Viking Pro III, IV, & V

Ware Wash Chemical Dispensing Systems

Overview

Pro III, IV, & V Detergent, Rinse, & Sanitizer Control Systems are field-proven warewash systems. Used in high-temperature probe-controlled applications, high and low-temperature dish machines dump & fill dish machines; glass washers; pot and pan washers; rack, tray and cage washing machines, laboratory bottle & laboratory test tube washing machines. These warewash systems use advanced electronic controls that will ease installation and provide accurate and reliable operation.

Warnings

Installation of VIKING products must meet all applicable electrical codes and regulations established by national, city, county, parish, provincial or other agencies. It is possible that electrical codes and regulations require that a certified electrical contractor or engineer perform the electrical installation. For questions, contact a certified electrician.

PRIOR TO INSTALLATION OR SERVICE, ALL ELECTRICAL POWER MUST BE TURNED OFF TO THE DISPENSER AND TO THE APPLIED MACHINE.

ALWAYS WEAR PROTECTIVE CLOTHING AND EYEWEAR WHEN WORKING WITH CHEMICAL PRODUCTS.

Specifications

Pro III
A two [2] product, liquid rinse & powdered / solid detergent probe controlled warewash dispenser for high temp dish machines. The Pro 3 can be ordered with two [2] internal transformers, one [1] internal transformer and a pressure switch, or as an external transformer unit.

Pro IV
A two [2] product, liquid rinse & liquid detergent probe controlled warewash dispenser for high temp dish machines. The Pro 4 can be ordered with two [2] internal transformers, two [2] internal transformers and a pressure switch, or as an external transformer unit.

Pro V
A three [3] product, liquid rinse, liquid sanitizer & (liquid or powdered / solid) detergent probe controlled warewash dispenser for high temp dish machines. The Pro 5 can be ordered with two [2] internal transformers, two [2] internal transformers and a pressure switch, or as an external transformer unit.

Pump Outputs
1. Fixed rate of 9 ounces (261Ml) per minute.
2. Adjustable dilution of 1/8 to ¾ ounce (4 to 22mL) per minute.

   Note: All pump outputs listed are based on water. Product viscosity, and the length and rise of run may reduce actual output.

Electrical Information
1. Internal transformers accept primary voltages of 110-, 208-, and 240-volts AC, 50 or 60 hertz. (480-Volts Optional)

Low Product Alarm
1. Delay adjustable from 20 seconds to 6 minutes.
2. Feed is shut off during alarm condition.

Operational Requirements

For Indoor Use Only		
Main Power	100 – 240 VAC (480 VAC OPTIONAL)	50/60 Hz 1.0 A
Trigger Signals	24V – 480V	50/60 Hz
Motors/Solenoid Valves	24VDC / 24VAC	
Case Material	ABS	
Maximum Altitude	2000 M	6500 ft
Environmental Temperature	0-40°C	32-104°F
Installation Category	II	
Pollution Category	II	
UL Recognized	U.S.A and Canada	
CE Certified	IEC 60335-1	

Overall Size

Pro III	Pro III	Pro III
		
7” H X 9 1/2” W X 6 ½” DEEP	7” H X 11” W X 6 ½” DEEP	7” H X 11” W X 6 ½” DEEP

Installation

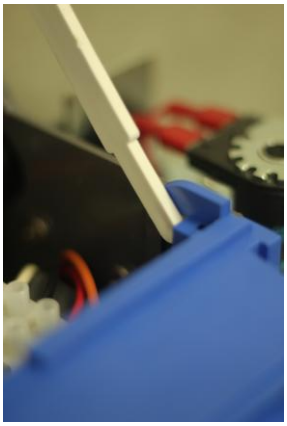
Dish Room Survey
Determine the best location to mount the Pro Warewash Unit on the wall within 9ft (3M) of the dish machine.

- Main power electrical cable is 15ft long.
- Locate unit away from direct water spray & excessive steam.

Opening the Pro Warewash Unit

- Insert the provided key into Cam Lock. Located on the front face in the top middle of the lid.

