Power Wave 455M/STT

Weld Set Reference: Z073102i

Stainless

Procedure	Gas Type	Mode
.030 Wire Size		
CV	Argon Mix	61
CV	He Ar CO_2	63
Pulse	He Ar CO_2	64
Pulse	Argon CO_2	66
Pulse	Argon O_2	62
.035 Wire Size		
CV	Argon Mix	31
CV	He Ar CO_2	33
Pulse	He Ar CO_2	34
Pulse	Argon CO_2	36
Pulse	Argon O_2	32
STT	Argon CO_2	131
STT	He Ar CO_2	127
STT Open Root	He Ar CO_2	135
.045 Wire Size		
CV	Argon Mix	41
CV	He Ar CO_2	43
Pulse	He Ar CO_2	44
Pulse	Argon CO_2	46
Pulse	Argon O_2	42
STT	Argon CO_2	133
STT	He Ar CO_2	129
STT Open Root	He Ar CO_2	137

Steel

Procedure	Gas Type	Mode
.030 Wire Size		
CV	CO_2	93
CV	Argon Mix	94
Pulse	Argon Mix	95
.035 Wire Size		
CV	CO_2	10
CV	Argon Mix	11
Pulse Crisp	Argon Mix	12
Pulse Soft	Argon Mix	14
Pulse RapidArc	Argon CO_2	13
STT	Argon CO_2	112
STT	CO_2	111
STT Open Root	CO_2	113
.045 Wire Size		
CV	CO_2	20
CV	Argon Mix	21
Pulse Crisp	Argon Mix	22
Pulse Soft	Argon Mix	19
Pulse RapidArc	Argon CO2	18
STT	Argon CO_2	118
STT	CO_2	117
STT Open Root	CO_2	119

Steel

Procedure	Gas Type	Mode
.052 Wire Size		
CV	CO_2	24
CV	Argon Mix	25
Pulse Crisp	Argon Mix	26
Pulse Soft	Argon Mix	28
Pulse RapidArc	Argon CO_2	27
STT	Argon CO_2	121
STT	CO_2	120
STT Open Root	CO_2	122
1/16 Wire Size		
CV	Argon Mix	107
Pulse	Argon Mix	108

General

Stick/Tig/Gouge		
Stick Soft		1
Stick Crisp		2
Touch Start TIG	Argon	3
Gouging		9
Wire Welding (Non Synergic)		
CV MIG		5
FCAW-SS	Self Shielded	6
Power mode		40

Non Synergic STT II	≤.035	≥.045
STT II (No Tailout)	109	125
STT II (w/ Tailout)	110	126
STT II (w/ Hot Start)	123	124

Aluminum 4043

Procedure	Gas Type	Mode
.035 Wire Size		
CV	Argon	148
Pulse	Argon	149
Pulse on Pulse	Argon	98
3/64 Wire Size		
CV	Argon	71
Pulse	Argon	72
Pulse on Pulse	Argon	99
1/16 Wire Size		
CV	Argon	73
Pulse	Argon	74
Pulse on Pulse	Argon	100

Flux Core

.045 Wire Size		
CV	CO_2	90
CV	Argon CO_2	91

Metal Core

.045 Wire Size		
CV	Argon CO_2	81
Pulse	Argon CO_2	82
Pulse RapidArc	Argon CO_2	87
.052 Wire Size		
CV	Argon CO_2	83
Pulse	Argon CO_2	84
Pulse RapidArc	Argon CO_2	88
1/16 Wire Size		
CV	Argon CO_2	85
Pulse	Argon CO_2	86
Pulse RapidArc	Argon CO_2	89

Aluminum 5356

Procedure	Gas Type	Mode
.035 Wire Size		
CV	Argon	151
Pulse	Argon	152
Pulse on Pulse	Argon	101
3/64 Wire Size		
CV	Argon	75
Pulse	Argon	76
Pulse on Pulse	Argon	102
1/16 Wire Size		
CV	Argon	77
Pulse	Argon	78
Pulse on Pulse	Argon	103

