

\*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 <sub>2</sub>	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 <sub>2</sub>	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 <sub>2</sub>	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 <sub>2</sub>	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 <sub>2</sub>	63		100 - 700 ipm (2.54 - 17.78 m/min)
		GMAW Pulse	Pulse	He Ar CO <sub>2</sub>	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 <sub>2</sub>	33		75 - 700 ipm (1.91 - 17.78 m/min)
		GMAW Pulse	Pulse	He Ar CO <sub>2</sub>	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)
		He Ar CO <sub>2</sub>	431	100 - 700 ipm (2.54 - 17.78 m/min)			
	0.045	GMAW CV	CV	Argon Mix	41	Pinch	75 - 390 ipm (1.91 - 9.91 m/min)
				He Ar CO <sub>2</sub>	43		75 - 475 ipm (1.91 - 12.07 m/min)
		GMAW Pulse	Pulse	He Ar CO <sub>2</sub>	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)	
	He Ar CO <sub>2</sub>	433	60 - 400 ipm (1.52 - 10.16 m/min)				
Metal Core	0.045	GMAW CV	CV	Argon Mix	81	Pinch	100 - 530 ipm (2.54 - 13.46 m/min)
				Argon Mix	82		50 - 535 ipm (1.27 - 13.59 m/min)
		GMAW Pulse	RapidArc®	Argon Mix	87	UltimArc®	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)
				Argon Mix	84		50 - 370 ipm (1.27 - 9.4 m/min)
		GMAW Pulse	RapidArc®	Argon Mix	88	UltimArc®	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
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)
GMAW Pulse on Pulse®		Pulse on Pulse®	Argon	98	Frequency	125 - 700 ipm (3.18 - 17.78 m/min)		
3/64			GMAW CV	CV	Argon	71	Pinch	125 - 500 ipm (3.18 - 12.7 m/min)
			GMAW Pulse	Pulse	Argon	72	UltimArc®	85 - 565 ipm (2.16 - 14.35 m/min)
				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
	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)
	GMAW Pulse on Pulse®	Pulse on Pulse®	Argon	101	Frequency	140 - 700 ipm (3.56 - 17.78 m/min)		
	3/64		GMAW CV	CV	Argon	75	Pinch	125 - 700 ipm (3.18 - 17.78 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)
	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®
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	NA	7	Pinch	10 - 45 V
Cored Wire	0.045	FCAW-G	CV	CO <sub>2</sub>	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		60 - 300 A