

*Maximum Range is limited by power source rating

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 - 9.00 kW
Steel	0.030	GMAW CV	CV	CO ₂	93	Pinch	75 - 700 ipm (1.91 - 17.78 m/min)
				Argon Mix	94		75 - 700 ipm (1.91 - 17.78 m/min)
		GMAW Pulse	Pulse	Argon Mix	95	UltimArc®	65 - 700 ipm (1.65 - 17.78 m/min)
	0.035	GMAW CV	CV	CO ₂	10	Pinch	50 - 700 ipm (1.27 - 17.78 m/min)
				Argon Mix	11		50 - 700 ipm (1.27 - 17.78 m/min)
		GMAW Pulse	Pulse	Argon Mix	12	UltimArc®	60 - 700 ipm (1.52 - 17.78 m/min)
			RapidArc®	Argon Mix	13		60 - 700 ipm (1.52 - 17.78 m/min)
	Precision Pulse™	Argon Mix	411	100 - 600 ipm (2.54 - 15.24 m/min)			
	0.040	GMAW CV	CV	CO ₂	138	Pinch	50 - 695 ipm (1.27 - 17.65 m/min)
				Argon Mix	139		50 - 630 ipm (1.27 - 16 m/min)
		GMAW Pulse	Pulse	Argon Mix	140	UltimArc®	60 - 665 ipm (1.52 - 16.89 m/min)
			RapidArc®	Argon Mix	141		60 - 700 ipm (1.52 - 17.78 m/min)
	Precision Pulse™	Argon Mix	412	75 - 600 ipm (1.91 - 15.24 m/min)			
	0.045	GMAW CV	CV	CO ₂	20	Pinch	50 - 400 ipm (1.27 - 10.16 m/min)
				Argon Mix	21		50 - 390 ipm (1.27 - 9.91 m/min)
		GMAW Pulse	Pulse	Argon Mix	22	UltimArc®	50 - 435 ipm (1.27 - 11.05 m/min)
			RapidArc®	Argon Mix	18		75 - 535 ipm (1.91 - 13.59 m/min)
	Precision Pulse™	Argon Mix	413	75 - 480 ipm (1.91 - 12.19 m/min)			
Stainless	0.030	GMAW CV	CV	Argon Mix	61	Pinch	100 - 700 ipm (2.54 - 17.78 m/min)
				He Ar CO ₂	63		100 - 700 ipm (2.54 - 17.78 m/min)
		GMAW Pulse	Pulse	He Ar CO ₂	64	UltimArc®	90 - 700 ipm (2.29 - 17.78 m/min)
				Argon Mix	66		80 - 700 ipm (2.03 - 17.78 m/min)
			Precision Pulse™	Argon Mix	420	UltimArc®	100 - 700 ipm (2.54 - 17.78 m/min)
	0.035	GMAW CV	CV	Argon Mix	31	Pinch	75 - 700 ipm (1.91 - 17.78 m/min)
				He Ar CO ₂	33		75 - 700 ipm (1.91 - 17.78 m/min)
		GMAW Pulse	Pulse	He Ar CO ₂	34	UltimArc®	75 - 700 ipm (1.91 - 17.78 m/min)
				Argon Mix	36		60 - 700 ipm (1.52 - 17.78 m/min)
			Precision Pulse™	Argon Mix	421	UltimArc®	100 - 600 ipm (2.54 - 15.24 m/min)
	0.045	GMAW CV	CV	Argon Mix	41	Pinch	75 - 390 ipm (1.91 - 9.91 m/min)
				He Ar CO ₂	43		75 - 475 ipm (1.91 - 12.07 m/min)
		GMAW Pulse	Pulse	He Ar CO ₂	44	UltimArc®	75 - 505 ipm (1.91 - 12.83 m/min)
				Argon Mix	46		50 - 415 ipm (1.27 - 10.54 m/min)
			Precision Pulse™	Argon Mix	423	UltimArc®	50 - 400 ipm (1.27 - 10.16 m/min)
Metal Core	0.045	GMAW CV	CV	Argon Mix	81	Pinch	100 - 530 ipm (2.54 - 13.46 m/min)
		GMAW Pulse	Pulse	Argon Mix	82	UltimArc®	50 - 535 ipm (1.27 - 13.59 m/min)
	RapidArc®		Argon Mix	87	75 - 625 ipm (1.91 - 15.88 m/min)		
0.052	GMAW CV	CV	Argon Mix	83	Pinch	50 - 345 ipm (1.27 - 8.76 m/min)	
	GMAW Pulse	Pulse	Argon Mix	84	UltimArc®	50 - 370 ipm (1.27 - 9.4 m/min)	
	RapidArc®	Argon Mix	88	60 - 370 ipm (1.52 - 9.4 m/min)			

