

Washer-Extractors

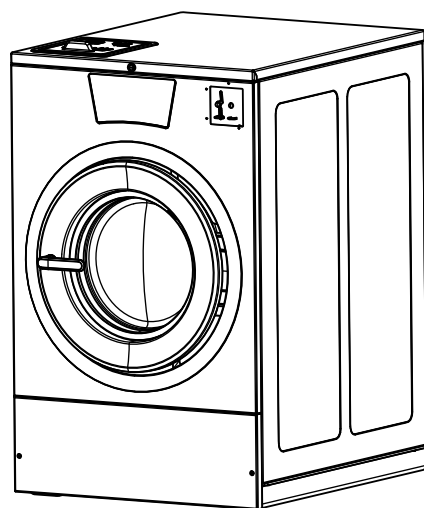
Cabinet Hardmount

Design 5, 6 and 8 Machines

Refer to Page 9 for Machine Identification



Installation/Operation/Maintenance



C-CHM11P10_SVG

Original Instructions

Keep These Instructions for Future Reference.

CAUTION: Read the instructions before using the machine.

(If this machine changes ownership, this manual must accompany machine.)

Regulatory Statements

PRODUCT COMPLIANCE

Users of this product are cautioned not to make modifications or changes that are not approved by Alliance Laundry Systems, LLC. Doing so may void the compliance of this product with applicable laws and regulatory requirements and may result in the loss of the user's authority to operate the equipment.

UNITED STATES

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions; (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the radio or television receiving antenna.
- Increase the separation between the computer equipment or receiver.
- Connect the equipment into an outlet on a circuit different from that to which the radio or television receiver is connected.
- Consult the dealer or experienced radio television technician for help.

	CAUTION
To comply with the limits of the Class B device, pursuant to Part 15 of the FCC Rules, this device is to comply with Class B limits. All peripherals must be shielded and grounded. Operation with non-certified peripherals or non-shielded cables is likely to result in interference and reception of the device.	
W1004	

Radiation Exposure Statement : This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. The radio installed in this equipment and is intended to operate with minimum distance 20cm between the radiator and your body.

Limited Channels Fixed For Use In USA : IEEE 802.11b or

802.11g or 802.11n(HT20) operation of this product in the U.S. is firmware-limited to Channel 1 through 11.

CANADA - CAN ICES-3(B)/NMB-3(B)

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s) standards. Operation is subject to the following two conditions:

- This device may not cause interference.
- This device must accept any interference, including interference that may cause undesired operation of the device.

Radiation Exposure Statement: This equipment complies with Innovation, Science and Economic Development Canada's radiation exposure limits set forth for in RSS-102. The radio installed in this equipment is installed and is intended to operate with minimum distance 20cm between the radiator and your body.

EUROPE

Products bearing the CE mark comply with the following EU directives:

- EMC Directive 2014/30/EU
- Machinery Directive 2006/42/EC
- Gas Appliance Directive 2016/426/EU
- RoHS Directive 2011/65/EU and its amendment directives; Commission Delegated Directive 2015/863 to restrict four phthalates

If the product has telecommunications functionality, it also complies with the requirements of the following EU directive:

- Radio Equipment Directive 2014/53/EU

Compliance with these Directives implies conformity to harmonized European standards that are noted in the EU Declaration of Conformity which is available upon request.

Alliance Laundry Systems products comply with the requirement of Article 12 as it can be operated in at least one Member State as examined and the product is compliant with Article 11 as it has no restrictions on putting into service in all EU member states.

This device contains a 2.4GHz transceiver, intended for indoor use only in all EU member states, EFTA states, and Switzerland. Attention has been given to allowed operational frequencies. For detailed information concerning installations in France, the user should contact the national spectrum authority in France (<http://www.arcep.fr/>)

Be aware that outdoor installations require special attention and will only be handled by trained and qualified installation personnel. No one from the general-public is permitted to install wireless products outdoors when external antennas, power

and grounding must be installed for use.

AUSTRALIA/NEW ZEALAND

The radio in this equipment complies with and is certified to the Australian and New Zealand regulatory requirements.

BRAZIL ANATEL

This device is not entitled to protection against harmful interference and may not interfere with duly authorized systems.

CHINA SRRC

The radio device has received certification of conformance in accordance with the People's Republic of China State Radio Regulation Committee (SRRC) certification scheme. Integrations of this radio into a final product does not require additional radio certification provided installation instructions are followed. No changes are authorized to the radio or the antenna of the approved device.

JAPAN

This product is equipped with a certified wireless device pursuant to Article 2-1-19 of the Certification Ordinance. No changes are authorized to the radio or the antenna of the approved device.

MEXICO IFETEL

“The operation of this equipment is subject to the following two conditions: (1) it is possible that this equipment or device does not cause harmful interference and (2) this equipment or device must accept any interference, including that which may cause its unwanted operation.”

SOUTH KOREA (KC)

The radio device has received certification of conformance in accordance with the Radio Waves Act. Integration of this radio into a final product does not require additional radio certification provided installation instructions are followed. No changes are authorized to the radio or the antenna of the approved device.

TAIWAN

The information in this section applies to products bearing the

Taiwan National Communications Commission mark:

This telecom equipment has complied with NCC regulations.

According to “Administrative Regulations of Low Power Radio Waves Radiated Devices:

Article 12 The low-power radio-frequency devices must not be altered by changing the frequency, enhancing emission power, adding external antenna, and modification of original design characteristic as well as function.

Article 14 The operation of the low-power radio-frequency devices is subject to the conditions that no harmful interference is caused. The user must stop operating the device immediately should harmful interference is caused and shall not resume until the condition causing the harmful interference has been corrected.

Moreover, the interference must be accepted that may be caused by the operation of an authorized communications, or ISM equipment. (1) Precautions (marked in the product manual and on outer packaging)

THAILAND

The information in this section applies to products approved by the Thailand National Communications Commission:

These telecommunication and device are compliance with the requirements of National Broadcasting and Telecommunication Commission.

Manufacturing Date

The manufacturing date for your unit can be found on the serial number. The first two digits indicate the year. The third and fourth digits indicate the month. For example, a unit with serial number 1505000001 was manufactured in May 2015.

Singapore Recommended Program For Nominal Load

The ECO Cycle at 27 minutes with 1 wash and 1 rinse is the program recommended for a nominal load at rated load capacity.

For the below model certification:

SCT020, SCT030, SCT040, SCT060

HCT020, HCT030, HCT040, HCT060

Refer to programming manual for details of this wash program.

China Restriction of hazardous substances (RoHS)

The Table of Hazardous Substances/Elements and their Content

Use of Hazardous Substances in Electrical and Electronic Products

As required by China's Management Methods for Restricted

Hazardous substances										
Part Name	Lead	Mercury	Cadmium	Hexavalent Chromium	Polybrominated biphenyls	Polybrominated diphenyl ethers	Dibutyl phthalate	Diisobutyl phthalate	Butylbenzyl phthalate	Di(2-ethylhexyl) phthalate
	(Pb)	(Hg)	(Cd)	(CR[VI])	(PBB)	(PBDE)	(DBP)	(DIBP)	(BBP)	(DEHP)
	≤ 0.1%	≤ 0.1%	≤ 0.01%	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%	≤ 0.1%
PCBs	X	O	O	O	O	O	O	O	O	O
Electromechanical Parts	O	O	O	O	O	O	O	O	O	O
Cables and Wires	O	O	O	O	O	O	O	O	O	O
Metal Parts	O	O	O	O	O	O	O	O	O	O
Plastic Parts	O	O	O	O	O	O	O	O	O	O
Sealing strips	O	O	O	O	O	O	O	O	O	O
Batteries	O	O	O	O	O	O	O	O	O	O
Hoses and Tubing	O	O	O	O	O	O	O	O	O	O
Textile	O	O	O	O	O	O	O	O	O	O
Timing Belts	O	O	O	O	O	O	O	O	O	O
Insulation	O	O	O	O	O	O	O	O	O	O
Glass	O	O	O	O	O	O	O	O	O	O
Display	O	O	O	O	O	O	O	O	O	O
This table is prepared in accordance with the provisions of SJ/T-11364.										

continues...

O: Indicates that the content of said hazardous substance in all of the homogenous materials in the component is within the limits required by GB/T 26572.

X: : Indicates that the content of said hazardous substance exceeds the limits required by GB/T 26572 in at least one homogenous material in the component, however, it follows the standard advised by 2011/65/EU in the current version.

NOTE: The referenced Environmental Protection Use Period Marking was determined according to normal operating use conditions of the product such as temperature and humidity.



Observing SJ/T 11364, Marking for the Restricted Use of Hazardous Substances in Electronic and Electrical Products.
Observing SJ/Z 11388, General Guidelines of Environment-friendly Use Period of Electronic Information Products Appendix B, adopting table look-up to verify the Environment Friendly Use Period 15 years.

Safety Information

Explanation of Safety Instruction Messages

Precautionary statements (“DANGER,” “WARNING,” and “CAUTION”), followed by specific instructions, are found in this manual and on machine decals. These precautions are intended for the personal safety of the operator, user, servicer, and those maintaining the machine.

	DANGER
Indicates an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.	

	WARNING
Indicates a hazardous situation that, if not avoided, could cause severe personal injury or death.	

	CAUTION
Indicates a hazardous situation that, if not avoided, may cause minor or moderate personal injury or property damage.	

Additional precautionary statements (“IMPORTANT” and “NOTE”) are followed by specific instructions.

IMPORTANT: The word “IMPORTANT” is used to inform the reader of specific procedures where minor machine damage will occur if the procedure is not followed.

NOTE: The word “NOTE” is used to communicate installation, operation, maintenance or servicing information that is important but not hazard related.

Important Safety Instructions

	WARNING
To reduce the risk of fire, electric shock, serious injury or death to persons when using your washer, follow these basic precautions:	
W023	

- Read all instructions before using the washer.
- Install the washer according the INSTALLATION instructions. Refer to the EARTH/GROUND instructions in the INSTALLATION manual for the proper earth/ground connection of the washer. All connections for water, drain, electrical

power and earth/ground must comply with local codes and be made by licensed personnel when required. It is recommended that the machine be installed by qualified technicians.

- Do not install or store the washer where it will be exposed to water and/or weather.
- To prevent fire and explosion, keep the area around machine free from flammable and combustible products. Do not add the following substances or textiles containing traces of the following substances to the wash water: gasoline, kerosene, waxes, cooking oils, vegetable oils, machine oils, dry-cleaning solvents, flammable chemicals, thinners, or other flammable or explosive substances. These substances give off vapors that could ignite, explode or cause the fabric to catch fire by itself.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for two weeks or more. HYDROGEN GAS IS EXPLOSIVE. If the hot water system has not been used for such a period, before using a washing machine or combination washer-dryer, turn on all hot water faucets and let the water flow from each for several minutes. This will release any accumulated hydrogen gas. The gas is flammable, do not smoke or use an open flame during this time.
- To reduce the risk of an electric shock or fire, DO NOT use an extension cord or an adapter to connect the washer to the electrical power source.
- Do not allow children to play on or in the washer. Close supervision of children is necessary when the washer is used near children. This appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance. This is a safety rule for all appliances.
- Models with electronic control: Remove and immediately recycle or dispose of used controls according to local regulations and keep away from children. Do NOT dispose of controls in the trash or incinerate. Do not attempt to remove the batteries. Even used batteries may cause severe injury or death. Call a local poison control center for treatment information. Non-rechargeable batteries are not to be recharged. Do not force discharge, recharge, disassemble, heat above 70°C [158°F] or incinerate. Doing so may result in injury due to venting, leakage or explosion resulting in chemical burns.
- DO NOT reach and/or climb into the tub or onto the washer, ESPECIALLY if the wash drum is moving. This is an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.
- Never operate the washer with any guards, panels and/or parts removed or broken. DO NOT bypass any safety devices or tamper with the controls.
- Use washer only for its intended purpose, washing textiles. Never wash machine parts or automotive parts in the ma-

chine. This could result in serious damage to the basket or tub.

- Use only low-sudsing, no-foaming types of commercial detergent. Be aware that hazardous chemicals may be present. Wear hand and eye protection when adding detergents and chemicals. Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed all warnings or precautions. To reduce the risk of poisoning or chemical burns, keep them out of the reach of children at all times [preferably in a locked cabinet].
- Do not use fabric softeners or products to eliminate static unless recommended by the manufacturer of the fabric softener or product.
- Always follow the fabric care instructions supplied by the textile manufacturer.
- Loading door **MUST BE CLOSED** any time the washer is to fill, tumble or spin. **DO NOT** bypass the loading door switch by permitting the washer to operate with the loading door open. Do not attempt to open the door until the washer has drained and all moving parts have stopped.
- Be aware that hot water is used to flush the supply dispenser. Avoid opening the dispenser lid while the machine is running.
- Do not attach anything to the supply dispenser's nozzles, if applicable. The air gap must be maintained.
- Do not operate the machine without the water reuse plug or water reuse system in place, if applicable.
- Be sure water connections have a shut-off valve and that fill hose connections are tight. **CLOSE** the shut-off valves at the end of each wash day.
- Keep washer in good condition. Bumping or dropping the washer can damage safety features. If this occurs, have washer checked by a qualified service person.
- **DANGER:** Before inspecting or servicing machine, power supply must be turned OFF. The servicer needs to wait for at least 5 minutes after turning the power OFF and needs to check for residual voltage with a voltage meter. The inverter capacitor or EMC filter remains charged with high voltage for some time after powering OFF. This is an imminently hazardous situation that, if not avoided, will cause severe personal injury or death.
- Do not repair or replace any part of the washer, or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that the user understands and has the skills to carry out.

ALWAYS disconnect the washer from electrical, power and water supplies before attempting any service.

- Disconnect the power by turning off the circuit breaker or by unplugging the machine. Replace worn power cords.
- Before the washer is removed from service or discarded, remove the door to the washing compartment.
- Failure to install, maintain, and/or operate this washer according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage.

NOTE: The WARNINGS and IMPORTANT SAFETY INSTRUCTIONS appearing in this manual are not meant to cover all possible conditions and situations that may occur. Common sense, caution and care must be exercised when installing, maintaining, or operating the washer.

Any problems or conditions not understood should be reported to the dealer, distributor, service agent or the manufacturer.



WARNING

Machine installations must comply with minimum specifications and requirements stated in the applicable Installation Manual, any applicable municipal building codes, water supply requirements, electrical wiring regulations and any other relevant statutory regulations. Due to varied requirements and applicable local codes, this machine must be installed, adjusted, and serviced by qualified maintenance personnel familiar with applicable local codes and the construction and operation of this type of machinery. They must also be familiar with the potential hazards involved. Failure to observe this warning may result in personal injury, property damage, and/or equipment damage, and will void the warranty.

W820

IMPORTANT: Ensure that the machine is installed on a level floor of sufficient strength. Ensure that the recommended clearances for inspection and maintenance are provided. Never allow the inspection and maintenance space to be blocked.

	WARNING
Never touch internal or external steam pipes, connections, or components. These surfaces can be extremely hot and will cause severe burns. The steam must be turned off and the pipe, connections, and components allowed to cool before the pipe can be touched.	
SW014	

	WARNING
 Models with electronic control: • INGESTION HAZARD: This product contains a non-replaceable button cell or coin battery. • Battery Type: CR-2450/VAN, CR-2354/VCN, CR2032 • Nominal voltage: 3V • DEATH or serious injury can occur if ingested. • A swallowed button cell or coin battery can cause Internal Chemical Burns in as little as 2 hours. • KEEP new and used batteries OUT OF REACH of CHILDREN. • Seek immediate medical attention if a battery is suspected to be swallowed or inserted inside any part of the body.	
W1076	

NOTE: All appliances are produced according to the EMC-directive (Electro-Magnetic-Compatibility). They can be used in restricted surroundings only (comply minimally with class A requirements). For safety reasons there must be kept the necessary precaution distances with sensitive electrical or electronic device(s). These machines are not intended for domestic use by private consumers in the home environment.

Applicable in Japan:

If used beyond the standard conditions, there is a risk of fire, burns, or other accidents due to abnormal wear or degradation over a shorter period than the standard usage period.

This machine is intended for use in household environments and similar applications:

- Stores, offices, and other staff work areas
- Farms
- Customers in hotels, motels, and other residential-type environments

However, this does not include environments such as simple

accommodations (like guesthouses or hotels with pets and breakfast included) or shared-use spaces such as laundry areas in condominiums and apartments. New hoses must be used with the machine, and it is not recommended to reuse old hose sets.

Safety Decals

Safety decals appear at crucial locations on the machine. Failure to maintain legible safety decals could result in injury to the operator or service technician.

Use manufacturer-authorized spare parts to avoid safety hazards.

Operator Safety

	WARNING
NEVER insert hands or objects into basket until it has completely stopped. Doing so could result in serious injury.	
SW012	

Machines referred to by model in this manual are intended to be used by the general public in applications such as:

- staff areas in shops, offices, kitchens and other working environments
- by clients in hotels, motels and other residential type environments
- areas for communal use in blocks of flats or in launderettes
- any other similar applications

Installation of these machines must fully conform to the instructions contained in this manual.

The following maintenance checks must be performed daily:

1. Verify that all warning labels are present and legible, replace as necessary.
2. Check door interlock before starting operation of the machine:
 - a. Attempt to start the machine with the door open. The machine should not start.
 - b. Close the door without locking it and start the machine. The machine should not start.
 - c. Attempt to open the door while a cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, disconnect power and call a service technician.
3. Do not attempt to operate the machine if any of the following conditions are present:
 - a. The door does not remain securely locked during the entire cycle.
 - b. Excessively high water level is evident.
 - c. Machine is not connected to a properly grounded circuit.

Safety Information

Do not bypass any safety devices in the machine.



WARNING

Operating the machine with severe out-of-balance loads could result in personal injury and serious equipment damage.

W728

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Information in this manual is applicable to these machines:

Part No. F8667901ENR9

30 Machines						
BCA030VC BCA030VH BCA030VL	BCA030VX BCA030VY BCK030VC	BCK030VH BCK030VL BCK030VX	BCK030VY BCL030VC BCL030VH	BCL030VL BCL030VX BCL030VY	BCT030VC BCT030VH BCT030VL	BCT030VX BCT030VY
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40 Machines						
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PCA040VC PCA040VH PCA040VL	PCA040VX PCA040VY PCK040VC	PCK040VH PCK040VL PCK040VX	PCK040VY PCL040VC PCL040VH	PCL040VL PCL040VX PCL040VY	PCT040VC PCT040VH PCT040VL	PCT040VX PCT040VY

60 Machines						
BCA060VC BCA060VH BCA060VL	BCA060VX BCA060VY BCK060VC	BCK060VH BCK060VL BCK060VX	BCK060VY BCL060VC BCL060VH	BCL060VL BCL060VX BCL060VY	BCT060VC BCT060VH BCT060VL	BCT060VX BCT060VY
SCA060VC SCA060VD SCA060VE SCA060VF SCA060VH SCA060VL SCA060VT SCA060VQ SCA060VV SCA060VX SCA060VY SCE060VC SCE060VD	SCE060VE SCE060VF SCE060VH SCE060VL SCE060VT SCE060VQ SCE060VV SCE060VX SCE060VY SCG060VC SCG060VD SCG060VE	SCG060VF SCG060VH SCG060VL SCG060VT SCG060VQ SCG060VV SCG060VX SCG060VY SCH060VC SCH060VD SCH060VE SCH060VF SCH060VH	SCH060VL SCH060VV SCH060VQ SCH060VT SCH060VX SCH060VY SCJ060VV SCK060VC SCK060VD SCK060VE SCK060VF SCK060VH SCK060VL	SCK060VQ SCK060VT SCK060VV SCK060VX SCK060VY SCL060VC SCL060VD SCL060VE SCL060VF SCL060VH SCL060VL SCL060VQ SCL060VT	SCL060VV SCL060VX SCL060VY SCT060VC SCT060VD SCT060VE SCT060VF SCT060VH SCT060VL SCT060VP SCT060VT SCT060VQ SCT060VV SCT060VX	SCT060VY SCU060VC SCU060VD SCU060VE SCU060VF SCU060VH SCU060VL SCU060VT SCU060VQ SCU060VV SCU060VX SCU060VY
HCA060VC HCA060VD HCA060VE HCA060VF HCA060VH HCA060VL HCA060VT HCA060VQ HCA060VV HCA060VX HCA060VY HCE060VC HCE060VD	HCE060VE HCE060VF HCE060VH HCE060VL HCE060VT HCE060VQ HCE060VV HCE060VX HCE060VY HCG060VC HCG060VD HCG060VE	HCG060VF HCG060VH HCG060VL HCG060VT HCG060VQ HCG060VV HCG060VX HCG060VY HCH060VC HCH060VD HCH060VE HCH060VF HCH060VH	HCH060VL HCH060VV HCH060VQ HCH060VT HCH060VX HCH060VY HCJ060VV HCK060VC HCK060VD HCK060VE HCK060VF HCK060VH HCK060VL	HCK060VQ HCK060VT HCK060VV HCK060VX HCK060VY HCL060VC HCL060VD HCL060VE HCL060VF HCL060VH HCL060VL HCL060VQ HCL060VT	HCL060VV HCL060VX HCL060VY HCT060VC HCT060VD HCT060VE HCT060VF HCT060VH HCT060VL HCT060VP HCT060VT HCT060VQ HCT060VV HCT060VX	HCT060VY HCU060VC HCU060VD HCU060VE HCU060VF HCU060VH HCU060VL HCU060VT HCU060VQ HCU060VV HCU060VX HCU060VY
PCA060VC PCA060VH PCA060VL	PCA060VX PCA060VY PCK060VC	PCK060VH PCK060VL PCK060VX	PCK060VY PCL060VC PCL060VH	PCL060VL PCL060VX PCL060VY	PCT060VC PCT060VH PCT060VL	PCT060VX PCT060VY

80 Machines						
BCA080VC BCA080VH BCA080VL	BCA080VX BCA080VY BCK080VC	BCK080VH BCK080VL BCK080VX	BCK080VY BCL080VC BCL080VH	BCL080VL BCL080VX BCL080VY	BCT080VC BCT080VH BCT080VL	BCT080VX BCT080VY
SCA080VC SCA080VD SCA080VE SCA080VF SCA080VH SCA080VL SCA080VQ SCA080VT SCA080VV SCA080VX	SCA080VY SCG080VH SCG080VL SCG080VT SCG080VQ SCG080VC SCG080VD SCG080VE SCG080VF SCG080VV	SCG080VX SCG080VY SCH080VC SCH080VD SCH080VE SCH080VF SCH080VH SCH080VL SCH080VQ SCH080VT	SCH080VV SCH080VX SCH080VY SCJ080VV SCK080VC SCK080VD SCK080VE SCK080VF SCK080VH SCK080VL	SCK080VQ SCK080VT SCK080VV SCK080VX SCK080VY SCT080VC SCT080VD SCT080VE SCT080VF SCT080VH	SCT080VL SCT080VP SCT080VT SCT080VQ SCT080VV SCT080VX SCT080VY SCU080VC SCU080VD SCU080VE	SCU080VF SCU080VH SCU080VL SCU080VT SCU080VQ SCU080VV SCU080VX SCU080VY
HCA080VC HCA080VD HCA080VE HCA080VF HCA080VH HCA080VL HCA080VQ HCA080VT HCA080VV HCA080VX	HCA080VY HCG080VH HCG080VL HCG080VT HCG080VQ HCG080VC HCG080VD HCG080VE HCG080VF HCG080VV	HCG080VX HCG080VY HCH080VC HCH080VD HCH080VE HCH080VF HCH080VH HCH080VL HCH080VQ HCH080VT	HCH080VV HCH080VX HCH080VY HCJ080VV HCK080VC HCK080VD HCK080VE HCK080VF HCK080VH HCK080VL	HCK080VQ HCK080VT HCK080VV HCK080VX HCK080VY HCT080VC HCT080VD HCT080VE HCT080VF HCT080VH	HCT080VL HCT080VP HCT080VT HCT080VQ HCT080VV HCT080VX HCT080VY HCU080VC HCU080VD HCU080VE	HCU080VF HCU080VH HCU080VL HCU080VT HCU080VQ HCU080VV HCU080VX HCU080VY
PCA080VC PCA080VH PCA080VL	PCA080VX PCA080VY PCK080VC	PCK080VH PCK080VL PCK080VX	PCK080VY PCL080VC PCL080VH	PCL080VL PCL080VX PCL080VY	PCT080VC PCT080VH PCT080VL	PCT080VX PCT080VY

100 Machines						
BCA100VC BCA100VH BCA100VL	BCA100VX BCA100VY BCK100VC	BCK100VH BCK100VL BCK100VX	BCK100VY BCL100VC BCL100VH	BCL100VL BCL100VX BCL100VY	BCT100VC BCT100VH BCT100VL	BCT100VX BCT100VY
SCA100VC SCA100VD SCA100VE SCA100VF SCA100VH SCA100VL SCA100VT SCA100VQ SCA100VV SCA100VX	SCA100VY SCG100VC SCG100VD SCG100VE SCG100VF SCG100VH SCG100VL SCG100VT SCG100VQ SCG100VV	SCG100VX SCG100VY SCH100VC SCH100VD SCH100VE SCH100VF SCH100VH SCH100VL SCH100VQ SCH100VT	SCH100VV SCH100VX SCH100VY SCJ100VV SCK100VC SCK100VD SCK100VE SCK100VF SCK100VH SCK100VL	SCK100VQ SCK100VT SCK100VV SCK100VX SCK100VY SCT100VC SCT100VD SCT100VE SCT100VF SCT100VH	SCT100VL SCT100VP SCT100VT SCT100VQ SCT100VV SCT100VX SCT100VY SCU100VC SCU100VD SCU100VE	SCU100VF SCU100VH SCU100VL SCU100VT SCU100VQ SCU100VV SCU100VX SCU100VY
HCA100VC HCA100VD HCA100VE HCA100VF HCA100VH HCA100VL HCA100VT HCA100VQ HCA100VV HCA100VX	HCA100VY HCG100VC HCG100VD HCG100VE HCG100VF HCG100VH HCG100VL HCG100VT HCG100VQ HCG100VV	HCG100VX HCG100VY HCH100VC HCH100VD HCH100VE HCH100VF HCH100VH HCH100VL HCH100VQ HCH100VT	HCH100VV HCH100VX HCH100VY HCJ100VV HCK100VC HCK100VD HCK100VE HCK100VF HCK100VH HCK100VL	HCK100VQ HCK100VT HCK100VV HCK100VX HCK100VY HCT100VC HCT100VD HCT100VE HCT100VF HCT100VH	HCT100VL HCT100VP HCT100VQ HCT100VT HCT100VV HCT100VX HCT100VY HCU100VC HCU100VD HCU100VE	HCU100VF HCU100VH HCU100VL HCU100VT HCU100VQ HCU100VV HCU100VX HCU100VY
PCA100VC PCA100VH PCA100VL	PCA100VX PCA100VY PCK100VC	PCK100VH PCK100VL PCK100VX	PCK100VY PCL100VC PCL100VH	PCL100VL PCL100VX PCL100VY	PCT100VC PCT100VH PCT100VL	PCT100VX PCT100VY

Delivery Inspection

Upon delivery, visually inspect crate, protective cover, and unit for any visible shipping damage. If signs of possible damage are evident, have the carrier note the condition on the shipping papers before the shipping receipt is signed, or advise the carrier of the condition as soon as it is discovered.

