

S E R I E S

2300

Chemical Injection Pumps

Installation & Operational Instructions

1. Remove the pump from the shipping container. Inspect for damage.
2. Position pump to allow easy access to the fluid lines and the electrical connections.
3. Connect the chemical supply line to the pump suction port. The pump suction port connection is 1/4" FNPT.

NOTE: *Fluid end of the pump should be positioned so the inlet and outlet ports are vertical with the suction port facing down.*

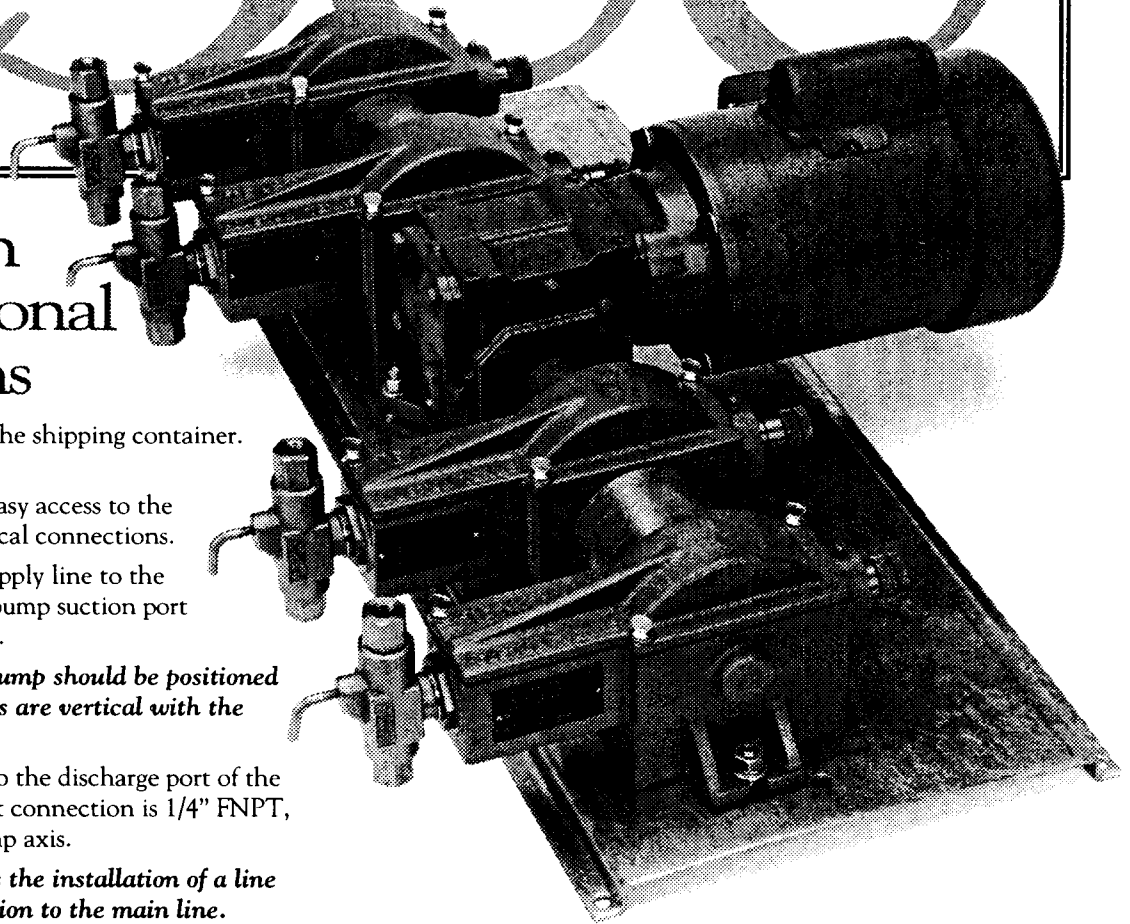
4. Connect tubing or pipe to the discharge port of the pump. The discharge port connection is 1/4" FNPT, and is vertical to the pump axis.

