

Weld Set Reference: Z264503 Rapid Power Wave® R450 Rapid (Metric units)



§ Advanced Module Required

▣ STT® Module Required

‡ STT® or Advanced Module Required

Ⓜ AutoDrive® S/SA Required

⊙ External HF Starter Required

△ Tandem Controller Required

□ Availability of mode determined by output rating of equipment setup

* AutoDrive® 4RS

~ Three Phase Input Required

Ⓜ R450 Rapid Model Required

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

Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range(*)				
							V	—	kW		
All	All	GMAW CV	STD CV (~)		5	Pinch	10	—	45	V	
		GMAW Power	Power Mode* (~)		40	Pinch	0.1	—	23	kW	
GMAW	0.8 mm	GMAW CV	CV	CO ₂	93	Pinch	75	—	1200	ipm (1.91 — 30.48 m/min)	
			Argon Mix	94	75		—	1200	ipm (1.91 — 30.48 m/min)		
		GMAW Pulse	Pulse	Argon Mix	95	UltimArc®	65	—	1200	ipm (1.65 — 30.48 m/min)	
			Precision Pulse™	Argon Mix	410		100	—	600	ipm (2.54 — 15.24 m/min)	
		0.9 mm	GMAW CV	CV	CO ₂	138	Pinch	50	—	1200	ipm (1.27 — 30.48 m/min)
				Argon Mix	139	50		—	1200	ipm (1.27 — 30.48 m/min)	
	GMAW Pulse		Pulse	Argon Mix	140	UltimArc®	60	—	1200	ipm (1.52 — 30.48 m/min)	
			RapidArc®	Argon Mix	141		75	—	1200	ipm (1.91 — 30.48 m/min)	
			Precision Pulse™	Argon Mix	411		100	—	600	ipm (2.54 — 15.24 m/min)	
			Rapid X*(‡)	Argon Mix	272		75	—	1200	ipm (1.91 — 30.48 m/min)	
	GMAW STT®		Synergic STT*(‡)	CO ₂	324	UltimArc®, Hot Start	100	—	225	ipm (2.54 — 5.72 m/min)	
				Argon Mix	325		100	—	225	ipm (2.54 — 5.72 m/min)	
			NonSynergic STT*(‡)	CO ₂	304	Peak, Background, Tailout, Hot Start	100	—	300	ipm (2.54 — 7.62 m/min)	
				Argon Mix	305		100	—	300	ipm (2.54 — 7.62 m/min)	
	GMAW AC STT®	Synergic AC STT*(§)	CO ₂	380	Balance, UltimArc®	50	—	200	ipm (1.27 — 5.08 m/min)		
			Argon Mix	381		50	—	200	ipm (1.27 — 5.08 m/min)		
	1.0 mm	GMAW CV	CV	CO ₂	10	Pinch	50	—	1200	ipm (1.27 — 30.48 m/min)	
			Argon Mix	11	50		—	1200	ipm (1.27 — 30.48 m/min)		
		GMAW Pulse	Pulse	Argon Mix	12	UltimArc®	75	—	1200	ipm (1.91 — 30.48 m/min)	
			RapidArc®	Argon Mix	13		60	—	1200	ipm (1.52 — 30.48 m/min)	
			Precision Pulse™	Argon Mix	412		75	—	600	ipm (1.91 — 15.24 m/min)	
			Rapid X*(‡)	Argon Mix	273		75	—	800	ipm (1.91 — 20.32 m/min)	
			Rapid X* LS C10(‡)	90Ar/10CO ₂	592		100	—	800	ipm (2.54 — 20.32 m/min)	
			Rapid X* LS C20(‡)	80Ar/20CO ₂	593		100	—	600	ipm (2.54 — 15.24 m/min)	
		GMAW STT®	Low Fume Pulse™(‡)	Argon Mix	551	UltimArc®, Hot Start	75	—	1200	ipm (1.91 — 30.48 m/min)	
				CO ₂	326		90	—	225	ipm (2.29 — 5.72 m/min)	
		GMAW STT®	NonSynergic STT*(‡)	Argon Mix	327	Peak, Background, Tailout, Hot Start	90	—	225	ipm (2.29 — 5.72 m/min)	
				CO ₂	306		90	—	225	ipm (2.29 — 5.72 m/min)	
		GMAW AC STT®	Synergic AC STT*(§)	CO ₂	382	Balance, UltimArc®	45	—	185	ipm (1.14 — 4.7 m/min)	
				Argon Mix	383		45	—	185	ipm (1.14 — 4.7 m/min)	
	1.2 mm	GMAW CV	CV	CO ₂	20	Pinch	50	—	800	ipm (1.27 — 20.32 m/min)	
			Argon Mix	21	50		—	800	ipm (1.27 — 20.32 m/min)		
		GMAW Pulse	Pulse	Argon Mix	22	UltimArc®	60	—	800	ipm (1.52 — 20.32 m/min)	
			RapidArc®	Argon Mix	18		60	—	800	ipm (1.52 — 20.32 m/min)	
			Precision Pulse™	Argon Mix	413		75	—	600	ipm (1.91 — 15.24 m/min)	
			Rapid X*(‡)	Argon Mix	274		100	—	800	ipm (2.54 — 20.32 m/min)	
			Rapid X* LS C10(‡)	90Ar/10CO ₂	594		100	—	600	ipm (2.54 — 15.24 m/min)	
			Rapid X* LS C20(‡)	80Ar/20CO ₂	595		100	—	500	ipm (2.54 — 12.7 m/min)	
		GMAW STT®	Low Fume Pulse™(‡)	Argon Mix	757	UltimArc®, Hot Start	75	—	650	ipm (1.91 — 16.51 m/min)	
				CO ₂	552		60	—	800	ipm (1.52 — 20.32 m/min)	
		GMAW STT®	NonSynergic STT*(‡)	Argon Mix	328	Peak, Background, Tailout, Hot Start	90	—	200	ipm (2.29 — 5.08 m/min)	
				CO ₂	329		90	—	200	ipm (2.29 — 5.08 m/min)	
		GMAW AC STT®	Synergic AC STT*(§)	CO ₂	384	Balance, UltimArc®	40	—	170	ipm (1.02 — 4.32 m/min)	
				Argon Mix	385		40	—	170	ipm (1.02 — 4.32 m/min)	
	1.32 mm	GMAW CV	CV (□)	Argon Mix	540	Pinch	50	—	550	ipm (1.27 — 13.97 m/min)	
			RapidArc® (□)	Argon Mix	541		60	—	905	ipm (1.52 — 22.99 m/min)	
		GMAW Pulse	Low Fume Pulse™(‡,□)	Argon Mix	544	UltimArc®	50	—	600	ipm (1.27 — 15.24 m/min)	
	1.4 mm	GMAW CV	CV (□)	CO ₂	24	Pinch	50	—	640	ipm (1.27 — 16.26 m/min)	
Argon Mix			25	50	—		550	ipm (1.27 — 13.97 m/min)			
GMAW Pulse		Pulse (□)	Argon Mix	26	UltimArc®	50	—	580	ipm (1.27 — 14.73 m/min)		
		RapidArc® (□)	Argon Mix	27		60	—	735	ipm (1.52 — 18.67 m/min)		
		Rapid X*(‡,□)	Argon Mix	275		75	—	600	ipm (1.91 — 15.24 m/min)		
		Low Fume Pulse™(‡,□)	Argon Mix	553		50	—	600	ipm (1.27 — 15.24 m/min)		
1.6 mm	GMAW CV	CV (□)	Argon Mix	107	Pinch	50	—	350	ipm (1.27 — 8.89 m/min)		
	GMAW Pulse	Pulse (□)	Argon Mix	108	UltimArc®	50	—	400	ipm (1.27 — 10.16 m/min)		

Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*							
							ipm	—	ipm	(1.91 — 22.86 m/min)				
Metal Core	0.9mm	GMAW AC Pulse	Rapid Z*(§)	Argon Mix	472	UltimArc®	75	—	900	ipm	(1.91 — 22.86 m/min)			
	1.0mm	GMAW AC Pulse	Rapid Z*(§)	Argon Mix	473	UltimArc®	70	—	700	ipm	(1.78 — 17.78 m/min)			
	1.2 mm	GMAW CV	Constant Penetration (X)	CV	Argon Mix	772	UltimArc® & Magnet Start	50	—	700	ipm	(1.27 — 17.78 m/min)		
					Argon Mix	81		Pinch	50	—	700	ipm	(1.27 — 17.78 m/min)	
		GMAW Pulse	Pulse	RapidArc® CP (X)	Argon Mix	82	UltimArc®	50	—	700	ipm	(1.27 — 17.78 m/min)		
					Argon Mix	767		75	—	650	ipm	(1.91 — 16.51 m/min)		
	1.4 mm	GMAW CV	CV (□)	CO2	Argon Mix	252	Pinch	100	—	960	ipm	(2.54 — 24.38 m/min)		
					Argon Mix	83		Pinch	50	—	1120	ipm	(1.27 — 28.45 m/min)	
					Argon Mix	84		UltimArc®	50	—	600	ipm	(1.27 — 15.24 m/min)	
		GMAW Pulse	Pulse (□)	Rapid X*(‡,□)	Argon Mix	295	UltimArc®	60	—	650	ipm	(1.52 — 16.51 m/min)		
					Argon Mix	85		Pinch	50	—	450	ipm	(1.27 — 11.43 m/min)	
					Argon Mix	86		UltimArc®	50	—	450	ipm	(1.27 — 11.43 m/min)	
1.6 mm	GMAW Pulse	Pulse (□)	Rapid X*(‡,□)	Argon Mix	296	UltimArc®	75	—	450	ipm	(1.91 — 11.43 m/min)			
				Argon Mix	296		75	—	450	ipm	(1.91 — 11.43 m/min)			
Stainless	0.8 mm	GMAW CV	CV	Argon Mix	61	Pinch	100	—	1200	ipm	(2.54 — 30.48 m/min)			
				Ar He CO2	63		100	—	1200	ipm	(2.54 — 30.48 m/min)			
				Argon Mix	64		UltimArc®	100	—	1200	ipm	(2.54 — 30.48 m/min)		
		0.9 mm	GMAW CV	CV	Argon Mix	29	Pinch	75	—	1200	ipm	(1.91 — 30.48 m/min)		
					Argon Mix	30		UltimArc®	60	—	1200	ipm	(1.52 — 30.48 m/min)	
					Argon Mix	421			100	—	600	ipm	(2.54 — 15.24 m/min)	
	GMAW STT®		NonSynergic STT®(‡)	Argon Mix	364	Peak, Background, Tailout, Hot Start	UltimArc®, Hot Start	100	—	300	ipm	(2.54 — 7.62 m/min)		
				Ar He CO2	365		100	—	250	ipm	(2.54 — 6.35 m/min)			
				Argon Mix	344		100	—	300	ipm	(2.54 — 7.62 m/min)			
	1.0 mm	GMAW CV	CV	Argon Mix	31	Pinch	75	—	1200	ipm	(1.91 — 30.48 m/min)			
				Ar He CO2	33		75	—	1000	ipm	(1.91 — 25.4 m/min)			
				Argon Mix	34		UltimArc®	60	—	1200	ipm	(1.52 — 30.48 m/min)		
			GMAW Pulse	Pulse	Argon Mix	36	UltimArc®	60	—	1200	ipm	(1.52 — 30.48 m/min)		
					Argon Mix	422		UltimArc®	60	—	600	ipm	(1.52 — 15.24 m/min)	
					Argon Mix	283		UltimArc®	100	—	800	ipm	(2.54 — 20.32 m/min)	
		GMAW STT®	NonSynergic STT®(‡)	Argon Mix	366	Peak, Background, Tailout, Hot Start	UltimArc®, Hot Start	100	—	300	ipm	(2.54 — 7.62 m/min)		
				Ar He CO2	367		100	—	250	ipm	(2.54 — 6.35 m/min)			
				Argon Mix	346		100	—	300	ipm	(2.54 — 7.62 m/min)			
			1.2 mm	GMAW CV	CV	Argon Mix	41	Pinch	75	—	700	ipm	(1.91 — 17.78 m/min)	
						Ar He CO2	43		75	—	700	ipm	(1.91 — 17.78 m/min)	
						Argon Mix	44		UltimArc®	50	—	700	ipm	(1.27 — 17.78 m/min)
	GMAW Pulse	Pulse			Argon Mix	46	UltimArc®	50	—	800	ipm	(1.27 — 20.32 m/min)		
					Argon Mix	423		UltimArc®	50	—	400	ipm	(1.27 — 10.16 m/min)	
					Argon Mix	284		UltimArc®	100	—	800	ipm	(2.54 — 20.32 m/min)	
	GMAW STT®	NonSynergic STT®(‡)		Argon Mix	368	Peak, Background, Tailout, Hot Start	UltimArc®, Hot Start	90	—	200	ipm	(2.29 — 5.08 m/min)		
				Ar He CO2	369		90	—	200	ipm	(2.29 — 5.08 m/min)			
				Argon Mix	348		90	—	225	ipm	(2.29 — 5.72 m/min)			
		1.6 mm		GMAW CV	CV (□)	Argon Mix	51	Pinch	50	—	480	ipm	(1.27 — 12.19 m/min)	
						Argon Mix	56		UltimArc®	50	—	505	ipm	(1.27 — 12.83 m/min)
						Argon Mix	56		UltimArc®	50	—	505	ipm	(1.27 — 12.83 m/min)
	Stainless Metal Core EC4XX		1.2 mm	GMAW Pulse	Rapid X*(‡)	Argon Mix	290	UltimArc®	75	—	800	ipm	(1.91 — 20.32 m/min)	
						Argon Mix	290		75	—	800	ipm	(1.91 — 20.32 m/min)	
	SiBr		1.0mm	GMAW Pulse	Pulse	Argon	192	UltimArc®	80	—	1000	ipm	(2.03 — 25.4 m/min)	
		Argon				336	UltimArc®		120	—	350	ipm	(3.05 — 8.89 m/min)	
		Argon				191	UltimArc®		50	—	600	ipm	(1.27 — 15.24 m/min)	
	Cu	1.0mm	GMAW Pulse	Pulse	Argon Helium	198	UltimArc®	75	—	500	ipm	(1.91 — 12.7 m/min)		
1.2mm		GMAW Pulse	Pulse	Argon Helium	196	UltimArc®	75	—	500	ipm	(1.91 — 12.7 m/min)			
NiCr	1.0mm	GMAW Pulse	Pulse	Ar He	502	UltimArc®	75	—	800	ipm	(1.91 — 20.32 m/min)			
	1.2mm	GMAW Pulse	Pulse	Ar He	504	UltimArc®	75	—	600	ipm	(1.91 — 15.24 m/min)			