Serial Plate Location

1. From the *System Menu*, select **DIAGNOSTICS** to enter the *Diagnostics Menu*.
2. From the *Diagnostics Menu*, select **MACHINE ID**. The **MACHINE ID** display includes the machine's model and serial number.

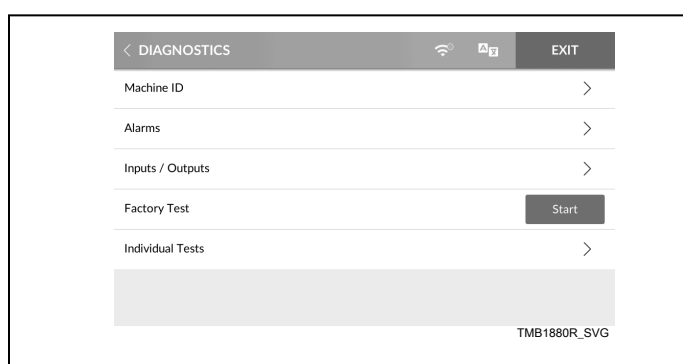
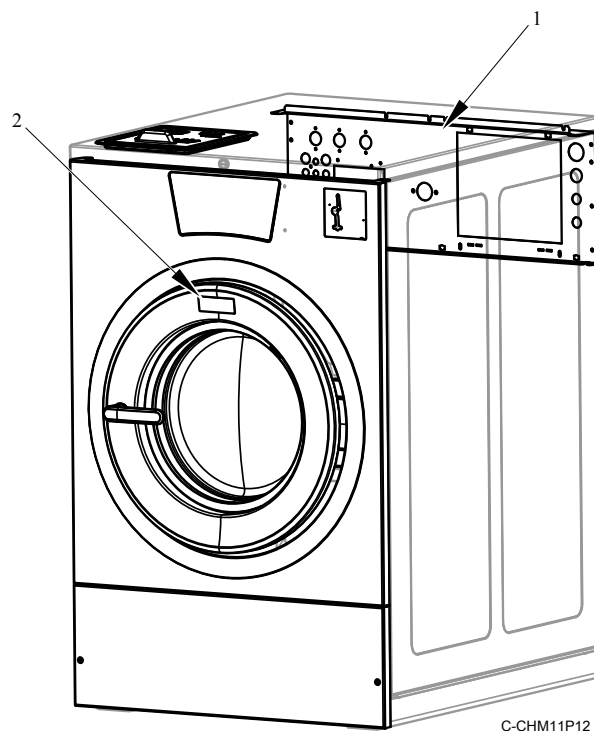


Figure 1

Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. Refer to *Figure 2*.

Model Example of Serial Plate Location



1. Serial Plate on Panel
2. Serial Plate on Door Frame

Figure 2

Replacement Parts

If replacement parts are required, contact the source from where you purchased your unit. If you are unable to locate an authorized parts distributor, navigate to <https://alliancelaundry.com/contact/> for the nearest Alliance Laundry Systems office for assistance.

Customer Service

For technical assistance, contact your local distributor or visit:

www.alliancelaundry.com

Specifications and Dimensions

Specification	20	30	40	60	80	100
Overall Dimensions						
Overall width, mm [in.]	660 [26.0]	737 [29.0]	778 [30.6]	865 [34.1]	1054 [41.5]	1054 [41.5]
Overall height, mm [in]	1120 [44.1]	1196 [47.1]	1252 [49.3]	1295 [51]	1481 [58.3]	1481 [58.3]
Overall depth, mm [in.]	784 [30.9]	896 [35.3]	1073 [42.3]	1135 [44.7]	1196 [47.1]	1298 [51.1]
Weight and Shipping Information						
Net weight, kg [lbs.]	154 [340]	197 [435]	249 [550]	308 [680]	567 [1250]	581 [1280]
Standard shipping weight, kg [lbs.]	172 [380]	215 [475]	268 [590]	327 [720]	590 [1300]	603 [1330]
Slat crate shipping weight, kg [lbs.]	209 [460]	263 [580]	308 [680]	381 [840]	649 [1430]	662 [1460]
Wash Cylinder Information						
Cylinder diameter, mm [in.]	533 [21.0]	610 [24.0]	668 [26.3]	762 [30.0]	914 [36.0]	914 [36.0]
Cylinder depth, mm [in.]	350 [13.8]	406 [16.0]	515 [20.3]	559 [22.0]	556 [21.9]	657 [25.9]
Cylinder volume, l [ft ³]	79.3 [2.8]	119 [4.2]	178 [6.3]	255 [9.0]	365 [12.9]	430 [15.2]
Cylinder capacity, kg [lbs.]	9.1 [20]	13.1 [30]	18.1 [40]	27.2 [60]	36.3 [80]	45.4 [100]
Perforation size, mm [in.]	4.78 [0.188]	4.78 [0.188]	4.78 [0.188]	4.78 [0.188]	4.78 [0.188]	4.78 [0.188]
Perforation open area, %	17.3	18.6	18.8	18.8	19.6	20.2
Door Opening Information						
Door opening size, mm [in.]	295 [11.6]	363 [14.3]	414 [16.3]	414 [16.3]	470 [18.5]	470 [18.5]
Height of door bottom above floor, mm [in.]	365 [14.4]	356 [14.0]	370 [14.6]	379 [14.9]	455 [17.9]	455 [17.9]
Height of door opening above floor, mm [in.]	432 [17.0]	431 [17.0]	451 [17.7]	460 [18.1]	551 [21.7]	551 [21.7]
Power Consumption						
Average power used per cycle, kW-hr. (X-voltage, non-heat models)	0.09	0.12	0.16	0.21	0.27	0.30
Estimated Building Heat Load						
HVAC load	Use 5% of total energy used per cycle.					
Drive Train Information						

Table 1

continues...

Specification		20	30	40	60	80	100
Number of motors in drive train		1	1	1	1	1	1
Drive motor power, kW [hp]		0.75 [1]	0.75 [1]	1.5 [2]	2.25 [3]	3.75 [5]	3.75 [5]
Cylinder Speeds							
Gentle wash/reverse, G [RPM]		0.4 [37]	0.4 [34]	0.4 [33]	0.4 [31]	0.4 [28]	0.4 [28]
Wash/reverse, G [RPM]		0.8 [51]	0.8 [48]	0.8 [46]	0.8 [43]	0.8 [39]	0.8 [39]
Distribution, G [RPM]		2.5 [92]	2.5 [86]	2.5 [82]	2.5 [77]	2.5 [70]	2.5 [70]
Very low extract, G [RPM]		27 [301]	27 [282]	27 [269]	27 [252]	27 [230]	27 [230]
Low extract, G [RPM]		80 [518]	80 [485]	80 [464]	80 [434]	80 [396]	80 [396]
Medium extract, G [RPM]		100 [579]	100 [542]	100 [518]	100 [485]	100 [443]	100 [443]
High extract, G [RPM]		125 [648]	125 [606]	125 [579]	125 [542]	125 [495]	125 [495]
Very high extract, G [RPM]		150 [710]	150 [664]	150 [635]	150 [594]	150 [542]	150 [542]
Ultra high extract, G [RPM]		200 [819]	200 [766]	200 [733]	200 [686]	200 [626]	165 [568]
Direct Steam Heating (Optional)							
Steam inlet connection size, in. (NPT)		N/A	N/A	1/2	1/2	1/2	1/2
Number of steam inlets		N/A	N/A	1	1	1	1
Maximum pressure, kPa [psi]		N/A	N/A	570 [85]	570 [85]	570 [85]	570 [85]
Required pressure, (min. - max. kPa [psi])		200-570 [30-85]	200-570 [30-85]	200-570 [30-85]	200-570 [30-85]	200-570 [30-85]	200-570 [30-85]
Steam re-quired to raise bath water temperature 10°C/kg [10°F/lbs.]	LOW	N/A	N/A	0.94 [2.09]	1.63 [3.80]	1.72 [3.80]	1.72 [3.80]
	MED	N/A	N/A	1.09 [2.40]	2.11 [4.65]	2.11 [4.65]	2.49 [5.49]
	HIGH	N/A	N/A	1.29 [2.84]	2.63 [5.79]	2.63 [5.79]	3.10 [6.84]
Average consumption per cycle, kgf m [BHP]		N/A	N/A	59 [0.78]	75 [0.98]	102 [1.34]	120 [1.58]
Electrical Heating (Optional)							
Total electrical heating capacity, kW	200V	5.4	5.4	10.8	10.8	19.1	19.1
	240V	7.8	7.8	15.6	15.6	27.4	27.4
	380V	6.5	6.5	13.0	13.0	17.2	17.2

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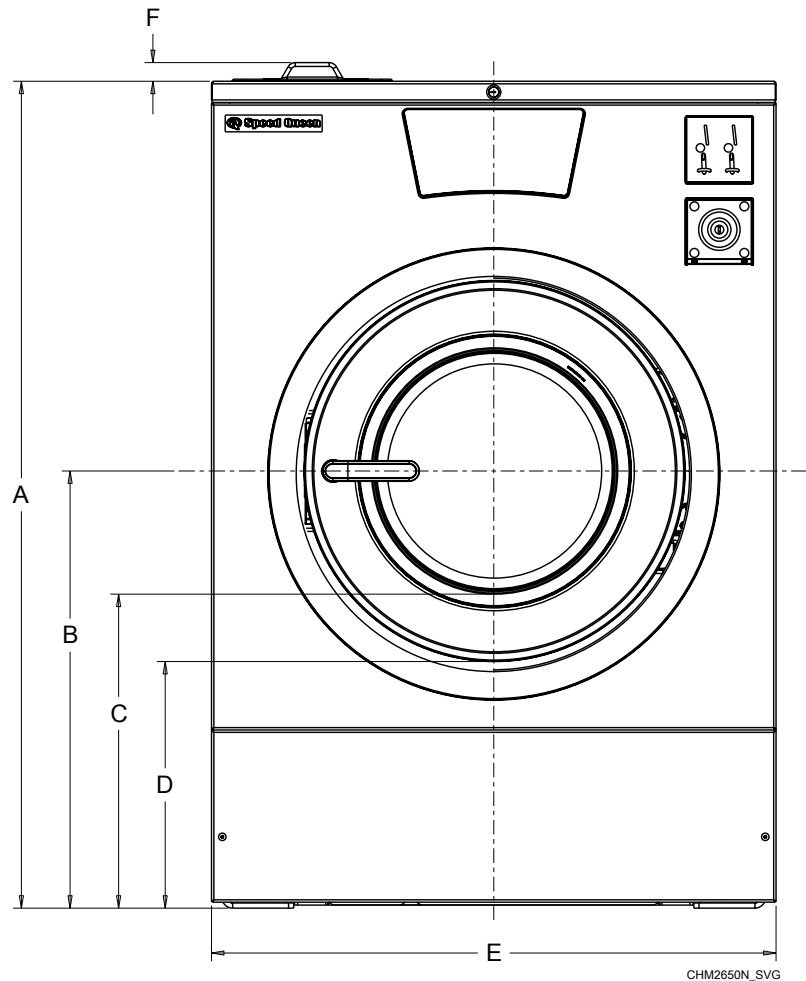
Table 1

Specifications and Dimensions

Specification		20	30	40	60	80	100
	415V	7.8	7.8	15.5	15.5	20.5	20.5
	480V	N/A	N/A	15.6	15.6	27.4	27.4
Number of electrical heating elements		3	3	6	6	6	6
Electrical heat element size, kW		2.6	2.6	2.6	2.6	4.2	4.2
Time required to raise bath temperature, minutes per 5.5°C [10°F]	LOW	1.690	2.545	1.792	2.648	2.101	2.436
	MED	2.048	3.119	2.187	2.902	2.268	2.843
	HIGH	2.368	3.693	2.394	3.269	2.643	3.031
Noise Emissions							
dBA	Wash	58	58	58	58	60	64
	Extract (100G)	56	56	58	60	67	69
	Extract (200G)	61	65	65	65	73	73
N/A = Not Applicable							

Table 1

Machine Dimensions

Front View**Figure 3**

Machine Dimensions, mm [in.]						
Specifica- tion	20	30	40	60	80	100
A	1092 [43.0]	1168 [46.0]	1224 [48.2]	1267 [49.9]	1453 [57.2]	1453 [57.2]
B	584 [23.0]	610 [24.0]	660 [26.0]	671 [26.4]	785 [30.9]	785 [30.9]
C	432 [17.0]	432 [17.0]	450 [17.7]	460 [18.1]	551 [21.7]	551 [21.7]
D	366 [14.4]	356 [14.0]	371 [14.6]	378 [14.9]	378 [17.9]	378 [17.9]
E	660 [26.0]	737 [29.0]	777 [30.6]	866 [34.1]	1054 [41.5]	1054 [41.5]
F	28 [1.1]	28 [1.1]	28 [1.1]	28 [1.1]	28 [1.1]	28 [1.1]

Table 2

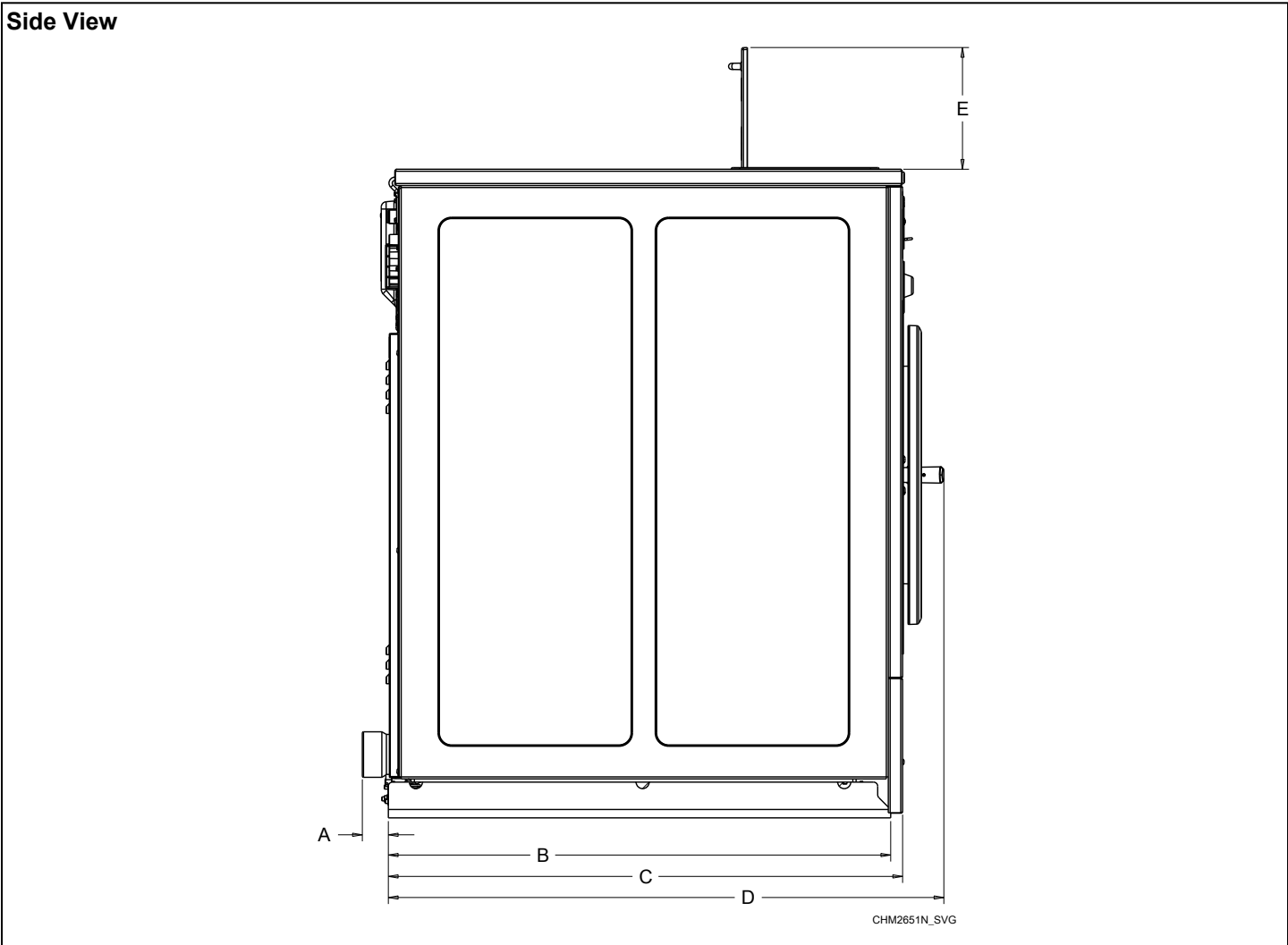
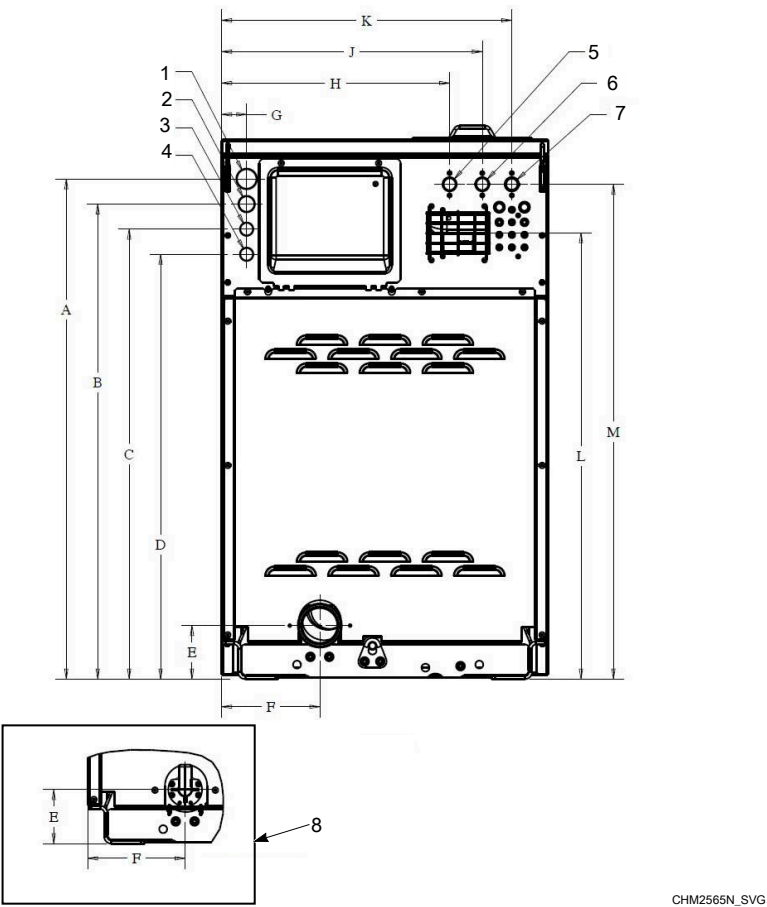


Figure 4

Machine Dimensions, mm [in.]						
Specifica- tion	20	30	40	60	80	100
A	51 [2.0]	51 [2.0]	51 [2.0]	51 [2.0]	28 [1.1]	28 [1.1]
B	681 [26.8]	800 [31.5]	902 [35.5]	980 [38.6]	996 [39.2]	996 [39.2]
C	693 [27.3]	808 [31.8]	940 [37.0]	1003 [39.5]	1120 [44.1]	1222 [48.1]
D	785 [30.9]	897 [35.3]	1074 [42.3]	1135 [44.7]	1196 [47.1]	1298 [51.1]
E	236 [9.3]	236 [9.3]	236 [9.3]	236 [9.3]	236 [9.3]	236 [9.3]
Door width	442 [17.4]	511 [20.1]	584 [23.0]	584 [23.0]	663 [26.1]	663 [26.1]

Table 3

20-30 Models Rear View



- 1. 1 1/2" Electrical
- 2. 1 1/8" Electrical
- 3. 7/8" Electrical
- 4. 7/8" Electrical
- 5. Compartment Cold Fill Valve
- 6. Compartment Hot Fill Valve
- 7. Cold Hard Water Valve or 3rd Water Inlet
- 8. Pump Drain View

Figure 5

Machine Dimensions, mm [in.]		
Specification	20	30
A	1011 [39.8]	1087 [42.8]
B	960 [37.8]	1036 [40.8]
C	909 [35.8]	986 [38.8]
D	859 [33.8]	935 [36.8]

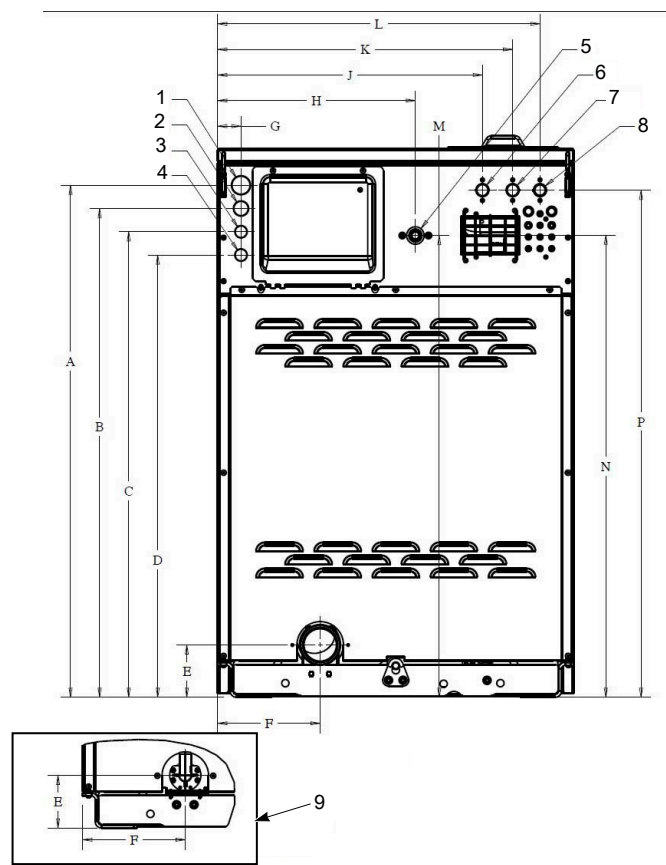
Table 4

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Machine Dimensions, mm [in.]		
Specification	20	30
E	99 [3.9]	109 [4.3]
F	198 [7.8]	236 [9.3]
G	51 [2.0]	51 [2.0]
H	460 [18.1]	536 [21.1]
J	526 [20.7]	602 [23.7]
K	587 [23.1]	663 [26.1]
L	1001 [39.4]	1077 [42.4]
M	904 [35.6]	978 [38.5]

