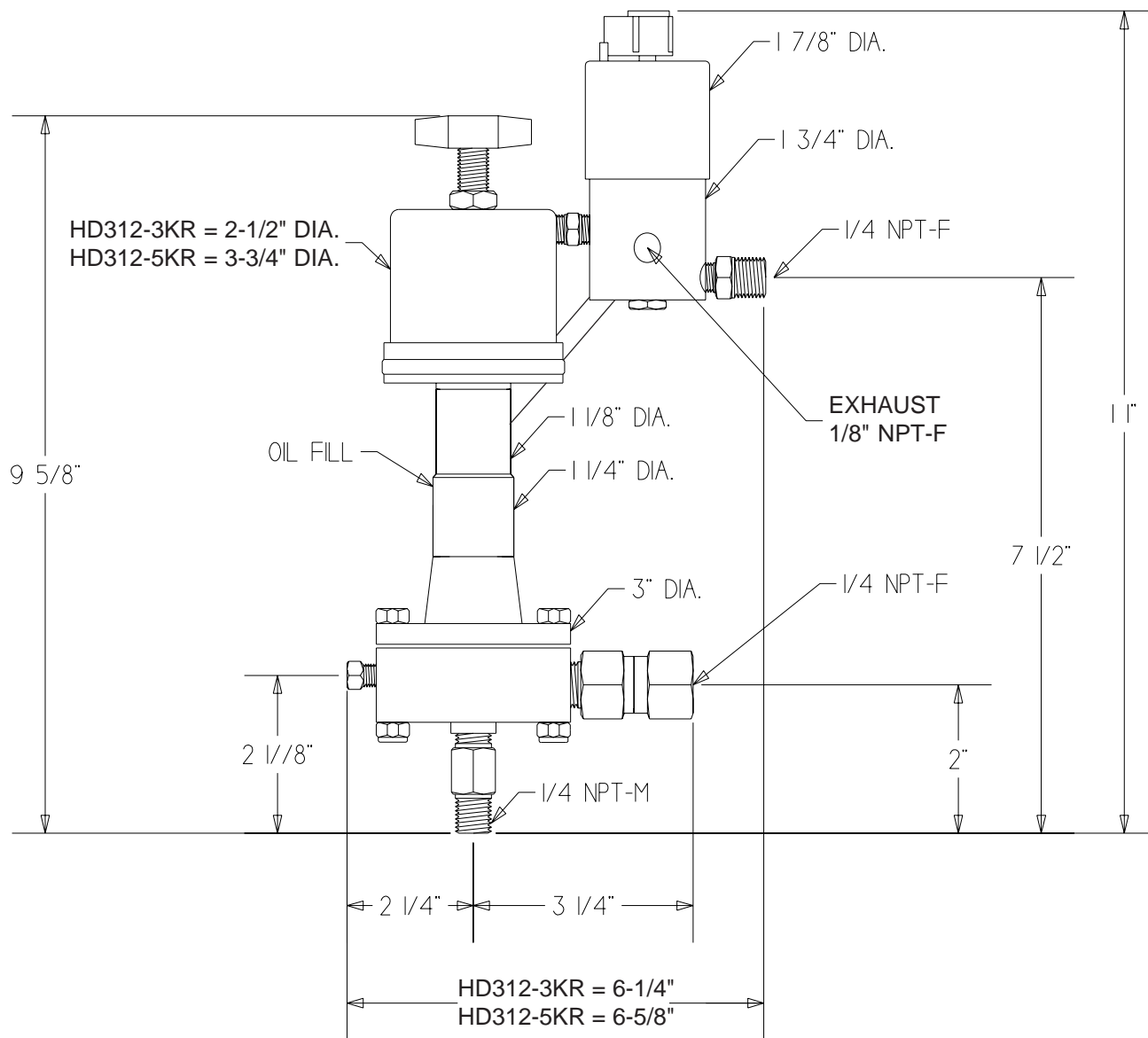


# MORGAN PRODUCTS

PNEUMATIC CHEMICAL PUMPS FOR THE GAS AND OIL INDUSTRIES

## MODEL HD312-3KR / HD312-5KR

AIR ACTUATED HYDRAULIC DIAPHRAGM  
GAS RECOVERY PUMP



**NOTE:**

RECOVERY PRESSURE MUST BE ADDED TO SUPPLY REQUIRED.

