

V-Cone Flow Meter Flow Formulas

Insertion Device # 13

Base Formula : $Q_{\text{gpm}} = 5.6748766 D^2 \beta^2 C_d (\Delta P)^{1/2} / (1-\beta^4)^{1/2}$

| Component | Meter I.D. (D) | Beta Ratio (β) | Discharge Coeff (Cd) | Formula |
|------------------|---------------------------|---------------------------|---------------------------------|--|
| BPM1-F | 0.438 | 0.532 | 0.8223 | $Q_{\text{gpm}} = 0.26417(\Delta P)^{1/2}$ |
| FM1-F | 0.656 | 0.701 | 0.8049 | $Q_{\text{gpm}} = 1.10906(\Delta P)^{1/2}$ |
| PS1-F | 0.656 | 0.701 | 0.8090 | $Q_{\text{gpm}} = 1.11471(\Delta P)^{1/2}$ |
| BPM2-F | 0.438" | 0.532 | 0.8179 | $Q_{\text{gpm}} = 0.26276(\Delta P)^{1/2}$ |
| FM2-F | 0.656" | 0.769 | 0.7852 | $Q_{\text{gpm}} = 1.40618(\Delta P)^{1/2}$ |
| PS2-F | 0.656" | 0.701 | 0.8110 | $Q_{\text{gpm}} = 1.11747(\Delta P)^{1/2}$ |