

Flow Capacities at Recommended Flow Velocities

The nomogram below is provided as an aid in determining the correct hose size.

How to use the nomogram: Determine the proper flow rate your system requires, then connect a straight edge from the selected flow rate to the recommended velocity range. The required hose I.D. will appear at the intersection of the straight edge and the center column. If the straight edge passes through the scale between sizes listed, use the next larger I.D. hose.

Example: Locate 16 gallons per minute in the left-hand column and 20 feet per second (fps) in the right-hand column (the maximum recommended velocity range for pressure lines). Lay a straight edge

across these two points. The inside diameter required is shown in the center column at or above the straight edge. In this case, we need a hose I.D. of 0.625 (5/8") inch (or larger).

Use the same procedure for suction or return lines, except utilizing their respective maximum recommended velocities.

The nomogram is based on the following formula:

$$D = \sqrt{\frac{Q \times 0.4081}{V}}$$

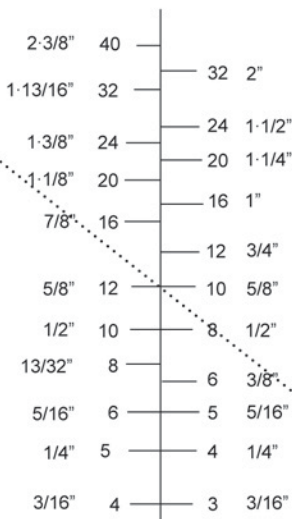
Where: Q = Flow in Gallons per Minute (gpm)
 V = Velocity in Feet per Second (fps)
 D = Hose Inside Diameter (inches)

Flow
Gallons per Minute

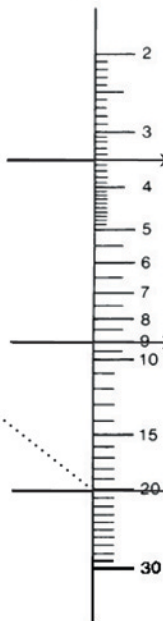


Inside Diameter of Hose
Inch / Dash Size

20, 21, 22, 23, All Others
Group XV, 90, 91



Velocity
Feet per Second



Maximum Recommended Velocity for
Suction Lines

Maximum Recommended Velocity for
Return Lines

Maximum Recommended Velocity
for Pressure Lines