



## SPRAY TABLE – US SYSTEM

### Acetylene

| WIRE                           | Recommended Hardware <sup>1</sup> |         |       | Pressure (psig)  |                   |                     | Flowmeter Readings |                   |     |                   |                    |                   | Flow                  |                       |                       | Spray Rate (Lbs/Hr) | Spray Distance (inch) | Wire Required <sup>6</sup> (lb/ft <sup>2</sup> (.001 <sup>3</sup> )) | Coverage <sup>6</sup> (ft <sup>2</sup> (.001 <sup>3</sup> )/h) |
|--------------------------------|-----------------------------------|---------|-------|------------------|-------------------|---------------------|--------------------|-------------------|-----|-------------------|--------------------|-------------------|-----------------------|-----------------------|-----------------------|---------------------|-----------------------|--|--|
|                                | Nozzle                            | Air Cap | Gears | Oxy <sup>2</sup> | Acet <sup>2</sup> | Air <sup>2, 3</sup> | Oxy <sup>2</sup>   | Acet <sup>2</sup> | Air | Oxy <sup>12</sup> | Acet <sup>12</sup> | Air <sup>13</sup> | Oxy                   | Acet                  | Air                   |                     |                       |  |  |
|                                |                                   |         |       |                  |                   |                     |                    |                   |     |                   |                    |                   | (ft <sup>3</sup> /hr) | (ft <sup>3</sup> /hr) | (ft <sup>3</sup> /hr) |                     |                       |  |  |
| 1                              | 2                                 | 3       | 4     | 5                | 6                 | 7                   | 8                  | 9                 | 10  | 11                | 12                 | 13                | 14                    | 15                    | 16                    | 17                  | 18                    | 19   | 20   |
| Aluminum <sup>8</sup>          | 3/16                              | EA      | Std   | 33               | 15                | 70                  | 48                 | 48                | 51  | 97                | 50                 | 23.5              | 95                    | 50                    | 1424                  | 16                  | 5-8                   | 0.0144   | 1111   |
|                                | 1/8                               | EC      |       | 30               | 15                | 70                  | 43                 | 40                | 52  | 87                | 40                 | 24                | 83                    | 40                    | 1452                  | 12                  | 5-8                   |  | 833  |
|                                | 11                                | J       |       | 25               | 15                | 60                  | 33                 | 30                | 48  | 67                | 30                 | 22.5              | 60                    | 30                    | 1259                  | 5.5                 | 5-8                   |  | 382  |
|                                | 15                                | M       |       | 25               | 15                | 55                  | 24                 | 24                | 45  | 47                | 22                 | 21                | 42                    | 22                    | 1140                  | 2                   | 5-8                   |  | 139  |
| Aluminum Bronze                | 3/16                              | EA      | Std   | 33               | 15                | 70                  | 48                 | 48                | 53  | 97                | 50                 | 24.5              | 95                    | 50                    | 1480                  | 19                  | 5-8                   | 0.0504   | 382  |
|                                | 1/8                               | EC      |       | 30               | 15                | 70                  | 44                 | 40                | 52  | 91                | 40                 | 24                | 86                    | 40                    | 1452                  | 15                  | 5-8                   |  | 299  |
|                                | 11                                | J       |       | 30               | 15                | 60                  | 38                 | 28                | 46  | 63                | 30                 | 21.5              | 60                    | 30                    | 1206                  | 7.5                 | 5-8                   |  | 146  |
| Babbitt <sup>8, 9</sup>        | 3/16                              | EA      | HS    | 30               | 15                | 70                  | 38                 | 48                | 53  | 69                | 40                 | 24.5              | 65                    | 40                    | 1480                  | 95                  | 5-8                   | 0.0504   | 1875   |
|                                | 1/8                               | EC      |       | 30               | 15                | 65                  | 29                 | 29                | 53  | 46                | 25                 | 24.5              | 44                    | 25                    | 1435                  | 40                  | 5-8                   |  | 799  |
|                                | 3/16                              | EA      |       | 35               | 15                | 70                  | 43                 | 55                | 53  | 85                | 60                 | 24.5              | 85                    | 60                    | 1480                  | 185                 | 5-8                   |  | 3680   |
|                                | 1/8                               | EC      |       | 35               | 15                | 65                  | 28                 | 41                | 53  | 48                | 40                 | 24.5              | 48                    | 40                    | 1435                  | 90                  | 5-8                   |  | 1770   |
| Bond Wire <sup>10</sup>        | 1/8                               | EC      | Std   | 30               | 15                | 70                  | 44                 | 39                | 52  | 91                | 48                 | 24                | 86                    | 48                    | 1452                  | 5                   | 5-8                   | .0432  | 111  |
