



**PRO V POWDER / SOLID / LIQUID DETERGENT, LIQUID RINSE, & LIQUID SANITIZER DISPENSER  
INSTALLATION INSTRUCTIONS  
REVISION #5**

**STEP #1. MOUNTING**

1. Choose a location where the unit is visible to the machine operator.
2. Locate the unit out of the direct path of heat and steam.
3. Locate as near as possible to the power source.
4. Wall mounting - Use the drilling template provided.
5. Surface mounting (optional)-Order the Surface Mount Kit-Part #VOPSURFKIT001

**STEP #2. PROBE PLACEMENT**

1. Locate on side of tank, approximately 3" - 4" from the bottom of the wash tank and out of corners if possible. Try to locate it between the detergent injection point and the circulation pump intake.
2. Probes should never be installed through the bottom of the wash tank. Probes must be installed below the water level.
3. Try to utilize an existing hole in the side of the tank.
4. If no suitable hole exists, one will need to be made. The probe diameter is 7/8".

**STEP #3A. DRY DETERGENT HOOKUP**

1. Water is fed to the Viking Bowl or DR-100 Reservoir through the 24 VAC solenoid on the right side of the case. Using the self-tapping saddle valve, tap a hot water line that is as close as possible to the spot where the unit will be mounted. Choose a hot water line that has constant water pressure. Water supplied to the detergent reservoir should be about 140 degrees Fahrenheit. DO NOT tap the hot water supply after a booster heater.
2. The inlet port for the detergent feed solenoid is the one toward the backside of the unit. Use the Ferrule and nut to connect the water line.
3. For the installation of a Viking Bowl or DR-100 Reservoir, refer to the unit's own instructions.

**STEP #3B. LIQUID DETERGENT HOOKUP - THE DETERGENT PUMP IS ON THE RIGHT AND HAS 1/4" TUBING**

1. Pump hookup: Loosen the compression nuts at the end of the squeeze tube.
2. On the supply (left) side of the pump, insert the 1/4" tubing all the way through the compression nut so that it bottoms in the compression fitting. Hand tighten the nut. Make this line long enough to reach the bottom of the supply drum and long enough that someone in the kitchen can make the supply container accessible to change it when it is empty.
3. Break apart the sections of the snap together dip tube and snap them together. Use two sections for a one-gallon jug and three for a bucket. Snap the fitting on the top. Remove the compression nut and slide it up the supply tubing. Insert the tubing into the compression fitting and push it through until it is just short of the bottom of the tube. Hand tighten the compression nut.
4. Cut a piece of supply tubing long enough to reach from the output (right) side of the pump to the injection fitting. Push the tubing through the compression nut on the right side of the pump until it bottoms in the compression fitting. Hand tighten the nut. Run the output line to the chosen injection point. A hole plug injection assembly is included for detergent injection.
5. The hole plug injection assembly should be installed just above the water line on the side of the wash tank. Try to place your injection point on the opposite side of the circulating pump intake. This is so the detergent will be drawn across the tank for better mixing. If an existing hole cannot be found, then a hole will need to be made. The hole plug injection assembly has a 7/8" diameter (same as a probe).

**STEP #4. RINSE PUMP HOOKUP - THE RINSE PUMP IS ON THE LEFT AND HAS 1/8" TUBING**

1. The rinse injection point should be in the rinse water supply line between the wash tank and the machine's vacuum breaker. It should be as high on the water line as possible, but not higher than the PRO V's pressure switch (if so equipped.)

2. Check to see if there is an injection port in the rinse arm. If a hole does not exist or is in a bad location, then you will need to drill your own. Select a suitable location, drill a 1/4" hole, and attach the 1/8" FPT saddle bracket so that the holes line up.

**INJECTION POINT  
DUAL INTERNAL TRANSFORMER SETUP (NO PRESSURE SWITCH)**

- A. Thread the 1/8" NPT straight fitting into the port or saddle bracket. Use Teflon tape to prevent leaking.
- B. Cut a piece of 1/8" supply tubing approximately 12" long. Feed about 6" of the 1/8" tubing through the straight BRASS fitting, into the rinse arm, and toward the wash tank. Hand tighten the compression nut.
- C. Connect the white ball check valve to the other end of the tubing. The flow indication arrow should point toward the injection assembly. Hand tighten the compression nut.
- D. Cut a line long enough to run from the output (right) side of the pump to the check valve. Hand tighten the compression nuts.

