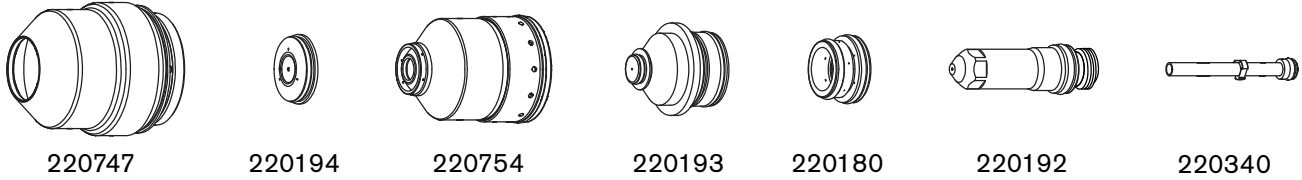


OPERATION

Mild steel O₂ Plasma / O₂ Shield 30 A Cutting

Flow rates – lpm/scfh		
	O ₂	Air
Preflow	0 / 0	46 / 97
Cutflow	22 / 46	0 / 0

Note: Air must be connected to use this process. It is used as the preflow gas



Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	mm	Volts	mm	mm/m	mm	factor %	seconds
O ₂	O ₂	80	15	92	15	0.5	114	1.3	5355	2.3	180	0.1
						0.8	115		4225			0.2
						1	116		3615			0.3
						1.2	117		2865			
						1.5	119		2210			
						35	5		2			120
		2.5	122	1325								
		3*	123	1160	0.5							
		4*	125	905	0.7							
		75	6*	128	665			1.0				

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time	
Plasma	Shield	Plasma	Shield	Plasma	Shield	in	Volts	in	ipm	in	factor %	seconds	
O ₂	O ₂	80	15	92	15	0.018	114	0.050	215	0.090	180	0.1	
						0.024			200			0.2	
						0.030			115			170	0.3
						0.036			116			155	
						0.048			117			110	
						35			5			0.060	119
		0.075	120	60									
		0.105	122	50									
		0.135*	123	40	0.5								
		75	1/4*	128	30		0.7						
				25	1.0								

Marking

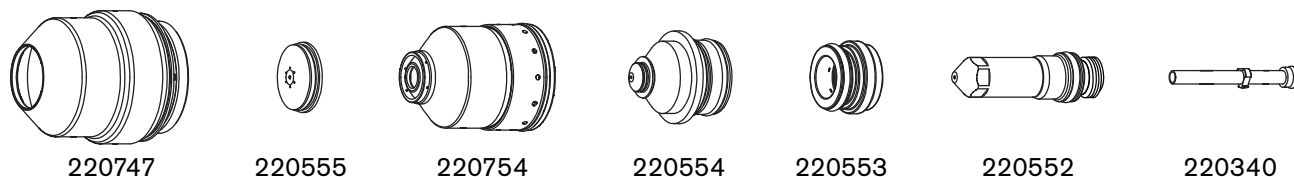
Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
						Amps	mm	in	mm/min	ipm	Volts
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	105
Ar	Air	90	10	90	10	9	2.5	0.10	2540	100	80

* Pierce complete is recommended for these thicknesses

Mild steel
O₂ Plasma / O₂ Shield
50 A Cutting

Flow rates – lpm/scfh		
	O ₂	Air
Preflow	0 / 0	43 / 90
Cutflow	25 / 52	0 / 0

Note: Air must be connected to use this process. It is used as the preflow gas



Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
O ₂	O ₂	70	30	75	15	0.8	110	1.0	6500	2.0	200	0.0
						1	111		5000			
						1.2	112		4150			
						1.5	114	1.3	3200	2.6		
						2	115		2700			
						2.5	117	1.5	2200	3.0		
						3	119		1800			
						4	121		1400			
						5	122	2.0	1200	4.0		
						6	126		950			
7	128	780										
8	130		630									

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
O ₂	O ₂	70	30	75	15	0.030	110	0.04	270	0.08	200	0.0
						0.036			210			
						0.048			160			
						0.060	114	0.05	125	0.10		
						0.075	115		110			
						0.105	118	0.06	80	0.12		
						0.135	120		60			
						3/16	121		50			
						1/4	125	0.08	35	0.16		
5/16	130	25										

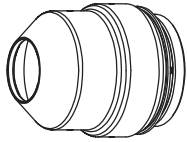
Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	118
Ar	Air	90	10	90	10	9	2.5	0.10	2540	100	77