| Copper                         | 3/16                              | EA      | Std   | 33               | 15                | 70                  | 48                 | 48                | 53  | 97                | 50                 | 24.5              | 95                    | 50                    | 1480                  | 30                  | 5-8                   | 0.0504   | 590  |
|                                | 1/8                               | EC      |       | 30               | 15                | 70                  | 44                 | 40                | 52  | 91                | 40                 | 24                | 86                    | 40                    | 1452                  | 24                  | 5-8                   |  | 486  |
|                                | 11                                | J       |       | 25               | 15                | 60                  | 33                 | 30                | 46  | 67                | 30                 | 21.5              | 60                    | 30                    | 1206                  | 10                  | 5-8                   |  | 201  |
|                                | 15                                | M       |       | 25               | 15                | 60                  | 24                 | 24                | 43  | 47                | 22                 | 20                | 42                    | 22                    | 1127                  | 6                   | 5-8                   |  | 118  |
| Moly <sup>4</sup>              | 3/16                              | EA      | Std   | 35               | 15                | 55                  | 50                 | 35                | 49  | 98                | 38                 | 23                | 98                    | 38                    | 1241                  | 8.5                 | 3.5-6                 | 0.0547   | 153  |
|                                | 1/8                               | EC      |       | 35               | 15                | 55                  | 50                 | 35                | 49  | 96                | 32                 | 23                | 96                    | 32                    | 1241                  | 7.5                 | 3.5-6                 |  | 139  |
|                                | 11                                | J       |       | 30               | 15                | 55                  | 38                 | 28                | 46  | 74                | 30                 | 21.5              | 70                    | 30                    | 1165                  | 4.5                 | 3.5-6                 |  | 83   |
| Stainless <sup>5</sup> (1 - 5) | 3/16                              | EA      | Std   | 33               | 15                | 70                  | 48                 | 45                | 53  | 100               | 46                 | 24.5              | 98                    | 46                    | 1480                  | 16                  | 5-8                   | 0.0461   | 347  |
|                                | 1/8                               | EC      |       | 30               | 15                | 70                  | 44                 | 40                | 50  | 89                | 40                 | 23.5              | 84                    | 40                    | 1396                  | 11                  | 5-8                   |  | 236  |
|                                | 11                                | J       |       | 25               | 15                | 60                  | 33                 | 30                | 48  | 67                | 30                 | 22                | 60                    | 30                    | 1259                  | 7.5                 | 5-8                   |  | 174  |
| Tin <sup>11</sup>              | 1/8                               | EC      | HS    | 30               | 15                | 65                  | 44                 | 24                | 53  | 90                | 20                 | 24.5              | 85                    | 20                    | 1435                  | 40                  | 5-8                   | 0.0504   | 799  |
|                                | 1/8                               | EC      |       | 30               | 15                | 65                  | 42                 | 29                | 53  | 84                | 25                 | 24.5              | 80                    | 25                    | 1435                  | 95                  | 5-8                   |  | 2674   |
| Zinc <sup>8, 9</sup>           | 3/16                              | EA      | Std   | 33               | 15                | 70                  | 48                 | 45                | 51  | 99                | 47                 | 23.5              | 97                    | 47                    | 1424                  | 65                  | 5-8                   | 0.0504   | 1285   |
|                                | 1/8                               | EC      |       | 30               | 15                | 70                  | 45                 | 40                | 53  | 91                | 40                 | 24.5              | 86                    | 40                    | 1480                  | 32                  | 5-8                   |  | 625  |
|                                | 1/8                               | EC      | 30    | 15               | 70                | 45                  | 42                 | 53                | 91  | 40                | 24.5               | 86                | 40                    | 1480                  | 45                    | 5-8                 | 903                   |  |  |
|                                | 11                                | J       | HS    | 25               | 15                | 60                  | 33                 | 30                | 48  | 61                | 30                 | 22.5              | 55                    | 30                    | 1259                  | 20                  | 5-8                   |  | 382  |
|                                | 15                                | M       | 25    | 15               | 60                | 24                  | 24                 | 43                | 47  | 22                | 20                 | 42                | 22                    | 1127                  | 12                    | 5-8                 | 243                   |  |  |
| Zinc/Alum                      | 1/8                               | EC      | Std   | 30               | 15                | 70                  | 45                 | 40                | 51  | 95                | 43                 | 23.5              | 90                    | 43                    | 1424                  | 25                  | 5-8                   | 0.036  | 688  |

