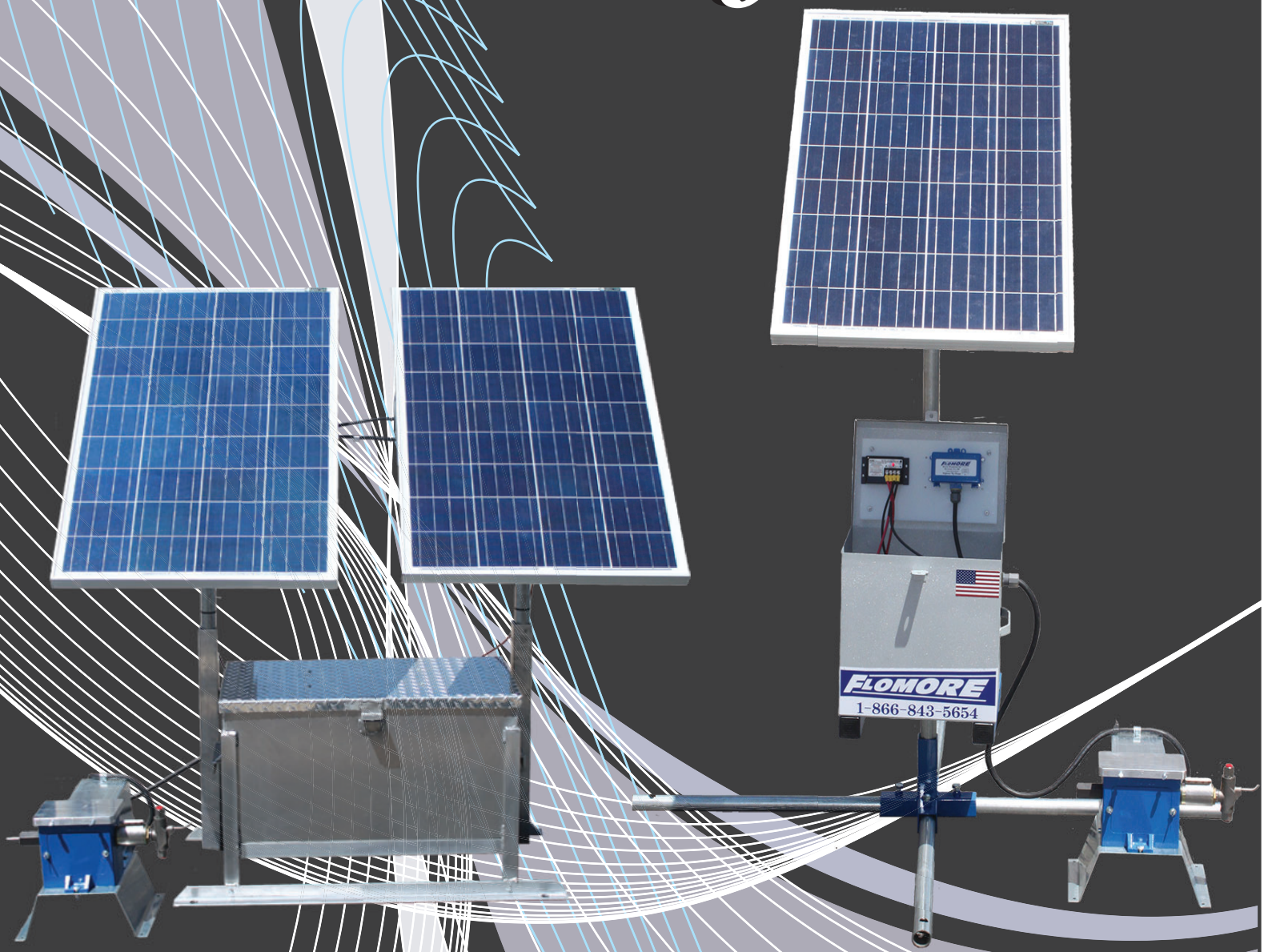
FLOMORE®

Different By Design

3000 Series Solar Power Injector



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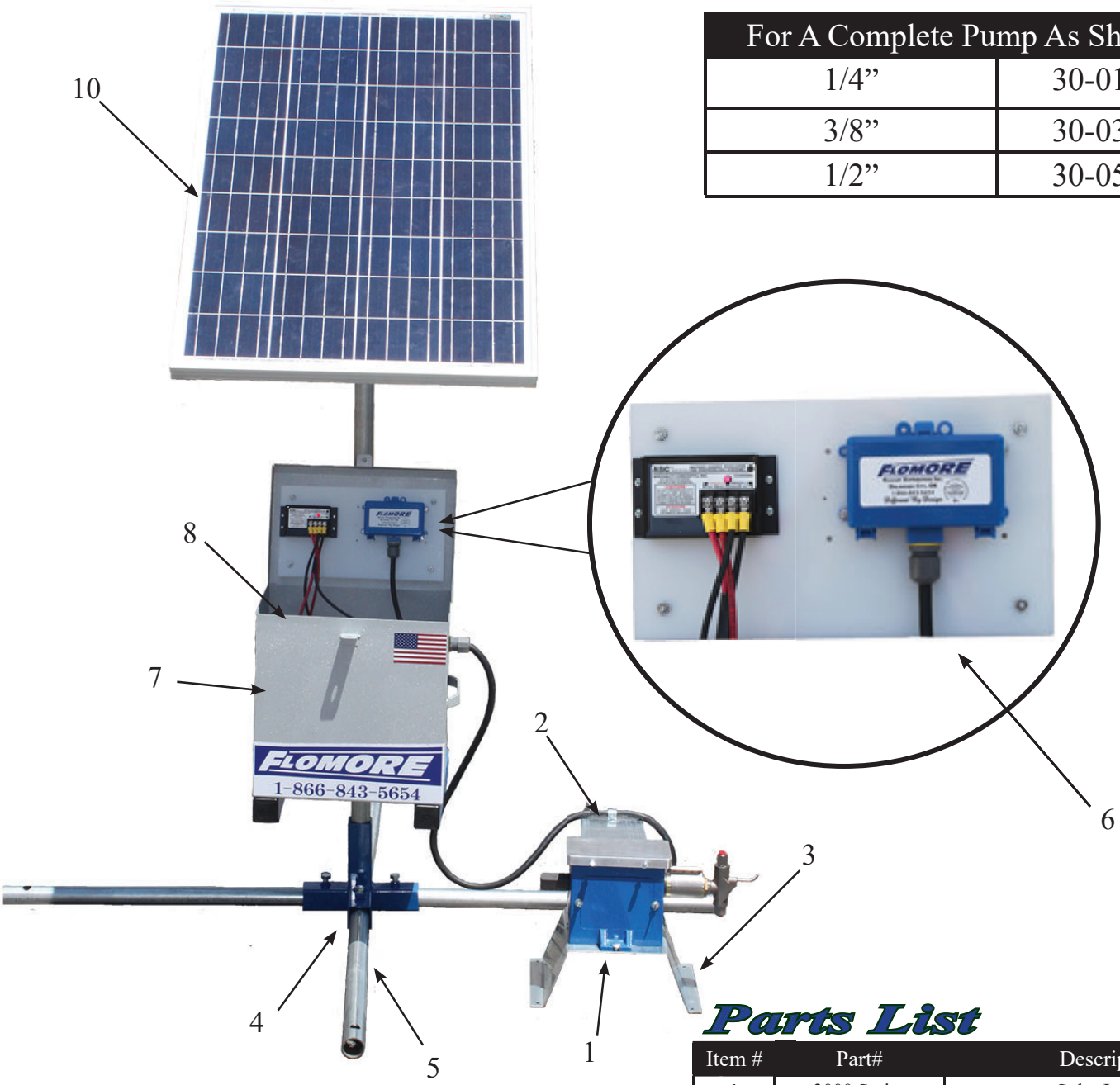
3000 Solar Power Injector

