BINKS
INFINITY PUMPS
A98-29R-13 01-01

Infinity Finishing Pumps And Equipment

BINKS

NOW WITH:
UltraCoat™
DLC/PTFE COATED FLUID SECTIONS ARE STANDARD FOR LONGER WORKING LIFE

Pump Basics for Smooth Operation

Your finishing pumps will be influenced by many factors. Keep in mind that the pump bears the ultimate burdens of drawing the material into the pump and moving the volume of material at a particular pressure to the application device, elevation changes, and frictional losses in the lines and valves. Consider the following details when selecting any pump.

Power Supply/ Adequate Volume

The power source of a pneumatically driven pump can affect its ability to maintain adequate fluid pressure and volume of the material being pumped. Problems are caused by an inadequate air supply. Do not place pumps at the end of long, small diameter air lines. A good rule of thumb for most pumps is that they require a minimum 30 PSI air pressure (measured while the pump is cycling) for operation. Binks pumps will operate as low as 10, in many applications

Air Treatment for Pump Operation

Over pneumatic pressurisation can result in excessive strain on the pump as the air motor cycles. This can contribute to premature pump failure. Use a regulator that keeps air pressure within specific parameters. Use a water separator and filter in the supply line to the pump. These will keep your pump in reliable working condition. Use air line lubricants only in heavy duty cycles that have proven the need for lubrication.

Use only Binks air line lubricant and lubricators with Binks pumps.

Flow Rates/Pressure

Oversize flow rate by 60 - 80% to increase longevity. The pump will last longer and consume less air if you operate the pump at the recommended continuous duty cycle rating, for non-abrasive materials. As a general guide, you want your pump to deliver 30% more fluid pressure than required by each application.

Resistance to Flow - Back Pressure

Resistance to flow is least when using large diameter pipe or tubing, configuring long runs without turns, using constant tubing or pipe size with long radius elbows. Avoid short, small turning radiuses, as found in a street elbow, and dramatic changes in internal diameter in short distances. A good rule of thumb is that fluid will flow smoothly after 7 x the pipe diameter. Try to spread out devices that cause turbulence. When you add all pressure drops this will give you the back pressure seen by the pump.

Be aware that some materials require high fluid velocity to keep the pigment in suspension.

Agitators

Agitate slowly, but efficiently and only when necessary. Position mixers 1" from the bottom with a 5-gallon pail, 6" from the bottom with a 55-gallon drum, and 90° to each other with multiple paddles. Use gear reduced drives for viscous materials. Provide lubricated and regulated air for heavy duty agitation of materials. Use stainless steel shafts and paddles made of materials compatible with waterborne coatings.

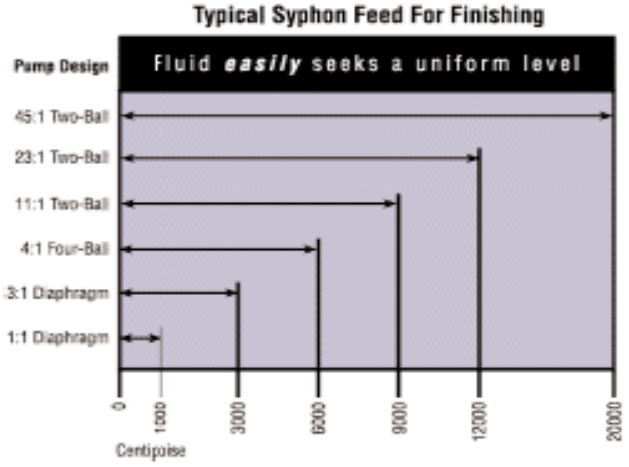
Pump Location

Position the pump inlet as close to the fluid source as possible. The ideal elevation of the pump inlet should be no greater than the height of the fluid source. Optimal fluid inlet positioning allows the coating to be gravity fed from the storage vessel or day tank.

Viscosity Control

Heaters can be used to maintain constant viscosity when the ambient temperature varies. Heat is used to reduce viscosity for consistent application of hard-to-atomise materials.

Typical Syphon Feed For Finishing



Pump Basics for Smooth Operation

Fluid Characteristics

Corrosive fluids chemically react with materials they contact. Failure to account for a fluid's corrosive characteristics can result in premature pump failure. Corrosiveness is measured in terms of its pH factor. In general, materials with a pH factor between six and eight are compatible with carbon steel components. Materials with pH factors below six or above eight are considered corrosive and require stainless steel components.

