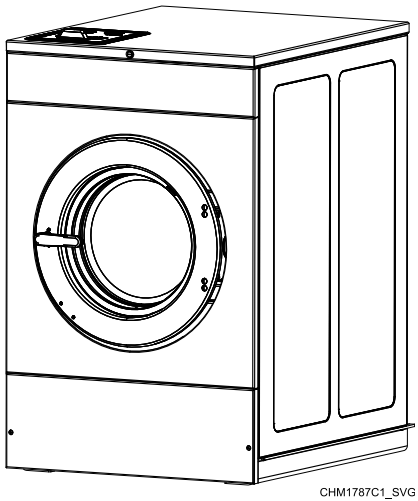
Washer-Extractors

Cabinet Hardmount

Design 4, 6, 7 and 8 Machines

Refer to Page 9 for Machine Identification

Installation/Operation/Maintenance



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.)

Alliance™ Laundry Systems

www.alliancelaundry.com

Part No. F8619501ENR13
December 2024

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 recieved 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

PCT020, PCT030, PCT040, PCT060

BCT020, BCT030, BCT040, BCT060

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

As required by China's Management Methods for Restricted Use of Hazardous Substances in Electrical and Electronic Products

Hazardous substances						
Part Name	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (CR[VI])	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
PCBs	X	O	O	O	O	O
Electromechanical Parts	O	O	O	O	O	O
Cables and Wires	O	O	O	O	O	O
Metal Parts	O	O	O	O	O	O
Plastic Parts	O	O	O	O	O	O
Batteries	O	O	O	O	O	O
Hoses and Tubing	O	O	O	O	O	O
Timing Belts	O	O	O	O	O	O
Insulation	O	O	O	O	O	O
Glass	O	O	O	O	O	O
Display	O	O	O	O	O	O

This table is prepared in accordance with the provisions of SJ/T-11364.

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.

All parts named in this table with an "X" are in compliance with the European Union's RoHS Legislation.

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

This product under normal use, durable years of environmental protection is 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 158ºF [70ºC] 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 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.

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

Table of Contents

Introduction

Machine Identification

Information in this manual is applicable to these machines:

20 Machines						
DCG020ND DCJ020NC DCJ020ND DCJ020NE	DCJ020NF DCJ020NH DCJ020NL DCJ020NQ	DCJ020NT DCJ020NV DCJ020NX DCJ020NY	DCJ020WC DCJ020WD DCJ020WE DCJ020WF	DCJ020WH DCJ020WL DCJ020WQ DCJ020WT	DCJ020WV DCJ020WX	DCJ020WY
BCA020NC BCA020NH BCA020NL BCA020NX BCA020NY BCA020QN BCA020WC BCA020WH BCA020WL BCA020WX	BCA020WY BCG020NC BCG020ND BCG020NE BCG020NF BCG020NH BCG020NL BCG020NQ BCG020NT BCG020NY	BCG020NV BCG020NX BCG020QN BCG020WC BCG020WD BCG020WE BCG020WF BCG020WH BCG020WL BCG020WQ	BCG020WT BCG020WV BCG020WX BCG020WY BCK020NC BCK020NH BCK020NL BCK020NX BCK020NY BCK020QN	BCK020WC BCK020WH BCK020WL BCK020WX BCK020WY BCL020NC BCL020NH BCL020NL BCL020NX BCL020NY	BCL020QN BCL020WC BCL020WH BCL020WL BCL020WX BCL020WY BCT020NC BCT020NH BCT020NL BCT020NX	BCT020NY BCT020QN BCT020WC BCT020WH BCT020WL BCT020WX BCT020WY
HCA020FN HCA020NC HCA020ND HCA020NE HCA020NF HCA020NH HCA020NL HCA020NQ HCA020NT HCA020NV HCA020NX HCA020NY HCA020QN HCA020WC HCA020WD HCA020WE HCA020WF HCA020WH HCA020WL HCA020WT HCA020WV HCA020WX HCA020WY HCD020FN HCD020NC HCD020ND HCD020NE HCD020NF HCD020NH HCD020NL	HCD020NQ HCD020NT HCD020NV HCD020NX HCD020NY HCD020QN HCD020WC HCD020WD HCD020WE HCD020WF HCD020WH HCD020WL HCD020WQ HCD020WT HCD020WV HCD020WX HCD020WY HCE020FN HCE020NC HCE020ND HCE020NE HCE020NF HCE020NH HCE020NL HCE020NQ HCE020NT HCE020NV HCE020NX HCE020NY HCE020WC	HCE020WD HCE020WE HCE020WF HCE020WH HCE020WL HCE020WQ HCE020WT HCE020WV HCE020WX HCE020WY HCG020FN HCG020NC HCG020ND HCG020NE HCG020NF HCG020NH HCG020NL HCG020NQ HCG020NT HCG020NV HCG020NX HCG020NY HCG020QN HCG020WC HCG020WD HCG020WE HCG020WF HCG020WH HCG020WL HCG020WT	HCG020WV HCG020WX HCG020WY HCH020FN HCH020NC HCH020ND HCH020NE HCH020NF HCH020NH HCH020NL HCH020NQ HCH020NT HCH020NV HCH020NX HCH020NY HCH020QN HCH020WC HCH020WD HCH020WE HCH020WF HCH020WH HCH020WL HCH020WQ HCH020WT HCH020WV HCH020WX HCH020WY HCJ020FN HCJ020NC HCJ020ND	HCJ020NE HCJ020NF HCJ020NH HCJ020NL HCJ020NQ HCJ020NT HCJ020NV HCJ020NX HCJ020NY HCJ020QN HCJ020WC HCJ020WD HCJ020WE HCJ020WF HCJ020WH HCJ020WL HCJ020WQ HCJ020WT HCJ020WV HCJ020WX HCJ020WY HCK020NH HCL020FN HCL020WH HCL020WX HCT020FN HCT020NC HCT020ND HCT020NE HCT020NF	HCT020NH HCT020NL HCT020NN HCT020NP HCT020NQ HCT020NT HCT020NV HCT020NX HCT020NY HCT020QC HCT020QD HCT020QE HCT020QF HCT020QH HCT020QL HCT020QN HCT020QQ HCT020QT HCT020QV HCT020QX HCT020QY HCT020WC HCT020WD HCT020WE HCT020WF HCT020WH HCT020WL HCT020WP HCT020WQ	HCT020WT HCT020WV HCT020WX HCT020WY HCU020FN HCU020NC HCU020ND HCU020NE HCU020NF HCU020NH HCU020NL HCU020NQ HCU020NT HCU020NV HCU020NX HCU020NY HCU020QN HCU020WC HCU020WD HCU020WE HCU020WF HCU020WH HCU020WL HCU020WQ HCU020WT HCU020WV HCU020WX HCU020WY

continues...

20 Machines						
PCA020NC PCA020NH PCA020NL PCA020NX PCA020NY PCA020QN PCA020WC PCA020WH PCA020WL PCA020WX	PCA020WY PCG020NC PCG020ND PCG020NE PCG020NF PCG020NH PCG020NL PCG020NQ PCG020NT PCT020NV	PCG020NX PCG020NY PCG020QN PCG020WC PCG020WD PCG020WE PCG020WF PCG020WH PCG020WL PCG020WQ	PCG020WT PCG020WV PCG020WX PCG020WY PCK020NC PCK020NH PCK020NL PCK020NX PCK020NY PCK020QN	PCK020WC PCK020WH PCK020WL PCK020WX PCK020WY PCL020NC PCL020NH PCL020NL PCL020NX PCL020NY	PCL020QN PCL020WC PCL020WH PCL020WL PCL020WX PCL020WY PCT020NC PCT020NH PCT020NL PCT020NX	PCT020NY PCT020QN PCT020WC PCT020WH PCT020WL PCT020WX PCT020WY
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UCA020FN UCA020NN UCA020QN UCD020FN	UCD020NN UCD020QN UCG020FN UCG020NN	UCG020QN UCH020FN UCH020NN UCH020QN	UCE020FN UCJ020FN UCJ020NN UCJ020QN	UCK020NN UCK020QN UCT020FN UCT020NN	UCT020QN UCU020FN UCU020QN	UCU020NN

30 Machines						
DCG030ND DCJ030NC DCJ030ND DCJ030NE	DCJ030NF DCJ030NH DCJ030NL DCJ030NQ	DCJ030NT DCJ030NV DCJ030NX DCJ030NY	DCJ030WC DCJ030WD DCJ030WE DCJ030WF	DCJ030WH DCJ030WL DCJ030WQ DCJ030WT	DCJ030WV DCJ030WX	DCJ030WY
BCA030NC BCA030NH BCA030NL BCA030NX BCA030NY BCA030QN BCA030WC BCA030WH BCA030WL BCA030WX	BCA030WY BCG030NC BCG030ND BCG030NE BCG030NF BCG030NH BCG030NL BCG030NQ BCG030NT BCG030NV	BCG030NX BCG030NY BCG030QN BCG030WC BCG030WD BCG030WE BCG030WF BCG030WH BCG030WL BCG030WQ	BCG030WT BCG030WV BCG030WX BCG030WY BCK030NC BCK030NH BCK030NL BCK030NX BCK030NY BCK030QN	BCK030WC BCK030WH BCK030WL BCK030WX BCK030WY BCL030NC BCL030NH BCL030NL BCL030NX BCL030NY	BCL030QN BCL030WC BCL030WH BCL030WL BCL030WX BCL030WY BCT030NC BCT030NH BCT030NL BCT030NX	BCT030NY BCT030QN BCT030WC BCT030WH BCT030WL BCT030WX BCT030WY
HCA030FN HCA030NC HCA030ND HCA030NE HCA030NF HCA030NH HCA030NL HCA030NQ HCA030NT HCA030NV HCA030NX HCA030NY HCA030QN HCA030WC HCA030WD HCA030WE HCA030WF HCA030WH HCA030WL HCA030WT HCA030WV HCA030WX HCA030WY HCD030FN HCD030NC HCD030ND HCD030NE HCD030NF HCD030NH HCD030NL	HCD030NQ HCD030NT HCD030NV HCD030NX HCD030NY HCD030QN HCD030WC HCD030WD HCD030WE HCD030WF HCD030WH HCD030WL HCD030WQ HCD030WT HCD030WV HCD030WX HCD030WY HCE030FN HCE030NC HCE030ND HCE030NE HCE030NF HCE030NH HCE030NL HCE030NQ HCE030NT HCE030NV HCE030NX HCE030NY HCE030WC	HCE030WD HCE030WE HCE030WF HCE030WH HCE030WL HCE030WQ HCE030WT HCE030WV HCE030WX HCE030WY HCG030FN HCG030NC HCG030ND HCG030NE HCG030NF HCG030NH HCG030NL HCG030NQ HCG030NT HCG030NV HCG030NX HCG030NY HCG030QN HCG030WC HCG030WD HCG030WE HCG030WF HCG030WH HCG030WL HCG030WT	HCG030WV HCG030WX HCG030WY HCH030FN HCH030NC HCH030ND HCH030NE HCH030NF HCH030NH HCH030NL HCH030NQ HCH030NT HCH030NV HCH030NX HCH030NY HCH030QN HCH030WC HCH030WD HCH030WE HCH030WF HCH030WH HCH030WL HCH030WQ HCH030WT HCH030WV HCH030WX HCH030WY HCJ030FN HCJ030NC HCJ030ND	HCJ030NE HCJ030NF HCJ030NH HCJ030NL HCJ030NQ HCJ030NT HCJ030NV HCJ030NX HCJ030NY HCJ030QN HCJ030WC HCJ030WD HCJ030WE HCJ030WF HCJ030WH HCJ030WL HCJ030WQ HCJ030WT HCJ030WV HCJ030WX HCJ030WY HCK030NH HCL030FN HCL030WH HCL030WX HCT030FN HCT030NC HCT030ND HCT030NE HCT030NF	HCT030NH HCT030NL HCT030NP HCT030NQ HCT030NT HCT030NV HCT030NX HCT030NY HCT030QC HCT030QD HCT030QE HCT030QF HCT030QH HCT030QL HCT030QN HCT030QQ HCT030QT HCT030QV HCT030QX HCT030QY HCT030WC HCT030WD HCT030WE HCT030WF HCT030WH HCT030WL HCT030WP HCT030WQ HCT030WT HCT030WV	HCT030WX HCT030WY HCU030FN HCU030NC HCU030ND HCU030NE HCU030NF HCU030NH HCU030NL HCU030NQ HCU030NT HCU030NV HCU030NX HCU030NY HCU030QN HCU030WC HCU030WD HCU030WE HCU030WF HCU030WH HCU030WL HCU030WQ HCU030WT HCU030WV HCU030WX HCU030WY

