

Airmatic® Lubricator

Pneumatic Operation, Oil

General

The Airmatic lubricator is a simple economical unit with a broad range of output. It is designed to be operated with shop air. The stroke setting is easily adjusted to suit a wide variety of industrial centralized lubrication needs. The package can be supplied with either a 1, 4 or 12 liter reservoir.

Application

The Airmatic lubricator is for use with cyclic oil lubrication systems. The unit can be used with single line resistance (SLR), positive displacement injector (PDI) and progressive distribution systems.*

Operation

Airmatic® lubricator includes an air actuated, spring return piston pump with an adjustable output between 2 to 10cc for each piston stroke at discharge pressures up to 500 psi. Oil output is related to piston travel and cycles per unit time. Stroke movement is preset to a fixed discharge and supply air pressure governs the output delivery pressure. When used with positive displacement injectors, a built-in pressure relief device lets the PDI reset after discharge.

For extended service, incoming air must be dry. Always use a suitable FRL unit (filter/regulator/lubricator) to control air to recommended operating range. Normally, the air-operated Airmatic is used with a 3/2-way electrical solenoid valve (optional) to control and vent shop air from the pump air inlet. The 4 and 12 liter models are available with optional 3/2-way valve and cycle controller.

To adjust lubricant delivery, loosen locknut on hex socket adjusting screw (see Figure 1 on right). Turn delivery adjusting screw clockwise to reduce discharge - use graduated label as guide, set to desired setting and tighten locknut (insert shows setting at 8cc). For PDI systems, maximum discharge of 10cc/stroke is recommended.

Technical Data

Delivery Volume	2cc-10cc/actuation cycle (infinite adjustment)
Viscosity Range	150-8000 SSU ¹
Normal Range Cycle	Up to 30 cycles/minute maximum ²
Operating Temperature	32°F to 120°F (0°C to 49°C)
Oil Outlet Connection	1/8" NPTF (female)
Low Level Switch	0.17 amp at 110 VAC
Solenoid Valve	0.12 amp at 110 VAC
Lubricator Air Connection (without solenoid)	1/4" NPTF (female)
Operating Pressure	300 psi (21 bar) - SLR, PRG 400 psi (28 bar) - PDI
Recommended Incoming Air Pressure	80 psi (5 bar) - SLR, PRG 100 psi (7 bar) - PDI
Air/oil Pressure Ratio	1:4
Maximum Inlet Pressure	125 psi
Minimum Inlet Pressure	70 psi

¹ Viscosity range at operating temperature may be restricted by internal relief valve (consult Bijur Delimon).

² System parameters may affect this rate (consult Bijur Delimon).



*Refer to appropriate engineering manuals for normal system limitations when sizing distribution proportioning devices for use at a particular discharge setting.

