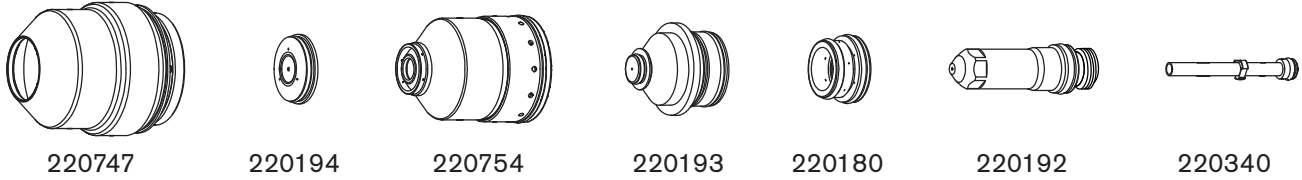


OPERATION

Mild steel O₂ Plasma / O₂ Shield 30 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 | mm | mm/m | mm | Factor % | Seconds | | | |
| O ₂ | O ₂ | 78 | 17 | 94 | 17 | 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 | | | | | | |
| | | | | | | 2 | 120 | | 1490 | | | | | | |
| | | 35 | 7 | 7 | 7 | 2.5 | 122 | 1.5 | 1325 | 2.7 | 0.4 | | | | |
| | | | | | | 3* | 123 | | 1160 | | 0.5 | | | | |
| | | | | | | 4* | 125 | | 905 | | 0.7 | | | | |
| | | | | | | 75 | 7 | | 7 | | 7 | 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 | 78 | 17 | 94 | 17 | 0.018 | 114 | 0.050 | 215 | 0.090 | 180 | 0.1 | | | |
| | | | | | | 0.024 | | | 200 | | | | 0.2 | | |
| | | | | | | 0.030 | | | 115 | | | | | 170 | |
| | | | | | | 0.036 | | | 116 | | | | | 155 | |
| | | | | | | 0.048 | | | 117 | | | | | 110 | |
| | | | | | | 0.060 | | | 119 | | | | | 85 | |
| | | 35 | 7 | 7 | 7 | 0.075 | 120 | 0.060 | 60 | 0.110 | 0.4 | | | | |
| | | | | | | 0.105 | 122 | | 50 | | | | | | |
| | | | | | | 0.135* | 123 | | 40 | | 0.5 | | | | |
| | | | | | | 75 | 7 | | 7 | | 7 | 3/16* | 128 | 30 | 0.7 |
| | | | | | | | | | | | | 1/4* | | 25 | 1.0 |

Marking

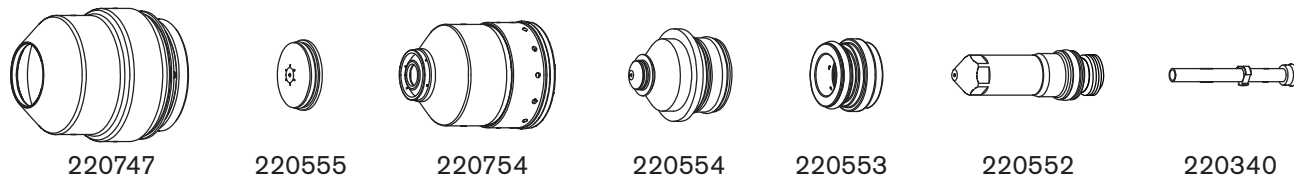
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|----|-------------|----|----------|------------------------|------|---------------|-----|-------------|
| | | | | | | Amps | mm | in | 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 | 81 | 14 | 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 | 81 | 14 | 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 | | | |

