

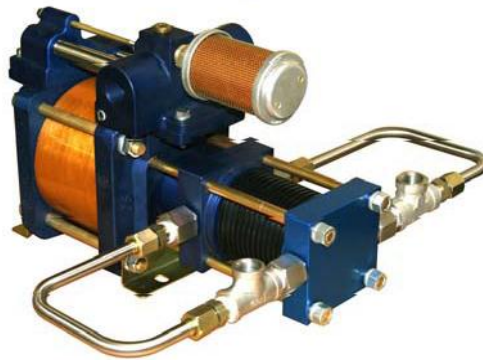


Designers and Manufacturers of Hydraulic and Pneumatic Equipment

## **SC HYDRAULIC ENGINEERING CORPORATION**

1130 Columbia Street - Brea, California 92821 - USA • Phone (714) 257-4800 - Fax (714) 257-4810

# **AB/ABD AIR BOOSTERS & SYSTEMS**



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800.696.6165

[www.comoso.com](http://www.comoso.com)



## *A "High Pressure" History...*

An innovator and pioneer in the field of hydraulic engineering, SC Hydraulic has been manufacturing air-driven liquid pumps for more than a half of a century.

Founded in 1953 by Bob Vedder and Willie Mohler, the company started with only a few core products. Basically air-driven liquid pumps. Today, SC Hydraulic's product line has expanded to include an extensive collection of air and gas boosters, power units, systems and selected high-pressure valves.



The product line remained stable through the 1980s seeing successful operation in an ever-increasing number of installations and applications, while sales grew through an expansion of distribution.

Under the leadership of Bob Vedder's daughter, Donna Perez, SC Hydraulic operates a state-of-the-art 65,000 square-foot facility in Brea, California, and is well prepared for future growth and innovation.

## *Where Hydraulic Force Meets Custom Engineering*

With products capable of achieving pressures exceeding 70,000 psig, SC Hydraulic Engineering Corp. is a force to be reckoned with in the field of hydraulic engineering.

SC Hydraulic manufactures a vast array of air-operated hydraulic pumps and boosters for a variety of industries. In addition to our current line of hydraulic products, we can work with you to custom design products to fit the exact specifications of your applications.

An international leader in hydraulic engineering, SC Hydraulic is staffed with educated and certified engineers. They are continually developing new products which are in sync with newly emerging applications, both in the United States and abroad.



*In a 65,000 square foot facility, SC Hydraulic is capable of setting the industry's highest standard while maintaining the best delivery times*

## *For Fluid Power...*

Contact SC Hydraulic today, to find out more about our capabilities or for a technical data sheet.

# AB & ABD SERIES AIR BOOSTERS

SC Hydraulic Engineering offers a complete selection of air boosters for almost any application. From economical compact single-acting two and four-to-one models to double-acting two and five-to-one models we can size a unit or system to fit your exact requirement.

The principle of the air booster works much the same as our liquid pumps in which a larger air drive piston is directly connected to a smaller pumping piston. The incoming air from the compressor drives the booster and also feeds the supply to the unit.

Pressures can be boosted up to 500 psi on the single-acting AB-4 and as much as 850 psi on our double-acting ABD-5.



All SC air boosters are pre-lubricated at the factory and should not be used with inline air lubricators. Clean, dry air is very important as any grit, moisture, or foreign matter in the air supply can damage the high pressure components. A coalescing filter is recommended before the air supply and air drive inlet, which can be the same.

Typically, air boosters are used to build up pressures for static holding applications. Under normal, intermittent duty, the air cycling valve should be inspected and re-lubricated after 500,000 cycles. For continuous operation the booster should not be operated at more than 40 cycles per minute and should be inspected and re-lubricated every 150,000 cycles or 60 operating hours.

## Typical Applications

- Extra force for small air clamps, roll tensioners, assembly machines and air presses.
- Top off and maintain pressure in die cushions.
- Release spring actuated brakes
- Top off high pressure tires.
- Increase marginal air pressure to valve actuators.
- Increase maximum torque on small air tools.
- Engine air starter systems.

In addition SC Hydraulic Engineering offers four standard air booster systems, which include an air booster, air controls, pressure gauges, high pressure receiver tank., safety relief and high pressure regulator.



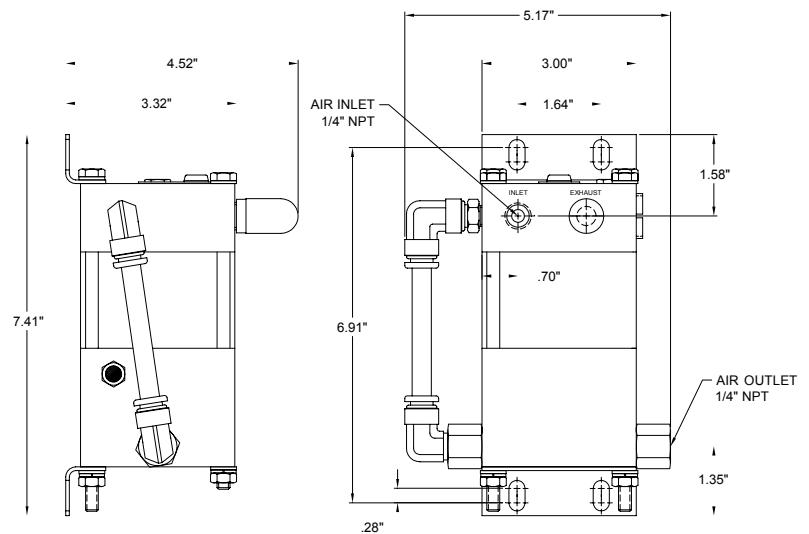
Custom booster systems are also available with multiple boosters, special tanks, custom skids, and more. In most cases a custom booster system can be designed, manufactured, tested and shipped in four weeks or less; usually in less time than our competition can ship a standard unit.

