

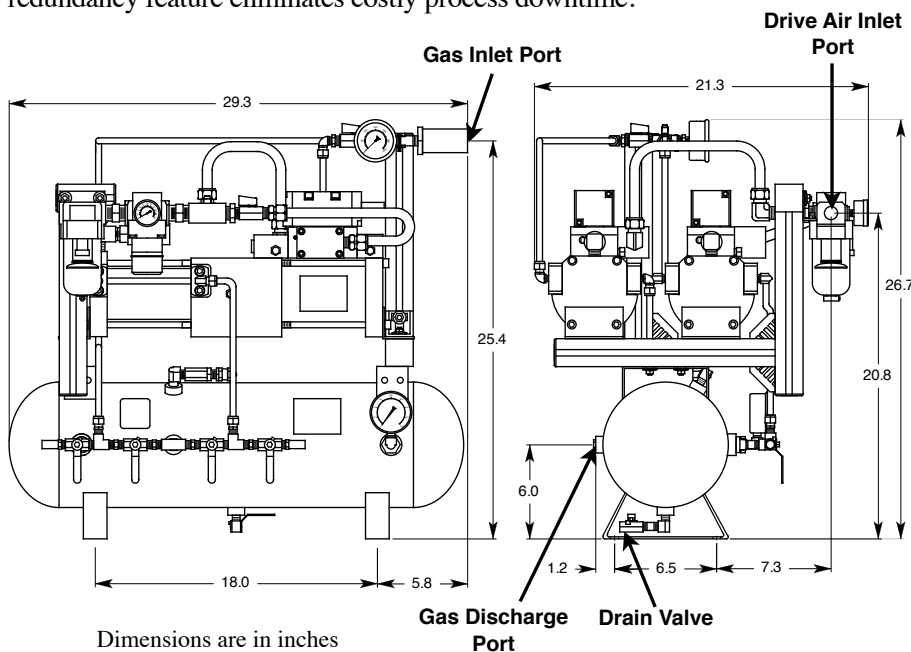
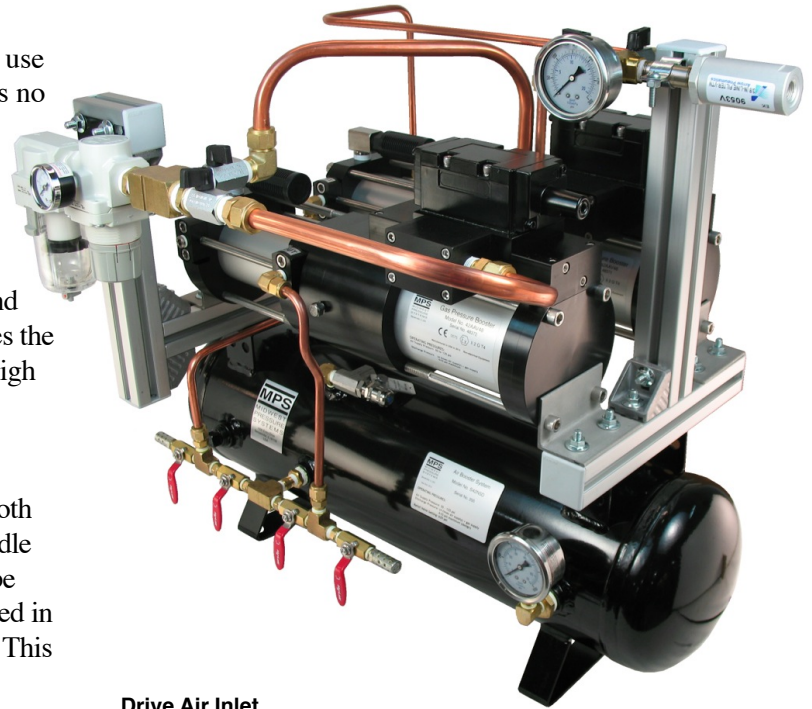
Model Number S42N5D

5/1 Dual Gas Pressure Booster System on a 5.5 Gallon Tank

The S42N5D dual gas pressure booster system uses shop air to boost the pressure of an air or gas stream. The drive air piston reciprocates automatically and drives the gas compressor piston. The boosters are unlubricated, and use filled Teflon® piston seals and rod seals. They require no electricity, cooling water, air-line lubricator, and are explosionproof.

The boosted gas flowrate and discharge pressure can be controlled by throttling the drive air flowrate and/or regulating the drive air pressure. When there is no demand for high pressure gas, the system will stall when it reaches the maximum discharge pressure. When there is a need for high pressure gas the pressure in the discharge line drops, and causes the system to restart automatically.

The S42N5D can be operated using a single booster or both boosters in unison. During single booster operation, the idle booster can be isolated and depressurized allowing it to be either removed from the system for maintenance, or placed in a stand-by mode when higher flowrates are not required. This redundancy feature eliminates costly process downtime.