NOTE: *TXT recommends the installation of a line check at the point of injection to the main line.*

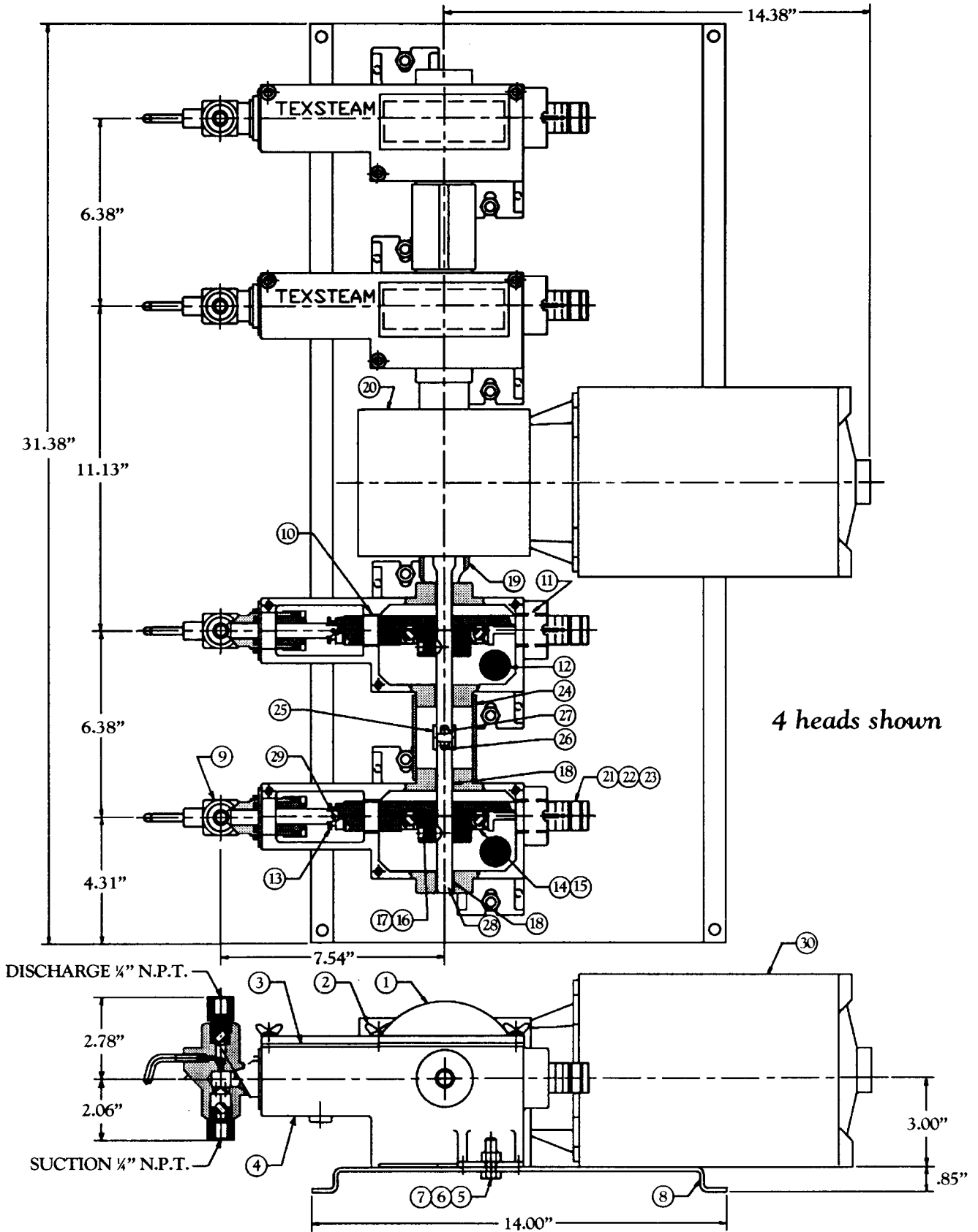
5. Connect the electrical supply lines to the pump motor leads per the correct wire connection marked on tag attached to the motor.