For A Complete Pump As Shown	
1/4”	30-01SS
3/8”	30-03SS
1/2”	30-05SS



Solar Power Injector with Stand

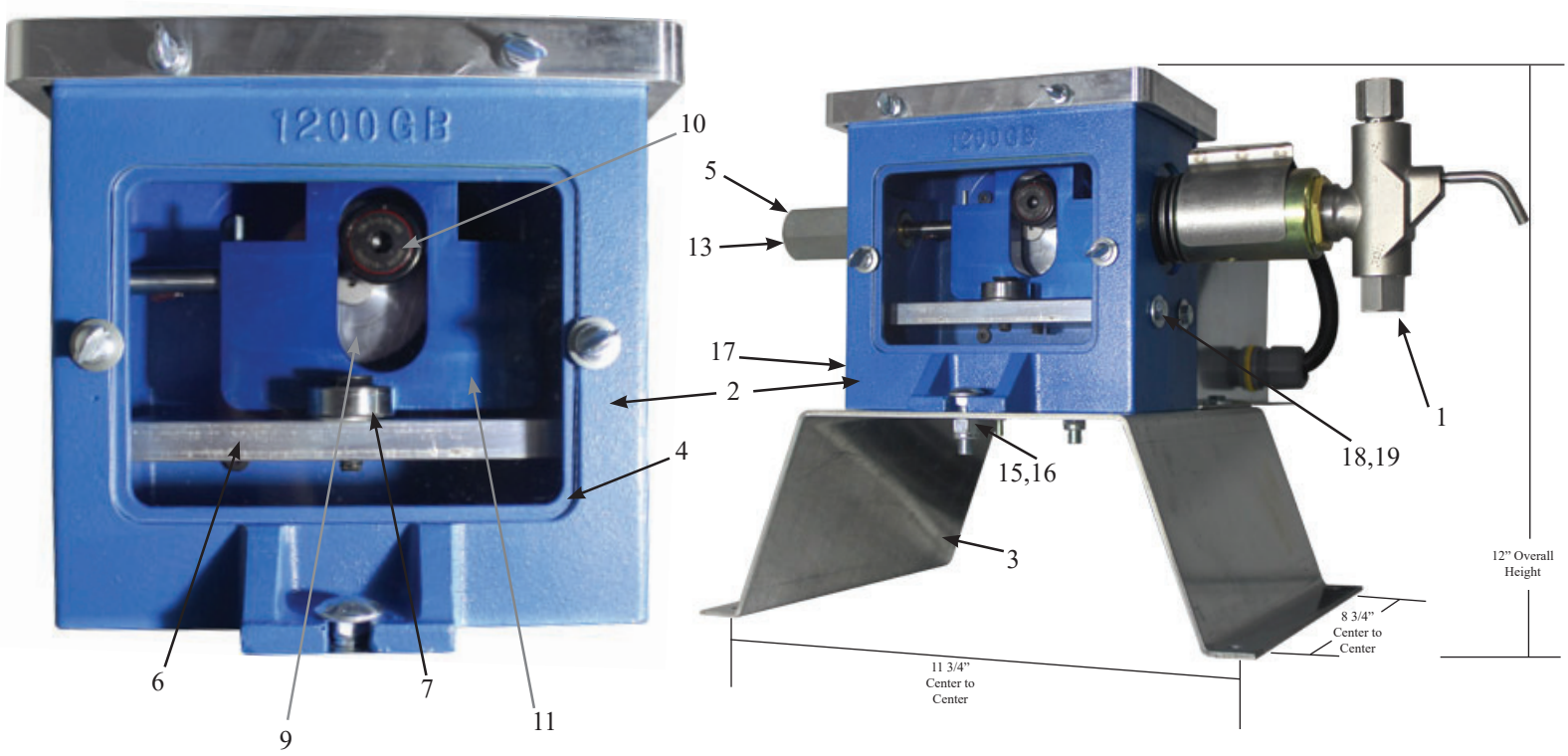
Parts List

Item #	Part#	Description
1	3000 Series	Solar Injector
2	S-1212	Electric Motor
3	SP-0001B	Power Box Solar Base
4	SP-0005W	5 -Way Base
5	SP-0100	Solar Injector Stand
6	S-0004/ SP-0032	Electronics / Timer
7	S-0200	Solar Battery Box with Electronics
8	SP-0010	Battery (located inside battery box)
10	S-0079	100 Watt Industrial Solar Panel USA

** Flomore Does Not Warrant Batteries or Electric Motors*

Note: Solar Panel Must Always Face South

Solar Injector Pump Body



Parts List

Item #	Part # 3/16"	1/4"	3/8"	1/2"	3/4"	# Reqd.	Description	Material
◆	◆	301	303	305	◆	1	Solar Injector	Ductile Iron
		S-3001SS	S-3003SS	S-3005SS				Stainless Steel
1		C-1578	C-1579	C-1580		1	Head Assembly	Ductile Iron
		C-1582	C-1583	C-1584				Stainless Steel
