Binks PNEUMATIC DIAPHRAGM PUMP DVP-GEMINI (RATIO 1:1)

IMPORTANT

Read and follow all instructions, recommendations and safety precautions before using this equipment. It is the responsibility of the employer to place this information into the hands of the operator.

DESCRIPTION

Anodized Aluminum Pump Models:

DVP-AN-USA-1	Basic Pump
DVPS-US-C	Pail Mounted – No Agitator
DVPS-US-CA	Pail Mounted – With Agitator
DVPE-US	Wall Mounted

NOTE

Be sure that all fluids, solvents and fillers to be used are chemically and physically compatible with wetted parts in the DVP pump. Consult your BINKS representative for DVP pump materials of constructions and compatibility information. Consult the fluid manufacture for information regarding the fluids to be used.

NOTE

BINKS is not responsible for misapplication of DVP pumps. Consult your BINKS representative for application assistance.

This is an air operated diaphragm pump, suitable for up to two guns or small circulation systems. Its wetted materials are anodized aluminum and PTFE.

⚠ CAUTION

IMPORTANT: If you are using the pump with corrosives or abrasives materials, you will need to clean the pump more often or replace parts more frequently. The maximum surface temperature of the pump will depend on the temperature of the fluid being pumped. Max fluid temperature allowed is 90˚C (194˚F).

TECHNICAL DATA:

Basic pump

DVP-AN-USA-1	
Weight:	7.3 kg (16.1 lbs)
Height:	190 mm (7.5 in)

Basic pump w/ Pail

Approximate Weight:	8.4 kg (18.6 lbs)
Approximate Height:	558.8 mm (22 in)

Basic pump w/ Pail and Agitator

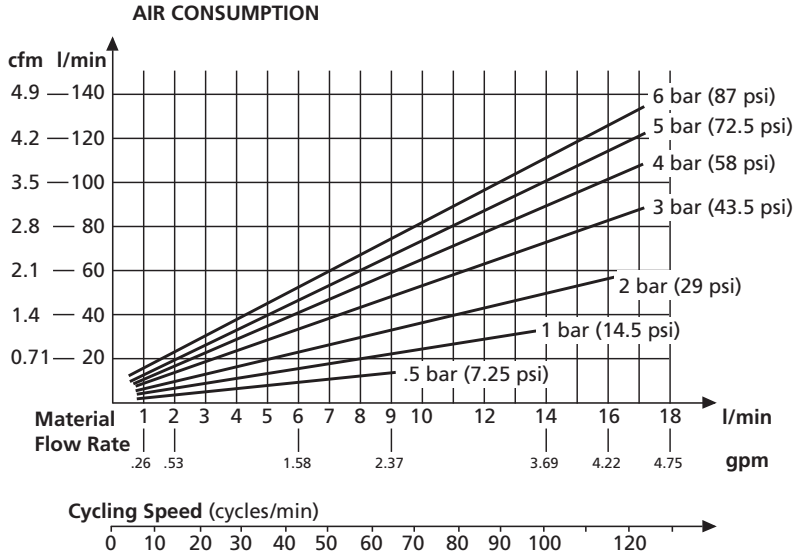
Approximate Weight:	10.0 kg (22.2 lbs)
Approximate Height:	558.8 mm (22 in)

NOTE: Weights and dimensions are approximate.

Regulated air pressure	7 bar	101.5 psi
Max paint viscosity (ford N°4)	60 sec	
Universal threaded air connector	1/4"(m) NPS	
Ambient temp range	0 – 40°C	32 – 104°F
Max fluid temperature	90°C	194°F
Recommended operating speed: Cycle/min.	60	
Max. operating speed	120 cycles/min	
Max. fluid pressure	7 bar	101.5 psi
Max. fluid flow (water free open)	17 l/min	4.49 gpm
Universal fluid threaded connector	3/8"(m) NPS	

The chart below shows the relation between the air consumption and the material flow rate and number of cycles.

Example: At an air input pressure of 5 bar (72.5 psi) and material flow rate of 8.3 l/min (2.19 gpm), at 60 cycles/min, the air consumption is 60 I/min (2.1 cfm).



In this part sheet, the words **WARNING**, **CAUTION** and **NOTE** are used to emphasize important safety information as follows:

⚠ WARNING	⚠ CAUTION	NOTE
Hazards or unsafe practices which could result in severe personal injury, death or substantial property damage.	**Hazards or unsafe practices which could result in minor personal injury, product or property damage.**	**Important installation, operation or maintenance information.**

⚠ WARNING

Read the following warnings before using this equipment.

READ THE MANUAL
Before operating finishing equipment, read and understand all safety, operation and maintenance information provided in the operation manual.

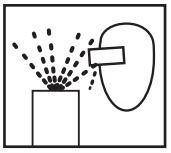
WEAR SAFETY GLASSES
Failure to wear safety glasses with side shields could result in serious eye injury or blindness.

DE-ENERGIZE, DEPRESSURIZE, DISCONNECT AND LOCK OUT ALL POWER SOURCES DURING MAINTENANCE
Failure to De-energize, disconnect and lock out all power supplies before performing equipment maintenance could cause serious injury or death.

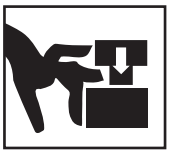
OPERATOR TRAINING
All personnel must be trained before operating finishing equipment.