Contact us direct, or one of our qualified distributors, with your specific requirements and let us help you with any of your air booster applications.

# AB-2 & AB-4 SERIES

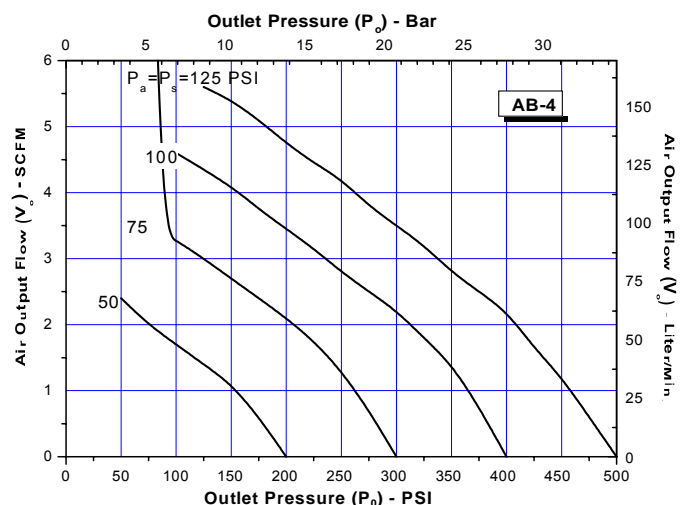
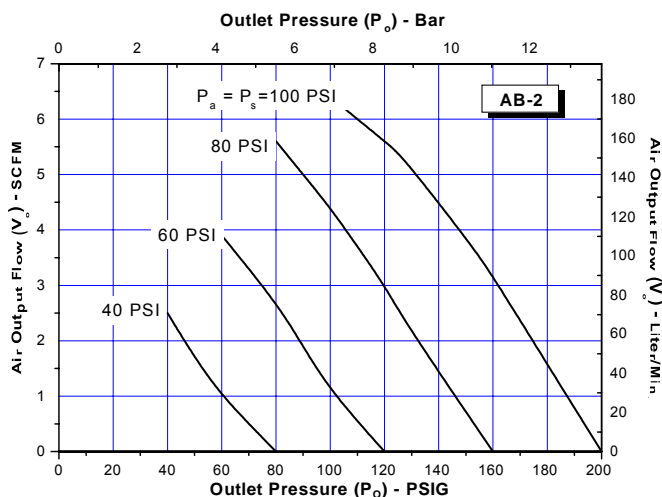
The AB Series air booster is a compact, single-acting unit available in 2:1 or 4:1 ratios. This booster is an inexpensive alternative for applications requiring 100-500 psi static holding pressures when low flow is acceptable.

The air drive and supply are the same so no extra plumbing is required and no electrical connections are needed. The compact and lightweight size, and ability to operate in any position, has broad appeal for in-plant, mobile machinery, and OEM applications. The units are pre-lubricated therefore air line lubrication is not required.



## MODEL SELECTION CHART

Model No.	Maximum Rated Air Supply (Ps)	Maximum Rated Air Outlet (Po)	Connection Ports			Static Outlet Stall Pressure	Actual Area Ratio	Displacement Per Stroke (in3 per cycle)
			Air Drive	Air Inlet	Air Outlet			
AB-2	150 psig	300 psig	1/4" NPT			2 Pa	2:1	2.9
	10.3 bar	21 bar						
AB-4	150 psig	600 psig	1/4" NPT			4 Pa	4:1	1.4
	10.3 bar	41 bar						



# ABD-2 & ABD-5 SERIES



**ABD-2 2:1 Ratio Air Booster**

The ABD-2 and ABD-5 are double-acting, single stage air boosters in 2:1 and 5:1 ratios. These boosters can supply equipment with added air pressure when plant supplies are depleted due to overuse or under-sizing. The volume available from the boosters is ample for most equipment applications or units can be paralleled for additional capacity.