- Turn the key
- Lift the lid, until 90º open from original closed position. (White plastic arm engages when fully opened to hold lid in upright open position.



For safety purposes disconnect main power to the dish machine. Connect power to the Pro Warewash per the dish machine manufacturer’s recommendations. Electrical codes may require a certified electrician for proper installation. UNIT MUST BE GROUNDED (EARTHED).

Electrical Wiring Connection

PRO V WIRING NOTE: On PRO V units, the sanitizer drive board gets its power from one of the rinse power legs and a pressure switch leg or the pressure switch loop in the case of a dual internal transformer (no pressure switch). If you have the unit apart and aren't sure where to hook up for power again, do the following: With the lid up on the unit and beginning from the first wire at the board on the left, count over to the third wire (yellow), and the fifth wire (one of the secondary side legs of the rinse transformer).

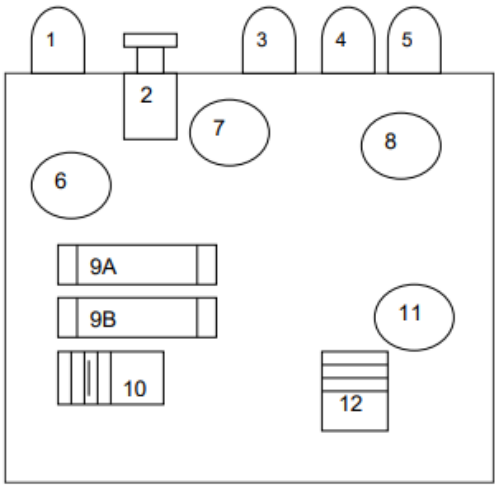
ONLY TWO WIRES SHOULD SUPPLY POWER TO THE SANITIZER MOTOR DRIVE BOARD!!

Incorrect wiring to the dish machine, such as connecting the probe to a power source, will result in a failure of the control board and will void the factory warranty!! Any other wiring combinations other than those described here may result in damage to the control board as well as damage to the installer!! Exercise extreme caution when working with high voltages and always make sure that breakers are thrown off before attempting to do any wiring.

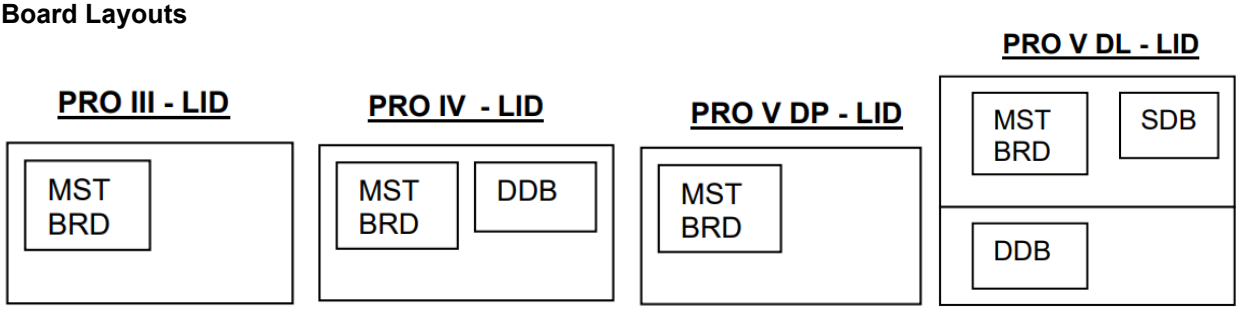
MASTER BOARD FOR ALL PRO III. IV. & V UNITS

1. Rinse Feed Indicator Light
2. Rinse Prime Button
3. Power Indicator Light – Power is present from the dish machine when light is lit.
4. Detergent Feed Indicator Light
5. Low Supply Light – indicates the probe is not being satisfied – out of product.
6. Rinse Speed Pot
7. Buzzer Volume Potentiometer
   - 0 = Quiet
   - 100 = Loud
8. Low Product Alarm Delay Po
   - 0 = minimum time to alarm (approx. 20 seconds)
   - 100 = maximum time to alarm (approx. 6 minutes)