	GMAW											
	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*				
GMAW	Aluminum (AISI)	1.0 mm	GMAW CV	CV	Argon	148	Pinch	125	—	800	ipm	(3.18 — 20.32 m/min)
			GMAW Pulse	Pulse	Argon	149	UltimArc®	125	—	800	ipm	(3.18 — 20.32 m/min)
				CC Pulse	Argon	150		125	—	800	ipm	(3.18 — 20.32 m/min)
				Precision Pulse™	Argon	566		125	—	800	ipm	(3.18 — 20.32 m/min)
				MAW Pulse-on-Pulse	Pulse-on-Pulse®	Argon		98	Frequency	100	—	500
		GMAW AC Pulse	AC Precision Pulse™ (§)	Argon	576	UltimArc®	150	—	700	ipm	(3.18 — 17.78 m/min)	
			AC Pulse (§)	Argon	392		125	—	700	ipm	(3.18 — 17.78 m/min)	
		1.2 mm	GMAW CV	CV	Argon	71	Pinch	125	—	700	ipm	(3.18 — 17.78 m/min)
			GMAW Pulse	Pulse	Argon	72	UltimArc®	85	—	600	ipm	(2.16 — 15.24 m/min)
				CC Pulse	Argon	69		85	—	600	ipm	(2.16 — 15.24 m/min)
				Precision Pulse™	Argon	567		85	—	600	ipm	(2.16 — 15.24 m/min)
				MAW Pulse-on-Pulse	Pulse-on-Pulse®	Argon		99	Frequency	85	—	500
		GMAW AC Pulse	AC Precision Pulse™ (§)	Argon	577	UltimArc®	125	—	500	ipm	(3.18 — 12.7 m/min)	
			AC Pulse (§)	Argon	393		100	—	500	ipm	(2.54 — 12.7 m/min)	
		1.6 mm	GMAW CV	CV (□)	Argon	73	Pinch	75	—	375	ipm	(1.91 — 9.53 m/min)
	GMAW Pulse		Pulse (□)	Argon	74	UltimArc®	75	—	350	ipm	(1.91 — 8.89 m/min)	
			CC Pulse (□)	Argon	79		75	—	350	ipm	(1.91 — 8.89 m/min)	
			Precision Pulse™ (□)	Argon	568		75	—	350	ipm	(1.91 — 8.89 m/min)	
			MAW Pulse-on-Pulse	Pulse-on-Pulse® (□)	Argon		100	Frequency	80	—	400	ipm
	GMAW AC Pulse	AC Precision Pulse™ (§, □)	Argon	578	UltimArc®	100	—	350	ipm	(2.54 — 8.89 m/min)		
		AC Pulse (§, □)	Argon	394		100	—	400	ipm	(2.54 — 10.16 m/min)		
	1.8mm	GMAW Pulse	AluMax™ (Ψ)	Argon	569	UltimArc®	75	—	250	ipm	(1.91 — 6.35 m/min)	
	Aluminum (AlMg)	1.0 mm	GMAW CV	CV	Argon	151	Pinch	175	—	750	ipm	(4.45 — 19.05 m/min)
			GMAW Pulse	Pulse	Argon	152	UltimArc®	125	—	700	ipm	(3.18 — 17.78 m/min)
				CC Pulse	Argon	153		125	—	700	ipm	(3.18 — 17.78 m/min)
				Precision Pulse™	Argon	571		150	—	800	ipm	(3.81 — 20.32 m/min)
				MAW Pulse-on-Pulse	Pulse-on-Pulse®	Argon		101	Frequency	140	—	800
		GMAW AC Pulse	AC Precision Pulse™ (§)	Argon	581	UltimArc®	125	—	700	ipm	(3.18 — 17.78 m/min)	
			AC Pulse (§)	Argon	397		125	—	800	ipm	(3.18 — 20.32 m/min)	
		1.2 mm	GMAW CV	CV	Argon	75	Pinch	125	—	750	ipm	(3.18 — 19.05 m/min)