NOTE: *Correct electrical protection (circuit breakers) should be provided to protect the pump motors.*

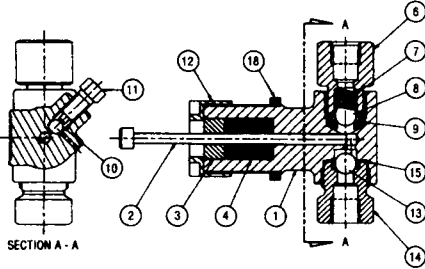
6. Turn power on to the pump. The pump should start to cycle. If it doesn't, check the electrical supply circuits.
7. Once the pump is cycling, open the priming valve on the fluid end. Allow the trapped air to be expelled from the head. Continue to cycle the pump with the priming valve open until air bubbles are no longer visible in the fluid stream coming from the bleed hole.
8. Control the output volume of the pump by adjusting the stroke adjustment knob. The pump can be operated at a stroke length of 10%, minimum volume.
9. Once the desired volume is established, the adjustment knob should be locked in place.



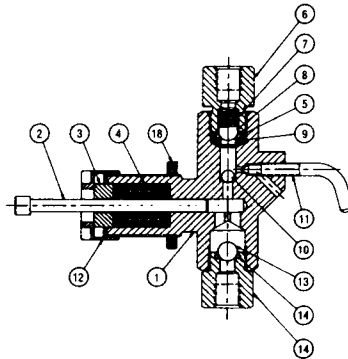
Pump Unit



Technical Data



3/16" Injector Head



1/4" - 3/8" - 1/2" Injector Heads

| Plunger Size | Pump Mod. # | Assembly Number |
|--------------|-------------|-----------------|
| 3/16" | 2304 | TB-1560 |
| 1/4" | 2301 | TB-1557 |
| 3/8" | 2303 | TB-1558 |
| 1/2" | 2305 | TB-1559 |

All stainless steel construction. Ductile iron not available.

Pump Unit Parts List

| Item | Part # | Name | Material |
|------|-----------|---------------------------|-------------------------|
| 1 | TB1483 | Cover | ASTM A48 Cast Iron |
| 2 | TA0136 | 1/4-20 x 1/4 Thumbscrew | Cad Plated Carbon Steel |
| 3 | TA5821 | Cover Gasket | Nitrile |
| 4 | TC2048 | Housing | ASTM A48 Cast Iron |
| 5 | TA0142 | HHCS 3/8-18 x 1.25 | Cad Plated Carbon Steel |
| 6 | TA0144 | Hex 3/8-18 Nut | Cad Plated Carbon Steel |
| 7 | TA0300 | Cut Washer 3/8 | Cad Plated Carbon Steel |
| 8 | | Base Plate | Galvanized Steel |
| 9 | See Above | Head Assembly | 316 SS |
| 10 | TA5964 | Cross Head Bearing | Nylon |
| 11 | TA5965 | Cross Head Bearing | Nylon |
| 12 | TA5966 | Screen | SS |
| 13 | TB1542 | Cross Head | AISI 4140 Hr Steel |
| 14 | TA5823 | Eccentric Cam | C 1018 Steel |
| 15 | TA5830 | Roller Bearing | Steel |
| 16 | TA5831 | 10-24 UNC x 1/4 Set Screw | Carbon Steel |
| 17 | TA2829 | Woodruff Key | Carbon Steel |
| 18 | TA5832 | Sleeve Bearing | Reinforced Steel |
| 19 | TA5826 | Shaft Guard | Plastic |
| 20 | TA5901 | Reducer | |
| 21 | TA5822 | Stroke Adjustor | CI213 C.R.S. |
| 22 | TA5824 | Stroke Adjustor Lock Nut | 416 SS |
| 23 | TA2825 | Adjusting Screw | 416 SS |
| 24 | TC2070 | Coupling Cover | Plastic |
| 25 | 61282P002 | Coupling | Steel |
| 26 | TA5937 | Key | Steel |
| 27 | CA0149 | Key | Steel |
| 28 | TA5950 | Tandem Shaft | Steel |
| 29 | TA5953 | Drive Clip | Steel |
| 30 | | Motor 1/2 HP | |