9A. Rinse Fuse (5 Amp)
9B. Detergent Fuse (5 Amp)
10. Power Switch Left = Off Right = On
11. Detergent Concentration Potentiometer
    - Allows adjustment of concentration 0=Minimum 100=Maximum
12. Range Selection
    - SwitchLow = 4-25 Drops
    - High = 10-25 Drops



Board Layouts



New Wiring Component Color Code

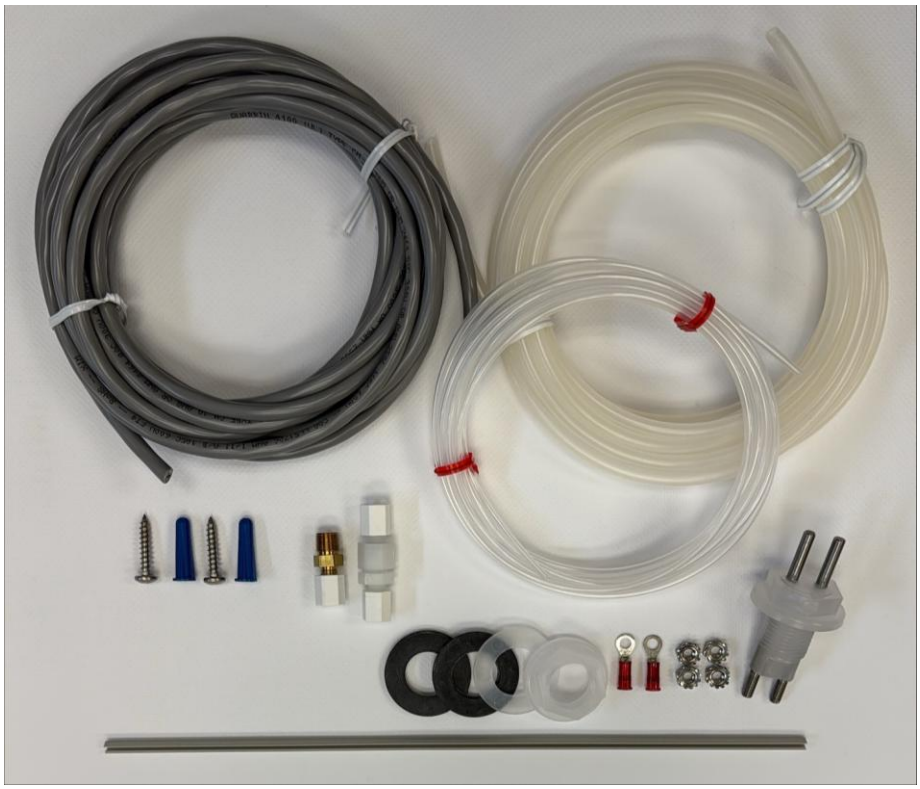
Note: DDB = Detergent motor drive board (Pro IV & Pro V DL) - THERE ARE NO ADJUSTMENTS ON THIS BOARD SDB = Sanitizer motor drive board (Pro V DP & DL) THE POTENTIOMETER ON THIS BOARD CONTROLS THE SANITIZER MOTOR SPEED

Internal Transformer Unit Wiring Information

When hooking up the high voltage coming into the wiring block, first check the voltage with a voltmeter and use the label on the transformer cap to hook up to the correct leads.: YOU WILL ALWAYS USE THE COMMON POSITION FOR ANY VOLTAGE - 240 WOULD MEAN CONNECTING ONE LEG TO THE COMMON POSITION AND ONE TO THE ONE MARKED FOR 240 VOLTS. If you need to share a single source of voltage from the dish machine in a unit with two internal transformers and a pressure switch, use small (18 AWG minimum) jumper wires. Use the correct positions, i.e. match up the voltage positions for the second transformer with those on the first. Remember that if you purchased a unit with dual internal transformers and a pressure switch and did not use the pressure switch, these wires must be disconnected from the pressure switch and tied together to complete the circuit or the rinse pump **WILL NOT RUN**. If you do not want to cut the leads, the black switch allows for a normally closed setup. Remove the Pressure switch from its housing. Remove the red connector from the middle terminal on the micro switch and place it on the outside terminal, the one closest to the front of the unit. This will complete the circuit without having to cut the wires.