Silicon Bronze

.035 Wire Size		
Pulse	Argon	192

Nickel Alloy

.035 Wire Size		
Pulse	Ar He	170
.045 Wire Size		
Pulse	Ar He	175

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THE WELDING EXPERTS

CONTENTS OF WELDING SOFTWARE Z073102i

Mode	Process	Procedure	Wire Size	Wire Type	Gas Type	WFS/Amps	Volts/Trim	ArcControl	
1	SMAW	Stick Soft				5 - 570 A		Arc Force	N.A.
2	SMAW	Stick Crisp				5 - 570 A		Arc Force	N.A.
3	GTAW	Touch Start TIG			Argon	5 - 570 A		n/a	N.A.
5	GMAW	CV MIG (Non Syn)				50 - 1200 ipm	10.0 - 45.0 V	Pinch	N.A.
6	FCAW-S	FCAW-SS (Non Syn)			Self Shielded	50 - 1200 ipm	10.0 - 45.0 V	Pinch	N.A.
9	GOUGING	Gouging				60 - 570 A		Arc Force	N.A.
10	GMAW	CV	0.035	Steel	CO2	50 - 1200 ipm	7.0 - 55.5 V	Pinch	
11	GMAW	CV	0.035	Steel	Argon Blends	50 - 1200 ipm	7.0 - 55.5 V	Pinch	
12	GMAW-P	Pulse - Crisp	0.035	Steel	Argon Blends	50 - 1200 ipm	0.50 - 1.50	Wave Control	
13	GMAW-P	Pulse - RapidArc	0.035	Steel	Argon CO2	100 - 800 ipm	0.50 - 1.50	Wave Control	
14	GMAW-P	Pulse - Soft	0.035	Steel	Argon Blends	50 - 1200 ipm	0.50 - 1.50	Wave Control	
18	GMAW-P	Pulse - RapidArc	0.045	Steel	Argon CO2	100 - 600 ipm	0.50 - 1.50	Wave Control	
19	GMAW-P	Pulse - Soft	0.045	Steel	Argon Blends	50 - 800 ipm	0.50 - 1.50	Wave Control	
20	GMAW	CV	0.045	Steel	CO2	75 - 800 ipm	8.3 - 58.5 V	Pinch	
21	GMAW	CV	0.045	Steel	Argon Blends	50 - 1200 ipm	7.0 - 58.5 V	Pinch	
22	GMAW-P	Pulse - Crisp	0.045	Steel	Argon Blends	50 - 1200 ipm	0.50 - 1.50	Wave Control	
24	GMAW	CV	0.052	Steel	CO2	50 - 600 ipm	8.5 - 55.5 V	Pinch	
25	GMAW	CV	0.052	Steel	Argon Blends	50 - 600 ipm	7.0 - 51.0 V	Pinch	
26	GMAW-P	Pulse - Crisp	0.052	Steel	Argon Blends	50 - 700 ipm	0.50 - 1.50	Wave Control	
27	GMAW-P	Pulse - RapidArc	0.052	Steel	Argon CO2	100 - 550 ipm	0.50 - 1.50	Wave Control	
28	GMAW-P	Pulse - Soft	0.052	Steel	Argon Blends	50 - 700 ipm	0.50 - 1.50	Wave Control	
31	GMAW	CV	0.035	Stainless	Argon Blends	75 - 800 ipm	6.8 - 46.5 V	Pinch	
32	GMAW-P	Pulse	0.035	Stainless	Argon Oxy	65 - 770 ipm	0.50 - 1.50	Wave Control	
33	GMAW	CV	0.035	Stainless	He Ar CO2	75 - 800 ipm	9.0 - 57.0 V	Pinch	
34	GMAW-P	Pulse	0.035	Stainless	He Ar CO2	75 - 770 ipm	0.50 - 1.50	Wave Control	
36	GMAW-P	Pulse	0.035	Stainless	Argon CO2	65 - 770 ipm	0.50 - 1.50	Wave Control	
40	GMAW	Power Mode (Non Syn)				0.1 - 15.0 kW		Pinch	N.A.
41	GMAW	CV	0.045	Stainless	Argon Blends	50 - 700 ipm	6.8 - 46.5 V	Pinch	
42	GMAW-P	Pulse	0.045	Stainless	Argon Oxy	50 - 600 ipm	0.50 - 1.50	Wave Control	
43	GMAW	CV	0.045	Stainless	He Ar CO2	50 - 700 ipm	8.5 - 61.5 V	Pinch	
44	GMAW-P	Pulse	0.045	Stainless	He Ar CO2	80 - 600 ipm	0.50 - 1.50	Wave Control	
46	GMAW-P	Pulse	0.045	Stainless	Argon CO2	50 - 600 ipm	0.50 - 1.50	Wave Control	
61	GMAW	CV	0.030	Stainless	Argon Blends	75 - 800 ipm	6.5 - 40.5 V	Pinch	
62	GMAW-P	Pulse	0.030	Stainless	Argon Oxy	90 - 770 ipm	0.50 - 1.50	Wave Control	
63	GMAW	CV	0.030	Stainless	He Ar CO2	75 - 800 ipm	9.0 - 55.5 V	Pinch	
