



TECHNICAL MANUAL
For
Quad Jet Aqua-Scrubber

Installation, Operation, and Maintenance Instructions

Insinger Machine Company
6245 State Road
Philadelphia, PA 19135-2996

800.344.4802

Fax 215.624.6966

www.insingermachine.com



Thank you for purchasing this quality Insinger product.

On the space provided below please record the model, serial number and start-up date of this unit:

Model: _____

Serial Number: _____

Start-Up Date: _____

When referring to this equipment please have this information available.

Each piece of equipment at Insinger is carefully tested before shipment for proper operation. If the need for service should arise please contact your local Authorized Insinger Service Company.

A Service Network Listing is provided on our web site, www.insingermachine.com or call Insinger at 800-344-4802 for your local authorized servicer.

For proper activation of the *Insinger Limited Warranty* a SureFire™ Start-Up & Check-Out Service should be completed on your machine. Refer to the Introduction section in this manual for an explanation of Insinger SureFire™ Start-Up & Check-Out Program.

Please read the Insinger Limited Warranty and all installation and operation instructions carefully before attempting to install or operate your new Insinger product.

To register your machine for warranty by phone, fax or the internet or for answers to question concerning installation, operation, or service contact our Technical Services Department:

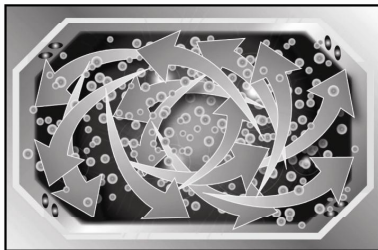
<i>TECHNICAL SERVICE CONTACTS</i>	
Toll-Free	800-344-4802
Fax	215-624-6966
E-mail	service@insingermachine.com
Web	www.insingermachine.com

TABLE OF CONTENTS

<i>Part 1</i> <i>Technical Information</i>	3-15
• Introduction	
• Catalog Cut-sheet	
• Warranty	
<i>Part 2</i> <i>Installation and Operating Instructions</i>	13-15
• Installation Drawing	
• Operation and Cleaning Instructions	
<i>Part 3</i> <i>Maintenance and Repair Procedures</i>	16
• Operation and Cleaning Instructions	
• Maintenance and Repair Procedures	
• Basic Service Guide	
<i>Part 4</i> <i>Electrical Schematics & Replacement Parts</i>	17-26
• Machine Wiring Diagrams	
• Control Panel Layout and Component Drawing	
<i>Part 5</i> <i>Replacement Parts</i>	27-29



QUADJET AQUA-SCRUBBER AUTOMATIC POT & PAN WASHING SYSTEM



The unique whirlpool action from 8 jets, 2 jets in 4 angled corners, get pots and pans cleaner faster.

DESIGN

Patent pending automatic scrub sink reduces labor cost up to 56%. The 8 jets supplied by a powerful 2 HP TEFC pump, and the innovative angled corners, keep the cookware moving in a turbulent whirlpool motion. No corners-no jams! The 4 angled corners have 2 jets in each corner. Custom build a QuadJet Aqua-Scrubber or choose from two pre-engineered systems- the Dash 109 or the Marathon 140.

STANDARD EQUIPMENT

- Patent Pending
- Heavy duty pump with a 2 HP TEFC motor
- Basket style high capacity lever action waste drain
- Easy clean seamless front skirt
- Fast flow mixing faucets
- Single point electrical connection: motor, controls, heater
- Stainless steel utensil basket
- Dual water temperature settings- 110 low/130 high
- 2.5 kw heater with low water protection and dual temperature control
- Welded support legs with s/s feet
- 300 series stainless steel
- NEMA 4X control panel enclosure

OPTIONAL EQUIPMENT

- Undershelf on clean end drain board
- Sink overflows
- 1 to 8 hour pump timer
- Scrap trough in drainboard
- Overshelf with mounting brackets (12" increments, 36" and up)
- End splash
- Disposal and cone (in soiled drainboard, 48" minimum length)
- Hot water sanitizing booster heater
- Scrapper drainboard with pre-rinse faucet
- Shelves- (cantilevered or wall mounted)

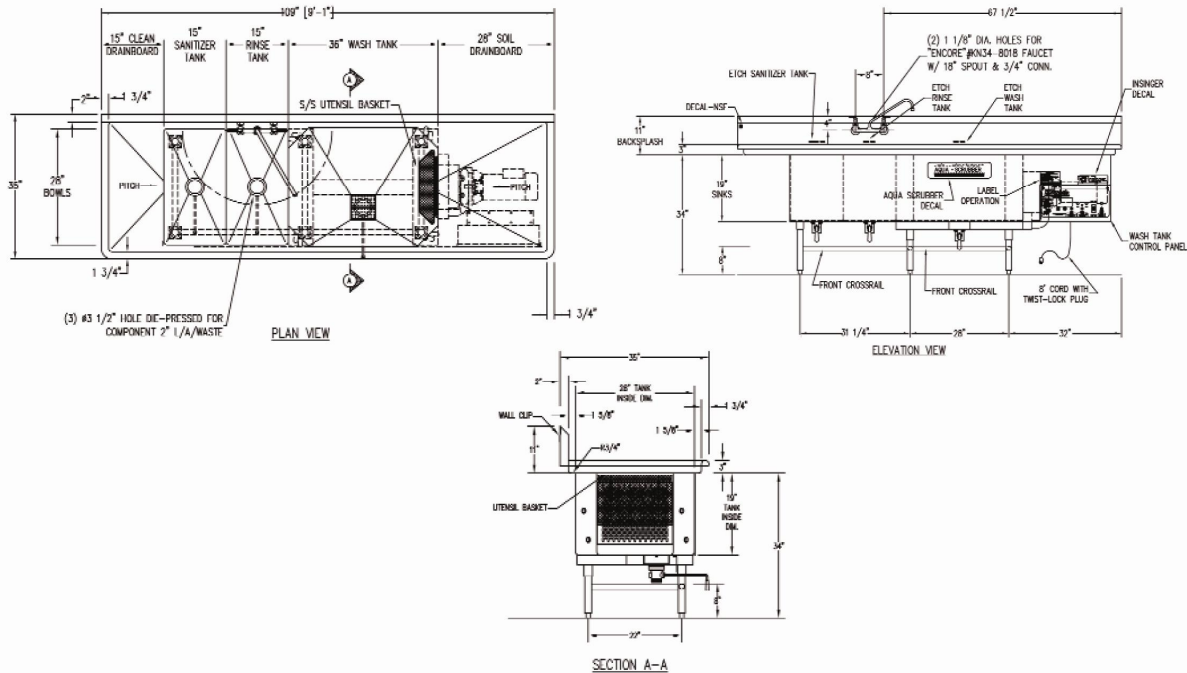


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QuadJet Aqua-Scrubber



Note: For all rough in connections see installation and layout detail drawing

SPECIFICATIONS

CONSTRUCTION- Entire unit constructed of 300 series polished stainless steel.

SINKS AND DRAINBOARDS- Constructed of 14 gauge stainless steel. All interior corners are covered to 3/4" radius. Top is 14 gauge stainless steel all welded with 11" high backsplash and 3" high splash on front and sides with a 1 3/4" rolled edge.

WASH SINK-Consists of side mounted intake manifold and specially designed nozzles strategically placed in corners for maximum scrubbing action. Intake manifold includes hinged access panel to facilitate cleaning of the intake chamber, heater and probes.

PUMP- The pump is heavy duty stainless steel construction with a 4" diameter intake and 3" diameter discharge. The motor is 2 HP totally enclosed, fan cooled with permanently sealed bearings.

SUPPORT- The wash sink is supported by heavy gauge stainless steel channels welded to the underside of the sink. H frame leg assemblies are removable and have stainless steel adjustable bullet feet.

