# V-Cone Application Sizing

| | |
|---|---|
| Serial # | 98-1906 |
| Tag | |
| Model | VP01QC44N1 |
| Job Ref. | JB4627 |

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

| | |
|---|---|
| Description | 1" V-Cone, all 304 SS. |
| Note | |

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

| | | |
|---|---|---|
| $C_f$ | 0.8659 | |
| $P_f$ | 120 | psiG |
| $T_f$ | 90 | °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 6.7e-06 | d 6.7e-06 |
| $P_v$ | 0.6991 | psiA |
| $P_{loss}$ | 8.579 | psiA |

⇐ Entered value.

| | | | |
|---|---|---|---|
| q | max. Flowrate | 20 | GPM |
| Re | max. Reynolds | 7.643e+04 | |
| V | max. Velocity | 7.410 | fps |
| $\Delta P$ | max. Dp | 321.58 | inWC |
| $\Delta P$ | min. Dp | 3.2158 | inWC |
| D | Meter I.D. | 1.0500 | in |
| d | Cone O.D. | 0.93840 | in |
| $\beta$ | Beta Ratio | 0.4486 | |
| | Turn Down | 10 | |

| | |
|---|---|
| McCrometer Cal. | MC 1500# |
| Third Party Cal. | |
| Dye. Pen. Exam. | |
| Hydro. Test | |
| X-Ray Exam. | |
| Mag. Part. | |
| PMI | |
| CMTR Copies | ✓ |
| McCrometer Eng. | JAM |

| | Re | Velocity fps | Gas. Exp. Y | $\Delta P$ inWC | Flowrate GPM |
|---|---|---|---|---|---|
| 1 | 7.643e+04 | 7.4104 | | 321.58 | 20.000 |
| 2 | 6.879e+04 | 6.6694 | | 260.49 | 18.000 |
| 3 | 6.115e+04 | 5.9283 | | 205.82 | 16.000 |
| 4 | 5.350e+04 | 5.1873 | | 157.58 | 14.000 |
| 5 | 4.586e+04 | 4.4462 | | 115.77 | 12.000 |
| 6 | 3.822e+04 | 3.7052 | | 80.397 | 10.000 |
| 7 | 3.057e+04 | 2.9642 | | 51.453 | 8.0000 |
| 8 | 2.293e+04 | 2.2231 | | 28.943 | 6.0000 |
| 9 | 1.529e+04 | 1.4821 | | 12.863 | 4.0000 |
| 10 | 7643 | 0.74104 | | 3.2158 | 2.0000 |

Table based on one flow condition (P, T ,Z , k ...) V40 Version 1.20

| | |
|---|---|
| Record Start Date | 12-01-1998 |
| Print Date | 05-21-2002 |

k1 = 8.5824e-03
k2 =
k3 =

McCROMETER