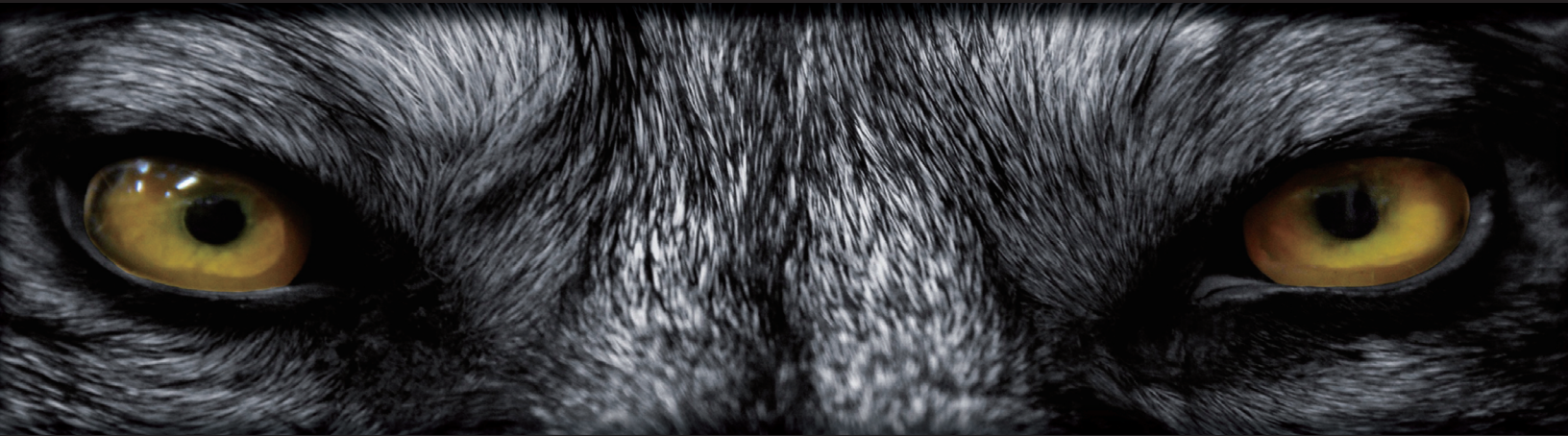


***FLOMORE***

*Different By Design*

**3500**

***Wolf Series***



***DUPLEX***

# 3500 Duplex

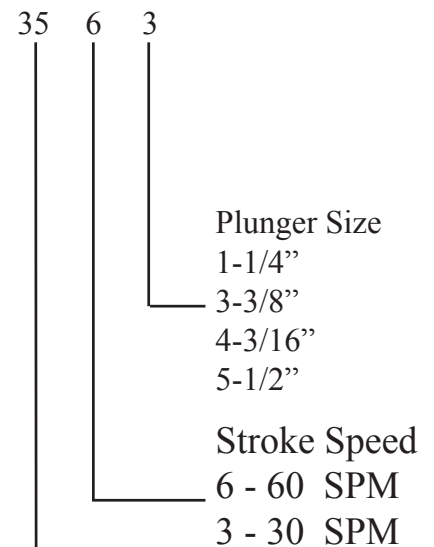


\*The Flomore 3500 series chemical injection pumps are electric driven, positive displacement pumps utilizing C-faced motors and common gear reducers. The gear reducers are available in 15, 30, 60, and 120 strokes per minute configurations. By utilizing even further flexibility of a wide variety of plunger sizes, the 3500 Series can fill many application requirements of different flow and pressures.