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GMAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
	Aluminum 4XXX	0.035		GMAW CV	CV	Argon	148	Pinch	150 - 700 ipm (3.81 - 17.78 m/min)
GMAW Pulse				Pulse	Argon	149	UltimArc®	125 - 700 ipm (3.18 - 17.78 m/min)	
				CC Pulse	Argon	150		125 - 700 ipm (3.18 - 17.78 m/min)	
3/64		GMAW Pulse on Pulse®		Pulse on Pulse®	Argon	98	Frequency	125 - 700 ipm (3.18 - 17.78 m/min)	
				GMAW CV	CV	Argon	71	Pinch	125 - 500 ipm (3.18 - 12.7 m/min)
					GMAW Pulse	Pulse	Argon	72	UltimArc®
		CC Pulse	Argon	69		85 - 565 ipm (2.16 - 14.35 m/min)			
		GMAW Pulse on Pulse®	Pulse on Pulse®	Argon		99	Frequency	85 - 500 ipm (2.16 - 12.7 m/min)	
Aluminum 5XXX	0.035		GMAW CV	CV	Argon	151	Pinch	175 - 700 ipm (4.45 - 17.78 m/min)	
			GMAW Pulse	Pulse	Argon	152	UltimArc®	150 - 700 ipm (3.81 - 17.78 m/min)	
				CC Pulse	Argon	153		150 - 700 ipm (3.81 - 17.78 m/min)	
	3/64	GMAW Pulse on Pulse®		Pulse on Pulse®	Argon	101	Frequency	140 - 700 ipm (3.56 - 17.78 m/min)	
				GMAW CV	CV	Argon	75	Pinch	125 - 700 ipm (3.18 - 17.78 m/min)
					GMAW Pulse	Pulse	Argon	76	UltimArc®
		CC Pulse	Argon	70		85 - 700 ipm (2.16 - 17.78 m/min)			
		GMAW Pulse on Pulse®	Pulse on Pulse®	Argon		102	Frequency	100 - 600 ipm (2.54 - 15.24 m/min)	
SiBr	0.035		GMAW Pulse	Pulse	Argon	192	UltimArc®	80 - 700 ipm (2.03 - 17.78 m/min)	
	0.045		GMAW Pulse	Pulse	Argon	191	UltimArc®	50 - 470 ipm (1.27 - 11.94 m/min)	
Cu	0.035		GMAW Pulse	Pulse	Ar He	198	UltimArc®	100 - 640 ipm (2.54 - 16.26 m/min)	
	0.045		GMAW Pulse	Pulse	Ar He	196	UltimArc®	75 - 430 ipm (1.91 - 10.92 m/min)	
Ni Alloy	0.035		GMAW Pulse	Pulse	Ar He	170	UltimArc®	80 - 700 ipm (2.03 - 17.78 m/min)	
				Precision Pulse™	Ar He	451	UltimArc®	75 - 600 ipm (1.91 - 15.24 m/min)	
	0.045		GMAW Pulse	Pulse	Ar He	175	UltimArc®	75 - 460 ipm (1.91 - 11.68 m/min)	
				Precision Pulse™	Ar He	453	UltimArc®	75 - 520 ipm (1.91 - 13.21 m/min)	

FCAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
	Flux Core	All		FCAW-S	Self Shield CV	NA	6	Pinch	10 - 45 V
				FCAW-G	Gas Shield CV		7	Pinch	10 - 45 V
Cored Wire	0.045		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)			

SMAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
	All	All	DCEP SMAW	SMAW Soft		NA	1	Arc Force, Hot Start	15 - 295 A
				SMAW Crisp		NA	2	Arc Force, Hot Start	15 - 295 A
				SMAW Pipe		NA	4	Arc Force	50 - 250 A

GTAW	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)	
	NA	NA	DCEN GTAW	Touch Start TIG		Ar / He	3	Hot Start	5 - 300 A
				Touch Start TIG Pulse		Ar / He	8	Frequency, Background, Hot Start	5 - 300 A

CAG	Type	Size	Procedure	Waveform	Gas Type	Mode #	Arc Control	Max. Range (*)
	NA	NA		CAG	Arc Gouge	Compressed Air	9	