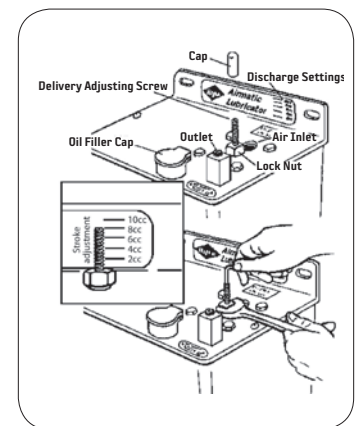


Figure 1:
Lubricant Delivery Adjustment

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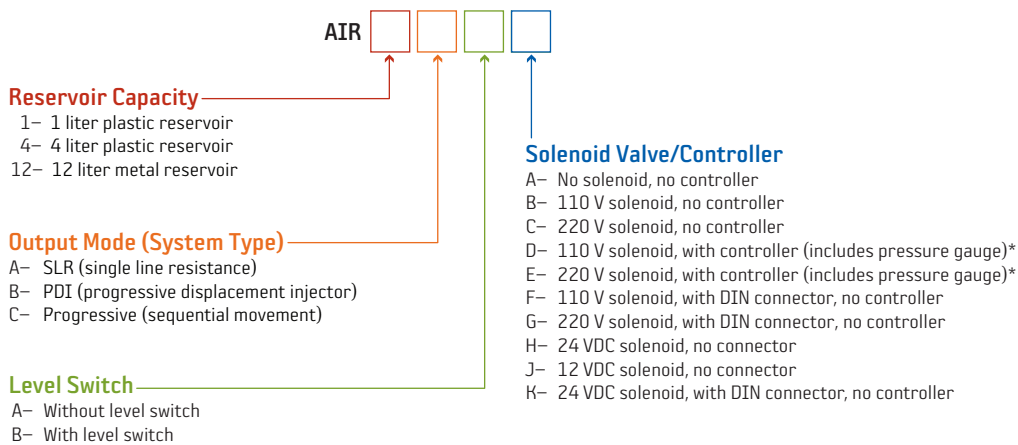
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System Design

If the distribution system incorporates extensive use of flexible lines, a slightly larger discharge must be used to compensate for the resiliency of the flexible connections. Solve for the following “R” value and ADD this amount to the required pump discharge:

- + R = .030 x feet of 5/16” O.D. flexible hose
- + R = .035 x feet of 7/16” O.D. flexible hose

How to Order



*Controller is not available on 1 liter model

Example: 1 liter unit for SLR system without switch and solenoid, use Part #AIR1AAA.
 12 liter unit for SLR system without switch and solenoid, use Part #AIR12AAA.

Several options are available in this configuration. It is necessary to choose the proper prefix letters for the particular type of unit required. Designation of lubricator is **AIR**, followed by a four part code, specifying reservoir size and pump options required.

After the letters **AIR**, insert code for **reservoir capacity**. The third letter designation identifies the lubricator to be used for **output mode (system type)**. Select the correct designation for lubricator unit to service the appropriate distribution system. Specify whether a low oil **level switch** is required by designating appropriate letter code in the fourth letter designation. **Solenoid valve/controller** selection is last designation. If required, select prefix for solenoid valve by voltage. 4 and 12 liter models can be supplied with lubricator controller - select prefix for particular need. The controller is **not** offered on the 1 liter model.

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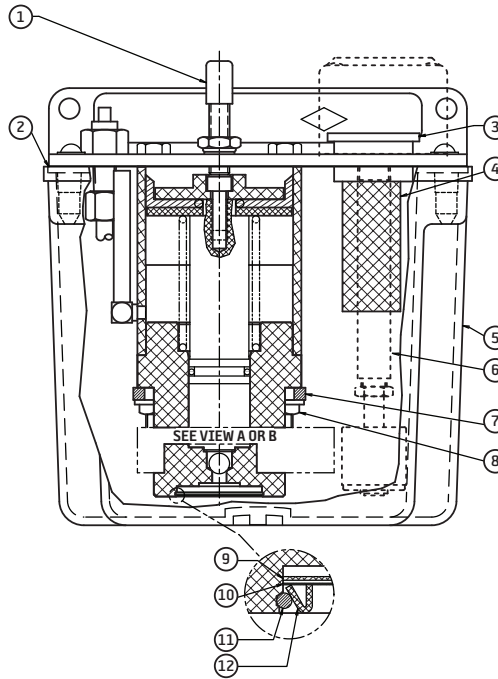
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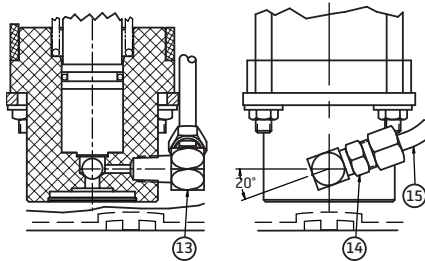
Service Parts- 1 Liter Model

