Model Number R03S

3.5 Gallon ASME Steel Receiver Tank
2:1 Maximum Pressure Boost
Supply Pressure of 15 to 150 psig
Self-Relieving Maximum Discharge Pressure Regulator
Discharge Pressure of 15 to 230 psig
Temperature Range of 40-130 °F
100% Duty Cycle
Approximate Weight of 45 Pounds

MODEL R03S FEATURES
A. Inlet pressure gauge
B. Built-in pressure regulator
C. Discharge pressure gauge
D. 1/2" FNPT inlet filter
E. Exhaust silencer
F. 235 psig ASME safety relief valve
G. 3.5 gallon, 350 psig ASME tank
H. 1/2" FNPT discharge port
I. 1/4" FNPT condensate drain valve
J. Four 1/2" diameter mounting holes

Dimensions are in inches
The Bootstrap Compressor is an air-driven, air pressure booster. It requires no electricity, cooling water, or air-line lubricator and is explosionproof. Shop air is fed to the inlet port through a filter, and is split into two streams inside the booster. One stream flows to the compressor portion of the unit and is boosted to higher pressure. The other stream drives the compressor portion, and is consumed during booster operation. The drive air stream is regulated to maintain the discharge pressure set by the external regulator handle. Drive air consumption is approximately 1/2 to 1 times the amount of pressure-boosted air. For example, if 10 scfm of high pressure air is required, the Bootstrap Compressor will need 15-20 scfm of shop air, and 5-10 scfm of that air will be vented through an exhaust silencer. For a given shop air pressure, Model R03S can deliver high pressure air at any flowrate up to the maximum shown on the flow curves below. The pressure regulator enables the booster to adjust automatically to changes in high pressure air demand or shop air pressure. When there is no demand for high pressure air, the booster stalls at the discharge pressure set by the regulator and consumes no energy. When there is a need for high pressure air, the tank pressure drops which causes the booster to restart automatically.

**Reading the Graph**

Use the curves to the left to determine the Model R03S air pressure booster maximum discharge flowrate for a given set of operating conditions. In the example shown above, a maximum discharge pressure of 110 psig is desired and 80 psi supply air is available. Follow the 110 psi line until it intersects with the 80 psi supply air curve. Draw a vertical line from the intersection down to the bottom line to determine the maximum flowrate of 50 scfm. The booster can operate at any flowrate from zero to maximum flowrate. It will automatically adjust its operating speed as long as the required flowrate is in this range.

**Specifications and Operation**

The Bootstrap Compressor is an air-driven, air pressure booster. It requires no electricity, cooling water, or air-line lubricator and is explosionproof. Shop air is fed to the inlet port through a filter, and is split into two streams inside the booster. One stream flows to the compressor portion of the unit and is boosted to higher pressure. The other stream drives the compressor portion, and is consumed during booster operation. The drive air stream is regulated to maintain the discharge pressure set by the external regulator handle. Drive air consumption is approximately 1/2 to 1 times the amount of pressure-boosted air. For example, if 10 scfm of high pressure air is required, the Bootstrap Compressor will need 15-20 scfm of shop air, and 5-10 scfm of that air will be vented through an exhaust silencer. For a given shop air pressure, Model R03S can deliver high pressure air at any flowrate up to the maximum shown on the flow curves below. The pressure regulator enables the booster to adjust automatically to changes in high pressure air demand or shop air pressure. When there is no demand for high pressure air, the booster stalls at the discharge pressure set by the regulator and consumes no energy. When there is a need for high pressure air, the tank pressure drops which causes the booster to restart automatically.