## Additional Information

- Maximum discharge pressure:  
6000 PSI (413 bar) with 3/16" plunger
- Maximum volume 139 gallons per day  
(528 liters per day) w/1/2" plunger
- Head is adjustable while running
- Available Simplex and Duplex
- Available in four stroke rates:  
15,30,60, or 120 strokes per minute
- 1/2 horsepower motor standard; 1 or 3 phase,  
TFC or explosion proof; 50 or 60 hertz
- Available with 3/16", 1/4", 3/8", or 1/2" plunger

### Model Designation



# *3500 Duplex Performance Data*



*\*Patent Pending*

Model #	Plunger Size	Strokes Per Minute	Maximum Discharge Press(PSI)	Gallons Per Day (per head)	
				Maximum	Minimum
35-34SS	3/16"	30	6000	4.9	0.5
35-64SS		60	6000	9.8	1
35-31SS	1/4"	30	4000	8.6	0.9
35-61SS		60	4000	17.3	1.7
35-33SS	3/8"	30	1800	19.6	2
35-63SS		60	1700	39.2	3.9
35-35SS	1/2"	30	1025	34.8	3.5
35-65SS		60	1000	69.7	7

*\*Note, Performance Data Complies with both Simplex and Duplex Pumps.*

# ***3500 Duplex Parts***

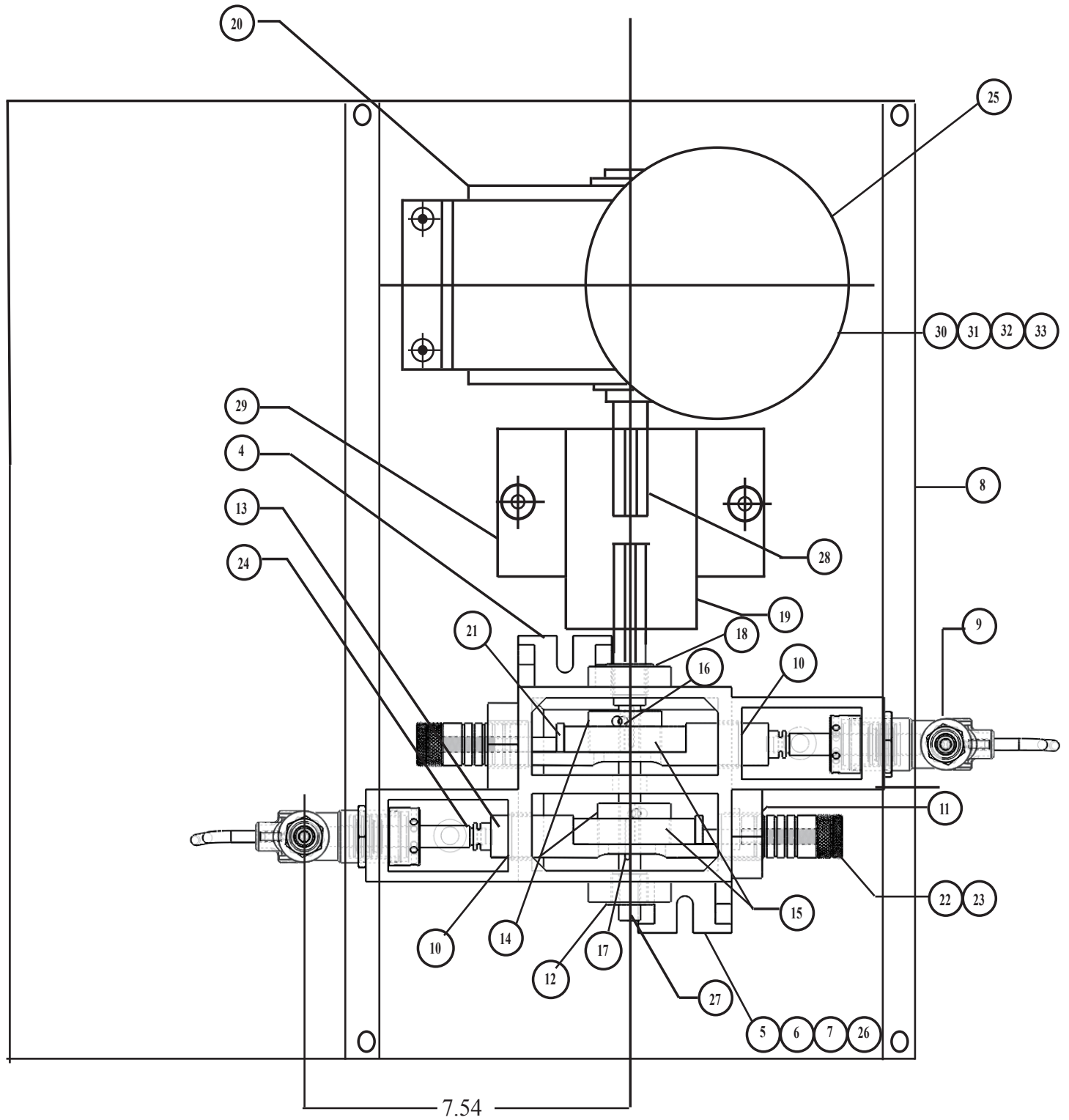
## **Parts List**

Item	Flomore Part #	Pcs Required	Description	Material