Table 4

40 Models Rear View



CHM2566N_SVG

- 1. 1 1/2" Electrical
- 2. 1 1/8" Electrical
- 3. 7/8" Electrical
- 4. 7/8" Electrical
- 5. Steam Valve
- 6. Compartment Cold Fill Valve
- 7. Compartment Hot Fill Valve
- 8. Cold Hard Water Valve or 3rd Water Inlet
- 9. Pump Drain View

Figure 6

Machine Dimensions, mm [in.]	
Specification	40
A	1143 [45.0]
B	1092 [43.0]
C	1049 [41.3]

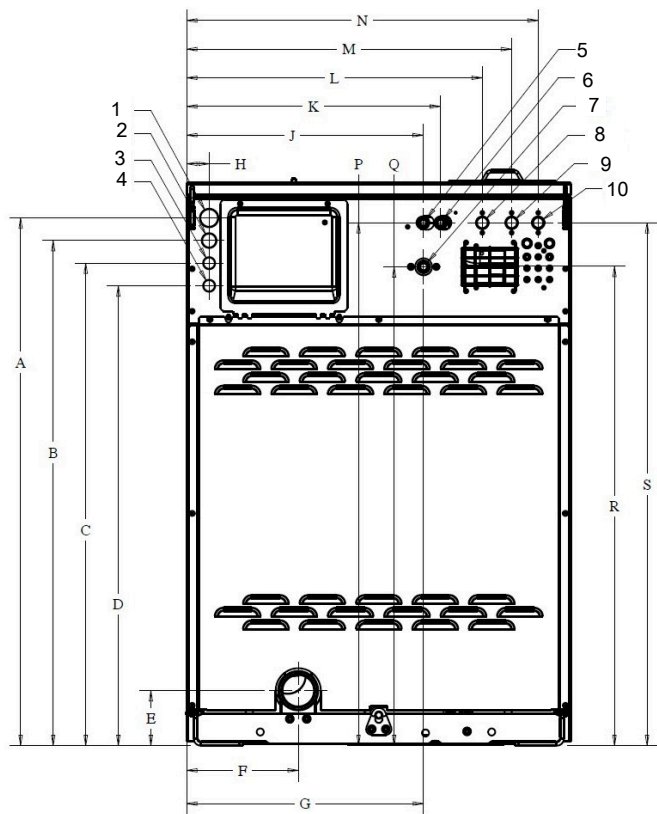
Table 5

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Machine Dimensions, mm [in.]	
Specification	40
D	991 [39.0]
E	114 [4.5]
F	224 [8.8]
G	432 [17.0]
H	51 [2.0]
J	579 [22.8]
K	645 [25.4]
L	704 [27.7]
M	1008 [39.7]
N	1133 [44.6]
P	1130 [44.5]

Table 5

60-100 Models Rear View



CHM2567N_SVG

- 1. 1 1/2" Electrical
- 2. 1 1/8" Electrical
- 3. 7/8" Electrical
- 4. 7/8" Electrical
- 5. Tub Cold Fill Valve
- 6. Tub Hot Fill Valve
- 7. Steam Valve
- 8. Compartment Cold Fill Valve
- 9. Compartment Hot Fill Valve
- 10. Cold Hard Water Valve or 3rd Water Inlet

Figure 7

Machine Dimensions, mm [in.]			
Specification	60	80	100
A	1186 [46.7]	1372 [54.0]	1372 [54.0]
B	1135 [44.7]	1321 [52.0]	1321 [52.0]

Table 6

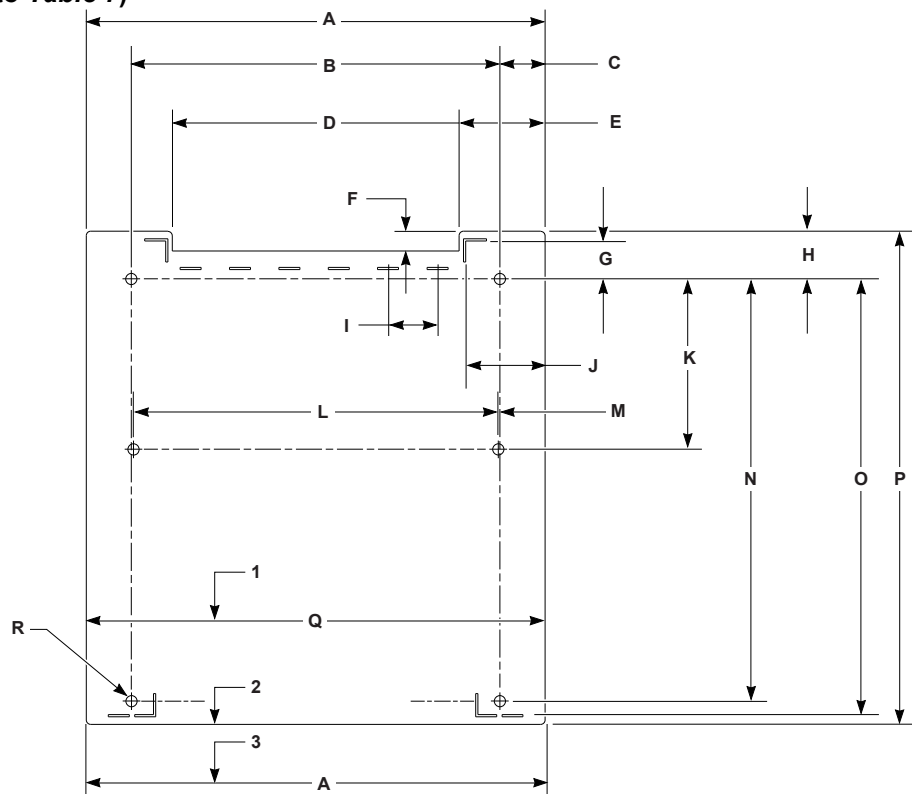
continues...

Machine Dimensions, mm [in.]			
Specification	60	80	100
C	1085 [42.7]	1270 [50.0]	1270 [50.0]
D	1034 [40.7]	1219 [48.0]	1219 [48.0]
E	124 [4.9]	130 [5.1]	130 [5.1]
F	251 [9.9]	69 [2.7]	69 [2.7]
G	533 [21.0]	732 [28.8]	732 [28.8]
H	51 [2.0]	51 [2.0]	51 [2.0]
J	533 [21.0]	721 [28.4]	721 [28.4]
K	572 [22.5]	759 [29.9]	759 [29.9]
L	665 [26.2]	853 [33.6]	853 [33.6]
M	732 [28.8]	919 [36.2]	919 [36.2]
N	792 [31.2]	980 [38.6]	980 [38.6]
P	1176 [46.3]	1336 [52.6]	1336 [52.6]
Q	1077 [42.4]	1262 [49.7]	1262 [49.7]
R	1176 [46.3]	1361 [53.6]	1361 [53.6]
S	1097 [42.4]	1262 [49.7]	1262 [49.7]

Table 6

Mounting Bolt Hole Locations – 20 and 30 Models

20-30 Models (refer to *Table 7*)



CHM2609N_SVG

1. Elevated Base Width
2. Front of Mounting Bolt Template
3. Machine Width

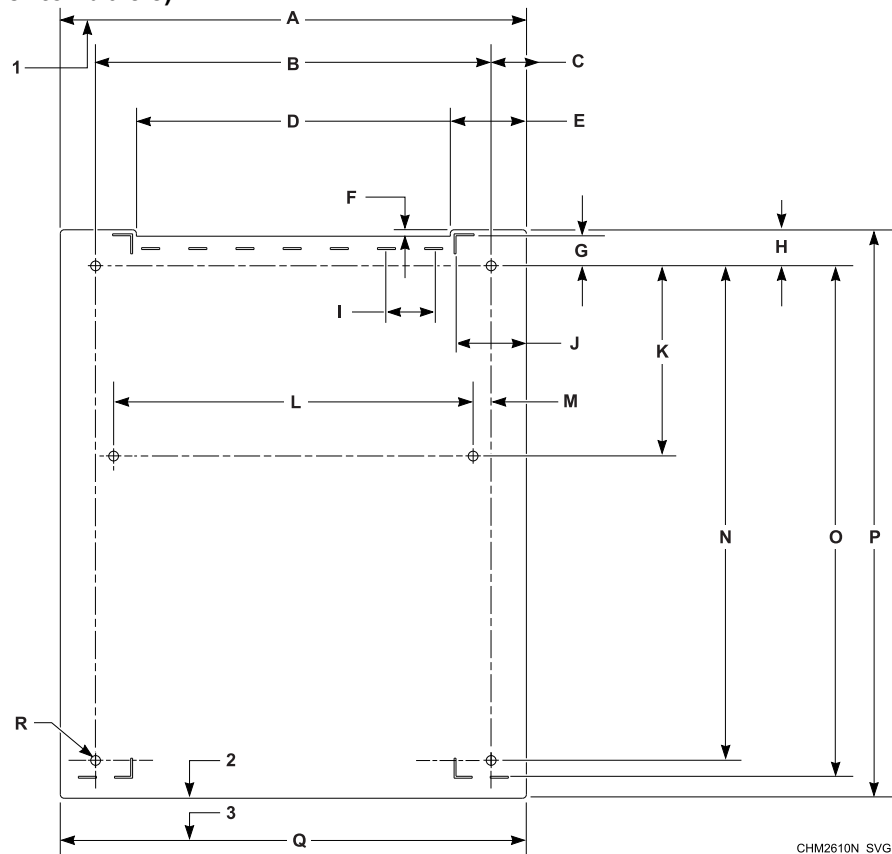
Figure 8

Mounting Bolt Hole Locations – 20 and 30 Models, mm [in.]		
Specification	20	30
A	660 [26]	737 [29]
B	530 [20.875]	607 [23.886]
C	65 [2.562]	65 [2.558]
D	413 [16.25]	479 [18.87]
E	124 [4.875]	129 [5.065]
F	28 [1.12]	26 [1.033]
G	55 [2.15]	46 [1.81]
H	69 [2.71]	60 [2.37]
I	71 [2.8]	71 [2.813]
J	114 [4.5]	114 [4.51]
K	245 [9.638]	267 [10.5]
L	525 [20.649]	597 [23.5]
M	3 [0.113]	5 [0.188]
N	608 [23.938]	735 [28.938]
O	627 [24.69]	754 [29.69]
P	710 [27.95]	597 [32.38]
Q	660 [26]	737 [29]
R	16 [0.641]	16 [0.641]

Table 7

Mounting Bolt Hole Locations - 40 and 60 Models

40 and 60 Models (refer to *Table 8*)



- 1. Elevated Base Width
- 2. Front of Mounting Bolt Template
- 3. Machine Width

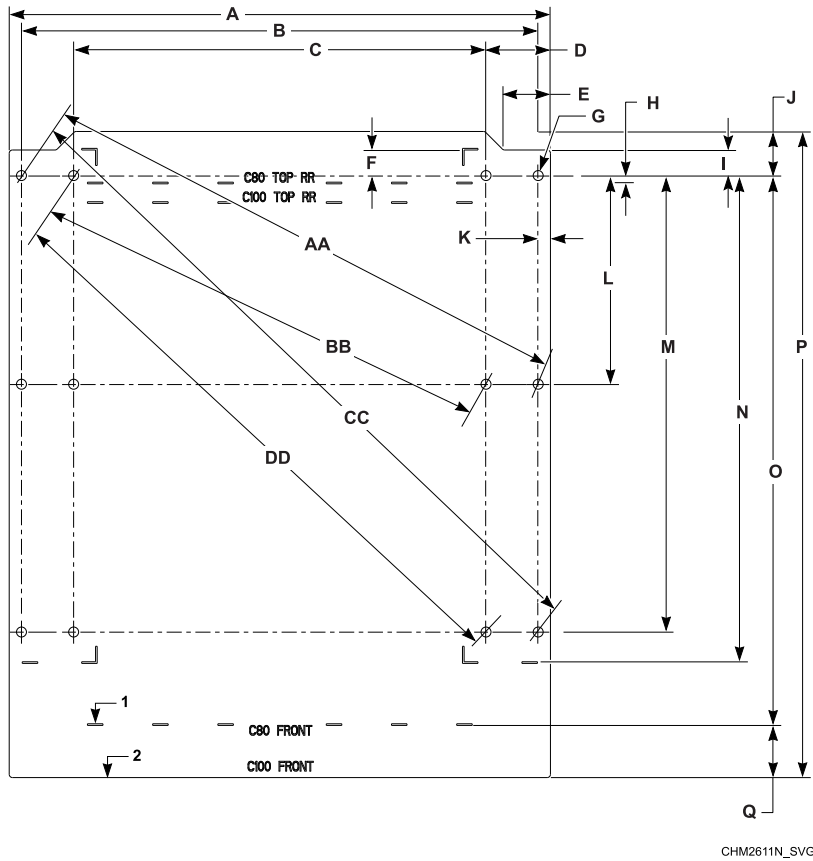
Figure 9

Mounting Bolt Hole Locations - 40 and 60 Models, mm [in.]		
Specification	40	60
A	778 [30.63]	865 [34.06]
B	660 [26]	762 [30]
C	59 [2.315]	52 [2.03]
D	524 [20.63]	594 [23.39]
E	127 [5]	136 [5.34]
F	11 [0.422]	16 [0.614]
G	50 [1.98]	44 [1.75]
H	60 [2.37]	60 [2.37]
I	79 [3.1]	83 [3.28]
J	118 [4.63]	126 [4.96]
K	318 [12.5]	303 [11.927]
L	600 [23.626]	699 [27.5]
M	30 [1.187]	32 [1.25]
N	826 [32.5]	914 [36]
O	852 [33.54]	699 [36.87]
P	949 [37.36]	1034 [40.7]
Q	777 [30.6]	866 [34.1]
R	16 [0.641]	16 [0.641]

Table 8

Mounting Bolt Hole Locations – 80 and 100 Models

80 and 100 Models (refer to Table 9)



1. Front of Mounting Bolt Template

NOTE: For single machine installations or two machines installed back to back, use the outside bolt holes marked “A”. For multiple machines installed side by side with minimum clearance, use the inside bolt holes marked “B”.

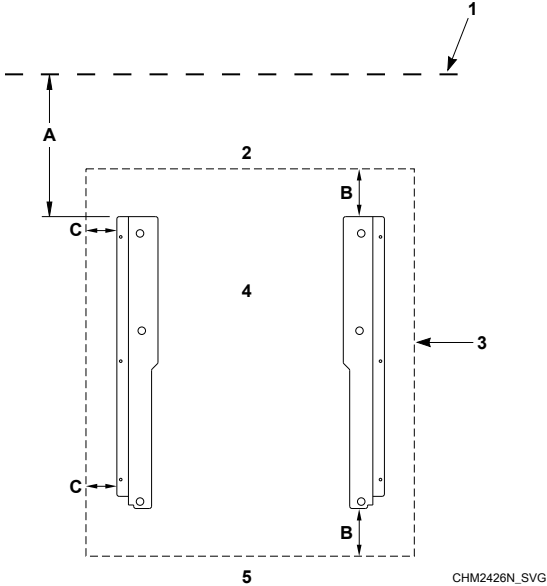
Figure 10

Mounting Bolt Hole Locations – 80 and 100 Models, mm [in.]			
Specification		80	100
A		1054 [41.5]	1054 [41.5]
B		1006 [39.62]	1006 [39.62]
C		803 [31.62]	803 [31.62]
D		124 [4.94]	124 [4.94]
E		92 [3.612]	92 [3.612]
F		50 [1.96]	50 [1.96]
G		19 [0.766]	19 [0.766]
H		13 [0.508]	13 [0.508]
I		50 [1.96]	50 [1.96]
J		86 [3.38]	86 [3.38]
K		24 [0.94]	24 [0.94]
L		406 [16]	406 [16]
M		889 [35]	889 [35]
N		947 [37.28]	947 [37.28]
O		1071 [42.16]	1071 [42.16]
P		1258 [49.54]	1258 [49.54]
Q		102 [4]	102 [4]
AA	Outside	1085 [42.72]	1085 [42.72]
BB	Inside	900 [35.43]	900 [35.43]
CC	Outside	1342 [52.86]	1342 [52.86]
DD	Inside	1197 [47.16]	1197 [47.16]

Table 9

Floor Mounting Layout – 20-60 Models

Dimensional Clearances - Single Machine Mount (refer to *Table 10*)

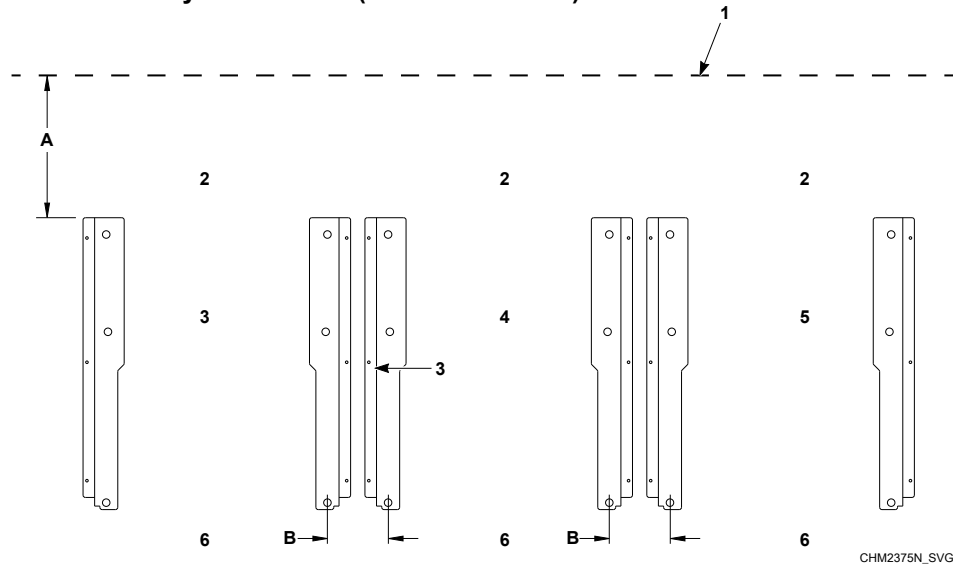


- 1. Wall
- 2. Rear of Base
- 3. Edge of Concrete Pad
- 4. Machine 1
- 5. Front of Base

Figure 11

Dimensional Clearances - Single Machine Mount - 20-60 Models, mm [in.]					
Description		20	30	40	60
A	Distance to wall (minimum)	610 [24]	610 [24]	610 [24]	610 [24]
B	Distance of machine base to edge of pad (minimum)	87 [3.44]	102 [4]	101 [3.99]	152 [5.99]
C	Distance of machine base to edge of pad (minimum)	64 [2.52]	64 [2.51]	71 [2.81]	131 [5.18]

Table 10

Dimensional Clearances - Side-by-Side Mount (refer to *Table 11*)

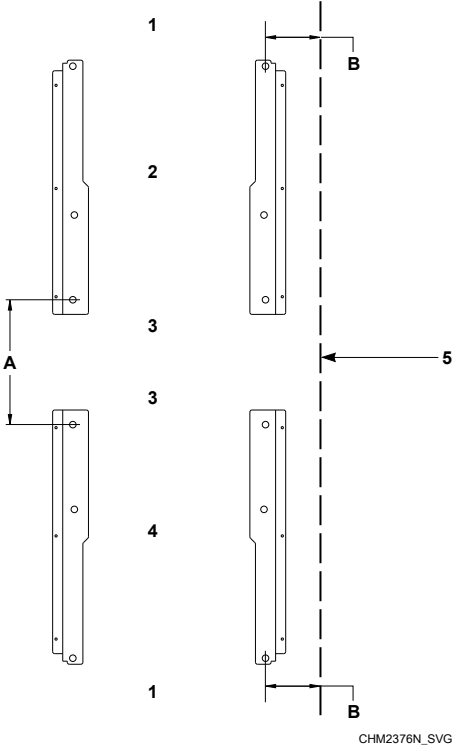
- 1. Wall
- 2. Rear of Base
- 3. Machine 1
- 4. Machine 2
- 5. Machine 3
- 6. Front of Base

Figure 12

Dimensional Clearances - Side-by-Side Mount - 20-60 Models, mm [in.]					
Description		20	30	40	60
A	Distance to wall (minimum)	610 [24]	610 [24]	610 [24]	610 [24]
B	Mounted without bases (minimum)	131 [5.14]	130 [5.12]	118 [4.63]	103 [4.06]
	Mounted with bases (minimum)	139 [5.5]	139 [5.5]	124 [4.88]	112 [4.44]

Table 11

Dimensional Clearances - Back-to-Back Mount (refer to Table 12)



- 1. Front of Machine
- 2. Machine 2
- 3. Rear of Machine
- 4. Machine 1
- 5. Edge of Concrete Pad

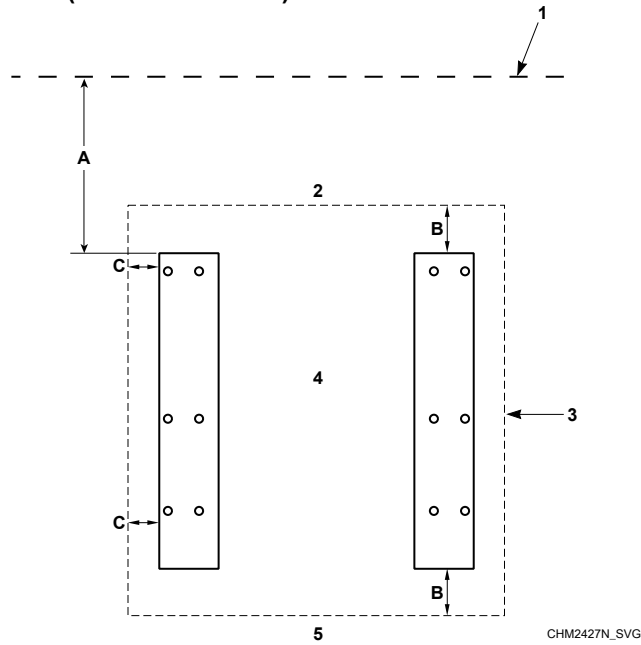
Figure 13

Dimensional Clearances - Back-to-Back Mount - 20-60 Models, mm [in.]					
Description		20	30	40	60
A	Adjacent rear bolt spacing (minimum)	719 [28.3]	702 [27.6]	710 [28.0]	699 [27.5]
B	Distance from front bolt to edge of pad (minimum)	134 [5.26]	134 [5.26]	157 [6.19]	226 [8.9]

Table 12

Floor Mounting Layout – 80 and 100 Models

Standard Mount for Single Machine (refer to *Table 13*)



1. Wall
2. Rear of Base
3. Edge of Concrete Pad
4. Machine 1
5. Front of Base

Figure 14

Standard Mount for Single Machine - 80 and 100 Models, mm [in.]		
Description		80-100
A	Distance to wall (minimum)	610 [24]
B	Distance of machine base to edge of pad (minimum)	126 [4.98]
C	Distance of machine base to edge of pad (minimum)	203 [8]

Table 13

Standard Mount Side-by-Side (refer to *Table 14*)