Abrasiveness refers to the material's ability to wear the surface it contacts. The abrasive qualities of a fluid are determined by the amount, size, and kind of solid particles contained in the fluid. The harder these particles are, the more abrasive the material will be. Small and similar sized particles can produce a lapping or polishing effect inside the pump. Although this will cause the pump to wear faster than non-abrasive materials, daily performance should not be affected. Materials with large, inconsistent, abrasive particles will cause rapid wear of internal pump components such as packings and piston rods. Pumps should be run at 1/2 the recommended continuous duty cycle rating to achieve better pump life, when using abrasive materials,

For selecting a material filter size a good rule of thumb is to first divide the fluid tip size by 2. The filter element screen should strain any particle of this size. For example: .020 (tip size) ÷ 2 = .010. Therefore a 70 mesh filter should be used.

Stability refers to a material's ability to hold its solids in suspension. High solid coatings can settle and separate. Use an agitator or recirculate the fluid through the system and back to the original container to prevent this settling. A good rule of thumb is to "turn" a 55 gallon drum one time per hour, in a circulating system.

Solvent Evaporation Rate affects how quickly a fluid dries. Some materials will form a solid layer, or skin, on the surface as their solvent evaporates. This skin can be pulled into the pump inlet and cause spray tips, filters, and other components to clog. Use a drum cover or agitator to reduce this problem. Most dirt comes from dried paint. Always recommend fluid outlet filters on the pump.

Tackiness (adhesion) is the ability of a material to adhere while wet. Use higher ratio pumps to provide the additional fluid pressure needed to transfer and atomise tacky fluids.

Polymer Diaphragm Pumps

Polymer diaphragm pumps are used for fluids with abrasive and/or shear sensitive materials.

Groundable Acetal Pumps are excellent lower cost pumps for use with flammable materials. Electrostatic build-up is transferred through the polymer to a single grounding point.

Polypropylene Pumps are an excellent low cost pump. Do not use to supply or clean up with flammable materials. An electrostatic charge can build up and can not safely transfer to a ground point.

Metallic Pumps

Carbon Steel Pumps have a limited role in solvent-based applications and are not suitable for waterborne applications.

Stainless Steel Pumps offer protection from corrosion when pumping today's preferred waterborne coatings. In addition, they offer the greatest future versatility for new coatings formulated due to regulation changes or enhanced production requirements. These pumps are available in three styles.

- *Hard Chrome Plating* - a proven performer for the full spectrum of non-abrasive to abrasive coatings. The plating is good for abrasive coatings in piston pumps with sliding components.
- *Ultra or Ceramic Coating* - the most durable surface available. Resists wear from highly abrasive fluids and reduces friction. The ultimate coating choice for sliding components in pumps.

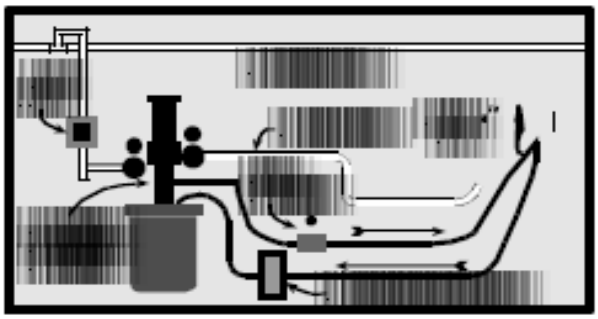
a UltraCoat™ folder & CD Rom is available upon request that depicts and explains the increased durability and advantage these pumps have over their rivals.

- *Non-Coated Stainless Steel* - an economical option for lower production requirements such as small shops and repair areas.

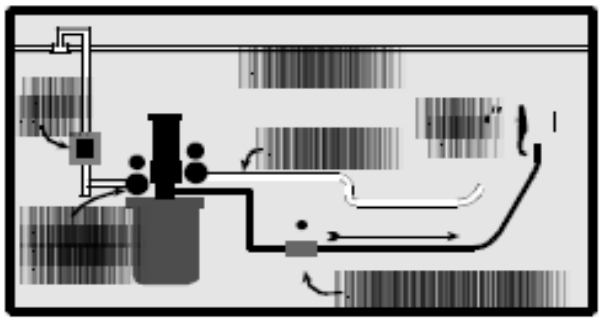
Aluminum Diaphragm Pumps an economical option for oils and water based fluids. They should not be used with halogenated hydrocarbons.