Item	Part #	Description
1	B10812-2	Cap
2	B8197	Gasket
3	HF705C	Cap
4	19030	Strainer
5	D3218	Reservoir assembly
6	B7760-5	Level switch (closes at low level)
7	20034	Retainer
8	20252-1	Nut (4x)
9	A3841	Support (*)
10	A3848	Screen (*)
11	A3899	Ring (*)
12	A3843	Clamp (*)
13	B3907	Check valve
14	B6086	Adapter
15	19700-7	Tubing
16	19700-7	Tubing assembly
17	20736-1	Valve assembly
18	20311-1	Solenoid valve 110 VAC
	20311-2	Solenoid valve 220 VAC
	20311-3	Solenoid valve 110 VAC w/DIN conn.
	20311-4	Solenoid valve 220 VAC w/DIN conn.
	20311-5	Solenoid valve 24 VDC
	20311-6	Solenoid valve 12 VDC
	20311-7	Solenoid valve 24 VDC w/DIN Conn
19	A4239-M	Muffler filter

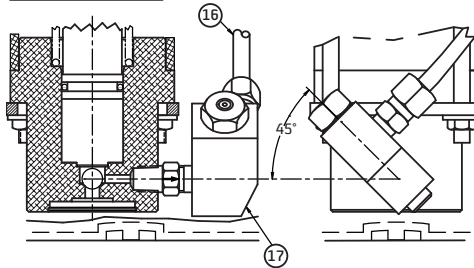
* = Available in Kit #A0293



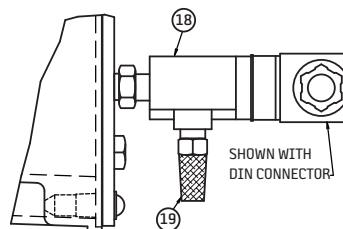
VIEW A – SLR & PROGRESSIVE MODELS



VIEW B – PDI MODELS



VIEW C – SOLENOID VALVE



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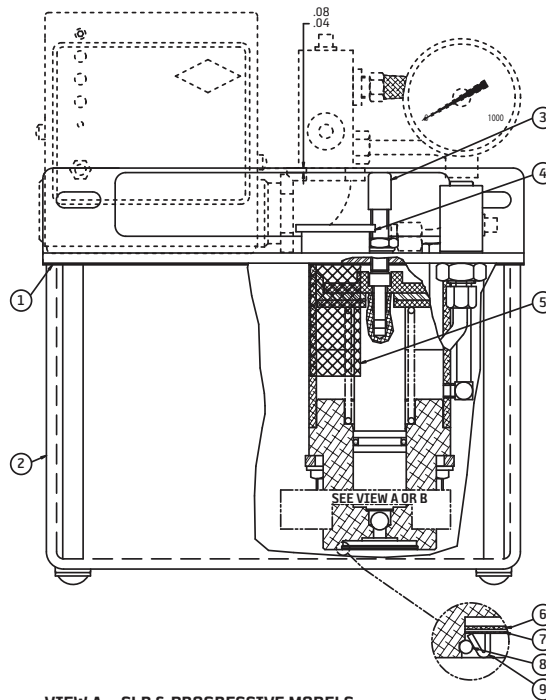
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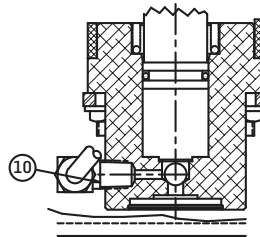
Service Parts- 4 Liter Model

Item	Part #	Description
1	B10670	Gasket
2	D3845	Reservoir assembly
3	B10812-2	Cover
4	HF705C	Cap
5	19030	Strainer
6	A3841	Support (*)
7	A3848	Screen (*)
8	A3899	Ring (*)
9	A3843	Clamp (*)
10	B3907	Check Valve
11	20736	Quick dump valve assembly
12	20311-1	Solenoid valve 110 VAC
	20311-2	Solenoid valve 220 VAC
	20311-3	Solenoid valve 110 VAC w/DIN conn.
	20311-4	Solenoid valve 220 VAC w/DIN conn.
	20311-5	Solenoid valve 24 VDC
	20311-6	Solenoid valve 12 VDC
	20311-7	Solenoid valve 24 VDC w/DIN conn.
13	A4239-M	Muffler filter