OPERATION

Mild steel O₂ Plasma / Air Shield 80 A Cutting

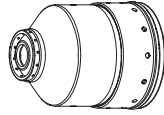
Flow rates – lpm/scfh		
	O ₂	Air
Preflow	0 / 0	76 / 161
Cutflow	23 / 48	41 / 87



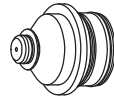
220747



220189



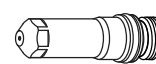
220756



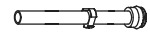
220188



220179



220187



220340

Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time			
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts		mm	mm/m	mm
O ₂	Air	50	30	72	30	2	112	2.5	9810	3.8	150	0.1			
						2.5	115		7980						
						3	117		6145						
						4	120		4300						
						6	123		3045						
						10	127		1810						
					15	12	130	2.0	1410	4.0	200	0.3			
						15	133		1030			0.5			
						20	135		2.5			545	5.0	250	0.7
												6.3			0.8
											0.9				

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time		
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts		in	ipm
O ₂	Air	50	30	72	30	0.075	112	0.100	400	0.150	150	0.1		
						0.105	115		290					
						0.135	117		180					
						3/16	120		155					
						1/4	123		110					
						3/8	127		75					
					15	1/2	130	0.080	50	0.160	200	0.3		
						5/8	133		37			0.200	250	0.5
						3/4	135		0.100					25
												0.9		

Marking

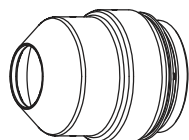
Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	78

Mild steel bevel cutting

O₂ Plasma / Air Shield

80 A Cutting

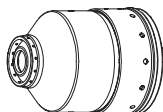
Flow rates – lpm/scfh		
	O ₂	Air
Preflow	0 / 0	47 / 100
Cutflow	23 / 48	47 / 100



220747



220189



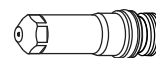
220756



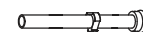
220188



220179



220187



220340

Metric

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	mm	mm	mm	mm/m	mm	factor %	seconds
O ₂	Air	50	48	72	48	2.0	2	2.5 – 8.6	9810	3.8	150	0.1
							2.5		7980			
							3		6145			
							4	2.0 – 8.6	4300	4.0	200	0.2
							6		3045			
							10		1810			
					12		1410	5.0	250	0.7		
					15		1030					
					20		545					
2.5 – 8.6	545	6.3	0.8									
2.5 – 8.6	545	6.3	0.9									

English

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	in	in	in	ipm	in	factor %	seconds
O ₂	Air	50	48	72	48	0.08	0.75	0.1 – 0.34	400	0.150	150	0.1
							0.105		290			
							0.135		180			
							3/16	0.08 – 0.34	155	0.160	200	0.2
							1/4		110			
							3/8		75			
					1/2		50	0.200	250	0.7		
					5/8		37					
					3/4		25					
0.1 – 0.34	25	0.250	0.8									
0.1 – 0.34	25	0.250	0.9									

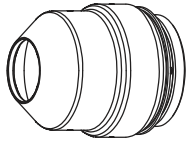
Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
						Amps	mm	in	mm/min	ipm	Volts
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	78

OPERATION

Mild steel O₂ Plasma / Air Shield 130 A Cutting

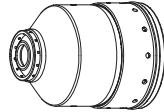
Flow rates – lpm/scfh		
	O ₂	Air
Preflow	0 / 0	102 / 215
Cutflow	33 / 70	45 / 96



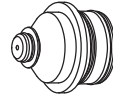
220747



220183



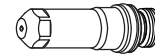
220756



220182



220179



220181



220340

Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
O ₂	Air	35	40	80	35	3	124	2.5	6505	5.0	200	0.1
						4	126	2.8	5550	5.6		0.2
						6	127		4035			0.3
					28	10	130	3.0	2680	6.0		0.5
						12	132	3.3	2200	6.6		0.7
						15	135	3.8	1665	7.6		1.0
			20		138	4.0	1050	190	1.8			
			25		141	4.5	550	255	Edge start			
			32		160		375					
			38		167	255						