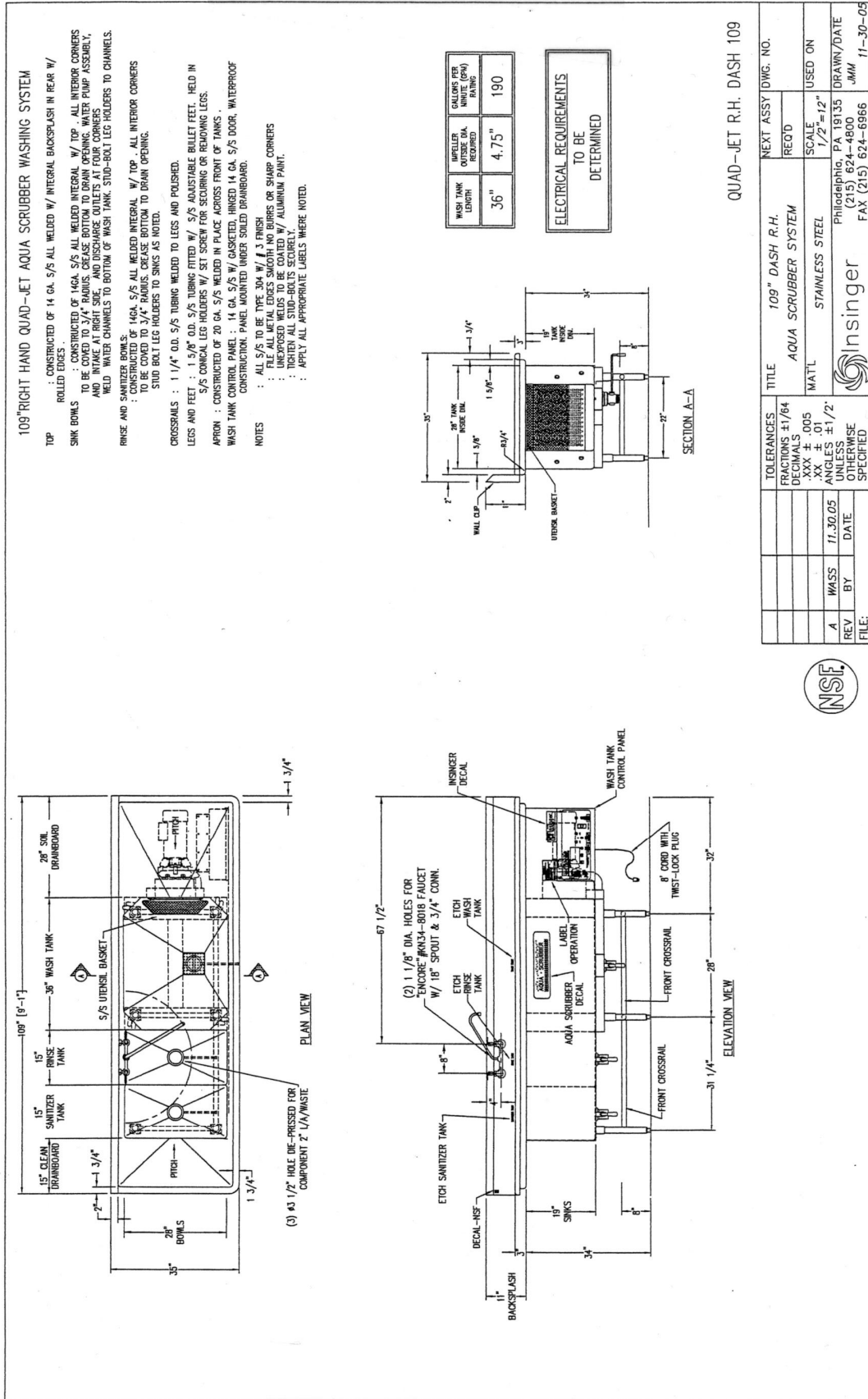
CONTROL PANEL- Control enclosure is made of 300 series stainless steel, completely welded and waterproof (NEMA 4X). On/off power switch, dual water temperature switch (low and high), on/off pump motor switch and reset switch. Heavy duty pump contactor and overload. Heavy duty grounded plug. Controls labeled in English and Spanish.

PRE-ENGINEERED SYSTEMS- The Dash 109 and Marathon 140.

Motor Size	Heater Size	Shipping Weight	Current Draw AMPs	Heater	Pump & Controls	Total
2 HP	2.5 kw	Dash 109 557 lbs. Marathon 140 650 lbs.	208/1PH/60HZ.....	12.0.....	9.6.....	21.6
			220-240/1PH/60HZ.....	10.9.....	8.9.....	19.8
			208/3PH/60HZ.....	6.9.....	5.9.....	12.8
			220-240/3PH/60HZ.....	6.3.....	5.6.....	11.9
			440-480/3PH/60HZ.....	3.1.....	2.8.....	5.9

1 2007 PRINTED IN USA
Information and specifications subject to change without notice.

Available in AutoQuotes and KCL Catalog

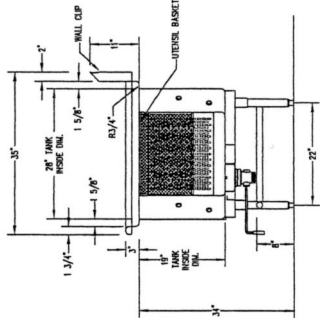
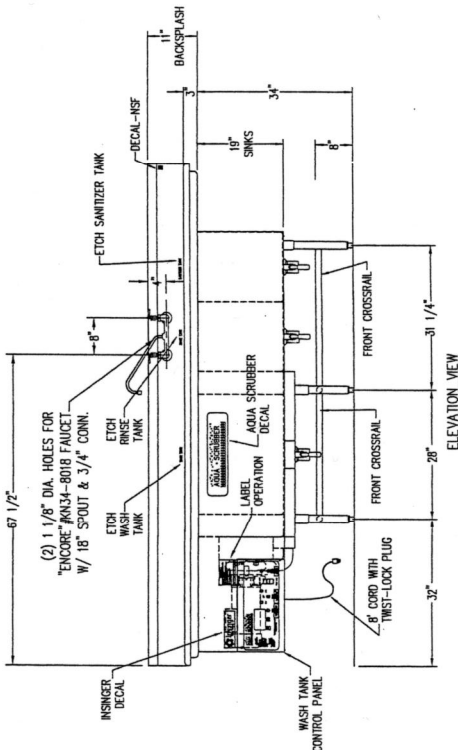
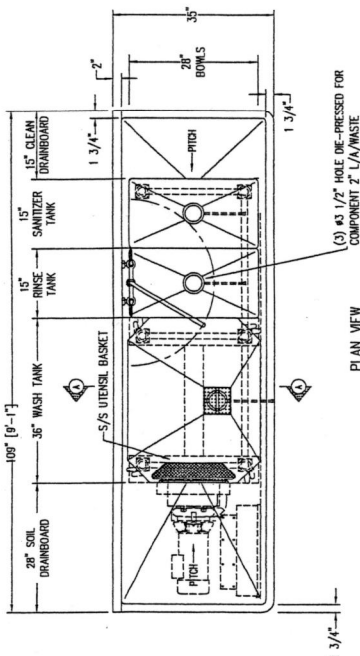


109" LEFT HAND QUAD-JET AQUA SCRUBBER WASHING SYSTEM

- TOP : CONSTRUCTED OF 14 GA. S/S ALL WELDED W/ INTEGRAL BACKSPASH IN REAR W/ ROLLED UNDER
- WASH BOWLS : CONSTRUCTED OF 14GA. S/S ALL WELDED INTEGRAL W/ TOP . ALL INTERIOR CORNERS TO BE COED TO 3/4" RADIUS. GREASE TRAP BOTTOM TO DRAIN OPENING. WATER PUMP ASSEMBLY, AND INTAKE AT LEFT SIDE. AND DISCHARGE OUTLETS AT FOUR CORNERS
- WELD WATER CHANNELS TO BOTTOM OF WASH TANK. STUD-BOLT LEG HOLDERS TO CHANNELS.
- RINSE AND SANITIZER BOWLS : CONSTRUCTED OF 14GA. S/S ALL WELDED INTEGRAL W/ TOP . ALL INTERIOR CORNERS TO BE COED TO 3/4" RADIUS. GREASE TRAP BOTTOM TO DRAIN OPENING. STUD BOLT LEG HOLDERS TO SINKS AS NOTED.
- CROSSRAILS : 1 1/4" O.D. S/S TUBING WELDED TO LEGS AND POLISHED.
- LEGS AND FEET : 1 3/8" O.D. S/S TUBING FITTED W/ S/S ADJUSTABLE BULLET FEET. HELD IN S/S CONICAL LEG HOLDERS W/ SET SCREW FOR SECURING OR REMOVING LEGS.
- APRON : CONSTRUCTED OF 20 GA. S/S W/ GASKETED, HINGED 14 GA. S/S DOOR. WATERPROOF CONSTRUCTION. PANEL MOUNTED UNDER SOILED DRAINBOARD.
- NOTES : ALL S/S TO BE TYPE 304 W/ # 3 FINISH
: FILE ALL METAL EDGES SMOOTH NO BURRS OR SHARP CORNERS
: UNPROPOSED WELDS TO BE COVERED W/ ALUMINUM PAINT.
: ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED.
: APPLY ALL APPROPRIATE LABELS WHERE NOTED.