Pump Basics for Smooth Operation

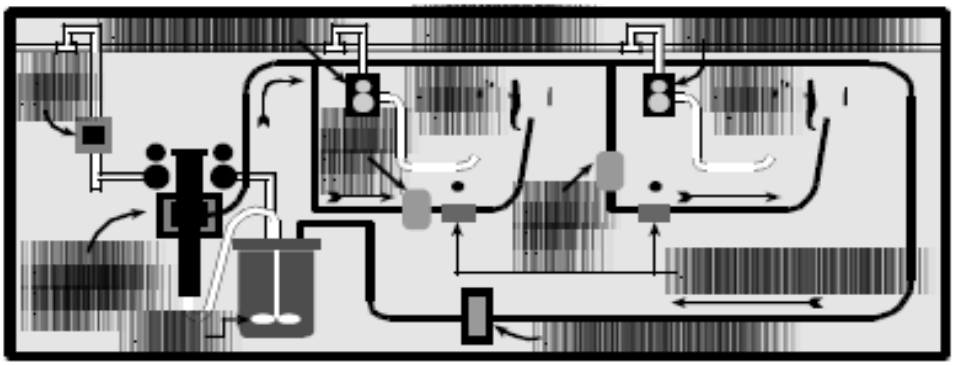
Double Air Regulation & Circulation
Supply to Spray Gun



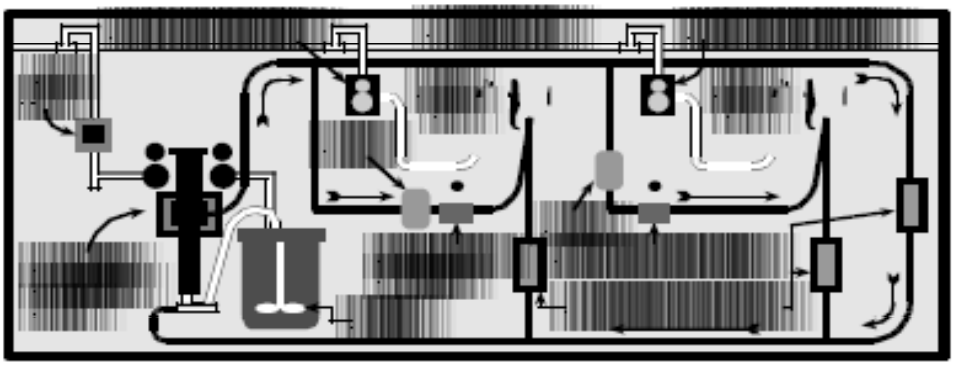
Double Air Regulation Dead End
Supply to Spray Gun



Basic Circulating Loop with Dead End
Supply to Spray Guns with Low Fluid Temperature



Basic Circulating Loop with Circulating
Supply through the Spray Guns



Infinity Diaphragm Pump Packages

Wall Mount Finishing

We offer 1/2" and 1" wall mount packages.
All Packages include:
Wall Mount Bracket,
2 Air Controls, and pneumatic shut off

1/2" Wall Mount Pump Packages

	WETTED	CONSTRUCTION SEAT	BALL	DIAPHRAGM
818150	SS	SS	SS	Teflon

1" Wall Mount Pump Packages

	WETTED	CONSTRUCTION SEAT	BALL	DIAPHRAGM
818121	SS	SS	SS	Teflon
818120	Alum	SS	SS	Teflon

Bung Mount

Bung Mount Packages include:
Air Control, Mounting Plate, Mounting Hardware, and SS Siphon Tube with strainer.

1/2" Bung Mount Pump Packages

	WETTED	CONSTRUCTION SEAT	BALL	DIAPHRAGM
818170	SS	SS	SS	Teflon

Pail Mount

Pail Mount Packages include:
2 Air Controls, Pump mounted on cover.

1/2" Pail Mount Pump Package

	WETTED	CONSTRUCTION SEAT	BALL	DIAPHRAGM
818160	Groundable Acetal	SS	SS	Teflon

INCLUDES	BARE	WALL	BUNG	PAIL
PUMP	✓	✓	✓	✓
MOUNTING	×	✓	✓	✓
AIR SHUT OFF VALVE	×	✓	✓	✓
1x FILTER/REG	×	(in selected packages)	✓	×
2x FILTER/REG	×		×	✓
SUCTION TUBE	×	×	✓	✓
PAINT REGULATOR	×	×	×	×
PAINT FILTER	×	×	×	×
SPRAYGUNS & HOSES	×	×	×	×

Wall Mount Bulk Transfer

These bulk transfer/high volume finishing pumps can efficiently transfer finishing coatings to a day tank. The 3:1 can supply large circulating systems. Both pumps are designed to handle heavy abrasive coatings.