**Notes:**

1. Refer to the Gas Head Hardware selection table for additional hardware recommendations before spraying.
2. Columns 5, 6, and 7 show lighting pressure only. After the gun is lit and spraying, adjust the flowmeter needle valves to obtain the flow rates listed in columns 8, 9 and 10 or 11, 12, and 13.
3. Adjust the air for running as well as for lighting to the pressure in column 7.
4. Only Acetylene and MAPP can be used as fuel gases to spray Moly wire.
5. When spraying Stainless wires, if the molten wire tip appears ragged and uneven, correct by reducing oxygen flow by 2 or 3 points.
6. The values in columns 19 and 20 are optimum. They can be obtained by skilled operators with all equipment in first-class condition.
7. When using the fan spray air cap, spray rates will be lower than the chart values.
8. Use non-load nozzle and air cap hardware when using the reference metal in a start-stop operation. Refer to the hardware selection table.
9. For convenience, parameters for both high and reduced spray rates are given in this table for Babbitt, Tin and Zinc.
10. After spraying Bond wire, you can continue to use the EC air cap with any 1/8" overcoat wire at a slightly reduced spray rate. Use the gas flows shown above.
11. When spraying 1/8" Tin wire, use drive rolls and gears for 1/8-3/16 wire size range to avoid crushing the wire.
12. Read all FMR values on the 3GF SCFH scale.
13. Read all FMR values on the 3AF SCFM scale.