WASH TANK LENGTH	36"	METALS OUTSIDE DIA. REQUIRED	4.75"	GULLONS PER MINUTE (GPM) RATING	190
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ELECTRICAL REQUIREMENTS TO BE DETERMINED



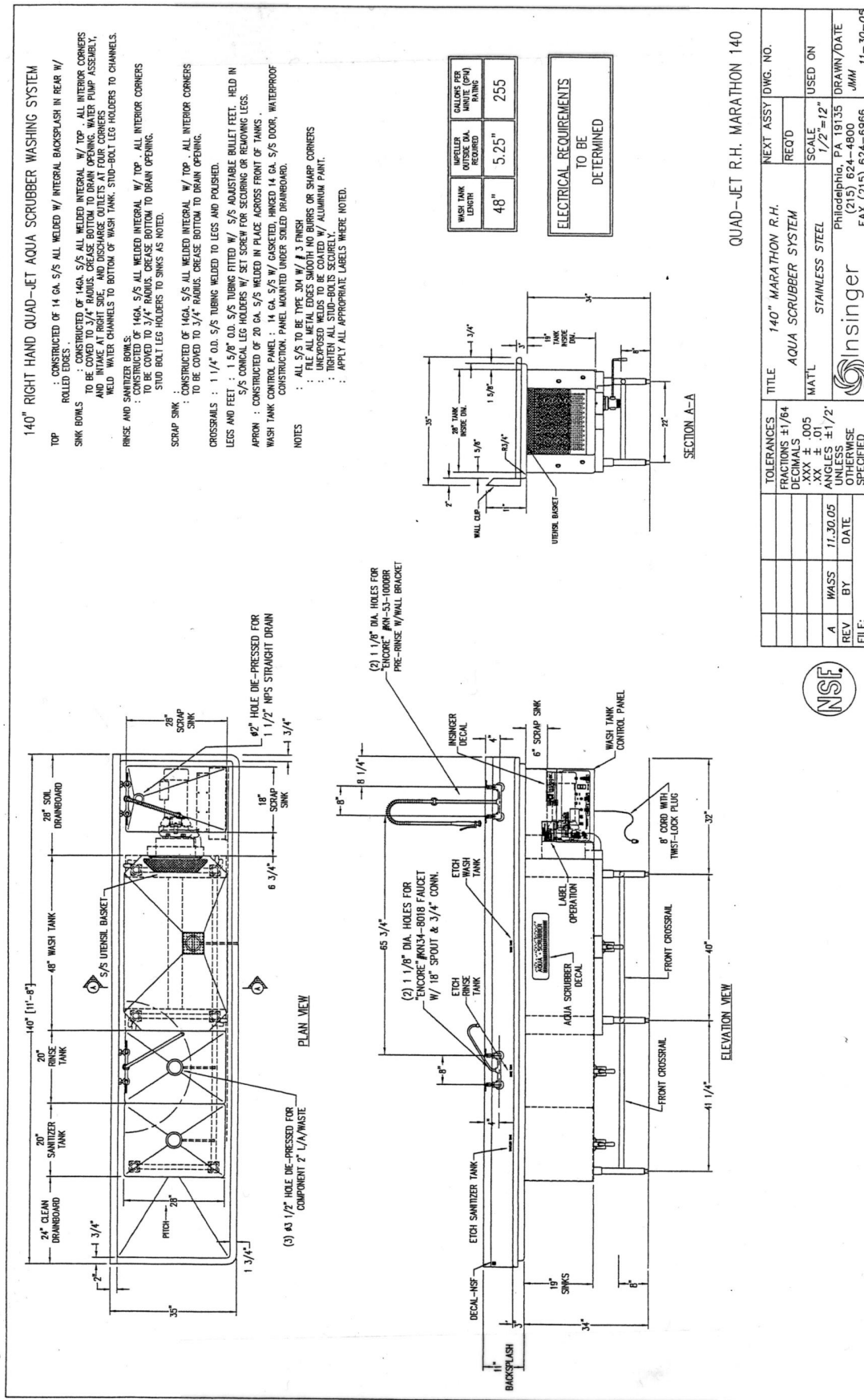
SECTION A-A

QUAD-JET L.H. DASH 109

TOLERANCES	FRACTIONS ±1/64	DECIMALS .005	ANGLES ±1/2°	UNLESS OTHERWISE SPECIFIED
REV.	A	W/ASS	11.30.05	DATE
BY				
FILE:				

TITLE	109" DASH L.H. AQUA SCRUBBER SYSTEM	NEXT ASSY DWG. NO.	
MAT'L	STAINLESS STEEL	SCALE	1/2" = 12"
USED ON		PHILADELPHIA PA 19135	DRAWN/DATE
		(215) 624-4800	JMM 11-30-05
		FAX (215) 624-8966	





QUAD-JET R.H. MARATHON 140

	TOLERANCES	TITLE	NEXT ASSY DWG. NO.
	FRACTIONS ±1/64	140" MARATHON R.H.	
	DECIMALS	AQUA SCRUBBER SYSTEM	REQ'D
	.XXX ± .005	MAT'L	SCALE
	.XX ± .01	STAINLESS STEEL	1/2" = 12"
	ANGLES		USED ON
	OTHERWISE		
	SPECIFIED		
REV BY DATE		Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-6966	
FILE:		DRAWN/DATE JMM 11-30-05	



INSINGER MACHINE COMPANY LIMITED WARRANTY

Insinger Machine Company, Inc. (Insinger) hereby warrants to the original retail purchaser of this Insinger Machine Company, Inc. product, that if it is assembled and operated in accordance with the printed instructions accompanying it, then for a period of either 15 months from the date of shipment from Insinger or 1 year (12 months) from the date of installation, that said Insinger product shall be free from defects in material and workmanship. Whichever one of the two aforesaid limited warranty time periods is the longest shall be the applicable limited warranty coverage time period.

Insinger may require reasonable proof of your date of purchase; therefore, you should retain your copy of invoice or shipping document.

This limited warranty shall be limited to the repair or replacement of parts which prove defective under normal use and service and which on examination shall indicate, to Insinger's satisfaction, they are defective. Any part that is claimed to be defective and covered by this limited warranty must be returned to Insinger, this may be done through an Authorized Service Agency. Furnish serial number of machine with shipment and send to:

*Insinger Machine Company
6245 State Road
Philadelphia, PA 19135-2996*

If Insinger's inspection confirms the defect and the claim, Insinger will repair or replace such part without charge and return it to you freight or postage prepaid.

This limited warranty does not cover any failure or accident, abuse, misuse, alteration, misapplication, improper installation, fire, flood, acts of God or improper maintenance or service, or failure to perform normal and routine maintenance as set out in

the instruction booklet (operating instructions) or for improper operation or failure to follow normal operating instructions (as set out in the instruction booklet). Insinger is not responsible nor liable for any conditions of erosion or corrosion caused by corrosive detergents, acids, lye or other chemicals used in the washing and or cleaning process.

Service must be done by either Insinger Appointed Service Agencies or agencies receiving prior authorization from Insinger.

All warranty work must be done during normal working hours, unless purchaser receives prior authorization from Insinger.

There are no other express warrants except as set forth herein and any applicable implied warranties of merchantability and fitness are limited in duration to the period of coverage of this express written limited warranty. This limited warranty supersedes all other express warranties, implied warranties of merchant-ability and fitness or limited warranties as of this date, January 1, 1998. Some states do not allow limitation on how long an implied warranty lasts so this limitation may not apply to you.

Insinger is not liable for any special, indirect or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation nor exclusion may not apply to you.

Insinger does not authorize any person or company to assume for it any other obligation or liability in connection with the sale, installation, use, removal, return or replacement of its equipment: and no such representations are binding on Insinger.

INSINGER MACHINE COMPANY LIMITED WARRANTY COMMERCIAL MARINE USE

Insinger Machine Company, Inc. (Insinger) hereby warrants to the original retail purchaser of this Insinger Machine Company, Inc. product, that if it is assembled and operated in accordance with the printed instructions accompanying it (installation manual), then for a period of 18 months from the date of installation on board the vessel, that said Insinger product shall be free from defects in material and workmanship.

Insinger may require reasonable proof of your date of equipment install, therefore, you should retain your copy of invoice or shipping document.

This limited warranty shall be limited to the replacement of parts which prove defective under normal use and service and which on examination shall indicate, to Insinger's satisfaction, they are defective. Any part that is claimed to be defective and covered by this limited warranty must be returned to Insinger. Furnish serial number of machine with shipment and send to:

*Insinger Machine Company, Inc.
6245 State Road
Philadelphia, PA 19135-2996*

If Insinger's inspection confirms the defect and the claim, Insinger will repair or replace such part without charge and return it to you freight or post-age prepaid. If part damages are not covered, Insinger will contact the customer and advise.

If a factory trained authorized technician is required to repair or replace defective parts or material during the 18 month warranty period, the cruise line will be responsible for the payment of travel expense and a minimum of four hours labor.

Labor will be billed to the customer at a reduced rate of \$40.00 per hour. If sailing with a vessel is required, then an eight hour per day minimum will apply.

This limited warranty does not cover accident, abuse, misuse, alteration, misapplication, improper installation, fire, flood, or improper maintenance or service, or failure to perform normal and routine maintenance as set out in the instruction booklet (operating instructions) or for improper operation or failure to follow normal operating instructions (as set out in the instruction booklet).

Insinger is not responsible nor liable for any conditions of erosion or corrosion caused by corrosive detergents, acids, lye or other chemicals used in the washing, caring and or cleaning process.

Warranty service must be done by either Insinger Appointed Service Agencies or agencies, customers galley engineers receiving prior authorization from Insinger.

There are no other express warrants except as set forth herein and any applicable implied warranties of merchantability and fitness are limited in duration to the period of coverage of this express written limited warranty. This limited warranty supersedes all other express warranties, implied warranties of merchantability and fitness or limited warranties as the above date.

Insinger does not authorize any person or company locally or overseas to assume for it any other obligation or liability in connection with the sale, installation, use, removal, return or replacement of its equipment; and no such representations are binding on Insinger.

QuadJet Aqua-Scrubber

INTRODUCTION

Purpose

The purpose of this technical manual is to provide installation, operation, cleaning and maintenance directions.

A section is provided for replacement parts.

Scope

This manual contains all pertinent information to assist in the proper installation, operation, cleaning, maintenance, and parts ordering for the QuadJet Aqua-Scrubber Warewashing System.