818100 3:1 Diaphragm includes:
Pump 818800
Wall Bracket 873134
Air Control 849303

	WETTED	CONSTRUCTION SEAT	BALL	DIAPHRAGM
818100	SS	SS	SS	Teflon

818110 1-1/2" Pump includes:
Pump 818810
Wall Bracket 873135
Air Control 849303

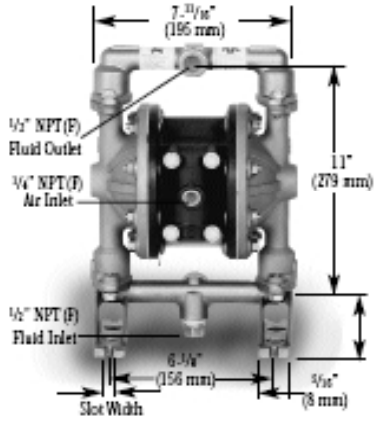
	WETTED	CONSTRUCTION SEAT	BALL	DIAPHRAGM
818110	SS	SS	SS	Teflon

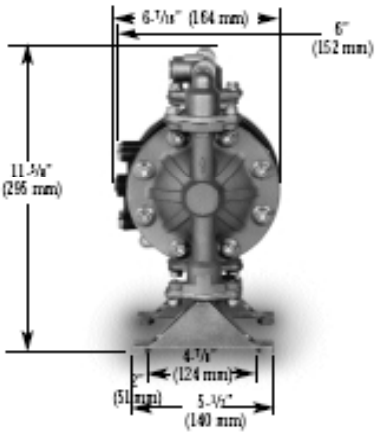
MODELS	SIZE (INCHES)	FLOW	WETTED	DIAPHRAGM	BALLS	SEATS	BARE	WALL	BUNG	PAIL
	1/2	7 GPM	PP	SANT	SANT	SS	818835	-	-	-
	1/2	7 GPM	GND ACT	TEFLON	SS	SS	818831	-	-	818160
	1/2	7 GPM	SS	TEFLON	SS	SS	818834	-	-	-
	1/2	13 GPM	PP	SANT	SANT	SS	818832	-	-	-
	1/2	13 GPM	GND ACT	TEFLON	SS	SS	818836	-	-	-
	1/2	13 GPM	SS	TEFLON	SS	SS	818830	818150	818170	-
	1/2	13 GPM	PP	TEFLON	SS	SS	818833	-	-	-
	1	35 GPM	PP	TEFLON	SS	SS	818840	-	-	-
	1	35 GPM	ALUM	TEFLON	SS	SS	818820	818120	-	-
	1	35 GPM	SS	TEFLON	SS	SS	818822	818122	-	-
	1(3:1)	24 GPM	SS	TEFLON	SS	SS	818800	818100	-	-
	1½	100 GPM	SS	TEFLON	TEFLON	SS	818810	818110	-	-

Key: SS = Stainless Steel - GND ACT = Groundable Acetal - PP = Polypropylene - SANT = Santoprene
For more information about 1/2" diaphragm pump packages, please see our material handling 'Euro' leaflet.

finity ½" Diaphragm Pump

	(SS)	(GND ACT)	(ALUMINIUM)	(POLY)	
Bare Pump (Short Stroke)	#818834	#818831		#818835	(Ceramic) ½"Diaphragms
Bare Pump (Long Stroke)	#818830	#818836		#818832	(Ceramic)
				#818833	(Long Stroke)





NOTE: Stainless Steel Pump Shown
Ground Acetal & Polypropylene have dual fluid outlets

Performance

Air Inlet Pressure . . . . . 20 - 100 PSI (1 - 6.9 bar)
Fluid Pressure . . . . . 20 - 100 PSI (1 - 6.9 bar)
Max. Flow Rate (Flooded Inlet)
- Long stroke . . . . . 13-GPM (49.2 lpm)
- Short stroke . . . . . 7-GPM (26.5 lpm)