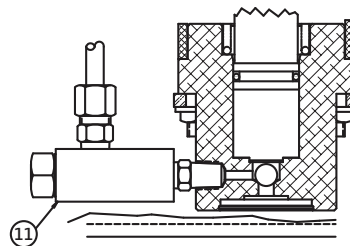
* = Available in Kit #A0293



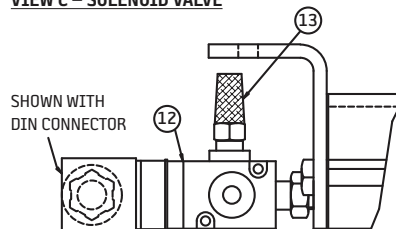
VIEW A – SLR & PROGRESSIVE MODELS



VIEW B – PDI MODELS



VIEW C – SOLENOID VALVE



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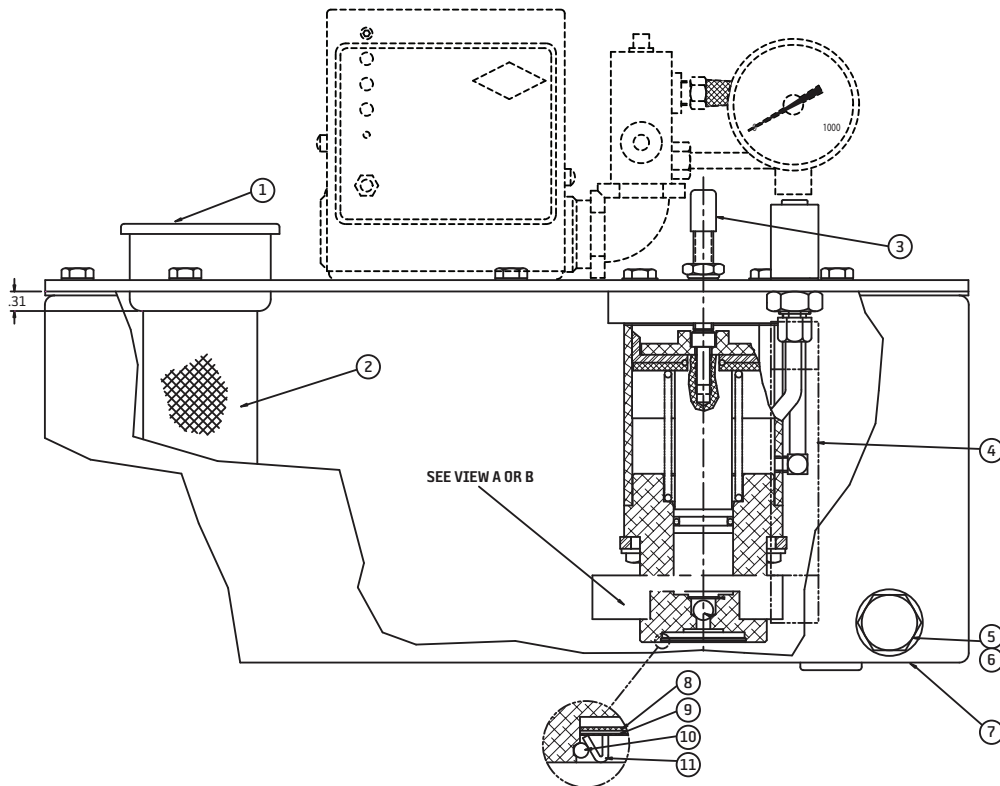
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Service Parts- 12 Liter Model

