

# V-Cone Flow Meter Flow Formulas

Insertion Device # 19

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	0.8170	$Q_{\text{gpm}} = 0.26247(\Delta P)^{1/2}$
FM1-F	0.656"	0.769	0.7784	$Q_{\text{gpm}} = 1.39400(\Delta P)^{1/2}$
PS1-F	0.656"	0.701	0.8035	$Q_{\text{gpm}} = 1.10713(\Delta P)^{1/2}$
BPM2-F	0.438"	0.532	<del>0.8136</del> 0.8241	$Q_{\text{gpm}} = \frac{0.26138}{0.26475}(\Delta P)^{1/2}$
FM2-F	0.656"	0.769	0.7741	$Q_{\text{gpm}} = 1.38630(\Delta P)^{1/2}$
PS2-F	0.656"	0.701	0.7990	$Q_{\text{gpm}} = 1.10093(\Delta P)^{1/2}$