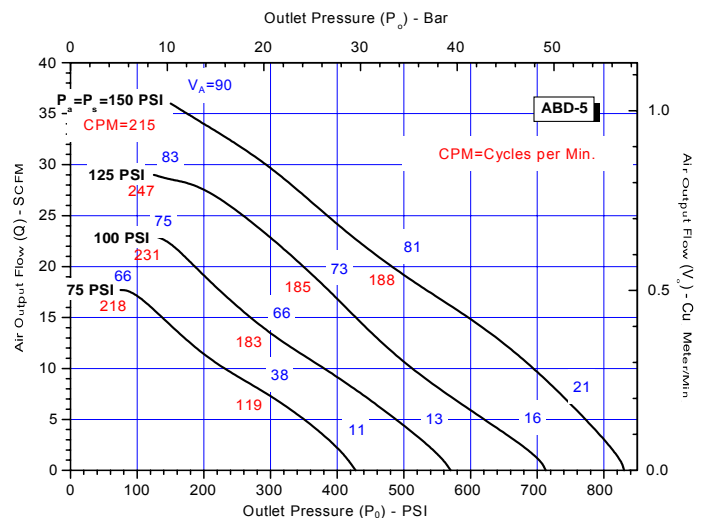
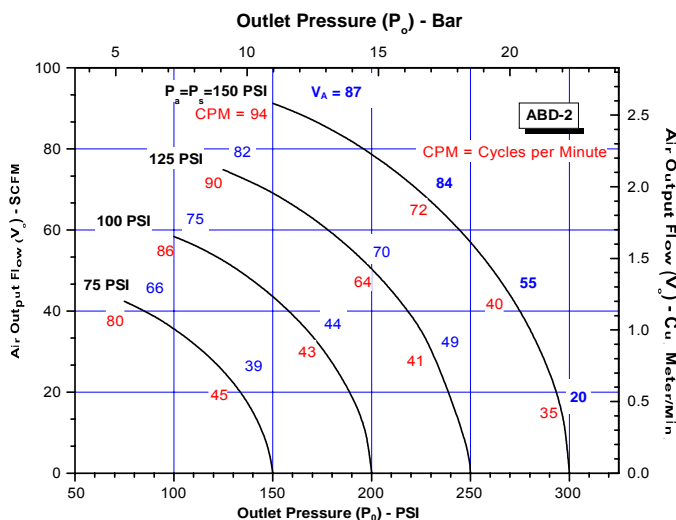


**ABD-5 5:1 Ratio Air Booster  
Shown with Cooling Jacket**

Applications requiring constant cycling should be sized so that the speed of operation does not exceed 40 cycles per minute (CPM). The easiest way to determine if an application meets or exceeds the recommended operating procedures is to fill out the data worksheet on Page 10 OR 11 of the catalog and e-mail ([service@schydraulic.com](mailto:service@schydraulic.com)) or fax (714-257-4810) it to our customer service department for sizing assistance.

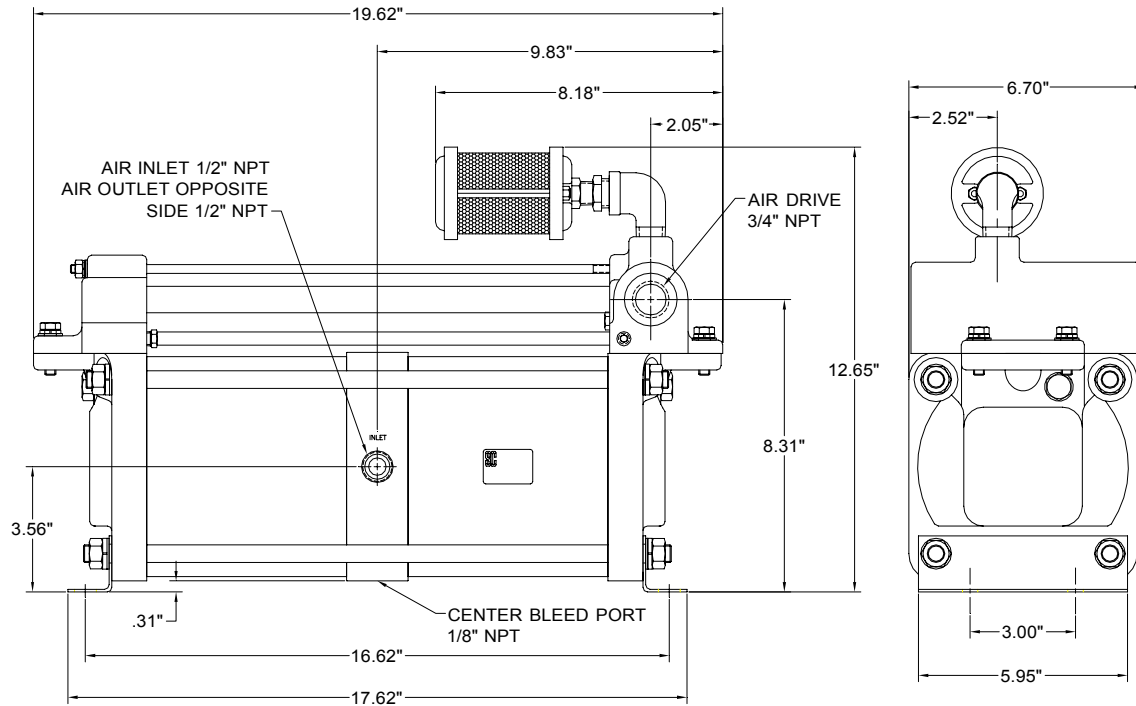
## MODEL SELECTION CHART

Model No.	Maximum Rated Air Supply (Ps)	Maximum Rated Air Outlet (Po)	Connection Ports			Static Outlet Stall Pressure	Actual Area Ratio	Displacement Per Stroke (in3 per cycle)
			Air Drive	Air Inlet	Air Outlet			
ABD-2	150 psig	300 psig	3/4" NPT	1/2" NPT	1/2" NPT	Pa + Ps	2:1	223
	10.3 bar	21 bar						
ABD-5	150 psig	855 psig	3/4" NPT	1/2" NPT	1/2" NPT	4.7 Pa + Ps	4.7:1	28.2
	10.3 bar	59 bar						