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30 Machines						
PCA030NC PCA030NH PCA030NL PCA030NX PCA030NY PCA030QN PCA030WC PCA030WH PCA030WL PCA030WX	PCA030WY PCG030NC PCG030ND PCG030NE PCG030NF PCG030NH PCG030NL PCG030NQ PCG030NT PCG030NV	PCG030NX PCG030NY PCG030QN PCG030WC PCG030WD PCG030WE PCG030WF PCG030WH PCG030WL PCG030WQ	PCG030WT PCG030WV PCG030WX PCG030WY PCK030NC PCK030NH PCK030NL PCK030NX PCK030NY PCK030QN	PCK030WC PCK030WH PCK030WL PCK030WX PCK030WY PCL030NC PCL030NH PCL030NL PCL030NX PCL030NY	PCL030QN PCL030WC PCL030WH PCL030WL PCL030WX PCL030WY PCT030NC PCT030NH PCT030NL PCT030NX	PCT030NY PCT030QN PCT030WC PCT030WH PCT030WL PCT030WX PCT030WY
SCA030FN SCA030NC SCA030ND SCA030NE SCA030NF SCA030NH SCA030NL SCA030NN SCA030NT SCA030NQ SCA030NV SCA030NX SCA030NY SCA030QN SCA030WC SCA030WD SCA030WE SCA030WF SCA030WH SCA030WL SCA030WT SCA030WQ SCA030WV SCA030WX SCA030WY SCD030FN SCD030NC SCD030ND SCD030NE SCD030NF SCD030NH SCD030NL SCD030NN SCD030NT SCD030NQ SCD030NV	SCD030NX SCD030NY SCD030WC SCD030WD SCD030WE SCD030WF SCD030WH SCD030WL SCD030WT SCD030WQ SCD030WV SCD030WX SCD030WY SCE030FN SCE030NC SCE030ND SCE030NE SCE030NF SCE030NH SCE030NL SCE030NN SCE030NT SCE030NQ SCE030NV SCE030NX SCE030NY SCE030WC SCE030WD SCE030WE SCE030WF SCE030WH SCE030WL SCE030WT SCE030WQ SCE030WV	SCE030WX SCE030WY SCG030FN SCG030NC SCG030ND SCG030NE SCG030NF SCG030NH SCG030NL SCG030NN SCG030NT SCG030NQ SCG030NV SCG030NX SCG030NY SCG030QN SCG030WC SCG030WD SCG030WE SCG030WF SCG030WH SCG030WL SCG030WT SCG030WQ SCG030WV SCG030WX SCG030WY SCH030FN SCH030NC SCH030ND SCH030NE SCH030NF SCH030NH SCH030NL SCH030NN SCH030NQ	SCH030NT SCH030NV SCH030NX SCH030NY SCH030WC SCH030WD SCH030WE SCH030WF SCH030WH SCH030WL SCH030WQ SCH030WT SCH030WV SCH030WX SCH030WY SCJ030FN SCJ030NN SCJ030WC SCJ030WD SCJ030WE SCJ030WF SCJ030WH SCJ030WL SCJ030WQ SCJ030WT SCJ030WV SCJ030WX SCJ030WY SCK030FN SCK030NC SCK030ND SCK030NE SCK030NF SCK030NH SCK030NL	SCK030NN SCK030NQ SCK030NT SCK030NV SCK030NX SCK030NY SCK030WC SCK030WD SCK030WE SCK030WF SCK030WH SCK030WL SCK030WQ SCK030WT SCK030WV SCK030WX SCK030WY SCL030FN SCL030NC SCL030ND SCL030NE SCL030NF SCL030NH SCL030NL SCL030NN SCL030NQ SCL030NT SCL030NV SCL030NX SCL030NY SCL030WC SCL030WD SCL030WE SCL030WF SCL030WH	SCL030WL SCL030WQ SCL030WT SCL030WV SCL030WX SCL030WY SCT030FN SCT030NC SCT030ND SCT030NE SCT030NF SCT030NH SCT030NL SCT030NN SCT030NP SCT030NT SCT030NQ SCT030NV SCT030NX SCT030NY SCT030QC SCT030QD SCT030QE SCT030QF SCT030QH SCT030QL SCT030QN SCT030QQ SCT030QT SCT030QV SCT030QX SCT030QY SCT030WC SCT030WD SCT030WE	SCT030WF SCT030WH SCT030WL SCT030WT SCT030WQ SCT030WV SCT030WX SCT030WY SCU030FN SCU030NC SCU030ND SCU030NE SCU030NF SCU030NH SCU030NL SCU030NN SCU030NT SCU030NQ SCU030NV SCU030NX SCU030NY SCU030WC SCU030WD SCU030WE SCU030WF SCU030WH SCU030WL SCU030WT SCU030WQ SCU030WV SCU030WX SCU030WY
UCA030FN UCA030NN UCA030QN UCD030FN	UCD030NN UCD030QN UCE030FN UCG030FN	UCG030NN UCG030QN UCH030FN UCH030NN	UCH030QN UCJ030FN UCJ030NN UCJ030QN	UCK030NN UCK030QN UCT030FN UCT030NN	UCT030QN UCU030FN UCU030NN	UCU030QN

40 Machines						
DCG040ND DCJ040NC DCJ040ND DCJ040NE	DCJ040NF DCJ040NH DCJ040NL DCJ040NQ	DCJ040NT DCJ040NV DCJ040NX DCJ040NY	DCJ040WC DCJ040WD DCJ040WE DCJ040WF	DCJ040WH DCJ040WL DCJ040WQ DCJ040WT	DCJ040WV DCJ040WX	DCJ040WY
BCA040NC BCA040NH BCA040NL BCA040NX BCA040NY BCA040QN BCA040WC BCA040WH BCA040WL BCA040WX	BCA040WY BCG040NC BCG040ND BCG040NE BCG040NF BCG040NH BCG040NL BCG040NQ BCG040NT BCG040NV	BCG040NX BCG040NY BCG040QN BCG040WC BCG040WD BCG040WE BCG040WF BCG040WH BCG040WL BCG040WQ	BCG040WT BCG040WV BCG040WX BCG040WY BCK040NC BCK040NH BCK040NL BCK040NX BCK040NY BCK040QN	BCK040WC BCK040WH BCK040WL BCK040WX BCK040WY BCL040NC BCL040NH BCL040NL BCL040NX BCL040NY	BCL040QN BCL040WC BCL040WH BCL040WL BCL040WX BCL040WY BCT040NC BCT040NH BCT040NL BCT040NX	BCT040NY BCT040QN BCT040WC BCT040WH BCT040WL BCT040WX BCT040WY
HCA040FN HCA040NC HCA040ND HCA040NE HCA040NF HCA040NH HCA040NL HCA040NQ HCA040NT HCA040NV HCA040NX HCA040NY HCA040QN HCA040WC HCA040WD HCA040WE HCA040WF HCA040WH HCA040WL HCA040WT HCA040WV HCA040WX HCA040WY HCE040FN HCE040NC HCE040ND	HCE040NE HCE040NF HCE040NH HCE040NL HCE040NQ HCE040NT HCE040NV HCE040NX HCE040NY HCE040WC HCE040WD HCE040WE HCE040WF HCE040WH HCE040WL HCE040WQ HCE040WT HCE040WV HCE040WX HCE040WY HCG040FN HCG040NC HCG040ND HCG040NE HCG040NF HCG040NH	HCG040NL HCG040NQ HCG040NT HCG040NV HCG040NX HCG040NY HCG040QN HCG040WC HCG040WD HCG040WE HCG040WF HCG040WH HCG040WL HCG040WT HCG040WV HCG040WX HCG040WY HCH040FN HCH040NC HCH040ND HCH040NE HCH040NF HCH040NH HCH040NL HCH040NQ HCH040NT	HCH040NV HCH040NX HCH040NY HCH040QN HCH040WC HCH040WD HCH040WE HCH040WF HCH040WH HCH040WL HCH040WQ HCH040WT HCH040WV HCH040WX HCH040WY HCJ040FN HCJ040NC HCJ040ND HCJ040NE HCJ040NF HCJ040NH HCJ040NL HCJ040NQ HCJ040NT HCJ040NV HCJ040NX	HCJ040NY HCJ040QN HCJ040WC HCJ040WD HCJ040WE HCJ040WF HCJ040WH HCJ040WL HCJ040WQ HCJ040WT HCJ040WV HCJ040WX HCJ040WY HCK040NH HCL040FN HCL040WH HCL040WX HCT040FN HCT040NC HCT040ND HCT040NE HCT040NF HCT040NH HCT040NL HCT040NN HCT040NP	HCT040NQ HCT040NT HCT040NV HCT040NX HCT040NY HCT040QC HCT040QD HCT040QE HCT040QF HCT040QH HCT040QL HCT040WX HCT040QN HCT040QQ HCT040QT HCT040QV HCT040QX HCT040QY HCT040WC HCT040WD HCT040WE HCT040WF HCT040WH HCT040WL HCT040WP HCT040WQ	HCT040WT HCT040WV HCT040WY HCU040FN HCU040NC HCU040ND HCU040NE HCU040NF HCU040NH HCU040NL HCU040NQ HCU040NT HCU040NV HCU040NX HCU040NY HCU040QN HCU040WC HCU040WD HCU040WE HCU040WF HCU040WH HCU040WL HCU040WQ HCU040WT HCU040WV HCU040WX HCU040WY
PCA040NC PCA040NH PCA040NL PCA040NX PCA040NY PCA040QN PCA040WC PCA040WH PCA040WL PCA040WX	PCA040WY PCG040NC PCG040ND PCG040NE PCG040NF PCG040NH PCG040NL PCG040NQ PCG040NT PCG040NV	PCG040NX PCG040NY PCG040QN PCG040WC PCG040WD PCG040WE PCG040WF PCG040WH PCG040WL PCG040WQ	PCG040WT PCG040WV PCG040WX PCG040WY PCK040NC PCK040NH PCK040NL PCK040NX PCK040NY PCK040QN	PCK040WC PCK040WH PCK040WL PCK040WX PCK040WY PCL040NC PCL040NH PCL040NL PCL040NX PCL040NY	PCL040QN PCL040WC PCL040WH PCL040WL PCL040WX PCL040WY PCT040NC PCT040NH PCT040NL PCT040NX	PCT040NY PCT040QN PCT040WC PCT040WH PCT040WL PCT040WX PCT040WY

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40 Machines						
SCA040FN	SCE040NN	SCG040WD	SCH040WV	SCK040WE	SCL040WX	SCT040WH
SCA040NC	SCE040NT	SCG040WE	SCH040WX	SCK040WF	SCL040WY	SCT040WL
SCA040ND	SCE040NQ	SCG040WF	SCH040WY	SCK040WH	SCT040FN	SCT040WT
SCA040NE	SCE040NV	SCG040WH	SCJ040FN	SCK040WL	SCT040NC	SCT040WQ
SCA040NF	SCE040NX	SCG040WL	SCJ040NN	SCK040WQ	SCT040ND	SCT040WV
SCA040NH	SCE040NY	SCG040WT	SCJ040WC	SCK040WT	SCT040NE	SCT040WX
SCA040NL	SCE040WC	SCG040WQ	SCJ040WD	SCK040WV	SCT040NF	SCT040WY
SCA040NN	SCE040WD	SCG040WV	SCJ040WE	SCK040WX	SCT040NH	SCU040FN
SCA040NT	SCE040WE	SCG040WX	SCJ040WF	SCK040WY	SCT040NL	SCU040NC
SCA040NQ	SCE040WF	SCG040WY	SCJ040WH	SCL040FN	SCT040NN	SCU040ND
SCA040NV	SCE040WH	SCH040FN	SCJ040WL	SCL040NC	SCT040NP	SCU040NE
SCA040NX	SCE040WL	SCH040NC	SCJ040WQ	SCL040ND	SCT040NT	SCU040NF
SCA040NY	SCE040WT	SCH040ND	SCJ040WT	SCL040NE	SCT040NQ	SCU040NH
SCA040QN	SCE040WQ	SCH040NE	SCJ040WV	SCL040NF	SCT040NV	SCU040NL
SCA040WC	SCE040WV	SCH040NF	SCJ040WX	SCL040NH	SCT040NX	SCU040NN
SCA040WD	SCE040WX	SCH040NH	SCJ040WY	SCL040NL	SCT040NY	SCU040NT
SCA040WE	SCE040WY	SCH040NL	SCK040FN	SCL040NN	SCT040QC	SCU040NQ
SCA040WF	SCG040FN	SCH040NN	SCK040NC	SCL040NQ	SCT040QD	SCU040NV
SCA040WH	SCG040NC	SCH040NQ	SCK040ND	SCL040NT	SCT040QE	SCU040NX
SCA040WL	SCG040ND	SCH040NT	SCK040NE	SCL040NV	SCT040QF	SCU040NY
SCA040WT	SCG040NE	SCH040NV	SCK040NF	SCL040NX	SCT040QH	SCU040WC
SCA040WQ	SCG040NF	SCH040NX	SCK040NH	SCL040NY	SCT040QL	SCU040WD
SCA040WV	SCG040NH	SCH040NY	SCK040NL	SCL040WC	SCT040QN	SCU040WE
SCA040WX	SCG040NL	SCH040WC	SCK040NN	SCL040WD	SCT040QQ	SCU040WF
SCA040WY	SCG040NN	SCH040WD	SCK040NQ	SCL040WE	SCT040QT	SCU040WH
SCE040FN	SCG040NT	SCH040WE	SCK040NT	SCL040WF	SCT040QV	SCU040WL
SCE040NC	SCG040NQ	SCH040WF	SCK040NV	SCL040WH	SCT040QX	SCU040WT
SCE040ND	SCG040NV	SCH040WH	SCK040NX	SCL040WL	SCT040QY	SCU040WQ
SCE040NE	SCG040NX	SCH040WL	SCK040NY	SCL040WQ	SCT040WC	SCU040WV
SCE040NF	SCG040NY	SCH040WQ	SCK040WC	SCL040WT	SCT040WD	SCU040WX
SCE040NH	SCG040QN	SCH040WT	SCK040WD	SCL040WV	SCT040WE	SCU040WY
SCE040NL	SCG040WC				SCT040WF	
UCA040FN	UCE040FN	UCG040QN	UCH040QN	UCJ040QN	UCT040FN	UCU040FN
UCA040NN	UCG040FN	UCH040FN	UCJ040FN	UCK040NN	UCT040NN	UCU040NN
UCA040QN	UCG040NN	UCH040NN	UCJ040NN	UCK040QN	UCT040QN	UCU040QN