2	SP-0091					1	Solar Pump Body	Aluminum
3	SP-0001B					1	Power Box Solar Base	Galv. Steel
4	SP-0001S					1	Power Box Viewing Shield	Acrylic
5	SP-0022					1	Solar Guide Body	1018 Nickel Plate
6	SP-0005					1	Aligment Bar	Aluminum
7	SP-0002B USA					2	Solar Power Hub Bearings	◆
8	SP-0002.02					1	Power Hub Set Screw	Steel
9	SP-0011					1	Power Hub Less Bearing	Aluminum
10	SP-0002CF USA					1	Power Hub Bearing	◆
11	SP-0008					1	Crosshead	1018 Carbon Steel
12	A-0290					2	Plunger Pin	Steel
13	SP-0021					1	Guide Rod	17-4 Stainless Steel
14	SP-0010.01					4	Motor Mounting Bolt	Steel
15	S-0038					2	Carriage Bolt	Steel
16	S-0037					2	Nylon Lock Nut	Steel
17	A-0138					1	Pipe Plug	Zinc Plated Steel
18	A-0163					4	Hex Head Bolt	Zinc Plated Steel
19	A-0167					4	Flat Washer	Zinc Plated Steel

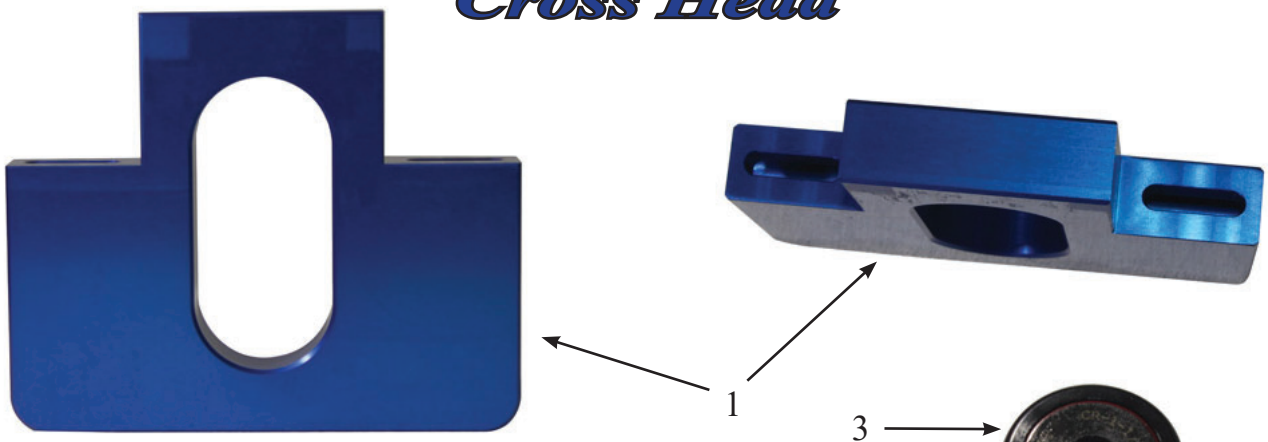
** Head Assembly comes with Buna-N Packing and Viton & Buna O'Rings*