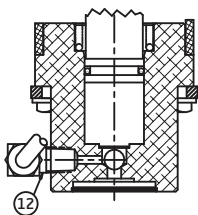
Item	Part #	Description
1	B9842	Filler cap
2	17661	Strainer
3	B10812-2	Cover
4	19312	Sight gauge
5	B9602	Plug
6	H0413	O-ring
7	19846-2	Reservoir
8	A3841	Support (*)
9	A3848	Screen (*)
10	A3899	Ring (*)
11	A3843	Clamp (*)

12	B3907	Check valve
13	20736	Quick dump valve assembly
14	20311-1	Solenoid valve 110 VAC
	20311-2	Solenoid valve 220 VAC
	20311-3	Solenoid valve 110 VAC w/DIN conn.
	20311-4	Solenoid valve 220 VAC w/DIN conn.
	20311-5	Solenoid valve 24 VDC
	20311-6	Solenoid valve 12 VDC
	20311-7	Solenoid valve 24 VDC w/DIN conn.
15	A4239-M	Muffler filter

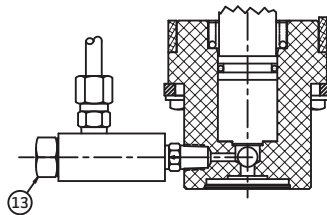
* = Available in Kit #A0293



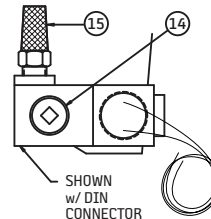
VIEW A – SLR & PROGRESSIVE MODELS



VIEW B – PDI MODELS



VIEW C – SOLENOID VALVE



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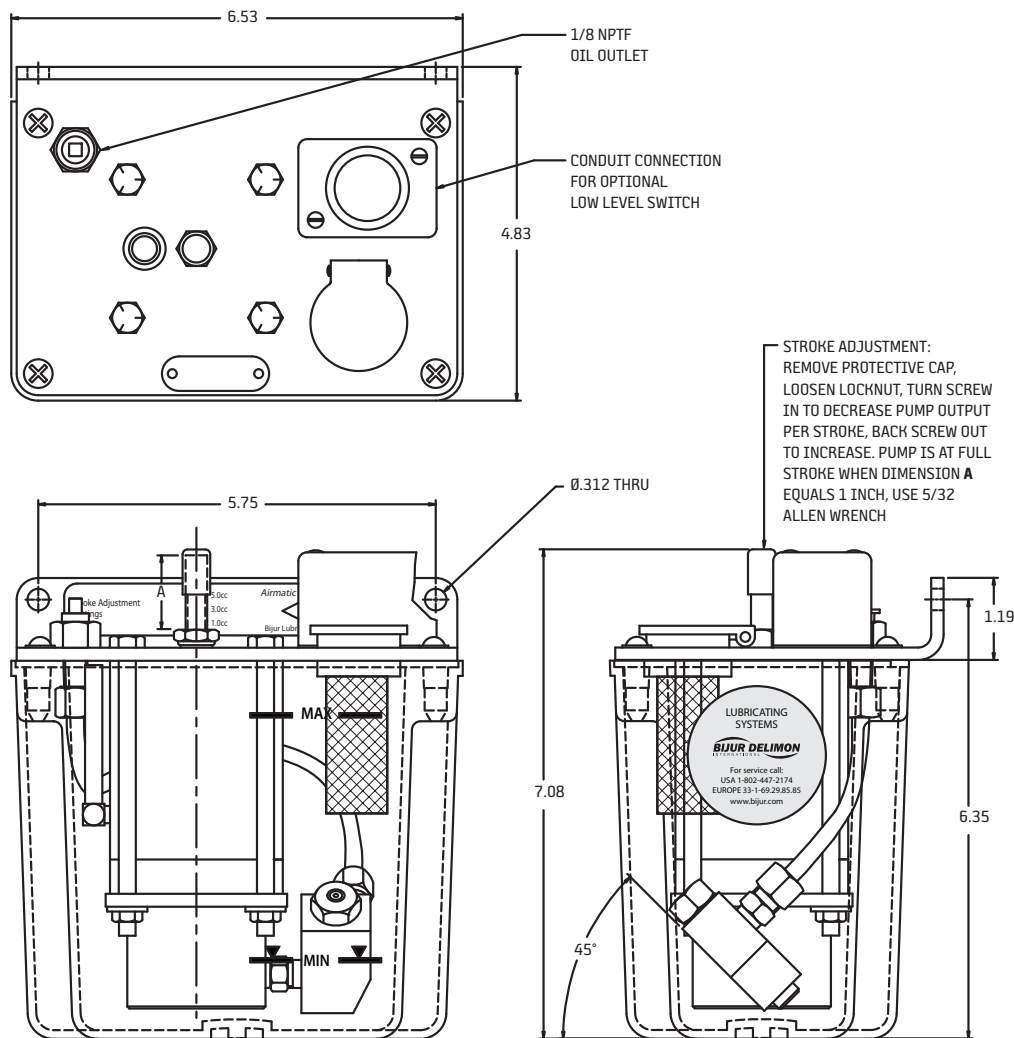
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Dimensional Schematics