The **installation instructions** are intended for qualified equipment installers. The **operation and cleaning instructions** are intended for the daily users of the equipment. The **maintenance and parts sections** are intended for qualified service and/or maintenance technicians. Replacement parts may be ordered directly from our factory or from your local Insinger Authorized Service Agency. You can speak to the **Insinger Technical Services Department, 800/344-4802**, or e-mail us at **service@insingermachine.com**. When calling for warranty information or replacement parts please provide the model and serial number of your Insinger Equipment. These important numbers should be noted in this manual on the spaces provided on the opening page.

Surefire™ Start-up & Check-out Program
Insinger is proud to offer our exclusive Surefire™ Start-up & Check-out Program to our commercial customers. This service is included in the purchase price of your new Insinger dishwasher. We will provide an authorized factory service technician for the initial start-up of your new Insinger dishwasher to ensure it is running at optimum levels from the very first pass. Please call the factory or your local Insinger Sales Representative to schedule this service.

NSF 3-2003 requirements for detergent and chemical sanitizer dispensers.

This machine must be operated with an automatic detergent dispenser 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 instructions for electrical and plumbing connections located in this manual and in the feeder equipment manual.

Definitions

Throughout this guide you will find the following terms: WARNING, CAUTION, & NOTE.

WARNING indicates potential physical danger.
CAUTION indicates potential equipment damage.
NOTE indicates helpful operating hints or tips.

You will visually be able to identify each as shown below:



WARNING:
Indicates potential physical danger.



NOTE:
Indicates helpful operating hints or tips.

CAUTION:

Indicates potential equipment damage.

QuadJet Aqua-Scrubber

Safety Summary

The following are general safety precautions that are not related to any specific procedures. These are recommended precautions that personnel must understand and apply during many phases of operation and maintenance.

Keep Away From Live Circuits

Operating personnel must at all times observe all safety regulations. Do not replace components or make adjustments inside the equipment with the high voltage supply turned on. Under certain conditions, dangerous potentials may exist when the power control is in the off position. To avoid casualties, always remove power, red tag machine and ground a circuit before touching it.

Do Not Service or Adjust Alone

Under no circumstances should any person reach into or enter the enclosure for the purpose of servicing or adjusting the equipment except in the presence of someone who is capable of rendering aid.

Resuscitation

Personnel working with or near high voltages should be familiar with modern methods of resuscitation. Such information may be obtained from the Bureau of Medicine and Surgery.

INSTALLATION INSTRUCTIONS

Aqua-Scrubber

Placement

Carefully uncrate machine. Take caution not to damage components which may be mounted on the top or sides of the machine. Set unit in place and adjust the bullet feet to level the machine. Turning the bullet foot clockwise will lower the unit. Turning the bullet foot counter-clockwise will raise the unit.

Electrical Connections

Connect electrical lines sized for the correct voltage, current and phase of the machine. These should agree with the machine requirements indicated on the nameplate and labels on the control panel.

A single-point electrical connection is provided for the pumps, control circuit, and wash tank heater.

CAUTION:

Connections must be made to a circuit breaker or fused disconnect as provided by the end-user and required by local codes. A laminated wiring diagram is inside the control panel.

Fuse Sizing Chart

Model	208-240VAC/10
Aqua-Scrubber	30A

Mechanical/Plumbing Connections

Connect hot (140°F) water line and cold water line to the provided faucet. Both are 3/4" connections.

Connect the drain line (1 1/2").

CAUTION:

Drain lines must be as specified on installation drawing.

Drain line must be properly vented and have fall of not less than 1/4" to the foot of proper flow. Some area plumbing codes require drains to flow into an open gap with an opening twice the diameter of the pipe.

Check with your local plumbing codes for the type of drain connection required.

CAUTION:

All lines must be flushed prior to use to remove debris.

CAUTION:

Do not reduce the size of lines as specified in installation drawings. All lines are sized to facilitate necessary flows, pressures, etc.

For best washing results, use only Insinger Aqua Wash detergent in the wash tank. Three pre-packaged pouches have been provided with your new Aqua Scrubber Warewashing System.

Open the Aqua Wash detergent pouch and dump into the wash tank. One packet will last 2-4 hours, depending on the soil load.

p

NOTE:

Contact Insinger for our exclusive AQUA WASH prepackaged detergent for use in your Aqua Scrubber Warewashing System. Toll-free, 800.344.4802 or on the internet, parts@insingermachine.com

Use any approved chlorine or iodine based food-grade sanitizer in the sanitizing basin. Dilute to manufacturers specifications. Consult your local chemical supplier.

The unit should be regularly de-limed to avoid excessive limescale build-up in the tank and on components. Any approved limescale removal chemical

Operation & Cleaning Instructions

Aqua-Scrubber

Follow these operation procedures and general cleaning procedures to ensure your Insinger ware-washer will give you years to trouble free service.

Operation Instructions

Close the tank drain valve

All water lines must be open. All electrical circuits must be on.

Fill the tank(s) by opening the faucet. Each tank has a "Tank Fill" indication on the back wall. Fill to this level. The tank should be filled with HOT water.

On the control panel, move the power toggle switch to the "ON" position. The power light will illuminate.

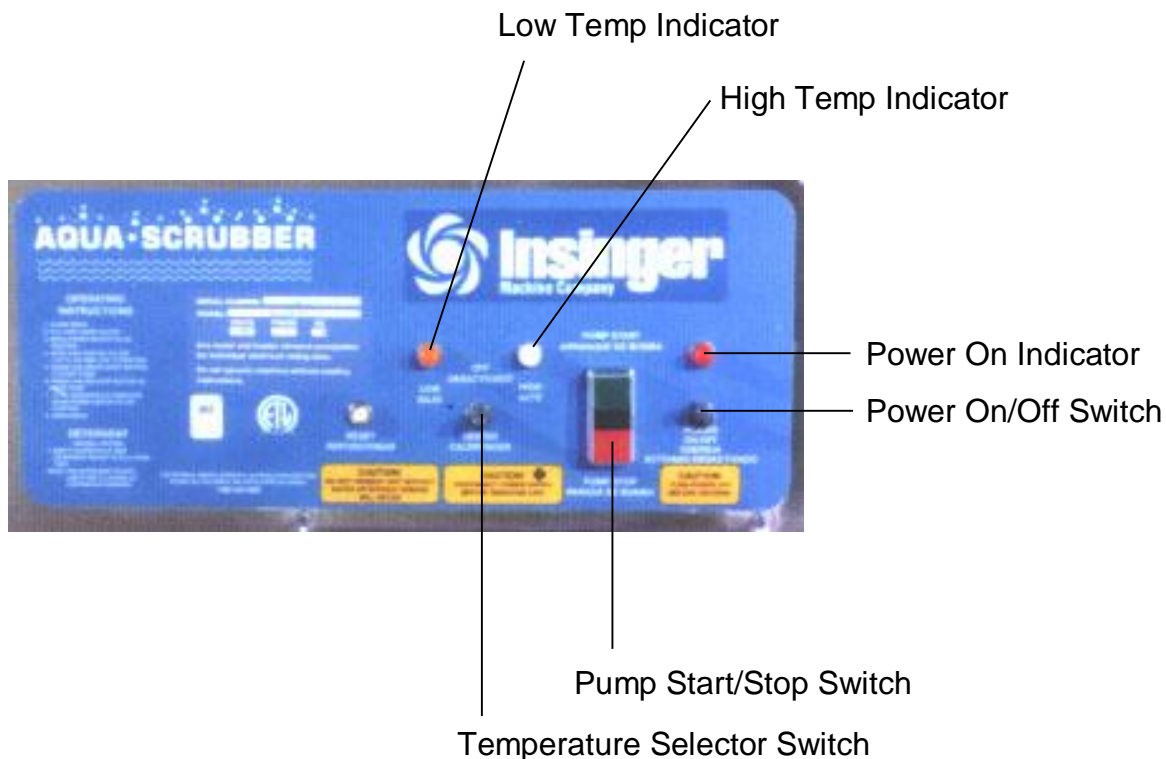
The Aqua Scrubber has two heat levels, high and low, controlled by the TEMPERATURE SELECTOR switch. Move the TEMPERATURE SELECTOR switch to the desired temperature. The appropriate indicator light will illuminate indicating that the tank is heating.

- Low Temperature is factory set to approximately 110°F
- High Temperature is factory set to approximately 140°F



WARNING:

Scalding occurs at 113°F. Do not remove ware from the Aqua-Scrubber with bare hands. Use a tool to aid in ware removal.



Operation & Cleaning Instructions
Aqua-Scrubber

Operation Instructions (continued)

Place soiled ware into the Aqua-Scrubber wash tank.

Press the green pump start button to start the wash pump. Press the red pump stop button to stop the wash pump.

p *NOTE:*
Overloading the wash tank will minimize the proper cleaning of ware.

Clean tank level probe (located under hinged pump scrap strainer).

When ware is clean, dip it into the rinse tank for rinsing and into the sanitizing tank for sanitizing.

Upon completion of ware cleaning move the power toggle switch to the "OFF" position.

Open the drains to allow the tanks to drain.

Refer to the cleaning procedures for proper clean-up of the Aqua-Scrubber.

Report any unusual occurrences to qualified service personnel.

The following cleaning procedures should be done daily, at the end of the shift.

Cleaning procedures, daily:

Clean the hinged pump scrap strainer.

Flush the insides of each tank.