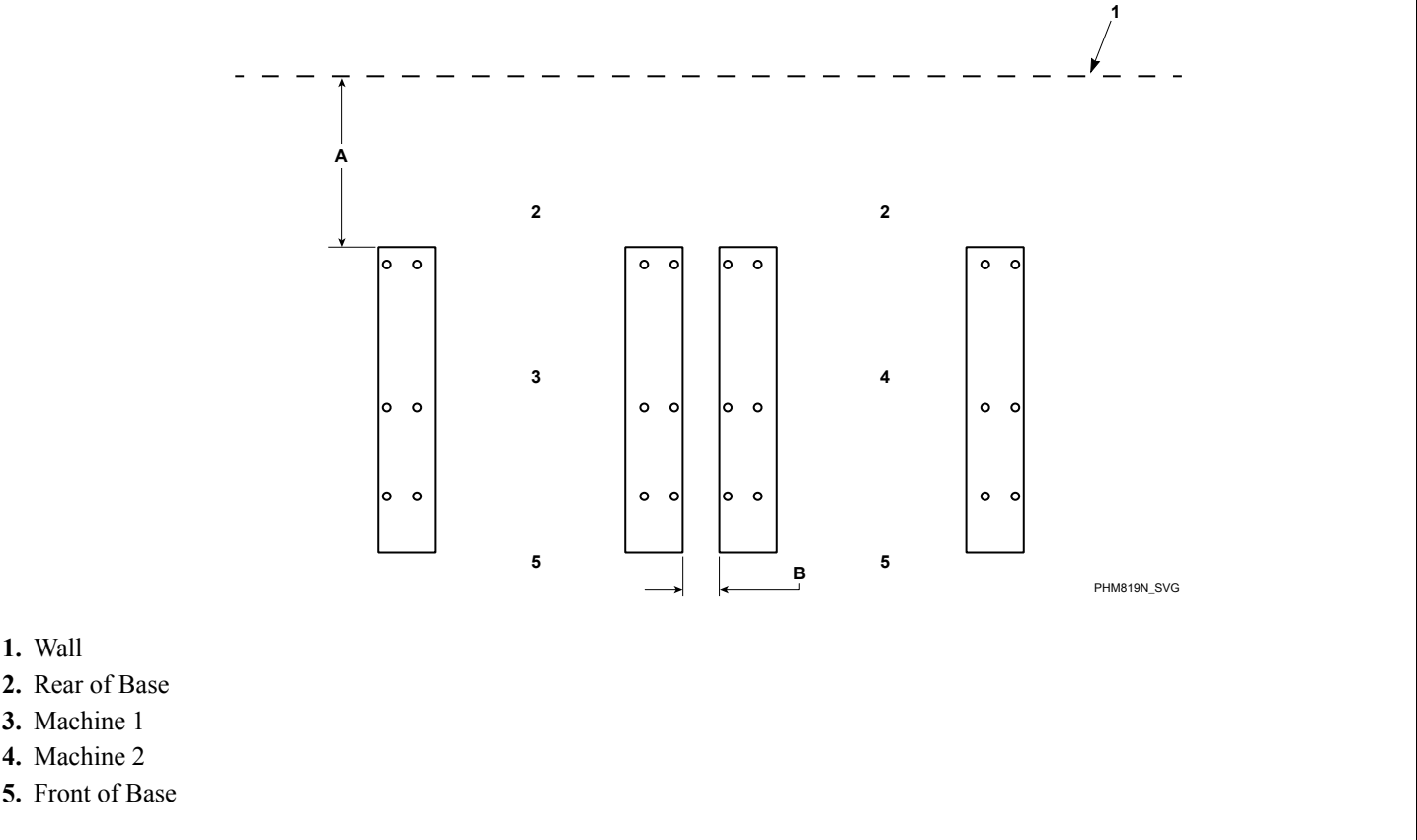
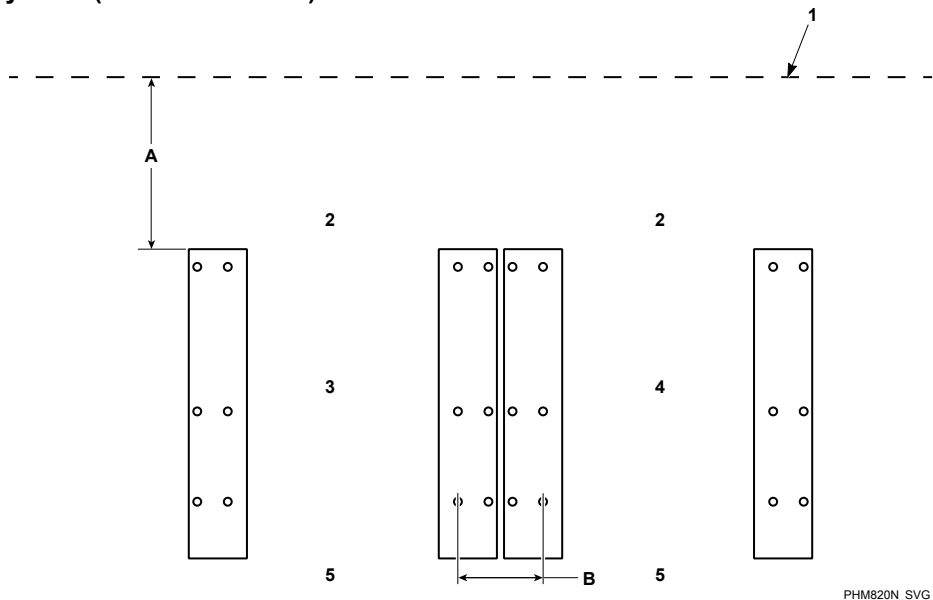


Figure 15

Standard Mount Side-by-Side - 80 and 100 Models, mm [in.]		
Description		80-100
A	Distance to wall (minimum)	610 [24]
B	Adjacent unit bolt spacing (minimum)	152 [6]

Table 14

Close Mount Side-by-Side (refer to Table 15)



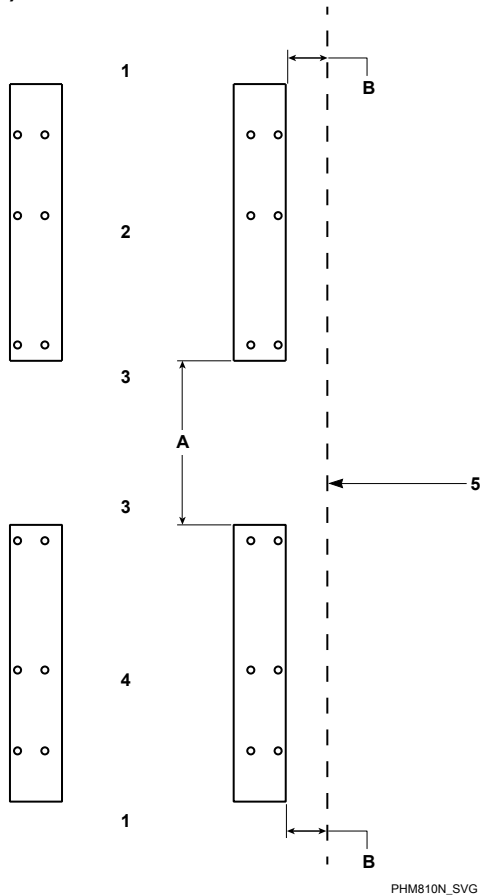
- 1. Wall
- 2. Rear of Base
- 3. Machine 1
- 4. Machine 2
- 5. Front of Base

Figure 16

Close Mount Side-by-Side - 80 and 100 Models, mm [in.]		
Description		80-100
A	Distance to wall (minimum)	610 [24]
B	Adjacent unit bolt spacing (minimum)	264 [10.38]
IMPORTANT: When close mounting, bolt machine using inside bolt holes.		

Table 15

Back-to-Back Mount (refer to Table 16)



- 1. Front of Machine
- 2. Machine 2
- 3. Rear of Machine
- 4. Machine 1
- 5. Edge of Concrete Pad

Figure 17

Back-to-Back Mount - 80 and 100 Models, mm [in.]		
Description		80-100
A	Adjacent rear bolt spacing (minimum)	846 [33.3]
B	Distance from front bolt to edge of pad (minimum)	203 [8]

Table 16

Installation

Single Machine Foundation Requirements

A minimum 3500 psi (refer to rating per supplier) reinforced concrete set on a prepared bed is required for all new machine installations.

NOTE: Do not mount on wooden floors, tile floors, elevated floor levels, stacked multiple base frames, or over basements or crawl spaces because of the high extract speed and the G-forces exerted. For 80 models and larger, do not mount on metal base frames.

Thoroughness of detail must be stressed with all foundation work to ensure a stable unit installation, eliminating possibilities of excessive vibration during extract.

	WARNING
To reduce the risk of fire, serious injury, property damage and/or death, install the machine on a level (within 3/8 inch), uncovered concrete floor of sufficient strength at grade.	
W787	

For new foundations a mounting bolt template or an elevated metal base frame is available at extra cost. For all installations a concrete hardware kit is available at extra cost.

The machine must be anchored to a smooth level surface so that the entire base of the machine is supported and rests on the mounting surface.

IMPORTANT: Do not permanently support the machine on only four points with spacers. Grouting is required and spacers must be removed.

Machine Installation on Existing Floor

The existing floor slab must be reinforced concrete without voids under slab and meet depth requirements per *Table 18*. If the floor meets these requirements and an elevated pad is NOT desired, refer to *Figure 19* and proceed to *Machine Mounting and Grouting*.

If the floor does not meet these requirements and an elevated pad is NOT desired, refer to *Figure 22* and proceed to *Machine Mounting and Grouting*.

Elevated Pad Installation with Existing Floor

The existing floor slab must meet minimum requirements shown in *Table 1* per machine. The floor must be reinforced concrete without voids under slab. If the slab meets these requirements and an elevated pad is desired, refer to *Figure 21* and proceed to *Machine Foundation and Pad Installation* section.

Elevated Base Frame Installation with Existing Floor

The existing floor slab must meet minimum requirements shown in *Table 1* per machine. The floor must be reinforced concrete without voids under slab. If the slab meets these requirements and an elevated base frame is desired, refer to *Figure 21* and *Figure 1* and proceed to *Machine Mounting and Grouting*.

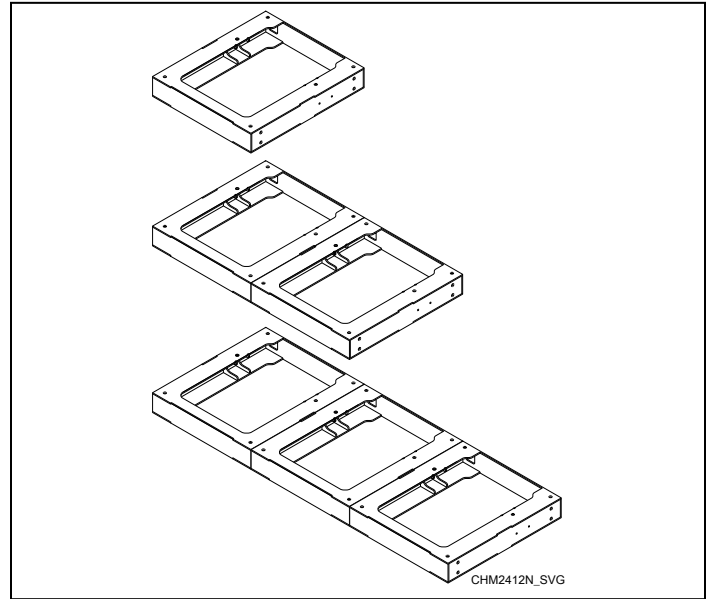


Figure 18

New Foundation

If the existing floor slab does not meet the single machine foundation requirements per model and/or a new monolithic foundation is desired, refer to *Figure 20* and proceed to *Foundation and Pad Installation*.

Isolated Pad Installation

This type of installation is NOT recommended. Installer MUST consult a Structural Engineer for concrete specifications and requirements for installations that will not be tied into adjacent foundations.

IMPORTANT: The above instructions and recommendations are conservative specifications for a typical installation based on consultations with a structural engineer. Alliance Laundry Systems stands behind all installations meeting these specifications. For alternate installation specifications based on your soil type, location, building structure, unique floor geometry, machine types, and utilities, consult a structural engineer in your local area.

Foundation and Pad Installation

A concrete pad may be constructed to elevate a machine. Care must be exercised in the design of the pad due to the force exerted by the machine during extract. This concrete pad, recommended not to exceed 203 mm [8 inches] above existing floor, must be placed, reinforced with rebar and tied to the existing floor. Refer to *Floor Layout and Pad Dimensions* and *Foundation Requirements* sections for multiple machine installations.

Elevated Pad, mm [in.]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed)	80-100
A	Height of elevated pad above floor (maximum)	203 [8]	203 [8]	203 [8]	203 [8]
B	Distance between reinforcing bars (maximum)	305 [12]	305 [12]	305 [12]	305 [12]
C	Length of reinforcing bar extending into existing floor (minimum)	64 [2.5]	64 [2.5]	64 [2.5]	64 [2.5]
D	Total depth of foundation (concrete plus 152 mm [6 in.] fill) (minimum)	203 [8]	203 [8]	305 [12]	381 [15]
E	Required thickness of existing floor (minimum)	102 [4]	102 [4]	152 [6]	152 [6]

Table 17

IMPORTANT: Do NOT install a pad on top of the existing floor. The foundation and pad must be constructed and tied together as one piece.

If the existing floor is not reinforced concrete at least 305 mm [12 inches] thick, an elevated pad is desired or multiple machines are to be installed, the following steps must be performed (refer to *Foundation Requirements*):

1. Cut a hole through the existing floor that is larger on all sides than the machine base, refer to *Floor Layout and Pad Dimensions*.
2. Excavate to a depth as indicated in *Table 17* from the top of the existing floor.
3. If installing a foundation with elevated pad, prepare a form for the above-ground portion of the foundation. Verify that the top of the foundation is level. The height of the foundation pad must not exceed 203 mm [8 inches] above the existing floor.
4. Backfill with clean fill dirt.
5. Compact backfill, making sure to allow for correct concrete thickness.
6. Drill holes (refer to manufacturer's requirements for drill hole size) for the perimeter reinforcing bar at a depth of 64 mm [2-1/2 inches] into the existing floor. The reinforcing should be 305 mm [12 inches] on center each way around entire perimeter.
7. Clean out debris from each reinforcing bar hole.
8. Fill half the hole depth with acrylic adhesive.

NOTE: Procure acrylic adhesive rated for commercial-grade vibratory machine installations

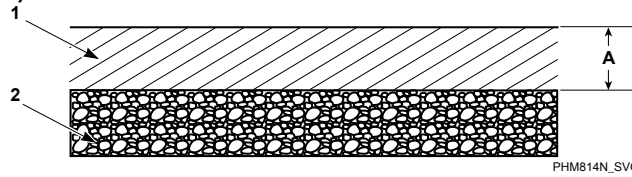
9. Using 60 ksi [#4] reinforcing bar, tie new pad to existing floor making sure to tie reinforcing bars at the intersections and using proper reinforcing bar supports to hold bars at the proper depth in the pad.
10. Allow adhesive around reinforcing bar to cure properly, refer to adhesive manufacturer for recommended cure times.
11. Completely fill with 3500 psi concrete up to the existing foundation level plus any added level (maximum of 203 mm [8 inch]) for the desired elevated pad. The concrete must be poured so that the entire foundation and pad cures as one piece.
12. Allow concrete to cure, refer to manufacturer's recommended cure times.
13. Using a mounting bolt template or machine base, mark where the holes should be drilled to mount the machine.

NOTE: As an alternate method, cast in the Grade 5 (minimum SAE rating), 16 mm [5/8 inch] for 20-60 models and 19 mm [3/4 inch] for 80 and 100 anchor bolts as the concrete is poured, refer to *Figure 24* and *Table 22*.

14. Proceed to *Machine Mounting and Grouting*.

Foundation Requirements

Existing Floor (refer to Table 18)



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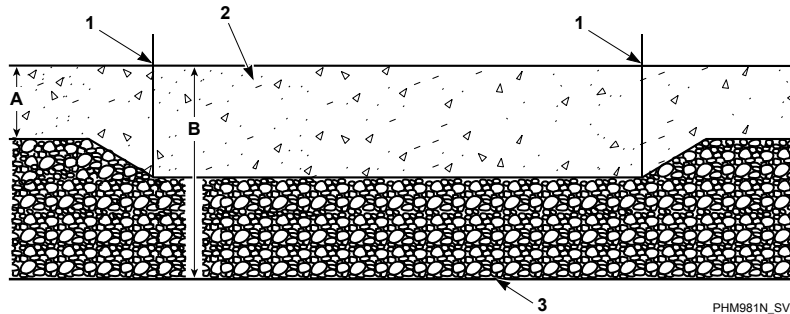
1. Existing Floor with 3500 PSI (minimum) Concrete
2. Compacted Fill (minimum 152 mm [6 in.])

Figure 19

Existing Floor, mm [in.]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed) / 80-100 (F-speed)	80-100 (V-speed)
A	Required thickness of existing floor (minimum)	102 [4]	102 [4]	152 [6]	229 [9]

Table 18

New Monolithic Floor (refer to Table 19)



PHM981N_SVG

1. Edge of Pad
2. 3500 PSI (minimum) Concrete
3. Compacted Fill (minimum 152 mm [6 in.] beneath machine)

Figure 20

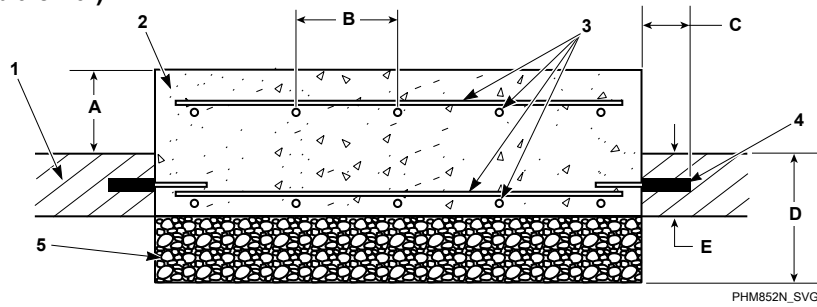
New Monolithic Floor, mm [in.]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed) / 80-100 (F-speed)	80-100 (V-speed)
A	Depth of Surrounding Floor	102 [4]	102 [4]	152 [6]	229 [9]

Table 19

continues...

New Monolithic Floor, mm [in.]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed) / 80-100 (F-speed)	80-100 (V-speed)
B	Total depth of foundation (concrete plus 152 mm [6 in.] fill) (minimum)	254 [10]	254 [10]	305 [12]	381 [15]

Table 19

Elevated Pad (refer to Table 20)

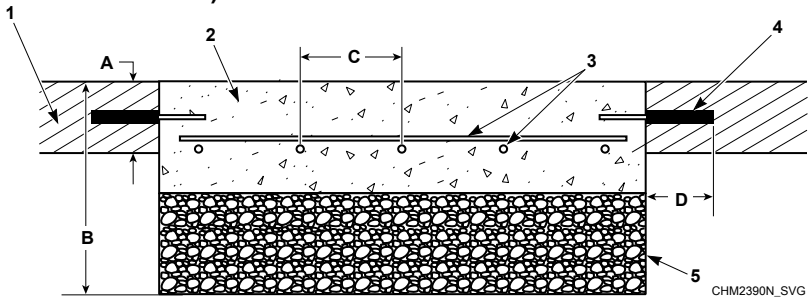
1. Existing Floor
2. 3500 PSI (minimum) Concrete
3. Reinforcing Bar
4. Perimeter Reinforcing Bar
5. Compacted Fill (minimum 152 mm [6 in.])

Figure 21

Elevated Pad, mm [in.]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed) / 80-100 (F-speed)	80-100 (V-speed)
A	Height of elevated pad above floor (maximum)	203 [8]	203 [8]	203 [8]	203 [8]
B	Distance between reinforcing bars (maximum)	305 [12]	305 [12]	305 [12]	305 [12]
C	Length of reinforcing bar extending into existing floor (minimum)	64 [2.5]	64 [2.5]	64 [2.5]	64 [2.5]
D	Total depth of foundation (concrete plus 152 mm [6 in.] fill) (minimum)	254 [10]	254 [10]	305 [12]	381 [15]
E	Required thickness of existing floor (minimum)	102 [4]	102 [4]	152 [6]	229 [9]

Table 20

Tie-in to Existing Floor (refer to Table 21)



- 1. Existing Floor
- 2. 3500 PSI (minimum) Concrete
- 3. Reinforcing Bar
- 4. Perimeter Reinforcing Bar
- 5. Compacted Fill (minimum 152 mm [6 in.])

Figure 22

Tie-in to Existing Floor, mm [in.]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed) / 80-100 (F-speed)	80-100 (V-speed)
A	Required thickness of existing floor (minimum)	102 [4]	102 [4]	152 [6]	229 [9]
B	Total depth of foundation (concrete plus 152 mm [6 in.] fill)(minimum)	254 [10]	254 [10]	305 [12]	381 [15]
C	Distance between reinforcing bars (minimum)	305 [12]	305 [12]	305 [12]	305 [12]
D	Length of reinforcing bar extending into existing floor (minimum)	64 [2.5]	64 [2.5]	64 [2.5]	64 [2.5]

Table 21

Machine Mounting and Grouting

NOTE: After the concrete has cured completely and the cast-in-place method was used, refer to *Figure 24* and proceed to Step 7. If acrylic adhesive anchors are desired, refer to *Figure 23* and proceed with Step 1 after concrete has cured completely.

1. Refer to *Table 22* to set the drill depth gauge.
2. Drill the holes to the set depth.
3. Use compressed air or squeeze bulb to clean out debris from each hole.
4. Fill half the hole depth with an industry-accepted adhesive anchoring system.
5. Insert anchor bolt until it reaches the bottom. Refer to *Table 22*.
6. Ensure all air pockets are removed from adhesive surrounding the bolt.
7. Allow adhesive around bolt to cure completely.
8. Remove shipping materials and place the machine or elevated base frame carefully over the bolts.

NOTE: Never attempt to lift the machine by the door handle or by pushing on the cover panels. Always insert a pry bar or other lifting device under the bottom frame of the machine to move it.

IMPORTANT: DO NOT install 80 models or larger machines on an elevated metal base frame.

9. Raise and level the machine or elevated base frame 1.27 cm [1/2 inch] off the floor on four corners, using spacers such as nut fasteners.

	WARNING
Crush hazard. To avoid personal injury and/or property damage, do not tip the machine more than 25 degrees in any direction.	
W793	

10. Completely fill the space between the elevated base frame or machine base and the floor with a good quality **non-shrinking machinery precision grout** to ensure a stable installation. Grout completely under frame. Remove front panel and back panel to gain access to **entire perimeter of base plates**. Force grout under base until all voids are filled.

IMPORTANT: Minimum Grade 5, SAE rating, flat washers and minimum Grade 5, SAE rating, serrated hex flange locknuts are the recommended hardware for anchoring machine or elevated base frame to anchor bolts.

11. Position the flat washers and locknuts on the anchor bolts and finger-tighten to machine base or elevated base frame.
12. Allow machine grout to set, but not cure.

IMPORTANT: Refer to bolt manufacturer's recommended adhesive cure times.

13. Remove the spacers carefully, allowing the machine base or elevated base frame to settle into the wet grout.

NOTE: If installing a 20-60 model directly to finished floor, wait until grout is completely cured and skip to Step 18. If installing on elevated base frame, proceed to Step 14.

20-60 Models

14. After the grout is completely cured, position the machine over the elevated base frame.
15. Align the mounting holes on the machine with the corresponding holes on the elevated base frame.
16. Install a bolt, flat washer and locknut in each mounting hole.
17. Hand tighten each nut.
 - a. Tighten the two rear nuts two turns.
 - b. Tighten the two front nuts two turns.
 - c. Tighten the two middle nuts firmly.
18. Torque all the locknuts to 90 ± 9 ft.-lbs. – one after the other – until all are tightened evenly and the machine is fastened securely to the elevated base frame or floor.

80 Models and Larger

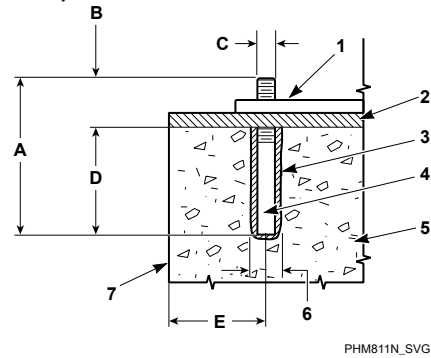
19. After the grout is completely cured, torque the locknuts to 150 ± 15 ft.-lbs. – one after the other – until all are tightened evenly and the machine is fastened securely to the floor.

IMPORTANT: Refer to recommended grout cure times from manufacturer before torquing locknuts.

IMPORTANT: All torque joints must remain dry (non-lubricated).

NOTE: Check and retighten the locknuts after five to ten days of operation and every month thereafter.

Acrylic Adhesive Anchors (refer to *Table 22*)

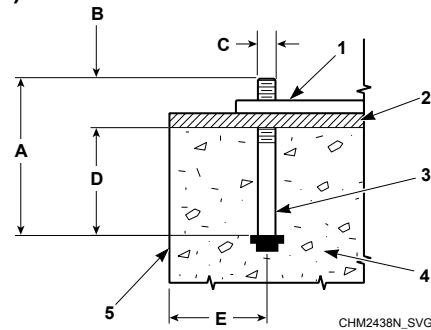


1. Machine Frame Base
2. Grout 13 mm [1/2 in.]
3. Acrylic Adhesive*
4. Anchor Bolt* (minimum Grade 5 SAE rating)
5. Concrete
6. Drill Hole Size per Manufacturer Requirements
7. Edge of Pad

NOTE: *Available for purchase through the distributor. If not purchasing from a distributor, procure acrylic adhesive rated for commercial-grade vibratory machine installations.