EQUIPMENT MISUSE HAZARD
Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.

KEEP EQUIPMENT GUARDS IN PLACE
Do not operate the equipment if the safety devices have been removed.



PROJECTILE HAZARD
You may be injured by venting liquids or gases that are released under pressure, or flying debris.



PINCH POINT HAZARD
Moving parts can crush and cut. Pinch points are basically any areas where there are moving parts.

AUTOMATIC EQUIPMENT
Automatic equipment may start suddenly without warning.

INSPECT THE EQUIPMENT DAILY
Inspect the equipment for worn or broken parts on a daily basis. Do not operate the equipment if you are uncertain about its condition.

NEVER MODIFY THE EQUIPMENT
Do not modify the equipment unless the manufacturer provides written approval.

KNOW WHERE AND HOW TO SHUT OFF THE EQUIPMENT IN CASE OF AN EMERGENCY

PRESSURE RELIEF PROCEDURE
Always follow the pressure relief procedure in the equipment instruction manual.

NOISE HAZARD
You may be injured by loud noise. Hearing protection may be required when using this equipment.

HIGH PRESSURE CONSIDERATION
High pressure can cause serious injury. Relieve all pressure before servicing. Spray from the spray gun, hose leaks, or ruptured components can inject fluid into your body and cause extremely serious injury.

STATIC CHARGE
Fluid may develop a static charge that must be dissipated through proper grounding of the equipment, objects to be sprayed and all other electrically conductive objects in the dispensing area. Improper grounding or sparks can cause a hazardous condition and result in fire, explosion or electric shock and other serious injury.

FOR FURTHER SAFETY INFORMATION REGARDING BINKS AND DEVILBISS EQUIPMENT, SEE THE GENERAL EQUIPMENT SAFETY BOOKLET (77-5300).

SAFETY INSTRUCTION: Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI

Important: Read and follow all instructions, recommendations and safety precautions before using this equipment. It is the responsibility of the employer to place this information into the hands of the operator.

FIRE AND EXPLOSION

Solvents and coating materials can be highly flammable or combustible, especially when sprayed. Work stations must be provided with adequate ventilation/exhaust to prevent the build-up of flammable vapors.

Smoking and open flames must not be allowed in the spraying or mixing areas. Fire extinguishing equipment must be provided in the spraying and mixing areas. Users must comply with all local and national codes of practice and insurance company requirements governing ventilation, fire precautions, operation, maintenance and housekeeping of work stations.

⚠WARNING

MAXIMUM SURFACE TEMPERATURE LIMITS

Maximum surface temperature depends on the operating conditions of the pump and the temperature of the fluid, do not allow the pump to run dry. Doing so may cause too much increase in surface temperature.

Daily or weekly cleaning is recommended on the pump surface to eliminate dust or paint building up on the pump and remove all risk of fire or explosive ignition.

HALOGENATED HYDROCARBON SOLVENTS:

Halogenated hydrocarbon solvents, for example: 1,1,1 - Trichoroethane and Methylene Chloride can chemically react with aluminium and galvanised or zinc coated parts and cause an explosion hazard. Read the label or Data Sheet for the material you intend to spray.

⚠WARNING

DO NOT USE SOLVENTS OR MATERIALS CONTAINING HALOGENATED HYDROCARBONS WITH THIS EQUIPMENT.

STATIC ELECTRICITY

Static electricity is generated by fluid moving through pipes and hoses. A static spark, capable of igniting certain solvents and coating materials, could be produced by high fluid flow rates. To prevent the risk of fire or explosion, earth continuity to the spray equipment and object being sprayed should be maintained.

Use the specific grounding kit (item 46) on the top plate (item 6) of the pump for connection of the ground wire to a good earth ground source. Secure pump and all the components of the air and fluid circuits so to avoid vibration and generation of contact or static spark. Check periodically continuity of electrical path to ground. Test with ohmmeter from each parts of the pump and the components of the pumping system to ground so to insure continuity. Ohmmeter should show 0,1 ohms or less. Pumping potentially explosive materials with pumps from containers can create an explosive atmosphere inside the container. Pump and container must be earthed at the same source and the suction fluid tube must be always immerged.

PERSONAL PROTECTIVE EOUIPMENT: TOXIC VAPORS

When sprayed, certain material may be poisonous, create irritation or otherwise be harmful to health. Always read carefully all labels and safety performance data for the material being sprayed and follow any recommendations. IF IN DOUBT, CONSULT THE MATERIAL SUPPLIER OR MSDS SHEET. The use of respiratory protective equipment is recommended at all times when spraying. The type of respiratory protective equipment used must be compatible with the material being sprayed and the level of concentration

Always wear protective eye protection when spraying or cleaning the equipment.

Gloves must be worn for spraying or cleaning the equipment when certain coating materials and solvents are used.

TRAINING

Personnel should be given adequate training in the safe use and maintenance of this equipment. Training courses on all aspects of the equipment are available. For details contact your local representative. The instructions and safety precautions contained in this and the literature supplied with the coating material should be read and understood before the equipment is used.

MISUSE

All spray guns project particles at high velocity and must never be aimed at any part of the body. Never exceed the maximum inlet air/hydraulic pressures as stated on the pump model plate and written on service bulletin.