60 Machines						
DCG060ND	DCJ060NF	DCJ060NT	DCJ060WC	DCJ060WH	DCJ060WV	DCJ060WY
DCJ060NC	DCJ060NH	DCJ060NV	DCJ060WD	DCJ060WL	DCJ060WX	
DCJ060ND	DCJ060NL	DCJ060NX	DCJ060WE	DCJ060WQ		
DCJ060NE	DCJ060NQ	DCJ060NY	DCJ060WF	DCJ060WT		

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60 Machines						
BCA060NC BCA060NH BCA060NL BCA060NX BCA060NY BCA060QN BCA060WC BCA060WH BCA060WL BCA060WX	BCA060WY BCG060NC BCG060ND BCG060NE BCG060NF BCG060NH BCG060NL BCG060NQ BCG060NT BCG060NV	BCG060NX BCG060NY BCG060QN BCG060WC BCG060WD BCG060WE BCG060WF BCG060WH BCG060WL BCG060WQ	BCG060WT BCG060WV BCG060WX BCG060WY BCK060NC BCK060NH BCK060NL BCK060NX BCK060NY BCK060QN	BCK060WC BCK060WH BCK060WL BCK060WX BCK060WY BCL060NC BCL060NH BCL060NL BCL060NX BCL060NY	BCL060QN BCL060WC BCL060WH BCL060WL BCL060WX BCL060WY BCT060NC BCT060NH BCT060NL BCT060NX	BCT060NY BCT060QN BCT060WC BCT060WH BCT060WL BCT060WX BCT060WY
HCA060FN HCA060NC HCA060ND HCA060NE HCA060NF HCA060NH HCA060NL HCA060NQ HCA060NT HCA060NV HCA060NX HCA060NY HCA060QN HCA060WC HCA060WD HCA060WE HCA060WF HCA060WH HCA060WL HCA060WT HCA060WV HCA060WX HCA060WY HCE060FN HCE060NC HCE060ND	HCE060NE HCE060NF HCE060NH HCE060NL HCE060NQ HCE060NT HCE060NV HCE060NX HCE060NY HCE060WC HCE060WD HCE060WE HCE060WF HCE060WH HCE060WL HCE060WQ HCE060WT HCE060WV HCE060WX HCE060WY HCG060FN HCG060NC HCG060ND HCG060NE HCG060NF HCG060NH	HCG060NL HCG060NQ HCG060NT HCG060NV HCG060NX HCG060NY HCG060QN HCG060WC HCG060WD HCG060WE HCG060WF HCG060WH HCG060WL HCG060WT HCG060WV HCG060WX HCG060WY HCH060FN HCH060NC HCH060ND HCH060NE HCH060NF HCH060NH HCH060NL HCH060NQ HCH060NT	HCH060NV HCH060NX HCH060NY HCH060QN HCH060WC HCH060WD HCH060WE HCH060WF HCH060WH HCH060WL HCH060WQ HCH060WT HCH060WV HCH060WX HCH060WY HCJ060FN HCJ060NC HCJ060ND HCJ060NE HCJ060NF HCJ060NH HCJ060NL HCJ060NQ HCJ060NT HCJ060NV HCJ060NX	HCJ060NY HCJ060QN HCJ060WC HCJ060WD HCJ060WE HCJ060WF HCJ060WH HCJ060WL HCJ060WQ HCJ060WT HCJ060WV HCJ060WX HCJ060WY HCK060NH HCL060FN HCL060WH HCL060WX HCT060FN HCT060NC HCT060ND HCT060NE HCT060NF HCT060NH HCT060NL HCT060NN HCT060NP	HCT060NQ HCT060NT HCT060NV HCT060NX HCT060NY HCT060QC HCT060QD HCT060QE HCT060QF HCT060QH HCT060QL HCT060QN HCT060QQ HCT060QT HCT060QV HCT060QX HCT060QY HCT060WC HCT060WD HCT060WE HCT060WF HCT060WH HCT060WL HCT060WP HCT060WQ HCT060WT	HCT060WV HCT060WX HCT060WY HCU060FN HCU060NC HCU060ND HCU060NE HCU060NF HCU060NH HCU060NL HCU060NQ HCU060NT HCU060NV HCU060NX HCU060NY HCU060QN HCU060WC HCU060WD HCU060WE HCU060WF HCU060WH HCU060WL HCU060WQ HCU060WT HCU060WV HCU060WX HCU060WY
PCA060NC PCA060NH PCA060NL PCA060NX PCA060NY PCA060QN PCA060WC PCA060WH PCA060WL PCA060WX	PCA060WY PCG060NC PCG060ND PCG060NE PCG060NF PCG060NH PCG060NL PCG060NQ PCG060NT PCG060NV	PCG060NX PCG060NY PCG060QN PCG060WC PCG060WD PCG060WE PCG060WF PCG060WH PCG060WL PCG060WQ	PCG060WT PCG060WV PCG060WX PCG060WY PCK060NC PCK060NH PCK060NL PCK060NX PCK060NY PCK060QN	PCK060WC PCK060WH PCK060WL PCK060WX PCK060WY PCL060NC PCL060NH PCL060NL PCL060NX PCL060NY	PCL060QN PCL060WC PCL060WH PCL060WL PCL060WX PCL060WY PCT060NC PCT060NH PCT060NL PCT060NX	PCT060NY PCT060QN PCT060WC PCT060WH PCT060WL PCT060WX PCT060WY

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60 Machines						
SCA060FN	SCE060NN	SCG060WD	SCH060WV	SCK060WE	SCL060WX	SCT060WH
SCA060NC	SCE060NT	SCG060WE	SCH060WX	SCK060WF	SCL060WY	SCT060WL
SCA060ND	SCE060NQ	SCG060WF	SCH060WY	SCK060WH	SCT060FN	SCT060WT
SCA060NE	SCE060NV	SCG060WH	SCJ060FN	SCK060WL	SCT060NC	SCT060WQ
SCA060NF	SCE060NX	SCG060WL	SCJ060NN	SCK060WQ	SCT060ND	SCT060WV
SCA060NH	SCE060NY	SCG060WT	SCJ060WC	SCK060WT	SCT060NE	SCT060WX
SCA060NL	SCE060WC	SCG060WQ	SCJ060WD	SCK060WV	SCT060NF	SCT060WY
SCA060NN	SCE060WD	SCG060WV	SCJ060WE	SCK060WX	SCT060NH	SCU060FN
SCA060NT	SCE060WE	SCG060WX	SCJ060WF	SCK060WY	SCT060NL	SCU060NC
SCA060NQ	SCE060WF	SCG060WY	SCJ060WH	SCL060FN	SCT060NN	SCU060ND
SCA060NV	SCE060WH	SCH060FN	SCJ060WL	SCL060NC	SCT060NP	SCU060NE
SCA060NX	SCE060WL	SCH060NC	SCJ060WQ	SCL060ND	SCT060NT	SCU060NF
SCA060NY	SCE060WT	SCH060ND	SCJ060WT	SCL060NE	SCT060NQ	SCU060NH
SCA060QN	SCE060WQ	SCH060NE	SCJ060WV	SCL060NF	SCT060NV	SCU060NL
SCA060WC	SCE060WV	SCH060NF	SCJ060WX	SCL060NH	SCT060NX	SCU060NN
SCA060WD	SCE060WX	SCH060NH	SCJ060WY	SCL060NL	SCT060NY	SCU060NT
SCA060WE	SCE060WY	SCH060NL	SCK060FN	SCL060NN	SCT060QC	SCU060NQ
SCA060WF	SCG060FN	SCH060NN	SCK060NC	SCL060NQ	SCT060QD	SCU060NV
SCA060WH	SCG060NC	SCH060NQ	SCK060ND	SCL060NT	SCT060QE	SCU060NX
SCA060WL	SCG060NX	SCH060NT	SCK060NE	SCL060NV	SCT060QF	SCU060NY
SCA060WT	SCG060ND	SCH060NV	SCK060NF	SCL060NX	SCT060QH	SCU060WC
SCA060WQ	SCG060NE	SCH060NX	SCK060NH	SCL060NY	SCT060QL	SCU060WD
SCA060WV	SCG060NF	SCH060NY	SCK060NL	SCL060WC	SCT060QN	SCU060WE
SCA060WX	SCG060NH	SCH060WC	SCK060NN	SCL060WD	SCT060QQ	SCU060WF
SCA060WY	SCG060NL	SCH060WD	SCK060NQ	SCL060WE	SCT060QT	SCU060WH
SCE060FN	SCG060NN	SCH060WE	SCK060NT	SCL060WF	SCT060QV	SCU060WL
SCE060NC	SCG060NT	SCH060WF	SCK060NV	SCL060WH	SCT060QX	SCU060WT
SCE060ND	SCG060NQ	SCH060WH	SCK060NX	SCL060WL	SCT060QY	SCU060WQ
SCE060NE	SCG060NV	SCH060WL	SCK060NY	SCL060WQ	SCT060WC	SCU060WV
SCE060NF	SCG060NY	SCH060WQ	SCK060WC	SCL060WT	SCT060WD	SCU060WX
SCE060NH	SCG060QN	SCH060WT	SCK060WD	SCL060WV	SCT060WE	SCU060WY
SCE060NL	SCG060WC				SCT060WF	
UCA060FN	UCE060FN	UCG060QN	UCH060QN	UCJ060QN	UCT060FN	UCU060FN
UCA060NN	UCG060FN	UCH060FN	UCJ060FN	UCK060NN	UCT060NN	UCU060NN
UCA060QN	UCG060NN	UCH060NN	UCJ060NN	UCK060QN	UCT060QN	UCU060QN

80 Machines						
DCJ080NC	DCJ080NH	DCJ080NV	DCJ080WD	DCJ080WL	DCJ080WX	DCJ080WY
DCJ080ND	DCJ080NL	DCJ080NX	DCJ080WE	DCJ080WQ		
DCJ080NE	DCJ080NQ	DCJ080NY	DCJ080WF	DCJ080WT		
DCJ080NF	DCJ080NT	DCJ080WC	DCJ080WH	DCJ080WV		

continues...