Power End Components
"Smooth Operator"

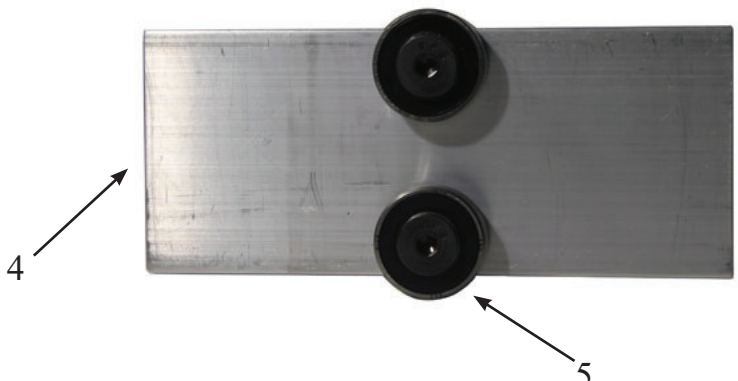
These three POWER END COMPONENTS create a back and fourth motion making the S3000 Solar Series Injector a POSITIVE DISPLACEMENT PUMP. As the plunger goes forward, fluid is discharged from the head assembly. The hub assembly is connected to the DC motor. As the motor turns the hub assembly, the bearing is placed eccentric causing a back and forth motion to the crosshead. The bottom bar assembly keeps the crosshead in a straight, linear motion, the straight motion on the crosshead creates less stress on the motor which has to draw less voltage from the battery. All bearings are sealed, needing no grease. The crosshead has three potential plunger pin placements, long stroke, middle stroke and short stroke, creating flexibility such as pumping 1 pint per day up to 45 gallons per day with a single head assembly.

Item #	Part#	Description	Material
1	SP-0008	Crosshead	Steel
2	SP-0011	Hub	Aluminum
3	SP-0002CF	Power Hub Cam Follower with Bolt	Steel
4	SP-0005	Bottom Alignment Bar	Aluminum
5	SP-0002B	Bearing - Sealed	Steel
6	SP-0002	Power Hub Less Bearing	Steel

Cross Head



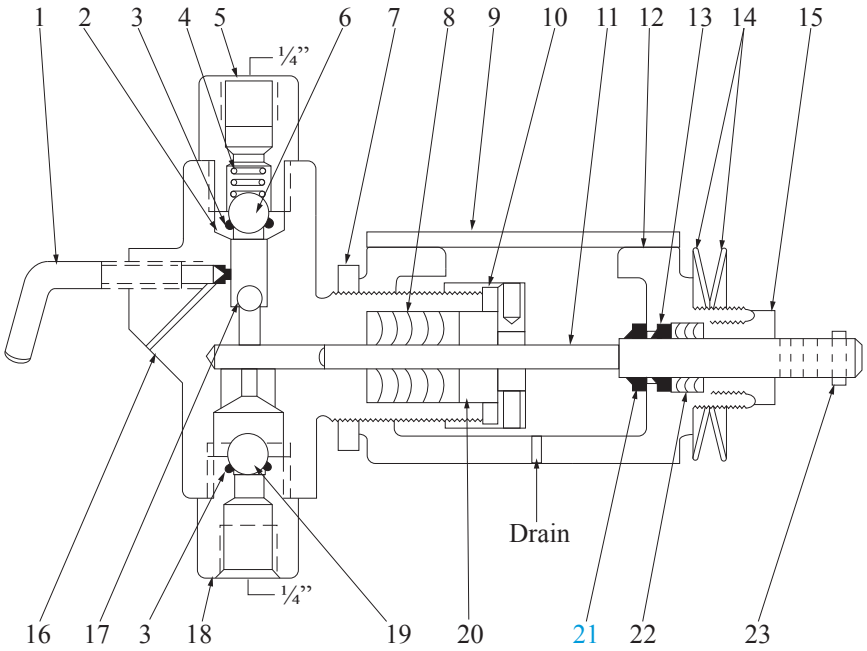
Bottom Alignment Bar with Bearings



Hub with Bearing

Injector Head

Alternate Construction



Item #	Part #	Description	Material
2	A-0806	Top Seat Assembly (Metal-to-Metal)	303 Stainless Steel
	B-0843	Top Seat Assembly (Viton)	
3	A-2580	O'Ring	Viton
8	A-3967	3/16" Plunger Packing	Viton
	A-3966		Teflon
	A-4102	¼" Plunger Packing	Viton
	A-1642		Teflon
	A-2295		Hard
	A-4101	⅜" Plunger Packing	Viton
	A-1234		Teflon
	A-1875		Hard
	A-4103	½" Plunger Packing	Viton
	A-1012		Teflon
	A-1874		Hard
11	B-1298-C	3/16" Ceramic Plunger	♦
	B-1175-C	¼" Ceramic Plunger	
	B-1176-C	⅜" Ceramic Plunger	
	B-1177-C	½" Ceramic Plunger	
18	A-0771	Bottom Seat Assembly (Metal-to-Metal)	303 Stainless Steel
	B-0844	Bottom Seat Assy. (Viton)	
19	A-0053	½" Ball	316 Stainless Steel

Note: Drip Ring moves with the Plunger.