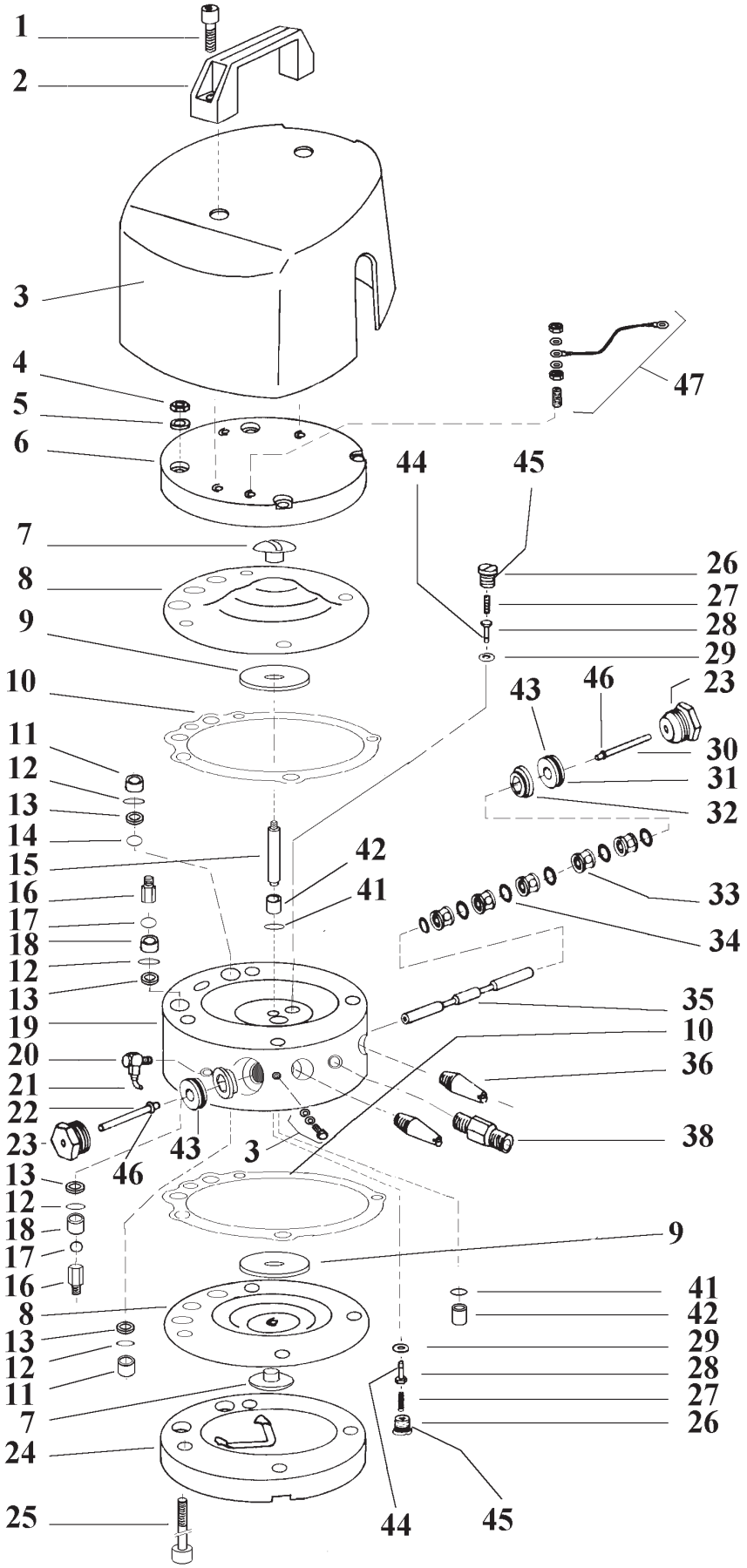
Be sure that hoses and connections used are able to withstand fluid pressures delivered by these pumps. Damaged hoses could leak flammable liquids and create potentially explosive atmospheres. Check all hoses for damage and wear. Be certain that the pump system is clean and in proper working condition.

Before dismantling the equipment for cleaning or maintenance, all pressures, air and material, must be isolated and released.

Keep containers closed when not in use, inert gas media must be pumped into the container to fill the void.

The disposal of non-metallic materials must be carried out in an approved manner. Burning may generate toxic fumes. The removal of waste solvents and coating materials should be carried out by an authorised local waste disposal service.

Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI



Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI

PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	H	CAP SCREW	2
2	SSH-460	HANDLE	1
3	DVP-22	PLASTIC COVER (CONDUCTIVE PLASTIC)	1
4	H	NUT	4
5	H	DISC SPRING	4
6	DVP-131-AN	TOP PLATE (ANODIZED)	1
7	B	RETAINING NUT	2
8	B	DIAPHRAGM	2
9	B	PRESSURE PLATE	2
10	ABC'EF	GASKET	2
11	C'	BUSHING STAINLESS STEEL	2
12	C'	O RING	4
13	C'	STAINLESS STEEL VALVE SEAT	4
14	C'	PTFE BALL 16 MM	1
15	B	STUD	1
16	H	STUD	2
17	C'	PTFE BALL 14 MM	2
18	C'	BUSHING STAINLESS STEEL	2
19	DVP-83-AN	BODY (ANODIZED)	1
20	H	SWIVEL ELBOW	1
21	H	NYLON TUBE	1
22/46	F	MANUAL RESTART STEM (WITH SNAP RING)	1
23	F	DISTRIBUTOR NUT	2
24	DVP-130-AN	BOTTOM PLATE (ANODIZED)	1
25	H	CAP SCREW	4
26	E	RETAINING NUT	2
27	E	SPRING	2
28	E	REVERSE VALVE	2
29	E	O RING VALVE SEAT	2
30/46	F	MANUAL RESTART STEM (WITH SNAP RING)	1
31	F	AIR VALVE PISTON	2
32	F	SLEEVE NUT	2
33	F	CYLINDER	5
34	F	O RING	6
35	F	SLIDE VALVE	1
36	DVP-17	AIR MUFFLER	2
38	H	DOUBLE NIPPLE	1
41	B	O RING	2
42	B	BUSHING	2
43	F	SEAL RING QUAD-RING	2
44	E	SEAL RING QUAD-RING (FOR REVERSE SWITCH)	2
45	E	O RING	2
47	KK-4635	GROUNDING KIT (2 SCREWS, 4 WASHER, 4 NUTS & GROUNDING WIRE)	1

CONTENTS OF KITS

The contents of repair kits are identified with letters A through H.

Example: kit KK-4630 ("B") is made up of part numbers identified with the letter "B". (See chart above.)

Use a medium strength sealing compound an threaded joints to prevent leakage.

REP	REFERENCE	DESCRIPTION
A	DVP-114-K6	Kit of 6 gaskets
B	KK-4630	Diaphragm and stud kit
C'	KK-4631-AN	Fluid valve kit
E	KK-4633	Reverse switch kit
F	KK-4634	Pneumatic distributor kit
H	KK-4637	Kit of Spares (misc. parts)

Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI

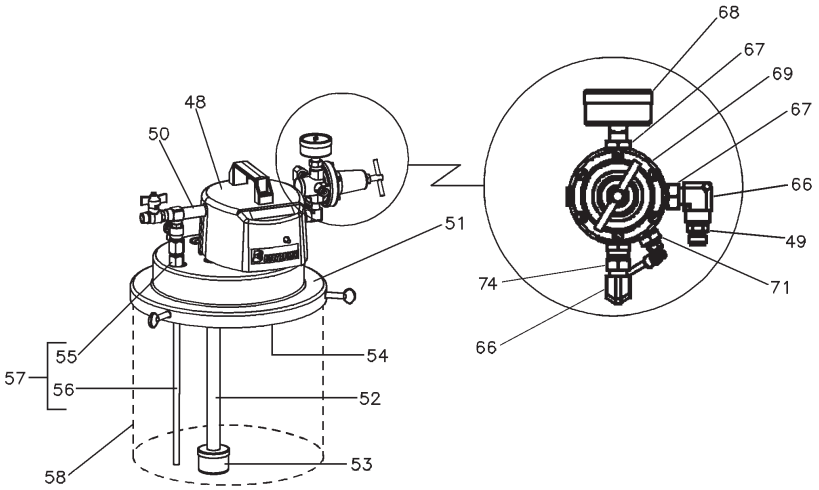
MODEL WITHOUT AGITATOR

Ref **DVPS-US-C**

These products include air regulator, muffler, carrying handle, suction tube with filter, by-pass with fluid return tube, 5 gallon pail cover, and a 5 gallon pail.

Height: 609.6 mm (24") (approximate)

Weight: 10.1 kg (22.2 lbs) (approximate)



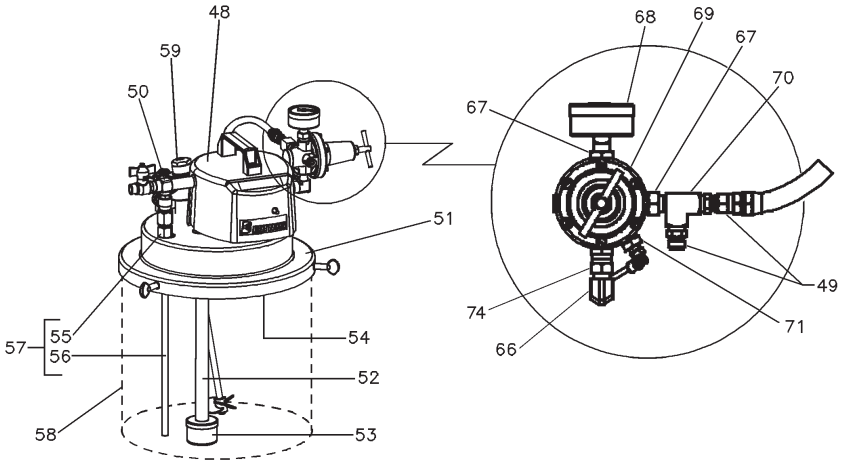
MODEL WITH AGITATOR

Ref **DVPS-US-CA**

These products include air regulator, muffler, carrying handle, suction tube with filter, by-pass with fluid return tube, agitator assembly, 5 gallon pail cover, and a 5 gallon pail.