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
O ₂	Air	35	40	80	35	0.135	124	0.100	240	0.200	200	0.1
						3/16	126	0.110	190	0.220		0.2
						1/4	127		150			0.3
					28	3/8	130	0.120	110	0.240		0.5
						1/2	132	0.130	80	0.260		0.7
						5/8	135	0.150	60	0.300		1.0
			3/4		138	45	190		1.8			
			1		141	0.160	20	15	Edge start			
			1-1/4		160	0.180	15					
			1-1/2		167		10					

Marking

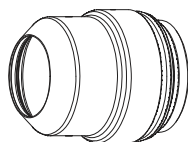
Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

Mild steel bevel cutting

O₂ Plasma / Air Shield

130 A

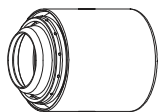
Flow rates – lpm/scfh		
	O ₂	Air
Preflow	0 / 0	64 / 135
Cutflow	33 / 70	45 / 96



220637



220742



220740



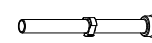
220646



220179



220649



220700

Note: Bevel angle range is 0° to 45°

Metric

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time		
Plasma	Shield	Plasma	Shield	Plasma	Shield	mm	mm	mm	mm/m	mm	factor %	seconds		
O ₂	Air	15	33	80	30	2.0	3	2.5 – 8.6	6505	5.0	200	0.1		
							4	2.8 – 8.6	5550			0.2		
							6		4035			0.3		
							10	3.0 – 8.6	2680			6.0		
							12	3.3 – 8.6	2200			6.6		
			23		15		3.8 – 8.6	1665	7.6	0.5				
					20			1050		1.0				
					25			550		1.8				
					32*			4.5 – 8.6		375		10.2	220	4.0
					38					255		Edge start		

English

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time		
Plasma	Shield	Plasma	Shield	Plasma	Shield	in	in	in	ipm	in	factor %	seconds		
O ₂	Air	15	33	80	30	0.080	0.135	0.100 – 0.340	240	0.200	200	0.1		
							3/16	0.110 – 0.340	190			0.2		
							1/4		150			0.3		
							3/8	0.120 – 0.340	110			0.240		
							1/2	0.130 – 0.340	80			0.260		
			23		5/8		0.150 – 0.340	60	0.300	0.5				
					3/4			45		1.0				
					1			0.160 – 0.340		20		190	1.8	
					1-1/4*			0.180 – 0.340		15		0.4	220	4.0
					1-1/2					10		Edge start		

Marking

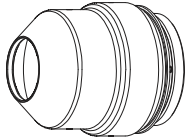
Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
						Amps	mm	in	mm/min	ipm	Volts
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

* Suggestions for piercing 32 mm (1-1/4 in) mild steel: 1. Turn preflow on during IHS, 2. Use ohmic contact during IHS, 3. Use pierce complete when piercing

OPERATION

Stainless steel N₂ Plasma / N₂ Shield 45 A Cutting

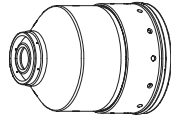
Flow rates – lpm/scfh	
N ₂	
Preflow	24 / 51
Cutflow	75 / 159



220747



220202



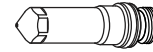
220755



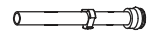
220201



220180



220308



220340

Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
N ₂	N ₂	35	5	55	60	0.8	94	2.5	6380	3.8	150	0.0
						1			5880			0.1
						1.2			5380			0.2
						1.5	4630					
						2	3935					
						2.5	3270					
						3	2550					
						4	1580		0.3			

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
N ₂	N ₂	35	5	55	60	0.036	94	0.100	240	0.150	150	0.0
						0.048			210			0.1
						0.060	180		0.2			
						0.075	160					
						0.105	120					
						0.135	75					
							0.3					

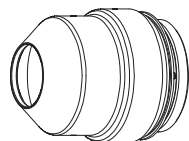
Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
Plasma	Shield	Plasma	Shield	Plasma	Shield		Amps	mm	in	mm/min	ipm
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	85
Ar	Air	90	10	90	10	12	2.5	0.10	2540	100	65

Note: This process produces a darker cut edge than the 45 A, F5/N₂ stainless steel process.

