

American Dish Service

INSTALLATION INSTRUCTIONS

Model ADC-44 or ADC-66

208/240v, 3-ph, 60a or 90a for 66

High Temp or Chemical Sanitizer Conveyor Dishmachines

Listed by UL #E68594, NSF/ANSI 3, ASSE 1004 #301, LA Test Labs File M-780089, Mass. License P3-0111-306



If you have questions, call 800-922-2178 or visit our website at www.AmericanDish.com



DANGER

The electrical power supplied to this machine is an imminent hazard that could result in severe bodily injury or death if not properly installed or hooked up correctly. When working in the control box or on electrical parts, always disconnect power and tag-out before servicing. Replace cover to control box and other protective covers when finished servicing this equipment.



CAUTION

READ Manufacturer's Manual before Using this Product. For your safety read and observe all cautions shown throughout these instructions. While performing installations described in this booklet, wear approved Personal Protective Equipment, including Safety Eye-Wear.

There are potentially hazardous situations when working with industrial cleaning chemicals for dishmachines. See chemical manufacturer's MSDS sheets and safe practices for handling and installing chemical feeders and supply containers.



WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov

NOTICE

#1 BEFORE YOU BEGIN— American Dish Service provides this information as a service to our customers. Keep all instructions for future reference. ADS reserves the right to alter or update this information at any time. Should you desire to make sure that you have the most up-to-date information, we would direct you to the appropriate document on our web site: www.americandish.com. Set out below are the specifications and requirements that you must use and follow to properly install the type or types of equipment listed above. It is your obligation as the customer to ensure that the machine is installed safely and properly, and when completed, the machine is left in proper and safe working order. Electrical, Plumbing, and Chemical hookup should be performed by a qualified professional who will ensure that the equipment is installed in accordance with all applicable Codes, Ordinances, and Safety requirements. Failure to follow the installation instructions could void the warranty. ADS assumes no liability or control over the installation of the equipment. Product failure due to improper installation is not covered under the ADS Warranty.

#2 HEAVY USE ITEM— A conveyor dishmachine is often run at full capacity. The machine is not rated for outdoor use.

#3 FLUSH OUT INITIAL FILL WATER— Do not install spray arms until machine is flushed with water. When this machine is connected to power, it will normally fill with water. Do this without installing the spray arms. Place a rack inside the machine so all the pumps will run. Afterward, drain all the water from the tanks, install all spray arms, and refill the machine. To drain, pull the pump filter out of the sump and the stand tube from the rinse tank (for the 66, also pull the large scrap basket from the power scrapper tank).

#4 CLEARANCES—Dishmachines must be installed to allow for servicing of motors and conveyor systems. Do not install chemical dispensers on the top of the control box, machine, or booster.

#5 WATER HEATERS—or boilers must provide the minimum temperature of 120F degrees required by the machines listed above, which have a minimum hourly demand of 120 gallons per hour. For **HOT WATER SANITIZING**, a booster heater must be installed to achieve the 180F minimum for the final rinse. This booster will require a rise of 70-degrees. These specifications are for the dishmachine only, which typically accounts for 70% of a restaurant's hot water demand.

#6 INSPECT FOR DAMAGE—If you receive a damaged dishmachine, do not sign "Clear" but write "Damaged" on the documents.

#7 TABLES— are critical to proper dishmachine operation. No table drains (quick drains) or sinks within 20" of the dishmachine on soil table. No sinks or drains on clean tables. Slant tables toward the machine and anchor to the machine lip with the four ¼" bolts supplied. Table lip must not rub on the conveyor bar. If needed, cut out a half-round in the table lip for clearance of the conveyor bar. Tray tracks are not adjustable up or down because of the switch activators. Fasten tables to the machine so they are level with the tray track. Curves or "bands" on clean table seldom work correctly, we recommend using ADS table limit switch (kit 288-1044) for short exit tables.

#8 REQUIRED by NSF — This machine must be operated with an automatic detergent feeder and, if applicable, an automatic chemical sanitizer feeder, including a visual means to verify that detergents and sanitizers are delivered or a visual or audible alarm to signal if detergents and sanitizers are not available for delivery to the respective washing and sanitizing systems. Please see instruction for electrical and plumbing connections located in this manual and in the feeder equipment manual.

ELECTRICAL SECTION

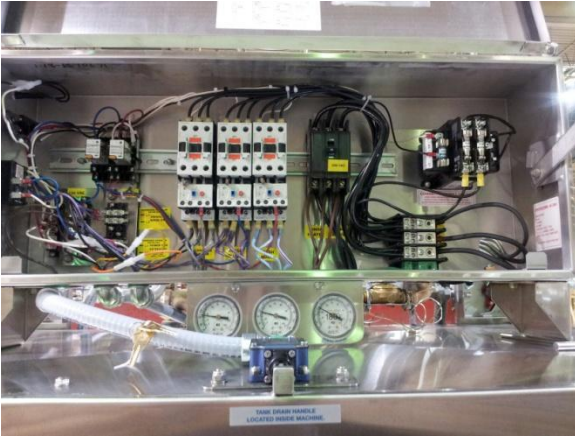


The electrical power supplied to this machine is an imminent hazard that could result in severe bodily injury or death if not properly installed or hooked up correctly