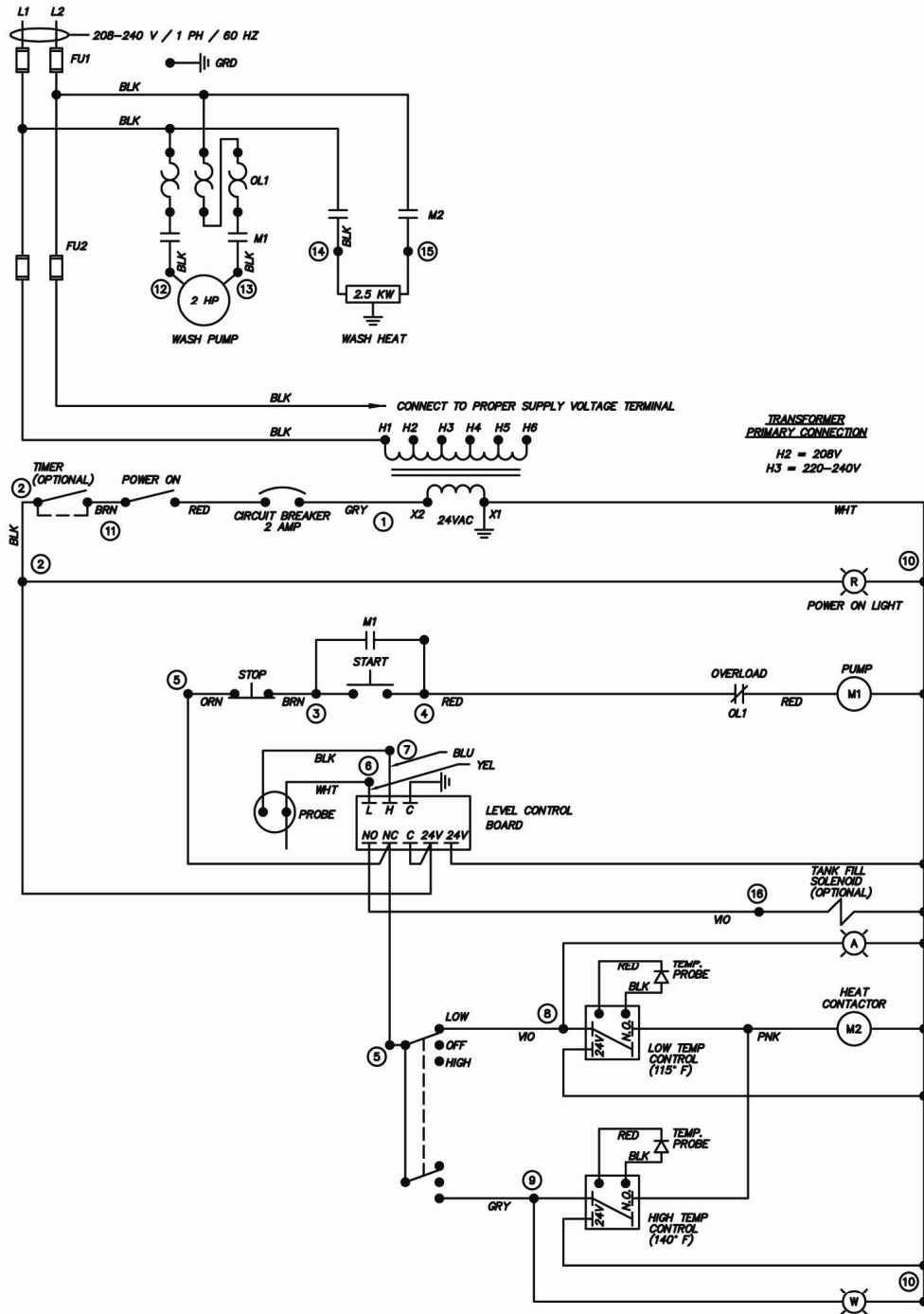
p *NOTE:*
Improper cleaning of pump scrap strainers will cause the pumps to cavitate. This will cause poor washing results.

CAUTION:

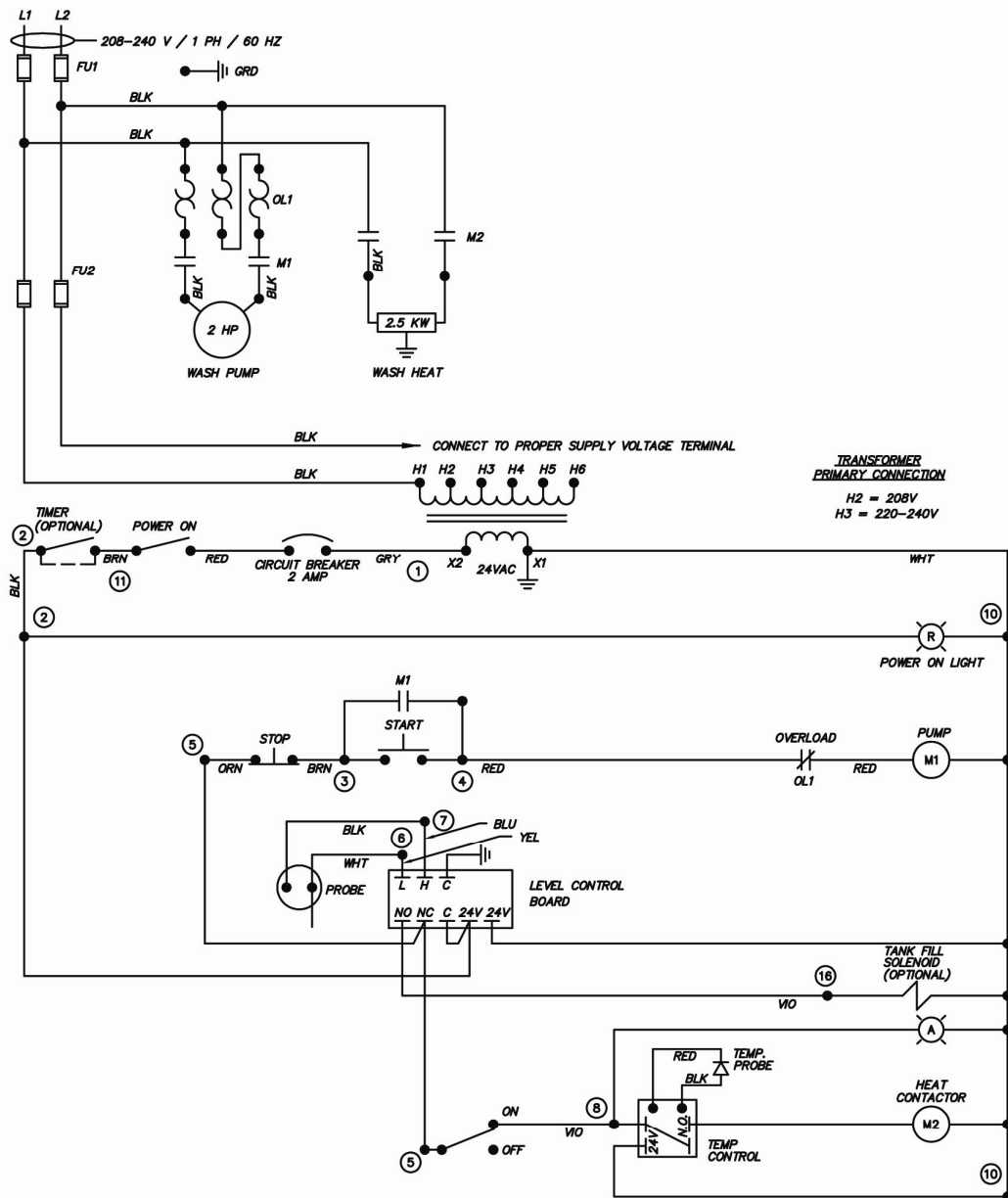
Level probe must be cleaned daily. Build-up of scale or grease will cause faulty operation of the heat system.