Height: 609.6 mm (24") (approximate)

Weight: 11.6 kg (25.6 lbs) (approximate)



MODEL FOR WALL MOUNTING

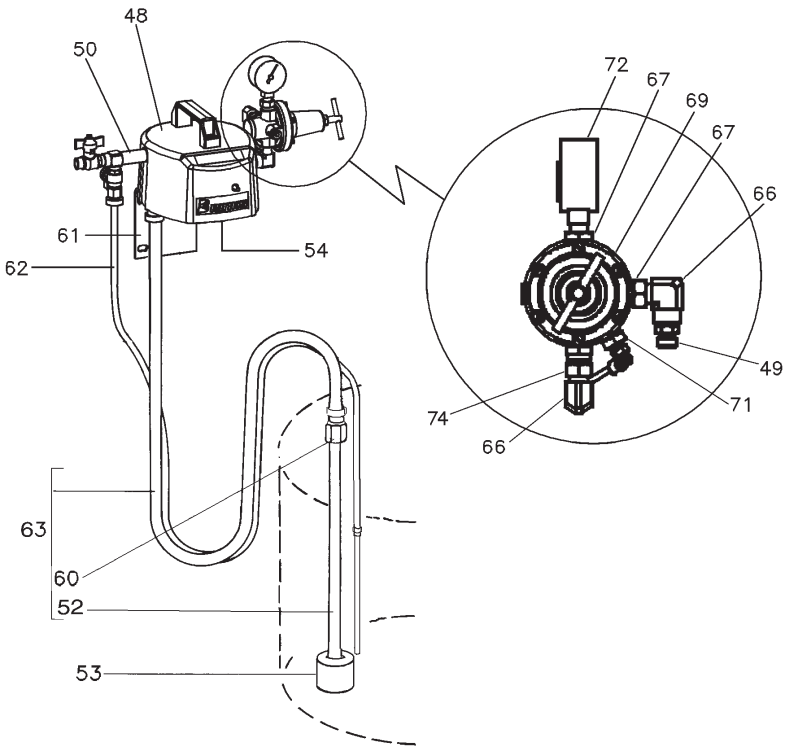
Ref **DVPE-US**

These products include air regulator, carrying handle, combination suction hose with fluid strainer, by-pass, fluid return hose, and wall mounting adapter. These units are also insulated for noise.

Height (incl. suction pipe): 1854.2 mm (73")

Weight: 7.9 kg (17.5 lb)
Width : 470 mm (18.5")
Depth : 222 mm (8-3/4")

NOTE: Weights and dimensions are approximate.



Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI

PARTS LIST FOR COMPLETE ASSEMBLY

Contact technical support for the list of items available as replacement parts.
Listed for reference only—not all items listed are available as replacement parts.

ITEM NO.	PART NO.	DESCRIPTION	QTY.
48	DVP-AN-USA	BASIC PUMP	1
49	57-13	D.M. NIPPLE 1/4 NPT x 1/4 NPS (QTY. 2 FOR AGITATOR UNITS)	1
50	DVP-52-1	BY-PASS 3/8" BSP	1
51	41-3230	COVER	1
52	DVP-2-W-US	SUCTION FLUID TUBE	1
53	41-2661	STRAINER (STAINLESS STEEL)	1
54	SS-10-D	HEXAGONAL HEAD BOLT	2
55	ZZ-3088	NUT (SUPPLIED WITH ITEM 57)	1
56	41-4377	STAINLESS STEEL TUBE (SUPPLIED WITH ITEM 57)	1
57	DVP-2R-US-1	BY-PASS TUBE ASSEMBLY (GEMINI PUMP)	1
58	41-661	PAIL-5 GALLON	1
59	41-3312	AGITATOR AND DRIVE ASSEMBLY (SS)	1
60	S-24378-H	ADAPTER F1/2R	1
61	DVP-50	WALL MOUNTING BRACKET	1
62	DVP-56-1	BY-PASS HOSE STAINLESS STEEL TUBE	1
63	DVP-41-W	SUCTION HOSE	1
66	SSP-1941-ZN	90° STREET ELBOW (QTY. 2 ON NON-AGITATED UNITS)	1
67	20-1753-1	BUSHING (3/8 x 1/4)	2
68	GA-385	GAUGE (0–100 PSI) (REAR MOUNT)	1
69	HAR-511	REGULATOR	1
70	23425-282	1/4 NPT STREET TEE (PLATED)	1
71	20-6810	MALE ELBOW SWIVEL (4mm TUBE TO 1/4 NPT PIPE)	1
72	83-2727 ■	GAUGE (0–100 PSI) (BOTTOM MOUNT)	1
73	873067	GROUNDING WIRE (NOT SHOWN)	1
74	SSP-8217-ZN	UNION SWIVEL 1/4 NPT(m) X 1/4 NPS(f)	1

■ Replacement glass lens is available – order 83-2290.

INSTALLATION

⚠ CAUTION

BEFORE USE : All pumps are tested with water soluble oil. It is necessary to clean the pump with an appropriate solvent before use. The air supply should be clean, with oil and moisture removed.

Use the same filtered, regulated air as used for spray painting.

Connect the by-pass hose (57) or (62) and suction tube (52) or (63). Make sure all connectors are tight to the pump body and the by-pass valve.

Connect fluid hose to the outlet of the by-pass and to the material inlet to your spray equipment.

Connect air supply hose to your spray equipment.

RECOMMENDED CONDUCTIVE HOSE SIZES

Recommended conductive hose sizes up to 10m (34ft) long. The recommended air supply hose is 8mm (5 /16") bore. The recommended material supply hose is 9.5mm (3 /8") bore.