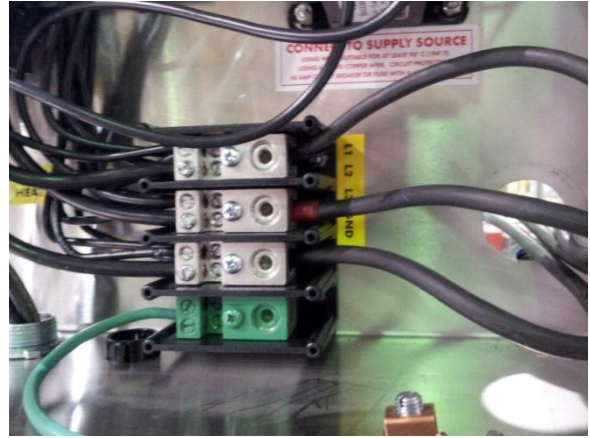
NOTICE

#1 Before powering up the machine, **CHECK ALL ELECTRICAL SCREW TERMINALS** in the control box on top of the machine, power box, and both heater boxes located under the tanks. Screws can loosen in transit. Loose connections on high amp load terminals will cause wire burning and component damage during operation and will not be covered under ADS warranty. The term "Clean Circuit" means the electrical circuit breaker supplies no other devices, motors, machines, or lights.

#2 ADS Conveyor models **DO NOT INCLUDE** an internal booster heater. Boosters must be installed separately, ADS recommends a 27 kW for 155 GPH at a 70-degree rise.



ADC-44 conveyor control box for 3-phase power



Main distribution block for 44's incoming 3-phase

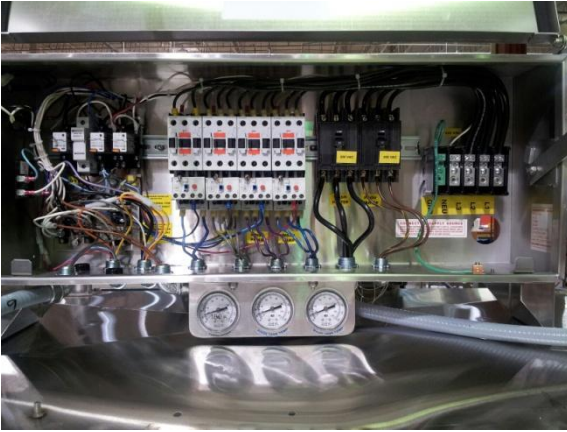
Electrical ADC-44, 208v/240v, 3-ph, 60a

ORDERING INSTRUCTIONS—Machines with heaters are voltage specific, order according to actual voltage at the installation (see kW chart in appendix)

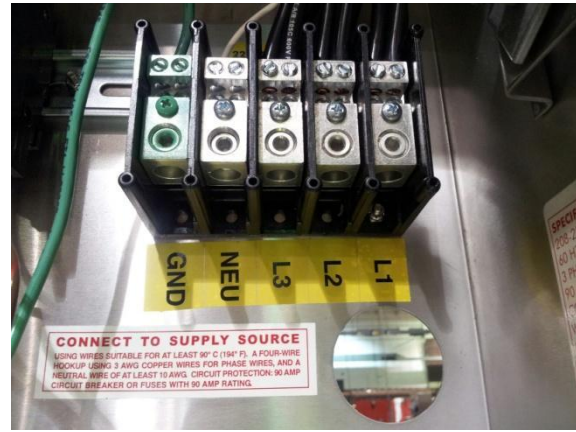
The power supply of 208 volts, 60 amps must consist of three 6-gauge wires and a suitable ground. The 60 amp breaker or fuses must be on a clean circuit to the machine. ADS has provided a conduit hole (1 3/8" actual size) for 1" conduit for the electrical service into the back of the control box. Attach the 6-gauge wires to the main distribution block in the control box to terminals marked L1, L2, & L3. Attach a building ground wire to the main distribution block marked GND and tighten all wires.

FOR 240 VOLT OR DELTA SYSTEMS—attach the high leg (200 volt line) to L3. Attach your 120 volt lines to L1 and L2. If power is 240v, see kW rating chart at the back of the manual for correct heater sizing and available ADS heater elements.

3-Phase MOTOR ROTATION—Remove front panels and check rotation of motors. A rotational arrow is placed on the wash pump motor. If this motor is running in reverse of the arrow, turn off main power and switch the incoming power wires on L1 & L2. This step will correct the rotation of the other motors at the same time. Verify proper rotation and tighten all wires.



ADC-66 conveyor control box for 3-phase power



Main distribution block for 66's incoming 3-ph, note Neutral

Electrical ADC-66, 208v/240v, 3-ph, 90a, w/10-gauge neutral

ORDERING INSTRUCTIONS—Machines with heaters are voltage specific, order according to actual voltage at the installation (see kW chart in appendix)

The power supply (208 volt, 90 amps) must consist of three 3-gauge wires, a 10-gauge neutral, and a suitable ground. The 90 amp breaker or fuses must be on a clean circuit to the machine. ADS has provided a conduit hole (1 3/4" actual size) for 1 1/4" conduit for electrical service in the back of the control box. Attach the 3-gauge wires to the main distribution block in the control box, to terminals marked L1, L2, & L3. Attach 10-gauge neutral and ground wire to their proper locations on the main distribution block and tighten all wires.

FOR 240 VOLT OR DELTA SYSTEMS— attach the high leg (200 volt line) to L3. Attach your 120 volt lines to L1 and L2. If power is 240v, see kW rating chart at the back of the manual for correct heater sizing and available ADS heater elements.

3-Phase MOTOR ROTATION—Remove front panels and check rotation of motors. A rotational arrow is placed on the wash pump motor. If this motor is running in reverse of the arrow, turn off main power and switch the incoming power wires on L1 & L2. This step will correct the rotation of the other motors at the same time. Verify proper rotation and tighten all wires.

IT IS RECOMMENDED THAT THIS EQUIPMENT BE INSTALLED USING A NEW CIRCUIT BREAKER.

