

# CFM / PSI / Abrasive Requirements

|                                    |                      | NOZZLE PRESSURE     |                     |                     |                     |                     |                       |                      |                      |       |
|------------------------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|----------------------|----------------------|-------|
| NOZZLE #<br>ORIFICE SIZE           | AIR & ABRASIVE RATES | 50 PSI<br>(3.5 BAR) | 60 PSI<br>(4.1 BAR) | 70 PSI<br>(4.8 BAR) | 80 PSI<br>(5.5 BAR) | 90 PSI<br>(6.2 BAR) | 100 PSI*<br>(6.9 BAR) | 125 PSI<br>(8.6 BAR) | 140 PSI<br>(9.7 BAR) |       |
| <b>#2</b><br>1/8 inch<br>(3.2 mm)  | AIR                  | (cu ft/min)         | 12                  | 13                  | 15                  | 18                  | 19                    | 21                   | 26                   |       |
|                                    |                      | (cu m/min)          | 0.34                | 0.37                | 0.42                | 0.51                | 0.54                  | 0.59                 | 0.74                 |       |
|                                    | ABRASIVE             | (lb/hr)             | 70                  | 80                  | 90                  | 100                 | 110                   | 120                  | 135                  |       |
|                                    |                      | (kg/hr)             | 32                  | 36                  | 41                  | 45                  | 50                    | 54                   | 61                   |       |
| <b>#3</b><br>3/16 inch<br>(4.8 mm) | AIR                  | (cu ft/min)         | 25                  | 30                  | 35                  | 40                  | 43                    | 45                   | 60                   |       |
|                                    |                      | (cu m/min)          | 0.71                | 0.85                | 0.99                | 1.13                | 1.22                  | 1.27                 | 1.70                 |       |
|                                    | ABRASIVE             | (lb/hr)             | 150                 | 170                 | 200                 | 215                 | 240                   | 260                  | 320                  |       |
|                                    |                      | (kg/hr)             | 68                  | 77                  | 91                  | 98                  | 109                   | 118                  | 145                  |       |
| <b>#4</b><br>1/4 inch<br>(6.35 mm) | AIR                  | (cu ft/min)         | 50                  | 55                  | 60                  | 70                  | 75                    | 80                   | 95                   |       |
|                                    |                      | (cu m/min)          | 1.42                | 1.56                | 1.70                | 1.98                | 2.12                  | 2.27                 | 2.69                 |       |
|                                    | ABRASIVE             | (lb/hr)             | 270                 | 300                 | 350                 | 400                 | 450                   | 500                  | 675                  |       |
|                                    |                      | (kg/hr)             | 122                 | 136                 | 159                 | 181                 | 204                   | 227                  | 306                  |       |
| <b>#5</b><br>5/16 inch<br>(8 mm)   | AIR                  | (cu ft/min)         | 80                  | 90                  | 100                 | 115                 | 125                   | 140                  | 190                  | 230   |
|                                    |                      | (cu m/min)          | 2.27                | 2.55                | 2.83                | 3.26                | 3.54                  | 3.96                 | 5.38                 | 6.51  |
|                                    | ABRASIVE             | (lb/hr)             | 470                 | 530                 | 600                 | 675                 | 750                   | 825                  | 1000                 | 1125  |
|                                    |                      | (kg/hr)             | 213                 | 240                 | 272                 | 306                 | 340                   | 374                  | 454                  | 510   |
| <b>#6</b><br>3/8 inch<br>(9.5 mm)  | AIR                  | (cu ft/min)         | 110                 | 125                 | 145                 | 160                 | 175                   | 200                  | 275                  | 315   |
|                                    |                      | (cu m/min)          | 3.12                | 3.54                | 4.11                | 4.53                | 4.96                  | 5.66                 | 7.79                 | 8.91  |
|                                    | ABRASIVE             | (lb/hr)             | 675                 | 775                 | 875                 | 975                 | 1060                  | 1100                 | 1350                 | 1840  |