64	GMAW-P	Pulse	0.030	Stainless	He Ar CO2	100 - 770 ipm	0.50 - 1.50	Wave Control	
66	GMAW-P	Pulse	0.030	Stainless	Argon CO2	80 - 770 ipm	0.50 - 1.50	Wave Control	
71	GMAW	CV	3/64	Aluminum 4043	Argon	125 - 750 ipm	6.5 - 49.5 V	Pinch	
72	GMAW-P	Pulse	3/64	Aluminum 4043	Argon	85 ~ 700 ipm	0.50 ~ 1.50	Wave Control	
73	GMAW	CV	1/16	Aluminum 4043	Argon	75 - 500 ipm	6.5 - 45.0 V	Pinch	
74	GMAW-P	Pulse	1/16	Aluminum 4043	Argon	60 - 350 ipm	0.50 - 1.50	Wave Control	
75	GMAW	CV	3/64	Aluminum 5356	Argon	125 - 750 ipm	6.3 - 45.0 V	Pinch	
76	GMAW-P	Pulse	3/64	Aluminum 5356	Argon	85 - 700 ipm	0.50 - 1.50	Wave Control	
77	GMAW	CV	1/16	Aluminum 5356	Argon	135 - 500 ipm	6.5 - 51.0 V	Pinch	
78	GMAW-P	Pulse	1/16	Aluminum 5356	Argon	75 ~ 500 ipm	0.50 ~ 1.50	Wave Control	
81	GMAW	CV	0.045	Metal Core	Argon CO2	100 - 650 ipm	7.3 - 52.5 V	Pinch	
82	GMAW-P	Pulse	0.045	Metal Core	Argon CO2	50 - 650 ipm	0.50 - 1.50	Wave Control	
83	GMAW	CV	0.052	Metal Core	Argon CO2	80 - 550 ipm	7.0 - 51.0 V	Pinch	
84	GMAW-P	Pulse	0.052	Metal Core	Argon CO2	50 - 600 ipm	0.50 - 1.50	Wave Control	
85	GMAW	CV	1/16	Metal Core	Argon CO2	70 - 450 ipm	7.5 - 52.5 V	Pinch	
86	GMAW-P	Pulse	1/16	Metal Core	Argon CO2	50 - 450 ipm	0.50 - 1.50	Wave Control	
87	GMAW-P	Pulse - RapidArc	0.045	Metal Core	Argon CO2	100 - 600 ipm	0.50 - 1.50	Wave Control	
88	GMAW-P	Pulse - RapidArc	0.052	Metal Core	Argon CO2	100 - 500 ipm	0.50 - 1.50	Wave Control	
89	GMAW-P	Pulse - RapidArc	1/16	Metal Core	Argon CO2	75 - 350 ipm	0.50 - 1.50	Wave Control	
90	FCAW-GS	CV	0.045	Outershield	CO2	200 - 800 ipm	12.5 - 55.5 V	Pinch	
91	FCAW-GS	CV	0.045	Outershield	Argon CO2	200 - 625 ipm	11.5 - 45.0 V	Pinch	
93	GMAW	CV	0.03	Steel	CO2	90 - 770 ipm	8.3 - 41.3 V	Pinch	
94	GMAW	CV	0.030	Steel	Argon Blends	80 - 1200 ipm	7.3 - 55.5 V	Pinch	
95	GMAW-P	Pulse	0.030	Steel	Argon Blends	65 - 1200 ipm	0.50 - 1.50	Wave Control	
98	GMAW-P	Pulse on Pulse	0.035	Aluminum 4043	Argon	125 - 600 ipm	0.50 - 1.50	Modulation Freq	
99	GMAW-P	Pulse on Pulse	3/64	Aluminum 4043	Argon	85 - 400 ipm	0.50 - 1.50	Modulation Freq	
100	GMAW-P	Pulse on Pulse	1/16	Aluminum 4043	Argon	65 - 300 ipm	0.50 - 1.50	Modulation Freq	
101	GMAW-P	Pulse on Pulse	0.035	Aluminum 5356	Argon	140 - 700 ipm	0.50 - 1.50	Modulation Freq	
102	GMAW-P	Pulse on Pulse	3/64	Aluminum 5356	Argon	85 - 550 ipm	0.50 - 1.50	Modulation Freq	
103	GMAW-P	Pulse on Pulse	1/16	Aluminum 5356	Argon	75 - 350 ipm	0.50 - 1.50	Modulation Freq	
107	GMAW	CV	1/16	Steel	Argon Blends	50 - 400 ipm	7.5 - 51.0 V	Pinch	
108	GMAW-P	Pulse - Crisp	1/16	Steel	Argon Blends	50 - 400 ipm	0.50 - 1.50	Wave Control	
109	GMAW	STT II (No Tailout)	<=.035	Steel/Stainless	CO_2, $ArCO_2$, $HeArCO_2$	50 - 500 ipm		STT II Controls	N.A., N.B.
110	GMAW	STT II (w/ Tailout)	<=.035	Steel/Stainless	CO_2, $ArCO_2$, $HeArCO_2$	50 - 500 ipm		STT II Controls	N.A., N.B.
111	GMAW	STT	0.035	Steel	CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
112	GMAW	STT	0.035	Steel	Argon CO2	90 - 325 ipm	0.50 - 1.50	Peak	N.C.