PLUMBING SECTION

NOTICE

#1 TANKLESS WATER HEATERS can be problematic for commercial dishmachines. The ADS models ADC-44/66 dishmachines require heated water 120 gallons per hour at 20 psi as measured at the final rinse manifold, with a minimum temperature of 120F. It has been the experience of ADS that tankless supply systems

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require multiple units plumbed in sequence with a recirculation loop to achieve proper pressure and temperature.

Check with the tankless water heater manufacturer, they may recommend a storage tank to guarantee proper flow and line pressure to the machine. Failure to provide adequate water quantity, pressure and temperature to the machine will cause the machine to function improperly and is not the responsibility of ADS. Improperly installing ADS equipment in this manner could void the warranty. All costs associated with providing an adequate water supply to the machine is the sole responsibility of the user.

#2 DRAIN SIZE—Gravity drain lines are 2" pipe size. Do not use reducing adapters for drain lines, always use same diameter pipe or larger. Close pump petcocks if equipped.

#3 A PRESSURE REDUCING valve with by-pass should be installed before the booster heater if the line pressure is 50 psi or above. This is according to booster manufacturer's instructions.

#4 ⚠ **BURN HAZARD** from hot water from pump sprays or plumbing leaks.

#5 ⚠ **ELECTRICAL SHOCK HAZARD** on bare electrical terminals in the thermostat boxes, power box, float switch boxes, and control box.

#6 HOODS—Follow all local plumbing and mechanical codes. IMC 2012, section 507.2.2 requires Type II hoods for all commercial dishwashers except where the heat and moisture loads are incorporated into the building's HVAC systems or dishwashing equipment designed with separate heat and moisture removal systems. A conveyor-type, hot-water sanitizing dishwasher is rated at 21,720 Btu/h by table 5E, ASHRAE Research Project #1362, 8/5/2008.

ADS DOES NOT SPECIFY BUILDING HVAC VALUES



Hot water inlet manifold, single point 3/4" pipe, PR valve



Final rinse manifold with pressure gauge, 20 psi flow req.

Flush building's water lines before connecting to dishmachine.

DUAL SANITIZING MODE

Hot Water Sanitizer Connection

For high temp sanitizing this line will come from a stand-alone booster heater. Connect ¾" MPT water supply line to the 90-degree elbow of the dishmachine's inlet manifold. The requirement at the dishmachine is 180 F minimum at 20 PSI during final rinse flow, 120 GPH. This is measured at the pressure gauge mounted next to the pressure reducing valve in the inlet plumbing on top of the machine's hood. To adjust pressure, turn adjustment screw atop the valve counter-clockwise to decrease pressure.

Chemical Sanitizer Connection

For chemical sanitizing this line will come directly from the building's water heater. Connect ¾" MPT water supply line to the 90-degree elbow of the dishmachine's inlet manifold. The requirement at the dishmachine is 120 F minimum at 20 PSI during final rinse flow, 120 GPH. This is measured at the pressure gauge mounted next to the pressure reducing valve in the inlet plumbing on top of the machine's hood. To adjust pressure, turn adjustment screw atop the valve counter-clockwise to decrease pressure. A dispenser with three product pumps is required for chemical sanitizing (chlorine pump)

Drain Requirements



Showing 2" drain manifold exiting sump & scrap box



Scrap box and tray

ADS provides a 2" copper common drain that exits on the soil side of the dishmachine under the scrap box (ADC-66 drain exits both sides). To prevent clogging, run drain lines as straight as possible. Do not plumb with

tight radius elbows or 180-degree bends. Use of floor sinks for drains can cause flooding. Do not use reducing adapters for drain lines, always use 2" diameter pipe or larger. Always run gravity drain lines downhill.

DISPENSER HOOK-UP SECTION



WARNING

You must wear approved safety eye-wear before connecting chemical equipment. Commercial cleaning chemicals are harmful and can cause damage to the plumbing and stainless steel of the dishmachine. Do not mount dispensers on the control box or run chemical lines over controls or plumbing. Always secure chemical lines and check regularly for leaks. If not properly handled, chemicals can cause serious bodily injury. In the event of chemical contact to skin or eyes; wash immediately with fresh water and seek medical attention.

There is NO CHEMICAL DISPENSER included with this model. Chemical dispensers must be provided and installed prior to operation. The installation of the dispenser is typically provided by the chemical supplier.

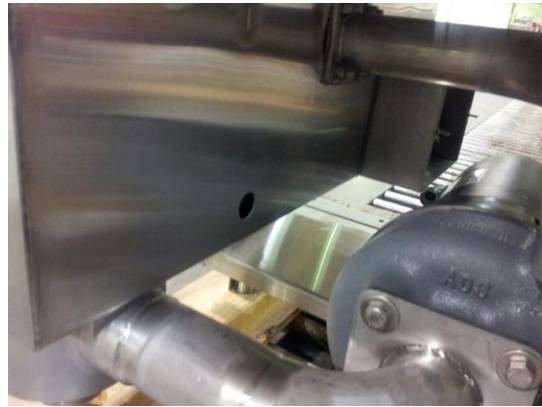


CONTAINERS: When a chemical delivery system is connected to the ADS conveyor dishmachine using 5-gallon pails for industrial ware-washing chemical products these must be equipped with Closed Loop containers. Always use chemical resistant safety gloves and safety goggles (indirect-vented or non-vented) when changing chemical buckets. Immediately report spills and refer to your chemical suppliers SDS safety data sheet or MSDS material safety data sheet for information if chemical come in contact with skin or eyes.