1 Liter Model (PDI Version Shown)

Measurements shown in inches.



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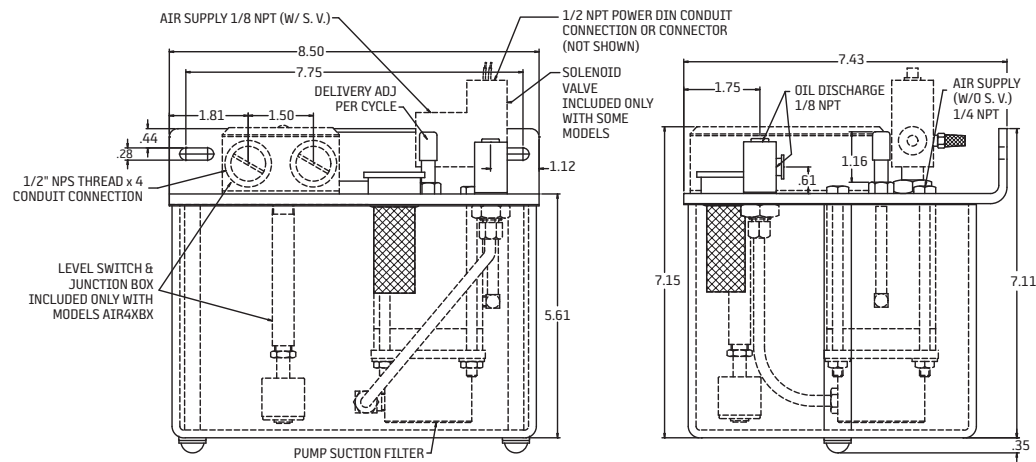
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Dimensional Schematics

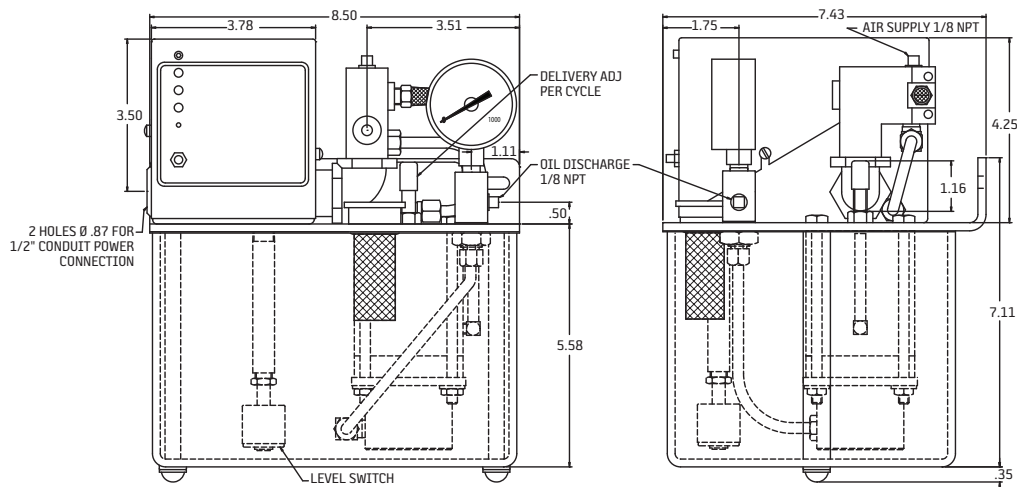
Measurements shown in inches.