Max. Particle Size . . . . . 1/32" Dia (2.4 lpm)
Max. Temperature Limits
- Stainless Steel . . . . . 200° F (93° C)
- Groundable Acetal . . . . . 180° F (82° C)
- Polypropylene . . . . . 150° F (65° C)

Displacement/Cycle (13 gpm) .0040 Gallon (.15 litre)
Displacement/Cycle (7 gpm) .0022 Gallon (.083 litre)
Noise Level with silencer
- @ 70 Psi @ 60 Cyc/Min. . . . . 71.1 db(A)

Specifications

Air Motor . . . . . Unbalanced
Wetted Pump Material . . . . . See Chart
Diaphragm Material . . . . . Teflon
Seat . . . . . 316 Stainless Steel
Balls (standard) . . . . . 316 Stainless Steel
Weight
- Stainless Steel . . . . . 14.6 lbs (6.6 kgs)
- Groundable Acetal . . . . . 8.8 lbs (4 kgs)
- Polypropylene . . . . . 7.2 lbs (3.3 kgs)

	CONSTRUCTION			
	BODY	SEAT	BALL	DIAPHRAGM
818830	SS	SS	SS	Teflon
818831	Groundable Acetal	SS	SS	Teflon
818833	Polypropylene	SS	SS	Teflon

Part Numbers

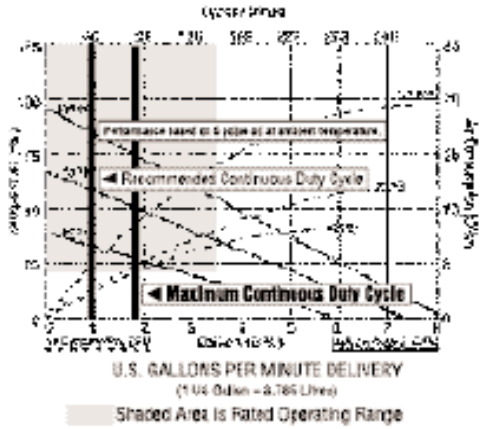
Air Motor Repair Kit 862004
Diaphragm Repair Kit
- Stainless Steel 862040
- Groundable Acetal 862040
- Polypropylene 862040

Ball & Seat Repair Kit
- Stainless Steel (Ball/Seat) 862045
- Teflon (Ball) SS (Seat) 862046

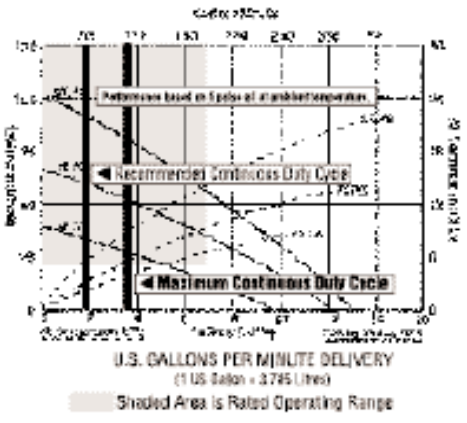
Recommended Accessories

Air Control 849303
Wall Mount 873116
Siphon . . . . . 5' Hose with Strainer
- 5 Gallon 874504

Ground Acetal



Stainless Steel & Polypropylene



Infinity 1" Diaphragm Pum

Bare Pump # 818822 (SS) & #818820 (Alum) 1"Diaphragms

Performance

Air Inlet Pressure . . . 20 - 120 PSI (1.4 - 8.3 bar)
Fluid Pressure . . . . . 20 - 120 PSI (1.4 - 8.3 bar)
Max. Flow Rate
(Flooded Inlet) . . . . . 35-GPM (133 lpm)
Max. Particle Size . . . . . 1/8" Dia (3.2 mm)
Max. Temperature Limits . . . . . 200° F (93° C)
Displacement/Cycle . . . . .0.16 Gallon (.60 litre)
Cycles Per Gallon (Litre) 6.25 (1.66)
Noise Level with silencer
@ 70 Psi @ 60 Cyc/Min. . . . . 64.5 db(A)

Specifications

Air Motor . . . . . Unbalanced
Wetted Pump Material . . . . . See Chart
Diaphragm Material . . . . . Teflon
Seat . . . . . Stainless Steel
Balls (standard) . . . . . Stainless Steel
Weight
Aluminum . . . . . 19 lbs (8.62 kgs)
Stainless Steel . . . . . 36 lbs (16.33 kgs)