Any modifications to the chemical delivery system for smaller containers must include **Closed Loop Chemical Containers** (spill proof bottles) in a secured racking system. It is the responsibility of the user of the machine to purchase chemicals in spill proof containers. **FAILURE CAN RESULT IN SERIOUS INJURY.** Never place chemicals in open containers or containers that can be easily tipped over when moving or changing product. Failure to do so is a safety hazard and will also void the ADS warranty.



Mixing chamber with two 1/8" pipe threaded ports
Hi-temp mixing chamber is SS, Chemical is a polymer



Showing 7/8" detergent probe hole behind pump motor

ADS provides two (2) ports, 1/8" IPS female threads in the final rinse mixing chamber for dispenser check valves. Probe hole (7/8") is provided in the wash tank for probe installations (install probe before operating the machine). Detergent hole (7/8") is provided for bulk-head fitting (install fitting before operating machine).



Showing hole at the side of tank, 7/8" detergent fitting



Dispenser signal connection terminals in control box

NOTE: Before turning on the water, if the chemical dispenser has not been installed, plug the probe and chemical delivery holes in the wash tank and plug the mixing chamber injection ports.

ADC-44, 3-phase provides 240v dispenser signals (transformer control voltage).

ADC-66, 3-phase provides 120v dispenser signals.

Connect to chemical dispenser terminal blocks located on the left-hand side of the control box, look for yellow decal labeled detergent and rinse

TESTING FOR TEMPERATURE—For high temp sanitizing, the measurement is taken at the manifold for a minimum of 180F, NOT in or at the sprays. If color changing tapes are used to verify temperature, then only 160-165F labels should be used, this is the highest temperature required on the surface of the plates--NOT 180F. This is according to the NSF/ANSI Standard 3 test protocol.

TYPE OF CHEMICALS—Use only commercial grade low-energy or high temp chemicals. For proper operation, use non-foaming detergents and buffered sanitizer. Do not wash gold, pewter, silver, or silver-plate with

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chlorine based sanitizers. High concentrations of chlorine sanitizers and caustic detergents will cause damage to metals and welds. Do not exceed 50 parts-per-million (PPM) “free” or available chlorine, using higher than 50 ppm will be dependent on local health requirements, however, the increased chlorine will result in higher corrosion of metal parts. Purpose-built ware-washing dispensers are needed to properly meter chemicals for wash and rinse. These dispensers are not included with this model but must be installed by the company that provides the ware-washing chemicals. Manually adding industrial chemicals to the dishmachine is unsafe and not approved.

HARD WATER—Water softeners should be used to correct hard water conditions. Treating hard water conditions with highly acidic solutions in the machine is discouraged. Hard water conditions are often treated with more expensive dishmachine chemicals, but it is more effective and less destructive to the metal when the water is softened before it is used by the dishmachine.

CHECK LIST PRIOR TO INITIAL START UP

Open doors and remove all packaging, including cardboard supports under the wash tank heater. Do not dispose of packing material until you remove spray arms and curtains. Packing materials contain the conveyor installation manual, QC check sheets, curtains; upper and lower wash arms, pumped rinse arms, and power scrapper arms for the ADC-66.



Showing wash arm T index for lower arm



Arm resting in “T” index with latch down



Showing pumped rinse manifold locking tab



Rinse arm index notch, latch will drop as arm is pushed in

Install wash and pumped rinse spray arms. Lower wash arm has eight spray tubes and upper wash arm has four. Install each by inserting indexed “T” end into bracket at front of tank, and then push the arm back until the round socket is fully inserted on the wash manifold near the back wall. Position the “T” bracket latch to secure wash arms in place by pulling down. Install power scrapper arms (ADC-66 only) and pumped rinse spray arms. Each arm has a locking tab. Lower arm locking tabs are located on the same side as the spray jets. Upper arm locking tabs are opposite the spray jets side. Insert the tab into the index slot of each manifold socket until socket catch locks in place. Note: make sure that spray jets on the bottom arms spray up, and top arms spray down.



ADC-66 power scrapper, overflow to scrap box



66 power scrapper motor, 1.5 HP, 208v, single-phase

Inspect all dish racks for broken ladders. Dispose of any broken dish racks.

IMPORTANT TABLE INSTRUCTIONS— Allow for one rack (20”) length as a minimum distance between the edge of the pre-rinse sink and the entrance of the machine on the soil dish table. Failure to do this will result in excessive chemical consumption and low machine temperatures. Do not use tables with quick drains or scrap troughs. Observe that the dish table lip does not rub on the conveyor bar; if the lip is longer than $\frac{3}{4}$ ” a notch will have to be made for clearance. Make certain that both dish tables slant into the machine so water will return to the tanks. To avoid service calls and motor damage, bolt clean and soil tables level to the machine’s tank lip and seal. New drill bits and $\frac{1}{4}$ ”-20” bolts are included with each machine.

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TABLE LIMIT SWITCH—Check clean dish table, if it holds less than four (4) dish racks, install an ADS table limit switch (#288-1044). The switch holder attaches to the back side of the table end. The bumper bar will extend through the table and pin to the rocker plate. When racks strike the bar, the switch will break the power connection in the machine's door cut-off switch, which stops all motors.



ADS table limit, and table bumper bar (#288-1044)

Tighten all wire connections looking for those that loosened during shipping or moving. Turn on the water supply. Check and correct any leaks throughout the machine. Verify incoming water temperatures and final rinse pressure (20 psi during spraying). Remove any of the white protective film from stainless surfaces such as doors or panels.

DISHMACHINE OPERATIONAL TESTS



WARNING

BURN HAZARD FROM HOT WATER. Do not open doors while machine is in cycle. Doing so could result in serious bodily injury from spraying hot water and chemicals.

To operate, turn on the breaker for main power and turn the dishmachine master switch to the "ON" position.



