

OPERATOR'S MANUAL

81822X

INCLUDING: OPERATION, INSTALLATION & MAINTENANCE

ALSO INCLUDE MANUALS: 81883X DIAPHRAGM PUMP (PN 876012), 84101X FILTER / PULSE ASSEMBLY (PN 876095), 849303 PIGGYBACK FILTER / REGULATOR (PN 876047) and S-1092 GENERAL INFORMATION (PN 876006).

RELEASED: 12-1-00
REVISED: 10-15-03
(REV. C)

81822X LOW PRESSURE DELIVERY SYSTEM 1/2" DIAPHRAGM PUMP, 1:1 RATIO, 55 GALLON DRUM FOR USE WITH CONVENTIONAL HVLP / AIR SPRAY SYSTEMS (SPRAY GUN NOT INCLUDED)



READ THIS MANUAL CAREFULLY BEFORE INSTALLING, OPERATING OR SERVICING THIS EQUIPMENT.

It is the responsibility of the employer to place this information in the hands of the operator. Keep for future reference.

SERVICE KITS

- Use only genuine Bink's replacement parts to assure compatible pressure rating and longest service life.
- **849305** for repair of filter / regulator.
- **862004** for repair of air section in pump.
- **862041** for replacement of diaphragms in pump.
- **862045** for replacement of balls and seats in pump.
- **862046** optional kit for replacement of balls and seats in pump.
- **862047** optional kit for replacement of balls and seats in pump.

PUMP SYSTEM DATA

Model Series	81822X Low Pressure Delivery System
Pump Model	818831
Pump Type	Non-metallic, air operated double diaphragm with stainless steel seats
Material	Groundable Acetal
Air Inlet (female)	1/2 - 14 N.P.T.
Air Consumption (approx.)	1 c.f.m. per gallon
Maximum Air Inlet Pressure	100 p.s.i.g. (6.9 bar)
Maximum Outlet Pressure	100 p.s.i.g. (6.9 bar)
Maximum Flow Rate	7 g.p.m. (26.5 l.p.m.)
Maximum Particle Size	3/32" (2.4 mm)
Maximum Output Per Cycle	0.022 gallons (.08 liters)
Maximum Temperature Limits	10° to 180° F (-12° to 82° C)
Dimensional Data	See page 3
Noise Level @ 70 p.s.i., 60 c.p.m.	71.1 db(A) [□]

[□] The pump sound pressure levels published here have been updated to an Equivalent Continuous Sound Level (L_{Aeq}) to meet the intent of ANSI S1.13-1971, CAGI-PNEUROP S5.1 using four microphone locations.