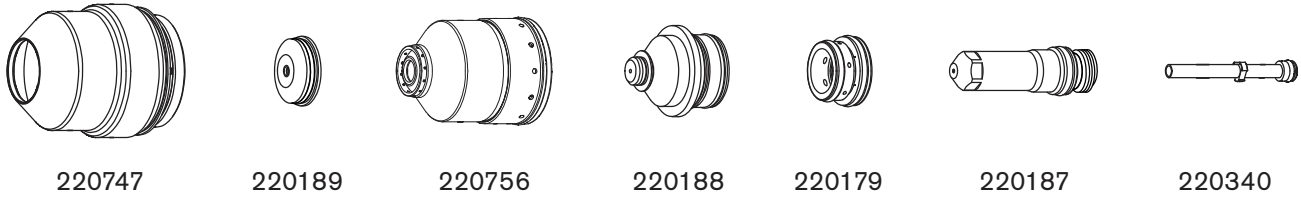
Marking

| 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 |



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 | Air | 48 | 23 | 78 | 23 | 2 | 112 | 2.5 | 9810 | 3.8 | 150 | 0.1 | |
| | | | | | | 2.5 | 115 | | 7980 | | | | |
| | | | | | | 3 | 117 | | 6145 | | | | |
| | | | | | | 4 | 120 | 2.0 | 4300 | | | | |
| | | | | | | 6 | 123 | | 3045 | | | | |
| | | | | | 10 | 127 | 10 | 1810 | 4.0 | 200 | 0.3 | | |
| | | | | | 12 | 130 | | 1410 | | | 5.0 | 250 | 0.5 |
| | | | | | 15 | 133 | | 1030 | | | | | 0.7 |
| | | | | | 20 | 135 | 2.5 | 545 | 6.3 | 250 | 0.8 | | |
| | | | | | | | | | | | | | |

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 | Air | 48 | 23 | 78 | 23 | 0.075 | 112 | 0.100 | 400 | 0.150 | 150 | 0.1 |
| | | | | | | 0.105 | 115 | | 290 | | | |
| | | | | | | 0.135 | 117 | | 180 | | | |
| | | | | | | 3/16 | 120 | 0.080 | 155 | | | |
| | | | | | | 1/4 | 123 | | 110 | 0.160 | 200 | |
| | | | | | 3/8 | 127 | 75 | 0.5 | | | | |
| | | | | | 1/2 | 130 | 10 | 50 | 0.200 | 250 | 0.7 | |
| | | | | | 5/8 | 133 | | 37 | | | 0.8 | |
| | | | | | 3/4 | 135 | | 0.100 | | | 25 | 0.250 |

Marking

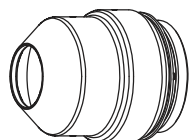
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|----|-------------|----|----------|------------------------|------|---------------|-----|-------------|
| | | | | | | Amps | mm | in | 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 |

Mild steel bevel cutting

O₂ Plasma / Air Shield

80 A Cutting

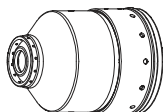
| Flow rates – lpm/scfh | | |
|-----------------------|----------------|----------|
| | O ₂ | Air |
| Preflow | 0 / 0 | 47 / 100 |
| Cutflow | 23 / 48 | 47 / 100 |



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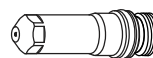
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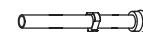
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Metric

| 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 | 48 | 39 | 78 | 39 | 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 | | 17 | 1410 | 5.0 | 250 | 0.7 | |
| | | | | | 15 | | | 1030 | | | | |
| | | | | | 20 | | | 545 | | | | |
| | | | | | | | 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 | 48 | 39 | 78 | 39 | 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 | 0.3 |
| | | | | | | | 1/4 | | 110 | | | |
| | | | | | | | 3/8 | | 75 | | | |
| | | | | | 1/2 | | 17 | 50 | 0.200 | 250 | 0.7 | |
| | | | | | 5/8 | | | 37 | | | | |
| | | | | | 3/4 | | | 25 | | | | |
| | | | | | | | 0.1 – 0.34 | 25 | 0.250 | | | 0.9 |

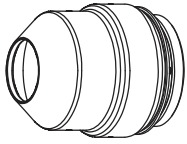
Marking

| 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

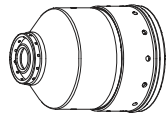
| Flow rates – lpm/scfh | | |
|-----------------------|----------------|-----------|
| | O ₂ | Air |
| Preflow | 0 / 0 | 102 / 215 |
| Cutflow | 33 / 70 | 45 / 96 |



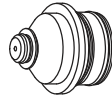
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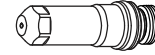
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220179