Figure 23

Cast-in-place Anchors (refer to *Table 22*)



1. Machine Frame Base
2. Grout
3. Anchor Bolt (minimum Grade 5 SAE rating)
4. Concrete
5. Edge of Pad

Figure 24

Minimum Anchoring Specifications, mm [in.]							
Description		20	30	40	60	80	100
Number of Bolts		4 or 6*	4 or 6*	4 or 6*	6	6	6
A	Bolt Length	152 [6]	152 [6]	152 [6]	152 [6]	216 [8-3/4]	216 [8-3/4]
B	Thread Extension	64 [2-1/2]	64 [2-1/2]	64 [2-1/2]	64 [2-1/2]	70 [2-3/4]	70 [2-3/4]
C	Bolt Diameter	16 [5/8]	16 [5/8]	16 [5/8]	16 [5/8]	19 [3/4]	19 [3/4]
D	Embedment Depth	89 [3-1/2]	89 [3-1/2]	89 [3-1/2]	89 [3-1/2]	152 [6]	152 [6]
E	Distance from Bolt Center to Edge of Concrete Pad	134 [5.26]	134 [5.26]	157 [6.19]	226 [8.9]	227 [8.94]	227 [8.94]
* On 20-40 models, the four (4) corner bolts are required and the two (2) center bolts are optional when mounting a machine or elevated base frame to floor.							

Table 22

Floor Load Data							
Specification		20	30	40	60	80	100
Static floor load, kN [lbs.]		1.91 [430]	2.45 [550]	3.07 [690]	4.09 [920]	7.07 [1590]	7.51 [1690]
Static pressure, kN-m ² [lbs.-ft ²]		4.64 [97]	4.55 [95]	4.69 [98]	5.03 [105]	6.70 [140]	7.13 [149]
Dynamic floor load, kN [lbs.]		1.86 [420]	2.80 [630]	3.74 [840]	5.61 [1260]	7.48 [1680]	7.48 [1680]
Dynamic floor pressure, kN-m ² [lbs.-ft ²]		4.60 [96]	5.22 [109]	5.70 [119]	6.85 [143]	7.13 [149]	7.13 [149]
Dynamic load frequency, Hz	F-speed	9.7	9.0	8.6	8.1	7.4	7.4
	V-speed	13.7	12.8	12.2	11.4	10.4	9.5
Maximum moment about machine base, kN-m [lbs.-ft.]		1.09 [805]	1.71 [1260]	2.47 [1820]	3.76 [2770]	5.87 [4330]	5.87 [4330]
Maximum vertical load, kN [lbs.]		3.56 [800]	5.03 [1130]	6.49 [1460]	9.16 [2060]	13.75 [3090]	14.06 [3160]

Table 23

Drain Connection Requirements

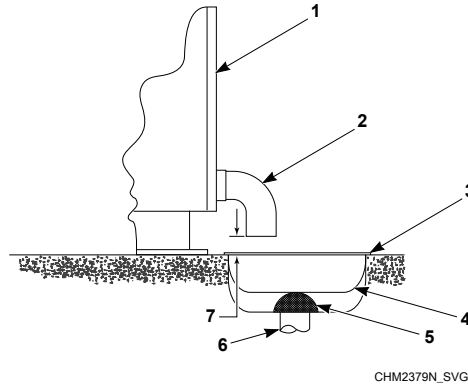
IMPORTANT: Machine must be installed in accordance with all local codes and ordinances.

All drain systems must be vented to prevent an air lock or siphoning.

Use the supplied black rubber adapter and clamps to transition from the machine drain outlet to the 76 mm [3 inches] schedule 40 PVC plumbing.

If proper drain size is not available or practical, a surge tank is required. A surge tank along with a sump pump should be used when gravity drainage is not possible.

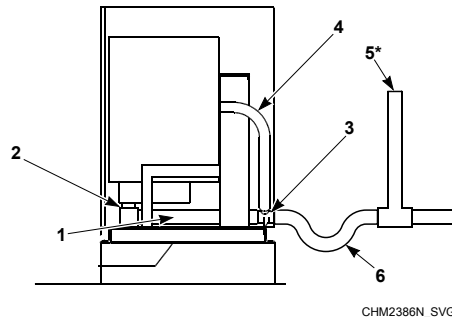
Drain Trough System



1. Rear of Machine
2. Drain Pipe
3. Steel Grate
4. Drain Trough
5. Strainer
6. Waste Line
7. 25 mm [1 in.] minimum gap

Figure 25

Direct Drain System



1. Drain Hose
2. Drain Valve
3. Drain Tee
4. Overflow Hose
5. Vent Pipe*
6. Trap (as required by local codes)

* Drain line must be vented to meet local plumbing codes.

Figure 26

IMPORTANT: Increasing the drain hose length, installing elbows, or causing bends will decrease drain flow rates and increase drain times, impairing machine performance.

Drain Information						
Specification	20	30	40	60	80	100
Drain connection size, in.	3 *	3 *	3 *	3 *	3 *	3 *
Overflow drain connection size, in.	1-1/2	2-1/4	2-1/4	2-1/4	2-1/4	2-1/4
Number of drain outlets	1	1	1	1	1	1
Drain flow capacity, l/min [gal/min]	95 [25]	114 [30]	151 [40]	189 [50]	208 [55]	208 [55]
Maximum discharge (level 30), l [gal]	42 [11.2]	90 [23.9]	104 [27.4]	117 [30.8]	165 [43.4]	202 [53.3]
Recommended drain pit size, l [ft ³]	57 [2.0]	71 [2.5]	128 [3.5]	161 [5.7]	221 [8.0]	269 [9.5]
* Also works with 3 inch OD PVC pipe if connected to inside of drain tee connector.						

Table 24

Drain Hose Models - Connect Drain Hose to Drain Receptacle

Remove the drain hose from its shipping position on the rear of the washer by removing the shipping tape.

IMPORTANT: Drain receptacle must be capable of handling a minimum of 35 mm [1-3/8 inch] outside diameter drain hose.

Drain Flow Rate - 100-127 Volt/60 Hertz	
Drain Height	Flow Rate liters per minute [gal- lons per minute]
0.9 m [3 ft.]	32.7 [8.6]
1.5 m [5 ft.]	25.9 [6.8]
1.8 m [6 ft.]	22.7 [6.0]
2.1 m [7 ft.]	19.5 [5.1]
2.4 m [8 ft.]	15.2 [4.0]

Table 25

Drain Flow Rate - 220-240 Volt/50 Hertz	
Drain Height	Flow Rate liters per minute [gal- lons per minute]
0.9 m [3 ft.]	27.7 [7.3]
1.5 m [5 ft.]	17.8 [4.7]
1.8 m [6 ft.]	13.4 [3.5]
2.1 m [7 ft.]	4.8 [1.3]
2.4 m [8 ft.]	0 [0]

Table 26

Drain Flow Rate - 208-240 Volt/60 Hertz	
Drain Height	Flow Rate liters per minute [gal- lons per minute]
0.9 m [3 ft.]	35.5 [9.4]
1.5 m [5 ft.]	28.8 [7.6]
1.8 m [6 ft.]	25.1 [6.6]

Table 27

continues...

Drain Flow Rate - 208-240 Volt/60 Hertz	
Drain Height	Flow Rate liters per minute [gal- lons per minute]
2.1 m [7 ft.]	21.2 [5.6]
2.4 m [8 ft.]	16.4 [4.3]

Table 27

Water Connection Requirements

	WARNING
To prevent personal injury, avoid contact with inlet water temperatures higher than 125° Fahrenheit [51° Celsius] and hot surfaces.	
W748	

The maximum water inlet temperature for vended models is 125°F [51°C] and the recommended maximum water inlet temperature for on-premises models is 150°F [66°C] (standard models) or 140°F [60°C] (WRAS approved models) .

Connections should be supplied by a hot and a cold water line of at least the sizes shown in *Table 29*. Installation of additional machines will require proportionately larger water lines.

Connections should be supplied by a hot and a cold water line per national and local codes and in accordance with AS/NZS 3500.I.

Water Supply Information		
Specification	Model	Requirement
Water inlet connection size, in.	20-100	3/4
Thread pitch, GHT [BSPP]	20-100	3/4 x 11-1/2 [3/4 x 14]
Number of water inlets	20-40	2
	60-100 (standard models)	4
	60-100 (WRAS- approved models)	2
Recommended pressure, psi [kPa]	20-100	30-85 [200-570]
Maximum inlet flow capacity per machine, gal/min at 85 psi [l/min at 1232 Pa]	20-40	10.5 [40]
	60	18.5 [70]
	80-100	23.0 [87]
Extra water inlet flow, gal/min at 85 psi [l/min at 1232 Pa]	20-100	5.2 [20]

Table 28

Water Supply Line Sizing, in.		
Number of Machines	Supply Line Size	
	Main	Hot/Cold
1	3/4	3/4
2	1	3/4
3	1-1/4	1
4	1-1/2	1

Table 29

Suitable air cushions (risers) should be installed in supply lines to prevent “hammering.” Refer to *Figure 27*.

Alliance Laundry Systems, LLC ranges of front loading commercial clothes washing machines have solenoid valves at the inlets. The water supply to the washing machines is supplied with an AB air gap between the soap tray and the drum. Minimum and maximum working pressure 1.4 bar and 8.3 bar. The machines are supplied with approved inlet hoses with a maximum inlet dimension of 1/2 inch (ID).

NOTE: This machine has a fluid category 5 backflow prevention device built in between the soap tray and drum.

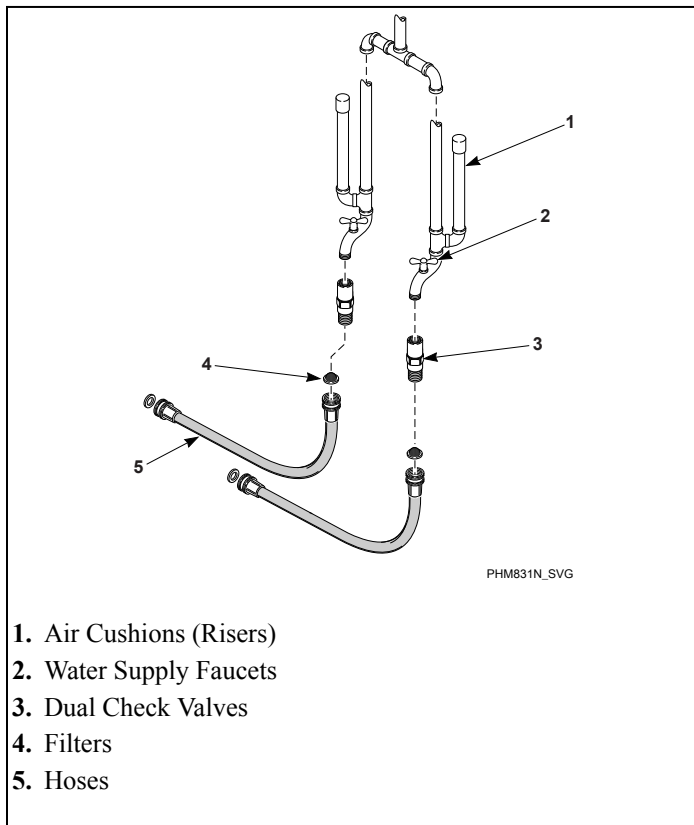


Figure 27

To comply with WRAS (IRN R160) and the Plumbing Code of Australia, European standard EN1717 and Australian standard WMTS-101, an approved dual check valve backflow prevention device with the watermark is provided with the unit and must be fitted at the point of connection(s) between the supply and the fitting. Refer to *Figure 27*.

NOTE: No more than three (3) water connection hoses should be used on WRAS-approved models.



Figure 28



Figure 29

Connect Inlet Hoses (20-40 Models)

When connecting water supplies, use only new hoses supplied with the machine. Do not reuse old hoses.

To connect water service to a machine with hoses, use the following procedure:

1. Before installing hoses, flush the building's water system at the machine connection valves for at least two (2) minutes.
 2. Remove the two (2) plain rubber washers and two (2) filter screens from the accessories bag supplied with the machine.
 3. Install one (1) plain rubber washer onto one end and one (1) filter screen into the other end of each fill hose. The screens must be facing outward toward the water supply. Refer to *Figure 30*.
 4. Screw hose couplings with the filter screens onto the water supply faucets until they are finger-tight. Use the red color-coded hose for the hot water connection and the blue color-coded hose for the cold water connection.
 5. Using pliers, screw approximately 1/4 turn.
 6. Screw the coupling with the plain rubber washer of the red color-coded hose (attached to the hot water connection) onto the valve inlet marked with a red label. Screw the coupling with the plain rubber washer of the blue color-coded hose (attached to the cold water connection) to the valve inlet marked with a blue label. Tighten to finger-tight.
 7. Using pliers, screw approximately 1/4 turn.
- IMPORTANT: DO NOT cross thread or overtighten couplings. This will cause them to leak.**
8. Hang hoses in a large loop; do not allow them to kink.
 9. Turn on water supply and check for leaks.

10. If leaks are found, turn off the water, unscrew hoses and re-install them until there are no leaks.

IMPORTANT: Turn off water supply whenever there will be an extended period of non-use.

If additional hose lengths are needed or using hoses other than those supplied by manufacturer, flexible hoses with screen filters are required.

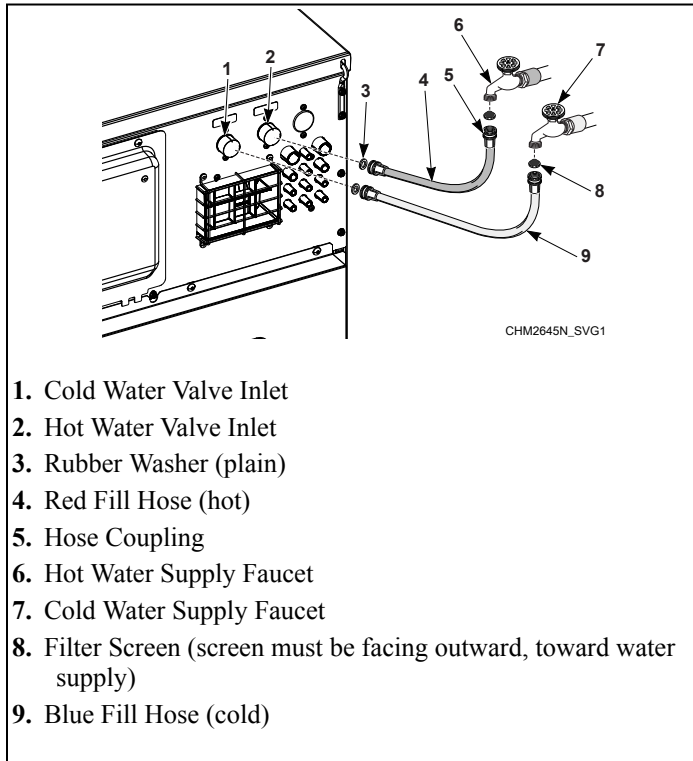


Figure 30

Connect Inlet Hoses with Y-Connectors (60-100 Models)

When connecting water supplies, use only new hoses supplied with the machine. Do not reuse old hoses.

To connect water service (for laundries with two [2] supply faucets) to a machine with hoses, use the following procedure:

1. Before installing hoses, flush the building's water system at the machine connection valves for at least two (2) minutes.
2. Remove the four (4) plain rubber washers and four (4) filter screens from the accessories bag supplied with the machine.
3. Install one (1) plain rubber washer onto one end and one (1) filter screen into the other end of each fill hose. The screens must be facing outward toward the water supply. Refer to Figure 31.
4. Screw one (1) of the Y-connectors (supplied with the machine) into the cold water supply faucet and one (1) into the hot water supply faucet.
5. Screw hose couplings with the filter screens onto the water supply faucets until they are finger-tight. Use the two (2) red

color-coded hose for the hot water connection and the two (2) blue color-coded hose for the cold water connection.

6. Using pliers, screw approximately 1/4 turn.
7. Screw the coupling with the plain rubber washer of one (1) of the red color-coded hoses (attached to the hot water connection) onto the main fill valve inlet (marked with a red label). Screw the coupling with the plain rubber washer of the other red color-coded hose onto the tub fill valve inlet (marked with a red label). Tighten to finger-tight. Refer to Figure 31.
8. Screw the coupling with the plain rubber washer of one (1) of the blue color-coded hoses (attached to the cold water connection) onto the main fill valve inlet (marked with a blue label). Screw the coupling with the plain rubber washer of the other blue color-coded hose onto the tub fill valve inlet (marked with a blue label). Tighten to finger-tight. Refer to Figure 31.
9. Using pliers, screw approximately 1/4 turn.
10. Hang hoses in a large loop; do not allow them to kink.
11. Turn on water supply and check for leaks.
12. If leaks are found, turn off the water, unscrew hoses and re-install them until there are no leaks.

IMPORTANT: Turn off water supply whenever there will be an extended period of non-use.

If additional hose lengths are needed or using hoses other than those supplied by manufacturer, flexible hoses with screen filters are required.

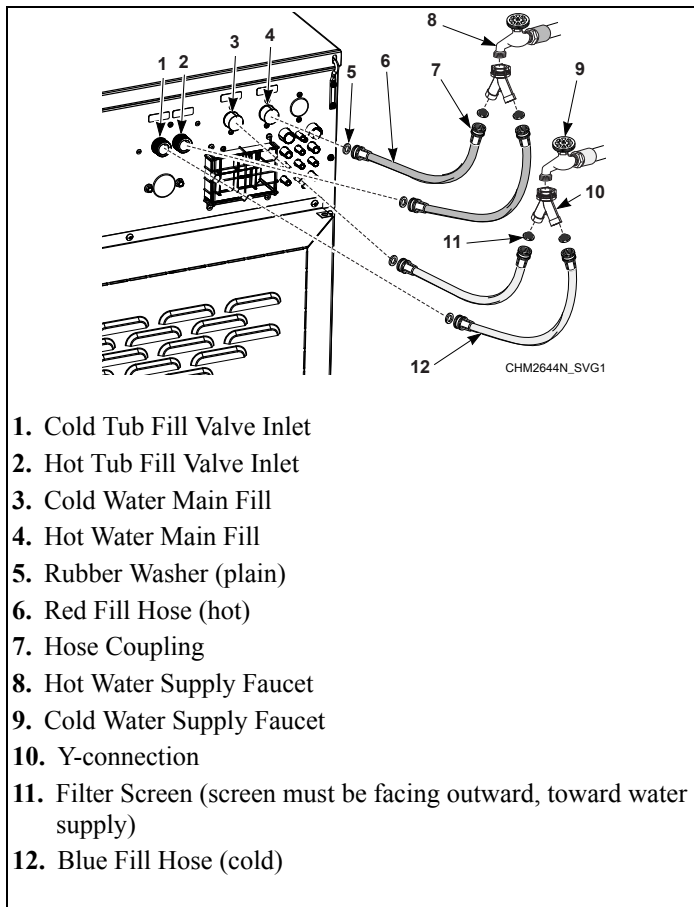


Figure 31

Plumbing Diagrams

20-60 Models - Side View (refer to *Table 30*)

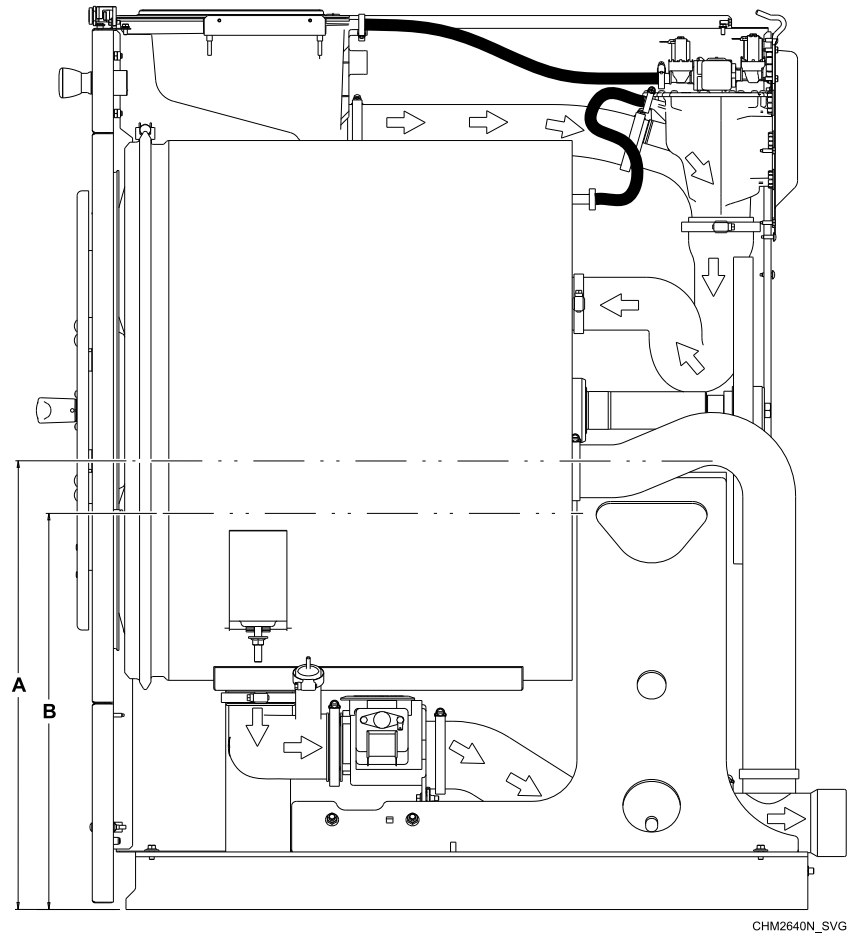
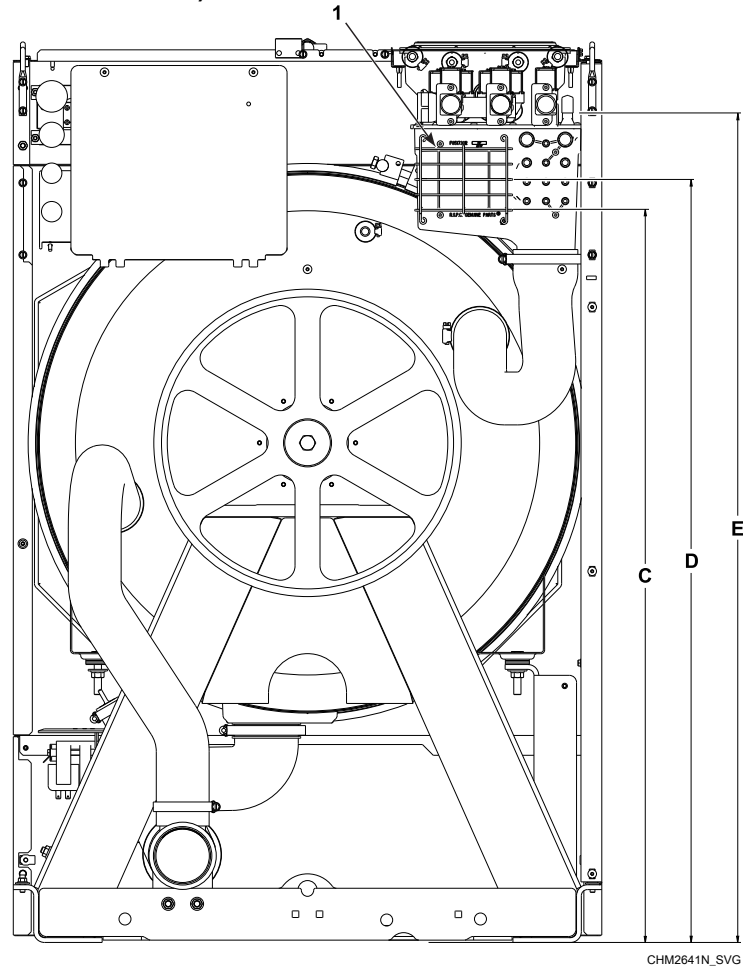


Figure 32

20-60 Models - Rear View (refer to Table 30)

1. Vacuum Breaker Overflow

Figure 33

Plumbing Diagram - 20-60 Models, mm [in.]				
Description		20	30	40
A	Maximum overflow height	521 [20.5]	544 [21.4]	587 [23.1]
B	Maximum operating water level	470 [18.5]	432 [17.0]	505 [19.9]
C	Vaccum breaker overflow	861 [33.9]	909 [35.8]	965 [38.0]
D	Vaccum breaker overflow centerline	902 [35.5]	953 [37.5]	1008 [39.7]
E	Inlet Valves	988 [38.9]	1052 [41.4]	1097 [43.2]