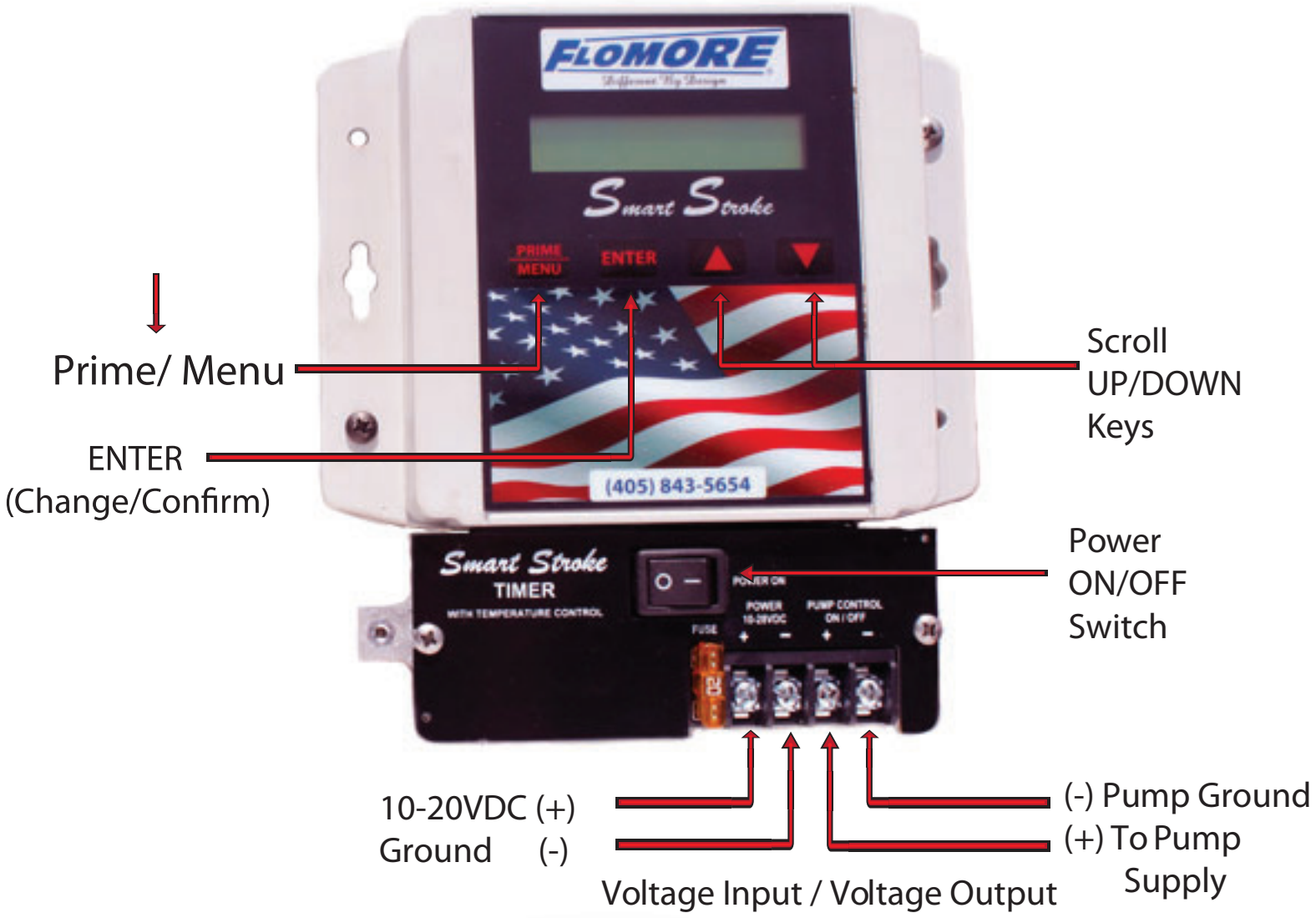
Standard Construction

Item #	Part # 3/16"	¼"	⅜"	½"	# Reqd.	Description	Material
♦	♦	C-1578	C-1579	C-1580	1	Head Assembly	Ductile Iron with Stainless Steel Trim
		C-1582	C-1583	C-1584	1		All Stainless Steel
1	A-1497				1	Priming Valve	303 Stainless Steel
*2	B-0737				1	Top Seat Assembly	303 Stainless Steel
*3	A-0479				1	O'Ring	Buna-N
4	A-0077				1	Ball Check Spring	316 Stainless Steel
5	A-1496				1	Top Bushing	302 Stainless Steel
6	A-0054				1	⅜" Large Top Ball	316 Stainless Steel
7	A-0225				1	Yoke Lock Nut	Brass
*8	♦	A-1461	A-1456	A-0959	1	Plunger Packing Set	Buna-N
9	C-1604				1	Yoke Cover	303 Stainless Steel
10	A-4104				1	Plunger Packing Gland Nut	303 Stainless Steel
*11	♦	B-1175	B-1176	B-1177	1	Plunger	17-4 pH Stainless Steel
12	B-1173				1	Yoke	Malleable Iron
13	A-4095				1	Plunger Wiper Ring	Buna-N
14	A-4256				3	Belleville Washer	302 Stainless Steel
15	A-4094				1	Yoke Packing Nut	Brass
16	♦				1	Body	Stainless Steel
17	♦	A-0126			1	¼" Small Top Ball	316 Stainless Steel
*18	♦	B-0736			1	Bottom Seat	303 Stainless Steel
*19	A-0054				1	⅜" Suction Ball	316 Stainless Steel
20	♦	A-1463	A-0957	A-1219	1	Plunger Packing Gland	303 Stainless Steel
21	A-4095				1	Plunger Wiping Ring	Buna-N
22	A-4127				1	Yoke Packing Set	Buna-N