**INJECTION POINT  
SINGLE TRANSFORMER (INTERNAL OR EXTERNAL) & PRESSURE SWITCH SETUP**

- A. Thread the 1/8" NPT end of the BRASS injection assembly into the port or saddle bracket. Use Teflon tape to prevent leaking.
  - B. Cut a piece of 1/8" supply tubing approximately 12" long. Feed about 6" of the 1/8" tubing through the straight fitting, into the rinse arm, and toward the wash tank. Hand tighten the compression nut.
  - C. Connect the check valve to the other end of the tubing. The flow indication arrow should point toward the injection assembly. Hand tighten the compression nut.
  - D. Cut a line long enough to run from the output (right) side of the pump to the check valve. Hand tighten the compression nuts.
  - E. Cut a piece of tubing long enough to reach from the pressure switch to the pressure switch port (elbow) on top of the injection assembly. Hand tighten both compression nuts.
3. Supply side: Cut a piece of supply tubing long enough to reach from the bottom of the supply container to the supply (left) side of the pump. Connect the tubing to the pump. Hand tighten the compression nut.
  4. Break apart the sections of the snap together dip tube and snap them together. Use two sections for a one-gallon jug and three sections for a bucket. Snap the fitting on top. Remove the compression nut and slide it up the supply tubing. Insert the tubing into the compression fitting and push it through until it is just short of the bottom of the tube. Hand tighten the compression nut.

**NOTE:** If you need to jump a pressure switch, instructions for doing this are given on the pages that cover the wiring.

**STEP #5. SANITIZER PUMP HOOKUP - THE SANITIZER PUMP IS IN THE MIDDLE AND HAS 1/8" TUBING**

1. Injection point: The sanitizer injection point should be in the rinse water supply line between the wash tank and the machine's vacuum breaker. It should (if possible) be closer to the wash tank than the rinse injection fitting.
2. Check to see if there is a second injection port in the rinse arm. If a hole does not exist or is in a bad location, then you will need to drill your own. Select a suitable location, drill a 1/4" hole, and attach the 1/8" FPT saddle bracket so that the holes line up.
3. Thread the 1/8" NPT end of the plastic injection fitting into the port or saddle bracket. Use Teflon tape to prevent leaking. **DO NOT OVER TIGHTEN!**
4. Cut a piece of 1/8" supply tubing approximately 12" long. Attach one end to the injection fitting. Hand tighten the compression nut.
5. Connect the gray check valve to the other end of the tubing. The flow indication arrow should point toward the injection fitting. Hand tighten the compression nut.
6. Cut a piece of supply tubing long enough to reach from the output (right) side of the pump to the check valve. Hand tighten the compression nuts.
7. Supply side: Cut a piece of supply tubing long enough to reach from the bottom of the supply container to the supply (left) side of the pump. Connect the tubing to the pump. Hand tighten the compression nut.
8. Break apart the sections of the snap together dip tube and snap them together. Use two sections for a one-gallon jug and three sections for a bucket. Snap the fitting on top. Remove the compression nut and slide it up the supply tubing. Insert the tubing into the compression fitting and push it through until it is just short of the bottom of the tube. Hand tighten the compression nut.

## STEP #6. ELECTRICAL

**\*\*CAUTION\*\*** Before doing any wiring, turn OFF the circuit breaker to the dish machine!! Be certain you comply with the local wiring code!! Never connect any voltage to the probe leads as it will damage the board and void your warranty.

1. Keep in mind that the PRO V is 24 volt AC unit. Using a voltmeter, determine the voltage that you will be wiring into your transformer. Turn the dish machine off. Confirm that the power is OFF with a voltmeter. Trip the breaker that controls power to the machine. If you do not have a voltmeter for this installation, you should get one before attempting any wiring.
2. Make sure the PRO V circuit board power switch is in the OFF position.
3. For the correct wiring combinations, refer to the wiring page in these instructions that covers both internal and external transformer hookup as well as board adjustments.

## STEP #7A - CONTROL SETUP - RINSE (Refer to circuit board diagram)

1. Turn the dish machine breaker ON, then turn dish machine ON.
2. Turn circuit board power switch ON.
3. With power to the unit present, press and hold the prime button until the chemical has reached the injection assembly. At this time, check all connections for leaks. Tighten any loose compression nuts.
4. The pump speed and its output are adjustable from approximately 1/8 oz. (4.5 ml) to 3/4 oz. (24.5 ml) per minute. Adjust the rinse pump speed based on the length of the rinse cycle and how much rinse fluid is required. See the wiring/board layout page for control details.

## STEP #7B - CONTROL SETUP - SANITIZER (Refer to circuit board diagram)

1. You will notice that priming the rinse pump will also prime the sanitizer pump. Make sure that the chemical in each line has reached the injection points before making speed adjustments. Check the sanitizer line for leaks and tighten any loose fittings.
2. The pump speed and its output are adjustable from approximately 1/8 oz. (4.5 ml) to 3/4 oz. (24.5 ml) per minute. Adjust the rinse pump speed based on the length of the rinse cycle and how much rinse fluid is required. See the wiring/board layout page for control details. The sanitizer pump speed control is on a sub board, not on the master board.