If you want to use your own hoses, you have to check their conductivity. The fluid flow speed should be below 1m/s (39.6") if the fluid has low conductivity and the hose liner is not conductive.

For example the hose size will be a minimum diameter of 19mm (3/4") bore if fluid flow is 17l/minute (4.49gpm).

GROUNDING

The pump must be grounded to avoid static discharge hazards. Electrical bond from the pump to earth should be checked with an ohmmeter. A resistance of less than 10^6 Ohms is recommended.

OPERATING INSTRUCTIONS

Pumps are suitable for use with all common materials, within PH range of 4.5 to 8.5, with exception of halogenated hydrocarbon solvents and materials which contain such solvents.

1. Mix, prepare and strain the material to be sprayed according to the paint manufacturer's instructions. Use a lint free mesh to strain the material

2. To start and prime the pump, open the by-pass valve and/or trigger the spray gun.

Adjust the air pressure by turning the air regulator knob clockwise until the pump begins to cycle. Allow the pump to operate until all the air is purged from the pump and fluid line. Turn off the by-pass valve and release the spray gun trigger.

Adjust the fluid pressure to obtain the required material flow (see spray gun operation manual).

⚠ CAUTION

If the required material flow is small while the gun is triggered (less than 5 cycles per minute) partially open the by-pass valve to increase the cycle rate to a minimum of 5 cycles per minute. This will eliminate the possibility of the pump stalling during the spray operation.

⚠ CAUTION

IMPORTANT: Do not run these pumps dry. Runaway cycling could cause diaphragms to warp and affect the pumps performance and increase surface temperature.

CLEANING

The cleaning frequency depends on material, general operating conditions, and running time. In general, the pump should be cleaned at least once a day, and before a long shut-down, to ensure a long service life. Under no circumstance should paint be allowed to set up, settle out, or dry within the pump. Do not flush pump dry, leave pump under pressure to keep solvent in fluid section. This protects against material hardening. It is advisable to establish a regular cleaning schedule.

Clean pump with a solvent appropriate to material sprayed as follows.

1. Close material valve to spray gun. Open by-pass valve.
2. Close air regulator. Relieve pressure from system by triggering spray gun.
3. Supply solvent to pump instead of material. Open air regulator.
4. Operate pump to flush paint from system. Continue flushing until whole system is clean.
5. Close by-pass valve.
6. Open material valve to spray gun and operate gun until clean and clear solvent appears
7. Clean exterior of pump with a solvent dampened cloth.

The pump can be stored for long periods when in a cleaned condition

REPLACEMENT OF PARTS

⚠ WARNING

The pump must not be dismantled when a potentially explosive atmosphere is present. Handling and cleaning of some internal pump parts may create an electrostatic hazard. Remove to an area away from the normal ZONED working area.

NOTE

Numbers in parentheses ( ) refer to the diagrams on pages 4 and 6.

DIAPHRAGMS (8): KIT Ref. KK 4630

1. Unscrew suction fluid tube (52) or (63), and remove cover (51) or wall mounting bracket (61).
2. Disassemble carrying handle (2) and cover (3). Remove the 4 cap screws (25) from top plate (6) and bottom plate (24) and remove plates. Caution the two balls diameter 14 mm (17) can easily be lost.
3. Unscrew the 2 diaphragm nuts (7) from stud (15), remove the two diaphragms (8) & plates (9). (Replace the two diaphragms)
4. Replace “O ring” (41) and sleeves (42), coat stud (15) with grease and fit. Check plates (9) and replace if necessary. Align holes in gasket (10) and diaphragms (8) with pump body (19).
5. Re-assemble top and bottom plates (6, 24) with screws (25), washers (5) and nuts (4) see fig.7. Tighten nuts (4) recommended torque 22-25 Nm (16-18 ft.lbs.).

NOTE

The top face of the pump body is marked “O” in order to facilitate the reassembling of the pump. Attach the top plate to this side.

REPLACEMENT OF REVERSING VALVES: Kit Ref. KK 4633

1. Both reversing valves are accessible after removal of the diaphragms (8).
2. Unscrew the plug with its “O Ring” (26,45).
3. Pull out the spring (27), pull out the stem valve with its “O Ring” (28,44) and the “O” Ring Seal (29). Check the condition of internal holes in the body. Fit new parts coated with bearing grease. Always replace both reversing valves at the same time.

NOTE

Excessive grease can block the air passage.

REPLACEMENT OF THE BALL (14) & (17), & VALVES SEAT (13): Kit Ref. KK 4631-AN

1. Both diaphragms must be disassembled in order to carry-out this operation (see “replacement of diaphragms”, 1-5. Remove balls (dia. 14 mm) (17).
2. Disassemble bushings (11) and (18). Remove the 4 “O” Rings (12) and the 4 valve seats (13), remove the ball dia 16 mm (14).
3. Inspect parts and replace if necessary and assemble new components in the reverse order.

NOTE

IMPORTANT: When reassembling ensure that all the components are in the right position (see fig. 8). Chamfer on bushings (for the O Ring (12) is positioned to valve seat), the O ring (12), and Stainless steel valve.

NOTE

All valve balls in the DVP-AN-USA pumps are of white PTFE material and the valve seats are of stainless steel material “H” grade. The bushings are of stainless steel material.