## SPRAY TABLE – US SYSTEM

### Propane

| WIRE                           | Recommended Hardware <sup>1</sup> |         |       | Pressure (psig)  |                   |                    | Flowmeter Readings |                   |     |                   |                    |                   | Flow |      |                           | Spray Rate (Lbs/Hr) | Spray Distance (inch) | Wire Required <sup>5</sup> (lb/ft <sup>2</sup> (.001”)) | Coverage <sup>5</sup> (ft <sup>2</sup> (.001”)/h) |                            |                           |
|--------------------------------|-----------------------------------|---------|-------|------------------|-------------------|--------------------|--------------------|-------------------|-----|-------------------|--------------------|-------------------|------|------|---------------------------|---------------------|-----------------------|---|---|----------------------------|---------------------------|
|                                | Nozzle                            | Air Cap | Gears | Oxy <sup>2</sup> | Prop <sup>2</sup> | Air <sup>2,3</sup> | 2GF                |                   | 2AF |                   | 3GF                |                   | 3AF  |      | Oxy (ft <sup>3</sup> /hr) |                     |                       |   |   | Prop (ft <sup>3</sup> /hr) | Air (ft <sup>3</sup> /hr) |
|                                |                                   |         |       |                  |                   |                    | Oxy <sup>2</sup>   | Prop <sup>2</sup> | Air | Oxy <sup>11</sup> | Prop <sup>11</sup> | Air <sup>12</sup> |      |      |                           |                     |                       |   |   |                            |                           |
| 1                              | 2                                 | 3       | 4     | 5                | 6                 | 7                  | 8                  | 9                 | 10  | 11                | 12                 | 13                | 14   | 15   | 16                        | 17                  | 18                    | 19  | 20  |                            |                           |
| Aluminum <sup>7</sup>          | 3/16                              | EA      | Std   | 45               | 40                | 70                 | 69                 | 35                | 53  | 157               | 33                 | 24.5              | 172  | 34   | 1482                      | 16                  | 5-8                   | 0.0144  | 1111  |                            |                           |
|                                | 1/8                               | EC      |       | 50               | 40                | 70                 | 72                 | 33                | 52  | 170               | 32                 | 24.5              | 194  | 33   | 1452                      | 12                  | 5-8                   |   | 833   |                            |                           |
|                                | 11                                | J       |       | 40               | 35                | 60                 | 54                 | 24                | 48  | 114               | 23                 | 22.5              | 120  | 23   | 1260                      | 5.5                 | 5-8                   |   | 382   |                            |                           |
|                                | 15                                | M       |       | 35               | 35                | 60                 | 46                 | 18                | 45  | 95                | 15                 | 21                | 95   | 15   | 1182                      | 2                   | 5-8                   |   | 139   |                            |                           |
| Aluminum Bronze                | 3/16                              | EA      | Std   | 50               | 40                | 70                 | 70                 | 35                | 53  | 158               | 34                 | 24.5              | 180  | 35   | 1482                      | 21                  | 5-8                   | 0.0504  | 403   |                            |                           |
|                                | 1/8                               | EC      |       | 50               | 40                | 70                 | 68                 | 33                | 53  | 153               | 34                 | 24.5              | 175  | 35   | 1482                      | 18                  | 5-8                   |   | 354   |                            |                           |
|                                | 11                                | J       |       | 40               | 35                | 60                 | 54                 | 24                | 48  | 114               | 23                 | 22.5              | 120  | 23   | 1260                      | 8                   | 5-8                   |   | 160   |                            |                           |
| Babbitt <sup>7,8</sup>         | 3/16                              | EA      | HS    | 30               | 30                | 70                 | 60                 | 26                | 53  | 137               | 21                 | 24.5              | 130  | 20   | 1482                      | 95                  | 5-8                   | 0.0504  | 1875  |                            |                           |
|                                | 1/8                               | EC      |       | 25               | 25                | 70                 | 45                 | 17                | 53  | 90                | 28                 | 24.5              | 80   | 12   | 1482                      | 40                  | 5-8                   |   | 799   |                            |                           |
|                                | 3/16                              | EA      |       | 45               | 35                | 70                 | 72                 | 35                | 53  | 169               | 35                 | 24.5              | 185  | 35   | 1482                      | 185                 | 5-8                   |   | 3680  |                            |                           |
|                                | 1/8                               | EC      |       | 25               | 20                | 70                 | 50                 | 22                | 53  | 101               | 20                 | 24.5              | 90   | 17   | 1482                      | 90                  | 5-8                   |   | 1770  |                            |                           |
| Bond Wire <sup>9</sup>         | 1/8                               | EC      | Std   | 50               | 45                | 70                 | 68                 | 35                | 53  | 154               | 35                 | 24.5              | 176  | 38   | 1482                      | 5                   | 5-8                   | .0432   | 111   |                            |                           |
| Copper                         | 3/16                              | EA      | Std   | 50               | 40                | 70                 | 70                 | 35                | 53  | 158               | 34                 | 24.5              | 180  | 35   | 1482                      | 33                  | 5-8                   | 0.0504  | 660   |                            |                           |
|                                | 1/8                               | EC      |       | 50               | 40                | 70                 | 68                 | 33                | 53  | 153               | 34                 | 24.5              | 175  | 35   | 1482                      | 25                  | 5-8                   |   | 521   |                            |                           |
|                                | 11                                | J       |       | 40               | 35                | 60                 | 54                 | 24                | 48  | 114               | 23                 | 22.5              | 120  | 23   | 1260                      | 14                  | 5-8                   |   | 278   |                            |                           |
|                                | 15                                | M       |       | 35               | 35                | 60                 | 46                 | 18                | 43  | 95                | 15                 | 20                | 95   | 15   | 1128                      | 8                   | 5-8                   |   | 160   |                            |                           |
| Stainless <sup>4</sup> (1 - 5) | 3/16                              | EA      | Std   | 55               | 50                | 70                 | 68                 | 38                | 53  | 152               | 37                 | 24.5              | 180  | 42   | 1482                      | 20                  | 5-8                   | 0.0461  | 417   |                            |                           |
|                                | 1/8                               | EC      |       | 55               | 50                | 70                 | 68                 | 36                | 53  | 153               | 35                 | 24.5              | 181  | 40   | 1482                      | 12                  | 5-8                   |   | 264   |                            |                           |
|                                | 11                                | J       |       | 45               | 35                | 70                 | 50                 | 25                | 48  | 89                | 22                 | 24.5              | 97   | 22   | 1338                      | 8                   | 5-8                   |   | 181   |                            |                           |
| Tin <sup>10</sup>              | 1/8                               | EC      | Std   | 25               | 20                | 70                 | 45                 | 17                | 53  | 90                | 15                 | 24.5              | 80   | 12   | 1482                      | 40                  | 5-8                   | 0.0504  | 799   |                            |                           |
|                                | 1/8                               | EC      |       | 25               | 25                | 70                 | 50                 | 22                | 53  | 101               | 19                 | 24.5              | 90   | 17   | 1482                      | 95                  | 5-8                   |   | 2673  |                            |                           |
| Zinc <sup>7,8</sup>            | 3/16                              | EA      | Std   | 45               | 35                | 70                 | 68                 | 32                | 53  | 147               | 30                 | 24.5              | 161  | 30   | 1482                      | 60                  | 5-8                   | 0.0504  | 1125  |                            |                           |
|                                | 1/8                               | EC      |       | 50               | 40                | 70                 | 68                 | 34                | 53  | 153               | 34                 | 24.5              | 175  | 35   | 1482                      | 32                  | 5-8                   |   | 625   |                            |                           |
|                                | 1/8                               | EC      | 50    | 40               | 70                | 68                 | 34                 | 53                | 153 | 34                | 24.5               | 175               | 35   | 1482 | 45                        | 5-8                 | 903                   |   |   |                            |                           |
|                                | 11                                | J       | 40    | 35               | 60                | 54                 | 24                 | 48                | 114 | 23                | 22.5               | 120               | 23   | 1260 | 20                        | 5-8                 | 382                   |   |   |                            |                           |
|                                | 15                                | M       | HS    | 35               | 35                | 60                 | 46                 | 18                | 43  | 195               | 15                 | 20                | 195  | 15   | 1128                      | 12                  | 5-8                   | 243   |   |                            |                           |
| Zinc/Alum                      | 1/8                               | EC      | Std   | 50               | 40                | 70                 | 68                 | 34                | 53  | 154               | 34                 | 24.5              | 176  | 35   | 1482                      | 25                  | 5-8                   | 0.036   | 694   |                            |                           |