Showing “float” switch that controls fill water & heater



Diverter plate separates fill stream for wash and rinse tank

FILLING THE MACHINE— When the machine is first turned on, water will automatically fill to an initial working level. During operation the water level will normally increase with each rack until water begins to exit the overflow into the scrap box. Open the access door and verify that the filling water is adjusted so the wash tank fills first and rinse tank fills last. For the ADC-66 the wash tank must overflow to fill the power scrapper tank. The last tank to fill should be the pumped rinse tank. If the fill sequence does not follow this order, adjust the diverter plate inside the hood, it is located upward near the water inlet (see photo above). Slotted holes allow the diverter plate to move side to side adjusting the flow to the rinse tank. The water stream going into the pumped rinse tank should be about the diameter of a pencil. It is normal for the machine to add more water when the pump turns on if the level has not yet reached the overflow.



Rinse tank float, pump filter, pumped rinse manifold



Wash tank float and tank overflow

“FLOAT” AND SWITCH—the float will not actually float. It is heavier than water but it weighs less in water than in air. This difference allows the return spring in the float switch to push out against the lever, which raises the float in the water. In air the float’s weight will overcome the switch’s spring tension and drop down. The float switch (#291-3014) is specifically made with this spring tension so the water control system will operate correctly. Do not replace with a timer switch even though they look similar.



Travel through conveyor tray rails, center pull bar w/dogs



Damaged and broken rack that will jam or skip conveyor

TEST DISH RACK CONVEYOR MOVEMENT by placing a rack into the soil side opening until it catches on a conveyor dog. The rack should enter and exit smoothly without jamming. The dishmachine tray track will not adjust up or down, it is fixed. Tables must sit on the tank lip. Verify that tables are bolted to the machine, and once bolted, sealed with silicone caulking at all four corners and under the lip. Check that all varieties and brands of dishrack can fit between the dishmachine's tray track rails without binding. If binding occurs, adjust the REAR tray track at all (3) anchor points until the rack binding is eliminated. You must adjust evenly at all three points to maintain proper alignment. Never adjust the front tray track, they contain switching alignments.



Conveyor cam blocks A & B



Rocker arm slip clutch spring, hook to bar weldment



Cam bearing screws into cam block B



Rocker arm attached to conveyor bar, drip chute



WARNING

Keep away from conveyor rocker arm movement to avoid severe bodily injury from pinch or crush danger

THE FRONT TRAY TRACK has sequence bars that turn on the pumps at each station of the dishmachine's operation. There is a sequence bar for the power scrapper (on the ADC-66 only), wash, and final rinse sections. To confirm proper operation, push a dishrack into the soil side opening and see that it is conveyed through each section without binding or stoppages.

POWER SCRAPPER (ADC-66 only) – Run one dishrack through the machine. Following initial fill, if there is an air lock in the scrapper pump, this is normal. The pump will equalize after being operated once. The power scrapper pump motor is the standard ADS single-phase 1.5HP motor wired for 208v instead of 115v. Make certain replacement motors are first wired for high voltage (see diagram on motor).

WASH SECTION – Verify that the wash sequence bar starts the wash pump when the dishrack contacts the bar, and the pump stops when the dishrack moves out of that section of the dishmachine.

FINAL RINSE SECTION – The last sequence bar will control the final rinse and pumped rinse. The pumped rinse, which is called the water curtain, should begin when a dishrack contacts the bar. This is a low pressure spray and the lower spray should only rise 4-6" from the arm. After a six second delay, the final rinse will begin to spray. All functions should stop when the dishrack exits the machine unless there is another rack still inside.



Sequence reed switch for wash tank



Wash tank sequence bar, pendulum with magnet

SEQUENCE BAR MAGNETS— The magnets located on the pendulum sequence bars inside the tank activate the reed switches, which are manufactured in the normally closed position (always on). The reed switch is mounted to the outside of the tank and turns off when a magnet comes within ½” of the switch. To test, hold a strong hand-held magnet next to the reed switch. If the magnet turns off the reed switch but the sequence bar magnet does not, adjust the sequence bar magnet for that section. The sequence bar magnet should be within a 1/8” of the bottom of the tank when it is at rest (hanging down at the 6:00 position).

TANK TEMPERATURE—The wash and pumped rinse tank temperatures are maintained by sustainer heaters. Record tank temperatures during the initial tests. There are three (3) gauges mounted under the control box. Gauges are marked Wash/Rinse/Final Rinse. Wash tank temperature should be 140F-degrees for chemical sanitizing and 150F-degrees for hot water sanitizing in multi-tank conveyors. The pumped rinse tank temperature should be 120F-degrees for chemical and 160F-degrees for hot water sanitizing. If tank temperatures are low, increase by adjusting the heater thermostats located behind the front panels.



Wash tank thermostat, rotate center rod Left to increase



T-stat signal goes to term #6 on heater relay under contactor

THERMOSTATS—There are two thermostats, one for each tank. Increase temp by turning center rod of the thermostat counter clock-wise or turn to the left. Adjust thermostats in small increments (1/4 turn). Heaters are switched off when water levels are low and the fill has been activated. Final rinse temperatures are 120F

for chemical sanitizers, and 180F for hot water sanitizing. To increase the final rinse temperatures turn up the thermostat on the booster heater or water heater respectively. Do not set a booster heater above 195F.

INSTALL CURTAINS— There are two short and two long curtains. Longer curtains are mounted at each end of the dishmachine. Curtains are there to keep heat in the water.



Vent attachments to end shield, 4" x 16" opening



200 to 400 CFM draw per side

VENTING— If exhaust vents (pant-leg vents) are attached to the dishmachine, do not exceed 400 CFM per individual pant leg. ADS does not specify building HVAC values and only offers this limit as a point of reference.

