



LP Series Seed Treater Quick Reference Sheet



SEED FLOW CALIBRATION

1. Set the adjustable seed gate lever at a position that you and your equipment can handle. Calibrations should be done with at least 40 units or 2000 lbs.
2. When equipment is in position, begin running seed through the seed treater. Using a stop watch, begin timing as soon as the seed lands on the distribution cone at the bottom of the surge hopper.
NOTE: Be sure the surge hopper stays full at all times. If seed does not pile up in the hopper, the seed calibration will not be accurate.
3. Stop timing after all seed has left the surge hopper and calculate the seed flow rate: Total Pounds per Minute.
EXAMPLE: 2000 pounds takes 2 minutes and 17 seconds, or 137 seconds
 2000 pounds / 137 seconds = 14.59 pounds/seconds
 14.59 x 60 seconds = 876 lbs/minute

PUMP CALIBRATION

1. Premix enough liquid for the amount of seed you are treating and pour into the 27 gallon stainless steel tank. It's always a good practice to mix up 20% extra slurry to help fill all the lines. Turn on the mix tank and allow liquid to mix.
2. Turn the "SEED TREATMENT SOURCE" valve to the "MIX TANK" position, the "SEED TREATMENT" valve to the "CALIBRATE" position and the valve on top of the mix tank to "MIX TANK".
3. Turn the pump direction switch to "FORWARD" and the "Hand/Off/Auto" switch to the "Hand" position. Adjust the pump speed to about "500" or half speed, on the dial setting. Liquid should begin circulating from the bottom of the mix tank, through the pump, and back into the top of the mix tank. Let liquid flow for at least 15 minutes to ensure all air has been removed from the liquid lines. This also helps to break-in the pump tubing, which is critical before checking liquid calibration.
4. After you have allowed the liquid to re-circulate you are ready to calibrate the liquid flow. Determine the number of ounces needed in one minute.
EXAMPLE: The seed treatment slurry rate is 4 ounces per cwt.
 Seed Flow Rate = 8.76 cwt/min. x 4 oz./cwt. = 35 oz./min.
 35 oz. is the rate the pump should be pumping in one minute.
5. Set the Liquid Adjustment Dial. You can use the charts on the reverse side to find a starting point.
EXAMPLE: The ounces needed in one minute = 35 oz/min. Assume we are using a 6-600 Masterflex pump. A good starting point is approximately 42.9 volts.
6. Use a stop watch to determine the pump flow rate. Keeping the pump running, position the valve on top of mix tank to "CALIBRATION TUBE". When liquid reaches 0 (zero) or an even number, begin timing for one minute.
7. As soon as one minute is up, position valve on top of mix tank to "MIX TANK". Read the level on the side of the calibration tube. This number should equal the number of ounces needed to flow through the pump in one minute.

TREATING SEED

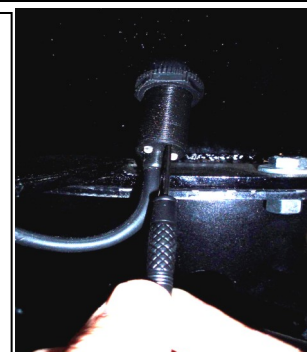
1. Prime the line going to the atomizer. Turn the atomizer switch to "ON" and turn the "SEED TREATMENT" valve to "PROCESS". Next turn the pump direction switch to "FORWARD" and the "Hand/Off/Auto" switch to "Hand". Liquid should begin pumping up to the atomizer. After the line has been primed, turn the "Hand/Off/Auto" switch to "Auto". Additional liquid can be pumped up into the atomizer and into the drum to guarantee coverage of the first seed that passes through the machine.
2. Position the "SEED TREATMENT SOURCE" valve to "MIX TANK", or to "CALIBRATION TUBE" if you desire to check the total ounces applied per batch of seed.
3. Turn the switches to "ON" for the drum, mix tank, and any conveyors being used. With all motors turned to the "ON" position, you are ready for seed.
4. Begin sending seed into the seed treater. As soon as seed lands on the proximity switch, the pump will turn on and the seed treating process will begin. When all seed has passed through the atomizer, the pump will automatically shut off.

