READING THE PUMP CURVE

You must know the following data:

1. Required discharge pressure.
2. Air pressure available at the air inlet of the pump.
3. Required flow rate.

TO OBTAIN DISCHARGE PRESSURE:

Using the performance chart for a 1/2" pump shown: If 80 psi is available at the air inlet and the required capacity of the pump is 6 GPM. Follow the blue concave curve at 80 psi (1) as it slopes to the right and intersects with the 6 GPM vertical line (2) By tracking horizontally back to the left (Y) axis, the discharge pressure is ascertained—65 psi (3). (Right axis converts PSI to feet/meters).

TO OBTAIN REQUIRED AIR INLET PRESSURE:

Reverse the steps above:
Choose required discharge pressure (65 psi) (3) on left (Y) axis, go directly across the graph to the intersection of the correct flow rate (6 GPM) (2), then track up and back toward the left (Y) axis along the blue curve; and the correct required air pressure can be obtained (80 psi). (1)

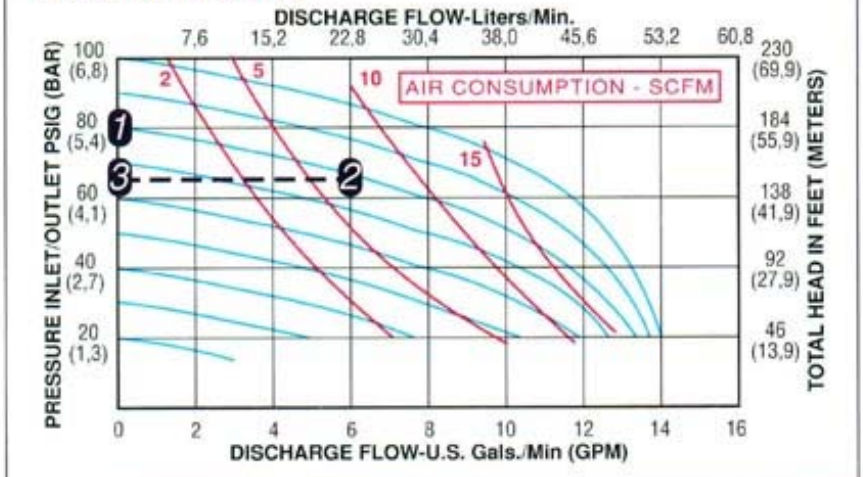
Note: If greater outlet pressure vs. air inlet pressure is required—select a larger pump.

TO OBTAIN AIR CONSUMPTION:

The convex red lines represent the air consumption (standard cubic feet per minute), and the closest red line to where the blue line and the flow rate intersect (2) represents the air capacity required. On our example, the air consumption would be approximately 6 SCFM.

To convert SCFM to m³/h (N) multiply by 1.7

Performance Chart



INSTALLATION

1. A lube-free, clean, dry compressed air source (or any non-flammable, compressed gas) is recommended. Use a filter that is capable of filtering out particles larger than 50 microns.

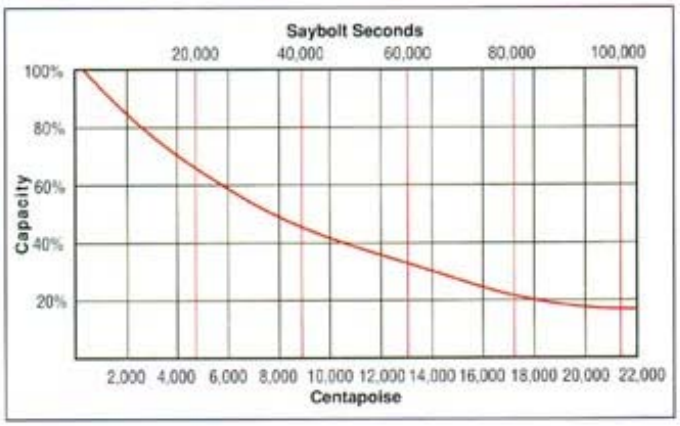
2. Pumps should be mounted in an upright position with the exception of the 1/4" models or any pump with Max-Pass™ valves. These pumps can be mounted in any position.

3. Install a particle fluid filter on the fluid suction line when particles in the fluid exceed the maximum particle size specification of the pump or particles are sharp enough to cut the diaphragms.

4. Never restrict fluid suction lines by means of a reduced pipe size (smaller than pump inlet size) or control the pump with valves on the fluid inlet side of the pump.

5. Limit fluid inlet pressure to 10 PSIG or (.68 BAR)

HIGH VISCOSITY APPLICATIONS



As you can see from the diagram above, as viscosities increase, the capacity of the pump decreases. Do not exceed 22,000 centapoise or 100,000 saybolt seconds on all 3/8" up to 3" pumps. Do not exceed 4,000 centapoise or 18,000 saybolt seconds on 1/4" models.

Some points to remember when pumping high viscosities:

1. Position the pump close to or below the level of the fluid source.
2. Suction lines should be increased in size—up to three times the size of the pump manifold inlet. Dual manifolds may be used when available.
3. Start the pump slowly using a control valve on the air line.
4. Maximum air pressure required is reached when increasing the air pressure does not increase the flow rate.
5. If greater capacity is required, select a larger pump.