**Notes:**

1. Refer to the Gas Head Hardware selection table for additional hardware recommendations before spraying.
2. Columns 5, 6, and 7 show lighting pressure only. After the gun is lit and spraying, adjust the flowmeter needle valves to obtain the flow rates listed in columns 8, 9 and 10 or 11, 12, and 13.
3. Adjust the air for running as well as for lighting to the pressure in column 7.
4. When spraying Stainless wires, if the molten wire tip appears ragged and uneven, correct by reducing oxygen flow by 2 or 3 points.
5. The values in columns 19 and 20 are optimum. They can be obtained by skilled operators with all equipment in first-class condition.
6. When using the fan spray air cap, spray rates will be lower than the chart values.
7. Use non-load nozzle and air cap hardware when using the reference metal in a start-stop operation. Refer to the hardware selection table.
8. For convenience, parameters for both high and reduced spray rates are given in this table for Babbitt, Tin and Zinc.
9. After spraying Bond wire, you can continue to use the EC air cap with any 1/8" overcoat wire at a slightly reduced spray rate. Use the gas flows shown above.
10. When spraying 1/8" Tin wire, use drive rolls and gears for 1/8-3/16 wire size range to avoid crushing the wire.
11. Read all FMR values on the 3GF SCFH scale.
12. Read all FMR values on the 3AF SCFM scale.