QuadJet Aqua-Scrubber

<i>Basic Service Guide</i>		
<i>SYMPTOM</i>	<i>POSSIBLE CAUSE</i>	<i>SOLUTION</i>
1. Machine will not operate	a. No power b. Blown fuse or tripped breaker c. Motor overload tripped	a. Check power supply b. Replace fuse; reset breaker c. Reset overload
2. Tank will not hold water	a. Drain not closed b. Pump petcock opened	a. Close drain b. Close pump petcock
3. Tank fills beyond overflow	a. Level probe dirty b. Level control system not operating correctly	a. Clean level probe b. Troubleshoot level control system
4. Weak wash	a. Clogged spray nozzles b. Obstruction in pump	a. Clean spray nozzles b. Clear obstruction through pump inspection plate
5. Water hammer	a. Excessive water line pressure	a. Install shock arrestor
6. Tank not filling	a. Faucet turned off b. Ball valve turned off	a. Turn faucet on b. Turn ball valve on
7. Tank heat not working; temperature too low or high	a. Heat switch not in LOW or HIGH position b. Level probe dirty c. Heat circuit not working d. Thermostat not adjusted e. Breaker turned off/tripped or blown fuse f. Element limed up	a. Move heat switch to desired position b. Clean level probe c. Troubleshoot heat circuit d. Adjust thermostat e. Turn on/reset breaker; replace fuse f. De-lime unit



C	1895	9.13.01	TITLE	WIRING SCHEMATIC	DWG. NO.
B	1647	12.11.98		AQUA-SCRUBBER (SINGLE PHASE)	SK-4005
A	-	10.12.97			
REV	EGN NO	DATE	Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-8988		DRWN/DATE
			Insinger		MFJ 6.17.97
FILE: SKETCH\SK-4005					



9 12 13 14 15 NOT USED

			TITLE	WIRING SCHEMATIC	DWG. NO.	SK-4246
			AQUA-SCRUBBER (FAST FOOD) 1 PH			
A	1895	9.13.01				
REV	ECN NO	DATE	Insinger		Philadelphia, PA 19135	DRWN/DATE
			Machine Company		(215) 624-4800	MFJ
			FILE: SKETCH\SK-4246		FAX (215) 624-6966	2.3.99

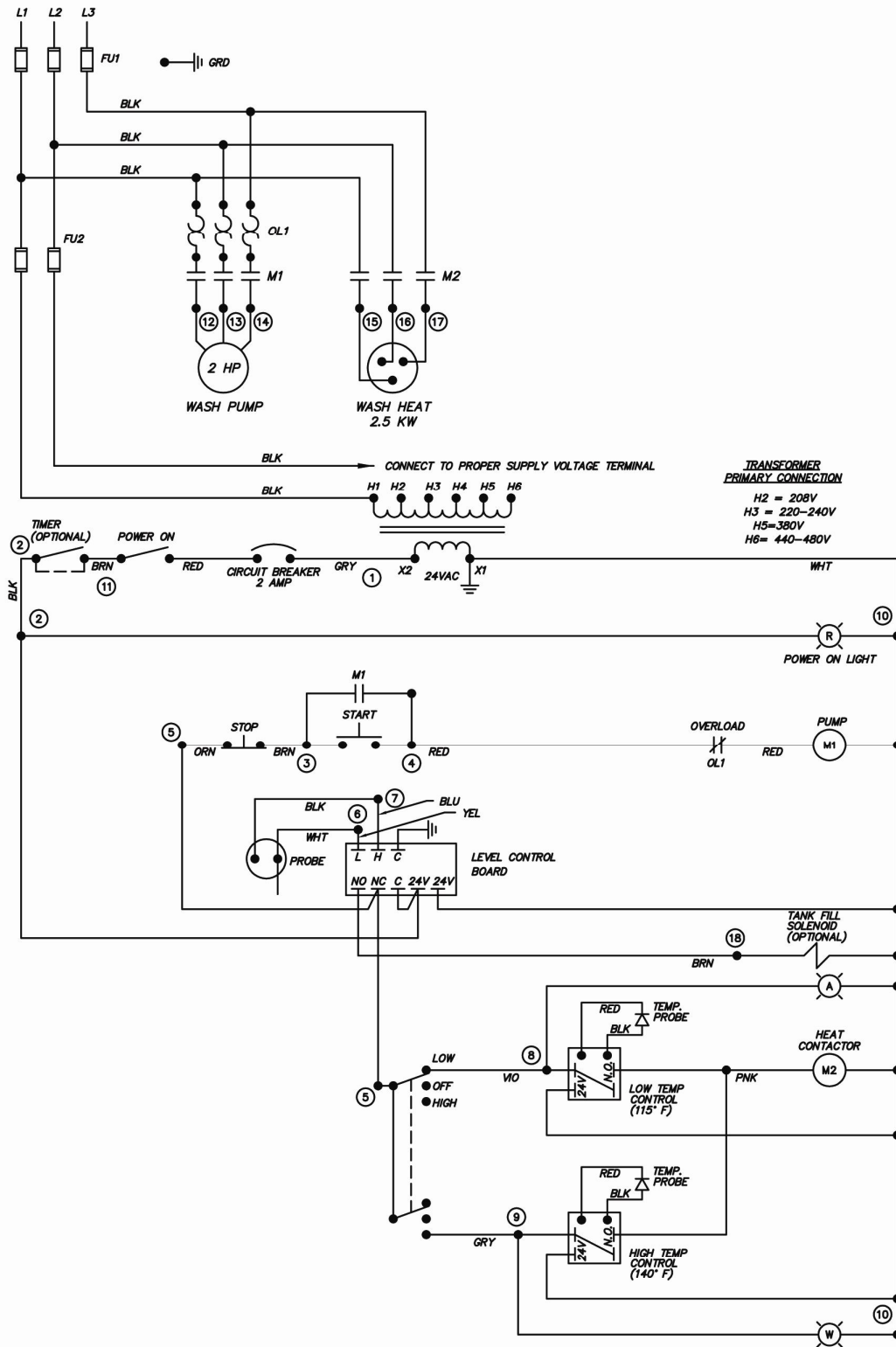
THESE ITEMS SHIPPED LOOSE IN BAG				THESE ITEMS WIRED TOGETHER ON 18" PIGTAIL AND CONNECTED TO TERMINAL BLOCK.				THESE ITEMS ATTACHED TO MOUNTING PLATE			
ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
34	BOOT (FOR DE5-32AE)	DE5-69	1	1	COMPONENT MOUNTING PLATE	SK-4009	1	1	OVERLOAD RELAY (2 HP PUMP)	DE2-55	1
35	BOOT (FOR TOGGLE SWITCH)	DE9-13	2	2	TRANSFORMER (50 VA, 24 VAC)	DE6-8	1	2	FUSE BLOCK KIT (50 VA XMR)	DE9-163	1
36	HEX NUT (FOR TEMP PROBE)	D-337	2	3	FUSE (50 VA TRANSFORMER PRIMARY)	DE9-163	1	4	FUSE (50 VA TRANSFORMER PRIMARY)	DE9-166	2
37				4	FUSE (50 VA TRANSFORMER PRIMARY)	DE9-166	2	5	OVERLOAD RELAY (2 HP PUMP)	DE2-55	1
ITEMS FOR REFERENCE ONLY				23	PUSHBUTTON ASSY, START-STOP	DE5-32AE	1	6	OVERLOAD BASE	DE2-53	1
38	AQUA-SCRUBBER DECAL LOGO (INSINGER)	SK-4025-1	1	24	SWITCH (POWER ON)	DE5-8	1	7	CONTACTOR (PUMP) SP4	DE1-93	1
	LIGHT BLUE	SK-4025-1	1	25	PILOT LIGHT (RED)	DE9-107	1	8	CONTACTOR (ELECT TANK HEAT) 3/1 A RES	DE1-109	1
	AQUA-SCRUBBER DECAL LOGO (NWS)	SK-4025-2	1	26	PILOT LIGHT (WHITE)	DE9-108	1	9	DIN RAIL (35 mm)	DE9-84	1
	DARK BLUE	SK-4025-2	1	27	PILOT LIGHT (AMBER)	DE9-109	1	10	TEMPERATURE CONTROL BOARD	DE9-291	2
39	DATA DECAL	SK-3715-1	1	28	CIRCUIT BREAKER (2A)	DE9-31	1	11	LEVEL CONTROL BOARD	DE9-85	1
40	AQUA-SCRUBBER OVERLAY (INSINGER)	SK-4026-1	1	29	SWITCH (HI-OFF-LOW)	DE5-16	1	12	LEVEL BLOCK, 3 POLE	DE9-186	1
40	AQUA-SCRUBBER OVERLAY (NWS)	SK-4026-2	1	30	SENSOR (FOR TEMP CONTROL BOARD)	DE9-252	2	13	FUSE	DE9-184	3
41	WIRING SCHEMATIC (THREE PHASE)	SK-4283	-	31	TIMER, 12 HOURS (OPTIONAL)	DE7-36	1	14	FUSE	DE9-184	3
				32				15	FUSE	DE9-184	3
				THIS ITEM WIRED ON 96" PIGTAIL WITH PUSH-ON CONNECTORS AND CONNECTED TO TERMINAL BLOCK.				16	FUSE	DE9-184	3
				33	LEVEL PROBE ASSY (INC PROBE, NUT, WASHER, & 2 GASKETS)	D2470-31	1	17	FUSE	DE9-184	3

ITEM	DESCRIPTION	PART NO.	QTY
1	COMPONENT MOUNTING PLATE	SK-4009	1
2	TRANSFORMER (50 VA, 24 VAC)	DE6-8	1
3	FUSE BLOCK KIT (50 VA XMR)	DE9-163	1
4	FUSE (50 VA TRANSFORMER PRIMARY)	DE9-166	2
5	OVERLOAD RELAY (2 HP PUMP)	DE2-55	1
6	OVERLOAD BASE	DE2-53	1
7	CONTACTOR (PUMP) SP4	DE1-93	1
8	CONTACTOR (ELECT TANK HEAT) 3/1 A RES	DE1-109	1
9	DIN RAIL (35 mm)	DE9-84	1
10	TEMPERATURE CONTROL BOARD	DE9-291	2
11	LEVEL CONTROL BOARD	DE9-85	1
12	LEVEL BLOCK, 3 POLE	DE9-186	1
13	FUSE	DE9-184	3
14	FUSE	DE9-184	3
15	FUSE	DE9-184	3
16	FUSE	DE9-184	3
17	FUSE	DE9-184	3
18	FUSE	DE9-184	3
19	FUSE	DE9-184	3
20	FUSE	DE9-184	3
21	FUSE	DE9-184	3
22	FUSE	DE9-184	3