80 Machines						
BCA080NC BCA080NH BCA080NL BCA080NX BCA080NY BCA080QN BCA080WC BCA080WH BCA080WL BCA080WX	BCA080WY BCG080NC BCG080ND BCG080NE BCG080NF BCG080NH BCG080NL BCG080NQ BCG080NT BCG080NV	BCG080NX BCG080NY BCG080QN BCG080WC BCG080WD BCG080WE BCG080WF BCG080WH BCG080WL BCG080WQ	BCG080WT BCG080WV BCG080WX BCG080WY BCK080NC BCK080NH BCK080NL BCK080NX BCK080NY BCK080QN	BCK080WC BCK080WH BCK080WL BCK080WX BCK080WY BCL080NC BCL080NH BCL080NL BCL080NX BCL080NY	BCL080QN BCL080WC BCL080WH BCL080WL BCL080WX BCL080WY BCT080NC BCT080NH BCT080NL BCT080NX	BCT080NY BCT080QN BCT080WC BCT080WH BCT080WL BCT080WX BCT080WY
HCA080FN HCA080NC HCA080ND HCA080NE HCA080NF HCA080NH HCA080NL HCA080NQ HCA080NT HCA080NV HCA080NX HCA080NY HCA080QN HCA080WC HCA080WD HCA080WE HCA080WF HCA080WH HCA080WL HCA080WT HCA080WV HCA080WX	HCA080WY HCG080FN HCG080NC HCG080ND HCG080NE HCG080NF HCG080NH HCG080NL HCG080NQ HCG080NT HCG080NV HCG080NX HCG080NY HCG080QN HCG080WC HCG080WD HCG080WE HCG080WF HCG080WH HCG080WL HCG080WT HCG080WV	HCG080WX HCG080WY HCH080FN HCH080NC HCH080ND HCH080NE HCH080NF HCH080NH HCH080NL HCH080NQ HCH080NT HCH080NV HCH080NX HCH080NY HCH080QN HCH080WC HCH080WD HCH080WE HCH080WF HCH080WH HCH080WL HCH080WQ	HCH080WT HCH080WV HCH080WX HCH080WY HCJ080FN HCJ080NC HCJ080ND HCJ080NE HCJ080NF HCJ080NH HCJ080NL HCJ080NQ HCJ080NT HCJ080NV HCJ080NX HCJ080NY HCJ080QN HCJ080WC HCJ080WD HCJ080WE HCJ080WF HCJ080WH	HCJ080WL HCJ080WQ HCJ080WT HCJ080WV HCJ080WX HCJ080WY HCK080NH HCT080FN HCT080NC HCT080ND HCT080NE HCT080NF HCT080NH HCT080NL HCT080NP HCT080NQ HCT080NT HCT080NV HCT080NX HCT080NY HCT080QC HCT080QD	HCT080QE HCT080QF HCT080QH HCT080QL HCT080QN HCT080QQ HCT080QT HCT080QV HCT080QX HCT080QY HCT080WC HCT080WD HCT080WE HCT080WF HCT080WH HCT080WL HCT080WP HCT080WQ HCT080WT HCT080WV HCT080WX HCT080WY	HCU080FN HCU080NC HCU080ND HCU080NE HCU080NF HCU080NH HCU080NL HCU080NQ HCU080NT HCU080NV HCU080NX HCU080NY HCU080QN HCU080WC HCU080WD HCU080WE HCU080WF HCU080WH HCU080WL HCU080WQ HCU080WT HCU080WV HCU080WX HCU080WY
PCA080NC PCA080NH PCA080NL PCA080NX PCA080NY PCA080QN PCA080WC PCA080WH PCA080WL PCA080WX	PCA080WY PCG080NC PCG080ND PCG080NE PCG080NF PCG080NH PCG080NL PCG080NQ PCG080NT PCT080NV	PCG080NX PCG080NY PCG080QN PCG080WC PCG080WD PCG080WE PCG080WF PCG080WH PCG080WL PCG080WQ	PCG080WT PCG080WV PCG080WX PCG080WY PCK080NC PCK080NH PCK080NL PCK080NX PCK080NY PCK080QN	PCK080WC PCK080WH PCK080WL PCK080WX PCK080WY PCL080NC PCL080NH PCL080NL PCL080NX PCL080NY	PCL080QN PCL080WC PCL080WH PCL080WL PCL080WX PCL080WY PCT080NC PCT080NH PCT080NL PCT080NX	PCT080NY PCT080QN PCT080WC PCT080WH PCT080WL PCT080WX PCT080WY

continues...

80 Machines						
SCA080FN	SCG080NH	SCH080FN	SCJ080FN	SCK080NX	SCT080NX	SCT080WY
SCA080NC	SCG080NL	SCH080NC	SCJ080NN	SCK080NY	SCT080NY	SCU080FN
SCA080ND	SCG080NN	SCH080ND	SCJ080WC	SCK080WC	SCT080QC	SCU080NC
SCA080NE	SCG080NT	SCH080NE	SCJ080WD	SCK080WD	SCT080QD	SCU080ND
SCA080NF	SCG080NQ	SCH080NF	SCJ080WE	SCK080WE	SCT080QE	SCU080NE
SCA080NH	SCG080FN	SCH080NH	SCJ080WF	SCK080WF	SCT080QF	SCU080NF
SCA080NL	SCG080NC	SCH080NL	SCJ080WH	SCK080WH	SCT080QH	SCU080NH
SCA080NN	SCG080ND	SCH080NN	SCJ080WL	SCK080WL	SCT080QL	SCU080NL
SCA080NT	SCG080NE	SCH080NQ	SCJ080WQ	SCK080WQ	SCT080QN	SCU080NN
SCA080NQ	SCG080NF	SCH080NT	SCJ080WT	SCK080WT	SCT080QQ	SCU080NT
SCA080NV	SCG080NV	SCH080NV	SCJ080WV	SCK080WV	SCT080QT	SCU080NQ
SCA080NX	SCG080NX	SCH080NX	SCJ080WX	SCK080WX	SCT080QV	SCU080NV
SCA080NY	SCG080NY	SCH080NY	SCJ080WY	SCK080WY	SCT080QX	SCU080NX
SCA080QN	SCG080QN	SCH080WC	SCK080FN	SCT080FN	SCT080QY	SCU080NY
SCA080WC	SCG080WC	SCH080WD	SCK080NC	SCT080NC	SCT080WC	SCU080WC
SCA080WD	SCG080WD	SCH080WE	SCK080ND	SCT080ND	SCT080WD	SCU080WD
SCA080WE	SCG080WE	SCH080WF	SCK080NE	SCT080NE	SCT080WE	SCU080WE
SCA080WF	SCG080WF	SCH080WH	SCK080NF	SCT080NF	SCT080WF	SCU080WF
SCA080WH	SCG080WH	SCH080WL	SCK080NH	SCT080NH	SCT080WH	SCU080WH
SCA080WL	SCG080WL	SCH080WQ	SCK080NL	SCT080NL	SCT080WL	SCU080WL
SCA080WT	SCG080WT	SCH080WT	SCK080NN	SCT080NN	SCT080WT	SCU080WT
SCA080WQ	SCG080WQ	SCH080WV	SCK080NQ	SCT080NT	SCT080WQ	SCU080WQ
SCA080WV	SCG080WV	SCH080WX	SCK080NT	SCT080NQ	SCT080WV	SCU080WV
SCA080WX	SCG080WX	SCH080WY	SCK080NV	SCT080NV	SCT080WX	SCU080WX
SCA080WY	SCG080WY					SCU080WY
UCA080FN	UCG080FN	UCH080FN	UCJ080FN	UCK080NN	UCT080NN	UCU080NN
UCA080NN	UCG080NN	UCH080NN	UCJ080NN	UCK080QN	UCT080QN	UCU080QN
UCA080QN	UCG080QN	UCH080QN	UCJ080QN	UCT080FN	UCU080FN	

100 Machines						
DCJ100NC	DCJ100NH	DCJ100NV	DCJ100WD	DCJ100WL	DCJ100WX	DCJ100WY
DCJ100ND	DCJ100NL	DCJ100NX	DCJ100WE	DCJ100WQ		
DCJ100NE	DCJ100NQ	DCJ100NY	DCJ100WF	DCJ100WT		
DCJ100NF	DCJ100NT	DCJ100WC	DCJ100WH	DCJ100WV		
BCA100NC	BCA100WY	BCG100NX	BCG100WT	BCK100WC	BCL100QN	BCT100NY
BCA100NH	BCG100NC	BCG100NY	BCG100WV	BCK100WH	BCL100WC	BCT100QN
BCA100NL	BCG100ND	BCG100QN	BCG100WX	BCK100WL	BCL100WH	BCT100WC
BCA100NX	BCG100NE	BCG100WC	BCG100WY	BCK100WX	BCL100WL	BCT100WH
BCA100NY	BCG100NF	BCG100WD	BCK100NC	BCK100WY	BCL100WX	BCT100WL
BCA100QN	BCG100NH	BCG100WE	BCK100NH	BCL100NC	BCL100WY	BCT100WX
BCA100WC	BCG100NL	BCG100WF	BCK100NL	BCL100NH	BCT100NC	BCT100WY
BCA100WH	BCG100NQ	BCG100WH	BCK100NX	BCL100NL	BCT100NH	
BCA100WL	BCG100NT	BCG100WL	BCK100NY	BCL100NX	BCT100NL	
BCA100WX	BCG100NV	BCG100WQ	BCK100QN	BCL100NY	BCT100NX	

continues...

100 Machines						
HCA100FN HCA100NC HCA100ND HCA100NE HCA100NF HCA100NH HCA100NL HCA100NQ HCA100NT HCA100NV HCA100NX HCA100NY HCA100QN HCA100WC HCA100WD HCA100WE HCA100WF HCA100WH HCA100WL HCA100WT HCA100WV HCA100WX	HCA100WY HCG100FN HCG100NC HCG100ND HCG100NE HCG100NF HCG100NH HCG100NL HCG100NQ HCG100NT HCG100NV HCG100NX HCG100NY HCG100QN HCG100WC HCG100WD HCG100WE HCG100WF HCG100WH HCG100WL HCG100WT HCG100WV	HCG100WX HCG100WY HCH100FN HCH100NC HCH100ND HCH100NE HCH100NF HCH100NH HCH100NL HCH100NQ HCH100NT HCH100NV HCH100NX HCH100NY HCH100QN HCH100WC HCH100WD HCH100WE HCH100WF HCH100WH HCH100WL HCH100WQ	HCH100WT HCH100WV HCH100WX HCH100WY HCJ100FN HCJ100NC HCJ100ND HCJ100NE HCJ100NF HCJ100NH HCJ100NL HCJ100NQ HCJ100NT HCJ100NV HCJ100NX HCJ100NY HCJ100QN HCJ100WC HCJ100WD HCJ100WE HCJ100WF HCJ100WH	HCJ100WL HCJ100WQ HCJ100WT HCJ100WV HCJ100WX HCJ100WY HCK100NH HCT100FN HCT100NC HCT100ND HCT100NE HCT100NF HCT100NH HCT100NL HCT100NP HCT100NQ HCT100NT HCT100NV HCT100NX HCT100NY HCT100QC HCT100QD	HCT100QE HCT100QF HCT100QH HCT100QL HCT100QN HCT100QQ HCT100QT HCT100QV HCT100QX HCT100QY HCT100WC HCT100WD HCT100WE HCT100WF HCT100WH HCT100WL HCT100WP HCT100WQ HCT100WT HCT100WV HCT100WX HCT100WY	HCU100FN HCU100NC HCU100ND HCU100NE HCU100NF HCU100NH HCU100NL HCU100NQ HCU100NT HCU100NV HCU100NX HCU100NY HCU100QN HCU100WC HCU100WD HCU100WE HCU100WF HCU100WH HCU100WL HCU100WQ HCU100WT HCU100WV HCU100WX HCU100WY
PCA100NC PCA100NH PCA100NL PCA100NX PCA100NY PCA100QN PCA100WC PCA100WH PCA100WL PCA100WX	PCA100WY PCG100NC PCG100ND PCG100NE PCG100NF PCG100NH PCG100NL PCG100NQ PCG100NT PCG100NV	PCG100NX PCG100NY PCG100QN PCG100WC PCG100WD PCG100WE PCG100WF PCG100WH PCG100WL PCG100WQ	PCG100WT PCG100WV PCG100WX PCG100WY PCK100NC PCK100NH PCK100NL PCK100NX PCK100NY PCK100QN	PCK100WC PCK100WH PCK100WL PCK100WX PCK100WY PCL100NC PCL100NH PCL100NL PCL100NX PCL100NY	PCL100QN PCL100WC PCL100WH PCL100WL PCL100WX PCL100WY PCT100NC PCT100NH PCT100NL PCT100NX	PCT100NY PCT100QN PCT100WC PCT100WH PCT100WL PCT100WX PCT100WY

continues...