GMAW Pulse			Pulse	Argon	76	UltimArc®	85	—	700	ipm	(2.16 — 17.78 m/min)	
			CC Pulse	Argon	70		85	—	700	ipm	(2.16 — 17.78 m/min)	
			Precision Pulse™	Argon	572		85	—	700	ipm	(2.16 — 17.78 m/min)	
			MAW Pulse-on-Pulse	Pulse-on-Pulse®	Argon		102	Frequency	100	—	600	ipm
GMAW AC Pulse		AC Precision Pulse™ (§)	Argon	582	UltimArc®	100	—	700	ipm	(2.54 — 17.78 m/min)		
		AC Pulse (§)	Argon	398		85	—	600	ipm	(2.16 — 15.24 m/min)		
1.6 mm		GMAW CV	CV (□)	Argon	77	Pinch	125	—	500	ipm	(3.18 — 12.7 m/min)	
		GMAW Pulse	Pulse (□)	Argon	78	UltimArc®	100	—	500	ipm	(2.54 — 12.7 m/min)	
			CC Pulse (□)	Argon	80		100	—	450	ipm	(2.54 — 11.43 m/min)	
			Precision Pulse™ (□)	Argon	573		100	—	500	ipm	(2.54 — 12.7 m/min)	
			MAW Pulse-on-Pulse	Pulse-on-Pulse® (□)	Argon		103	Frequency	75	—	350	ipm
GMAW AC Pulse		AC Precision Pulse™ (§, □)	Argon	583	UltimArc®	100	—	400	ipm	(2.54 — 10.16 m/min)		
		AC Pulse (§, □)	Argon	399		100	—	400	ipm	(2.54 — 10.16 m/min)		
1.8mm		GMAW Pulse	AluMax™ (Ψ)	Argon	574	UltimArc®	75	—	350	ipm	(1.91 — 8.89 m/min)	
FCAW		Flux Core	All	FCAW-S	Self Shield CV (~)	NA	6	Pinch	10	—	45	V
				FCAW-G	Gas Shield CV (~)	NA	7	Pinch	10	—	45	V
	Cored Wire	1.2 mm	FCAW-G	CV	CO ₂	90	Pinch	175	—	600	ipm	(4.45 — 15.24 m/min)
			Argon Mix	91	175	—	600	ipm	(4.45 — 15.24 m/min)			
		1.4 mm	FCAW-G	CV (□)	CO ₂	187	Pinch	150	—	500	ipm	(3.81 — 12.7 m/min)
			Argon Mix	188	150	—	500	ipm	(3.81 — 12.7 m/min)			
		1.6 mm	FCAW-G	CV (□)	CO ₂	189	Pinch	125	—	400	ipm	(3.18 — 10.16 m/min)
Argon Mix	190	125	—	400	ipm	(3.18 — 10.16 m/min)						
SMAW	NA	NA	DCEP SMAW	Soft	NA	1	Arc Force, Hot Start	15	—	555	A	
				Crisp	NA	2	Arc Force, Hot Start	15	—	555	A	
			Pipe	NA	4	Arc Force	50	—	250	A		
			DCEN SMAW	SMAW DC- (§)	NA	379	Arc Force, Hot Start	15	—	350	A	
			AC SMAW	AC SMAW (§)	NA	374	Arc Force, Hot Start, Frequency	15	—	350	A	
GTAW	NA	NA	DCEN GTAW	Touch Start GTAW	Ar / He	3	Hot Start	5	—	555	A	
				Touch Start TIG Pulse	Ar / He	8	Frequency, Background Hot Start	5	—	555	A	
				HF TIG (Ø)	Ar / He	375	Hot Start	5	—	450	A	
				HF TIG Pulse (Ø)	Ar / He	376	Frequency, Background Hot Start	5	—	450	A	
			AC GTAW	Touch Start AC TIG (§)	Ar / He	377	AC Frequency, AC Balance, DC Offset, Hot Start	10	—	350	A	
				HF Start AC TIG (§)	Ar / He	378	AC Frequency, AC Balance, DC Offset, Hot Start	10	—	350	A	

