# Air-Driven, High Flow, High Pressure Liquid Pump Series AHL33-2D

Double-Acting, Dual Piston Air Drive

## **Technical Data: Liquid Side Specifications**

- Service: Oil, Water or Water/Oil mixture and other fluids depending on material compatibility
- Maximum Outlet Pressure: 6,700 PSI (462 bar)
- Air to Liquid Pressure Ratio: 1:67
- Isolation Chamber (prevents process contamination of air section): Standard
- Volume Displacement Per Stroke: 15.3 in<sup>3</sup> (250.7 cm<sup>3</sup>)
- Dual Inlet Connections: 1" FNPT
- Dual Outlet Connections: 1/2" FNPT (Contact Autoclave Engineers for Additional Options)

### Technical Data: Air Side Specifications

- Air Drive Pressure Range: 20-100 psi (1.4-6.9 bar) \*See note1
- Nominal air pressure required for 6,700 PSI (462 bar) output pressure is 100 psi (6.9 bar)
- Inlet Port: 1" female FNPT
- Pilot Port: 1/8" female FNPT
- Exhaust Ports (mufflers removed): 1" female BSP
- Air Consumption @ 50 PSI air (0 PSI liquid): 290 SCFM
- Prelubricated at Factory

1. Maximum air drive pressure is limited by maximum output pressure.

Notes:

### **General Specifications**

- Operating Temperature: 0-140° F (-18° to 60° C)
- Net Weight: 160 lbs (73 kg)
- Pressure Head: 15-5 PH Stainless Steel
- Stainless steel plunger utilizing a proprietary multi-layer carbon based coating with diamond like carbon exterior layer - 3 times the hardness of stellite with a coefficient of friction equal to/less than PTFE
- Check Valve Glands: 316 Stainless Steel
- Liquid Seal: See Ordering Guide for options
- Air Drive Seals: Buna N



MADE IN THE U.S.A.

## **Ordering Guide:**

For complete information on available pump options, contact Autoclave Engineers.

Typical catalog number: AHL33-2DSCUV **AHL33-2D** S С UV Liquid Seal Liquid Inlet Isolation Pump Type / Size / Ratio Chamber Location Materials<sup>†</sup> **AHL** = • High Flow Liquid High Pressure Pump S = Side C = Included **UV** = Urethane U-Cup and Viton O-Rings • 10" Dual Piston Air Drive **UE** = Urethane U-Cup and EPDM O-Rings • 1:67 Air-to-Liquid Pressure Ratio <sup>†</sup> 2nd character represents o-ring • Maximum 6,700 psi (462 bar) material in the check valves and the • Double Acting Liquid Heads u-cup o-ring energizer material in and Viton O-Rings the "U" and "T" seal options. "C" seal option is o-ring only, no and EPDM O-Rings u-cup. and Buna-N O-Rings

- **UB** = Urethane U-Cup and Buna-N O-Rings
- TV = Thermoplastic Polyester U-Cup
- TE = Thermoplastic Polyester U-Cup
- **TB** = Thermoplastic Polyester U-Cup
- **TC** = Thermoplastic Polyester U-Cup and Perfluoroelastomer O-Rings
- **C** = Perfluoroelastomer O-Rings

### Liquid Flow Rate vs. Outlet Pressure:

### **AHL33-2DSC Series**

Approximate air drive pressure: 100 psi				
Pressure (PSI)	Pressure (bar)	Flow (gpm)	Flow (liter/min)	
0	0	7.6 <sup>*</sup> see note 2	28.8 *see note 2	
1000	69	6.1	23.0	
2000	138	5.7	21.5	
3000	207	4.9	18.4	
4000	276	4.0	15.2	
5000	345	3.2	12.3	
6000	414	1.8	6.9	

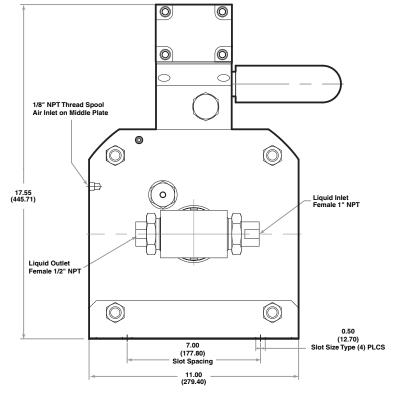
Nominal Liquid Pressure (Stalled)					
Air Drive Pressure		Liquid Pressure			
PSI	bar	PSI	bar		
20	1.4	1340	92.4		
30	2.1	2010	138.6		
40	2.8	2680	184.8		
50	3.4	3350	231.0		
60	4.1	4020	277.2		
70	4.8	4690	323.4		
80	5.5	5360	369.6		
90	6.2	6030	415.8		
100	6.9	6700	461.9		

Notes:

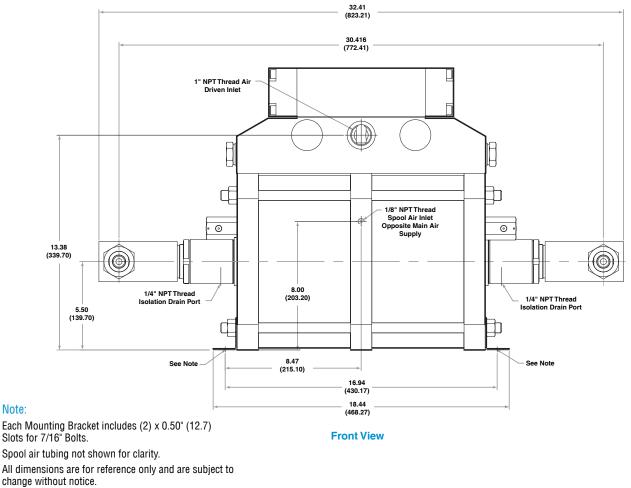
1. Actual flow rates will vary depending on air flow capacity, downstream flow restrictions, and fluid type.

2. Flow value at approximately 50 psi air drive pressure.

### **Dimensional Data:**



**Side View** 



Primary Dimensions: Inches

Note:

Secondary Dimensions: (Millimeters)

#### Air-Driven, High Pressure Liquid Pump - Series AHL33-2D

### Accessories Available:

- Air Control Packages
- · Pneumatic Pilot switches and Solenoid Valves
- Stroke Counter
- Relief Valve / Safety Heads
- · Complete line of High Pressure Components Valves, Fittings & Tubing
- Spare Parts
- Service





For complete information on available high pressure accessories, please contact Autoclave Engineers.

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