Stainless steel
F5 Plasma / N₂ Shield
45 A Cutting

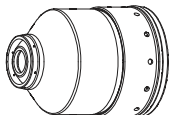
Flow rates – lpm/scfh		
	F5	N ₂
Preflow	0 / 0	43 / 91
Cutflow	8 / 17	65 / 138



220747



220202



220755



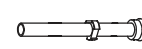
220201



220180



220308



220340

Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
F5	N ₂	35	25	55	60	0.8	99	2.5	6570	3.8	150	0.2
						1			5740			
						1.2			4905			
						1.5			3890			
						2			3175			
						2.5			2510			
						3			2010			
					4	1435						
				15	6	110	2.0	845		190	0.5	

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
F5	N ₂	35	25	55	60	0.036	99	0.100	240	0.150	150	0.2
						0.048			190			
						0.060			150			
						0.075			130			
						0.105			90			
						0.135			65			
						3/16			45			
					1/4	30						
				15	3/16	108	0.080	45		190	0.4	
					1/4	110		30			0.5	

Marking

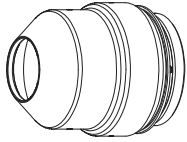
Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	85
Ar	Air	90	10	90	10	12	2.5	0.10	2540	100	65

Note: This process produces a shinier cut edge than the 45 A, N₂/N₂ stainless steel process.

OPERATION

Stainless steel F5 Plasma / N₂ Shield 80 A Cutting

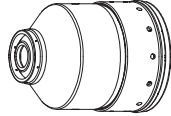
Flow rates – lpm/scfh		
	F5	N ₂
Preflow	0 / 0	67 / 142
Cutflow	31 / 65	55 / 116



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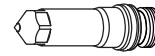
220755



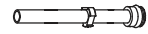
220337



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Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
F5	N ₂	35	30	60	75	4	108	3.0	2180	4.5	150	0.2
						6	112	2.5	1225	3.8		0.3
						10	120	3.0	560	4.5		0.5

English

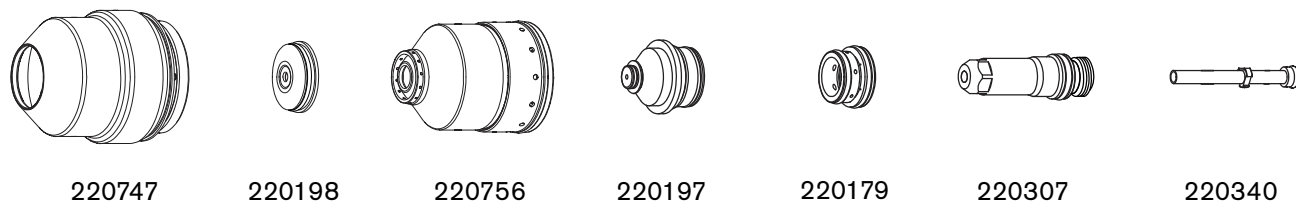
Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
F5	N ₂	35	30	60	75	0.135	108	0.120	105	0.180	150	0.2
						3/16	110	0.110	60	0.170		0.3
						1/4	112	0.100	45	0.150		
						3/8	120	0.120	25	0.180		0.5

Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	95
Ar	Air	50	10	50	10	12	3.0	0.12	2540	100	60

Stainless steel
N₂ Plasma / N₂ Shield
130 A Cutting

Flow rates – lpm/scfh	
N ₂	
Preflow	97 / 205
Cutflow	79 / 168



Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
N ₂	N ₂	20	65	70	30	6	153	3.0	1960	6.0	200	0.3
						10	156		1300			0.5
						12	162	3.5	900	7.0		0.8
						15	167	3.8	670	Edge start		
						20	176	4.3	305			

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
N ₂	N ₂	20	65	70	30	1/4	153	0.120	75	0.240	200	0.3
						3/8	156		55			0.5
						1/2	162	0.140	30	0.280		0.8
						5/8	167	0.150	25	Edge start		
						3/4	176	0.170	15			

Marking

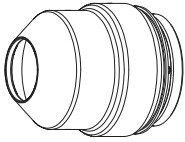
Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
Plasma	Shield	Plasma	Shield	Plasma	Shield		Amps	mm	in	mm/min	
N ₂	N ₂	10	10	10	10	18	2.5	0.10	6350	250	140
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

Note: This process produces a rougher, darker cut edge with more dross, and the cut edges are closer to perpendicular than the 130 A, H35/N₂ process.