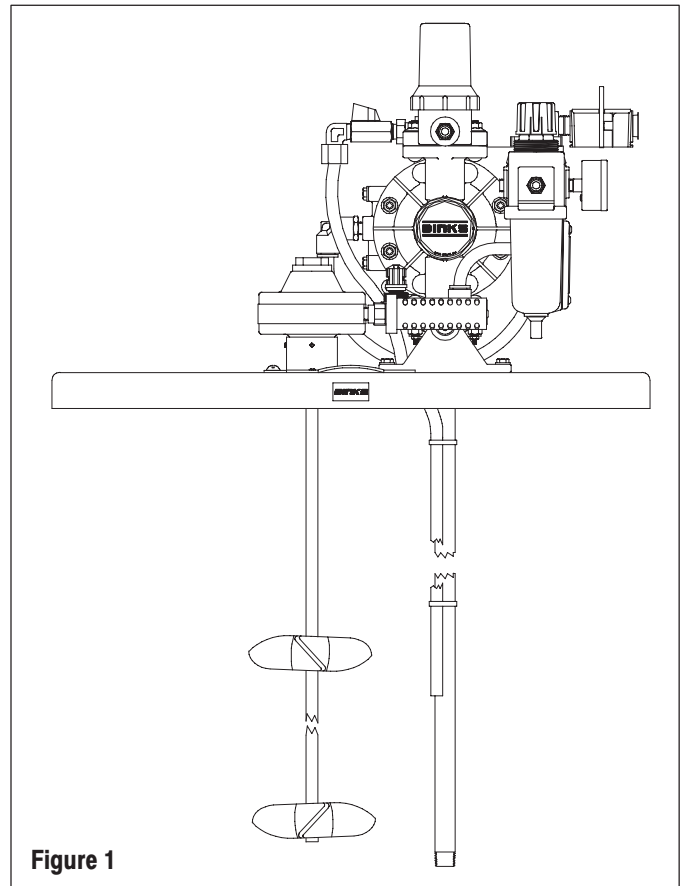


Figure 1

GENERAL DESCRIPTION

The 818220 Portable Pumping System includes fittings, drum cover, filter / regulators, siphon tube, gauges and hardware. It is intended to be used in conventional HVLP (High Volume Low Pressure) spray systems. These systems generally operate using low material pressure (less than 30 p.s.i.), and when complimented with the proper gun, it produces a "soft spray".

Read the information included with the spray gun for system settings and operation information.

The diaphragm pump uses stainless steel balls and seats, and teflon diaphragms and is designed to be used with waterborne paints. The gun and low pressure air and material hoses are not included.

Consult your sales representative for the proper low pressure gun and

other accessories which will best match the application.

The drum cover features a mount for locating an agitator (843001).

Theory of operation:

HVLP (High Volume, Low Pressure) is a spray process which uses a high volume of air (15 - 22 c.f.m.) at a low pressure (10 p.s.i. or less) to atomize the material, producing both high transfer efficiency (the total percent of material that actually stays on the intended surface) and a quality finish. The air cap of the HVLP gun injects air into the fluid after it passes through the orifice restriction. The low velocity of the material being sprayed minimizes the over-spray and bounce-back that is associated with conventional air spray.

BINKS®

North American Office
ITW Industrial Finishing
195 Internationale Blvd
Glendale Heights, IL 60139
Tel. 630-237-5000 Fax 630-237-5011

International Office
ITW Industrial Finishing
Ringwood Road, Bournemouth
Dorset, BH11 9LH, England
Tel. 0 1202 571111 Fax 0 1202 593883

81822X PARTS LIST

Item	Description (Size in inches)	Qty	Part No.
1	Diaphragm Pump	(1)	818831
2	Piggyback Filter / Regulator	(2)	849303
3	Cover (includes items 4, 5, 6, 7, 8 and 9)	(1)	874506
4	Door	(1)	
5	Screw (#8 - 32 x 3/4")	(2)	
6	Hex Nut (#8 - 32)	(3)	
7	Cover Disc	(2)	
8	Cap Screw (1/4" - 20 x 3/4")	(1)	
9	Lock Nut (1/4" - 20)	(1)	
10	Suction Tube	(1)	
11	Tubing (1/2" o.d. x 17" long)	(1)	
12	Tubing (1/2" o.d. x 32" long)	(1)	
13	Relieving Shut-Off (1/2 - 14 N.P.T.)	(1)	849311
14	Nut	(1)	
15	Adapter (1/2 - 14 N.P.T. x 3/8 - 18 N.P.T.)	(1)	
16	Male Elbow (1/2 - 14 N.P.T. x 1/2" o.d. tube)	(2)	
17	Male Elbow (1/4 - 18 N.P.T. x 1/2" o.d. tube)	(2)	
18	Cross Pipe Fitting (1/2 - 14 N.P.T.)	(1)	
19	Nipple (1/2 - 14 N.P.T. x 1-1/8")	(3)	
20	Bracket	(1)	873118
21	Adapter (1/4 - 18 N.P.S. x 1/2 - 14 N.P.T.F.)	(1)	873560
22	Cap Screw (1/4" - 20 x 1")	(4)	
23	Nut (1/4" - 20)	(4)	