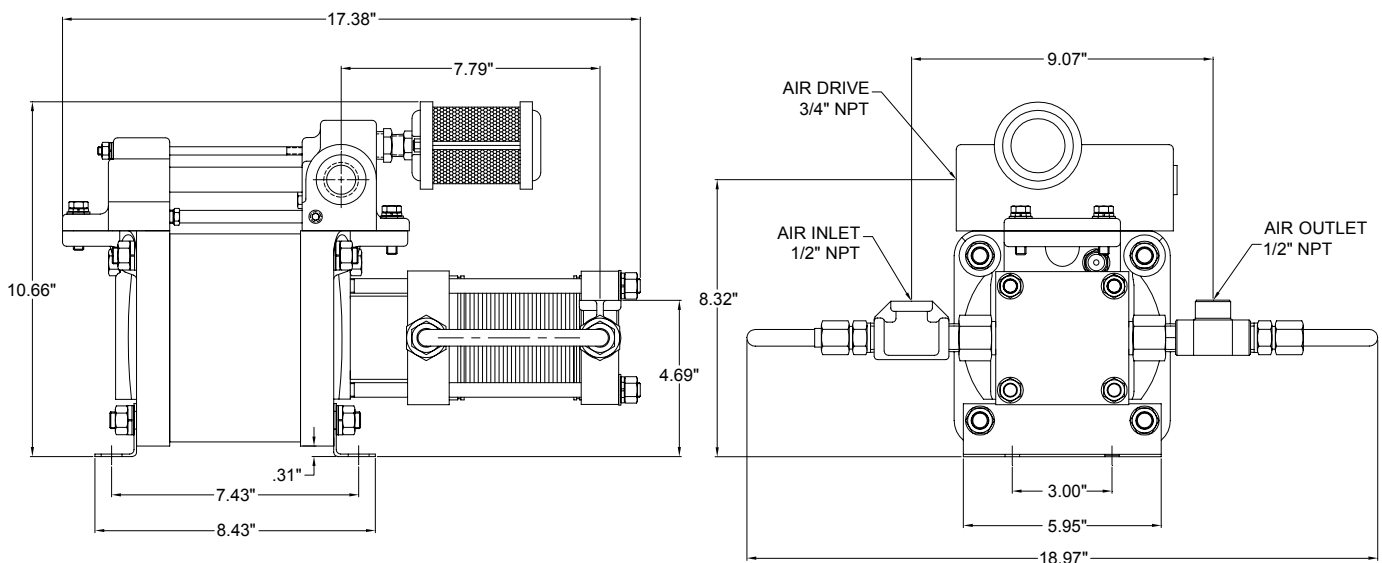




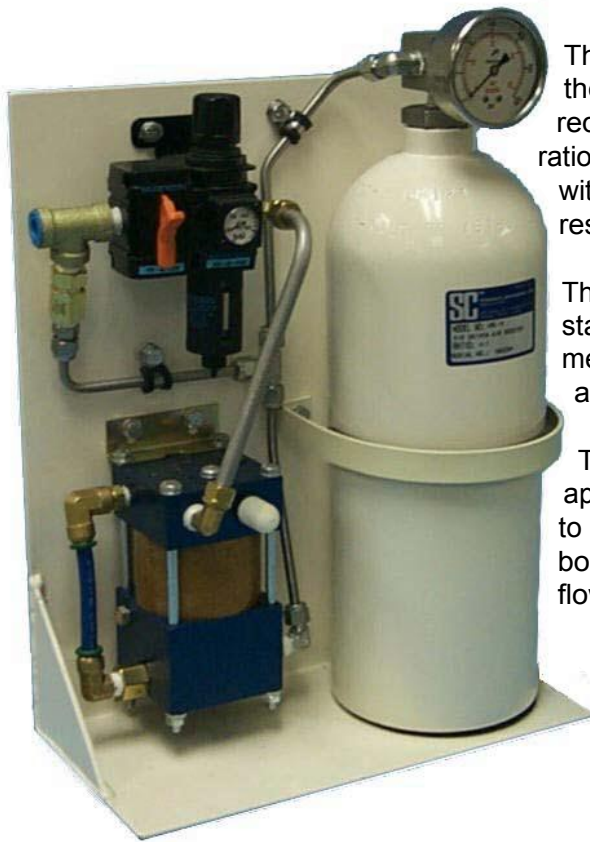
# ABD-2 SERIES



# ABD-5 SERIES



# AB-2 & AB-4 SYSTEMS



The S10320-AB-2 and S10320-AB-4 Systems provide the most compact sized unit for air booster requirements. Both units consist of either the 2:1 ratio or 4:1 ratio booster, filter/regulator combination with shut-off and air pressure gauge, 200 cubic inch reservoir tank with high pressure gauge.