1	B-1483-DH	1	Cover	363F Aluminum
2	A-0136	3	Thumbscrew	Gr 5 Zinc
3	A-5963	1	Cover Gasket	Nitrile
4	C-2048-DH	1	Housing	356T6 Aluminum
5	A-0141	2	HHCS 5/16-18	Gr 5 Zinc
6	A-0144	2	Nut Hex 5/16-18	Gr 5 Zinc
7	A-0167	2	Cut Washer 5/16	Gr 5 Zinc
8	C-2197.2	1	Base Plate	Galv Steel
9	N/A	1	Head Assembly	316 SS
10	A-5964	2	Cross Head Bearing	Nylon
11	A-5965	2	Cross Head Bearing	Nylon
12	A-6935	1	Sleeve Bearing	Nylon
13	B-1542	2	Cross Head	316 SS
14	A-5823	2	Eccentric Cam	C1018 Steel
15	A-5830	2	Roller Bearing	Steel
16	A-5831	4	Set Screw	Steel
17	A-6386	2	Key	Steel
18	A-6936	1	Sleeve Bearing	Nylon
19	A-6714	1	Coupling	Steel
20	Gear Reducer	1	Reducer	N/A
21	A-5822	2	Stroke Adjustor	C1213 C.R.S
22	A-5824	2	Lock Nut , Stroke Adj.	416 SS
23	A-5825	2	Adjusting Screw	416 SS
24	A-5953	2	Drive Clip	Steel
25	N/A	1	Motor	N/A
26	A-0425	2	Lockwasher 5/16	GR 5 ZINC
27	B-1726.2	1	Drive Shaft	Steel
28	A-6720	1	Drive Shaft Key	Steel
29	B-1700	1	Coupling Guard	Steel
30	A-0139	4	HHCS 3/8-16x1.25	Gr 5 Zinc
31	A-2207	4	Hex Nut 3/8-16	Gr 5 Zinc
32	A-0746	4	Flatwasher 3/8	Gr 5 Zinc
33	A-0459	4	Lockwasher SPG 3/8	Gr 5 Zinc