Replacement Parts

Pro 3 Replacement Components/Kits



Qty.	Description	Part No.
1	Rinse Kit Electric Kit #3	HO*J*RINSEEL*H62
1	Dry Detergent Kit #2	VO*A*UP2FIXD *704
1	15’ X 5 Conductor Cut & Rolled	CW*A*15-5CON*000
1	¼” X 15’ OD Supply Tubing	CB*A*1/4-15’ *000
1	1/8” X 15’ OD Supply Tubing	CB*A*1/8-15’ *000
1	Screw & Anchor Pack	CH*A*SCRWANC*000
1	1/8” Tube Stiffener 12”	VO*S*1/8TUBE*STF

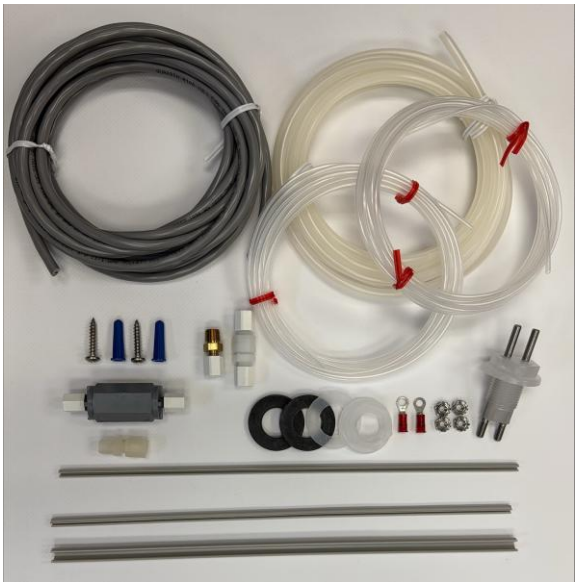
Pro 4 Replacement Components/Kits

Item No.	Qty.	Description	Part No.
1	1	RINSE KIT ELECTRIC KIT # 3	HO*J*RINSEEL*H62
2	1	LIQUID DETERGENT KIT # 1	HO*J*LIQDET *H60
3	1	15’ X 5 CONDUCTOR CUT & ROLLED	CW*A*15-5CON*000
4	1	1/4” X 15’ OD SUPPLY TUBING	CB*A*1/4-15’ *000
5	1	1/8” X 15’ OD SUPPLY TUBING	CB*A*1/8-15’ *000
6	1	SCREW AND ANCHOR PACK	CH*A*SCRWANC*000
7	1	1/8” TUBE STIFFENER 12”	VO*S*1/8TUBE*STF
8	1	1/4" TUBE STIFFNER 12"	DE*M*813121_*000
9	PRO IV W/2-INT TRANS P4/2		FO*P*P4-2IT *P37

Pro 5 DL Replacement Components/Kits

Item No.	Qty.	Description	Part No.
1	1	RINSE KIT ELECTRIC KIT # 3	HO*J*RINSEEL*H62
2	1	LIQUID DETERGENT KIT # 1	HO*J*LIQDET *H60
3	1	SANT.ELECTRIC KIT #4	HO*J*SANTELT*H63
4	1	15’ X 5 CONDUCTOR CUT & ROLLED	CW*A*15-5CON*000
5	1	1/4” X 15’ OD SUPPLY TUBING	CB*A*1/4-15’ *000
6	2	1/8” X 15’ OD SUPPLY TUBING	CB*A*1/8-15’ *000
7	1	SCREW AND ANCHOR PACK	CH*A*SCRWANC*000
8	2	1/8” TUBE STIFFENER 12”	VO*S*1/8TUBE*STF
9	1	1/4" TUBE STIFFNER 12"	DE*M*813121_*000
10	PRO V DL W/ INTERNALS		FO*P*P5DL2IT*F46