PROXIMITY SWITCH ADJUSTMENT GUIDE

The proximity switches mounted in the extension ring and cone of the seed treater detect when seed is present. The first is used to automatically shut off the inlet conveyor when the surge hopper is full, the second is used to shut off the pump automatically when all seed has left the hopper. Sometimes the switches sensitivity needs to be adjusted. Below is instructions and picture of how to adjust the sensitivity of these switches when not working properly.

Using the small screw driver shipped inside the main control panel, you can adjust the proximity switch by turning the adjusting screw.

- Turn Clockwise for more sensitive.
- Turn Counterclockwise for less sensitive.



Refer to the Owners Manual for Further Details



LP Series Seed Treater, Pump Settings



**NOTE: ALL CALIBRATIONS WERE DONE USING WATER.
NUMBERS ARE NOT EXACT, ONLY USE THESE NUMBERS AS A STARTING POINT OR FOR TROUBLESHOOTING.**

LP800 Seed Treater

6-600 Masterflex Pump w/ L/S Pump Head

Masterflex L/S 35 Pump Tubing

<u>Volts</u>	<u>OZ./Min.</u>	<u>mL./Min.</u>
10.5	7.4	219
14.6	10.5	325
18.8	14.1	432
22.9	17.7	538
27.0	21.3	645
31.2	24.9	751
35.3	28.5	858
39.4	32.1	964
43.6	35.7	1,071
47.7	39.3	1,177
51.8	42.9	1,284
55.9	46.5	1,390
60.1	50.1	1,497
64.2	53.7	1,603
68.3	57.3	1,710
72.5	60.9	1,816
76.6	64.5	1,923
80.7	68.1	2,029
84.9	71.7	2,136
89.0	75.3	2,242

LP2000 Seed Treater

2-200 Masterflex Pump w/ I/P Pump Head

Masterflex I/P 82 Pump Tubing

<u>Volts</u>	<u>OZ./Min.</u>	<u>mL./Min.</u>
10.0	12.7	376
14.1	19.3	570
18.2	25.8	765
22.3	32.4	959
26.3	39.0	1,153
30.4	45.5	1,347
34.5	52.1	1,542
38.6	58.7	1,736
42.7	65.2	1,930
46.8	71.8	2,125
50.8	78.4	2,319
54.9	84.9	2,513
59.0	91.5	2,707
63.1	98.1	2,902
67.2	104.7	3,096
71.3	111.2	3,290
75.3	117.8	3,484
79.4	124.4	3,679
83.5	130.9	3,873
87.6	137.5	4,067

LP800 Cotton/Rice Seed Treater

Leeson Pump with 4.8:1 Reducer & I/P Head

Masterflex I/P 82 Pump Tubing

<u>Volts</u>	<u>OZ./Min.</u>	<u>mL./Min.</u>
9.2	22.6	669
13.3	36.3	1,074
17.5	50.0	1,480
21.6	63.7	1,885
25.8	77.4	2,291
29.9	91.1	2,696
34.1	104.8	3,101
38.2	118.5	3,507
42.3	132.2	3,912
46.5	145.9	4,318
50.6	159.7	4,723
54.8	173.4	5,128
58.9	187.1	5,534
63.0	200.8	5,939
67.2	214.5	6,345
71.3	228.2	6,750
75.5	241.9	7,155
79.6	255.6	7,561
83.8	269.3	7,966
87.9	283.0	8,372

LP2000 Cotton/Rice Seed Treater

Leeson Pump with 3.1:1 Reducer & I/P Head

Masterflex I/P 82 Pump Tubing

<u>Volts</u>	<u>OZ./Min.</u>	<u>mL./Min.</u>
10.0	40.0	1,183
14.5	60.8	1,798
18.8	88.1	2,606
23.0	113.2	3,348
27.2	131.8	3,899
31.4	150.7	4,458
35.5	171.7	5,079
39.8	193.9	5,736
43.9	216.2	6,395
48.1	238.0	7,040
52.4	260.8	7,714
56.6	282.5	8,356
60.8	300.7	8,895
65.0	314.8	9,312
69.2	325.0	9,614
73.3	331.2	9,797
77.5	334.3	9,889
81.7	336.5	9,954
85.8	339.4	10,039
90.0	343.9	10,173