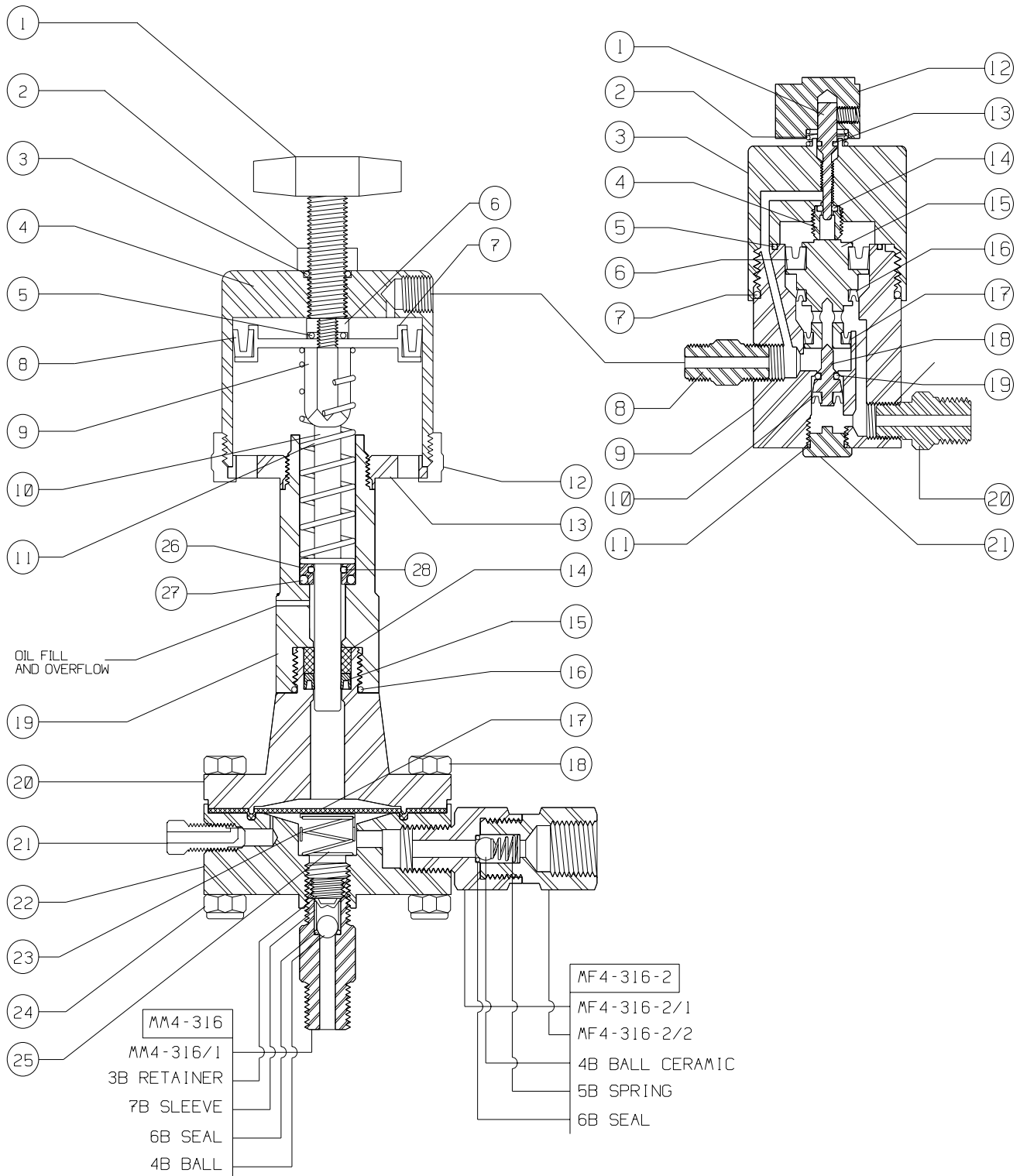
MODEL (WITH TIMER)	DISPLACEMENT	PUMP RATIO	STROKE LENGTH in. - cm.	CONNECTIONS ALL NPT INPUT / OUTPUT	MAXIMUM DISCHARGE PSI - BAR	MAXIMUM RECOVERY PSI / BAR.	OUTPUT PER HOUR
HD312-3KR-TR2R	1 cc	30:1	1 - 2.5	1/4 - M / 1/4 - F	3000 - 207	40 / 580	.06 - .63 / .24 - 2.4
HD312-K5R-TR2R	1 cc	50:1	1 - 2.5	1/4 - M / 1/4 - F	5000 - 345	40 / 580	.06 - .63 / .24 - 2.4

