

Airpinch™ Pinch Valves Dimensions

Airpinch™ pinch valves sizes are identified by the internal diameter of the rubber sleeve and do not necessarily indicate the end cap thread size. Housing length dimensions include end caps. All valve specifications are approximate.

Valve	Housing Length	Valve O.D.	End Cap Threads	Control Inlet
1/4"	3.5"	1.25"	1/4"	1/8"
3/8"	2.875"	1.75"	1/4", 3/8"	1/8"
5/8", 3/4"	4"	2.25"	3/4", 1"	1/4"
1"	5.5"	3.5"	1"	1/4"
1 1/4"	5.5"	3.5"	1 1/4"	1/4"
1 1/2"	7"	4"	1 1/2"	3/8"
2"	10"	6.25"	2"	3/8"

Pinch Valve Flow Capacities

Airpinch™ pinch vales have high flow capacity, which is measured by the flow coefficient or Cv - which is defined as the flow rate of water in gallons per minute at a pressure drop on one pso through the valve.

Cv Values								
Valve (i.d)	1/4"	3/8"	5/8"	3/4"	1"	1 1/4"	1 1/2"	2"
Cv	2	5	15	27	55	85	98	220

Coefficient Formula

$$Cv = Q \times \sqrt{\frac{SpGr}{\Delta P}}$$

Q = GPM

SpGr = Specific gravity of controlled liquid (H₂O=1)

ΔP = Pressure drop through valve

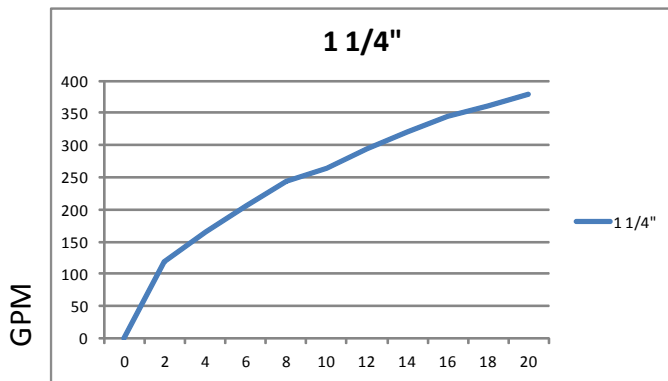
For gravity or low head pressure, CV does not apply.

Flow Rates

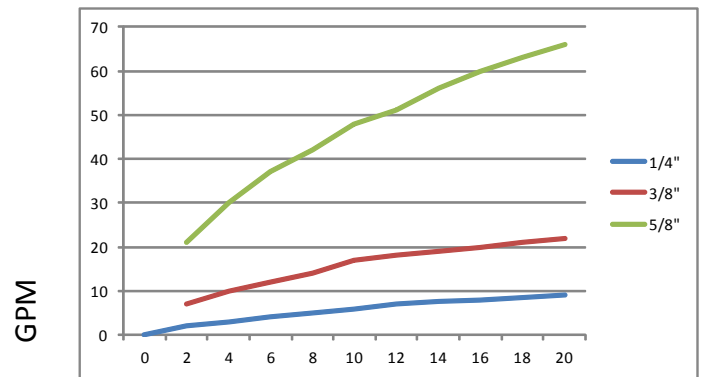
The flow coefficient (Cv) is not the maximum flow capacity in gallons per minute. The maximum flow rate is much higher than the Cv value, as is determined in the example below.

EXAMPLE: Compute flow rate (gpm) for water: (SpGr=1), using the 5/8" pinch

$$Q = \sqrt{(Cv)^2 (\Delta P)} = \sqrt{(15)^2 (10)} = 47.43 \text{ gpm}$$



ΔP (pressure drop)



ΔP (pressure drop)

NOTE: It is the responsibility of the user to determine suitability of sleeve material for any particular control application.