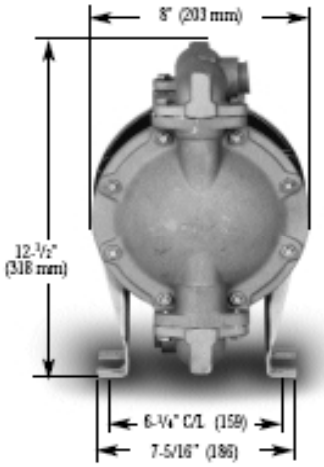
Part Numbers

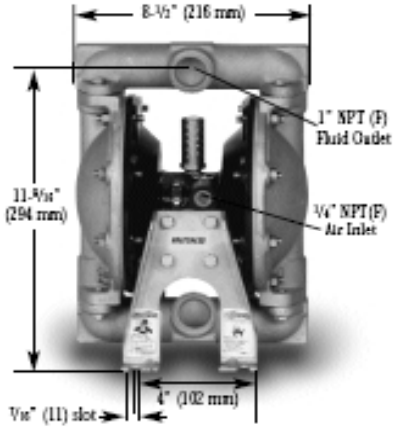
Air Motor Repair Kit. 862003
Diaphragm Repair Kit 862020
Ball & Seat Repair Kit
Stainless Steel (Ball/Seat) 862025
Teflon (Ball) SS (Seat) 862026

Recommended Accessories

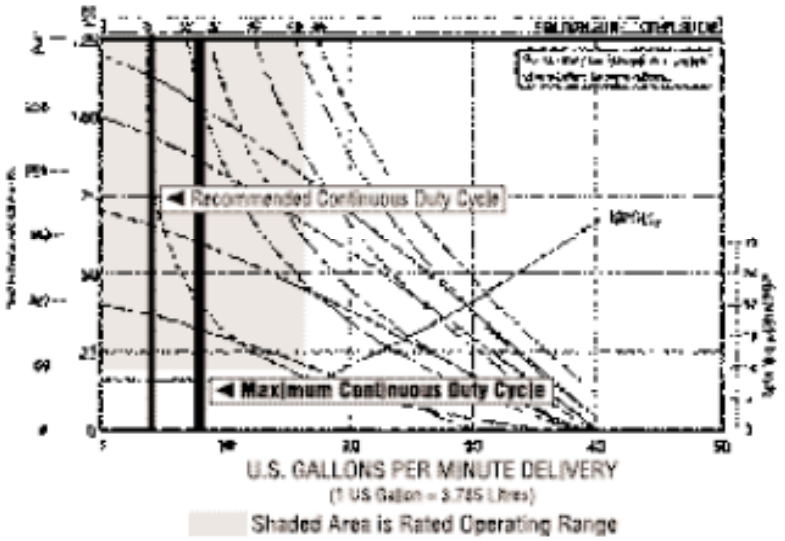
Air Control. 849803
Wall Mount 873115
Siphon Hose . . . . . 5" Hose with Stainer
5 Gallon 874500
55 Gallon 874501

NOTE:
1" Polypropylene pump also available.



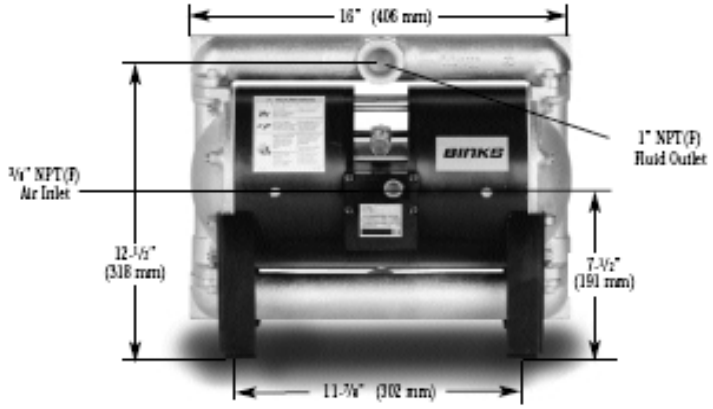


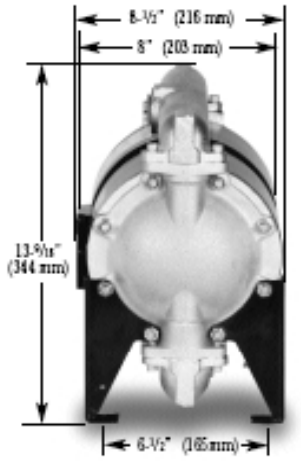
	CONSTRUCTION			
	BODY	SEAT	BALL	DIAPHRAGM
818820	Aluminum	SS	SS	Teflon
818822	SS	SS	SS	Teflon