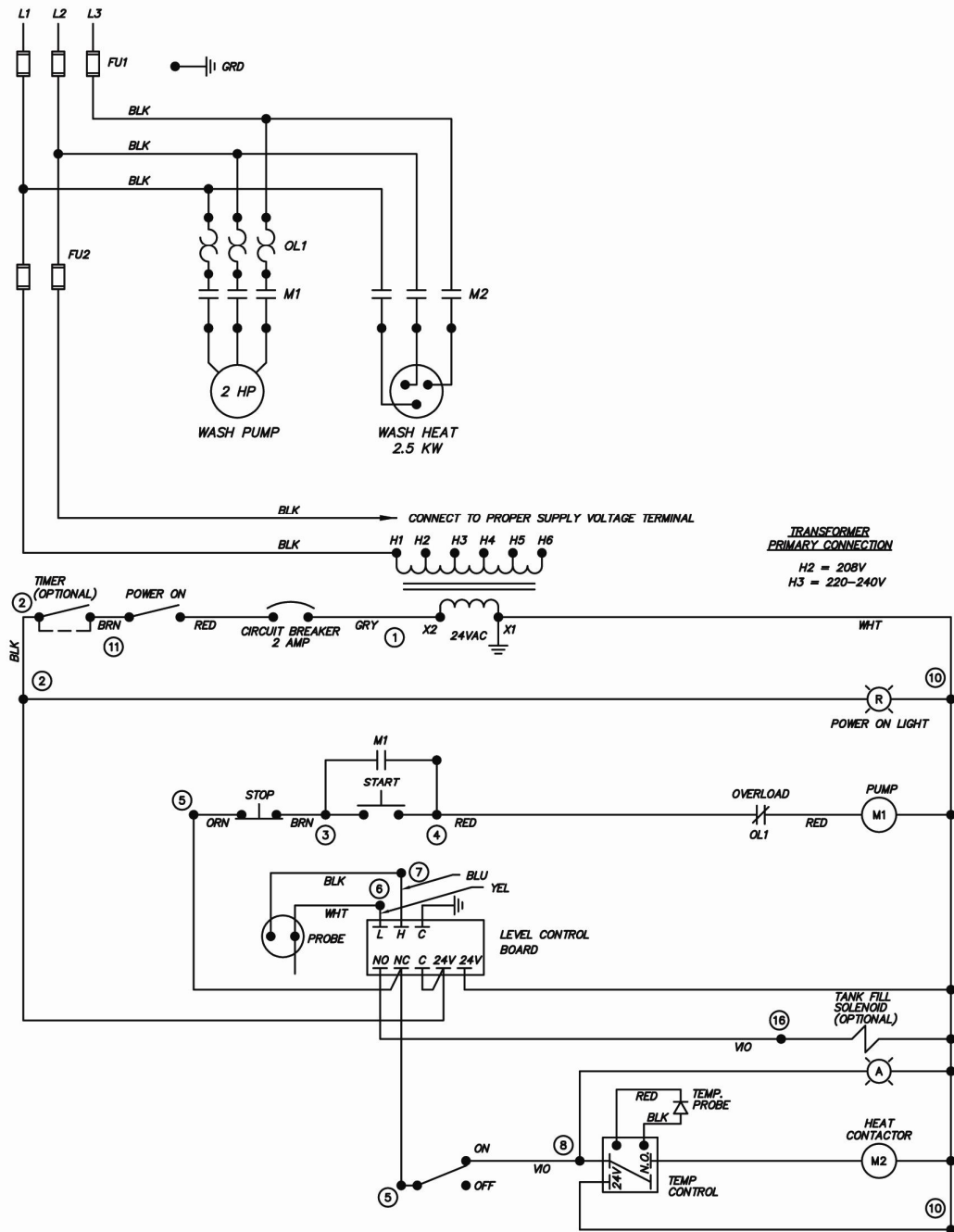
TITLE	AQUA-SCRUBBER CONTROL PANEL LAYOUT - THREE PHASE
1993	8.9.03
1901	10.23.07
1887	2.15.07
REV	ECN NO DATE

FILE	SCALE	DWG. NO.
1993	1=4	SK-4280

DATE	DRWN/DATE
8.9.03	6.17.99

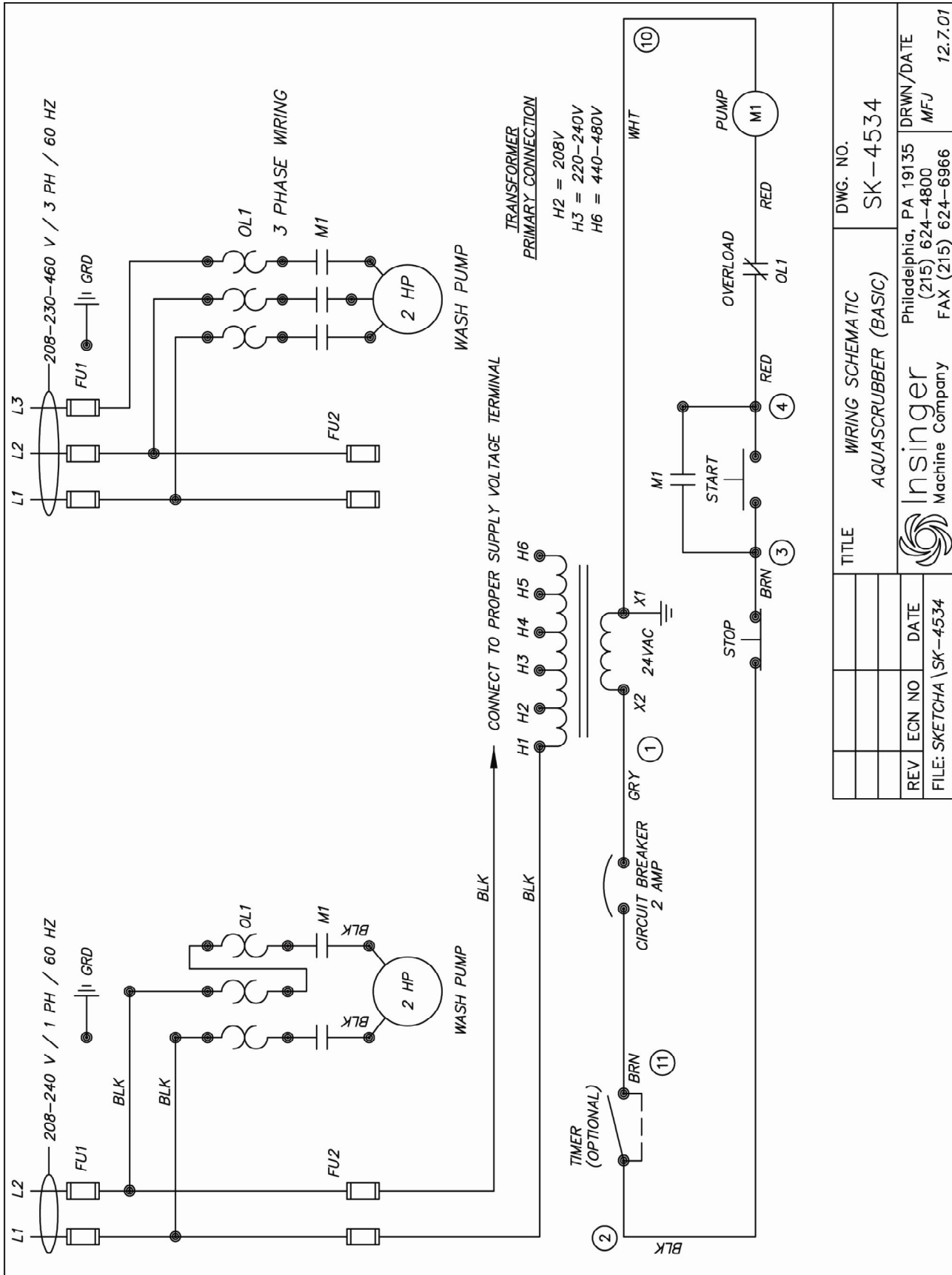


			TITLE	WIRING SCHEMATIC	DWG. NO.
				AQUA-SCRUBBER (THREE PHASE)	SK-4283
REV	ECN NO	DATE			
A	1993	9.9.03			
FILE: SKETCH\SK-4283			 Philadelphia, PA 19135 (215) 624-4800 FAX (215) 624-8966		DRWN/DATE MFJ 6.17.99



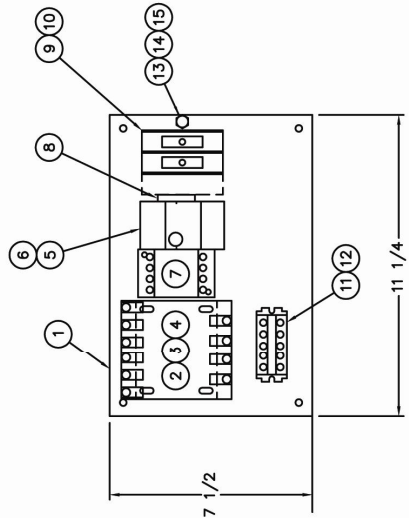
9 12 13 14 15 NOT USED

			TITLE	WIRING SCHEMATIC	DWG. NO.	SK-4523
			AQUA-SCRUBBER (FAST FOOD) 3 PH			
REV	ECN NO	DATE	 Philadelphia, PA 19135 (215) 624-4800		DRWN/DATE	MFJ
FILE:	SKETCH	SK-4523	FAX (215) 624-6966		10.22.01	



