

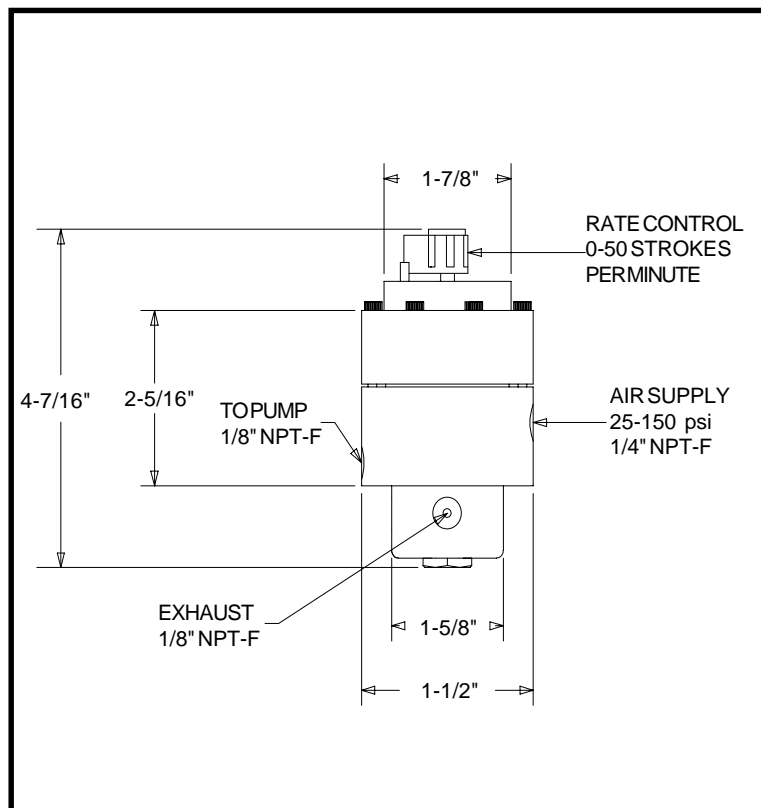
MORGAN PRODUCTS

PNEUMATIC CHEMICAL PUMPS FOR THE GAS AND OIL INDUSTRIES

MODEL TR1 AIR ACTUATED TIMER

SETUP AND OPERATION

Connect the TR1 timer to the pump. Next connect the air or gas supply to the TR1 timer. Note: Gas supply should be regulated at or near the timing relay. Now open the rate control knob counterclockwise approximately one-quarter turn. Cycling should begin. Increase gas supply pressure until the pump strokes solidly. Then, refer to the volume chart for your specific pump and set the cycle rate for your required volume. Use the stroke adjuster on the pump to fine tune. Finally, place protective cover on the relay covering the control knob.



TROUBLE - SHOOTING

- | | |
|---|---|
| 1. Constant air flow through exhaust port. | A. Check "Air supply" and "To pump" ports for proper connection.
B. Check exhaust poppet (TR1-24).
C. Check lower diaphragm (TR1-17). |
| 2. Relay cycles but will not adjust properly. | A. Replace Teflon seal (TR2-7). |
| 3. Constant air flow between body sections. | A. Check upper diaphragm (TR1-11) or middle diaphragm (TR1-14). |
| 4. Intermittent or sluggish operation. | A. Inspect upper seat orifice (TR1-18) for any obstruction.
B. Inspect poppet nose (TR1-24) for excessive wear. |

CONNECTIONS INPUT/OUTPUT/EXHAUST	RANGE SPM	PRESSURE RATING PSI / BAR	MATERIAL
1/4 NPT-F / 1/8 NPT-F / 1/8" NPT-F	0 - 50	25-150 / 1.7-10.3	ANODIZED ALUMINIUM

