

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

Problem:

At 16 gallons per minute (gpm), what is the proper hose size for pressure lines?

Solution:

Locate 16 gallons per minute in the left-hand column and 20 feet per second 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 of 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 (ft/sec)
 D = Hose Inside Diameter (inches)