Item	Description (Size in inches)	Qty	Part No.
24	Washer (9/32" i.d.)	(4)	
<input type="checkbox"/> 25	Screw, Ground (5/16" - 18 x 5/8")	(1)	
<input type="checkbox"/> 26	Hex Nut, Ground (5/16" - 18)	(1)	
27	Ball Valve (3/8 - 18 N.P.T.)	(1)	873414
28	Tube Fitting (3/8 - 18 N.P.T. x 1/2" o.d. tube)	(1)	
29	Street Elbow (1/2 - 14 N.P.T.)	(1)	
30	Adapter (3/8 - 18 N.P.T. x 3/8 - 18 N.P.S.)	(1)	
31	Adapter (1/2 - 14 N.P.T. x 3/8 - 18 N.P.T.)	(1)	
32	Filter / Pulse Assembly	(1)	841010
33	Needle Valve	(1)	873409
34	Propeller LH Pitch	(1)	873415
35	Propeller RH Pitch	(1)	873416
36	Stirring Rod (32")	(1)	
37	Adapter	(1)	
38	Set Screw (1/4" - 20 x 1/4")	(4)	
39	Motor Base	(1)	
40	Tubing (1/2" o.d. x 7" long)	(1)	
41	Nipple (1/4 - 18 N.P.T. x 7/8")	(1)	
42	Mixer Motor	(1)	
43	Set Screw (#10 - 32 x 3/16")	(2)	
44	Screw (5/16" - 18 x 5/8")	(3)	
45	Lock Nut (5/16" - 18)	(3)	

Items not shown.

OPERATING INSTRUCTIONS

⚠ WARNING DO NOT EXCEED MAXIMUM OPERATING PRESSURE OF 100 P.S.I. (6.9 BAR) AT 100 P.S.I. (6.9 BAR) AIR INLET PRESSURE.

⚠ WARNING READ THE PUMP MANUAL FOR ADDITIONAL OPERATING AND SAFETY PRECAUTIONS AND OTHER IMPORTANT INFORMATION.

INITIAL SETUP PROCEDURE

NOTICE

REFER TO THE INFORMATION INCLUDED WITH THE LOW PRESSURE HVLP GUN FOR SYSTEM SETUP INFORMATION. THE SYSTEM IS INTENDED FOR LOW PRESSURE APPLICATION ONLY.

- Attach air supply hose, gun and low pressure material hose.
- Install the connector to the air supply hose.
- Attach ground kit (included with pump) to ground tab, securing with (25) screw and (26) nut.
- Attach the ground wire to a suitable ground.
- The gun air supply hose must be 5/16" i.d. minimum.
- Keep containers covered to prevent contamination.

Nominal system settings:

- Pump Outlet Material Pressure - 15 p.s.i. maximum.
- Spray Gun Air Pressure - 60 p.s.i. maximum. Note: At 30 p.s.i. nominal setting it will deliver approximately 8 p.s.i. at the air cap when using 5/16" i.d. x 15' long air hose.
- Set air pressure to the pump at approximately 2x (two times) the operating material pressure.

For example: If 15 p.s.i. material pressure is required, adjust the pump air regulator/gauge pressure to approximately 30 p.s.i. Use the material pressure regulator to adjust. Control the spray gun air volume using the air regulator.

START-UP

1. Turn the knob on the air regulator counterclockwise to zero p.s.i.
2. Place pump and cover (with gun and hose attached) onto the container of material.
3. The operating pressure should be set at the lowest needed to atomize and deliver the paint. Start with the gun material pressure about the same as the air supply and adjust up or down to set the pattern.
4. Start the pump to cycle by turning the air regulator knob clockwise. The pump will cycle several strokes until pressure is built up in the system, at which time it will stop. Check for any loose fittings or leakage.

81822X PARTS LIST

