

MSA-100 Air Operated Pump

DESCRIPTION

The MSA-100 is an air-operated pump with an adjustable volume output. It is designed to be used in series progressive oil or grease lubrication systems.

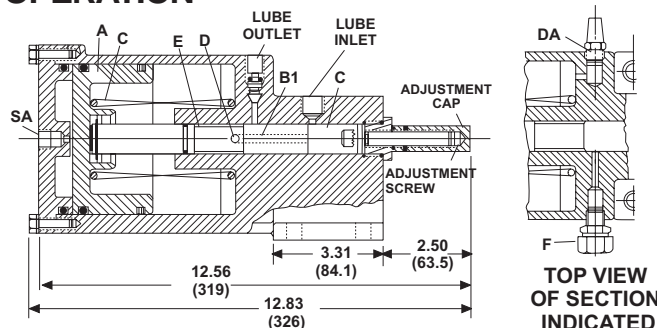
Lubricant can be supplied to the MSA-100 pump by either a gravity feed reservoir or a pressurized source such as a bulk header that exerts up to 500 psi at the pump inlet. This pressure handling capability results from the valve action of the MSA-100. Its piston prevents lubricant from flowing into the lube system when the piston is in the priming position.

The MSA-100 is supplied as a single-acting pump. However, it can be easily field-converted to double-acting by simply removing the air breather from the double-acting port and installing an air line.

FEATURES

- Adjustable lube output, from .400 to .800 cubic inches per stroke, permits a broad range of applications.
- The MSA-100 is ideal for bulk header lube systems because it can handle up to 500 psi inlet pressure.
- Single-or double-acting air cylinder provides wide choice of controls.
- Ability to pump either oil or grease expands the opportunity to standardize on the MSA-100 through out the plant or shop.
- High pressure relief protection reduces chance of damage to the lube system in case of blockage.
- Can be piped to standard Trabon reservoirs (Refer to bulletin 12000 for reservoirs).

OPERATION



When air is supplied in the single-acting port (SA), the pump piston (A) is moved forward. The lube inlet is closed by the piston (B1). The lubricant in the chamber (C) is forced into a channel in the middle of the piston (B1). An outlet hole (D) from that channel opens into an undercut (E) on the piston. When the undercut opens to the lube outlet, the lubricant flows, under pressure, to the lube system. If a blockage occurs in the lube system, the rupture to atmosphere indicator (F) ruptures and the pressure is relieved. When the air has been vented from the single-acting inlet, the piston return spring (G) returns the piston to its original position, reopening the lube inlet and allowing new lubricant to enter chamber (C) for the next cycle.

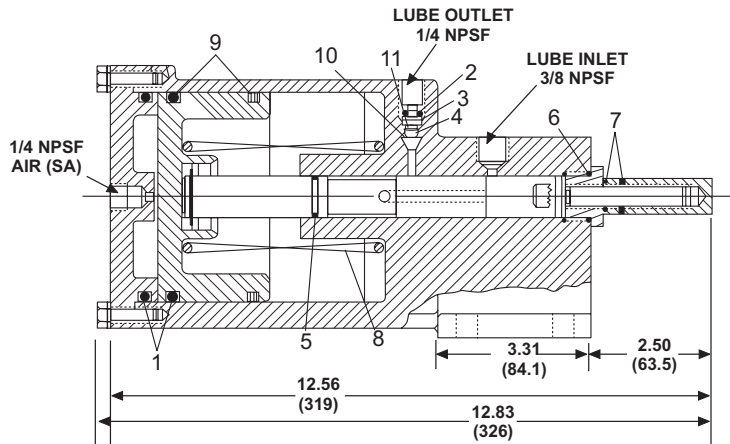
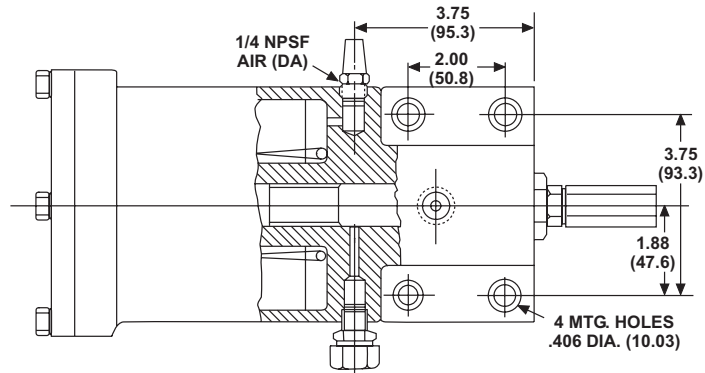
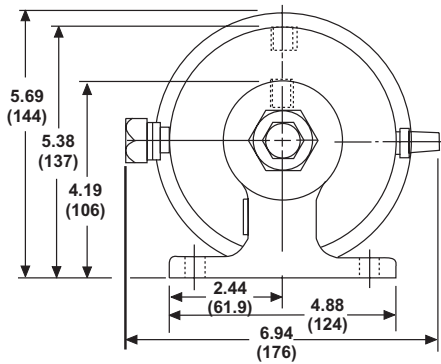
If the pump is double-acting, air will be supplied in the double-acting air inlet (DA) as air is vented from the single-acting port to return the piston to its original position.

SPECIFICATIONS

Material	Aluminum
Seals	Buna-N and Viton
Output per stroke	400 to .800 cubic inches (6.566 to 13.112 cm ³)
Maximum pump strokes per minute	
– Single-acting, 15	
– Double-acting, 30	
Operating pressure	
– Minimum air inlet, 60 psi (4 bar)	
– Maximum air inlet, 140 psi (10 bar)	
– *Maximum lube inlet, 500 psi (35 bar)	
– Maximum lube outlet, 3000 psi (207 bar)	
	supplied with 1450 psi rupture to atmosphere indicator
Lubricant	Oil or Grease
Air to lube ratio	25:1

* When connected to pressurized supply, back-flow to supply must be permitted; alternatively, a small accumulator or 3 ft of 1/2" ID hose can be connected to lube inlet of pump.

DIMENSIONS Inches (mm)



INSTALLATION INSTRUCTIONS

1. Mount pump, using all four mounting holes.
2. If you intend the MSA-100 to operate as a double-acting pump, remove the vent plug from the double-acting inlet port and install the air line to that inlet.
3. Seal all pipe connections. **DO NOT USE TEFLON TYPE TAPE.**
4. Cycle the pump until all air is removed and lubricant runs clear at the outlet.
5. To adjust pump output, remove adjustment screw cap and turn the screw clockwise to reduce output, or counter clockwise to increase output.

ORDERING INSTRUCTIONS

Use part numbers shown below to order MSA-100 Pump, Repair Kit and Accessories

MSA-100 Pump 140-000-171

Standard pump includes a 1450 psi rupture to atmosphere indicator, part number 511-839-100. For higher pressure rupture discs, refer to bulletin 15401 or contact your Trabon Distributor.

Repair Parts Kit 560-001-560

includes: Four O-rings (1, 5 and 6); one keeper (2); one check valve spring (3); one 3/8-inch viton ball (4); two gaskets (7); one return spring (8); two spiral back-up rings (9); one poppet (10); one spring rest (11); plus instructions for installation.

Air Inlet Restrictor (not shown) 463-410-080

All written and visual data contained in this document are based on the latest product information available at the time of publication. Graco reserves the right to make changes at any time without notice.

Call today for product information or to request a demonstration.

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