*\* Items 1, 2 and 3 Indicate Pump Cover Components (not displayed in drawing)*

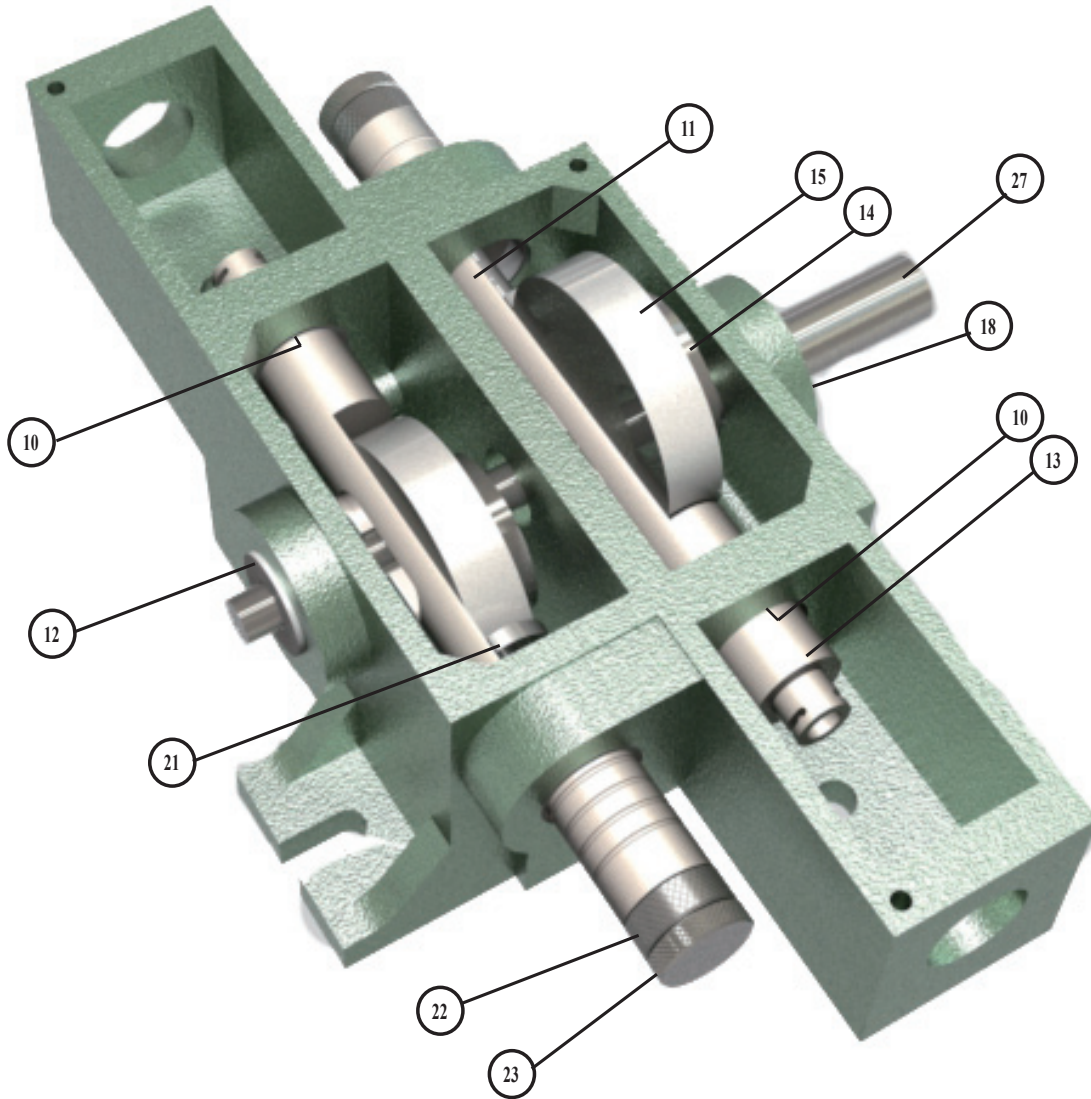


# *Parts Drawing*



*\* For Installation and Operating Instructions See page 10*

# *Internal View*



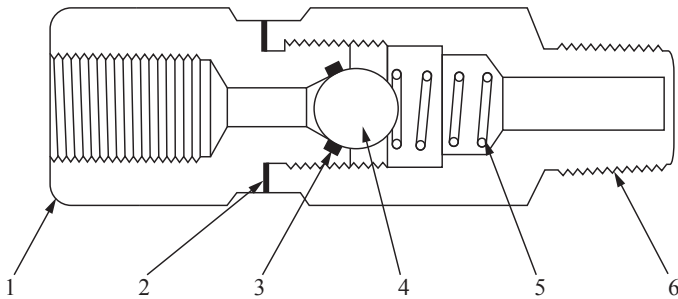
Item	Flomore Part #	Pcs Required	Description	Material
10	A-5964	2	Cross Head Bearing	Nylon
11	A-5965	2	Cross Head Bearing	Nylon
12	A-6935	1	Sleeve Bearing	Nylon
13	B-1542	2	Cross Head	316 SS
14	A-5823	2	Eccentric Cam	C1018 Steel
15	A-5830	2	Roller Bearing	Steel
18	A-6936	1	Sleeve Bearing	Nylon
21	A-5822	2	Stroke Adjustor	C1213 C.R.S
22	A-5824	2	Lock Nut, Stroke Adj.	416 SS
23	A-5825	2	Adjusting Screw	416 SS
27	B-1726.2	1	Drive Shaft	Steel