Showing repair of loose end cap when tab on the cap has been forced close or bent on material such as seeds or tooth picks.



Tab on endcap bent inward, causing loose fit



Straighten tab in line with the coin edge to tighten latch



Conveyor drive, cam blocks, bearing, clutch springs (use caution)



Conveyor motor control relays

APPENDIX

089-9342---44" Conveyor Parts Manual
 089-9421---44" Spec sheet
 089-9346---44" Service Manual
 089-9437---44" Brochure
 089-9365---44" & 66" Conveyor Wall Chart
 089-9454---44" Wire diagram
 089-9388---Installation Manual ADC-44/ADC-66 3 Phase
 089-9343---66" Conveyor Parts Manual
 089-9423---66" Spec Sheet
 089-3408---66" Service Manual
 089-9439---66" Brochure
 089-9456---66" Wire Diagram

ADC-44 Conveyor

Voltage	Phase	Full Load Amps
208v	3	50a
240v	3	52a

ADC-66 Conveyor

Voltage	Phase	Full Load Amps
208v	3	68.8
240v	3	76.6

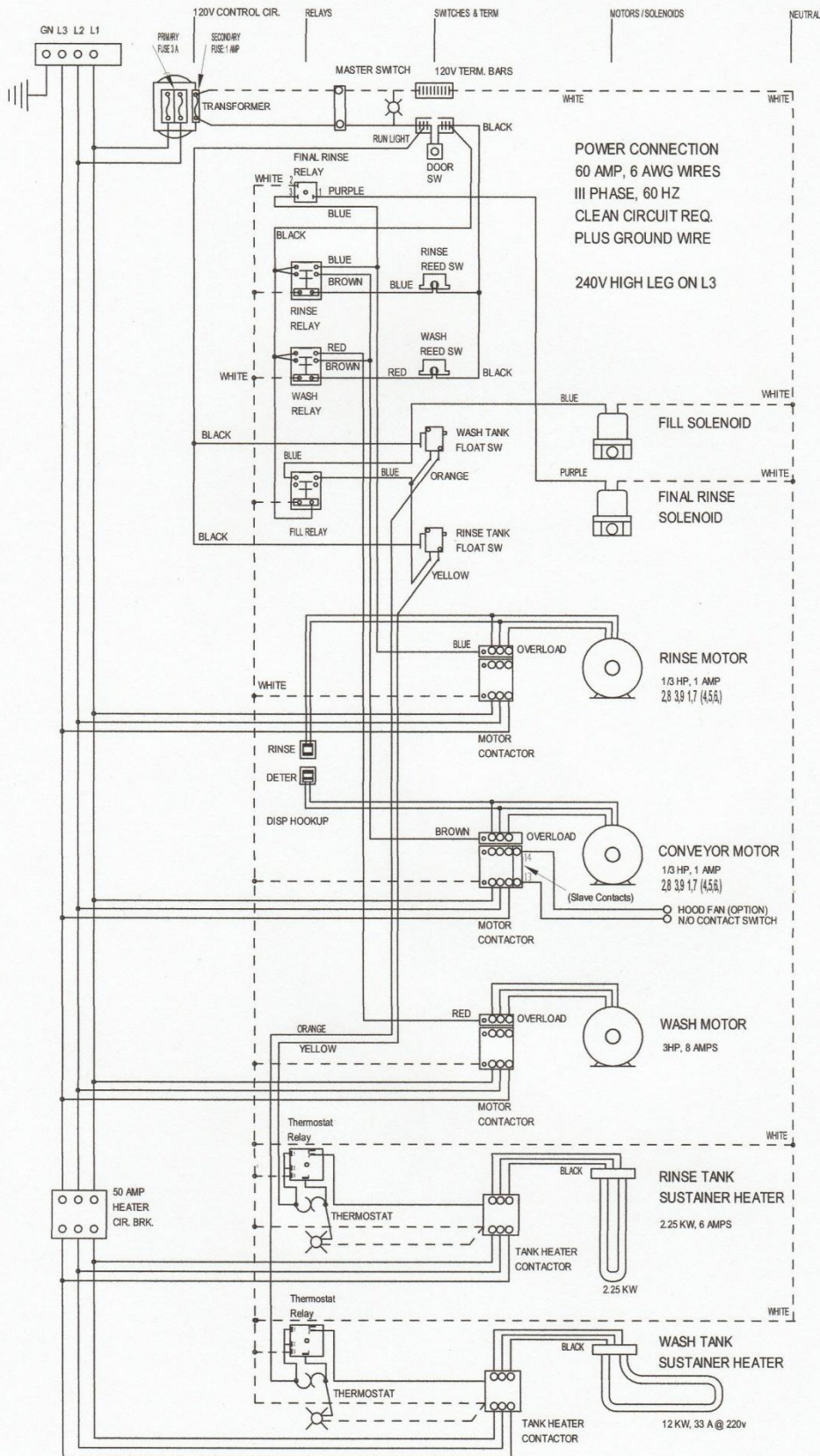
Heaters are voltage specific, meaning voltage makes a difference in the wattage output of the heater. The following chart will list the wattage (kW) output for various available 3-phase voltages. Also listed are the ADS tank heaters available to match those voltages.