REPLACEMENT OF PNEUMATIC DISTRIBUTOR COMPONENTS: Kit Ref. KK 4634

1. Disconnect the nylon tube (21) from connector (20).
2. Unscrew the regulator assy (21-40-39-37-38) from pump body (19).
3. Unscrew the air mufflers (36). Remove screw (23) on one side (socket wrench 24 mm).
4. Press in piston (35) as far as possible. Turn body and using flat of hand push protruding pin (30 for example). Piston (31) with its seal ring is ejected from opposite side.
5. Remove the second screw (23) and press out slider valve (35).
6. Unscrew sleeves (32) from both sides using 10 mm Hex Key.

7. Remove 5 cylinders (33) and 6 “O” Rings (34).
8. Check the condition of the pump body and replace with new components. Assemble in the reverse order.

REASSEMBLE

1. Screw in sleeve (32) on one side, and insert “O Ring” (34) and cylinders (33) in the correct order. Screw in second sleeve (32), and insert slider valve (35) after light greasing with vaseline or oil base grease.
2. Insert pistons (31) complete with seal rings on both sides of body. Note order of assembly. Reassemble nuts (23) and pins (30,46), put the longer pin on air connector side (20).
3. Reassemble steps 1 to 3 in reverse order.
4. Seal thread of double nipple (38) with a medium strength thread sealing compound.

CARE, MAINTENANCE AND LUBRICATION

Additional information is contained in the operation instructions for spray gun. All moving parts are factory pre-lubricated, and under normal conditions require no further lubrication.

FIGURE 7

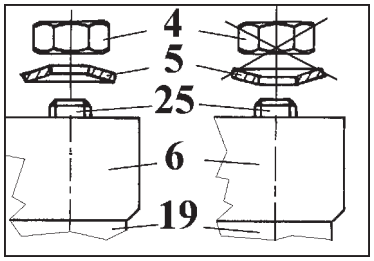
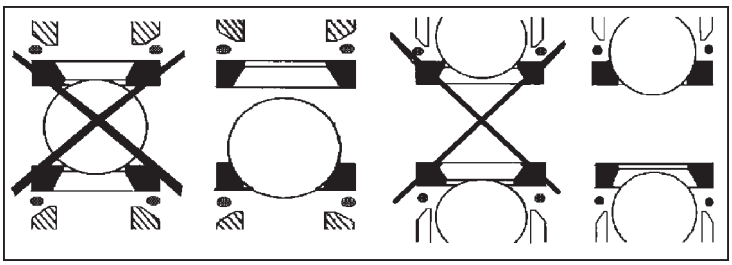


FIGURE 8



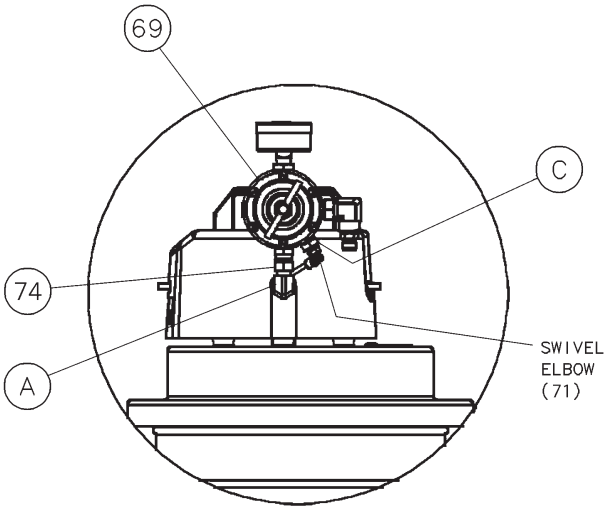
Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI

Remove Agitator and Drive Assembly (59)

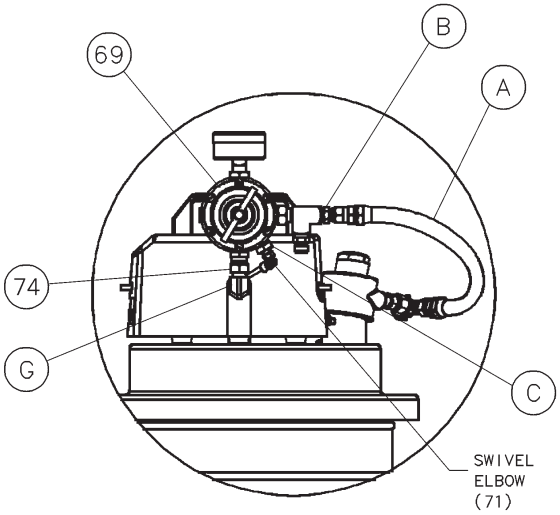
1. Shut off the main air supply and release pressure. Disconnect the main air supply hose assembly from the unit.
2. Remove the hose assembly between the regulator (69) and the agitator assembly (59).
3. Unscrew the 3 thumb screws evenly on the side of cover (51) enough to allow the cover (51) to clear the lip on the pail (58).
4. Remove the cover (51) with the attached DVP Pump (48), Regulator (69) and Agitator with Drive Assembly (59) from the pail (58).
5. Loosen the top set screw in the coupling closest to cover (51), to remove coupling with agitator shaft and propeller from agitator motor shaft.
6. Remove the 1" pipe locknut, (turn counter clockwise), from the holder assembly for the agitator motor. Note the position of the 1" pipe washer beneath the 1" pipe locknut.
7. Loosen the set screw on the side of the holder assembly sufficiently to clear the detent in the agitator motor shaft.
8. Remove agitator motor.

