Mix	11	50 - 1200 ipm						
		GMAW Pulse	Pulse	Argon Mix	12	UltimArc®	75 - 1200 ipm			
			RapidArc®	Argon Mix	13		60 - 1200 ipm			
	Precision Pulse™		Argon Mix	412	75 - 600 ipm					
	1.2 mm	GMAW CV	CV	CO ₂	20	Pinch	50 - 800 ipm			
		Argon Mix	21	50 - 800 ipm						
		GMAW Pulse	Pulse	Argon Mix	22	UltimArc®	60 - 800 ipm			
			RapidArc®	Argon Mix	18		60 - 800 ipm			
	Precision Pulse™		Argon Mix	413	75 - 600 ipm					
	1.4 mm	GMAW CV	CV	CO ₂	24	Pinch	50 - 650 ipm			
Argon Mix		25	50 - 550 ipm							
GMAW Pulse		Pulse	Argon Mix	26	UltimArc®	50 - 600 ipm				
		RapidArc®	Argon Mix	27		60 - 650 ipm				
1.6 mm	GMAW CV	CV	Argon Mix	107	Pinch	50 - 350 ipm				
	GMAW Pulse	Pulse	Argon Mix	108	UltimArc®	50 - 400 ipm				
GMAW	Stainless	0.8 mm	GMAW CV	CV	Argon Mix	61	Pinch	100 - 1200 ipm		
			He Ar CO ₂	63	100 - 1200 ipm					
			GMAW Pulse	Pulse	He Ar CO ₂	64	UltimArc®	100 - 1200 ipm		
				Precision Pulse™	Argon Mix	66		100 - 1200 ipm		
		0.9 mm	GMAW CV	CV	Argon Mix	29	Pinch	75 - 1200 ipm		
			GMAW Pulse	Pulse	Argon Mix	30	UltimArc®	60 - 1200 ipm		
				Precision Pulse™	Argon Mix	421		100 - 600 ipm		
		1.0 mm	GMAW CV	CV	Argon Mix	31	Pinch	75 - 1200 ipm		
			He Ar CO ₂	33	75 - 1000 ipm					
			GMAW Pulse	Pulse	He Ar CO ₂	34	UltimArc®	60 - 1200 ipm		
				Argon Mix	36	60 - 1200 ipm				
				Precision Pulse™	Argon Mix	422		UltimArc®	60 - 600 ipm	
		1.2 mm	GMAW CV	CV	Argon Mix	41	Pinch	75 - 700 ipm		
			He Ar CO ₂	43	75 - 700 ipm					
			GMAW Pulse	Pulse	He Ar CO ₂	44	UltimArc®	75 - 700 ipm		
				Argon Mix	46	50 - 800 ipm				
				Precision Pulse™	Argon Mix	423		UltimArc®	50 - 400 ipm	
		1.6 mm	GMAW CV	CV	Argon Mix	51	Pinch	50 - 600 ipm		
	GMAW Pulse		Pulse	Argon Mix	56	UltimArc®	50 - 700 ipm			

Δ Tandem Controller Required

* Range is limited by power source rating, module rating, or feeder configuration