CAG	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*	
	NA	NA	CAG	Arc Gouge (-)	Compressed Air	9	60 — 555	A	

GMAW-Tandem	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Range*		
	Steel	1.0 mm	MAW Tandem (Δ, ~)	Sync Pulse Lead	Argon Mix	402	UltimArc®, Phase Angle	150 — 800	ipm	(3.81 — 20.32 m/min)
				Sync Pulse Trail	Argon Mix	403	UltimArc®	150 — 800	ipm	(3.81 — 20.32 m/min)
				HotWire Pulse Trail	Argon Mix	461		80 — 800	ipm	(2.03 — 20.32 m/min)
		1.2 mm	MAW Tandem (Δ, ~)	Sync Pulse Lead	Argon Mix	404	UltimArc®, Phase Angle	100 — 700	ipm	(2.54 — 17.78 m/min)
				Sync Pulse Trail	Argon Mix	405	UltimArc®	100 — 700	ipm	(2.54 — 17.78 m/min)
				HotWire Pulse Trail	Argon Mix	462		75 — 800	ipm	(1.91 — 20.32 m/min)
	1.4 mm	MAW Tandem (Δ, ~)	Sync Pulse Lead	Argon Mix	406	UltimArc®, Phase Angle	100 — 600	ipm	(2.54 — 15.24 m/min)	
			Sync Pulse Trail	Argon Mix	407	UltimArc®	100 — 600	ipm	(2.54 — 15.24 m/min)	
			HotWire Pulse Trail	Argon Mix	463		50 — 800	ipm	(1.27 — 20.32 m/min)	