Reassemble Agitator and Drive Assembly (59) to Cover (51)

1. Insert the agitator motor into holder assembly. Locate detent in the agitator motor shaft with the set screw on the side of the holder assembly. Tighten set screw
2. Locate the holder assembly with the attached agitator motor to the cover (51) by aligning the pin the bottom of the holder assembly with the notch in the hold for the agitator motor.
3. Replace the 1" pipe washer in its original positions (raised portion towards 1" pipe locknut). Replace the 1" pipe locknut and tighten clockwise, sufficiently to retain locating pin in notch and not to allow 1" pipe locknut to work loose.
4. Replace the coupling with agitator shaft and propeller to the agitator motor shaft. Align the top set screw in the coupling with the flat on the agitator motor shaft. Tighten set screw.
5. Replace the cover (51) with the attached DVP-Pump (48), regulator (69) and agitator with drive assembly (59) onto the pail (58).
6. Tighten the 3 thumb screws evenly on the side of cover (51). Make sure thumb screws are beneath the lip on the pail (58).
7. Replace the hose assembly between the regulator (69) and the agitator assembly (59).
8. Reconnect the main air supply hose assembly to the unit.



VIEW A



VIEW B

NOTE

Refer to "view A" when removing and replacing the regulator assembly (69) on non-agitator units. Some numbers in parentheses () may refer to the diagrams on pages 4 and 6.

Removing Regulator (69) on non-agitated units.

1. Turn off the main air supply and release pressure. Disconnect the main air supply hose assembly from the unit.
2. Unscrew the swivel elbow (71) from the regulator (69).
3. Unscrew the swivel (74) from the 90º street elbow “A”.

Re-Installing the Regulator (69) on non-agitated units

1. Screw the swivel (74) onto the 90° street elbow “A”. Position Regulator (69) to its original position.
2. Replace the swivel elbow (71), clockwise, into regulator (69).
3. Connect the main air supply hose assembly to the unit.

NOTE

Refer to view "B" when removing and replacing the regulator (69) on agitated units. Some numbers in parentheses () may refer to the diagrams on pages 4 and 6.

Removing the Regulator(69) on agitated units.

1. Turn off the main air supply and release the pressure. Discount the main air supply hose assembly from the unit.
2. Unscrew the hose assembly “A” from double male nipple “B”.
3. Unscrew the swivel elbow (71) from regulator (69).
4. Unscrew the swivel (74) from the 90° street elbow “G”.

Re-Installing the Regulator (69) on agitated units.

1. Screw the swivel (74) onto the 90° street elbow “G”. Position Regulator (69) to its original position.
2. Screw the swivel elbow (71) into regulator (69).
3. Screw the hose assembly “A” to the double male nipple “B”.
4. Connect the main air supply hose assembly to the unit.

Binks PNEUMATIC DIAPHRAGM PUMP DVP–GEMINI

SERVICE CHECKS

SERVICE CHECKS	CAUSES	CORRECTION
Air in the material.	Material viscosity too high.	Reduce viscosity.
	Suction tube not properly tightened & sealed.	Tighten Seal with PTFE tape if necessary.
Air in the material and pump operates irregularly	Leak between top and/or bottom plate body and diaphragm.	Remove the cover and tighten the 4 bolts
	Diaphragm damaged	Replace if material has leaked into pneumatic distributor, remove & clean it
Pump operates irregularly	Material inlet or outlet blocked	Flush material system.
	Dirty or worm material inlet or outlet valves	Flush pump or if necessary replace balls & valves seats.
Pump will not operate.	Blockage in material in pump outlet	Check and clean tubes, filters, orifices and so on.
	Slider valve in neutral position.	Push manual restart stem (22-30).
Pump exhaust continuously	Slider valve in neutral position	Push manual restart stem (22-30).
	Reverse switch staying in open position.	Dismantle the reverse switches, clean or replace
Pump will not prime	Viscosity too high.	Reduce viscosity.
	Suction pipe not properly tightened and sealed.	Tighten. Seal with PTFE tape if necessary.
Pump will not prime and exhausts through suction tube.	Top or bottom plates wrongly assembled.	Disassemble top and bottom plates and re-assemble correctly.

ACCESSORIES

ATOMIZATION REGULATOR ASSEMBLY (DVP PUMP OUTFITS) 85-461

Allows for one spray gun to be connected to the air supply directly at the pump, simplifying equipment controls for the operator.
A clean air filter should be fitted to the air supply.

WARRANTY
This product is covered by Binks' 1 Year Limited Warranty.

Binks Worldwide Sales and Service Listing: www.binks.com

Industrial Finishing

Binks has authorized distributors throughout the world. For technical assistance or the distributor nearest you, see listing below.

U.S./Canada Technical Service Office:
195 Internationale Blvd., Glendale Heights, IL 60139
Toll-Free Telephone: 1-888-992-4657 (U.S.A. and Canada only)
Toll-Free Fax: 1-888-246-5732

77-2870R-4 Revisions: (P4) Updated exploded view; (P5) Updated Parts List; (P6) Updated exploded views; (P7) Updated Parts List; (P11) Updated diagrams and text.

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