4 Liter Model

Basic Model (Without Controller):



Model with Level Switch, Solenoid Valve and Controller:



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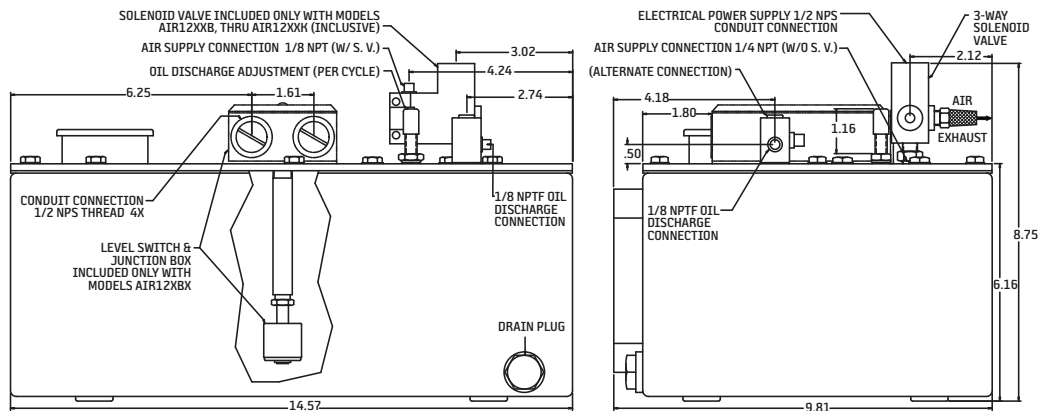
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Dimensional Schematics

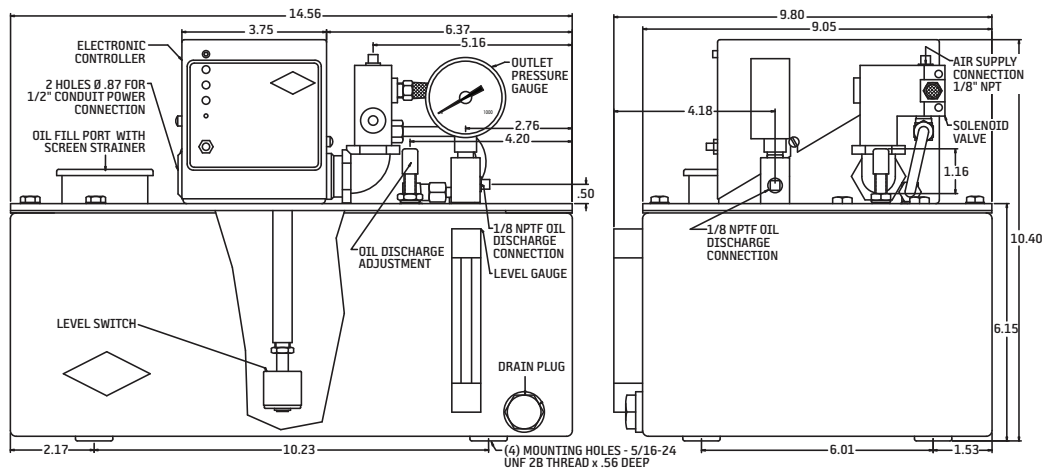
Measurements shown in inches.

12 Liter Model

Basic Model (Without Controller):



Model with Level Switch, Solenoid Valve and Controller):



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