Table 30

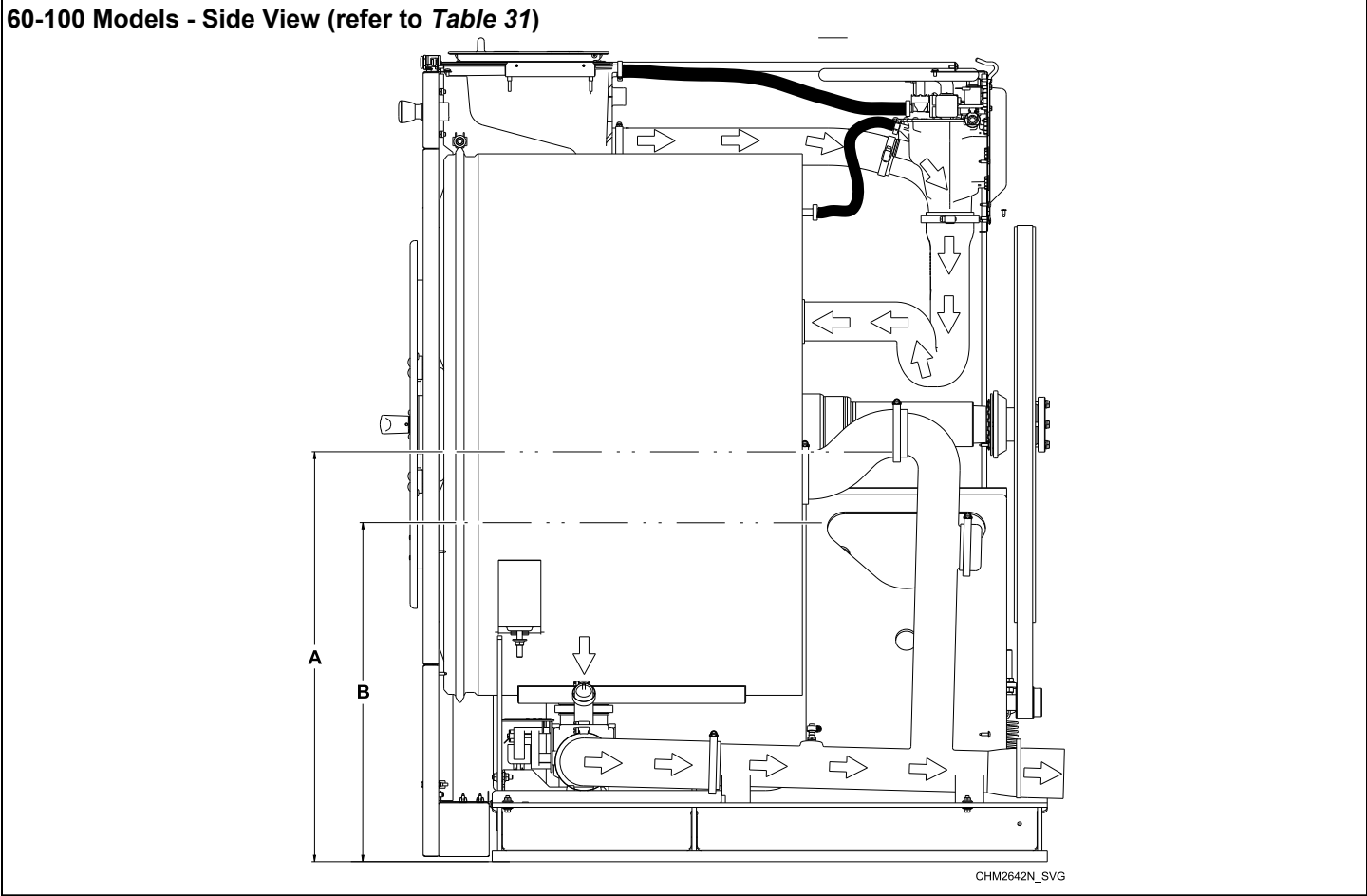
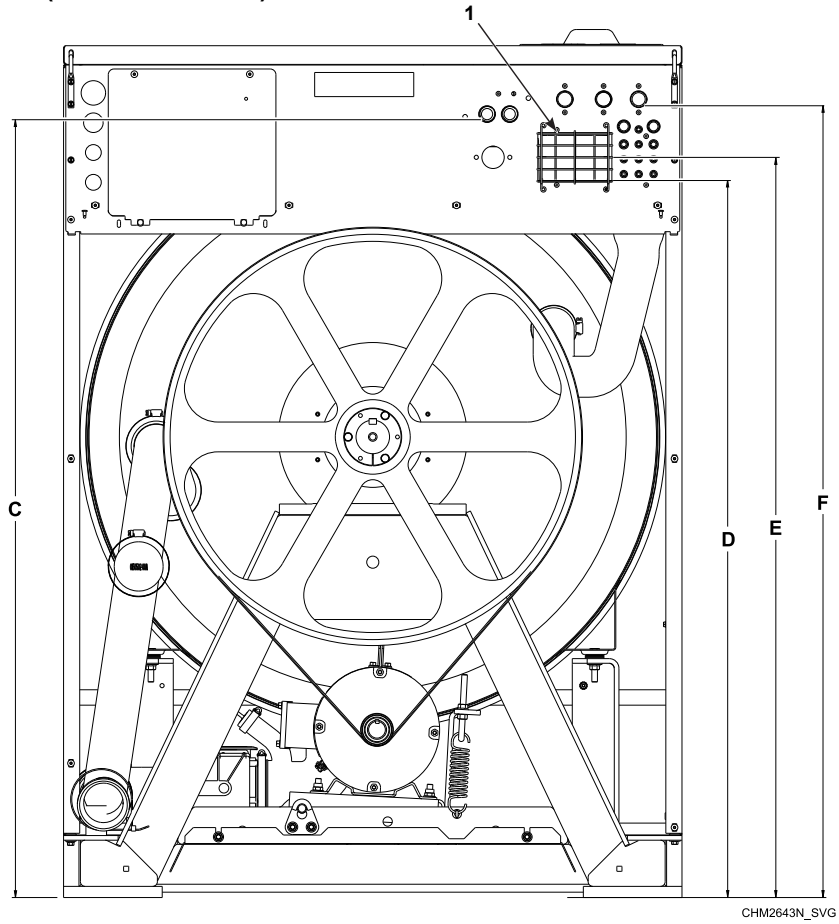


Figure 34

60-100 Models - Rear View (refer to Table 31)



1. Vacuum Breaker Overflow

Figure 35

Plumbing Diagram - 60-100 Models, mm [in.]				
Description		60	80	100
A	Maximum overflow height	587 [23.1]	732 [28.8]	732 [28.8]
B	Maximum operating water level	523 [20.6]	632 [24.9]	632 [24.9]
C	Aux Inlet valves	1163 [45.8]	1326 [52.2]	1326 [52.2]
D	Vaccum breaker overflow	1034 [40.7]	1219 [48.0]	1219 [48.0]
E	Vaccum breaker overflow centerline	1077 [42.4]	1262 [49.7]	1262 [49.7]
F	Inlet Valves	1166 [45.9]	1349 [53.1]	1349 [53.1]

Table 31

Electrical Installation Requirements

IMPORTANT: Electrical ratings are subject to change. Refer to serial plate for electrical ratings information specific to your machine.

	DANGER
Electrical shock hazard will result in death or serious injury. Disconnect electric power and wait five (5) minutes before servicing.	
W810	

	WARNING
Dangerous voltages are present inside the machine. Only qualified personnel should attempt adjustments and troubleshooting. Disconnect power from the machine before removing any cover and guards, and before attempting any service procedures.	
W736	

	WARNING
Hazardous Voltage. Can cause shock, burn or death. Verify that a ground wire from a proven earth ground is connected to the lug near the input power block on this machine.	
W360	

	WARNING
This Machine produces excessive leakage current. Do not use a grounding conductor smaller than 10mm².	
W946	

NOTE: For voltages above or below listed specification, a qualified electrical contractor must be consulted to install the appropriate transformer to meet the OEM electrical specifications. Refer to *Electrical Specifications (North American Approval)* and *Electrical Specifications (CE Approval)*.

Electrical connections are made at the rear of the machine. The machine must be connected to the proper electrical supply shown on the serial plate on the rear of the machine, using copper conductors only.

IMPORTANT: Alliance Laundry Systems warranty does not cover components that fail as a result of improper input voltage.

Machines are equipped with an AC inverter drives requiring a clean power supply, free from voltage spikes and surges. Use voltage monitor to check incoming power.

Input Power Conditioning

The drive is suitable for direct connection to input power within the rated voltage of the drive. Listed in *Table 32* are certain input power conditions which may cause component damage or reduction in product life. If any of the conditions exist, install one of the devices listed under the *Possible Corrective Action(s)*.

Input Power Condition	Possible Corrective Action(s)
Low Line impedance (less than 1% line reactance)	• Install Line Reactor • Isolation Transformer
Greater than 120 kVA supply transformer	
Line has power factor correction capacitors	• Install Line Reactor • Isolation Transformer
Line has frequent power interruptions	
Line has intermittent noise spikes in excess of 3000V (lightning)	
Phase to ground voltage exceeds 125% of normal line to line voltage	• Remove MOV jumper to ground • Install Isolation Transformer with grounded secondary (if necessary)
Ungrounded distribution system	
240V open delta configuration (stinger leg)*	• Install Line Reactor
* For drives applied on an open delta with a middle phase grounded neutral system, the phase opposite the phase that is tapped in the middle to the neutral or earth is referred to as the “stinger leg,” “high leg,” “red leg,” etc. This leg should be identified throughout the system with red or orange tape on the wire at each connection point. The stinger leg should be connected to the center Phase B on the reactor.	

Table 32

Input Voltage Requirements

For voltages above or below listed specifications, contact your power company or local electrician.

IMPORTANT: Improper connections will result in equipment damage and will void warranty.

	DANGER
Electrical shock hazard will result in death or serious injury. Disconnect electric power and wait five (5) minutes before servicing.	
W810	

Circuit Breakers and Quick Disconnects

Single-phase machines require a single-phase inverse-time circuit breaker. Three-phase machines require a separate, three-phase inverse-time circuit breaker to prevent damage to the motor by disconnecting all legs if one should be lost accidentally. Refer to *North American Approval* and *CE Approval* sections for model-specific circuit breaker requirements.

IMPORTANT: Only one device per branch circuit is required. It should be mounted closest to the branch and sized to handle the total current of the branch circuit.

IMPORTANT: All quick disconnects should comply with the specifications. DO NOT use fuses instead of circuit breakers.

Connection Specifications

IMPORTANT: Connection must be made by a qualified electrician using wiring diagram provided with machine, or according to accepted European Union standards.

Connect machine to an individual branch circuit not shared with lighting or other equipment. Shield conductors in a liquid-tight or approved flexible conduit. Copper conductors of correct size must be installed in accordance with National Electric Code (NEC) or other applicable codes.

Use wire sizes indicated in the Electrical Specifications chart for runs up to 15 m [50 feet] . Use next larger size for runs of 15 to 30 m [50 to 100 feet] . Use two (2) sizes larger for runs greater than 30 m [100 feet] .

IMPORTANT: For X voltage - To obtain 200-240V from a 200-240V source, connect L1 and L2. To obtain 220-240V from a 380-415V source, connect L1 and N. Refer to Figure 36.

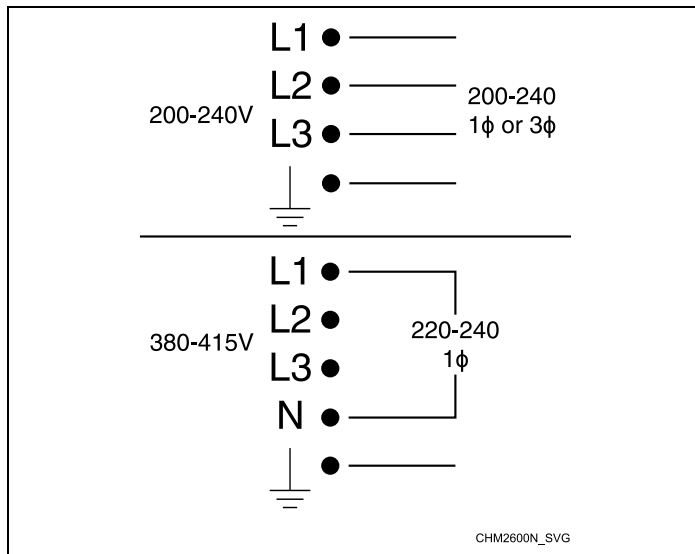


Figure 36

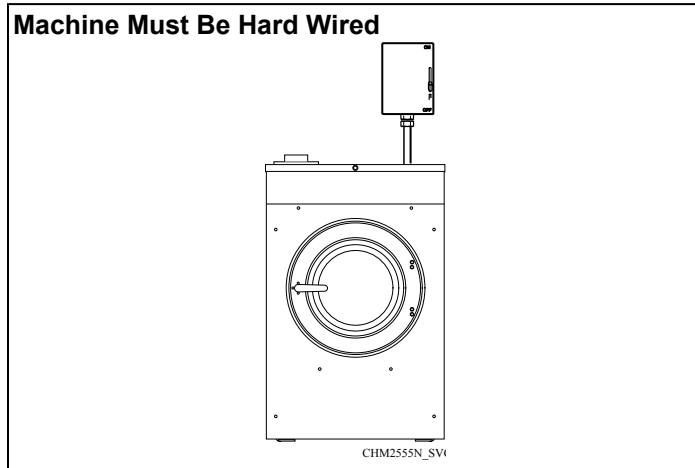


Figure 37

NOTE: Electrical receptacle must be located so that it is easily accessible with machine in place. An intermediate shut-off box with a 3 mm gap is required to meet EN 60335-1, clauses 24.3 and 22.2 or 3.5 mm gap is required to meet Standard IEC 60335-1, clauses 24.3 and 22.2. Gap is defined as the minimum contact separation of each pole in the switch between the “ON” and “OFF” positions.

IMPORTANT: Where an emergency stop is required by local ordinances, a disconnect must be installed that is readily accessible to all users.

NOTE: Installation of models in North America: recommended installation is hard wired without a GFCI. If a GFCI is mandatory due to local requirements, then the GFCI must be rated for 30mA or higher.

Single-Phase Connections

For single-phase input, connect L1, L2 and Ground and cap neutral as shown in *Figure 38*.

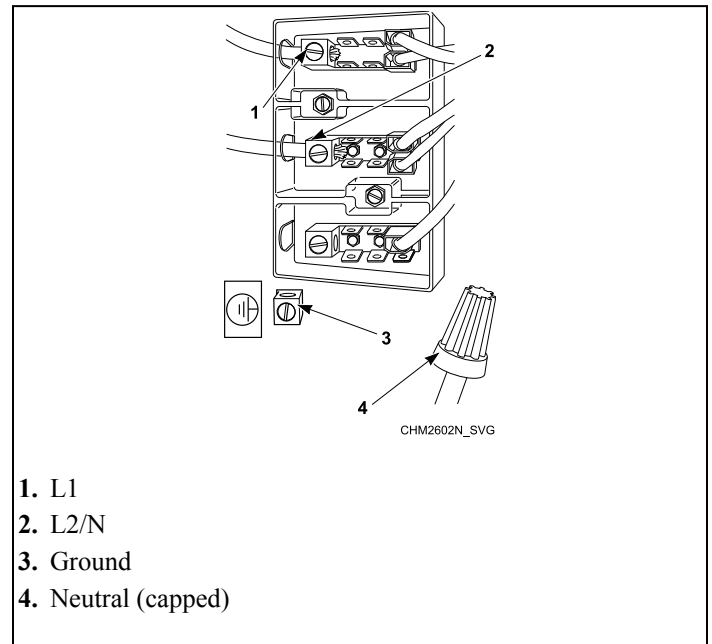


Figure 38

Three-Phase Connections

For three-phase input, connect L1, L2, L3 and Ground as shown in *Figure 39*.

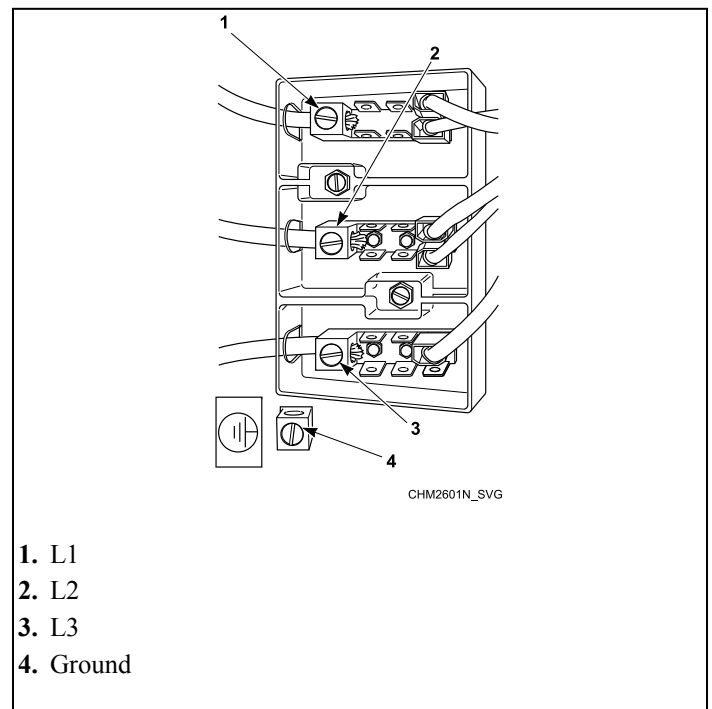


Figure 39

IMPORTANT: If a stinger leg is used for three-phase input, it **MUST** be connected to L3.

Grounding

For personal safety and proper operation, the machine must be grounded in accordance with state and local codes. If such codes are not available, grounding must conform to the National Electric Code, article 250 (current edition). The ground connection must be made to a proven earth ground, not to conduit or water pipes.

	WARNING
Electrically heated machines DO NOT require dual power sources. Do not connect customer power or customer load to the Internal Load Distribution terminal block. Refer to the machine electrical schematic for details.	
W759	

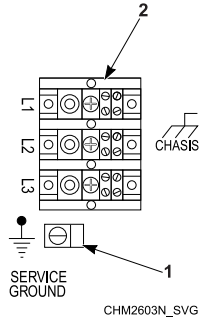
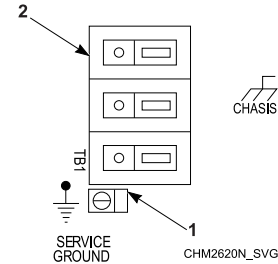
Machines with Electric Heat  1. Grounding Lug: Connect to proven earth ground 2. Customer Input Power Terminals
--

Figure 40

Machines without Electric Heat



1. Grounding Lug: Connect to proven earth ground
2. Customer Input Power Terminals

Figure 41

Phase Adder

IMPORTANT: Do not use a phase adder on any machine.

Thermal Overload Protector

The inverter drive provides overload protection for the drive motor.

North American Approval

NOTE: Wire sizing listed in this table is based on Article 310, Table 310.16 of the NEC; at 40°C [104°F] ambient temperature. Follow your local electrical codes. Use only copper conductors, rated for 90°C [194°F] or higher, type THHN or better. No more than three current carrying conductors per raceway. Contact your local Authority having jurisdiction if you have questions. Circuit breakers should be UL 489 listed or better. Single phase circuit breakers for single phase machines only; three phase circuit breakers for all others.

20 Models - North American Approval									
Voltage Designation						Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	AWG	mm ²
F-Speed Models									
B		120	60	1	2	8	15	14	2.5
W		200-240	50	1/3	2/3	4/3	15	14	2.5
Y		200-240	60	1/3	2/3	4/3	15	14	2.5
X		200-240	50- 60	1/3	2/3	4/3	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	22	30	10	6.0
P	Standard	380-415	50- 60	3	3	2	15	14	2.5
	Electric Heat					12	15	14	2.5
N	Standard	440-480	50-60	3	3	2	15	14	2.5
	Electric Heat					14	15	14	2.5
V-Speed Models									
B		120	60	1	2	9	15	14	2.5
W		200-240	50	1/3	2/3	4/3	15	14	2.5
Y		200-240	60	1/3	2/3	4/3	15	14	2.5
X		200-240	50- 60	1/3	2/3	4/3	15	14	2.5
Q	Electric Heat	200-240	50- 60	3	3	22	30	10	6.0
P	Standard	380-415	50- 60	3	3	2	15	14	2.5
	Electric Heat					12	15	14	2.5
N	Standard	440-480	50- 60	3	3	2	15	14	2.5
	Electric Heat					14	15	14	2.5

Table 33

30 Models - North American Approval									
Voltage Designation						Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	AWG	mm ²
F-Speed Models									
B		120	60	1	2	10	15	14	2.5
W		200-240	50	1/3	2/3	5/4	15	14	2.5
Y		200-240	60	1/3	2/3	5/4	15	14	2.5
X		200-240	50- 60	1/3	2/3	5/4	15	14	2.5
Q	Electric Heat	200-240	50- 60	3	3	22	30	10	6.0
P	Standard	380-415	50- 60	3	3	3	15	14	2.5
	Electric Heat					12	15	14	2.5
N		440-480	50- 60	3	3	3	15	14	2.5
						14	15	14	2.5
V-Speed Models									
B		120	60	1	2	12	15	12	4
W		200-240	50	1/3	2/3	7/4	15	14	2.5
Y		200-240	60	1/3	2/3	7/4	15	14	2.5
X		200-240	50-60	1/3	2/3	7/4	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	22	30	10	6.0
P	Standard	380-415	50-60	3	3	3	15	14	2.5
	Electric Heat					12	15	14	2.5
N	Standard	440-480	50-60	3	3	3	15	14	2.5
	Electric Heat					14	15	14	2.5

Table 34

40 Models - North American Approval									
Voltage Designation					Specifications				
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	AWG	mm ²
F-Speed Models									
B		120	60	1	2	10	15	14	2.5
W		200-240	50	1/3	2/3	6/4	15	14	2.5
Y		200-240	60	1/3	2/3	6/4	15	14	2.5
X		200-240	50-60	1/3	2/3	6/4	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	41	50	8	10.0
P	Standard	380-415	50-60	3	3	3	15	14	2.5
	Electric Heat					24	30	10	6.0
N	Standard	440-480	50-60	3	3	3	15	14	2.5
	Electric Heat					22	30	10	6.0
V-Speed Models									
B		120	60	1	2	12	15	12	2.5
W		200-240	50	1	2/3	7/4	15	14	2.5
Y		200-240	60	1/3	2/3	7/4	15	14	2.5
X		200-240	50-60	1/3	2/3	7/4	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	41	50	8	10.0
P	Standard	380-415	50-60	3	3	3	15	14	2.5
	Electric Heat					24	30	10	6.0
N	Standard	440-480	50-60	3	3	3	15	14	2.5
	Electric Heat					22	30	10	6.0

Table 35

60 Models - North American Approval									
Voltage Designation						Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	AWG	mm ²
F-Speed Models									
X		200-240	50-60	1/3	2/3	8/5	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	41	50	8	10.0
P	Standard	380-415	50-60	3	3	4	15	14	2.5
	Electric Heat					26	30	10	6.0
N	Standard	440-480	50-60	3	3	4	15	14	2.5
	Electric Heat					22	30	10	6.0
V-Speed Models									
X		200-240	50-60	1/3	2/3	11/7	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	41	50	8	10.0
P	Standard	380-415	50-60	3	3	4	15	14	2.5
	Electric Heat					26	30	10	6.0
N	Standard	440-480	50-60	3	3	4	15	14	2.5
	Electric Heat					22	30	10	6.0

Table 36

80 Models - North American Approval									
Voltage Designation						Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	AWG	mm ²
F-Speed Models									
X		200-240	50-60	1/3	2/3	12/8	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	73	80	4	25.0
P	Standard	380-415	50-60	3	3	5	15	14	2.5
	Electric Heat					33	40	8	10.0
N	Standard	440-480	50-60	3	3	5	15	14	2.5
	Electric Heat					36	40	8	10.0
V-Speed Models									
X		200-240	50-60	1/3	2/3	15/9	20/15	12/14	4/2.5
Q	Electric Heat	200-240	50-60	3	3	73	80	4	25.0
P	Standard	380-415	50-60	3	3	6	15	14	2.5
	Electric Heat					33	40	8	10.0
N	Standard	440-480	50-60	3	3	6	15	14	2.5
	Electric Heat					36	40	8	10.0

Table 37

100 Models - North American Approval									
Voltage Designation						Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	AWG	mm ²
F-Speed Models									
X		200-240	50-60	1/3	2/3	12/8	15	14	2.5
Q	Electric Heat	200-240	50-60	3	3	74	80	4	25.0
P	Standard	380-415	50-60	3	3	5	15	14	2.5
	Electric Heat					32	40	8	10.0
N	Standard	440-480	50-60	3	3	5	15	14	2.5
	Electric Heat					36	40	8	10.0
V-Speed Models									
X		200-240	50-60	1/3	2/3	16/10	20/15	12/14	4/2.5
Q	Electric Heat	200-240	50-60	3	3	74	80	4	25.0
P	Standard	380-415	50-60	3	3	6	15	14	2.5
	Electric Heat					32	40	8	10.0
N	Standard	440-480	50-60	3	3	6	15	14	2.5
	Electric Heat					36	40	8	10.0

Table 38

CE Approval

NOTE: Wire sizing listed in this table is based on Article 310, Table 310.16 of the NEC; at 40°C [104°F] ambient temperature. Follow your local electrical codes. Use only copper conductors, rated for 90°C [194°F] or higher, type THHN or better. No more than three current carrying conductors per raceway. Contact your local Authority having jurisdiction if you have questions. Circuit breakers should be UL 489 listed or better. Single phase circuit breakers for single phase machines only; three phase circuit breakers for all others.

