

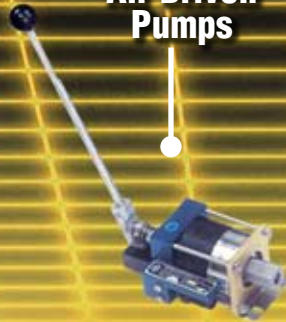


# PRODUCT LINE OVERVIEW

Flow  
Meters



Air Driven  
Pumps



Air Driven  
Gas Boosters



Packaged  
Systems



Air Pressure  
Amplifiers






High Pressure  
Valves



**HHI**



Chatsworth, California, USA

## LIQUID PUMPS AIR OR GAS DRIVEN




Drive Piston(s) (Diameter)	Area Ratios, (Drive vs Boost Piston(s))		Basic Description and Benefits
<b>3"</b>	8:1, 14:1 25:1, 41:1, 81:1, 125:1, 220:1		<p>The drive piston(s) is directly connected to the pump plunger or piston, separated by a high pressure seal. When shop air (or gas) is applied, the assembly reciprocates automatically, producing a positive displacement pumping action at the liquid end. This pumping action will stall and hold pressure whenever the system down stream is closed. The final pressure is estimated by multiplying drive air pressure x the area ratio of each model. Drive air or gas can range from 5 to 150 PSI.</p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>• Start/stop/restart under full load. Hold maximum pressure indefinitely.</li> <li>• No electrical hazard in explosive or damp environments.</li> <li>• Rated for water, oils, solvents, and most liquefied gases to high pressure.</li> <li>• Simple maintenance.</li> <li>• Simple control in fluid power circuits.</li> </ul>
5 Models	Pressures to 15,000 PSI	7 lbs (max)	
<b>5-3/4"</b>	4:1, 10:1, 15:1, *20:1, 30:1, *30:1, 45:1, 60:1, *60:1, *90:1, 115:1, *120:1, 150:1, 205:1, *230:1, 300:1, *300:1, *410:1, 450:1, *600:1, **900:1 *two drive pistons **Three drive pistons		
20 Models	Pressures to 80,000 PSI	30 lbs (max)	
<b>7"</b>	7:1, 35:1, 60:1, 100:1, *70:1, *120:1, *200:1 <small>*two drive pistons</small>		
7 Models	Pressures to 20,000 PSI	85 lbs (max)	

Typical Applications: •Hydrostatic testing - Tanks, piping, instruments.  
•Hydraulic clamps, presses, safety brakes.  
•Valve actuators - Compact power source, pneumatically driven.  
•Portable Tools - Compact power source for high pressure hydraulics.

## GAS BOOSTERS AIR OR GAS DRIVEN

Drive Piston(s) (Diameter)	Area Ratios, (Drive vs Boost Piston(s))		Basic Description and Benefits
<b>3"</b>	23:1 <small>Note: Optional hand pump kit available.</small>		<p>The drive piston(s) is directly connected to the booster piston(s), separated by a vented, triple seal system. The reciprocating action is the same as the liquid pumps. However, with most models final pressure is a function of drive pressure, gas inlet pressure and staging so commonly an external pressure control is recommend.</p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>• Non lube dry gas pistons ensure hydrocarbon free gas output.</li> <li>• Safe with flammable gases or oxygen.</li> <li>• Boost most commercially available bottled gases including breathing air.</li> </ul>
1 Model	Pressures to 3,450 PSI	11 lbs (max)	
<b>5-3/4"</b>	4:1, 7:1, 14:1, *14:1, *28:1, 30:1, 50:1, *60:1, 75:1, 92:1, *100:1, *150:1 <small>*two drive pistons</small>  <small>Note also that 17 different combinations of these ratios are available in standard 2 stage models</small>		
36 Models	Pressures to 25,000 PSI	53 lbs (max)	
<p>Typical Applications: • Bottled gas transfer. • High pressure gas testing. • Gas injection - plastic forming or chemical process. • Rebreather Fillings or topping off.</p>			