The components are mounted on a sturdy free standing base and plate. The complete system measures 18 1/4" high by 12 1/2" wide by 6" deep and weighs about 35 pounds

This system is perfect for low flow cycling applications when a reserve of high pressure air (up to 600 psi) is required. The reservoir allows the booster to build up pressure between cycles for higher flow ability than the booster can deliver alone.

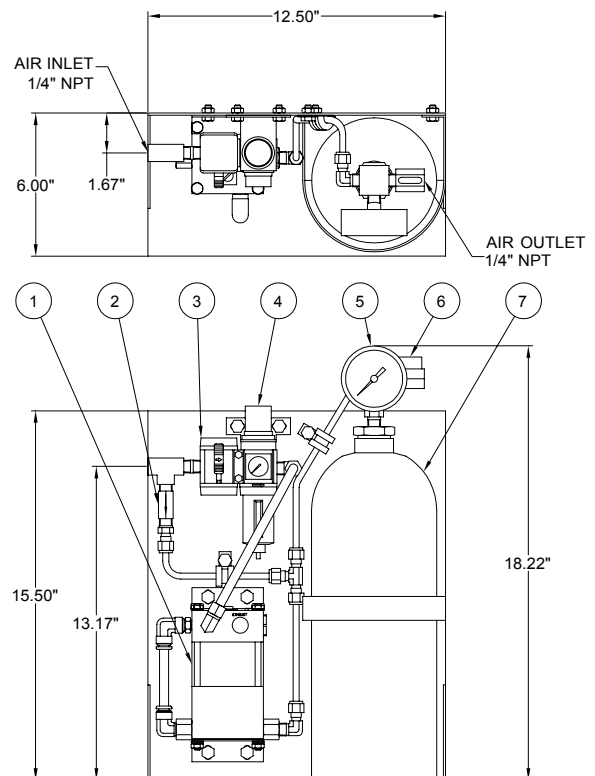
## S10320-AB-2 2:1 Ratio Air Booster System

**Note: Old Model Number is S10306**

## S10320-AB-4 4:1 Ratio Air Booster System

**Note: Old Model Number is S10304**

- |     |                          |
|-----|--------------------------|
| (1) | AB-2 or AB-4 Air Booster |
| (2) | Inline Check Valve       |
| (3) | Shut-off Valve           |
| (4) | Air Filter/Regulator     |
| (5) | Receiver Pressure Gauge  |
| (6) | Outlet shut-off Valve    |
| (7) | 200 Cu. Inch Receiver    |





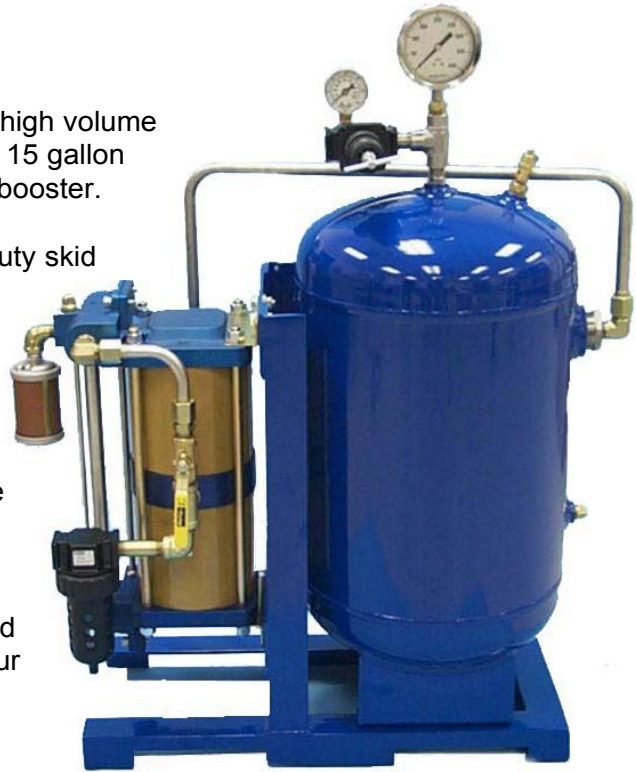
# ABD-2 SYSTEM

The S10320-ABD-2 Air Booster System is built for high volume applications requiring up to 250 psi air reserve in a 15 gallon ASME receiver with our double-acting 2:1 ratio air booster.

The booster and receiver is mounted on a heavy duty skid with forklift provisions and weighs approximately 145 pounds. Installation is simple with a 3/4" NPT inlet to an inline filter and a 1/2" NPT outlet high pressure regulator.