NOTE: N and P Voltage - Where the protective conductor has a cross-sectional area of less than 10 mm² Cu, a second protective conductor of at least the same cross-sectional area shall be provided up to a point where the protective conductor has a cross-sectional area not less than 10 mm² Cu.

20 Models - CE Approval								
Voltage Designation					Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
F-Speed Models								
B		120	60	1	2	8	10	2.5
W		200-240	50	1/3	2/3	4/3	6	2.5
Y		200-240	60	1/3	2/3	4/3	6	2.5
X		200-240	50-60	1/3	2/3	4/3	6	2.5
Q	Electric Heat	200-240	50-60	3	3	17- 20	25	2.5
P	Standard	380-415	50-60	3	3	2	6	2.5
	Electric Heat					11	16	2.5
N		440-480	50-60	3	3	2	6	2.5
V-Speed Models								
B		120	60	1	2	9	10	2.5
W		200-240	50	1/3	2/3	4	6	2.5
Y		200-240	60	1/3	2/3	4	6	2.5
X		200-240	50-60	1/3	2/3	4/3	6	2.5
Q	Electric Heat	200-240	50-60	3	3	17- 20	25	2.5
P	Standard	380-415	50-60	3	3	2	6	2.5

continues...

Table 39

20 Models - CE Approval								
Voltage Designation						Specifications		
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
	Electric Heat					11	16	2.5
N		440-480	50-60	3	3	2	6	2.5

Table 39

30 Models - CE Approval								
Voltage Designation					Specifications			
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
F-Speed Models								
B		120	60	1	2	10	10	2.5
W		200-240	50	1/3	2/3	5/4	6	2.5
Y		200-240	60	1/3	2/3	5/4	6	2.5
X		200-240	50-60	1/3	2/3	5/4	6	2.5
Q	Electric Heat	200-240	50-60	3	3	17- 20	25	2.5
P	Standard	380-415	50-60	3	3	3	6	2.5
	Electric Heat					11	16	2.5
N		440-480	50-60	3	3	3	6	2.5
V-Speed Models								
B		120	60	1	2	12	16	2.5
W		200-240	50	1/3	2/3	7/4	10/6	2.5
Y		200-240	60	1/3	2/3	7/4	10/6	2.5
X		200-240	50-60	1/3	2/3	7/4	10/6	2.5
Q	Electric Heat	220-240	50-60	3	3	17- 20	25	2.5
P	Standard	380-415	50-60	3	3	3	6	2.5
	Electric Heat					11	16	2.5
N		440-480	50-60	3	3	3	6	2.5

Table 40

40 Models - CE Approval								
Voltage Designation						Specifications		
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
F-Speed Models								
B		120	60	1	2	10	10	2.5
W		200-240	50	1/3	2/3	6/4	6	2.5
Y		200-240	60	1/3	2/3	6/4	6	2.5
X		200-240	50-60	1/3	2/3	7/4	10/6	2.5
Q	Electric Heat	220-240	50-60	3	3	33- 39	50	10.0
P	Standard	380-415	50-60	3	3	3	6	2.5
	Electric Heat					23	25	2.5
N	Standard	440-480	50-60	3	3	3	6	2.5
	Electric Heat					20	25	2.5
V-Speed Models								
B		120	60	1	2	12	16	2.5
W		200-240	50	1/3	2/3	7/4	10/6	2.5
Y		200-240	60	1/3	2/3	7/4	10/6	2.5
X		200-240	50-60	1/3	2/3	7/4	10/6	2.5
Q	Electric Heat	200-240	50-60	3	3	33- 39	50	10.0
P	Standard	380-415	50-60	3	3	3	6	2.5
	Electric Heat					23	32	2.5
N	Standard	440-480	50-60	3	3	3	6	2.5
	Electric Heat					30	25	2.5

Table 41

60 Models - CE Approval								
Voltage Designation						Specifications		
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
F-Speed Models								
X		200-240	50-60	1/3	2/3	8/5	10/6	2.5
		220-240						
Q	Electric Heat	200-240	50-60	3	3	33- 39	50	10.0
P	Standard	380-415	50-60	3	3	4	6	2.5
	Electric Heat					23	32	2.5
N	Standard	440-480	50-60	3	3	4	6	2.5
	Electric Heat					20	25	2.5
V-Speed Models								
X		200–240	50-60	1/3	2/3	11/7	16/ 10	2.5
Q	Electric Heat	200-240	50-60	3	3	33- 39	50	10.0
P	Standard	380-415	50-60	3	3	4	6	2.5
	Electric Heat					23	32	2.5
N	Standard	440-480	50-60	3	3	4	6	2.5
	Electric Heat					20	25	2.5

Table 42

80 Models - CE Approval								
Voltage Designation						Specifications		
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
F-Speed Models								
X		200-240	50-60	1/3	2/3	12/8	16/ 10	2.5
Q	Electric Heat	200-240	50-60	3	3	59- 70	80	16.0
P	Standard	380-415	50-60	3	3	5	6	2.5
	Electric Heat					30	40	4.0
N	Standard	440-480	50-60	3	3	5	6	2.5
	Electric Heat					35	40	4.0
V-Speed Models								
X		200-240	50-60	1/3	2/3	17/ 11	20/ 16	2.5
Q	Electric Heat	200-240	50-60	3	3	59- 70	80	16.0
P	Standard	380-415	50-60	3	3	7	10	2.5
	Electric Heat					30	40	4.0
N	Standard	440-480	50-60	3	3	7	10	2.5
	Electric Heat					35	40	4.0

Table 43

100 Models - CE Approval								
Voltage Designation						Specifications		
Code		Voltage	Cycle	Phase	Wire	Full Load Amps	Circuit Breaker	mm ²
F-Speed Models								
X		200-240	50-60	1/3	2/3	12/8	10/ 16	2.5
Q	Electric Heat	220-240	50-60	3	3	59- 70	80	16.0
P	Standard	380-415	50-60	3	3	5	6	2.5
	Electric Heat					30	40	4.0
N	Standard	440-480	50-60	3	3	5	6	2.5
	Electric Heat					35	40	4.0
V-Speed Models								
X		200-240	50-60	1/3	2/3	17/ 11	20/ 16	2.5
Q	Electric Heat	220-240	50-60	3	3	59- 70	80	16.0
P	Standard	380-415	50-60	3	3	7	10	2.5
	Electric Heat					30	40	4.0
N	Standard	440-480	50-60	3	3	7	10	2.5
	Electric Heat					35	40	4.0

Table 44

Steam Requirements (Steam Heat Option Only)

	WARNING
Hot Surfaces. Will cause severe burns. Turn steam off and allow steam pipes, connections and components to cool before touching.	
W505	

For machines equipped with optional steam heat, install piping in accordance with approved commercial steam practices. Steam requirements are shown in *Table 1*.

Chemical Injection Supply System

	WARNING
Dangerous Chemicals. May damage eyes and skin. Wear eye and hand protection when handling chemicals; always avoid direct contact with raw chemicals. Read the manufacturer's directions for accidental contact before handling chemicals. Ensure an eye-rinse facility and an emergency shower are within easy reach. Check at regular intervals for chemical leaks.	
W363	

IMPORTANT: Undiluted chemical dripping can damage the machine. All chemical injection supply dispenser pumps and dispenser tubing should be mounted below the washer's injection point. Loops do not prevent drips if these instructions are not followed. *Figure 44* shows a typical Chemical Injection Supply System.

IMPORTANT: Failure to follow these instructions could damage the machine and void the warranty.

The chemical supply connector is located on the back right-

hand side of the machine. There are 12 chemical ports on the connector, through each a liquid supply hose can be connected. A flush manifold system can only be connected through the top 6 ports (refer to *Figure 43*).

IMPORTANT: Water pressure must not exceed 275 kPa [40 psi] .

1. Drill through the ports on the chemical supply connector as needed for the external supply hoses.

NOTE: 3/8 inch ports must be drilled through with a 3/16 inch diameter drill bit and 1/2 inch ports must be drilled through with a 5/16 inch diameter drill bit before connecting chemical lines. Refer to *Figure 43*.

IMPORTANT: Be careful to only drill through the first wall so as not to damage the machine.

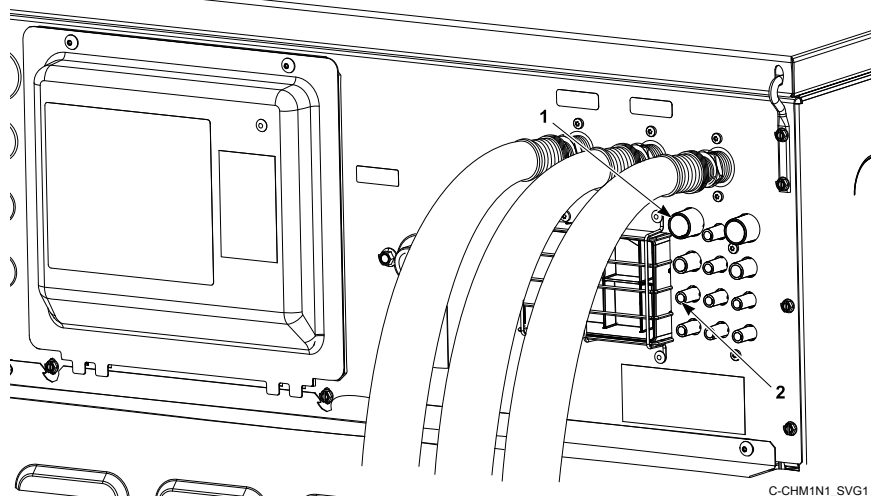
2. Remove plastic debris.
3. Attach the external supply hoses to the ports at each of the drilled holes.
4. Secure with proper clamps.

	CAUTION
Drill out plugs and nipples before making supply hose connection. Failure to do so can cause buildup of pressure and risk a tubing rupture.	
W491	

Supply Dispensing	
Number of liquid chemical supply signals (if equipped)	4 or 8
Number of supply compartments	4
Number of external liquid supply connections	12

Table 45

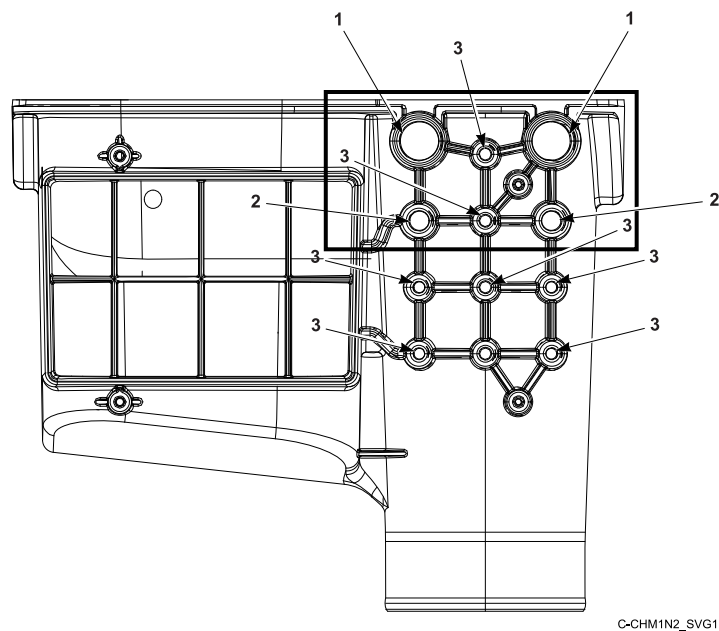
Connection for Chemical Supply Hoses (refer to *Figure 43* for detail of chemical supply connector)



1. Chemical Supply Connector
2. External Liquid Supply Connection Ports (12)

Figure 42

External Liquid Supply Connection Ports

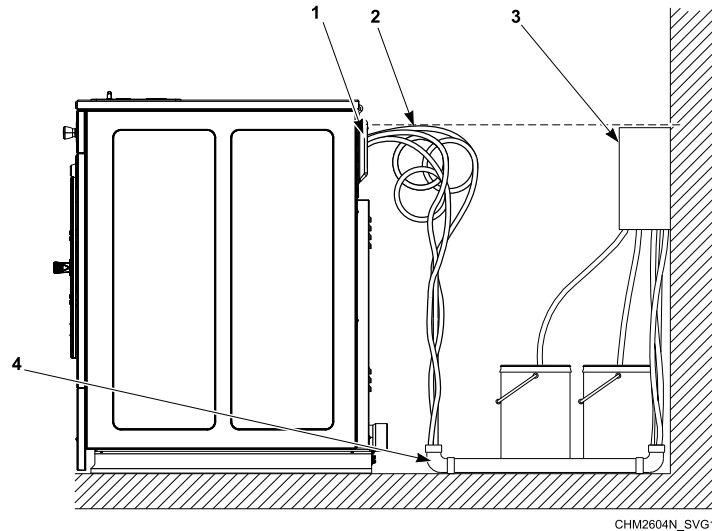


NOTE: A flush manifold system can only be connected through the top 6 ports (boxed).

1. 3/4 inch port, O.D.
2. 1/2 inch port, O.D.
3. 3/8 inch port, O.D.

Figure 43

Chemical Supply Setup



1. Injection Point*
2. Loops
3. Chemical Dispenser Pump Outlet †
4. PVC Pipe

* Use a check valve on the end of tubing

† Pumps must be mounted below the injection point

Figure 44

External Supplies

For proper communication between the machine and an external chemical supply system, it is important for the low-voltage signal power to be connected properly. The included wiring diagram shows several different options for safe and correct wiring of this interface.

The preferred method for connecting the wiring from the external chemical supply system to the machine is to use the 300mA power of the machine's 24VAC control transformer, which is intended strictly for this purpose. Refer to *Figure 45* and *Figure 46*. Other voltage and current options are available, but require some wiring changes and must be provided with an external power source. Under no circumstances should the high-voltage machine supply connections or source be used for the communication wiring.

Communication wiring connections, which is H2 a single row green connector on a small output board, can be found under a service panel at the upper back of the machine.

Chemical Injection Using Internal 24VAC Control Transformer

NOTE: Using the Internal 24VAC 300 Milliamp Control Transformer is recommended by Alliance Laundry Systems.



CAUTION

Do not attempt to increase fuse rating or alter wiring of external chemical supply terminal strip in such as way that may conflict with the suggested methods provided on the Optional External Supply Wiring Diagram.

W699

IMPORTANT: Do not use the transformer terminals if an external power supply is used.

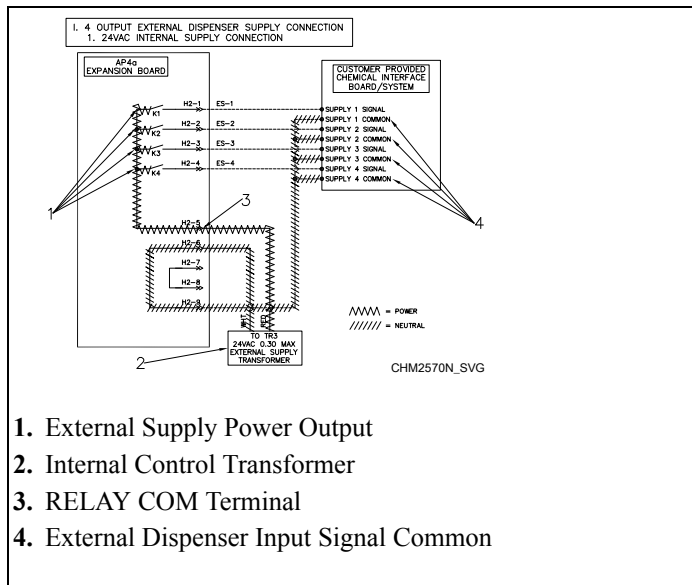


Figure 45

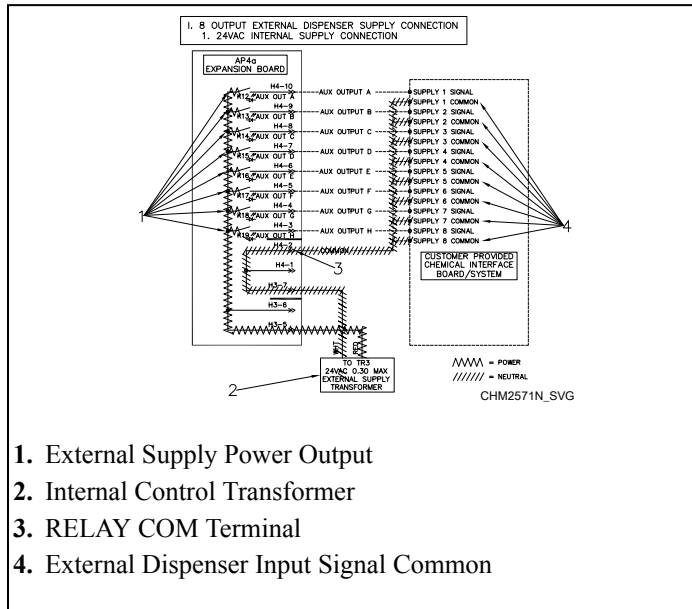


Figure 46

Chemical Injection Using External AC Power Source

NOTE: An External AC Power Source is NOT provided by Alliance Laundry Systems.

NOTE: Power for external supplies must not be derived from the high-voltage main power connection point.

IMPORTANT: The external power must supply power of 240VAC or less and be protected at 3 Amps or less.

1. Disconnect and cap off the Red and White 24VAC wires.
2. Connect one side of the external power to the “RELAY COM” and the other to the external dispenser input signals common. Refer to *Figure 47* and *Figure 48*.

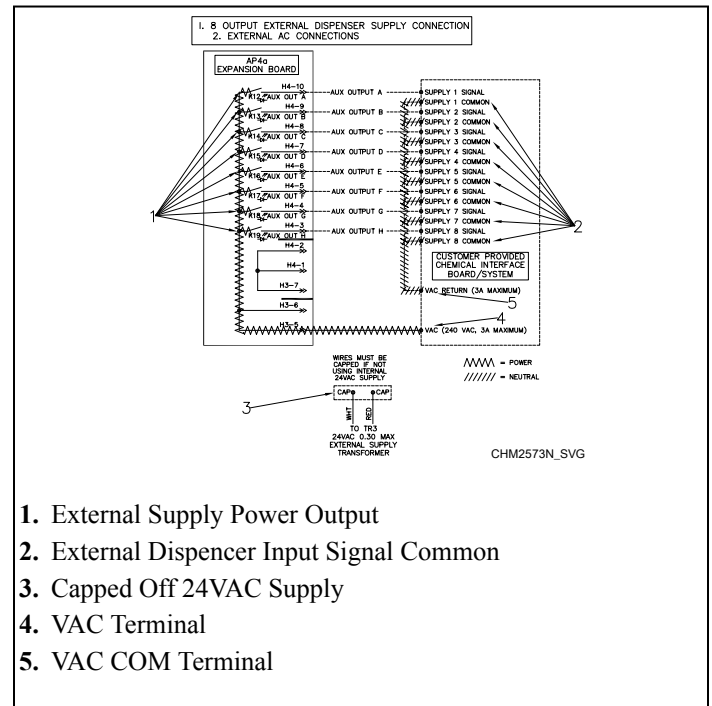


Figure 47

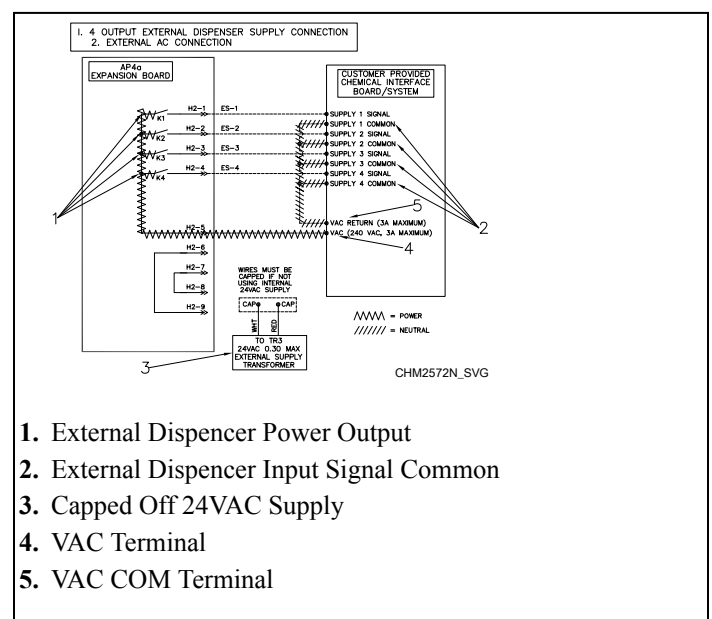


Figure 48



CAUTION

Do not attempt to increase fuse rating or alter wiring of external chemical supply terminal strip in such a way that may conflict with the suggested methods provided on the Optional External Supply Wiring Diagram.

W699

External Supply Signals

Wash-cycle signals are provided to the external chemical supply equipment and a “wait for the next step” signal can be received from the supply equipment.

For example of a 4-signal board, if ES1 is selected the K1 contact will close and power will be supplied to Supply 1 Signal. The contact will remain closed for the amount of time programmed in control. Refer to *Figure 49* for Internal Supply Connection or *Figure 51* for External AC Connection.

For example of an 8-signal board, if ES1 is selected the K12 contact will close and power will be supplied to Supply 1 Signal. The contact will remain closed for the amount of time programmed in control. Refer to *Figure 50* for Internal Supply Connection or and *Figure 52* for External AC Connection.

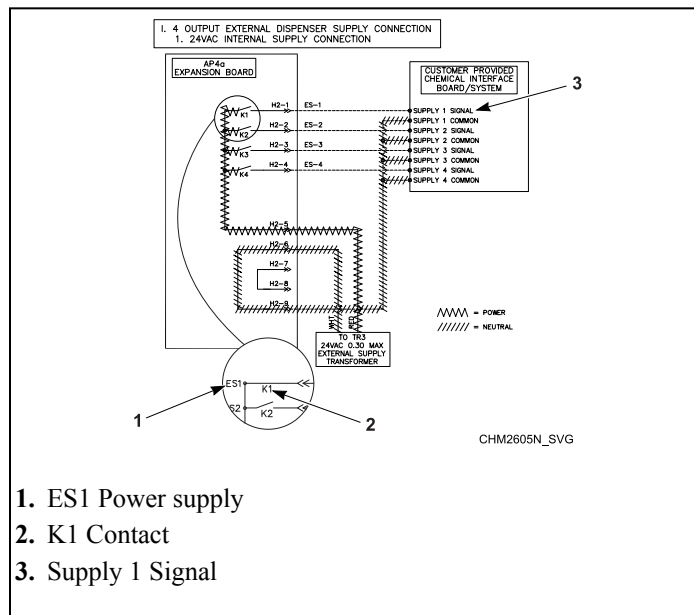


Figure 49

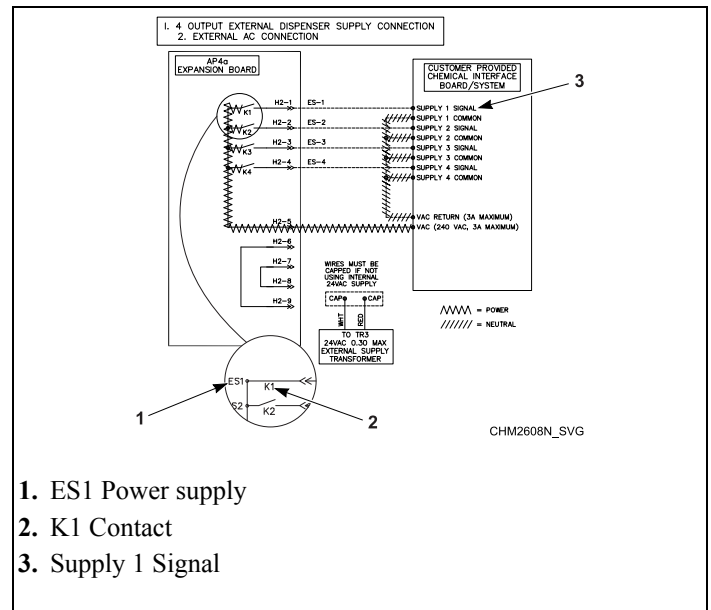


Figure 50

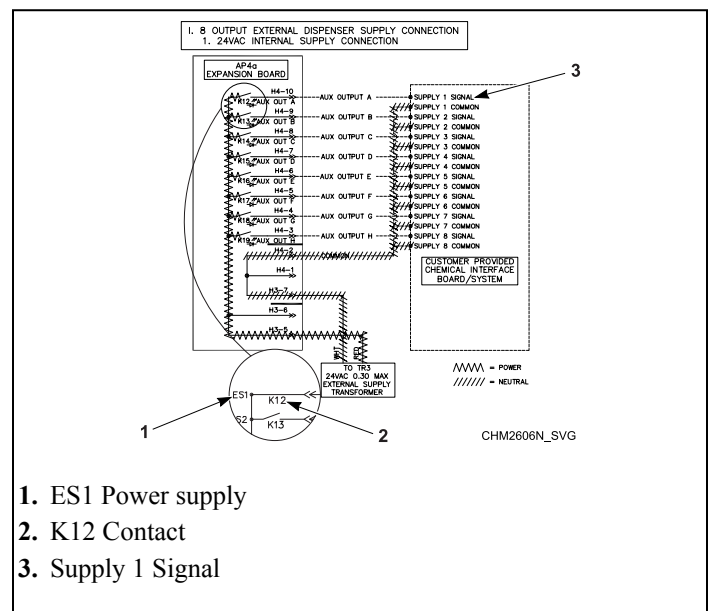


Figure 51

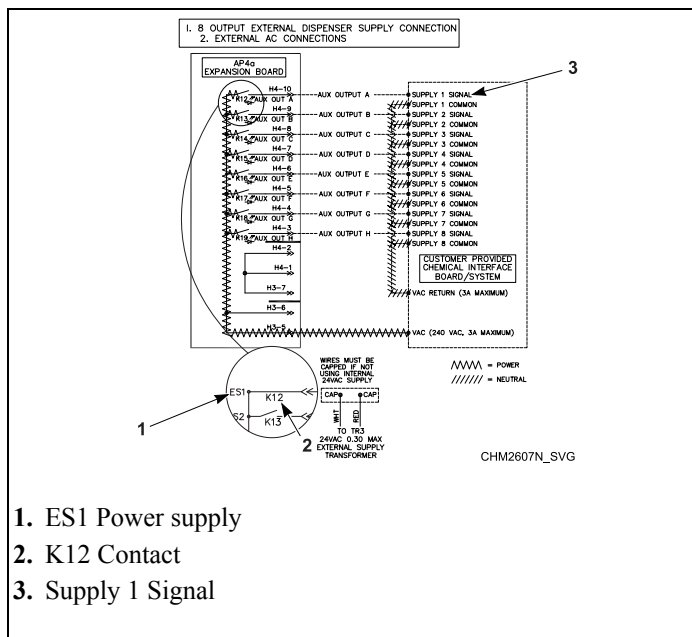


Figure 52

Start Up

Basket Rotation

After installation is complete, run the machine through a test cycle and check that basket rotation is counter clockwise in the extract step.