## STEP #7C - CONTROL SETUP - DETERGENT (Refer to circuit board diagram)

**NOTE:** Low Range = Approximately 4 – 25 drop titration (more range and more sensitive to adjustment)  
High Range = Approximately 10 – 25 drop titration (less range and less sensitive to adjustment)

1. With the dish machine still turn ON, fill the machine with water. Bring the water up to the proper operating temperature. See the board diagram on the wiring/controls page. Locate the concentration and time delay adjustment potentiometers. With the control boards switch "OFF", start the machine operating manually. Add enough detergent to bring the solution up to the required minimum concentration. Allow enough time for the solution to mix thoroughly. Slide the control switch "ON". Turn the concentration adjustment potentiometer clockwise until it calls for soap, then turn it back on division and wait until the feed function stops. Now, very Slowly, turn the potentiometer clockwise until it begins to feed again. Allow the feed to stop automatically.
2. Setting the time delay function (the adjustment potentiometer is variable for 20 seconds to 6 minutes); set the potentiometer for about 30 seconds. Be sure that the installation recharges itself fast enough that the alarm does not activate. If the feed cannot satisfy the probe before the buzzer sounds, turn the potentiometer up to allow for more feed time. Adjust the buzzer volume to desired level.

## WARRANTY

Viking LLC, A DEMA Company products are warranted against defective material and workmanship under normal use and service for one year from the date of manufacture. This limited warranty does not apply to any products which have a normal life shorter than one year or failure and damage caused by chemicals, corrosion, improper voltage supply, physical abuse or misapplication. Rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of Viking LLC products. If the products are altered or repaired without prior approval of Viking LLC, this warranty will be void.

Defective units or parts should be returned to the factory with transportation prepaid. If inspection shows them to be defective, they will be repaired or replaced without charge, F.O.B. factory. Viking LLC assumes no liability for damages. Return Merchandise Authorization (RMA) number to return units for repair or replacement must be granted in advance of return.

**PRO V REPLACEMENT PARTS LIST**

<b><u>PART DESCRIPTION</u></b>	<b><u>PART NUMBER</u></b>
THREE PUMP HOUSING	MOP PRV3PMP M23
THREE PUMP CASE	MOP PR3PCSE M36
THREE PUMP LID	MOP PR3PLID M38
THREE PUMP BOARD CARRIER	MOP P5BDC2P N38
PRO III-V BOARD	BOA PS3-5BD B01
DETERGENT MOTOR DRIVE BOARD	BOA PS4BABY B04
SANITIZER MOTOR DRIVE BOARD	BOA 5BABYST B37
60 RPM DETERGENT MOTOR #2884	CMP 2884MOT 000
18 RPM RINSE & SANITIZER MOTOR #2883	CMP 2883MOT 000
DETERGENT SOLENOID	VOA S24C V45
40 VA INTERNAL TRANSFORMER ONLY	CTA 40VINT 000
2 INTERNAL TRANSFORMER ASSEMBLY (INCLUDES CAP, WIRING BLOCK, MOUNTING HARDWARE, AND CONNECTORS FOR CIRCUIT BOARD)	VOP 2INTAS V13
REPLACEMENT HARNESS KIT (FOR ANY STYLE PRO V)	VWP HARNV W05
1/4" PRO DETERGENT TUBE WITH ENDS	VOA LNTUBWE V98
1/8" PRO RINSE / SANITIZER TUBE WITH ENDS	VOP 1/8NEND V30
RINSE / SANITIZER ROLLER ASSEMBLY (BLUE)	VOP ROLPRO V44
DETERGENT ROLLER ASSEMBLY (WHITE)	VOP PROROLB V07
PRO FACE PLATE WITH BEARING	VOP FCEBEAR V94
PRESSURE SWITCH COMPLETE	VOP PRES/SW V74
SNAP TOGETHER DIP TUBE	MOA 2PTDTUB M69
1/4" FITTING FOR SNAP TOGETHER DIP TUBE	MOA DTUB1/4 M68
1/8" FITTING FOR SNAP TOGETHER DIP TUBE	MOA DTUB1/8 M66
1/8" BALL CHECK VALVE FOR SANITIZER (GRAY)	VOA 1/8CPCV V09
1/8" BALL CHECK VALVE FOR RINSE (WHITE)	VOA 1/8BCHV V69
1/8" MNPT X COMP STRAIGHT FITTING (BRASS)	CHA 1/8STBR 000
1/8" MNPT X COMP STRAIGHT FITTING (PLASTIC)	CHA 1/8X1/8 P02
1/8" FNPT SADDLE BRACKET	CVA VRBRCKT 000
BRASS INJECTION ASSEMBLY COMPLETE	VOA 1/8INJB V54
SELF-TAPPING SADDLE VALVE	CVA SV-1 000
HOLE PLUG INJECTION ASSEMBLY	VOA HP/INJ V40
UP-2 PROBE	VOA UP2 V13
SURFACE MOUNT LEG KIT	VOP SURFKIT 001
COMPLETE REPLACEMENT HRDW FOR A PRO V DL	HOR HWPR5DL H07
COMPLETE REPLACEMENT HRDW FOR A PRO V DP	HOR HWPR5DP H08