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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 | |
| O ₂ | Air | 32 | 32 | 84 | 28 | 3 | 124 | 2.5 | 6505 | 5.0 | 200 | 0.1 |
| | | | | | | 4 | 126 | 2.8 | 5550 | 5.6 | | 0.2 |
| | | | | | | 6 | 127 | | 4035 | 0.3 | | |
| | | | | | 22 | 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 |
| | | | 52 | | 20 | 138 | 4.0 | 1050 | 190 | 1.8 | | |
| | | | | | 25 | 141 | | 550 | | | | |
| | | | | | 32 | 160 | | 4.5 | | 375 | Edge start | |
| | | | 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 | 32 | 32 | 84 | 28 | 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 | | |
| | | | | | 22 | 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 | | | | | | |
| | | | 52 | | 1 | 141 | 0.160 | 20 | 190 | 1.8 | | |
| | | | | | 1-1/4 | 160 | 0.180 | 15 | | Edge start | | |
| | | | | | 1-1/2 | 167 | | 10 | | | | |

Marking

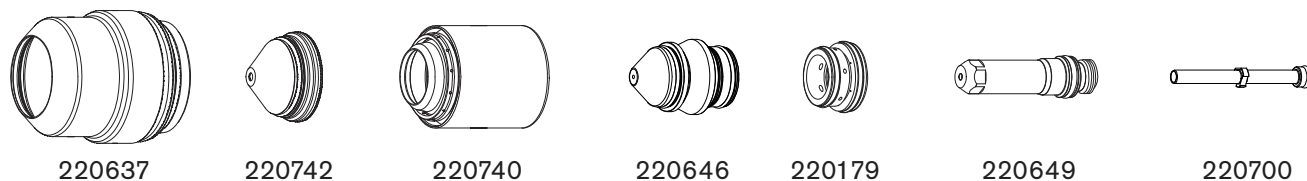
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|----|-------------|----|----------|------------------------|------|---------------|-----|-------------|
| | | | | | | | mm | in | mm/min | ipm | 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 |

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 |



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 | 23 | 84 | 21 | 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 | | 0.5 |
| | | | 12 | | 3.3 – 8.6 | | 2200 | 6.6 | 0.7 | | | |
| | | | 15 | | 3.8 – 8.6 | | 1665 | 7.6 | 1.0 | | | |
| | | | 20 | | | | 1050 | | 1.8 | | | |
| | | | 25 | | | | 550 | | 190 | | | |
| | | | 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 | 23 | 84 | 21 | 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 | | 0.5 |
| | | | 1/2 | | 0.130 – 0.340 | | 80 | 0.260 | 0.7 | | | |
| | | | 5/8 | | 0.150 – 0.340 | | 60 | 0.300 | 1.0 | | | |
| | | | 3/4 | | | | 45 | | 1.8 | | | |
| | | | 1 | | | | 20 | | 190 | | | |
| | | | 1-1/4* | | 0.180 – 0.340 | | 15 | 0.4 | 220 | 4.0 | | |
| 1-1/2 | 10 | Edge start | | | | | | | | | | |

Marking

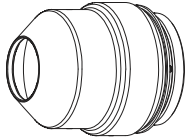
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|----|-------------|----|----------|------------------------|------|---------------|-----|-------------|
| | | | | | | Amps | mm | in | 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

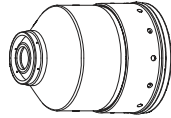
| Flow rates – lpm/scfh | |
|-----------------------|----------|
| N ₂ | |
| Preflow | 24 / 51 |
| Cutflow | 75 / 159 |



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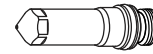
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220201



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 | | mm |
| N ₂ | N ₂ | 35 | 5 | 62 | 49 | 0.8 | 94 | 2.5 | 6380 | 3.8 | 150 | 0.2 | |
| | | | | | | 1 | | | | | | | |
| | | | | | | 1.2 | | | | | | | |
| | | | | | | 1.5 | 95 | | | | | | 4630 |
| | | | | | | 2 | | | | | | | 3935 |
| | | | | | | 2.5 | 101 | | | | | | 3270 |
| | | | | | | 3 | | | | | | | 2550 |
| | | | | | | 4 | 103 | | | | | | 1580 |