TITLE		WIRING SCHEMATIC		DWG. NO.	
		AQUASCRUBBER (BASIC)		SK-4534	
REV	ECN NO	DATE	Philadelphia, PA 19135 DRWN/DATE		
FILE: SKETCHA \ SK-4534			(215) 624-4800 MFJ		
			FAX (215) 624-6966		
			12.7.01		

THESE ITEMS WIRED TOGETHER ON 18" PIGTAIL AND CONNECTED TO TERMINAL BLOCK.			THESE ITEMS ATTACHED TO MOUNTING PLATE				
ITEM	DESCRIPTION	PART NO.	QTY	ITEM	DESCRIPTION	PART NO.	QTY
18	PUSHBUTTON ASSY, START-STOP	DE5-32AE	1	1	COMPONENT MOUNTING PLATE	SK-4544	1
19	CIRCUIT BREAKER (2A)	DE9-3T	1	2	TRANSFORMER (50 VA, 24 VAC)	DE6-8	1
20	TIMER, 12 HOURS (OPTIONAL)	DE7-36	1	3	FUSE BLOCK KIT (50 VA XFMR)	DE9-163	1
21				4	FUSE (50 VA TRANSFORMER PRIMARY)		2
22				208 - 240 V	FNQ-R-.75	DE9-166	
				440 - 480 V	FNQ-R-.5	DE9-196	
	THESE ITEMS SHIPPED LOOSE IN BAG			5	OVERLOAD RELAY (2 HP PUMP)		1
23	BOOT (FOR DE5-32AE)	DE5-69	1	208-240/1/60	9-13 A	DE2-57	
24				208/3/60	5.5-8 A	DE2-55	
				230/3/60	5.5-8 A	DE2-55	
				460/3/60	2.5-4 A	DE2-53	
	ITEMS FOR REFERENCE ONLY			6	OVERLOAD BASE	DE2-60	1
				7	CONTACTOR (PUMP)	DE1-93	1
25	WIRING SCHEMATIC (BASIC)	SK-4534		8	DIN RAIL (35 mm)	DE9-84	1
				9	FUSE BLOCK, 2 POLE (FOR SINGLE PHASE)	DE9-185	1
				10	FUSE BLOCK, 3 POLE (FOR 3 PHASE)	DE9-186	1
					FUSE		AR
					208-240/1/60	FNQ-R-20	DE9-184
					208/3/60	FNQ-R-15	DE9-183
					230/3/60	FNQ-R-15	DE9-183
					460/3/60	FNQ-R-10	DE9-181
				11	TERMINAL BLOCK	DE3-9A	5
				12	TERMINAL BLOCK END	DE3-9B	1
				13	GROUNDING STUD, 1/4-20	D309C-GC-4G	1
				14	LOCKWASHER, 1/4	D313C-G5	1
				15	HEX NUT, 1/4-20	D312C-GC-2	1
				16			
				17			



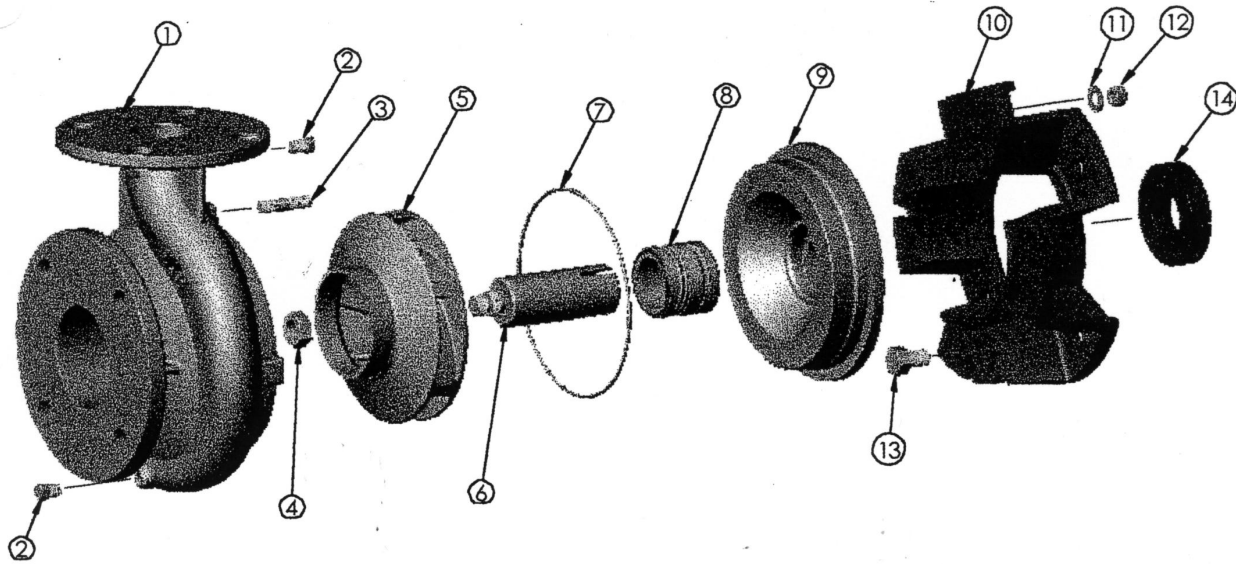
TITLE	AQUA-SCRUBBER CONTROL PANEL LAYOUT (BASIC)
DRWN/DATE	Philadelph, PA 19135 (215) 624-4800 MFJ 12.27.01
FAX	(215) 624-6966
FILE	SKETCH/ SK-4535
SCALE	DWG. NO.
REV	1=4
ECH NO	SK-4535
DATE	

QuadJet Aqua-Scrubber

<i>PART NUMBER</i>	<i>DESCRIPTION</i>	<i>QUANTITY</i>
D10X014	Basket Strainer	1
D130002	Crumb Cup Lever Drain	1
D10X021	O-ring Lever Drain	1
D507200	Lever Drain Complete Assembly	1
KN531000BR	Pre-Rinse Spray with Wall Bracket	1
KN348018	Wash Tank Faucet	1
KN548012	Rinse & Sanitize Tank Faucet	1
436620065044	480 Volt Heating Element	1
23278210001	208 & 204 Volt Heating Element	1

QuadJet Aqua-Scrubber

33423



ITEM	PART NUMBER	DESCRIPTION	QUANTITY
1	31469	Volute S/S	1
2	21255	Pipe Plug S/S 1/8" NPT	2
3	21261	Stud S/S 3/8- 16 x 1 5/8"	4
4	29194	Hex Jam Nut S/S 5/8-18	1
5	31571	Impellar S/S 5.6" dia.	1
6	31806	Drive Sleeve S/S	1
7	31233	O-ring Viton	1
8	31374	Mech. Seal 1.5" T-2100	1
9	31093	Seal Housing S/S	1
10	31711	Motor Adapter 145TC	1
11	28053	Washer S/S 3/8"	4
12	21268	Hex Nut S/S 3/8-16	4
13	25663	Cap Screw S/S 3/8-16 3/4"	4
14	23039	Clamp	1

QuadJet Aqua-Scrubber

<i>Parts List</i>		
<i>Motor & Pump</i>		
<i>Part Number</i>	<i>Description</i>	<i>Quantity</i>
34415-0001	Pump & Motor Assembly	1
	Pump 3 1/2" Intake x 3"	
21042	Pump Discharge Elbow	1
5663k12	Screw Clamp	2
INS0075P001	1" O.D. Tubing	4
INS0076P001	1" O.D. Tubing	4
NMLT-50	1/2" PVC Liq. Tight Conn.	4
STOCK	Bolt, Hex Head S/S	1
STOCK	Nut Hex	4
STOCK	Washer Lock	8
<i>Controls</i>		
SK4280-0001	Control Panel Large	1
208V-3PH-0001		
Special Order	Tubing Heat Shrink	1
Special Order	Watertight Connector	2
STOCK	S/S Truss Head Screw	2
STOCK	1/4-20 UNC S/S Weld Nut	2
M48-0122	S/S Continuous Hinge	1
MISC 1066	Door Gasket	1
G89-851	1/2" Flex Conduit	4 ft.
NMLT9050	1/2" 90° Liq/Tight Conn.	2
CG-5050	1/2" Liq/Tight Conn.	1
2462	1/2" Liq/Tight Conn.	1
ITCSN08006PK	Tubing Heat Shrink	1

<i>Parts List</i>		
<i>Misc. Electric</i>		
<i>Part Number</i>	<i>Description</i>	<i>Quantity</i>
436620065040	Immersion Heater	1
104S0W	Cord	8 ft.
HBL-2421	Twist Lock Plug	1
<i>Miscellaneous</i>		
QUAD 2508	Utility Basket	1
MISC 2407	S/S Wire Guard	1
A10-0851	S/S Bullet Foot	10
A18-0406	S/S Leg Holder (Plate)	6
A18-0206	S/S Leg Holder	4
J77-4401	Double Pot Hook	44



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