Pro 5 DP Replacement Components/Kits



Item No.	Qty.	Description	Part No.
1	1	RINSE KIT ELECTRIC KIT # 3	HO*J*RINSEEL*H62
2	1	DRY DETERGENT KIT # 2	VO*A*UP2FIXD *704
3	1	SANT.ELECTRIC KIT #4	HO*J*SANTELT*H63
4	1	15’ X 5 CONDUCTOR CUT & ROLLED	CW*A*15-5CON*000
5	1	1/4” X 15’ OD SUPPLY TUBING	CB*A*1/4-15’ *000
6	2	1/8” X 15’ OD SUPPLY TUBING	CB*A*1/8-15’ *000
7	1	SCREW AND ANCHOR PACK	CH*A*SCRWANC*000
8	2	1/8” TUBE STIFFENER 12”	VO*S*1/8TUBE*STF
9	1	1/4" TUBE STIFFNER 12"	DE*M*813121_*000
10	PRO V DP W/2 INT TRANS P5D-2		FO*P*P5DP2IT*F45

Squeeze Tubes: Replacement/Installation Procedures

REMOVING THE OLD SQUEEZE TUBE

1. If the chemicals you are pumping are hazardous in any way, you should wear safety glasses and gloves when changing the squeeze tube. You should also have a rag handy.

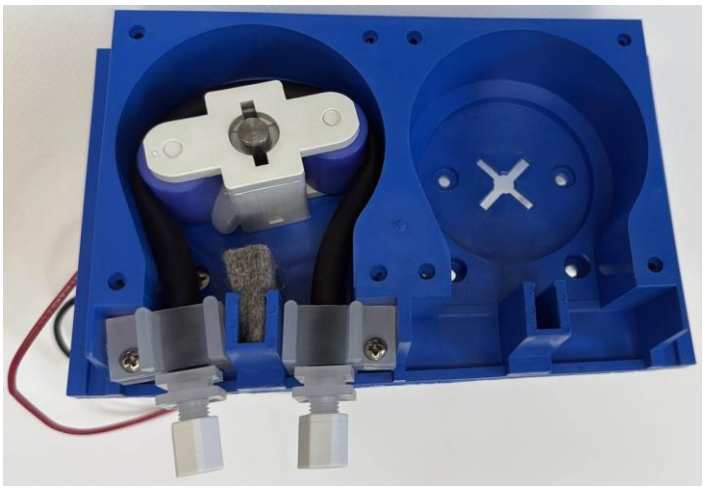
2. Disconnect the inlet and outlet supply tubing from the squeeze tube by loosening the compression nuts.

3. Remove the four (4) screws from the clear faceplate. Remove the faceplate. Make sure that the faceplate bearing is either on the end of the motor shaft or in the center of the faceplate.

4. Place a rag over both fittings in the bottom of the squeeze tube and pull the squeeze tube towards you and work it out of the pump.

INSTALLING THE NEW SQUEEZE TUBE

1. Place the left side tube block in left hand block space – the head of the screw is facing out. If the end of the screw is facing out, switch blocks so that the screw head is facing out. Work the tubing into the pump from the 6:30 position clockwise around to the right-hand block.



2. You can turn the roller around in a clockwise direction and get the tube under it or you can try to press the tube in between the roller and the side of the housing. This is the more difficult of the two options.

3. Make sure that both, left and right, blocks are in place and seated in the recesses. Put the faceplate back on the pump. Install the four (4) faceplate screws.

4. Reconnect and tighten the two (2) compression nuts. Make sure that the line from the bucket is connected on the left and the one going to the machine or injection point is connected to the right.

Warranty

Merchandise Returns

No Merchandise will be Returned for Credit Without VIKING'S Written Permission. Returned Merchandise Authorization Number is Required in Advance of Return.

Product Warranty

DEMA / Viking 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 that have a normal life shorter than one year, or failure and damage caused by chemicals, corrosion, physical abuse, or misapplication. Rubber and synthetic rubber parts such as "O"-rings, diaphragms, PVC tubing, and gaskets are considered expendable and are not covered under warranty. This warranty is extended only to the original buyer of VIKING products. If products are altered or repaired without prior approval of VIKING, this warranty is 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 assumes no liability for damages. Return merchandise authorization numbers must be granted in advance of returned units for repair or replacement.