## AIR PRESSURE AMPLIFIERS AIR DRIVEN

Drive Piston(s) (Diameter)	Area Ratios, (Drive vs Boost Piston(s))		Basic Description and Benefits
<b>3"</b>	2.5:1, 4:1		<p>These units are simplified versions of HII's gas booster design in that they are designed to boost (amplify) the pressure of the same gas (shop air) used for drive.</p> <p><u>Benefits:</u></p> <ul style="list-style-type: none"> <li>Solve low air pressure problems at individual pneumatically actuated production machines.</li> <li>Provide higher test station air or nitrogen pressure economically.</li> </ul>
2 Models	Pressures to 675 PSI	7 lbs (max)	
<b>5-3/4"</b>	2:1, 5:1		
2 Models	Pressures to 1,250 PSI	36 lbs (max)	
<b>7"</b>	8:1		
1 Model	Pressures to 1,250 PSI	45 lbs (max)	

## HIGH PRESSURE VALVES

Type	Relief 4 Models	Pilot Cut Off 11 Models	Release/Unloading 5 Models	Check 6 Models to 2" NPT	On/Off 1 Model
Pressures to	60,000 PSI	25,000 PSI	20,000 PSI	20,000 PSI	10,000 PSI
					


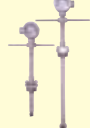






### Gas Receivers

15 models. Pressures to 20,000 PSI. Volumes to 900cu. inches

### High Pressure Intensifier

3 cu. in. to 100,000 PSI, liquid or gas, 10:1 area ratio, oil or water drive.

## FLOWMETERS LIQUID OR GAS

Type	Turbine			Variable Area		
	Inline	Insertion	Tangential	Standard	Sanitary	Hydraulic 5000PSI
Range	Liquid	.03 - 15,000 GPM	.001 - 2.0 GPM	.2 - 100 GPM		0 - 80 GPM
	Gas	15,000 ACFM	2 ACFM	.2 - 400 SCFM		
						
<b>Flow Computer</b>			Totalizing, Rate Display, Batching Mass. Intrinsically safe, Explosion proof, Weather Proof. Battery operated, AC/DC.			

## PACKAGED SYSTEMS LIQUID OR GAS

Hydraulic Power Unit	High Pressure Oxygen Transfer	Air Amplifier with 200 PSI Receiver and Controls
		



# Detailed Literature Available

Catalogs	Number	Includes
	<b>Liquid Pumps - Air or Gas Driven</b> LP500	Principle of operation, benefits, applications, installation detail, chart of rated pressures, port sizes, and weights, performance curves, standard modifications. 12 Pages
	<b>Gas Boosters - Air or Gas Driven</b> GB500	Principle of operation, benefits, Applications, typical schematics, selection tables, performance curves and modifications. 16 Pages
	<b>Air Amplifiers - Air Driven</b> AA500	Principle of operation, replacing dedicated air compressor in large plants, installation, controls, schematics, and packaged systems. 4 Pages
	<b>Flowmeters - Liquid or Gas</b> FM-100	Principle of operation, applications, design features, flow ranges and sizing guides with calculations. How to order. 58 Pages
Bulletins	Number	Includes
	<b>Liquid Pumps</b> LP501	Basic pressure ratings, displacement per cycle, weights, dimensions, and key features. 2 Pages
	<b>Gas Boosters</b> GB501	Basic pressure ratings, displacement per cycle, weights, dimensions, and key features. 2 Pages
	<b>Standard System Packages for High Pressure Liquid, Gas or Air</b> SP-100A	11 Packaged systems with ordering guides to fit each to specific applications 8 pages
	<b>High Pressure Valves</b> V-100	Relief, pilot cutoff, unloading, check, plus gas receivers and needle valves. 2 pages
	<b>Breathing Air - Scuba Diving</b> GB-102	Breathing air booster unit for dive store SCUBA tank fill stations to 4500 PSI. 1 Page