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 |
| N ₂ | N ₂ | 35 | 5 | 62 | 49 | 0.036 | 94 | 0.100 | 240 | 0.150 | 150 | 0.2 | |
| | | | | | | 0.048 | | | | | | | |
| | | | | | | 0.060 | 95 | | | | | | 180 |
| | | | | | | 0.075 | | | | | | | 160 |
| | | | | | | 0.105 | 101 | | | | | | 120 |
| | | | | | | 0.135 | | | | | | | 103 |

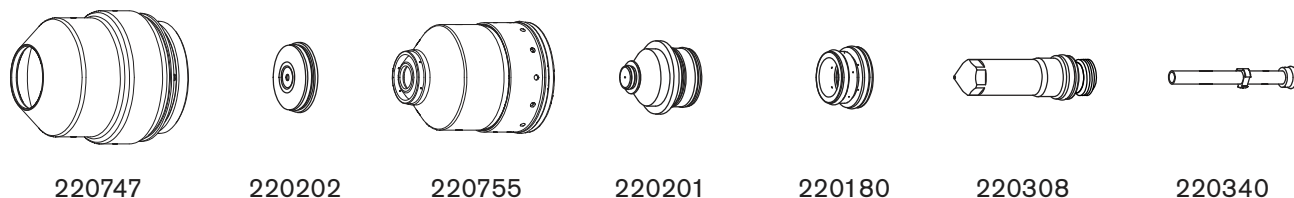
Marking

| 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 | 15 | 2.5 | 0.10 | 6350 | 250 | 85 |
| Ar | N ₂ | 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 |



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 | 18 | 62 | 49 | 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 | 0.3 | | | | | |
| 11 | 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 | 18 | 62 | 49 | 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 | | | 108 | | | |
| | | | | | 11 | 1/4 | 110 | | 0.080 | | | 45 |
| | | | | | | 30 | 0.5 | | | | | |

Marking

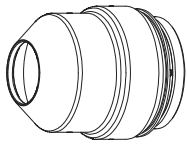
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|----|-------------|----|----------|------------------------|------|---------------|-----|-------------|
| | | | | | | | mm | in | mm/min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

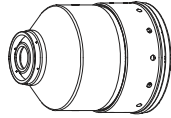
| Flow rates – lpm/scfh | | |
|-----------------------|---------|----------------|
| | F5 | N ₂ |
| Preflow | 0 / 0 | 67 / 142 |
| Cutflow | 31 / 65 | 55 / 116 |



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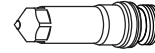
220755



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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 | 33 | 23 | 65 | 60 | 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

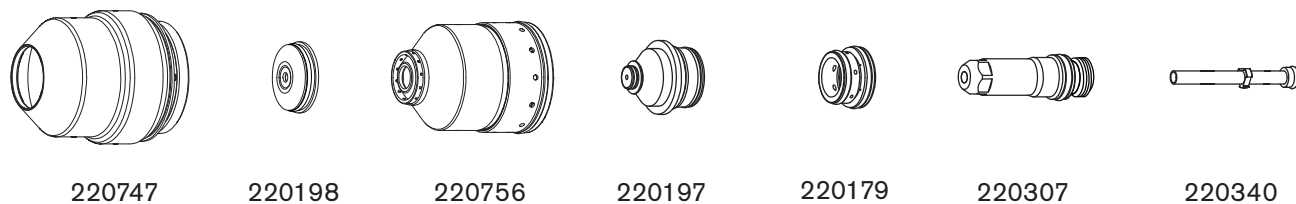
| Select Gases | | Set Preflow | | Set Cutflow | | Material Thickness | Arc Voltage | Torch-to-Work Distance | Cutting Speed | Initial Pierce Height | | Pierce Delay Time |
|--------------|----------------|-------------|--------|-------------|--------|--------------------|-------------|------------------------|---------------|-----------------------|-------|-------------------|
| Plasma | Shield | Plasma | Shield | Plasma | Shield | | | | | in | Volts | |
| F5 | N ₂ | 33 | 23 | 65 | 60 | 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 | N ₂ | 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 | 19 | 51 | 75 | 23 | 6 | 153 | 3.0 | 1960 | 6.0 | 200 | 0.3 |
| | | | | | | 10 | 156 | | 1300 | | | 0.5 |
| | | | | | | 12 | 162 | 3.5 | 900 | | | 7.0 |
| | | | | | | 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 | 19 | 51 | 75 | 23 | 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 |
| | | | | | | 5/8 | 167 | 0.150 | 25 | Edge start | | |
| | | | | | | 3/4 | 176 | 0.170 | 15 | | | |