Green Notes: Recommended Spare Parts (see table above)

*Alternate Components Availiable (see table above)

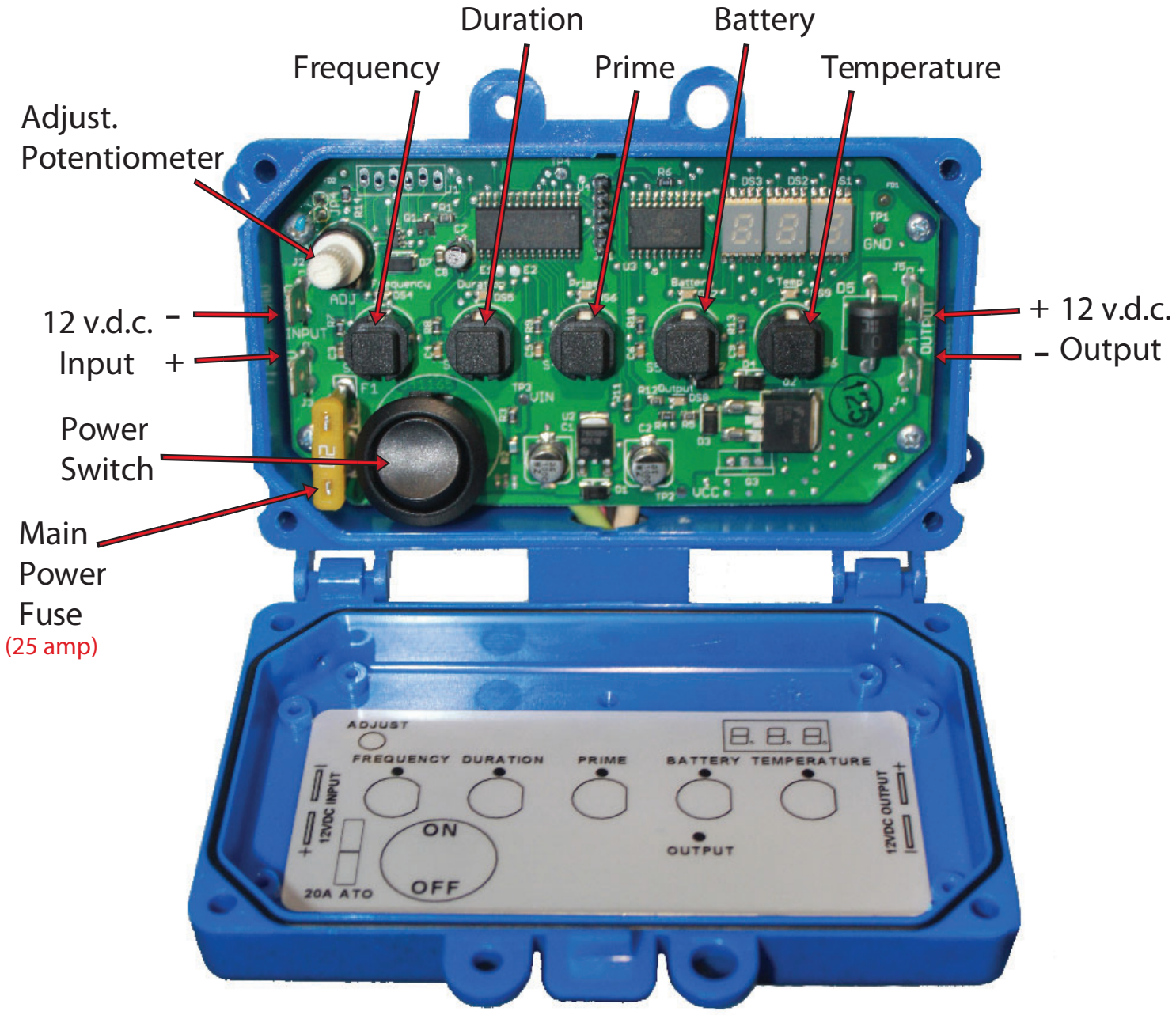
SS2 Smart Stroke Timer



This Smart Stroke Timer / Temperature controller is an easy to operate and reliable controller for the Flomore pump.

This timer is designed to automatically deactivate the pump in the event the supply of voltage drops below 9.5 VDC to prevent damage to the motor. The timer will record each deactivation and reactivate when voltage returns to appropriate level.

SS3 Basic Timer



Terms and Adjustments:

Frequency	- Adjustable from 1 to 10 ; measured in cycles per minute
Duration	- Adjustable from 1 to 5; measured in seconds
Prime	- Adjustable from 10 to 120; measure in seconds
Battery	- Adjustable from 9.0 to 12.5; measured in Volts
Temperature	- Adjustable from 0 to 50, measured in Degrees Fahrenheit
Low Level	- The point at which functionality will cease in order to preserve battery
High Temperature	- When the measured temp. is above this point the controller will not operate.