Injector Head Parts List

| Item | Part Number | | | | Name | Material |
|------|-------------|---------|---------|---------|--|---------------------|
| | 3/16" | 1/4" | 3/8" | 1/2" | | |
| 1 | TC-2040 | TC-291 | TC-425 | TB-349 | Body | SS |
| *2 | TA-6082 | TA-6079 | TA-6080 | TA-6081 | Plunger | 17-4PH |
| 3 | TA-5642 | TA-1463 | TA-957 | TA-1219 | Plunger Packing Gland | 303 SS |
| *4 | TA-3969 | TA-1461 | TA-1456 | TA-0959 | Packing (see table below for maximum discharge pressures) | Buna N |
| | TA-3948 | TA-2295 | TA-1875 | TA-1874 | | Hard |
| | TA-3967 | TA-4102 | TA-4101 | TA-4103 | | Viton |
| | TA-3966 | TA-1642 | TA-1234 | TA-1012 | | Teflon |
| *5 | TA-0479 | TA-0479 | TA-0479 | TA-0479 | Suction/Discharge O-ring | Buna N |
| | TA-2093 | TA-2580 | TA-2580 | TA-2580 | (included in Items 9 & 14) | Viton |
| 6 | TA-1496 | TA-1496 | TA-1496 | TA-1496 | Top Bushing | 302 SS |
| *7 | TA-0077 | TA-0077 | TA-0077 | TA-0077 | Ball Check Spring | 316 SS |
| *8 | TA-0054 | TA-0054 | TA-0054 | TA-0054 | Large Top Ball 3/8" | 316 SS |
| | TA-0064 | TA-0064 | TA-0064 | TA-0064 | | Hastelloy |
| *9 | TB-0737 | TB-0737 | TB-0737 | TB-0737 | Top Seat Ass'y Buna O-ring | 303 SS |
| | N/A | TA-0806 | TA-0806 | TA-0806 | Top Seat Ass'y (M to M) | 303 SS |
| *10 | N/A | TA-0126 | TA-0126 | TA-0126 | Small Top Ball 1/4" | 316 SS |
| 11 | TA-5462 | TA-1497 | TA-1497 | TA-1497 | Priming Valve | 303 SS |
| 12 | TA-4104 | TA-4104 | TA-4104 | TA-4104 | Plunger Packing Gland Nut | 303 SS |
| *13 | TA-0054 | TA-0054 | TA-0054 | TA-0054 | Suction Ball 3/8" | 316 SS |
| | TA-0064 | TA-0064 | TA-0064 | TA-0064 | | Hastelloy |
| | N/A | TA-0053 | TA-0053 | TA-0053 | | Suction Ball 1/2" A |
| *14 | TB-1216 | TB-0736 | TB-0736 | TB-0736 | Bottom Seat w/Buna O-ring | 303 SS |
| | N/A | TA-0771 | TA-0771 | TA-0771 | Bottom Seat Bushing † | 303 SS |
| 15 | TA-4394 | N/A | N/A | N/A | Gasket | 304 SS |
| *18 | TA-0225 | TA-0225 | TA-0225 | TA-0225 | Locknut | Brass |

*Recommended spare parts. ^Use with TA-0771 MtoM Bottom Seat only. †(MtoM) Use with TA-0053 1/2" ball only)