100 Machines						
SCA100FN	SCG100FN	SCH100FN	SCJ100FN	SCK100NX	SCT100NX	SCT100WY
SCA100NC	SCG100NC	SCH100NC	SCJ100NN	SCK100NY	SCT100NY	SCU100FN
SCA100ND	SCG100ND	SCH100ND	SCJ100WC	SCK100WC	SCT100QC	SCU100NC
SCA100NE	SCG100NE	SCH100NE	SCJ100WD	SCK100WD	SCT100QD	SCU100ND
SCA100NF	SCG100NF	SCH100NF	SCJ100WE	SCK100WE	SCT100QE	SCU100NE
SCA100NH	SCG100NH	SCH100NH	SCJ100WF	SCK100WF	SCT100QF	SCU100NF
SCA100NL	SCG100NL	SCH100NL	SCJ100WH	SCK100WH	SCT100QH	SCU100NH
SCA100NN	SCG100NN	SCH100NN	SCJ100WL	SCK100WL	SCT100QL	SCU100NL
SCA100NT	SCG100NT	SCH100NQ	SCJ100WQ	SCK100WQ	SCT100QN	SCU100NN
SCA100NQ	SCG100NQ	SCH100NT	SCJ100WT	SCK100WT	SCT100QQ	SCU100NT
SCA100NV	SCG100NV	SCH100NV	SCJ100WV	SCK100WV	SCT100QT	SCU100NQ
SCA100NX	SCG100NX	SCH100NX	SCJ100WX	SCK100WX	SCT100QV	SCU100NV
SCA100NY	SCG100NY	SCH100NY	SCJ100WY	SCK100WY	SCT100QX	SCU100NX
SCA100QN	SCG100QN	SCH100WC	SCK100FN	SCT100FN	SCT100QY	SCU100NY
SCA100WC	SCG100WC	SCH100WD	SCK100NC	SCT100NC	SCT100WC	SCU100WC
SCA100WD	SCG100WD	SCH100WE	SCK100ND	SCT100ND	SCT100WD	SCU100WD
SCA100WE	SCG100WE	SCH100WF	SCK100NE	SCT100NE	SCT100WE	SCU100WE
SCA100WF	SCG100WF	SCH100WH	SCK100NF	SCT100NF	SCT100WF	SCU100WF
SCA100WH	SCG100WH	SCH100WL	SCK100NH	SCT100NH	SCT100WH	SCU100WH
SCA100WL	SCG100WL	SCH100WQ	SCK100NL	SCT100NL	SCT100WL	SCU100WL
SCA100WT	SCG100WT	SCH100WT	SCK100NN	SCT100NN	SCT100WT	SCU100WT
SCA100WQ	SCG100WQ	SCH100WV	SCK100NQ	SCT100NT	SCT100WQ	SCU100WQ
SCA100WV	SCG100WV	SCH100WX	SCK100NT	SCT100NQ	SCT100WV	SCU100WV
SCA100WX	SCG100WX	SCH100WY	SCK100NV	SCT100NV	SCT100WX	SCU100WX
SCA100WY	SCG100WY					SCU100WY
UCA100FN	UCE100NN	UCG100QN	UCH100QN	UCJ100QN	UCT100FN	UCU100FN
UCA100NN	UCG100FN	UCH100FN	UCJ100FN	UCK100NN	UCT100NN	UCU100NN
UCA100QN	UCG100NN	UCH100NN	UCJ100NN	UCK100QN	UCT100QN	UCU100QN

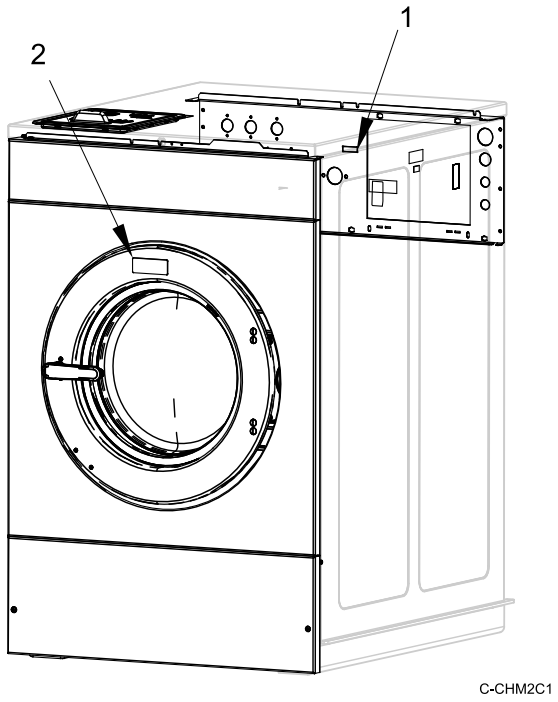
Delivery Inspection

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

The serial plate is located on the rear panel and inside the door of the machine.

Always provide the machine's serial number and model number when ordering parts or when seeking technical assistance. Refer to *Figure 1*.



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

Figure 1

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, in. [mm]	26.0 [660]	29.0 [737]	30.6 [778]	34.1 [865]	41.5 [1054]	41.5 [1054]
Overall height, in [mm]	44.1 [1120]	46.1 [1171]	48.3 [1227]	51 [1295]	58.3 [1481]	58.3 [1481]
Overall depth, in. [mm]	30.9 [784]	35.3 [896]	42.3 [1073]	44.7 [1135]	47.1 [1196]	51.1 [1298]
Weight and Shipping Information						
Net weight, lbs. [kg]	340 [154]	435 [197]	550 [249]	680 [308]	1250 [567]	1280 [581]
Standard shipping weight, lbs. [kg]	380 [172]	475 [215]	590 [268]	720 [327]	1300 [590]	1330 [603]
Standard shipping volume, ft^3 [m^3]	27 [0.76]	36 [1.01]	44 [1.24]	57 [1.61]	83 [2.35]	89 [2.52]
Standard shipping dimensions (WxDxH), in. [mm]	28.0 x 33.8 x 49.4 [711 x 859 x 1255]	31.5 x 38.3 x 51.3 [800 x 973 x 1303]	32.5 x 43.5 x 53.6 [826 x 1105 x 1361]	37.5 x 46.9 x 56.3 [953 x 1191 x 1430]	44.0 x 54.5 x 59.6 [1118 x 1384 x 1514]	44.0 x 58.5 x 59.6 [1118 x 1486 x 1514]
Slat crate shipping weight, lbs. [kg]	460 [209]	580 [263]	680 [308]	840 [381]	1430 [649]	1460 [662]
Slat crate shipping volume, ft^3 [m^3]	38 [1.08]	47 [1.33]	54 [1.52]	78 [2.20]	105 [2.97]	112 [3.17]
Slat crate shipping dimensions (WxDxH), in. [mm]	32.5 x 36.8 x 55 [826 x 935 x 1397]	36.0 x 41.3 x 55.0 [914 x 1049 x 1397]	37.0 x 45.9 x 55.0 [940 x 1166 x 1397]	42.0 x 49.9 x 64.0 [1067 x 1267 x 1626]	48.5 x 57.5 x 65.1 [1232 x 1461 x 1654]	48.5 x 61.5 x 65.1 [1232 x 1562 x 1654]
Wash Cylinder Information						
Cylinder diameter, in. [mm]	21.0 [533]	24.0 [610]	26.3 [668]	30.0 [762]	36.0 [914]	36.0 [914]
Cylinder depth, in. [mm]	13.8 [350]	16.0 [406]	20.3 [515]	22.0 [559]	21.9 [556]	25.9 [657]
Cylinder volume, ft^3 [l]	2.8 [79.3]	4.2 [119]	6.3 [178]	9.0 [255]	12.9 [365]	15.2 [430]
Cylinder capacity, lbs. [kg]	20 [9.1]	30 [13.1]	40 [18.1]	60 [27.2]	80 [36.3]	100 [45.4]
Perforation size, in. [mm]	0.188 [4.78]	0.188 [4.78]	0.188 [4.78]	0.188 [4.78]	0.188 [4.78]	0.188 [4.78]
Perforation open area, %	17.3	18.6	18.8	18.8	19.6	20.2
Door Opening Information						
Door opening size, in. [mm]	11.6 [295]	14.3 [363]	16.3 [414]	16.3 [414]	18.5 [470]	18.5 [470]
Height of door bottom above floor, in. [mm]	14.4 [365]	14.0 [356]	14.6 [370]	14.9 [379]	17.9 [455]	17.9 [455]
Height of door opening above floor, in. [mm]	17.0 [432]	17.0 [431]	17.7 [451]	18.1 [460]	21.7 [551]	21.7 [551]

continues...

Table 1

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

continues...

Table 1

Specification		20	30	40	60	80	100
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
	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 10°F [5.5°C]	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

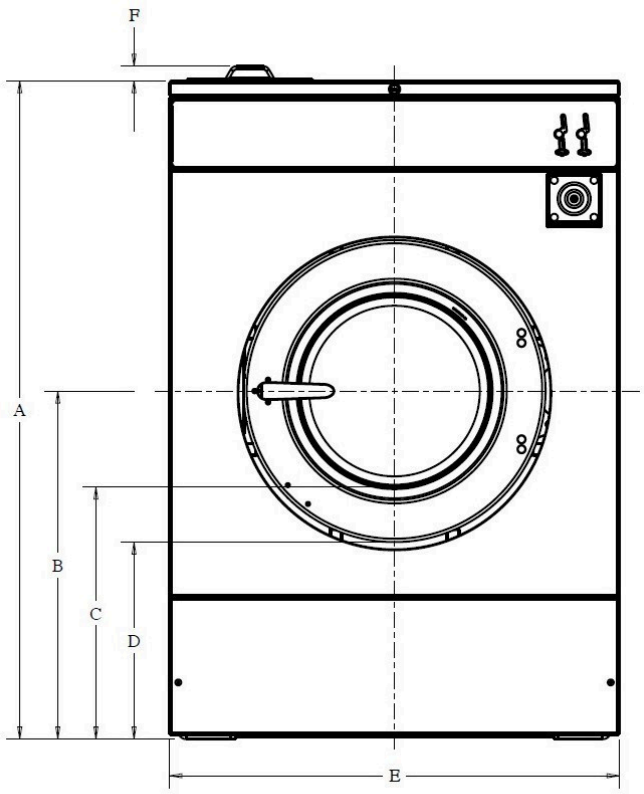


Figure 2

Machine Dimensions, in. [mm]						
Specification	**20**	**30**	**40**	**60**	**80**	**100**
A	43.0 [1092]	45.0 [1143]	47.2 [1199]	49.9 [1267]	57.2 [1453]	57.2 [1453]
B	23.0 [584]	24.0 [610]	26.0 [660]	26.4 [671]	30.9 [785]	30.9 [785]
C	17.0 [432]	17.0 [432]	17.7 [450]	18.1 [460]	21.7 [551]	21.7 [551]
D	14.4 [366]	14.0 [356]	14.6 [371]	14.9 [378]	17.9 [378]	17.9 [378]
E	26.0 [660]	29.0 [737]	30.6 [777]	34.1 [866]	41.5 [1054]	41.5 [1054]
F	1.1 [28]	1.1 [28]	1.1 [28]	1.1 [28]	1.1 [28]	1.1 [28]