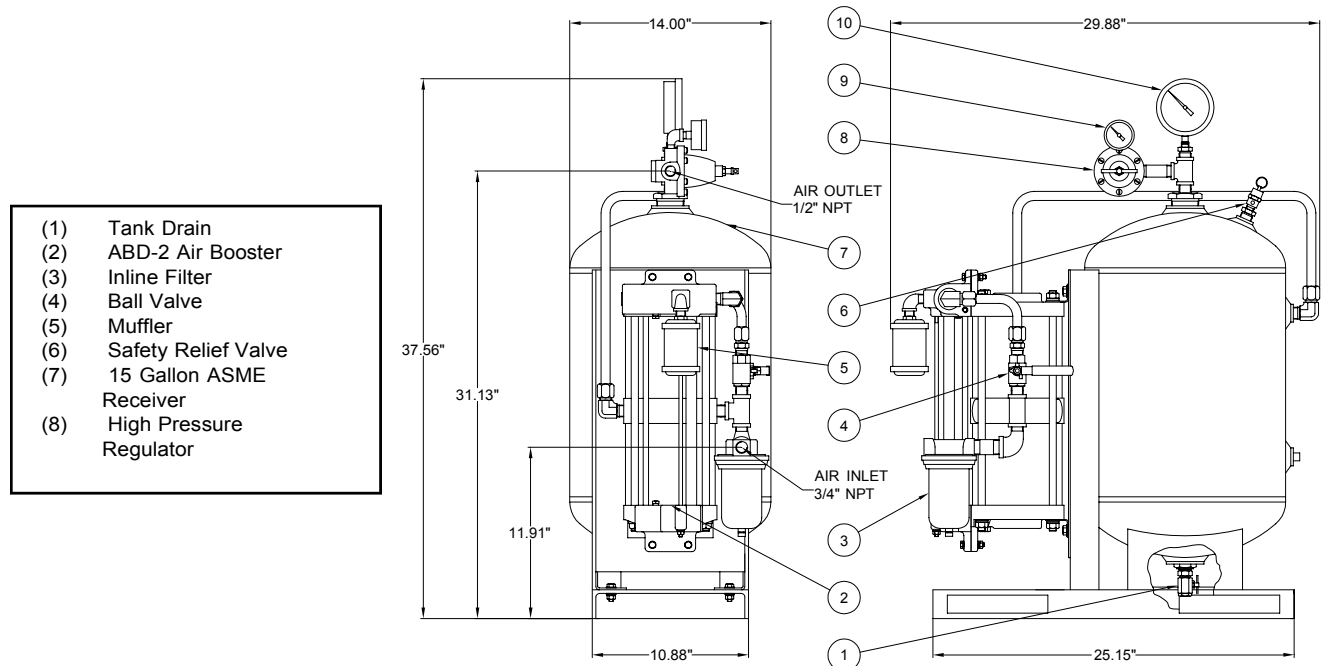
The receiver is protected with a safety relief valve and has both receiver and regulator pressure gauges.

This system is a low cost solution when high pressure and relative high volumes of air is required in a pneumatic application. Contact us or one of our authorized distributors for application or sizing assistance.



## S10320-ABD-2 2:1 Ratio Air Booster System

**Note: Old Model Number is S10300**



# ABD-5 SYSTEM

The S10320-ABD-5 System combines the rugged 5:1 ratio, single-stage, double acting booster with a 600 PSI ASME reservoir for high pressure applications needing a five gallon reserve.

The unit can be mounted either horizontally, as shown, or vertical on a wall or equipment structure. The complete unit weighs approximately 85 pounds.

The system is ready for hook-up to an air supply and includes an inlet filter/regulator with shut-off and gauge, safety relief valve, muffler, high pressure regulator, and high pressure reservoir and outlet pressure gauges.

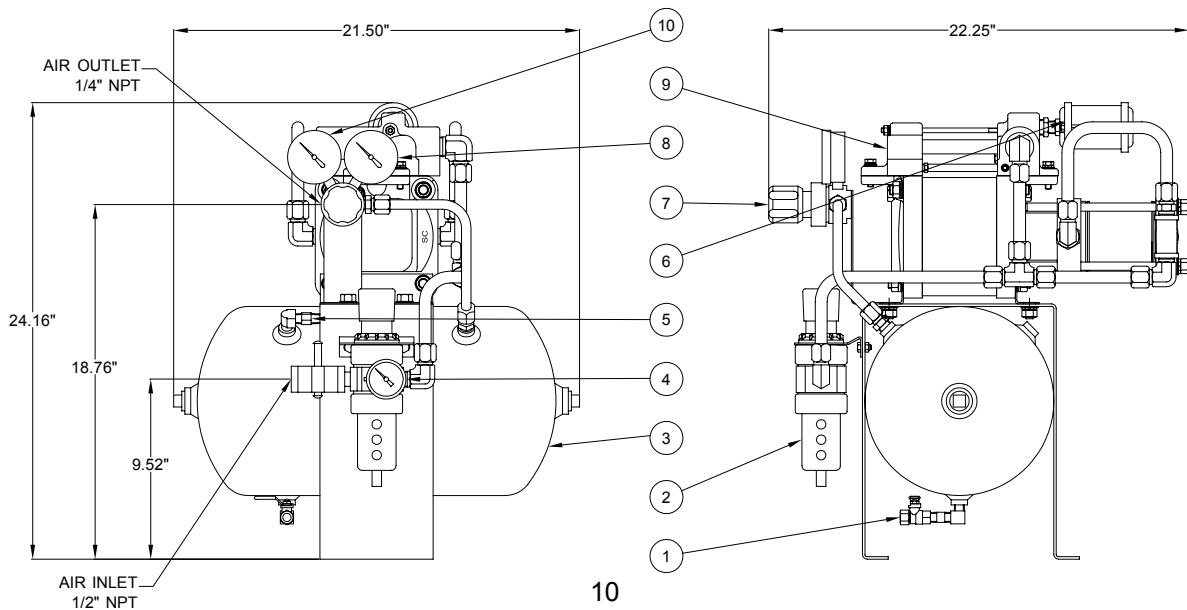
The S10320-ABD-5 system can save money when requirements need up to a 600 PSI supply of air with reserve capacity. Contact us or one of our authorized distributors for application or sizing assistance.