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# HD312-3KR-TR2R / HD312-5KR-TR2R



To order check valve parts, use check valve designation & dash number.  
 EXAMPLE: Ball for MF4-316-2 Order MF4-316-2/4

Keep all rubber goods lubricated with Morgan Products grease or equivalent.

**MODEL HD312-3KR / HD312-5KR  
PARTS LIST**

NO	NAME	PART NO.	MODEL
1	Stroke Adjuster	HD312-1	ALL
2	Locknut	100-2	ALL
3	O-Ring Seal	100-3 *	ALL
4	Air Chambers	200-4 300-4	HD312-3KR HD312-5KR
5	O-Ring Seal	100-11 *	ALL
6	Piston Locknut	100-7	ALL
7	Pistons	200-8 300-8	HD312-3KR HD312-5KR
8	Piston Seals	200-9 * 300-9 *	HD312-3KR HD312-5KR
9	Spring Guide	HD312-10	HD312-3KR, 5KR
10	Plunger	HD312-15 *	ALL
11	Return Spring	200-13	HD312-3KR, 5KR
12	Air Chamber Rings	200-5 300-5	HD312-3KR HD312-5KR
13	Faceplates	200R-6 300R-6	HD312-3KR HD312-5KR
14	Back Up Ring	HD312-19 * +	ALL
15	Pressure Seal	HD312-20 * +	ALL
16	O-Ring Seal	50-21 *	ALL
17	Diaphragm	HD312-32 *	ALL
18	Chamber Bolt	D40-PVC-10 (8) HD-5K-36	HD312-3KR HD312-5KR
19	Oiler Housings	HD312-3KR-14	ALL
20	Hydraulic Chamber	HD312-29	ALL
21	Bleeder	125-22	ALL
22	Pressure Chamber	HD312-23	ALL
23	Spring Cup	HD312-35	ALL
24	Locknut	D40-9 (8) HD-5K-37	HD312-3KR HD312-5KR
25	Diaphragm Spring	HD312-36 *	ALL
26	Seal Retainer	HD312R-26	ALL
27	O-Ring	3000-3 *	ALL
28	O-Ring	HD312R-28 *	ALL
	Tube Fitting	SR1S-22	ALL
	Tubing †	1/4" x .035 SS	ALL
	1oz. Grease	*	ALL
	1oz. Oil	HD187-24 *	ALL

† = Must be cut and bent to fit.