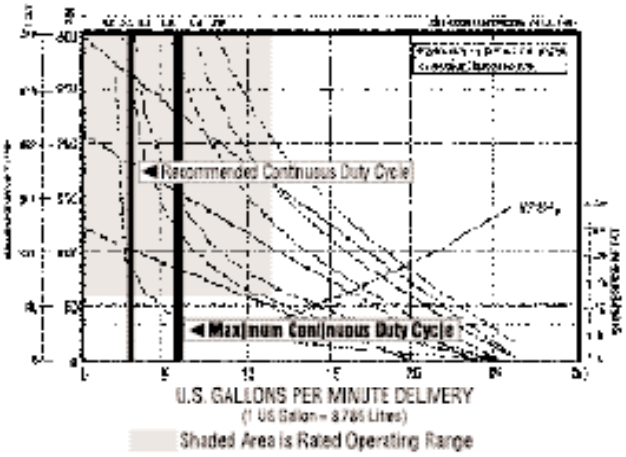


ity Hi-Volume 3:1 Diaphragm Pump

Bare Pump #818800 – Ratio 3:1







Performance

Air Inlet Pressure . . . . 20 - 100 PSI (1.4 - 6.8 bar)
Fluid Pressure . . . . . 60 - 300 PSI (4 - 20.4 bar)
Max. Flow Rate
(Flooded Inlet) . . . . . 24-GPM (90.8 lpm)
Max. Particle Size . . . . . 1/8" Dia (3.2 mm)
Max. Temperature Limits. . . . . 200° F (93°)
Noise Level with silencer
@ 70 Psi @ 60 Cyc/Min. . . . . 84.5 db(A)

Specifications

Air Motor . . . . . Unbalanced
Wetted Pump Material . . . . . Stainless Steel
Diaphragm Material. . . . . Teflon
Seat . . . . . Stainless Steel
Balls (standard) . . . . . Stainless Steel
Weight: Stainless Steel . . . . . 95 lbs (43 kgs)

Part Numbers

Air Motor Repair Kit 862001
Diaphragm Repair Kit 862000
Ball & Seat Repair Kit
Stainless Steel (Ball/Seat) 862025

Recommended Accessories

Air Control 848303
Wall Mount 873134

NOTE:
Prior to utilising or specifying this pump contact our technical department.

Infinity Hi-Volume 1 ½" Diaphragm

Bare Pump #818810 – 1 ½" Diaphragm

Performance

Air Inlet Pressure . . . . 20 - 120 PSI (1 - 8.3 bar)
Fluid Pressure . . . . . 20 - 120 PSI (1 - 8.3 bar)
Max. Flow Rate
(Flooded Inlet). . . . . 100-GPM (378 lpm)
Max. Particle Size . . . . . ¼" Dia (6.4 lpm)
Max. Temperature Limits . . . . . 150° F (66° C)
Displacement/Cycle . . . .0.73 Gallon (2.76 litre)
Cycles Per Gallon (Litre) . . . . . 1.3 (.36)
Noise Level with silencer
@ 70 Psi @ 60 Cyc/Min . . . . . 77.7 db(A)
Air Motor . . . . . Unbalanced

Specifications

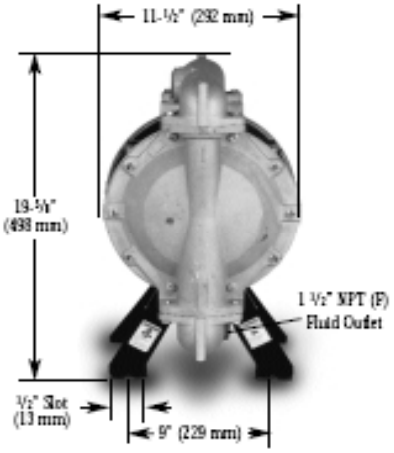
Wetted Pump Material . . . . . Stainless Steel
Diaphragm Material . . . . . Teflon
Seat . . . . . Stainless Steel
Balls (standard) . . . . . Teflon
Weight
Stainless Steel. . . . . 84 lbs (38.1 kgs)
Air Motor Repair Kit. 862003

