# V-Cone Application Sizing

| | |
|---|---|
| Serial # | 99-0582 |
| Tag | |
| Model | VP0CQE44N2 |
| Job Ref. | JB4012 |

| | |
|---|---|
| Fluid State | LIQUID |
| Fluid | Water , WATER |
| End User | ARGONNE LABS |

| | |
|---|---|
| Description | 3/4" V-CONE |
| Note | |

| | |
|---|---|
| Mktg. Code | |
| | |

| | | |
|---|---|---|
| $C_f$ | 0.8105 | |
| $P_f$ | 120.0 | psiG |
| $T_f$ | 90.0 | °F |
| $\rho$ | 62.00 | lb/ft3 |
| $\mu$ | 0.7827 | cP |
| G | | |
| Z | | |
| Y | | |
| k | | |
| $C_P$ | | |
| Mw | 18.015 | |
| $P_b$ | | |
| $T_b$ | | |
| $Z_b$ | | |
| $P_{baro}$ | 14.696 | psiA |
| $P_c$ | 3198.8 | psiA |
| $T_c$ | 1164.8 | °R |
| $F_a$ | 1.000 | |
| aPE | D 9.5e-06 | d 9.5e-06 ⇐ |
| $P_v$ | 0.6991 | psiA |

⇐ Entered value.

| | | | | |
|---|---|---|---|---|
| q | max. Flowrate | 30 | GPM |
| Re | max. Reynolds | 7.552e+04 | |
| V | max. Velocity | 4.823 | fps |
| $\Delta P$ | max. Dp | 62.128 | inWC |
| $\Delta P$ | min. Dp | 0.62128 | inWC |
| D | Meter I.D. | 1.5940 | in |
| d | Cone O.D. | 1.3250 | in |
| $\beta$ | Beta Ratio | 0.5559 | |
| | Turn Down | 10 | |

| | |
|---|---|
| McCrometer Cal. | |
| Third Party Cal. | |
| Dye. Pen. Exam. | |
| Hydro. Test | |
| X-Ray Exam. | |
| Mag. Part. | |
| PMI | |
| CMTR Copies | |
| McCrometer Eng. | MBB |

| | Re | Velocity fps | Gas. Exp. Y | $\Delta P$ inWC | Flowrate GPM |
|---|---|---|---|---|---|
| 1 | 7.552e+04 | 4.8232 | | 62.128 | 30.000 |
| 2 | 6.797e+04 | 4.3409 | | 50.323 | 27.000 |
| 3 | 6.042e+04 | 3.8586 | | 39.762 | 24.000 |
| 4 | 5.286e+04 | 3.3762 | | 30.443 | 21.000 |
| 5 | 4.531e+04 | 2.8939 | | 22.366 | 18.000 |
| 6 | 3.776e+04 | 2.4116 | | 15.532 | 15.000 |
| 7 | 3.021e+04 | 1.9293 | | 9.9406 | 12.000 |
| 8 | 2.266e+04 | 1.4470 | | 5.5915 | 9.0000 |
| 9 | 1.510e+04 | 0.96464 | | 2.4852 | 6.0000 |
| 10 | 7552 | 0.48232 | | 0.62128 | 3.0000 |

Table based on one flow condition (P, T ...)

| | |
|---|---|
| Record Start Date | 04-27-1999 |
| Print Date | 05-24-1999 |

McCROMETER