Heater Rated	Supplied Volts	Actual Output	Amp Draw	Phase
12kW 208v * (291-9009)	200 volts	11.1 kW	32.0a	3-ph
	208 volts	12.0 kW	33.4a	3-ph
	220 volts	13.42 kW	35.3a	3-ph
	240 volts	15.9 kW	38.4a	3-ph
12kW 220v (291-9001)	200 volts	9.9 kW	28.6a	3-ph
	208 volts	10.7 kW	29.7a	3-ph
	220 volts	12.0 kW	33.4a	3-ph
	240 volts	14.3 kW	34.4a	3-ph
14kW 208v (291-9008)	200 volts	12.9 kW	37.4a	3-ph
	208 volts	14.0 kW	38.9a	3-ph
	220 volts	15.66 kW	41.1a	3-ph
	240 volts	18.6 kW	44.8a	3-ph
18kW 220v ** (291-9007)	200 volts	14.8kW	42.9a	3-ph
	208 volts	16.1kW	44.7a	3-ph
	220 volts	18.0kW	47.3a	3-ph
	240 volts	21.4kW	51.5a	3-ph
8kW 208v (391-9001)	200 volts	7.4 kW	21.4a	3-ph
	208 volts	8.0 kW	22.2a	3-ph
	220 volts	8.9 kW	23.4a	3-ph
	240 volts	10.6 kW	25.5a	3-ph
2.25kW 208v (291-9003)	200 volts	2.079 kW	6.0a	3-ph
	208 volts	2.250 kW	6.2a	3-ph
	220 volts	2.515 kW	6.6a	3-ph
	240 volts	2.993 kW	7.2 a	3-ph

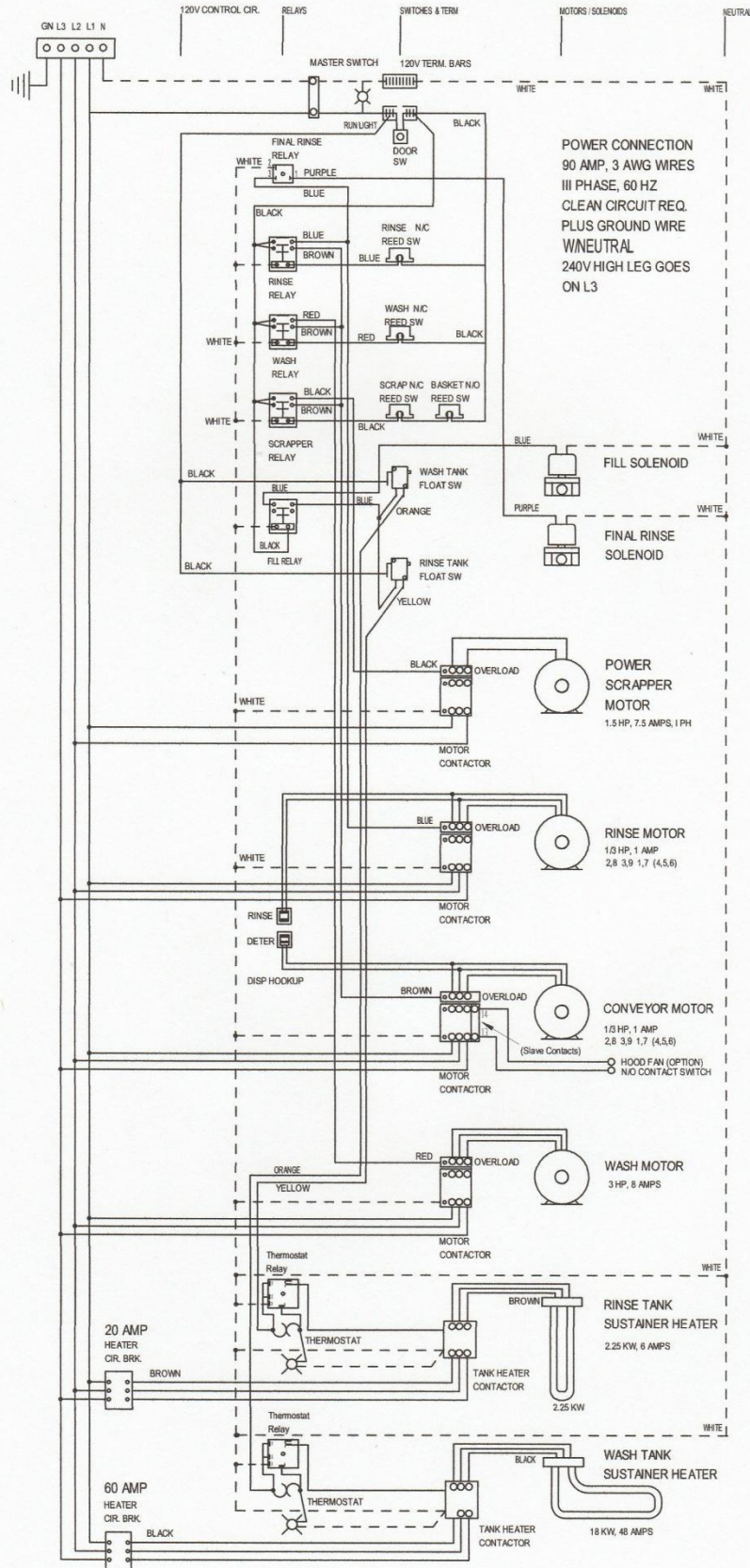
*Normal tank heater ADC-44, 3-phase is 208v, 12kW,
--240v, 12kW is special order

**Normal tank heater for ADC-66

ADC-44 Conveyor for 3-phase, 208-240v power



ADC-66 Conveyor for 3-phase, 208-240v power



WARNING!

This product is manufactured solely for **commercial** use. It is not to be used in residential installations of any kind. Doing so will immediately void all warranties. American Dish Service assumes no liability for such unintended uses.