Table 2

Side View

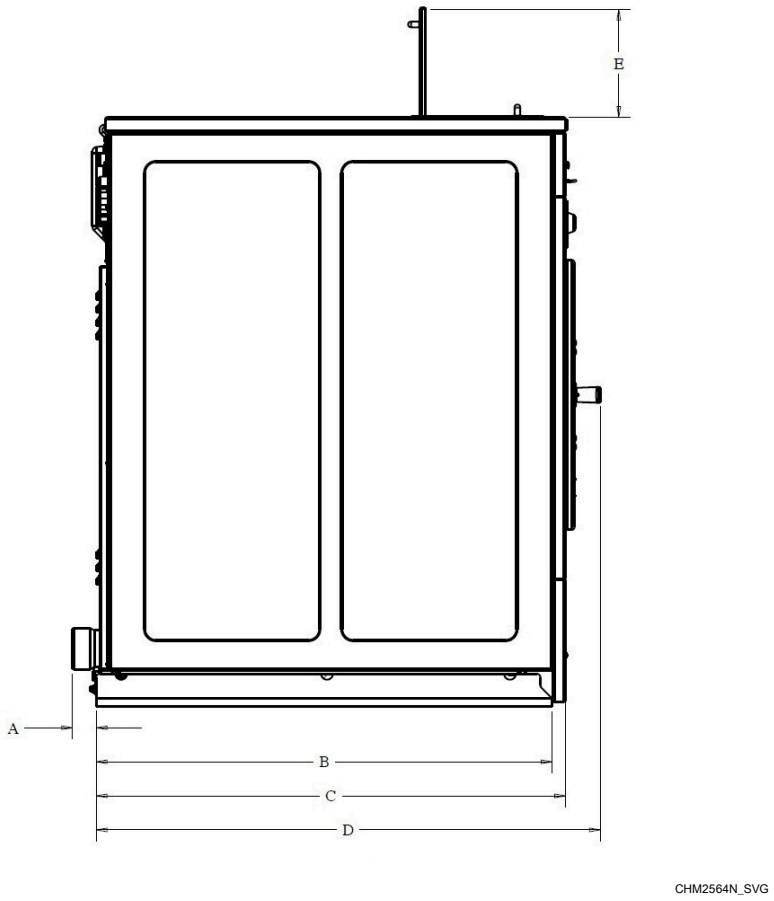
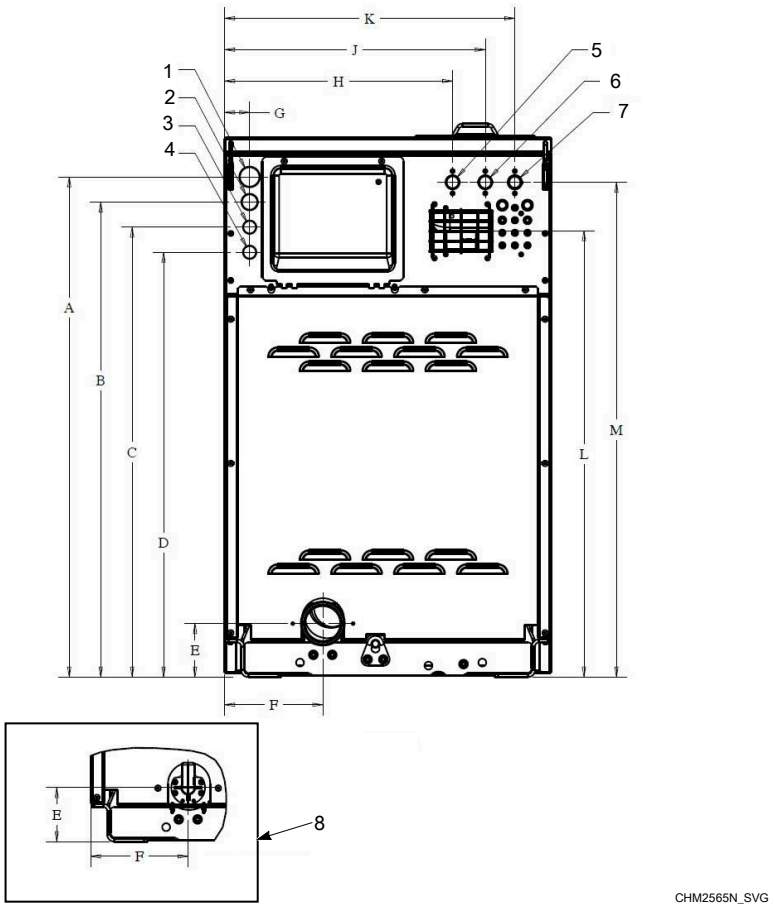


Figure 3

Machine Dimensions, in. [mm]						
Specification	**20**	**30**	**40**	**60**	**80**	**100**
A	2.0 [51]	2.0 [51]	2.0 [51]	2.0 [51]	1.1 [28]	1.1 [28]
B	26.8 [681]	31.5 [800]	35.5 [902]	38.6 [980]	39.2 [996]	39.2 [996]
C	27.3 [693]	31.8 [808]	37.0 [940]	39.5 [1003]	44.1 [1120]	48.1 [1222]
D	30.9 [785]	35.3 [897]	42.3 [1074]	44.7 [1135]	47.1 [1196]	51.1 [1298]
E	9.3 [236]	9.3 [236]	9.3 [236]	9.3 [236]	9.3 [236]	9.3 [236]
Door width	16.75 [426]	19.38 [492]	21.75 [552]	21.75 [552]	25.25 [641]	25.25 [641]

Table 3

20-30 Models Rear View



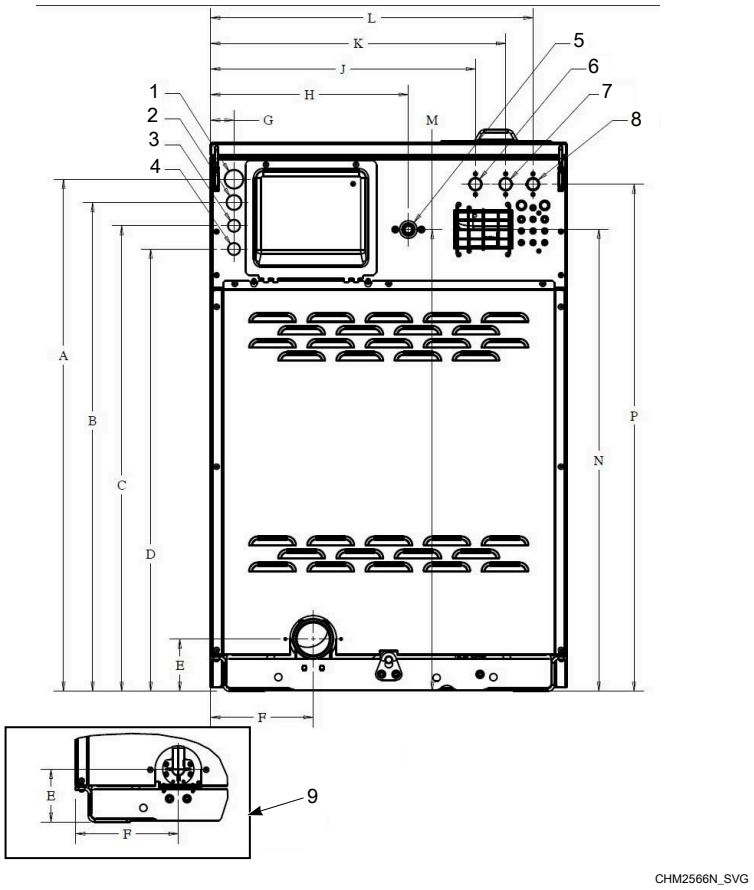
1. 1 1/2" Electrical
2. 1 1/8" Electrical
3. 7/8" Electrical
4. 7/8" Electrical
5. Compartment Cold Fill Valve
6. Compartment Hot Fill Valve
7. Cold Hard Water Valve or 3rd Water Inlet
8. Pump Drain View

Figure 4

Machine Dimensions, in. [mm]		
Specification	**20**	**30**
A	39.8 [1011]	41.8 [1062]
B	37.8 [960]	39.8 [1011]
C	35.8 [909]	37.8 [960]
D	33.8 [859]	35.8 [909]
E	3.9 [99]	4.3 [109]
F	7.8 [198]	9.3 [236]
G	2.0 [51]	2.0 [51]
H	18.1 [460]	21.1 [536]
J	20.7 [526]	23.7 [602]
K	23.1 [587]	26.1 [663]
L	39.4 [1001]	41.4 [1052]
M	35.6 [904]	37.5 [953]

Table 4

40 Models Rear View



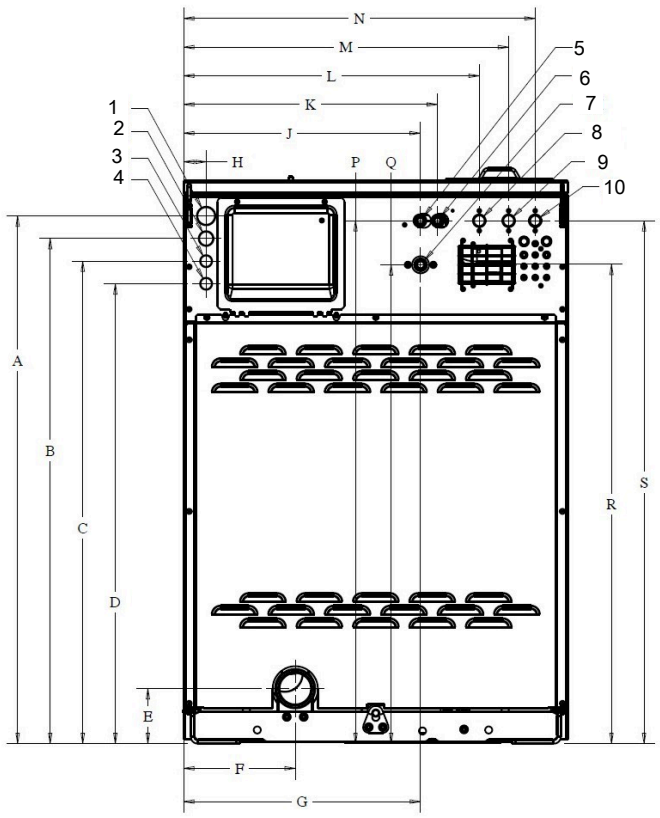
1. 1 1/2" Electrical
2. 1 1/8" Electrical
3. 7/8" Electrical
4. 7/8" Electrical
5. Steam Valve
6. Compartment Cold Fill Valve
7. Compartment Hot Fill Valve
8. Cold Hard Water Valve or 3rd Water Inlet
9. Pump Drain View

Figure 5

Machine Dimensions, in. [mm]	
Specification	**40**
A	44.0 [1118]
B	42.0 [1067]
C	40.3 [1024]
D	38.0 [965]
E	4.5 [114]
F	8.8 [224]
G	17.0 [432]
H	2.0 [51]
J	22.8 [579]
K	25.4 [645]
L	27.7 [704]
M	39.7 [1008]
N	43.6 [1107]
P	43.5 [1105]

Table 5

60-100 Models Rear View



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

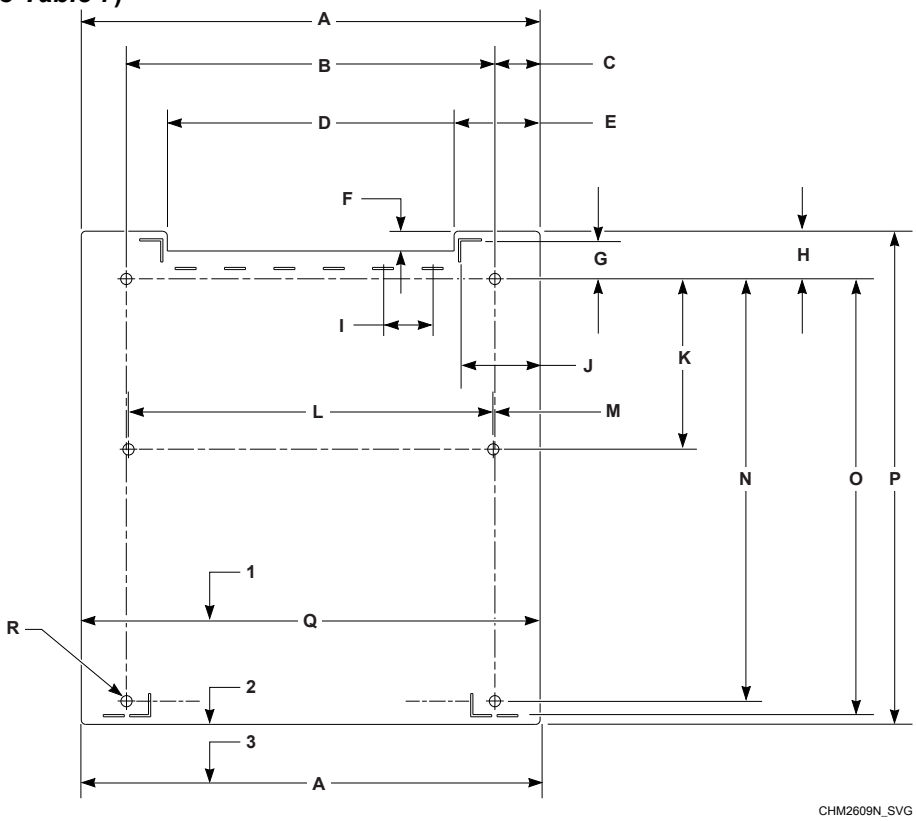
Figure 6

Machine Dimensions, in. [mm]			
Specification	**60**	**80**	**100**
A	46.7 [1186]	54.0 [1372]	54.0 [1372]
B	44.7 [1135]	52.0 [1321]	52.0 [1321]
C	42.7 [1085]	50.0 [1270]	50.0 [1270]
D	40.7 [1034]	48.0 [1219]	48.0 [1219]
E	4.9 [124]	5.1 [130]	5.1 [130]
F	9.9 [251]	2.7 [69]	2.7 [69]
G	21.0 [533]	28.8 [732]	28.8 [732]
H	2.0 [51]	2.0 [51]	2.0 [51]
J	21.0 [533]	28.4 [721]	28.4 [721]
K	22.5 [572]	29.9 [759]	29.9 [759]
L	26.2 [665]	33.6 [853]	33.6 [853]
M	28.8 [732]	36.2 [919]	36.2 [919]
N	31.2 [792]	38.6 [980]	38.6 [980]
P	46.3 [1176]	52.6 [1336]	52.6 [1336]
Q	42.4 [1077]	49.7 [1262]	49.7 [1262]
R	46.3 [1176]	53.6 [1361]	53.6 [1361]
S	42.4 [1097]	49.7 [1262]	49.7 [1262]