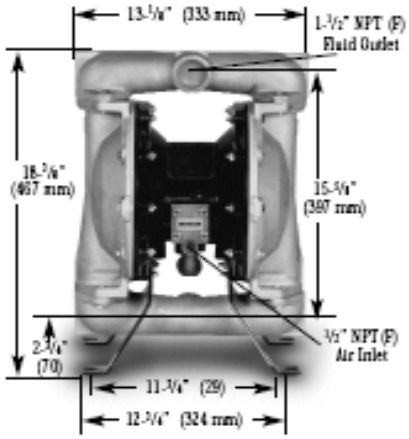
Part Numbers

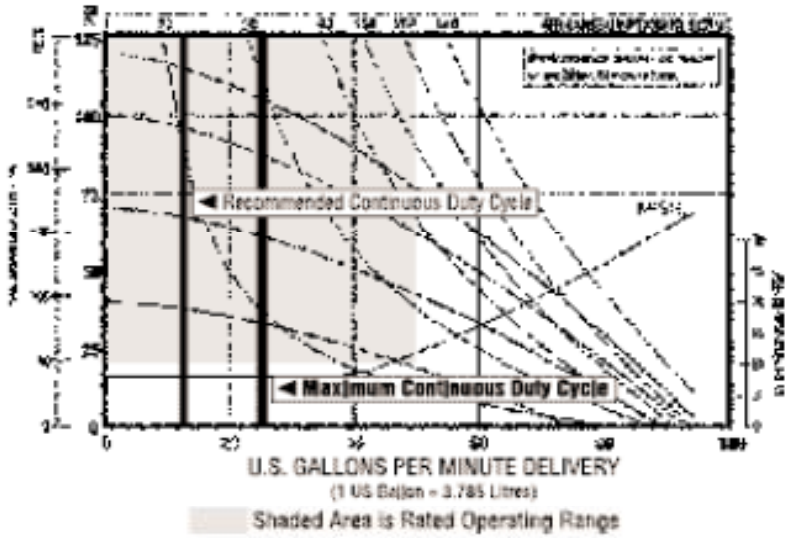
Diaphragm Repair Kit 862010
Ball & Seat Repair Kit
Teflon (Ball) SS (Seat) 862015

Recommended Accessories

Air Control. 849303
Wall Mount 873135







Infinity "Pogo" Pump

Bare Pump #812300 (SS), #812304 Stub (SS), & #812302 (CS) – Ratio 2:1

Performance

Air Inlet Pressure . . . 30 - 150 PSI (2 - 10.2 bar)
Fluid Pressure Range 60 - 300 PSI (4 - 20.4 bar)
Max. Rated Cycles Per Minute. 120
Displacement In³ Per Cycle . . 7.2 (117.9 cm³)
Cycles Per Gallon (Litre). 32 (8.4)
Flow @ 120 Cycles/Minute. .4 GPM (15.1 lpm)
Noise Level @ 60 Psi . . . . . 77.8 db(A)

Specifications (Stainless)

Lower Pump Material. . . . . 316 Stnls. Steel
Plunger Material . . . . . 316 Stnls. Steel
Cylinder Material . . . . . Stainless Steel
Packing Set. . . . . UHMW Polyethylene
Max. 120° F Fluid Inlet Temp.
Max. 180° F Fluid Inlet Temp.
Weight Drum. . . . . 19 lbs. (8.6 kgs.)
Stub . . . . . 16 lbs. (7.2 kgs.)

Part Numbers (Both SS Pumps)

Air Motor 873008
Air Motor Repair Kit. 861034
Lower Pump Assembly. 873009
SS 873200
SS Stub 873009
Lower Pump Repair Kit (same) 861037
Optional Teflon Packing 861038

Specifications (Carbon Steel)

Lower Pump Material . . . . . Carbon Steel
Plunger Material . . Carbon Steel (Chrome Plated)
Cylinder Material . . . . . Carbon Steel
Packing Set. . . . . UHMW Polyethylene
Max. 120° F Fluid Inlet Temp.
Max. 180° F Fluid Inlet Temp. Optional Packing
Weight . . . . . 12 lbs. (5.4 kgs.)

Part Numbers (Carbon Steel)

Air Motor 873008
Air Motor Repair Kit 861034
Lower Pump Assembly. 873010
Lower Pump Repair Kit 861035
Optional Teflon Packing 861036

Recommended Accessories

Air Controls 849303
Silencer 873191
Wall Mount 873184
1:1 Drum Pump Carbon Steel 812306