Marking

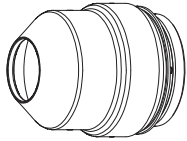
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|--------|-------------|--------|----------|------------------------|------|---------------|-----|-------------|
| Plasma | Shield | Plasma | Shield | Plasma | Shield | | mm | in | mm/min | ipm | |
| N ₂ | N ₂ | 10 | 10 | 10 | 10 | 18 | 2.5 | 0.10 | 6350 | 250 | 140 |
| Ar | N ₂ | 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

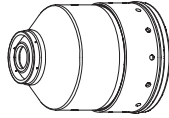
| Flow rates – lpm/scfh | | |
|-----------------------|---------|----------------|
| | H35 | N ₂ |
| Preflow | 0 / 0 | 76 / 160 |
| Cutflow | 26 / 54 | 68 / 144 |



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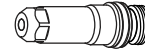
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Metric

| 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 | 19 | 32 | 75 | 49 | 10 | 154 | 4.5 | 980 | 7.7 | 170 | 0.3 |
| | | | | | 37 | 12 | 158 | | 820 | | | 0.5 |
| | | | | | 24 | 15 | 162 | | 580 | | | 0.8 |
| | | | | | | 20 | 165 | | 360 | | | 1.3 |
| | | | | | 16 | 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 | 19 | 32 | 75 | 49 | 3/8 | 154 | 0.180 | 40 | 0.310 | 170 | 0.3 |
| | | | | | 37 | 1/2 | 158 | | 30 | | | 0.5 |
| | | | | | 24 | 5/8 | 162 | | 20 | | | 0.8 |
| | | | | | | 3/4 | 165 | | 15 | | | 1.3 |
| | | | | | 16 | 1 | 172 | | 10 | | | Edge start |

Marking

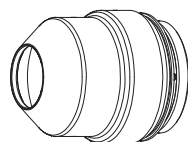
| Select Gases | | Set Preflow | | Set Cutflow | | Amperage | Torch-to-Work Distance | | Marking Speed | | Arc Voltage |
|----------------|----------------|-------------|----|-------------|----|----------|------------------------|------|---------------|-----|-------------|
| | | | | | | Amps | mm | in | mm/min | ipm | Volts |
| N ₂ | N ₂ | 10 | 10 | 10 | 10 | 18 | 2.5 | 0.10 | 6350 | 250 | 130 |
| Ar | N ₂ | 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

H35 and N₂ Plasma / N₂ Shield
130 A Cutting

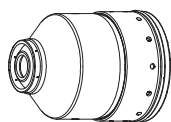
| Flow rates – lpm/scfh | | |
|-----------------------|---------|----------------|
| | H35 | N ₂ |
| Preflow | 0 / 0 | 97 / 205 |
| Cutflow | 13 / 28 | 71 / 150 |



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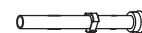
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Metric

| 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 | Mix Gas 1 | Mix Gas 2 | mm | Volts | mm | mm/m | mm | Factor % | Seconds |
| H35 | N ₂ | 19 | 51 | 75 | 38 | 32 | 18 | 6 | 150 | 3.0 | 1835 | 6.0 | 200 | 0.3 |
| | | | | | 27 | | | 10 | 153 | | 1195 | | | 0.3 |
| | | | | | 12 | | | 160 | 3.5 | 875 | 7.0 | 0.5 | | |
| | | | | | 15 | | | 168 | 3.8 | 670 | 7.6 | 0.8 | | |
| | | | | | 20 | | | 176 | 4.3 | 305 | 7.7 | 180 | | 1.3 |

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 | Mix Gas 1 | Mix Gas 2 | in | Volts | in | ipm | in | Factor % | Seconds |
| H35 | N ₂ | 19 | 51 | 75 | 38 | 32 | 18 | 1/4 | 150 | 0.120 | 70 | 0.240 | 200 | 0.3 |
| | | | | | 27 | | | 3/8 | 153 | | 50 | | | 0.3 |
| | | | | | 1/2 | | | 160 | 0.140 | 30 | 0.280 | 0.5 | | |
| | | | | | 5/8 | | | 168 | 0.150 | 25 | 0.300 | 0.8 | | |
| | | | | | 3/4 | | | 176 | 0.170 | 15 | 0.310 | 180 | | 1.3 |

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 | 130 |
| Ar | N ₂ | 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. Edge color is more silver than the H35/N₂ process.