OPERATION

Stainless steel H35 Plasma / N₂ Shield 130 A Cutting

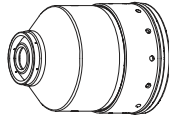
Flow rates – lpm/scfh		
	H35	N ₂
Preflow	0 / 0	76 / 160
Cutflow	26 / 54	68 / 144



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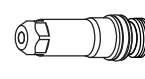
220755



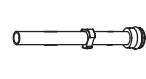
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Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	mm	Volts	mm	mm/m	mm	factor %	seconds
H35	N ₂	20	40	70	60	10	154	4.5	980	7.7	170	0.3
					45	12	158		820			0.5
					30	15	162		580			0.8
					20	20	165		360			1.3
					20	25	172		260			Edge start

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	in	Volts	in	ipm	in	factor %	seconds
H35	N ₂	20	40	70	60	3/8	154	0.180	40	0.310	170	0.3
					45	1/2	158		30			0.5
					30	5/8	162		20			0.8
					30	3/4	165		15			1.3
					20	1	172		10			Edge start

Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
Plasma	Shield	Plasma	Shield	Plasma	Shield	Amps	mm	in	mm/min	ipm	Volts
N ₂	N ₂	10	10	10	10	18	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

Note: This process produces a smoother, shinier cut edge with less dross, and the cut edges are less perpendicular than the 130 A, N₂/N₂ process.

Stainless steel bevel cutting

N₂ Plasma / N₂ Shield
130 A

Flow rates – lpm/scfh	
N ₂	
Preflow	97 / 205
Cutflow	125 / 260



Note: Bevel angle range is 0° to 45°

Metric

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	mm	
N ₂	N ₂	20	65	70	80	2.0	6	3.0 – 10.0	1960	6.0	200	0.3
							10		1300			0.5
							12	3.5 – 10.0	900	7.0		0.8
							15	3.8 – 10.0	670	Edge start		
							20	4.3 – 10.0	305			

English

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	in	
N ₂	N ₂	20	65	70	80	0.080	1/4	0.120 – 0.400	75	0.240	200	0.3
							3/8		55			0.5
							1/2	0.140 – 0.400	30	0.280		0.8
							5/8	0.150 – 0.400	25	Edge start		
							3/4	0.170 – 0.400	15			

Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	18	2.5	0.10	6350	250	140
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

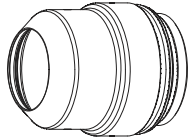
OPERATION

Stainless steel bevel cutting

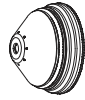
H35 Plasma / N₂ Shield

130 A

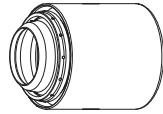
Flow rates – lpm/scfh		
	H35	N ₂
Preflow	0 / 0	90 / 190
Cutflow	26 / 54	114 / 240



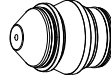
220637



220738



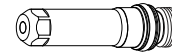
220739



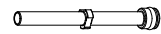
220656



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Note: Bevel angle range is 0° to 45°

Metric

Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	mm	
H35	N ₂	20	40	70	80	2.0	4.5 – 10.0	980	7.7	170	0.3	
											0.5	
											0.8	
											1.3	
											260	Edge start

English

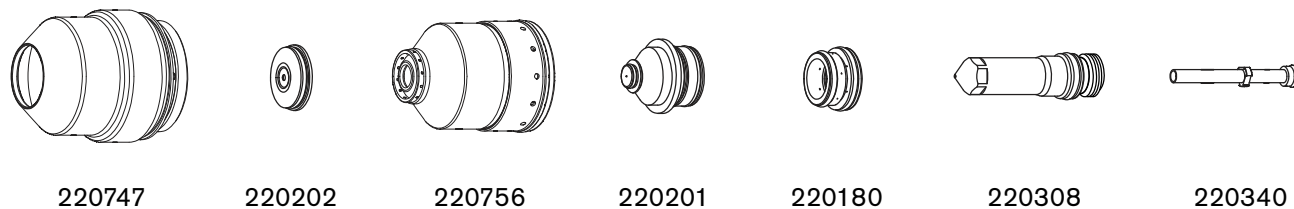
Select Gases		Set Preflow		Set Cutflow		Minimum Clearance	Equivalent Material Thickness	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	in	
H35	N ₂	20	40	70	80	0.080	0.180 – 0.400	40	0.310	170	0.3	
											0.5	
											0.8	
											1.3	
											10	Edge start

Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
Plasma	Shield	Plasma	Shield	Plasma	Shield		Amps	mm	in	mm/min	
N ₂	N ₂	10	10	10	10	18	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