Table 6

Mounting Bolt Hole Locations – 20 and 30 Models

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



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

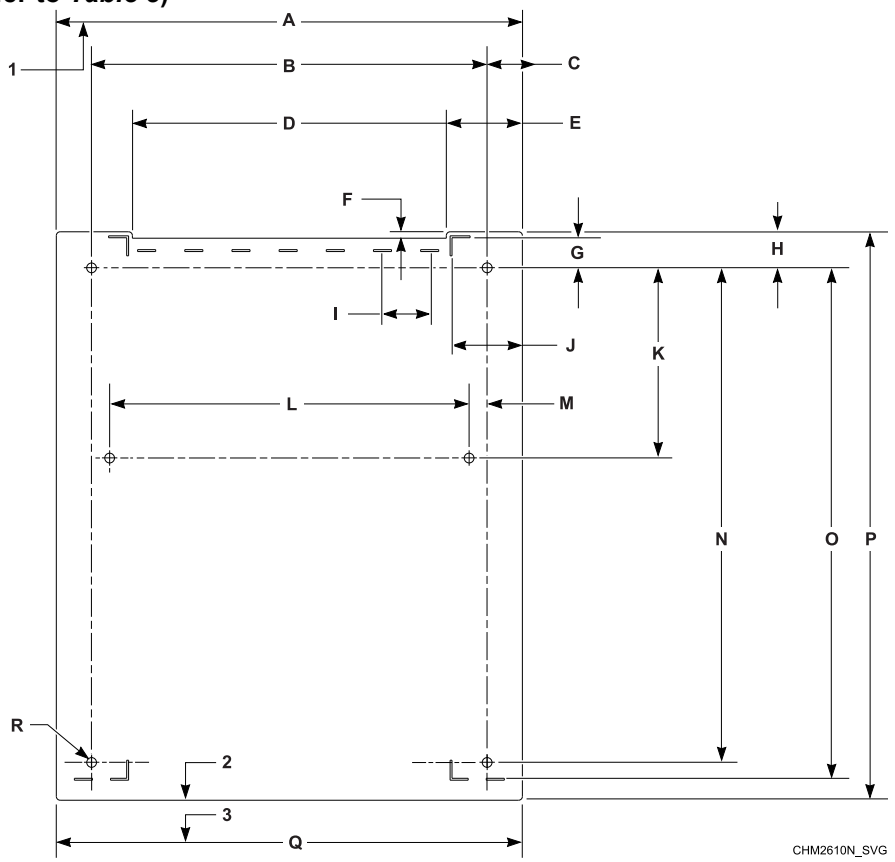
Figure 7

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

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

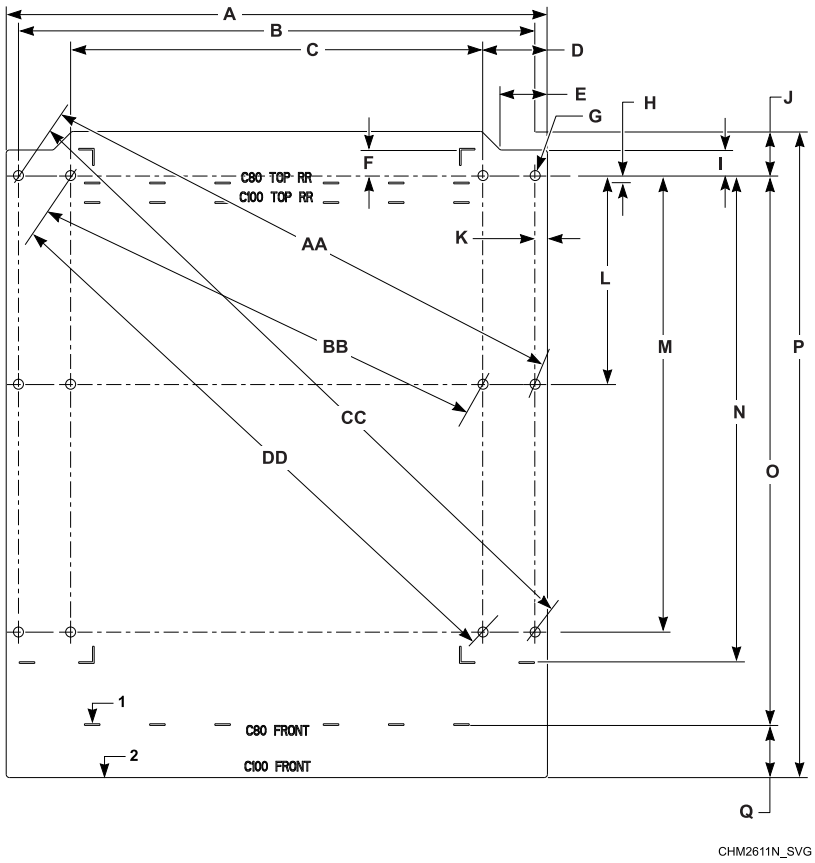
Figure 8

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

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 9

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

Table 9

Installation

Foundation Options

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 is available at extra cost or use machine base if available.

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 19*. If the floor meets these requirements and an elevated pad is NOT desired, refer to *Figure 18* 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 21* and proceed to *Machine Mounting and Grouting*.

Elevated Pad Installation on Existing Floor

The existing floor slab must meet minimum requirements shown in *Foundation Requirements* 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 20* and proceed to *Machine Mounting and Grouting*.

Elevated Base Frame Installation on Existing Floor

The existing floor slab must meet minimum requirements shown in *Machine Foundation and Pad Installation* per machine. The floor must be reinforced concrete without voids under slab. Refer to *Figure 18* and *Figure 19*. If the slab does not meets these requirements and an elevated base frame is desired, refer to *Figure 21*. Proceed to *Machine Mounting and Grouting*.

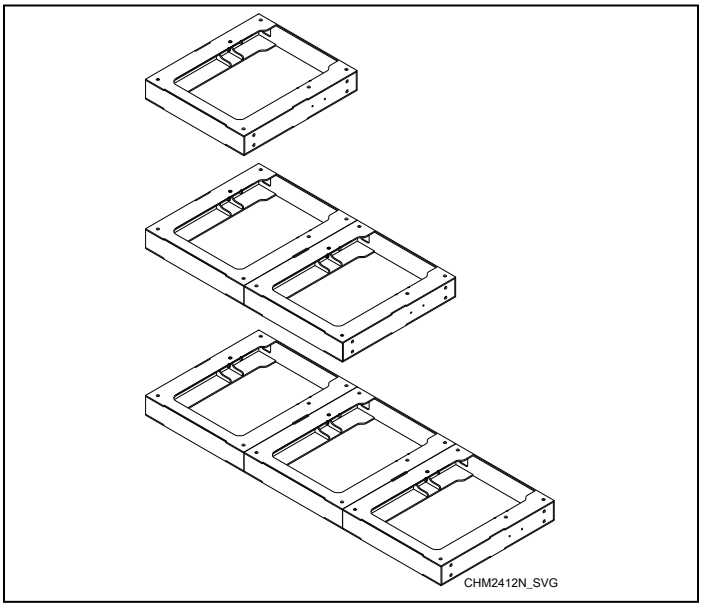


Figure 10

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 19* 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 8 inches [203 mm] 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, in. [mm]					
Description		20-30	40-60 (F-speed)	40-60 (V-speed)	80-100
A	**Height of elevated pad above floor (maximum)**	8 [203]	8 [203]	8 [203]	8 [203]
B	**Distance between reinforcing bars (maximum)**	12 [305]	12 [305]	12 [305]	12 [305]
C	**Length of reinforcing bar extending into existing floor (minimum)**	2.5 [64]	2.5 [64]	2.5 [64]	2.5 [64]
D	**Total depth of foundation (concrete plus 6 in. [152 mm] fill) (minimum)**	8 [203]	8 [203]	12 [305]	15 [381]
E	**Required thickness of existing floor (minimum)**	4 [102]	4 [102]	6 [152]	6 [152]

Table 10

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 12 inches [305 mm] thick, an elevated pad is desired or multiple machines are to be installed, the following steps must be performed (refer to *Foundation Requirements*):

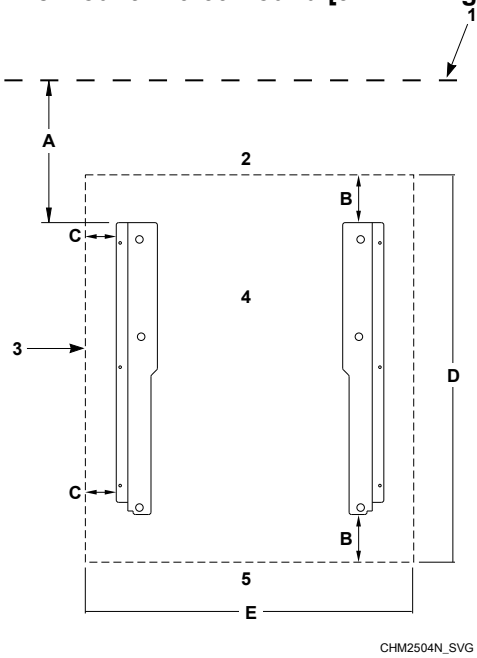
1. Cut a hole through the existing floor that is larger on all sides than the machine base, refer to *Floor Layout and Pad Dimensions*.
2. Excavate to a depth as indicated in *Table 10* from the top of the existing floor.
3. If installing a foundation with elevated pad, prepare a form for the above-ground portion of the foundation. Verify that the top of the foundation is level. The height of the foundation pad must not exceed 8 inches [203 mm] 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 2-1/2 inches [64 mm] 12 inches [64 mm] into the existing floor. The reinforcing should be 12 inches [305 mm] 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 #4 [60 ksi] 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 8 inch [203 mm]) 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), 5/8 inch [16 mm] 3/4 inch [16 mm] for 20-60 models and 3/4 inch [19 mm] for 80 and 100 anchor bolts as the concrete is poured, refer to *Figure 23* and *Table 23*.
14. Proceed to *Machine Mounting and Grouting*.

Floor Layout and Pad Dimensions

Dimensional Clearances - Single Machine Mount - 20-60 Pound [9.1-27.2 Kg] Models (refer to *Table 11*)



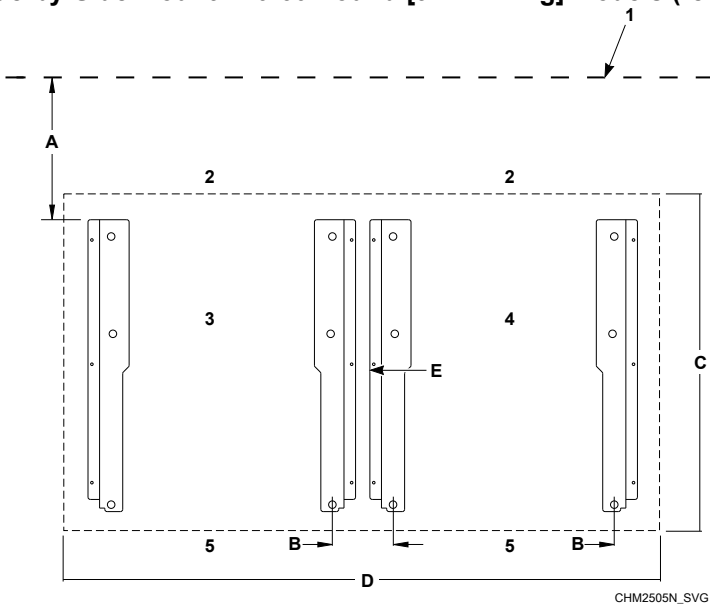
1. Wall
2. Rear Edge of Pad
3. Side Edge of Pad
4. Machine 1
5. Front Edge of Pad

Figure 11

Dimensional Clearances - Single Machine Mount - 20-60 Pound [9.1-27.2 Kg] in. [9.1-27.2 Kg] Models, in. [mm]					
Description		**20**	**30**	**40**	**60**
A	Distance to wall (minimum)	24 [610]	24 [610]	24 [610]	24 [610]
B	Distance of machine base to edge of pad (minimum)	3.44 [87]	4 [102]	3.99 [101]	5.99 [152]
C	Distance of machine base to edge of pad (minimum)	2.52 [64]	2.51 [64]	2.81 [71]	5.18 [131]
D	Length of pad (minimum)	34.8 [884]	39.5 [1003]	43.5 [1105]	50.6 [1285]
E	Width of pad (minimum)	31.4 [798]	34.4 [874]	36.5 [927]	44.8 [1138]