HyperFill® ¹	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)		
	Steel	0.9 mm	GMAW	HyperFill® (□)	Argon Mix	601	UltimArc®	150 — 650	ipm	(3.81 — 16.51 m/min)
				HyperFill® STT® (⊖)	Argon Mix	651	UltimArc®	100 — 250	ipm	(2.54 — 6.35 m/min)
		1.0 mm	GMAW	HyperFill® (□)	Argon Mix	602	UltimArc®	100 — 500	ipm	(2.54 — 12.7 m/min)
				Hyperfill - RA (□)	Argon Mix	626		100 — 475	ipm	(2.54 — 12.07 m/min)
				HyperFill® STT® (⊖)	Argon Mix	653	UltimArc®	75 — 200	ipm	(1.91 — 5.08 m/min)
		1.2 mm	GMAW	HyperFill® (□)	Argon Mix	603	UltimArc®	100 — 370	ipm	(2.54 — 9.4 m/min)
	Metal Core	1.2 mm	GMAW	HyperFill® (□)	Argon Mix	608	UltimArc®	150 — 415	ipm	(3.81 — 10.54 m/min)
	Cored Wire	1.2 mm	FCAW-G	HyperFill® (□)	CO ₂	617	Pinch	100 — 500	ipm	(2.54 — 12.7 m/min)
				HyperFill® (□)	Argon Mix	618	Pinch	100 — 480	ipm	(2.54 — 12.19 m/min)