Aluminum
Air Plasma / Air Shield
45 A Cutting

Flow rates – lpm/scfh	
Air	
Preflow	45 / 95
Cutflow	78 / 165



Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts	
Air	Air	35	25	55	60	1.2	130	2.5	4750	3.8	150	0.2
						1.5	115		4160			
						2	113		3865			
						2.5	110		3675			
						3	107		2850			
					40	4	102	1.8	2660	2.7	0.3	
						6	117	3.0	1695	4.5		0.6

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts	
Air	Air	35	25	55	60	0.040	130	0.100	220	0.150	150	0.2
						0.051	115		170			
						0.064	113		160			
						0.102	110		140			
						0.125	102		0.070			
					40	3/16	114	0.120	90	0.180	0.4	
						1/4	117		60			0.6

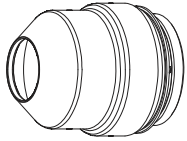
Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
							mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	15	2.5	0.10	6350	250	85
Ar	Air	90	10	90	10	12	2.5	0.10	2540	100	75

OPERATION

Aluminum Air Plasma / Air Shield 130 A Cutting

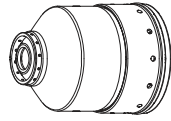
Flow rates – lpm/scfh	
	Air
Preflow	73 / 154
Cutflow	78 / 165



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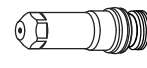
220756



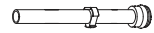
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Metric

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	mm	Volts	mm	mm/m	mm	factor %	seconds
Air	Air	20	40	70	30	6	153	2.8	2370	5.6	200	0.2
						10	154					3.0
						12	156	1225	6.0	0.5		
						15	158	3.3	1050	6.6		0.8
						20	162	3.5	725	7.0		1.3
						25	172	4.0	525	N/A		

English

Select Gases		Set Preflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time
Plasma	Shield	Plasma	Shield	Plasma	Shield	in	Volts	in	ipm	in	factor %	seconds
Air	Air	20	40	70	30	1/4	153	0.110	90	0.220	200	0.2
						3/8	154					0.120
						1/2	156	45	0.240	0.5		
						5/8	158	0.130	40	0.260		0.8
						3/4	162	0.140	30	0.280		1.3
						1	172	0.160	20	N/A		

Marking

Select Gases		Set Preflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
						Amps	mm	in	mm/min	ipm	Volts
N ₂	N ₂	10	10	10	10	18	2.5	0.10	6350	250	120
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	82

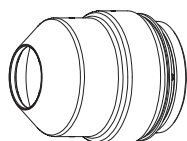
Note: This process produces a rougher cut edge that is less perpendicular than the 130 A, H35/N₂ process.

Aluminum

H35 Plasma / N₂ Shield

130 A Cutting

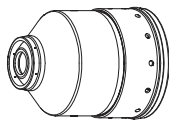
Flow rates – lpm/scfh		
	H35	N ₂
Prewflow	0 / 0	76 / 160
Cutflow	26 / 54	68 / 144



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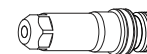
220755



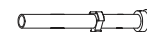
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Metric

Select Gases		Set Prewflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time	
Plasma	Shield	Plasma	Shield	Plasma	Shield					mm	Volts		mm
H35	N ₂	20	40	70	60	10	158	4.5	5.0	1615	6.5	130	0.3
					45	12	156		1455	7.7	170	0.5	
					30	15	157		1305			0.8	
					20	20	176		940			1.3	

English

Select Gases		Set Prewflow		Set Cutflow		Material Thickness	Arc Voltage	Torch-to-Work Distance	Cutting Speed	Initial Pierce Height		Pierce Delay Time	
Plasma	Shield	Plasma	Shield	Plasma	Shield					in	Volts		in
H35	N ₂	20	40	70	60	3/8	158	0.180	0.200	65	0.260	130	0.3
					45	1/2	156		55	0.310	170	0.5	
					30	5/8	157		50			0.8	
					20	3/4	176		40			1.3	

Marking

Select Gases		Set Prewflow		Set Cutflow		Amperage	Torch-to-Work Distance		Marking Speed		Arc Voltage
						Amps	mm	in	mm/min	ipm	
N ₂	N ₂	10	10	10	10	18	2.5	0.10	6350	250	130
Ar	Air	50	10	50	10	15	3.0	0.12	2540	100	75

Note: This process produces a smoother cut edge that is more perpendicular than the 130 A, Air/Air process.