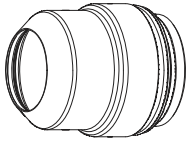
OPERATION

Stainless steel bevel cutting

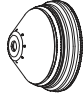
N₂ Plasma / N₂ Shield

130 A

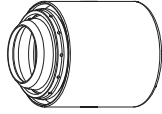
| Flow rates – lpm/scfh | |
|-----------------------|-----------|
| N ₂ | |
| Preflow | 97 / 205 |
| Cutflow | 125 / 260 |



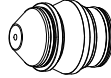
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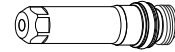
220739



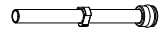
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Note: Bevel angle range is 0° to 45°

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 | |
| N ₂ | N ₂ | 19 | 51 | 75 | 63 | 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 | 19 | 51 | 75 | 63 | 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 |
|----------------|----------------|-------------|--------|-------------|--------|----------|------------------------|------|---------------|--------|-------------|
| Plasma | Shield | Plasma | Shield | Plasma | Shield | | Amps | mm | in | mm/min | ipm |
| N ₂ | N ₂ | 10 | 10 | 10 | 10 | 18 | 2.5 | 0.10 | 6350 | 250 | 140 |
| Ar | N ₂ | 50 | 10 | 50 | 10 | 15 | 3.0 | 0.12 | 2540 | 100 | 75 |

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 |



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 |
| H35 | N ₂ | 19 | 32 | 75 | 63 | 2.0 | 10 | 4.5 – 10.0 | 980 | 7.7 | 170 | 0.3 |
| | | | | | | | 12 | | 820 | | | 0.5 |
| | | | | | | | 15 | | 580 | | | 0.8 |
| | | | | | | | 20 | | 360 | | | 1.3 |
| | | | | | | | 25 | | 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 | in | ipm | in | Factor % | Seconds |
| H35 | N ₂ | 19 | 32 | 75 | 63 | 0.080 | 3/8 | 0.180 – 0.400 | 40 | 0.310 | 170 | 0.3 |
| | | | | | | | 1/2 | | 30 | | | 0.5 |
| | | | | | | | 5/8 | | 20 | | | 0.8 |
| | | | | | | | 3/4 | | 15 | | | 1.3 |
| | | | | | | | 1 | | 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 | 18 | 2.5 | 0.10 | 6350 | 250 | 130 |
| Ar | N ₂ | 50 | 10 | 50 | 10 | 15 | 3.0 | 0.12 | 2540 | 100 | 75 |

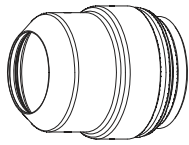
OPERATION

Stainless steel bevel cutting

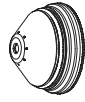
H35 and N₂ Plasma / N₂ Shield

130 A

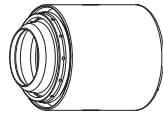
| Flow rates – lpm/scfh | | |
|-----------------------|---------|----------------|
| | H35 | N ₂ |
| Preflow | 0 / 0 | 97 / 205 |
| Cutflow | 13 / 28 | 120 / 250 |



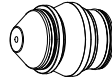
220637



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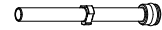
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Note: Bevel angle range is 0° to 45°

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 | Mix Gas 1 | Mix Gas 2 | mm | mm | mm | mm/m | mm | Factor % | Seconds |
| H35 | N ₂ | 19 | 51 | 75 | 80 | 32 | 18 | 2.0 | 6 | 3.0 – 10.0 | 1835 | 6.0 | 200 | 0.3 |
| | | | | | | | | | 10 | | 1195 | | | |
| | | | | | | | | | 12 | 3.5 – 10.0 | 875 | 7.0 | | |
| | | | | | | | | | 15 | 3.8 – 10.0 | 670 | 7.6 | | |
| | | | | | | | | | 20 | 3.0 – 10.0 | 305 | 7.7 | | |