|                                    |                      | (kg/hr)             | 306                 | 352                 | 397                 | 442                 | 481                   | 499                  | 612                  | 835   |
| <b>#7</b><br>7/16 inch<br>(9.5 mm) | AIR                  | (cu ft/min)         | 150                 | 170                 | 200                 | 215                 | 240                   | 255                  | 315                  | 405   |
|                                    |                      | (cu m/min)          | 4.25                | 4.81                | 5.66                | 6.09                | 6.80                  | 7.22                 | 8.92                 | 11.46 |
|                                    | ABRASIVE             | (lb/hr)             | 900                 | 1000                | 1200                | 1300                | 1400                  | 1510                 | 1800                 | 2540  |
|                                    |                      | (kg/hr)             | 408                 | 454                 | 544                 | 590                 | 635                   | 703                  | 816                  | 1152  |
| <b>#8</b><br>1/2 inch<br>(12.7 mm) | AIR                  | (cu ft/min)         | 200                 | 225                 | 250                 | 275                 | 300                   | 340                  | 430                  | 540   |
|                                    |                      | (cu m/min)          | 5.66                | 6.37                | 7.08                | 7.79                | 8.50                  | 9.63                 | 12.18                | 15.28 |
|                                    | ABRASIVE             | (lb/hr)             | 1200                | 1350                | 1500                | 1700                | 1850                  | 2025                 | 2525                 | 3240  |
|                                    |                      | (kg/hr)             | 544                 | 612                 | 680                 | 771                 | 839                   | 919                  | 1145                 | 1470  |
| <b>#10</b><br>5/8 inch<br>(16 mm)  | AIR                  | (cu ft/min)         | 300                 | 350                 | 400                 | 450                 | 500                   | 550                  | 700                  | 880   |
|                                    |                      | (cu m/min)          | 8.50                | 9.91                | 11.33               | 12.74               | 14.16                 | 15.58                | 19.82                | 24.90 |
|                                    | ABRASIVE             | (lb/hr)             | 1900                | 2200                | 2400                | 2700                | 3000                  | 3300                 | 4000                 | 5200  |
|                                    |                      | (kg/hr)             | 862                 | 998                 | 1089                | 1225                | 1361                  | 1497                 | 1814                 | 2359  |
| <b>#12</b><br>3/4 inch<br>(19 mm)  | AIR                  | (cu ft/min)         | 430                 | 500                 | 575                 | 650                 | 700                   | 800                  | 1100                 | 1255  |
|                                    |                      | (cu m/min)          | 12.18               | 14.16               | 16.28               | 18.41               | 19.82                 | 22.66                | 31.15                | 35.52 |
|                                    | ABRASIVE             | (lb/hr)             | 2700                | 3100                | 3500                | 3900                | 4300                  | 4700                 | 5700                 | 7375  |
|                                    |                      | (kg/hr)             | 1225                | 1406                | 1588                | 1769                | 1950                  | 2132                 | 2586                 | 3345  |

This table is to be used as reference only. Actual results may vary depending on specific abrasive media used. This table is based on abrasive with a bulk density of 100 pounds per cubic foot.

## \*100 PSI Min / Reduce CFM Required



Most abrasive blast equipment requires a minimum pressure of 100 PSI in order for the control system to function properly. To maintain the 100 PSI minimum and lower the CFM requirement of blasting, a pressure regulator can be installed downstream of the control air connection. Example: if blasting with a #5 nozzle, the CFM requirement can be lowered from 140 to 115 by regulating the pressure to 80 PSI.

## Respirator Requirements



When calculating your CFM requirements, the air used by each respirator must be taken into account. A general rule is each respirator will require an additional **6-16 CFM**. PSI and type of control device will affect the CFM used. Consult the owners manual for your respirator for more on specific PSI and CFM requirements



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