3000 Solar Pump
1/4" Head Performance Data

Chart Ratings listed below in Gallons Per Day for Single Head
Double Heads Assemblies available

PSI	Cycles Per Minute	Seconds On: 1 Stroke S	1 Stroke M	1 Stroke L	2 Stroke S	2 Stroke M	2 Stroke L	3 Stroke S	3 Stroke M	3 Stroke L	4 Stroke S	4 Stroke M	4 Stroke L	5 Stroke S	5 Stroke M	5 Stroke L
0	1	.25	.50	.75	.50	.75	1	.75	1	1.50	.75	1.25	1.75	1	1.75	2.25
1000		.25	.50	.75	.50	.75	1	.50	.75	1.50	.50	.50	1.50	.75	1.50	1.75
2000		.25	.50	.50	.25	.50	.75	.50	.75	1	.50	1	1.50	.75	1.25	1.75
3000		.25	.50	.75	.25	.50	.75	.50	.75	1	.50	1	1.50	.50	1.25	1.75
4000		.25	.25	.50	.25	.50	.75	.33	.63	1	.38	.75	1.25	.50	1	1.25
0	2	.50	.50	1	.50	1.25	1.75	1	2.25	2.50	1.25	2.25	3.25	1.50	3	4.25
1000		.25	.50	1	.50	1	1.50	.75	1.25	1.75	1	2	3	1.25	2.50	4
2000		.25	.50	1	.50	1	1.50	.75	1.25	2	.75	2	3	1.25	2.50	3.50
3000		.25	.50	1	.50	1	1.50	.75	1.25	2	.75	2	3	1.25	2.50	3.75
4000		.25	.50	1	.50	1	1.50	.75	1.25	2	.75	2	2.75	1.25	2.50	3.50
0	3	.75	1	1.50	1.25	2	2.75	2.75	3.75	4.25	2.50	4	5	3.25	5.25	7.25
1000		.50	1	1.50	1	1.50	2.75	1.50	2.75	4	2	3.50	5	2.50	4.25	7.50
2000		.50	.75	1.25	1	1.50	2.50	1.25	2.75	3.75	1.50	3.25	4.75	2	4	6
3000		.50	.75	1.25	.75	1.25	2.25	1	2	3.25	1	2.50	4.50	1.50	3.25	5
4000		.25	.75	1	.50	1.25	2.25	.75	1.75	3	1	2.50	4	1.50	2.25	5
0	4	.75	1	1.75	1.50	2.50	3.50	2	3.50	5.25	2.75	4.75	6.50	3.75	6	8.50
1000		.75	1	1.75	1.25	2	3.25	1.75	3.25	4.50	2.25	4.25	6	2.75	5.25	8
2000		.75	1	1.75	1	2	3	1.50	2.75	4.25	2	4	5.25	2.50	4.50	7
3000		.50	1	1.50	1	1.75	3	1.50	2.75	4	2	3.75	5.75	2.50	4.50	7
4000		.50	1	1.50	1	1.75	3	1.50	2.75	4	2	3.75	4	2	4	6

1 Battery + 1 Solar Panel 2 Batteries + 1 Solar Panel

Stroke Key: S = Short Stroke M = Medium Stroke L = Long Stroke

PLEASE NOTE

All test results were calculated in Oklahoma City in the month of October 2018.
All tests were performed with a constant 14.1 battery voltage.
Results may vary with higher or lower battery charge in field.

3000 Solar Pump
3/8" Head Performance Data

Chart Ratings listed below in Gallons Per Day for Single Head
Double Heads Assemblies available

PSI	Cycles Per Minute	Seconds On														
		1			2			3			4			5		
		Stroke			Stroke			Stroke			Stroke			Stroke		
		S	M	L	S	M	L	S	M	L	S	M	L	S	M	L
0	1	1	1	1.50	1.50	2	2.50	2	3	3.75	2.25	3	4.75	3	4	5.5
500		.75	1	1.50	1	1.75	2.25	1.75	2.75	3.50	2.25	3	4.50	3	3.50	5.5
1000		.75	1	1.50	1	1.75	2.25	1.75	2.50	3.25	1.75	2.50	3	2.75	3.50	5
1500		.75	1	1.25	1	1.75	2	1.50	2.25	3	1.50	2.25	3	2.50	3.50	5
2000		.50	1	1	1	1.50	2	1.50	2	2.75	1.75	2.75	3.75	2.25	3.50	5
3000		.25	1	1	1	1.50	2	1	2	2.75	1.50	2.50	3	2	3	4.25
0	2	1.50	2	2.50	2.50	3.75	5	3.75	5.50	7.75	5	7	8	6	9	12.50
500		1.50	2	2.50	2.50	3.25	5	3.50	5	7	5	7	8	6	9	11
1000		1.25	2	2.50	2	3	4.25	3.25	4.50	6.50	4	6.50	8	5	8	10.50
1500		1.25	2	2.50	2	3	4.25	3.25	4.50	6.50	4	6.50	8	5	8	10
2000		1.25	2	2.50	2	3	4.25	3.25	4.50	6.50	4	6	8	5	7	10
3000		1.25	2	2	2	3	4.25	3	4.50	6	3.75	6	8	4.75	7.75	10
0	3	2.25	3	4.75	4	6	8.75	5.50	7.50	11.50	7.50	10.50	13.75	9	12.75	16
500		2	3	4.50	4	5	7	5	7.50	11	7	10	13	9	12	16
1000		1.50	3	4.25	3.50	4.75	6.75	5	7.50	10	6.25	9.75	13	8	11.50	16
1500		1.50	3	4	3	4.75	6.50	5	7.50	10	6.25	9.50	13	8	11	16
2000		1.50	3	3.75	3	4.75	6.25	5	7.50	9.75	6.25	9.50	13	8	11	16
3000		1.50	3	3.50	2.75	4.50	6.25	4.50	6.50	9	5.75	9.25	12	7	10	15
0	4	3.25	4.75	6.25	5.75	10.25	11.75	7.75	11.50	15	10	17	20	12.50	20	25
500		3	4	6	5	9	10	7	11	14	10	15	19	12	17	23
1000		2.75	4.25	5.50	4.75	6.25	8.50	7	9.50	13	9	12.25	18	11	15	22
1500		2.75	4.25	5	4.75	6.25	8.50	7	9.50	13	9	12	18	11	15	21
2000		2.75	4.25	5	4.50	6.25	8.50	6.50	9.50	12.50	8.25	12	18	10.50	15	20
3000		2.25	3.25	4.50	3.75	5.75	8.50	5.75	8.50	11	7.50	12	15.50	8.75	14.25	19.50