FOR PARTS & SERVICE MANUALS

GO TO

www.americandish.com

- _____ c. Pressure test: Washpump 6 psi lower, 9 psi upper
Rinsepump 2-3 psi all
Final rinse 20 psi (adjust at pressure reg.)
Power-scrapper (66) 6psi lower, 9 psi upper
- _____ d. Check for leaks with machine running
- _____ e. Overloads will operate in test mode
- _____ 14. Control box cover fits square and straight
 - _____ a. Door will latch open and slide closed easily
 - _____ b. Front skirts of machine: straight and fit interchangeably
- _____ 15. No leaks from inlet plumbing or drain manifold
 - _____ a. **Calibrate thermometers with thermocouple tester**
- _____ 16. Water control Weights are free moving, no contact with retaining bracket
 - _____ a. Micro switch mounted flush to flipper lever
 - _____ b. Micro switch tested and marked: 6.5 oz
 - _____ c. Weights: 238 grams test
 - _____ d. Water cut off level is 3/8" from weight's top
 - _____ e. Weight's retaining bracket is installed and tightened
(no contact to weight)
- _____ 17. Name plate with correct serial number
- _____ 18. Decals: electrical source, NSF data plate, wire diagram, temperatures, controls, safety, rotation, labels in control box. (all decals put on straight)
- _____ 19. General appearance and cleanliness (free of scratches or marks)
- _____ 20. **CHECK ALL WIRE CONNECTIONS:** clean and tight, no crimps on insulation
- _____ 21. Check door cut off switch adjustment
- _____ 22. End caps welded correctly
 - _____ a. 4-point welds on casting
 - _____ b. All pins flash welded on one side only
- _____ 23. Pumped rinse arm sockets clearance at spray arm
 - _____ a. Pumped rinse jets welded full across bottom of fin
 - _____ b. Locking latch on pumped rinse manifold welded full on pivot pin
 - _____ c. Alignment pin on pumped rinse spray arm welded secure
 - _____ d. Spray pattern must be from (straight up and down) at 12:00 to 6:00
no sprays into wash area
- _____ 24. Final rinse arms alignment sprays straight up and straight down, fan pattern
- _____ 25. High Potential test: 1700 volts @ 60 seconds

Notes:

Make sure door moves up and down smoothly and latches at the top

Rinse jets are set to correct fan pattern, End caps close and open securely

MODEL: _____

MACHINE SERIAL NUMBER: _____

INSPECTORS NAME: _____ DATE: _____

3/6/2020

PRODUCTION FINAL INSPECTION

AMERICAN DISH SERVICE

MODEL: ADC-44/ -66

- _____ 1. Connect power source, leave heaters and motors off
- _____ 2. Attach tables
- _____ 3. Fill both tanks by turning on master switch
- _____ 4. Check rack travel (no binding or jumping)
 - _____ a. Travel time: from table lip to table lip, ref. point is rear side of rack (29 sec)
 - _____ b. Final rinse: clear jets, check for leaks at manifold
- _____ 5. Sequence switch movement (free moving, 1/16" clearance at bolts)
 - _____ a. Check binding on tray rail
 - _____ b. No contact with tank bottom, use gauge for magnets (1/16")
 - _____ c. Lock down tube lock nut
 - _____ d. Check for complete shut down after last rack exits machine (end dogs)
- _____ 6. Check all studs (should not deform metal by drawing down on torque)
- _____ 7. Slip Clutch, lateral movement should not exceed 1/8"
 - _____ a. Strap should not be bent or warped.
 - _____ b. Check for broken/bent spring or spring ears
 - _____ c. Alignment of holes for straps
 - _____ d. No contact of Drip Chute by Rocker Arm
 - _____ e. No contact of tank or frame by Rocker Arm
 - _____ f. Alignment of rocker arm to center of travel
 - _____ g. Tighten (1/2" bolt) drive bar and rocker arm bolt 20 ft/lb then back off one 1/4" turn
- _____ 8. Check door for leaking when wash pump is operated, adjust angle of jets
- _____ 9. Easy movement of spray arm as they are installed or removed for cleaning
- _____ 10. Scrap trays fit without binding or gaps over .25"
- _____ 11. Dogs move without sticking (no sides rubbing on drive bar)

_____ 12. Turn on heater circuit breaker

_____ a. Check amp draw on each leg:	12kW wash 31.6a—34.9a, 208v, 3PH
	12kW wash 27.5a—30.3a, 240v, 3PH
_____ Amps wash	11.5kW wash 45.5a—50.2a, 240v, 1PH
_____ Amps rinse	2.25kW rinse 5.8a—6.5a, 208v, 3PH
	2.25kW rinse 5.1a—5.6a, 240v, 3PH
	2.25kW rinse 10.2a—11.3a, 208v, 1PH
	2.25kW rinse 8.9a—9.8a, 240v, 1PH
_____ Amps wash (66)	17 kW, wash 44.8a—49.5a, 208v, 3PH
	18 kW, wash 40.8a—45.1a, 240v, 3PH

Amp draw can vary 10% of rated draw at rated voltage, current imbalance of 5% is acceptable

- _____ b. Adjust thermostats to 120F rinse, 140F wash for Chemical Sanitizing
160F rinse, 150F wash for Hot Temp

_____ 13. Connect motors on contactor test window and operate (pin motor, set screws bottomed)

- _____ a. Check rotation
- _____ b. Check for seal leaks
- _____ Amps wash Wash 3hp mtr, 8.5a—9.4a (208v 3PH), 13.3a—14.7a, (208v 1PH)]
- _____ Amps rinse Rinse or conveyor mtr, 0.47a—1.0a (208v 3PH), 0.95a—2.5a, (208v 1PH)
- _____ Amps Power-scrapper 1.5hp mtr (66), 7.12a—8.0a, 208-240v Wired I-PH