*\* This table corresponds with parts list table on page 4*

# 3500 Duplex Components

## A-0675 & A0676 Line Check

### Parts List



Item #	Part #	# Reqd.	Description	Material
1	A-0678	1	Inlet Body	Brass
	A-1297	1	Inlet Body	303 Stainless Steel
2	A-1574	1	Washer	304 Stainless Steel
3	A-0479	1	O'Ring	Buna-N
	A-2580	1	O'Ring	Viton
4	A-0054	1	3/8" Ball	316 Stainless Steel
5	A-0391	1	Spring	Steel
6	A-0679	1	Outlet Body	Brass
	A-1296	1	Outlet Body	303 Stainless Steel

\* Recommended Spare Parts

\*\*A-0675 Only

\*\*\*A-0676 Only

## Electric Motors

Flomore Part #	Horse Power	Enclosure Type	Phase	Voltage	Frequency
A-5896	.5	TEFC	1	115/230	60 hz
A-5897	.5	Explosion Proof	1	115-230	60hz
A-5898	.5	TEFC	3	230-460	60hz
A-5899	.5	Explosion Proof	3	230 1/460	60hz

# *Injector Heads*

## *Parts List*

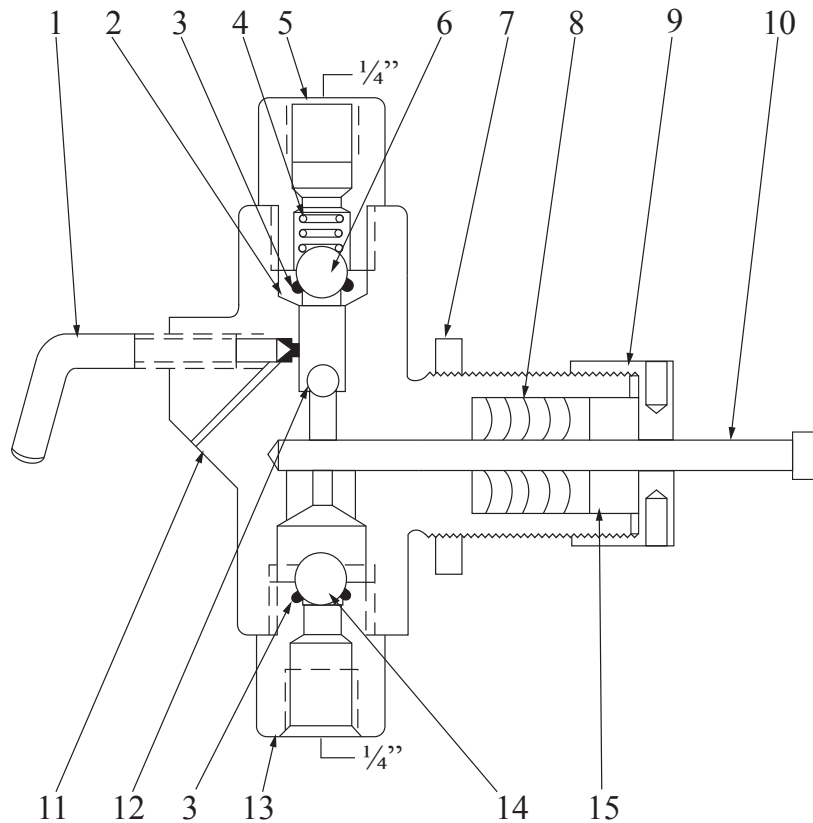
Item #	Part #				# Reqd.	Description	Material
	3/16"	1/4"	3/8"	1/2"			
♦	♦	B-0166	B-0203	B-0496	1	Head Assembly	Ductile Iron with Stainless Steel Trim
	B-1299	B-1557	B-1558	B-1559			All Stainless Steel
1	A-4027	A-1497			1	Priming Valve	303 Stainless Steel
* 2	B-0737				1	Top Seat Assembly- Buna	303 Stainless Steel
* 3	A-0479				1	Suction & Discharge O'Ring	Buna-N
4	A-0077				1	Ball Check Spring	316 Stainless Steel
5	A-1496				1	Top Bushing	303 Stainless Steel
6	A-0054				1	3/8" Large Top Ball	316 Stainless Steel
7	A-0225				1	Locknut	Brass
* 8	A-3969	A-1461	A-1456	A-0959	1	Plunger Packing	Buna-N
9	A-4104				1	Plunger Packing Gland Nut	303 Stainless Steel
10	A-7001	A-7004	A-7002	A-7003	1	Plunger	17-4 pH Stainless Steel
11	♦	C-0275	C-0276	C-0272	1	Body	Ductile Iron
	C-2040	C-0291	C-0425	C-0349			Stainless Steel
12	♦	A-0126			1	1/4" Small Top Ball	316 Stainless Steel
* 13	B-1216	B-0736			1	Bottom Seat Assembly-Buna	303 Stainless Steel
* 14	A-0054				1	3/8" Suction Ball	316 Stainless Steel
15	A-4332	A-1463	A-0957	A-1219	1	Plunger Packing Gland	303 Stainless Steel
16	A-0126	♦			1	1/4" Ball	316 Stainless Steel
17	A-4394	♦			1	Suction Bushing Sealing Washer	304 Stainless Steel