1 Battery + 1 Solar Panel 2 Batteries + 1 Solar Panel

Stroke Key: S = Short Stroke M = Medium Stroke L = Long Stroke

PLEASE NOTE

All test results were calculated in Oklahoma City in the month of October 2018.
All tests were performed with a constant 14.1 battery voltage.
Results may vary with higher or lower battery charge in field.

3000 Solar Pump
1/2" Head Performance Data

Chart Ratings listed below in Gallons Per Day for Single Head
Double Heads Assemblies available

PSI	Cycles Per Minute	Seconds On: 1			2			3			4			5		
		Stroke			Stroke			Stroke			Stroke			Stroke		
		S	M	L	S	M	L	S	M	L	S	M	L	S	M	L
0	1	1.50	2	2.75	2.75	4.25	5.25	3.75	5.25	7	5	6.50	8.75	6.25	9	11
500		1.50	2	2.75	2.50	3	4	3	4	6	4.50	6.25	8.50	5	7.25	9.75
1000		1.25	1.75	2	2	2.75	4	2.50	4	5	3.75	5	6.50	4	6	8
1500		1.25	1.50	2	2	3	4	3.25	5	6.50	4.50	5.75	7.50	4	5.75	7.50
2000		1	1.50	1.75	1.50	2	2.50	2.50	3.75	4	3	4.75	6	4	5.50	7
0	2	2.50	4	5.50	4	7.25	8	5.75	10.25	14	7.75	12	16.50	10	14	20
500		2.50	4	5.50	4	6	8	5.50	9	12	7.75	11	16	10	14	19
1000		2.25	3.75	5.25	3.75	5.50	8	5.50	8.50	10.75	7.75	10.50	16	9.50	13.50	18.50
1500		2.25	3	4	3.75	5.50	8	5.50	8	10.50	7.25	10.50	14.50	9	13	18
2000		2.25	2.75	3.75	3.50	5.50	7.50	5.50	7.50	10.50	7.25	10.25	13	8.50	13	17
0	3	5	6.25	8	7.75	11	14.25	10.50	14.50	20	13.50	18	25	16	24	33
500		4.25	6	7	6	9.50	13	9.50	13	17	12	18	23	15	22	30
1000		3.75	5.25	5.75	5.75	8.75	12	8.75	12.50	15.75	11.25	17.25	21	14	20	27
1500		3.75	5	5.25	5.50	8	12	8	12	15.50	11	17	21	13	19	27
2000		3.75	4.50	5.25	5.50	8	11.50	7.75	11.25	15.50	11	16	21	13	19	27
0	4	5.50	8	11	8.75	14	19.50	13	19	27	17	25	35	20	32	45
500		5	8	10	8	13	18	12	18	25	16	24	33	20	29	41
1000		5	7	9	8	12	16	11	18	22	15	23	32	20	27	37
1500		5	6	8	8	11.50	15	11	16	21	14	22	29	18	26	36
2000		4.25	5.75	7.50	7.50	11.50	15	10.50	15	20	14	21	26	17	26	36

1 Battery + 1 Solar Panel 2 Batteries + 1 Solar Panel

Stroke Key: S = Short Stroke M = Medium Stroke L = Long Stroke

PLEASE NOTE

All test results were calculated in Oklahoma City in the month of October 2018.
All tests were performed with a constant 14.1 battery voltage.
Results may vary with higher or lower battery charge in field.

Maintenance and Troubleshooting

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 line 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 used.
   - Take advantage of factory installed holes in the base plate for securing the pump

Fluid End

3. 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.

Start Up

4. Open the priming valve on the fluid end assembly and start the pump motor
5. Allow the pump to run until a clear, stream with NO bubbles comes out of the priming valve
6. Close the priming valve
7. Check the packing for proper sealing. If it leaks, stop the pump and make necessary adjustments.

Installation

8. 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

** For further assistance please call our Oklahoma City Facitlity at 866-843-5654

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platinum REGISTRATION, INC. ISO 9001:2015 CERTIFIED

ANAB ACCREDITED ISO/IEC 17021 MANAGEMENT SYSTEMS CERTIFICATION BODY

WE SUPPORT WOUNDED VETERANS