\* = Included in Repair Kit

+ = Included in Seal Set

**MODEL TR2R  
PARTS LIST**

NO	NAME	PART NO.	MATERIAL
1	Metering Valve	TR2-3	303 SS
2	Knob Spring	TR2-2	302 SS
3	Upper Body	TR2-5	303 SS
4	Metering Seat	TR2-6	18-8 SS
5	O-Ring	TR2-13 *	BUNA-N
6	Upper Seal	TR2-10 *	VITON
7	O-Ring	TR2-14 *	BUNA-N
8	1/8" NPT Nipple	TR2-22	303 SS
9	Lower Body	TR2R-8	303 SS
10	Poppet Seal	TR2-17 *	VITON
11	Plug Seal	TR2-18 *	BUNA-N
12	Knob	TR2-1	PLASTIC
13	O-Ring	TR2-4 *	BUNA-N
14	Teflon Seal	TR2-7 *	TEFLON
15	Piston	TR2-9	NYLON
16	Middle Seal	TR2-11 *	VITON
17	Lower Seal	TR2-12 *	VITON
18	Poppet	TR2-15	PVC
19	Poppet O-Ring	TR2-16 *	VITON
20	1/8 x 1/4 NPT Nipple	TR2-21	303 SS
21	Plug	TR2-19	303 SS
	1oz. Grease	*	

\* = Included in Repair Kit

**REPAIR KITS AND SEAL SET**

PART NO.	DESCRIPTION	MODEL
HD312-3KR-50	REPAIR KIT	HD312-3KR
HD312-5KR-50	REPAIR KIT	HD312-5KR
HD312-48	SEAL SET	ALL
TR2-50	REPAIR KIT	TR2R

## MATERIAL SPECIFICATIONS HD312-3KR / HD312-5KR

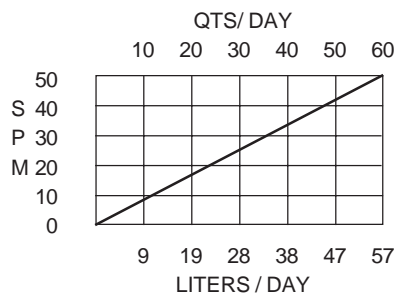
NAME	STANDARD	OPTION
Stroke Adjuster	18-8 SS & ABS	
Locknut	18-8 SS	
O-Ring Seals	Buna - N	Viton
Piston Seals	Buna - N	Viton
Plunger	17-4 SS	
Return Spring	Teflon Coated Inconel	
Back Up Ring	PVC	
Pressure Seal	Graphite Filled Teflon	
Diaphragm	Teflon Faced Buna-N	
Chamber Bolt	18-8 SS	
Bleeder	316 SS	
Pressure Chamber	316 SS	
Spring Cup	316 SS	
Diaphragm Spring	Inconel	
Check Valve Bodies	316 SS	
Check Valve Seals	Teflon	
Check Valve Balls	Ceramic	
Check Valve Springs	Inconel	

### INSTALLATION INSTRUCTIONS

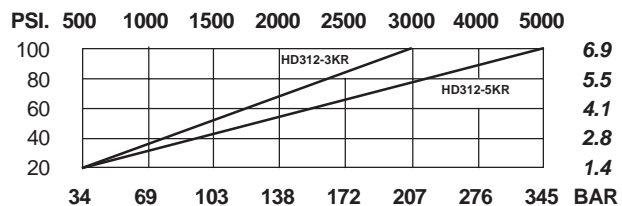
1. Discard all red plastic closures.
2. Connect suction check valve, to a gravity fed chemical source.
3. Connect discharge check valve, to process line.
4. Connect a regulated air or gas supply, to the timing relay.
5. Connect Exhaust port on TR2R to a low pressure line (**40 PSI MAXIMUM**).
6. Fill oil reservoir with oil provided, until oil flows out of the bleed hole.  
\*\* This must be done BEFORE start up.\*\*
7. Open bleeder valve until chemical flows from bleeder.
8. Set regulator at 10 to 15 psi ABOVE the pressure required. **PLUS THE RECOVERY LINE PRESSURE. 150 PSI MAXIMUM SUPPLY.** (See Discharge pressure graph.)
9. Set cycle rate in strokes per minute.  
(See volume graph)

CAUTION: Use only light hydraulic oil.

#### VOLUME



#### DISCHARGE PRESSURE



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