*\*Recommended Spare Parts*

*\*\* Alternate construction available see chart above*



# *Injector Heads*



## *Alternate Construction*

Item #	Part #	Description	Material
2	A-0806	Top Seat Assembly (Metal-to-Metal)	303 Stainless Steel
2	B-0843	Top Seat with Viton O'Ring	303 Stainless Steel
3	A-2580	O'Ring	Viton
8	◆	3/16" Plunger Packing	Hard
	A-3967		Viton
	A-3966		Teflon
	A-2295	Hard	
	A-4102	1/4" Plunger Packing	Viton
	A-1642		Teflon
	A-1875	Hard	
	A-4101	3/8" Plunger Packing	Viton
	A-1234		Teflon
	A-1874	Hard	
	A-4103	1/2" Plunger Packing	Viton
A-1012	Teflon		
* 13	A-0771	Bottom Seat Assembly (Metal-to-Metal)	316 Stainless Steel
13	B-0844	Suction Bushing with Viton O'Ring	303 Stainless Steel
* 14	A-0053	1/2" Suction Ball	316 Stainless Steel

*\*Recommended Spare Parts*

*\*\*Items must be used together*

# ***Installation and Operating Instructions***

## ***Installation***

1. Plan Ahead for proper mounting, pump location is very important. position it to provide efficient routing of suction, discharge lines and electric service.

- Avoid long suction lines and provide for a flooded suction line whenever possible.

2. Pump fluid lines, connections operate best when there is a minimum restriction to the medium flow.

3. Install the proper electrical starters and disconnect switches

- It is recommended that a solid mounting support be provided--
- take advantage of factory installed holes in the base plate for securing the pump

## ***Fluid End***

4. All fluid connections both suction and discharge, should be sealed tight.

- Fluid end connections are 1/4" NPT
- The suction connection is at the bottom of the fluid end, and the discharge connection is at the top.

## ***Motor***

5. A conduit connection is provided at the motor for electrical connections.

- Assure the proper electrical service has been provided.
- Assure all connections are tight, in their proper location, properly grounded and fused

## ***Gear Reducer***

6. Check the oil level of the gear reducer

- If the oil level is below the output shaft oil plug, refill to the plug with API approved oil

## ***Start Up***

7. Open the priming valve on the fluid end assembly and start the pump motor

8. Allow the pump to run until a clear bubbleless stream of media comes out of the priming valve

9. Close the priming valve

10. Check the packing for proper sealing.

- If it leaks, stop the pump and make necessary adjustments. Adjust the stroke adjustment knob to obtain the desired flow rate

## ***Preventive Maintenance***

11. Check periodically (min once per month) and apply small amount of grease to the cam bearing and to the crosshead areas that cycle through the linear bearings

- Check the packing regularly. If leakage is observed, stop the pump.
- Make small adjustments by turning the gland nut.
- Restart the pump but do not over tighten the packing as this will reduce the packing life and possibly

damage the plunger.

***\*\*It is always important to assure the packing material is compatible with the media being pumped, check for swollen or deteriorated seals.***



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