- |      |                                |
|------|--------------------------------|
| (1)  | Tank Drain                     |
| (2)  | Filter/Regulator with Shut-off |
| (3)  | 5 Gallon 600 PSI ASME Receiver |
| (4)  | Inlet gauge                    |
| (5)  | Safety Relief Valve            |
| (6)  | Muffler                        |
| (7)  | High Pressure Regulator        |
| (8)  | Receiver Gauge                 |
| (9)  | ABD-5 Air Booster              |
| (10) | Outlet Gauge                   |

## S10320-ABD-5 5:1 Ratio Air Booster System

**Note: Old Model number is S10301**





DESIGNER AND MANUFACTURER OF HYDRAULIC AND PNEUMATIC EQUIPMENT

## **SC HYDRAULIC ENGINEERING CORPORATION**

1130 Columbia Street, Brea, CA 92821 USA - (714) 257-4800 – Fax (714) 257-4810

### **DATA WORKSHEET AIR BOOSTER**

**DATE**

**CONTACT**

**CUSTOMER**

**E-MAIL**

**ADDRESS**

**PHONE**

**CITY, STATE, ZIP**

**FAX**

#### **AIR DRIVE (Pa) & AIR SUPPLY (Ps) INFORMATION**

MAXIMUM PRESSURE	<input type="text"/>	PSI	MINIMUM PRESSURE	<input type="text"/>	PSI
MINIMUM FLOW AVAILABLE	<input type="text"/>	SCFM			

#### **AIR SUPPLY (Ps) IF DIFFERENT FROM ABOVE**

MAXIMUM PRESSURE	<input type="text"/>	PSI	MINIMUM PRESSURE	<input type="text"/>	PSI
MINIMUM FLOW AVAILABLE	<input type="text"/>	SCFM			

#### **AIR SUPPLY (Ps) IF DIFFERENT FROM ABOVE**

OUTLET PRESSURE REQUIRED	<input type="text"/>	PSI	TIME REQUESTED TO FILL	<input type="text"/>
ACTUAL VESSEL VOLUME TO	<input type="text"/>	FILL CU. IN. OR FLOW RATE	<input type="text"/>	SCFM

#### **DIAGRAM OF APPLICATION**



DESIGNER AND MANUFACTURER OF HYDRAULIC AND PNEUMATIC EQUIPMENT

## **SC HYDRAULIC ENGINEERING CORPORATION**

1130 Columbia Street, Brea, CA 92821 USA - (714) 257-4800 – Fax (714) 257-4810

### **DATA WORKSHEET AIR BOOSTER**

**DATE**

**CONTACT**

**CUSTOMER**

**E-MAIL**

**ADDRESS**

**PHONE**

**CITY, STATE, ZIP**

**FAX**

#### **AIR DRIVE (Pa) & AIR SUPPLY (Ps) INFORMATION**

MAXIMUM PRESSURE	<input type="text"/>	PSI	MINIMUM PRESSURE	<input type="text"/>	PSI
MINIMUM FLOW AVAILABLE	<input type="text"/>	SCFM			

#### **AIR SUPPLY (Ps) IF DIFFERENT FROM ABOVE**

MAXIMUM PRESSURE	<input type="text"/>	PSI	MINIMUM PRESSURE	<input type="text"/>	PSI
MINIMUM FLOW AVAILABLE	<input type="text"/>	SCFM			

#### **AIR SUPPLY (Ps) IF DIFFERENT FROM ABOVE**

OUTLET PRESSURE REQUIRED	<input type="text"/>	PSI	TIME REQUESTED TO FILL	<input type="text"/>	
ACTUAL VESSEL VOLUME TO	<input type="text"/>	FILL CU. IN. OR	FLOW RATE	<input type="text"/>	SCFM