1. If rotation is not counter clockwise, disconnect power to machine.
2. Have a qualified electrician reverse any two motor leads at the motor.

Operation

Operating Instructions

1. Turn on main power source (circuit breaker).
2. Turn handle clockwise to open. Refer to *Figure 53*.

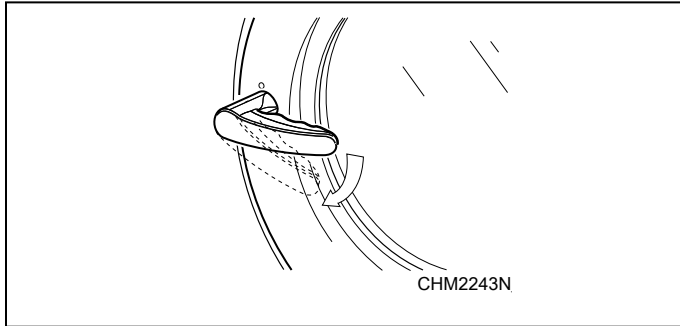


Figure 53

3. Load to capacity whenever possible. DO NOT OVERLOAD. Refer to *Figure 54*.

NOTE: Underloading can cause out-of-balance conditions that can shorten machine life.

	CAUTION
Be careful around the open door, particularly when loading from a level below the door. Impact with door edges can cause personal injury.	
SW025	

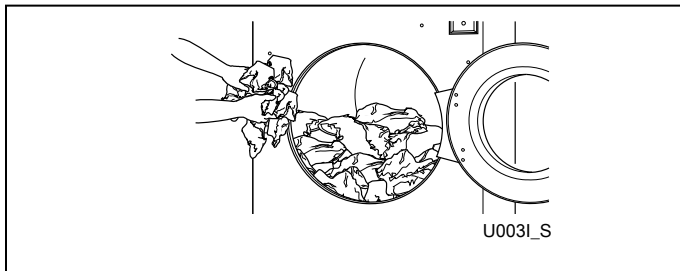


Figure 54

NOTE: When washing items which may disintegrate or fragment, such as mop heads or sponges, use laundry nets to prevent drain blockage.

IMPORTANT: To prevent out-of-balance conditions, premature wear or damage to machine when using laundry nets, use several small nets in a load.

4. Close the door and turn handle counter clockwise. Refer to *Figure 55*.

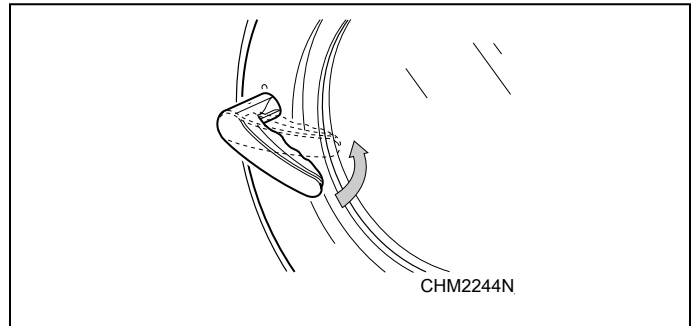


Figure 55

5. Refer to *OPL Control Instructions* to select and start a cycle.

	CAUTION
Water cannot be extracted from rubber backed items. To avoid damage to machine from out of balance conditions, do not use a spin (extract) step when washing rubber backed items. Warranty will be voided.	
W880	

	WARNING
To prevent personal injury, avoid contact with inlet water temperatures higher than 51° Celsius [125° Fahrenheit] and hot surfaces.	
W748	

SC Models with V Control

1. From the *Approach Screen*, select I'm Ready to Wash, Rinse the Machine or Speed Cycle (refer to *Figure 56*).



Figure 56

NOTE: Touch  to make additional changes on a previous menu.

2. Select a cycle from the cycle options menu *Cycle Preset*. Select the desired temperature, then touch NEXT (refer to *Figure 57*).

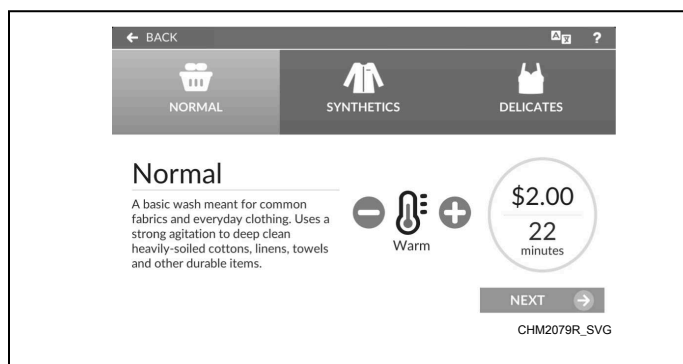


Figure 57

3. If programmed, select desired options from the Additional Options Menu. The vend price and cycle time changes accordingly. When finished adding options, touch PAY (refer to *Figure 58*). Additional options are not available on Rinse the Machine.

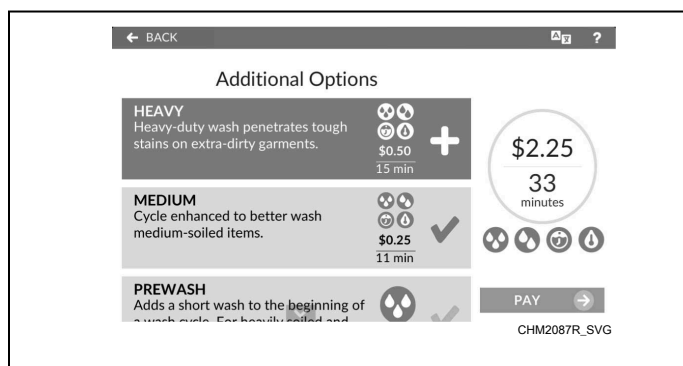


Figure 58

4. The Payment Menu shows the cycle selection summary and vend price total (refer to *Figure 59*). Once the total vend price is entered, the vend price total changes to show START.

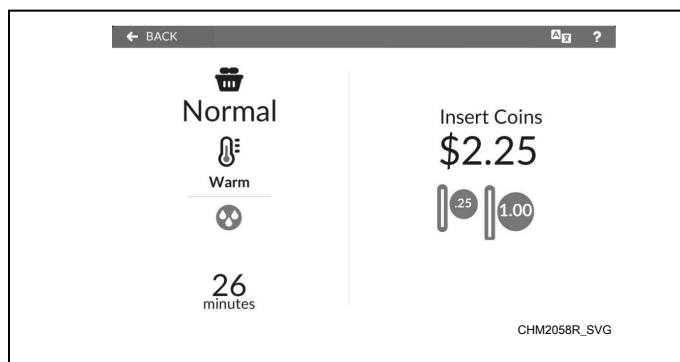


Figure 59

NOTE: If the door is open, the *Close Door Menu* shows until the door is closed.

5. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 46*.
 - a. Detergent:
 - Liquid - Compartment 1 (prewash) + Compartment 3
 - Powder - Compartment 1 (prewash) + Compartment 2
 - b. Bleach:
 - Liquid - Compartment 3
 - Powder - Compartment 2
 - c. Softener:
 - Liquid - Compartment 4
6. Touch START to begin the cycle.
7. The control displays the *Run Menu* until the cycle is complete.

Adding Supplies

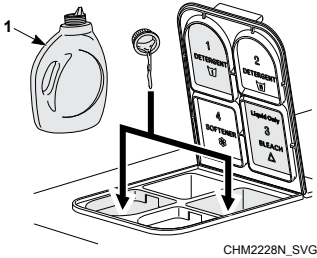
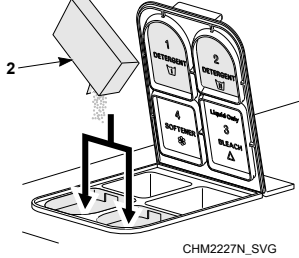
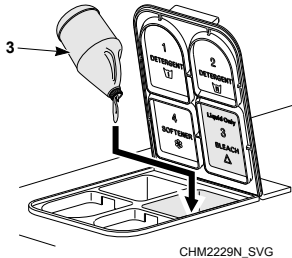
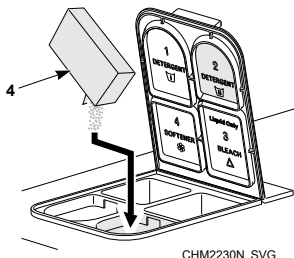
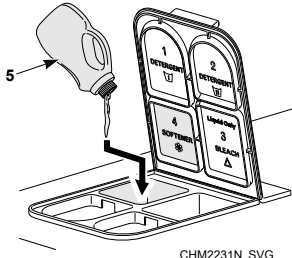
a. DETERGENT	 1. Liquid Detergent	 2. Powder Detergent
b. BLEACH	 3. Liquid Bleach	 4. Powder Bleach
c. SOFTENER	 5. Liquid Softener	

Table 46

Maintenance

Routine maintenance maximizes operating efficiency and minimizes downtime. The maintenance procedures described below will prolong the life of the machine and help prevent accidents.

	WARNING
Sharp edges can cause personal injury. Wear safety glasses and gloves, use proper tools and provide lighting when handling sheet metal parts.	
W366R1	

	CAUTION
Replace all panels that are removed to perform service and maintenance procedures. Do not operate the machine with missing guards or with broken or missing parts. Do not bypass any safety devices.	
SW019	

Follow local codes for proper advise on laundering infected garments.

The following maintenance procedures must be performed regularly at the required intervals.

Daily

IMPORTANT: Replace all panels that are removed to perform maintenance procedures. Do not operate the machine with missing guards or with broken or missing parts. Do not bypass any safety devices.

	WARNING
Do not spray the machine with water. Short circuiting and serious damage may result.	
W782	

IMPORTANT: Door lock should be checked daily to ensure proper operation. Also check that all safety and instruction stickers are on the machine. Any missing or illegible safety instructions stickers should be replaced immediately.

Beginning of Day

1. Inspect the door interlock before starting operation.
 - a. Attempt to start the machine with the door open. The machine should not start.

- b. Close the door without locking it and start the machine. The machine should not start.
- c. Attempt to open the door while the cycle is in progress. The door should not open.

If the door lock and interlock are not functioning properly, disconnect power and call a service technician.

2. Check the machine for leaks.
 - a. Start an unloaded cycle to fill the machine.
 - b. Verify that door and door gasket do not leak.
 - c. Verify that the drain valve is operating and that the drain system is free from obstruction. If water does not leak out during the first wash segment, the drain valve is closed and functioning properly.
3. Inspect the water inlet valve hose connections on the back of the machine for leaks.
4. Inspect the chemical connections for machines equipped with an automatic chemical supply system by inspecting all connections and chemical hoses for leaks or cracks.

	WARNING
To reduce the risk of electrical shock, serious injury or death, disconnect the electrical power to washer-extractor before examining the wiring.	
W636	

5. If applicable, inspect the steam hose connections for leaks.
6. Ensure all panels and guards are properly installed.

End of Day

1. Clean the wash drum, door glass, and door gasket of residual detergent and all foreign matter.
2. Clean the chemical dispenser, flushing with clean water.
3. Clean the machine's exposed surfaces with all-purpose cleaner.

IMPORTANT: Use only isopropyl alcohol to clean graphic overlays. DO NOT use ammonia based or vinegar-based cleans on overlays.

NOTE: Unload the machine promptly after each completed cycle to prevent moisture buildup. Leave loading door and dispenser lid open at the end of each completed cycle to allow moisture to evaporate.

4. Leave the loading door and dispenser lid open to allow moisture to evaporate.

NOTE: Unload the machine promptly after each completed cycle to prevent moisture buildup.
5. Shut off water supply.

Monthly

	WARNING
To reduce the risk of electrical shock, serious injury or death, disconnect the electrical power to washer-extractor before examining the wiring.	
W636	

1. Inspect the electrical connections for looseness. Tighten as required after disconnecting power.
 - a. Verify that insulation is intact on all external wires and that all connections are secure. If bare wire is evident, call a service technician.
2. Clean inlet hose filter screens.
 - a. Turn water off and allow valve and water line to cool, if necessary.
 - b. Unscrew inlet hose from the faucet and remove filter screen.
 - c. Clean with soapy water and reinstall. Replace if worn or damaged.
 - d. Repeat procedure with the filter located inside the valve at the back of the machine.

NOTE: All filter screens should be replaced every five years.
3. If applicable, clean the customer-supplied steam filter. Refer to *Figure 60*.
 - a. Turn off steam supply and allow time for the valve to cool.
 - b. Unscrew cap.
 - c. Remove element and clean.
 - d. Replace element and cap.

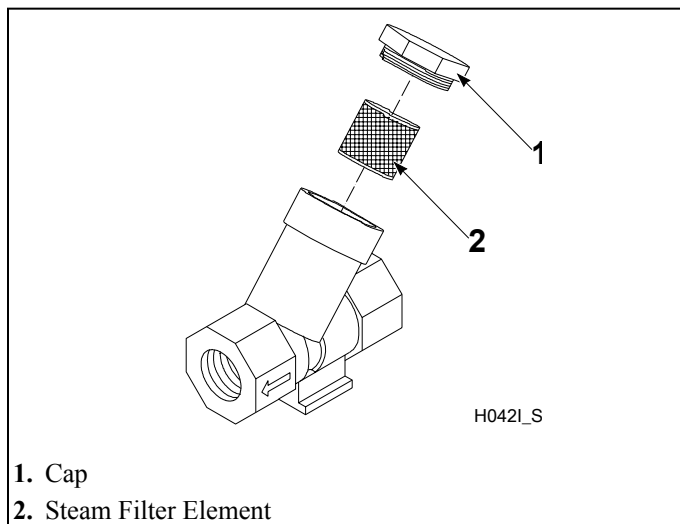


Figure 60

4. For electric heat models only, inspect heating elements for excess debris by rotating basket to view them through its perforations. Remove drain valve hose to access and clear debris with pliers. Replace element(s) if necessary.

NOTE: Lint buildup may take several months to occur. Inspect heating elements a minimum of every 6 months.

5. For 36.3 and 45.4 kg [80 and 100 pound] capacity models only : Lubricate the barings each month or after every 200 hours of operation. Visually inspect grease line for air pockets, purging air pockets as necessary.

The grease must have the following characteristics:

- NLGI Grade 2
- Lithium-based
- Water-insoluble
- Anti-rusting
- Anti-oxidizing
- Mechanically stable

The grease must have adequate base oil viscosity with one of the following ratings:

- ISO VG 150 (135–165 cSt at 40°C [709–871 SUS at 100°F])
- ISO VG 220 (198–242 cSt at 40°C [1047–1283 SUS at 100°F])
- An SAE 40 rating is also acceptable as long as the cSt or SUS values are within the specified ranges.

Pump the grease gun slowly, permitting only 2 strokes.

NOTE: Do not pump the grease gun until grease comes out of the bearing housing. This can result in over lubrication, causing damage to bearings and seals.

Yearly

NOTE: Disconnect power to the machine at its source before performing maintenance procedures.

1. Remove the front panel(s) and rear access panels and inspect all hose, drain, and overflow connections/clamps for leaks. Inspect all hoses for visible signs of deterioration. Replace as necessary.
2. Inspect the belt for unusual wear, frayed edges, and improper belt tension, replacing belts and/or adjusting tensioning elements as necessary.

NOTE: Belts must not be twisted and must be properly seated on pulleys. Belt must be centered on basket pulley within 1 mm [.04 inches] .

- a. Use the following procedures to determine if belt(s) require replacement or adjustment. Call a qualified service technician in either case.

NOTE: Basket pulley must be rotated three (3) full turns before assessing belt tension after every adjustment.

- **Frequency Gauge.** Tighten eyebolt top nut until the correct frequency (refer to *Table 48*) is obtained mid-span. Torque jam nut to spring bracket to 20.6 ± 2 ft.-lbs. Refer to *Figure 61*.

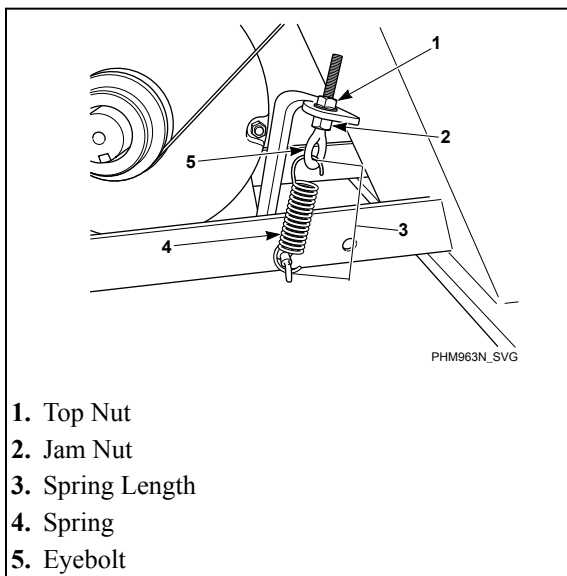


Figure 61

- **Tension Gauge.** Tighten eyebolt top nut until the proper belt gauge (refer to *Table 48*) is obtained mid-span. Torque jam nut to spring bracket to 20.6 ± 2 ft.-lbs. Refer to *Figure 61*.
- **Spring Length.** Tighten eyebolt top nut until the spring measures the correct distance between the hooks. Refer to *Table 47*. Torque jam nut to spring bracket to 20.6 ± 2 ft.-lbs. Refer to *Figure 61*.

Spring Length, mm [in.]	
Model	Distance Between Hooks
20 (2 HP)	116 [4-9/16]
30	114 [4-1/2]
40	117 [4-5/8]
60	133 [5-1/4]
80	116 [4-9/16]
100	124 [4-9/10]

Table 47

- **Maintain Tension During Belt Removal.** If proper tension is achieved, tape the jam nut in place and loosen eyebolt top nut to release the belt. Replace belt and retighten eyebolt top nut back to jam nut position. Refer to *Figure 61*.

IMPORTANT: All torque joints must remain dry (non-lubricated).

- b. **20-60 Models:** verify the belt is centered on the basket pulley with in one (1) rib. **80-100 Models:** verify the belt is within the allowable distance of 1 mm [.04 inch] between the belt and the edge of basket pulley.

Belt Tension by Frequency or Belt Tension Gauge			
Model	Frequency (Hz)	Belt Tension (lbs.)	Tension Gauge (N)
20	88 ± 2	60.4 ± 6.1	269 ± 27
30	84 ± 2	63.2 ± 6.3	281 ± 28
40	75 ± 2	88.6 ± 8.8	394 ± 39
60	70 ± 2	100.2 ± 5.7	446 ± 25
80	102 ± 2	135 ± 5	601 ± 23
100	110 ± 2	158 ± 5	702 ± 23

Table 48

- Remove any accumulated debris on or near the motor and motor variable frequency drive heat sinks, if applicable.
 - If applicable, unlock or unscrew the top cover and inspect the supply dispenser hoses and hose connections for visible signs of deterioration. Replace hoses if worn or damaged.
- NOTE: Hoses and other natural rubber parts deteriorate after extended use. Hoses may develop cracks, blisters or material wear from the temperature and constant high pressure they are subjected to.**
- Remove any dust from all electrical components, including coin acceptors if applicable, with compressed air.
 - Inspect hardware for any loose nuts, bolts, screws.
 - Check the tightness of the motor spring and motor pulley hardware. Also check that the eyebolt is tightened properly.
 - Tighten motor mounting bolt locknuts and bearing bolt locknuts, if necessary.
 - Check the bearing mounting bolts to make sure they are torqued properly. Refer to *Table 49*.

Torque, ft-lbs.		
Model	Bearing	Torque
20	All	41
30-40	All	101
60	All	201
80-100	All	357

Table 49

- d. Tighten door hinges and fasteners, if necessary.
7. Place a large magnet over the normally-closed ball switch to verify the stability switch operation.
8. Ensure all panels and guards are properly reinstalled.
 - a. Verify that the drain motor shield is in place and secure, if so equipped.
9. Run factory test, reference programming manual for procedure details and components tested.
10. Inspect all painted surfaces for exposed metal. Replace or repaint if necessary.
 - If bare metal is showing, paint with primer or solvent-based paint.
 - If rust appears, remove it with sandpaper or by chemical means. Repaint with primer or solvent-based paint.
11. Torque anchor bolts and inspect grout for cracking.

NOTE: Refer to the *Installation Manual* for anchor bolt specifications.

IMPORTANT: All torque joints must remain dry (non-lubricated).

12. Every 5 years replace inlet hoses, hose screens, belt, and fan filter (if applicable).

Care of Stainless Steel

- Remove dirt and grease with detergent and water. Thoroughly rinse and dry after washing.
- Avoid contact with dissimilar metals to prevent galvanic corrosion when salty or acidic solutions are present.
- Do not allow salty or acidic solutions to evaporate and dry on stainless steel. Wipe clean of any residues.
- Rub in the direction of the polish lines or “grain” of the stainless steel to avoid scratch marks when using abrasive cleaners. Use stainless steel wool or soft, non-metal bristle brushes. Do not use ordinary steel wool or steel brushes.
- If the stainless steel appears to be rusting, the source of the rust may be an iron or steel part not made of stainless steel, such as a nail or screw.
- Remove discoloration or heat tint from overheating by scouring with a powder or by employing special chemical solutions.
- Do not leave sterilizing solutions on stainless steel equipment for prolonged periods of time.
- When an external chemical supply is used, ensure no siphoning of chemicals occurs when the machine is not in use. Highly concentrated chemicals can cause severe damage to stainless steel and other components within the machine. Damage of this kind is not covered by the manufacturer’s warranty. Locate the pump and tubing below the machine’s injection point to prevent siphoning of chemicals into the machine.

Disposal of Unit

This appliance is marked according to the European directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Refer to *Figure 62*. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. Ensuring this product is disposed of correctly will help prevent potential negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact the local city office, household waste disposal service, or the source from which the product was purchased.

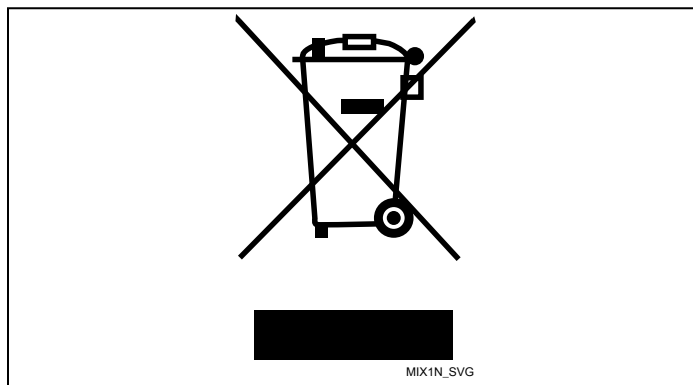


Figure 62