113	GMAW	STT- Open Root	0.035	Steel	CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
117	GMAW	STT	0.045	Steel	CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
118	GMAW	STT	0.045	Steel	Argon CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
119	GMAW	STT- Open Root	0.045	Steel	CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
120	GMAW	STT	0.052	Steel	CO2	90 - 150 ipm	0.50 - 1.50	Peak	N.C.
121	GMAW	STT	0.052	Steel	Argon CO2	90 - 170 ipm	0.50 - 1.50	Peak	N.C.
122	GMAW	STT- Open Root	0.052	Steel	CO2	90 - 170 ipm	0.50 - 1.50	Peak	N.C.
123	GMAW	STT II (w/ Hot Start)	<=.035	Steel/Stainless	CO_2, $ArCO_2$, $HeArCO_2$	50 - 500 ipm		STT II Controls	N.A., N.B., N.D.
124	GMAW	STT II (w/ Hot Start)	>=.045	Steel/Stainless	CO_2, $ArCO_2$, $HeArCO_2$	50 - 500 ipm		STT II Controls	N.A., N.B., N.D.
125	GMAW	STT II (No Tailout)	>=.045	Steel/Stainless	CO_2, $ArCO_2$, $HeArCO_2$	50 - 500 ipm		STT II Controls	N.A., N.B.
126	GMAW	STT II (w/ Tailout)	>=.045	Steel/Stainless	CO_2, $ArCO_2$, $HeArCO_2$	50 - 500 ipm		STT II Controls	N.A., N.B.
127	GMAW	STT	0.035	Stainless	He Ar CO2	100 - 225 ipm	0.50 - 1.50	Peak	N.C.
129	GMAW	STT	0.045	Stainless	He Ar CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
131	GMAW	STT	0.035	Stainless	Argon CO2	110 - 225 ipm	0.50 - 1.50	Peak	N.C.
133	GMAW	STT	0.045	Stainless	Argon CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
135	GMAW	STT- Open Root	0.035	Stainless	He Ar CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
137	GMAW	STT- Open Root	0.045	Stainless	He Ar CO2	90 - 225 ipm	0.50 - 1.50	Peak	N.C.
148	GMAW	CV	0.035	Aluminum 4043	Argon	150 - 750 ipm	6.5 - 42.0 V	Pinch	
149	GMAW-P	Pulse	0.035	Aluminum 4043	Argon	125 - 700 ipm	0.50 - 1.50	Wave Control	
151	GMAW	CV	0.035	Aluminum 5356	Argon	175 - 750 ipm	6.0 - 37.5 V	Pinch	
152	GMAW-P	Pulse	0.035	Aluminum 5356	Argon	140 - 700 ipm	0.50 - 1.50	Wave Control	
170	GMAW-P	Pulse - Non Adaptive	0.035	Ni Alloy	Argon Helium	80 - 700 ipm	0.50 - 1.50	Wave Control	
175	GMAW-P	Pulse - Non Adaptive	0.045	Ni Alloy	Argon Helium	75 - 550 ipm	0.50 - 1.50	Wave Control	
192	GMAW-P	Pulse	0.035	Si Bronze	Argon	80 - 700 ipm	0.50 - 1.50	Wave Control	

Notes: All GMAW-P procedures accept Trim input of 1.00 ± 0.50 (2 decimal places)
This may require resetting the weld mode with Fanuc robots or rescaling Trim input from PLC programs when updating from earlier weld sets.

N.A. May not be available on machines equipped with analog interface.
Not fully supported by Fanuc/DeviceNet implementation.

N.B. Peak, Background, Tailout and Hot Start set via Wave Controls 1-4 in STT II procedures.
Not supported by semi-automatic feeders with MSP3 panel or PF15M.

N.C. Trim adjusts background current and Wave Control 1 adjusts peak current in synergic STT procedures.

N.D. Not supported by Fanuc/ArcLink implementation prior to Fanuc ArcTool Version 6.4.

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