English

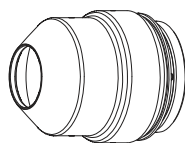
| Select Gases | | Set Preflow | | Set Cutflow | | | | Minimum Clearance | Equivalent Material Thickness | Torch-to-Work Distance | Cutting Speed | Initial Pierce Height | | Pierce Delay Time |
|--------------|----------------|-------------|--------|-------------|--------|-----------|-----------|-------------------|-------------------------------|------------------------|---------------|-----------------------|----------|-------------------|
| Plasma | Shield | Plasma | Shield | Plasma | Shield | Mix Gas 1 | Mix Gas 2 | in | in | in | ipm | in | Factor % | Seconds |
| H35 | N ₂ | 19 | 51 | 75 | 80 | 32 | 18 | 0.080 | 1/4 | 0.120 – 0.400 | 70 | 0.240 | 200 | 0.3 |
| | | | | | | | | | 3/8 | | 50 | | | |
| | | | | | | | | | 1/2 | 0.140 – 0.400 | 30 | 0.280 | | |
| | | | | | | | | | 5/8 | 0.150 – 0.400 | 25 | 0.300 | | |
| | | | | | | | | | 3/4 | 0.170 – 0.400 | 15 | 0.310 | | |

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 | 130 |
| Ar | N ₂ | 50 | 10 | 50 | 10 | 15 | 3.0 | 0.12 | 2540 | 100 | 75 |

Aluminum
Air Plasma / Air Shield
45 A Cutting

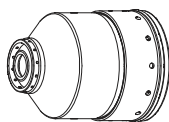
| Flow rates – lpm/scfh | |
|-----------------------|----------|
| Air | |
| Preflow | 45 / 95 |
| Cutflow | 78 / 165 |



220747



220202



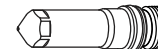
220756



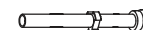
220201



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 | |
| Air | Air | 35 | 19 | 62 | 49 | 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 | | | |
| | | | | | | 4 | 102 | | 1.8 | | | |
| | | | | | 33 | 6 | 117 | 3.0 | 1695 | 4.5 | 0.3 | |
| | | | | | | | | | | | 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 | | in | ipm | in |
| Air | Air | 35 | 19 | 62 | 49 | 0.040 | 130 | 0.100 | 220 | 0.150 | 150 | 0.2 | | | |
| | | | | | | 0.051 | 115 | | 170 | | | | | | |
| | | | | | | 0.064 | 113 | | 160 | | | | | | |
| | | | | | | 0.102 | 110 | | 140 | | | | | | |
| | | | | | | 33 | 0.125 | | 102 | | | | 0.070 | 110 | 0.110 |
| | | | | | | | 3/16 | | 114 | | | | 0.120 | 90 | 0.180 |
| | | | | | 1/4 | 117 | 60 | 0.4 | | | | | | | |
| | | | | | | | | | | | 0.6 | | | | |

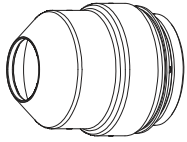
Marking

| 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

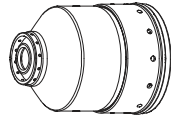
| Flow rates – lpm/scfh | |
|-----------------------|----------|
| Air | |
| Preflow | 73 / 154 |
| Cutflow | 78 / 165 |



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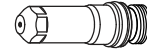
220756



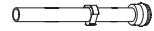
220197



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 | mm | mm/m | mm | Factor % | Seconds |
| Air | Air | 19 | 31 | 75 | 23 | 6 | 153 | 2.8 | 2370 | 5.6 | 200 | 0.2 |
| | | | | | | 10 | 154 | 3.0 | 1465 | 6.0 | | 0.3 |
| | | | | | | 12 | 156 | | 1225 | | | 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 | 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 |
| Air | Air | 19 | 31 | 75 | 23 | 1/4 | 153 | 0.110 | 90 | 0.220 | 200 | 0.2 |
| | | | | | | 3/8 | 154 | 0.120 | 60 | 0.240 | | 0.3 |
| | | | | | | 1/2 | 156 | | 45 | | | 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 | 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 | 18 | 2.5 | 0.10 | 6350 | 250 | 120 |
| Ar | Air | 50 | 10 | 50 | 10 | 15 | 3.0 | 0.12 | 2540 | 100 | 82 |

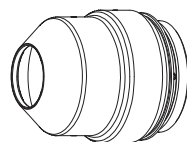
Note: This process produces a rougher cut edge that is less perpendicular than the 130 A, H35/N₂ process.