#### **DIAGRAM OF APPLICATION**

# HOW TO ORDER TABLE

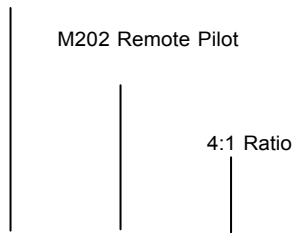
10320 -  -  -

**Prefix<sup>(3)</sup>      1                      2                      3      Table Reference**

## Example #1 Booster Only Selection

**AB - M202 - 4**

AB Series Single Stage

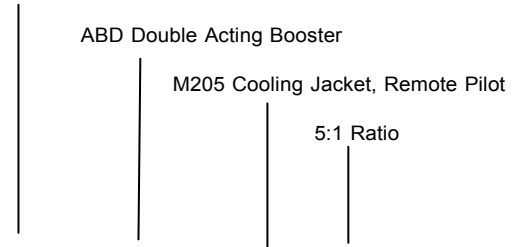


AB - M202 - 4

## Example #2 Booster System Selection

**S10320 - ABD-M205 - 5**

Air Booster System (Add for Systems Only)



S10320 - ABD - M205 - 5

<b>TABLE 1<sup>(1)</sup></b>	<b>Gas Booster Series</b>
<b>AB</b>	Single Stage
<b>ABD</b>	Single Stage Double Acting

<b>TABLE 2</b>	<b>Modification</b>
<b>Blank</b>	No Modification
<b>M200</b>	Refrigerant Recovery <sup>(2)</sup>
<b>M201</b>	No Inlet/outlet Plumbing <sup>(2)</sup>
<b>M202</b>	Remote Pilot
<b>M203</b>	No Inlet/outlet Plumbing, Remote Pilot <sup>(2)</sup>
<b>M204</b>	Cooling Jacket <sup>(2)</sup>
<b>M205</b>	Cooling Jacket, Remote Pilot <sup>(2)</sup>
<b>M206</b>	Cooling Jacket, No Inlet/Outlet Plumbing <sup>(2)</sup>
<b>M207</b>	Cooling Jacket, No Inlet/Outlet Plumbing, Remote Pilot <sup>(2)</sup>

<b>TABLE 3</b>	<b>Pressure Ratio</b>
<b>2</b>	AB, ABD
<b>4</b>	AB
<b>5</b>	AB, ABD
<b>8</b>	AB

**Notes:**

1. Do not fill gap on a two digit description.
2. Available on ABD-5 only.
3. Use prefix for systems only.

## LIMITED WARRANTY

**SC** manufactured products are warranted free of original defects in material and workmanship for a period of one year from date of purchase to first user. This warranty does not include packing, seals or failures caused by lack of proper maintenance, incompatible fluids, foreign materials in the air media, in the fluid media or application of pressures beyond catalog ratings. Products believed to be originally defective may be returned, freight prepaid, for repair and/or replacement to the distributor, authorized service representative or to the factory. If upon inspection by the factory or authorized service representative and the problem is found to be originally defective material or workmanship, repair or replacement will be made at no charge for labor and materials, F.O.B. the point of repair or replacement. Permission to return under warranty should be requested prior to shipment. A Return Material Authorization Number (RMA), the original purchase date, purchase order number, serial number, model number, reason for return or other pertinent data to establish warranty claim must be included in the documentation to expedite the return or replacement to the owner.

If the unit has been disassembled, misused, or altered without prior **written** authorization, warranty is void. If it has been improperly reassembled or substitute parts have been used in place of factory manufactured parts, warranty is void.

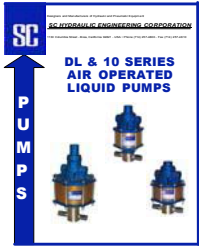
Any modification to any SC product which you have made or may make in the future will void warranty. SC disclaims any and all liability obligation, or responsibility for the modified product, and for any claims, demands or causes of action for damage or for personal injuries resulting from the modification and/or use of such a modified SC product.

**SC's obligation with respect to its products shall be limited to replacement, and in no event shall SC be liable for any loss or damage, consequential or special, of whatever kind or nature, or any other expense which may arise in connection with or as a result of such products or the use or incorporation thereof in a job. This warranty is expressly made in lieu of all other warranties of merchantability and fitness for a particular purpose. No express warranty and no implied warranties whether of merchantability or fitness for a particular purpose or otherwise, other than those expressly set forth above, shall apply to SC products.**





Other catalogs available from SC Hydraulic Engineering. Contact your local distributor or us direct and request the one(s) you need by name or number. Catalogs are also available online at [www.schydraulic.com](http://www.schydraulic.com).



**Catalog # D15000**

**D/10 SERIES AIR OPERATED LIQUID PUMPS**

Three sizes to choose from with various ratios. Pressures to 65,000 psi

**Catalog # D15001**

**L3 Series Air Operated Liquid Pumps**

Compact sized pumps for pressures up to 15,600 psi plus three styles of power units.



**Catalog # D15002**

**L10 SERIES AIR OPERATED LIQUID PUMPS**

10" Air drive double-acting pump for pressures up to 30,000 psi.

**Catalog # D15005**

**AIR OPERATED GAS BOOSTERS**

Single and double-acting and two stage boosters up to 25,000 psi plus complete gas booster systems.



**Catalog # D15007**

**D/10 SERIES POWER UNITS**

Six different types with and without reservoirs and pressures up to 65,000 psi. All non-electric.

**Catalog # D15006**

**FLOW CONTROL & AIR PILOT SWITCH VALVES**

High pressure check, sequence, release, relief, and air pilot switch valves for liquid and gas applications.



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