GTAW - APEX® ²	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)		
	NA	NA	DCEN GTAW	Touch Start TIG	NA	490	Transition Speed	5 — 500	A	
				HF TIG (G)	NA	491	Transition Speed	5 — 500	A	
		AC GTAW	Hotwire AC TIG	NA	495	Frequency, Balance	0 — 350	A		

GTAW - LincMaster® ³	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
NA	NA	DCEN GTAW	HF TIG pulse	Ar/He	645	Peak Time, Background Time, and Background	5 — 450	A	

PAW - LincMaster® ³	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
	NA	NA	PAW	Plasma	Ar/He	640		5 — 410	A
Plasma Pulse				Ar/He	641	Peak Time, Background Time, Background	5 — 410	A	

Hot Wire	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
NA	NA	Hot Wire	AC Hotwire	NA	780	Frequency, DC Offset	0 — 4	kW	

GMAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)					
	Steel	1.0mm	GMAW Pulse	RapidArc® 2 (V)	Argon Mix	703		75 — 1200	ipm	(1.91 — 30.48 m/min)			
					90% Ar 10% CO ₂	1727		75 — 1200	ipm	(1.91 — 30.48 m/min)			
					85% Ar 15% CO ₂	2751		75 — 1200	ipm	(1.91 — 30.48 m/min)			
					80% Ar 20% CO ₂	3775		75 — 1200	ipm	(1.91 — 30.48 m/min)			
				Precision Pulse 2™ (V)	Argon Mix	3875	UltimArc®	75 — 600	ipm	(1.91 — 15.24 m/min)			
					90% Ar 10% CO ₂	803		75 — 600	ipm	(1.91 — 15.24 m/min)			
					85% Ar 15% CO ₂	1827		75 — 600	ipm	(1.91 — 15.24 m/min)			
					80% Ar 20% CO ₂	2851		75 — 600	ipm	(1.91 — 15.24 m/min)			
				RapidArc® 2 XLS(V)	90% Ar 10% CO ₂	690		100 — 800	ipm	(2.54 — 20.32 m/min)			
					80% Ar 20% CO ₂	693		100 — 600	ipm	(2.54 — 15.24 m/min)			
					1.2mm	GMAW Pulse	RapidArc® 2 (V)	Argon Mix	704		75 — 800	ipm	(1.91 — 20.32 m/min)
								90% Ar 10% CO ₂	1728		75 — 800	ipm	(1.91 — 20.32 m/min)
		85% Ar 15% CO ₂	2752					75 — 800	ipm	(1.91 — 20.32 m/min)			
		80% Ar 20% CO ₂	3776					75 — 800	ipm	(1.91 — 20.32 m/min)			
		Precision Pulse 2™ (V)	Argon Mix	3876	UltimArc®	75 — 600	ipm	(1.91 — 15.24 m/min)					
			90% Ar 10% CO ₂	804		75 — 600	ipm	(1.91 — 15.24 m/min)					
			85% Ar 15% CO ₂	1828		75 — 600	ipm	(1.91 — 15.24 m/min)					
			80% Ar 20% CO ₂	3877		75 — 600	ipm	(1.91 — 15.24 m/min)					
	RapidArc® 2 XLS(V)	90% Ar 10% CO ₂	691		100 — 800	ipm	(2.54 — 20.32 m/min)						
		80% Ar 20% CO ₂	694		100 — 600	ipm	(2.54 — 15.24 m/min)						
		SIBr	0.040	GMAW Pulse	RapidArc® 2 (V)	Argon	697	UltimArc®	100 — 450	ipm	(2.54 — 11.43 m/min)		
						Argon	698	UltimArc®	75 — 400	ipm	(1.91 — 10.16 m/min)		
			0.045	GMAW Pulse	RapidArc® 2 (V)	Argon	698	UltimArc®	75 — 400	ipm	(1.91 — 10.16 m/min)		

¹HyperFill® & 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.

²APEX® System Required

³LincMaster System Required