Maximum Packing Pressures

| Plunger Size | Material | | | | | | | |
|--------------|----------|-------|------|-------|-------|-------|--------|-------|
| | Buna-N | | Hard | | Viton | | Teflon | |
| | PSIG | Bars | PSIG | Bars | PSIG | Bars | PSIG | Bars |
| 3/16" | 3000 | (207) | 6000 | (414) | 3000 | (207) | 3000 | (207) |
| 1/4" | 2400 | (165) | 4000 | (275) | 2400 | (165) | 2400 | (165) |
| 3/8" | 1500 | (103) | 1800 | (124) | 1500 | (103) | 1500 | (103) |
| 1/2" | 1000 | (69) | 1025 | (71) | 1000 | (69) | 1000 | (69) |
| 3/4" | 450 | (31) | 450 | (31) | 450 | (31) | 450 | (31) |
| 1" | 250 | (17) | 250 | (17) | 250 | (17) | 250 | (17) |

Technical Data


2300 Electric Pump Pressure and Volume Chart

| Plunger Size | Strokes per Minute | Maximum Discharge Press | | Gallons Per Day (Liters) | | | |
|--------------|--------------------|-------------------------|--------|--------------------------|--------|---------|-------|
| | | PSI | (Bars) | Maximum | | Minimum | |
| 1/8" | 15 | 6000 | (414) | 2.4 | (9) | .2 | (1) |
| | 30 | 6000 | (414) | 4.9 | (19) | .5 | (2) |
| | 60 | 6000 | (414) | 9.8 | (37) | 1.0 | (4) |
| | 120 | 4000 | (275) | 18.7 | (71) | 1.9 | (7) |
| 1/4" | 15 | 3200 | (221) | 4.3 | (16) | .4 | (2) |
| | 30 | 4000 | (275) | 8.6 | (33) | .9 | (3) |
| | 60 | 4000 | (275) | 17.3 | (65) | 1.7 | (7) |
| | 120 | 2100 | (145) | 34.6 | (131) | 3.5 | (13) |
| 3/8" | 15 | 1450 | (100) | 9.8 | (37) | 1.0 | (4) |
| | 30 | 1800 | (124) | 19.6 | (74) | 2.0 | (7) |
| | 60 | 1700 | (117) | 39.2 | (148) | 3.9 | (15) |
| | 120 | 950 | (65) | 78.5 | (297) | 7.8 | (30) |
| 1/2" | 15 | 820 | (56) | 17.4 | (66) | 1.7 | (7) |
| | 30 | 1025 | (71) | 34.8 | (88) | 3.5 | (9) |
| | 60 | 1000 | (70) | 69.7 | (264) | 7.0 | (26) |
| | 120 | 525 | (36) | 139.5 | (528) | 13.9 | (53) |
| 5/8" | 15 | 360 | (25) | 39.3 | (149) | 3.9 | (15) |
| | 30 | 450 | (31) | 78.5 | (297) | 7.8 | (30) |
| | 60 | 440 | (30) | 157.0 | (594) | 15.7 | (59) |
| | 120 | 230 | (16) | 313.9 | (1188) | 31.4 | (119) |
| 1" | 15 | 205 | (14) | 69.7 | (264) | 7.0 | (26) |
| | 30 | 250 | (17) | 139.5 | (528) | 13.9 | (53) |
| | 60 | 250 | (17) | 279.1 | (1056) | 27.9 | (106) |
| | 120 | 130 | (9) | 558.1 | (2113) | 55.8 | (211) |

* For 50 cycle motors multiply above volumes by .8

Model Designation

23F3-3 3/8"

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- Always specify plunger size when ordering.
 - Indicates number of injector heads (1 through 4).
 - Indicates plunger size (1 is 1/4", 3 is 3/8", 4 is 1/2", 5 is 5/8", 6 is 3/4", and 7 is 1")
 - Indicates gear ratio
 E - 15:1
 F - 30:1
 G - 60:1
 H - 120:1