MODEL S42N5D FEATURES

- 3/4" NPT female drive air inlet port
- 3/8" NPT female gas inlet port
- 1/2" NPT female gas discharge port
- 1/4" NPT drain valve
- Shop drive air supply inlet filter
- Shop drive air supply pressure regulator
- Gas supply inlet filter
- Shop drive air, gas inlet, and gas discharge pressure gauges
- 5.5 gallon, 625 psig ASME receiver tank
- 625 psig safety relief valve
- Exhaust mufflers
- Dual or single booster operation

MODEL S42N5D SPECIFICATIONS

- Capable of 100% duty cycle
- Shop drive air pressure range: 30-125 psig
- Discharge pressure range: 30-610 psig
- Flowrates of up to 16 scfm
- Approximate weight of 120 pounds

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Midwest Pressure Systems, Inc.

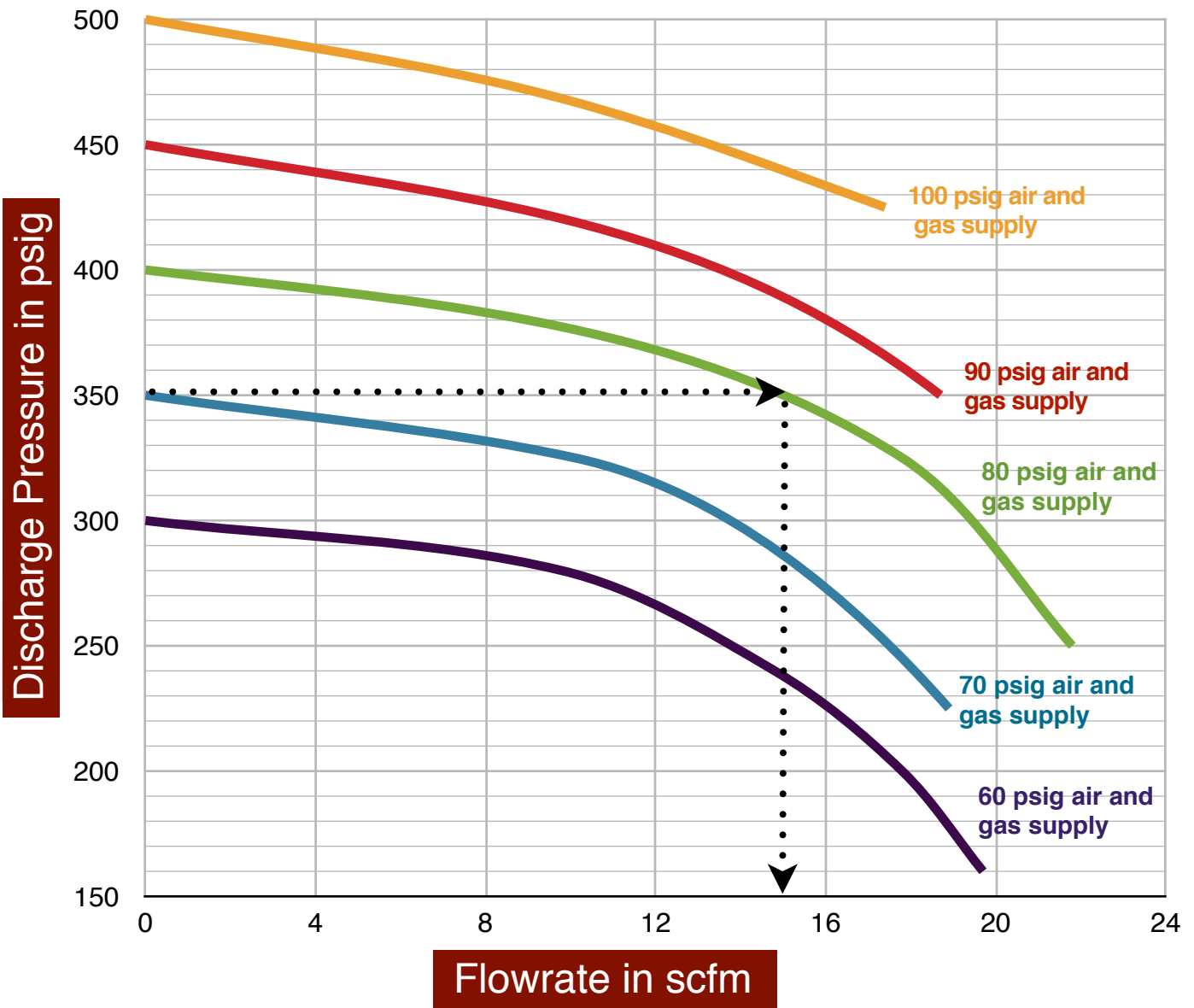
1035 Entry Drive, Bensenville, IL 60106

Phone 630-766-6049 Fax 630-766-6236

www.midwestpressuresystems.com

S42N5D Discharge Pressure vs Flowrate

Shop drive air pressure and gas supply pressure are the same.



Use the graph above to determine the maximum discharge flowrate for the S42N5D booster system for dual booster operation given a set of operating conditions. In the example shown above, a maximum discharge pressure of 350 psig is desired and 80 psig drive air and 80 psig gas supply are available. Follow the 350 psig line until it intersects with the 80 psig curve. Draw a vertical line from the intersection down to the

bottom line to determine the maximum flowrate of 14.8 scfm. During single booster operation the maximum flowrate is approximately half of the flowrate found on the graph (7.4 scfm). The system can operate at any flowrate from zero to the maximum flowrate. The boosters will automatically adjust their operating speed as long as the required flowrate is in this range.



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