	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*		
	GMAW	Aluminum 4XXX	1.0 mm	GMAW CV	CV	Argon	148	Pinch	125 - 800 ipm	
GMAW Pulse				Pulse	Argon	149	UltimArc®	125 - 800 ipm		
				CC Pulse	Argon	150		125 - 800 ipm		
					GMAW Pulse on Pulse*	Pulse on Pulse*	Argon	98	Frequency	100 - 500 ipm
1.2 mm			GMAW CV	CV	Argon	71	Pinch	125 - 700 ipm		
			GMAW Pulse	Pulse	Argon	72	UltimArc®	85 - 600 ipm		
				CC Pulse	Argon	69		85 - 600 ipm		
					GMAW Pulse on Pulse*	Pulse on Pulse*	Argon	99	Frequency	85 - 500 ipm
1.6 mm			GMAW CV	CV	Argon	73	Pinch	75 - 375 ipm		
		GMAW Pulse	Pulse	Argon	74	UltimArc®	75 - 350 ipm			
			CC Pulse	Argon	79		75 - 350 ipm			
				GMAW Pulse on Pulse*	Pulse on Pulse*	Argon	100	Frequency	80 - 400 ipm	
Aluminum 5XXX		1.0 mm	GMAW CV	CV	Argon	151	Pinch	175 - 750 ipm		
			GMAW Pulse	Pulse	Argon	152	UltimArc®	125 - 700 ipm		
				CC Pulse	Argon	153		125 - 700 ipm		
					GMAW Pulse on Pulse*	Pulse on Pulse*	Argon	101	Frequency	140 - 800 ipm
		1.2 mm	GMAW CV	CV	Argon	75	Pinch	125 - 750 ipm		
			GMAW Pulse	Pulse	Argon	76	UltimArc®	85 - 700 ipm		
				CC Pulse	Argon	70		85 - 700 ipm		
					GMAW Pulse on Pulse*	Pulse on Pulse*	Argon	102	Frequency	100 - 600 ipm
		1.6 mm	GMAW CV	CV	Argon	77	Pinch	125 - 500 ipm		
GMAW Pulse			Pulse	Argon	78	UltimArc®	100 - 500 ipm			
			CC Pulse	Argon	80		100 - 450 ipm			
				GMAW Pulse on Pulse*	Pulse on Pulse*	Argon	103	Frequency	75 - 350 ipm	
Metal Core	1.2 mm	GMAW CV	CV	Argon Mix	81	Pinch	50 - 700 ipm			
		GMAW Pulse	Pulse	Argon Mix	82	UltimArc®	50 - 700 ipm			
	1.4mm	GMAW Pulse	Pulse	Argon Mix	84	UltimArc®	50 - 600 ipm			
	1.6 mm	GMAW CV	CV	Argon Mix	85	Pinch	50 - 450 ipm			
		GMAW Pulse	Pulse	Argon Mix	86	UltimArc®	50 - 450 ipm			
SiBr	1.0mm	GMAW Pulse	Pulse	Argon	192	UltimArc®	80 - 1000 ipm			
	1.2mm	GMAW Pulse	Pulse	Argon	191	UltimArc®	50 - 600 ipm			
Cu	1.0mm	GMAW Pulse	Pulse	Argon Helium	198	UltimArc®	75 - 500 ipm			
	1.2mm	GMAW Pulse	Pulse	Argon Helium	196	UltimArc®	75 - 500 ipm			
NiCr	1.0mm	GMAW Pulse	Pulse	Ar/ Ar He	502	UltimArc®	75 - 800 ipm			
	1.2mm	GMAW Pulse	Pulse	Ar/ Ar He	504	UltimArc®	75 - 600 ipm			

	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*
	FCAW	Flux Core	All	FCAW-S	STD CV	NA	6	Pinch
FCAW-G				STD CV		7	Pinch	10 - 45 V
1.2 mm			FCAW-G	CV	CO ₂	90	Pinch	175 - 600 ipm
						Argon Mix		91
1.4 mm			FCAW-G	CV	CO ₂	187	Pinch	150 - 500 ipm
						Argon Mix		188
1.6 mm			FCAW-G	CV	CO ₂	189	Pinch	125 - 400 ipm
				Argon Mix	190	125 - 400 ipm		

Weld Set Reference: Z163928
Power Wave® S700



Δ Tandem Controller Required

* Range is limited by power source rating, module rating, or feeder configuration

SMAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*
	NA	NA	DCEP SMAW	SMAW Soft	NA	1	Arc Force, Hot Start	15 - 900 A
				SMAW Crisp	NA	2	Arc Force, Hot Start	15 - 900 A
				SMAW Pipe	NA	4	Arc Force	50 - 250 A

GTAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*
	NA	NA	DCEN GTAW	GTAW Touch Start	Argon	3	Hot Start	5 - 900 A
				GTAW-P	Argon	8	Hot Start, Frequency, Background	5 - 800 A

CAG	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*
	NA	NA	CAG	CAG	CAG	Air	9	

GMAW-Tandem	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*
	Steel	1.0 mm	GMAW Tandem (Δ)	Sync Pulse Lead	Argon Mix	402	UltimArc®	150 - 800 ipm
				Sync Pulse Trail	Argon Mix	403		150 - 800 ipm
				HotWire Pulse Trail	Argon Mix	461		80 - 800 ipm
		1.2 mm	GMAW Tandem (Δ)	Sync Pulse Lead	Argon Mix	404	UltimArc®	100 - 700 ipm
				Sync Pulse Trail	Argon Mix	405		100 - 700 ipm
				HotWire Pulse Trail	Argon Mix	462		75 - 800 ipm
		1.4 mm	GMAW Tandem (Δ)	Sync Pulse Lead	Argon Mix	406	UltimArc®	100 - 600 ipm
				Sync Pulse Trail	Argon Mix	407		100 - 600 ipm
				HotWire Pulse Trail	Argon Mix	463		50 - 800 ipm
	1.6 mm	GMAW Tandem (Δ)	Sync Pulse Lead	Argon Mix	408	UltimArc®	100 - 500 ipm	
			Sync Pulse Trail	Argon Mix	409		100 - 500 ipm	
			HotWire Pulse Trail	Argon Mix	464		50 - 500 ipm	