Aluminum

H35 Plasma / N₂ Shield

130 A Cutting

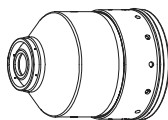
| Flow rates – lpm/scfh | | |
|-----------------------|---------|----------------|
| | H35 | N ₂ |
| Prewflow | 0 / 0 | 76 / 160 |
| Cutflow | 26 / 54 | 68 / 144 |



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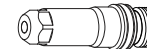
220755



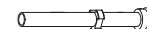
220197



220179



220307



220340

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 | mm/m | mm |
| H35 | N ₂ | 19 | 32 | 75 | 49 | 10 | 158 | 4.5 | 1615 | 7.7 | 170 | 6.5 | 130 | 0.3 |
| | | | | | 37 | 12 | 156 | | 1455 | | | 0.5 | | |
| | | | | | 24 | 15 | 157 | | 1305 | | | 0.8 | | |
| | | | | | 16 | 20 | 176 | | 940 | | | 1.3 | | |
| | | | | | 16 | 25 | 176 | | 540 | | | Edge start | | |

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 | ipm | in |
| H35 | N ₂ | 19 | 32 | 75 | 49 | 3/8 | 158 | 0.180 | 65 | 0.310 | 170 | 0.260 | 130 | 0.3 |
| | | | | | 37 | 1/2 | 156 | | 55 | | | 0.5 | | |
| | | | | | 24 | 5/8 | 157 | | 50 | | | 0.8 | | |
| | | | | | 16 | 3/4 | 176 | | 40 | | | 1.3 | | |
| | | | | | 16 | 1 | 176 | | 20 | | | Edge start | | |

Marking

| Select Gases | | Set Prewflow | | 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 | 130 |
| Ar | N ₂ | 50 | 10 | 50 | 10 | 15 | 3.0 | 0.12 | 2540 | 100 | 75 |

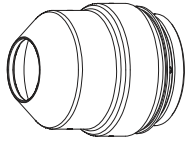
Note: This process produces a smoother cut edge that is more perpendicular than the 130 A, Air/Air process.

OPERATION

Aluminum

H35 and N₂ Plasma / N₂ Shield
130 A Cutting

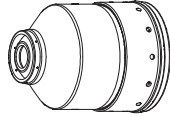
| Flow rates – lpm/scfh | | |
|-----------------------|---------|----------------|
| | H35 | N ₂ |
| Preflow | 0 / 0 | 97 / 205 |
| Cutflow | 13 / 28 | 71 / 150 |



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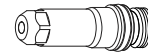
220755



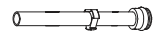
220197



220179



220307



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 | Mix Gas 1 | Mix Gas 2 | mm | Volts | mm | mm/m | mm | Factor % | Seconds |
| H35 | N ₂ | 19 | 51 | 75 | 27 | 32 | 18 | 6 | 156 | 3.5 | 2215 | 7.0 | 200 | 0.3 |
| | | | | | | | | 10 | 158 | | 1615 | | | |
| | | | | | | | | 12 | 159 | 3.0 | 1455 | 6.0 | | |
| | | | | | | | | 15 | 160 | | 1215 | | | |
| | | | | | | | | 20 | 163 | | 815 | | | |

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 | Mix Gas 1 | Mix Gas 2 | in | Volts | in | ipm | in | Factor % | Seconds |
| H35 | N ₂ | 19 | 51 | 75 | 27 | 32 | 18 | 1/4 | 156 | 0.140 | 85 | 0.280 | 200 | 0.3 |
| | | | | | | | | 3/8 | 158 | | 65 | | | |
| | | | | | | | | 1/2 | 159 | 0.120 | 55 | 0.240 | | |
| | | | | | | | | 5/8 | 160 | | 45 | | | |
| | | | | | | | | 3/4 | 163 | | 35 | | | |

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 | 130 |
| Ar | N ₂ | 50 | 10 | 50 | 10 | 15 | 3.0 | 0.12 | 2540 | 100 | 75 |