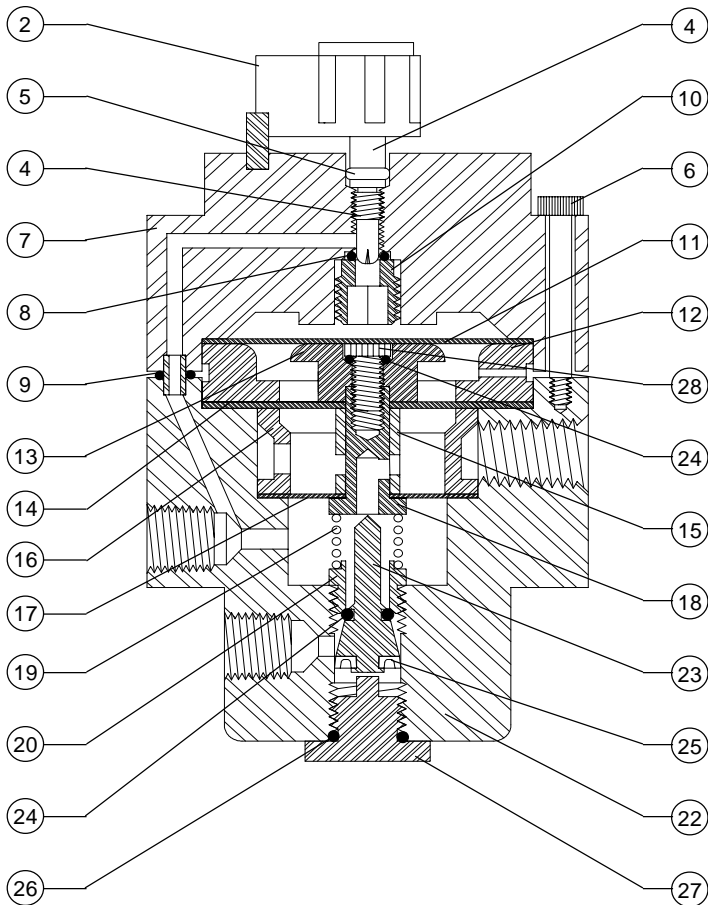
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Parts List Model TR1



NO	NAME	PART NO.	MATERIAL
N/S	Cover	TR1-1	Alum.
2	Knob	TR2-1	Plastic
3	Knob Spring	TR2-2	303 SS
4	Metering Valve	TR2-3	303 SS
5	O-Ring	TR2-4 *	Buna-N
6	8-32 Cap Screw	TR1-15 (6)	18-8 SS
7	Upper Body	TR1-7	Alum.
8	Teflon Seal	TR2-7 *	Teflon
9	O-Ring	TR2-4 *	Buna-N
10	Metering Seat	TR2-6	18-8 SS
11	Upper Diaphragm	TR1-11 *	Buna-N
12	Upper Spool	TR1-16	Alum.
13	Diaphragm Plate	TR1-13	Alum.
14	Middle Diaphragm	TR1-14 *	Buna-N
15	Middle Spool	TR1-18	Alum.
16	Lower Spool	TR1-19	Alum.
17	Lower Diaphragm	TR1-17 *	Buna-N
18	Upper Seat	TR1-20	Alum.
19	Seat Spring	SR1S-15 *	302 SS
20	Lower Seat	TR1-22	303 SS
21	Not Used		
22	Lower Body	TR1-23	Alum.
23	Poppet	TR1-24	PVC
24	Poppet O-Ring	TR2-16 * (2)	Viton
25	Poppet Seal	TR2-17 *	Viton
26	O-Ring Seal	TR2-18 *	Buna-N
27	Plug	TR2-19	303 SS
28	Screw	TR1-5	18-8 SS
	Repair Kit	TR1-50	

ALL PARTS NOTED BY * INCLUDED IN REPAIR KIT

INSTALLATION INSTRUCTIONS

1. Choose the chemical injector best suited for your specific needs.
2. Connect the smaller (1/8" NPT) port on the TR1 to the air inlet port at the top of the pump.
3. Connect the air or gas supply to the larger (1/4" NPT) port.
4. Open the control knob counter clockwise about 3/4 of a turn. The timer should start to cycle.
5. Set the air supply so that the pump full strokes. See pump start up instructions.
6. Set cycle rate in strokes per minute. (See volume graph for specific pump)

NOTE 2 1/4" diameter and smaller air cylinders will operate up to 50 SPM.
3" and larger air cylinders require an SR1S relay.

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