Table 11

Dimensional Clearances - Side-by-Side Mount - 20-60 Pound [9.1-27.2 Kg] Models (refer to *Table 12*)



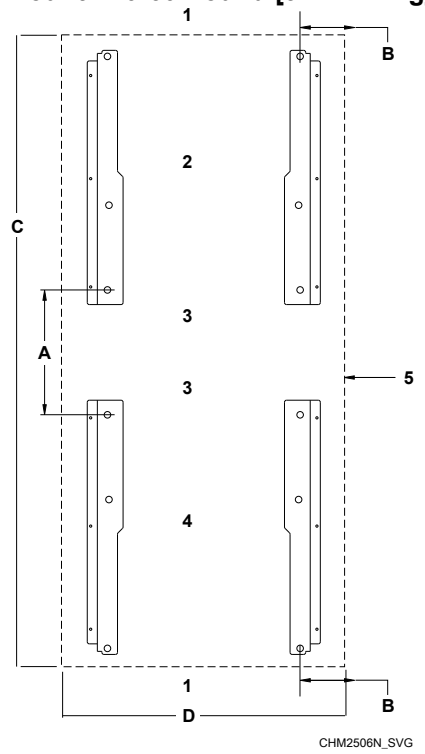
1. Wall
2. Rear Edge of Pad
3. Machine 1
4. Machine 2
5. Front Edge of Pad

Figure 12

Dimensional Clearances - Side-by-Side Mount - 20-60 Pound [9.1-27.2 Kg] in. [9.1-27.2 Kg] Models, in. [mm]					
Description		**20**	**30**	**40**	**60**
A	Distance to wall (minimum)	24 [610]	24 [610]	24 [610]	24 [610]
B	Mounted without bases (minimum)	5.14 [131]	5.12 [130]	4.63 [118]	4.06 [103]
	Mounted with bases (minimum)	5.5 [139]	5.5 [139]	4.88 [124]	4.44 [112]
C	Length of pad (minimum)	34.8 [884]	39.5 [1003]	43.5 [1105]	50.6 [1285]
D	Width of pad (minimum)	57.54 [1462]	63.52 [1613]	67.38 [1711]	78.98 [2006]
E	Side clearance between machines	.5 [13]	.5 [13]	.5 [13]	.5 [13]

Table 12

Dimensional Clearances - Back-to-Back Mount - 20-60 Pound [9.1-27.2 Kg] Models (refer to *Table 13*)



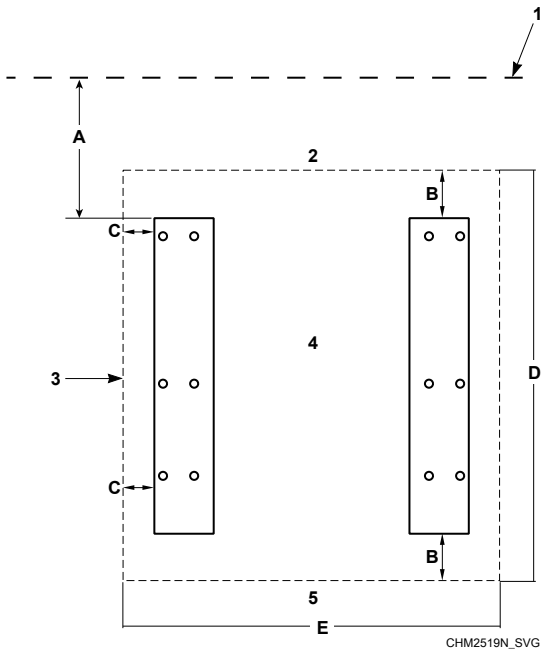
1. Front-facing Edge of Pad
2. Machine 2
3. Rear of Machine
4. Machine 1
5. Side Edge of Pad or Wall

Figure 13

Dimensional Clearances - Back-to-Back Mount - 20-60 Pound [9.1-27.2 Kg] in. [9.1-27.2 Kg] Models, in. [mm]					
Description		**20**	**30**	**40**	**60**
A	Adjacent rear bolt spacing (minimum)	28.3 [719]	27.6 [702]	28.0 [710]	27.5 [699]
B	Distance from front bolt to edge of pad (minimum)	5.26 [134]	5.26 [134]	6.19 [157]	8.9 [226]
C	Length of pad (minimum)	88.63 [2251]	98.37 [2499]	115.23 [2927]	119.48 [3035]
D	Width of pad (minimum)	31.4 [798]	34.4 [874]	36.5 [927]	44.8 [1138]

Table 13

Dimensional Clearances - Single Machine Mount - 80 and 100 Pound [36.3 and 45.4 Kg] Models (refer to *Table 14*)



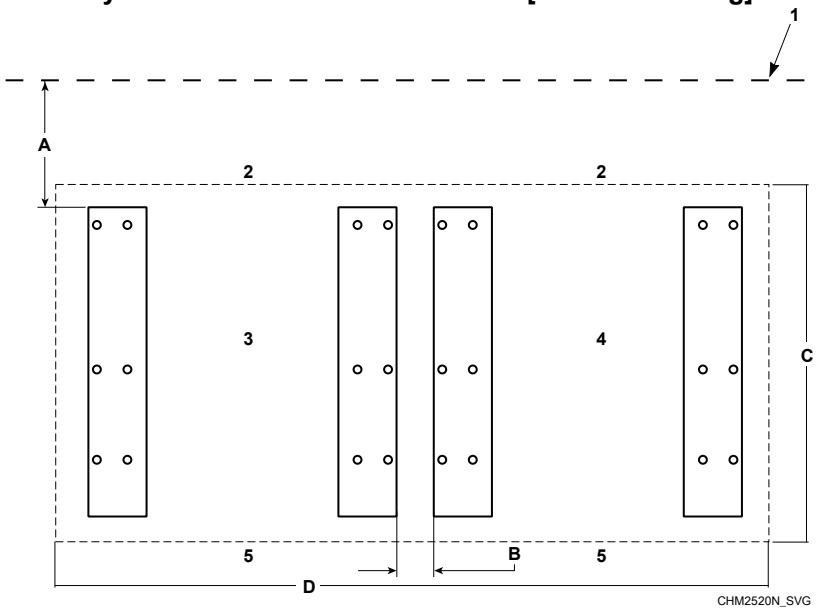
1. Wall
2. Rear Edge of Pad
3. Side Edge of Pad
4. Machine 1
5. Front Edge of Pad

Figure 14

Single Machine Mount - 80 and 100 Pound [36.3 and 45.4 Kg] in. [36.3 and 45.4 Kg] Models, in. [mm]		
Description		**80-100**
A	Distance to wall (minimum)	24 [610]
B	Distance of machine base to edge of pad (minimum)	4.98 [126]
C	Distance of machine base to edge of pad (minimum)	8 [203]
D	Length of pad (minimum)	49.2 [1250]
E	Width of pad (minimum)	57.5 [1461]

Table 14

Dimensional Clearances - Side by Side Mount - 80 and 100 Pound [36.3 and 45.4 Kg] Models (refer to *Table 15*)



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

Figure 15

Standard Mount Side-by-Side - 80 and 100 Pound [36.3 and 45.4 Kg] in. [36.3 and 45.4 Kg] Models, in. [mm]		
Description		**80-100**
A	Distance to wall (minimum)	24 [610]
B	Adjacent unit spacing (minimum)	6 [152]
C	Length of pad (minimum)	49.2 [1250]
D	Width of pad (minimum)	99.5 [2527]

Table 15

Close Mount Side-by-Side - 80 and 100 Pound [36.3 and 45.4 Kg] Models (refer to *Table 15*)

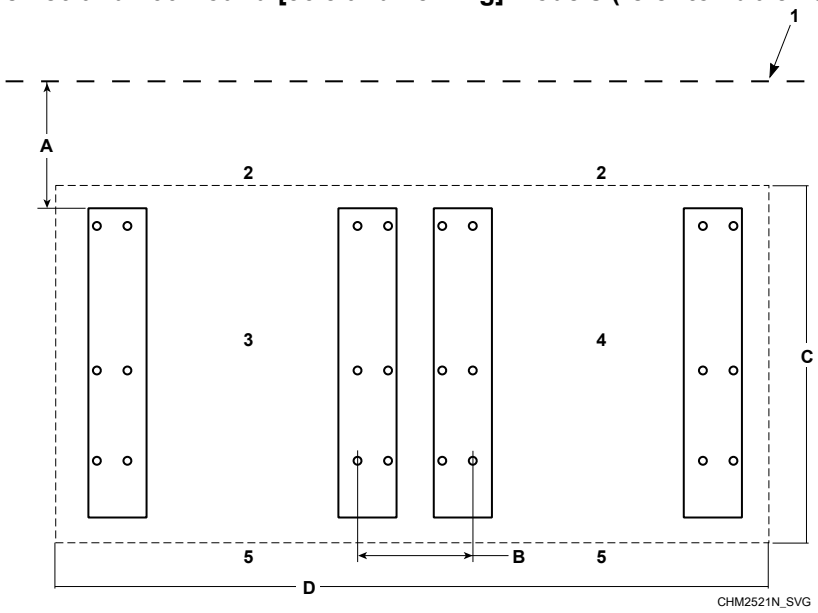
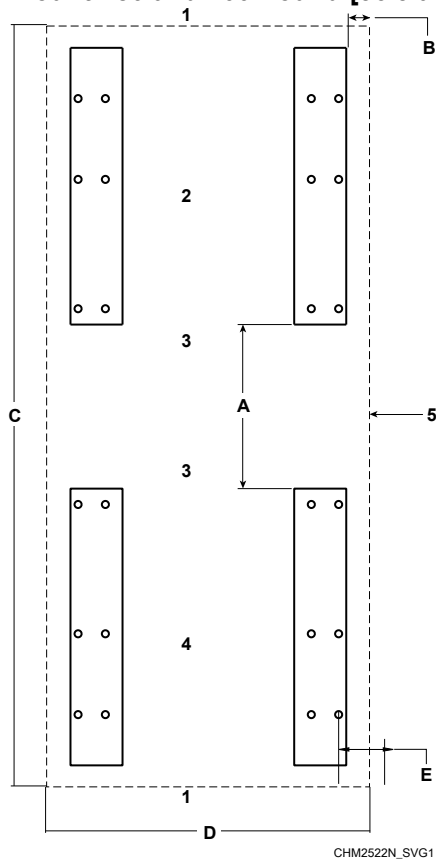


Figure 16

Close Mount Side-by-Side - 80 and 100 Pound [36.3 and 45.4 Kg] in. [36.3 and 45.4 Kg] Models, in. [mm]		
Description		**80-100**
A	Distance to wall (minimum)	24 [610]
B	Adjacent unit bolt spacing (minimum)	10.38 [264]
C	Length of pad (minimum)	49.2 [1250]
D	Width of pad (minimum)	99.5 [2527]
IMPORTANT: When close mounting, bolt machine using inside bolt holes.		

Table 16

Dimensional Clearances - Back to Back Mount - 80 and 100 Pound [36.3 and 45.4 Kg] Models (refer to *Table 17*)



1. Front-facing Edge of Pad
2. Machine 2
3. Rear of Machine
4. Machine 1
5. Side Edge of Pad or Wall

Figure 17

Back-to-Back Mount - 80 and 100 Pound [36.3 and 45.4 Kg] in. [36.3 and 45.4 Kg] Models, in. [mm]		
Description		**80-100**
A	Adjacent rear spacing (minimum)	33.3 [846]
B	Distance of machine base to edge of pad (minimum)	8 [203]
C	Length of pad (minimum)	130.56 [3316]
D	Width of pad (minimum)	51.5 [1308]
E	Distance from front bolt to edge of pad (minimum)	8.94 [227]

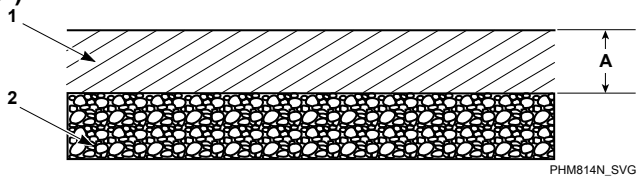
Table 17

Pad Thickness Requirements, in. [mm]						
Specification		**20**	**30**	**40**	**60**	**80-100**
Minimum Foundation Thickness	F-speed	4 [102]	4 [102]	4 [102]	4 [102]	6 [152]
	V-speed	4 [102]	4 [102]	6 [152]	6 [152]	9 [229]
Minimum Excavation Depth	F-speed	8 [203]	8 [203]	8 [203]	8 [203]	12 [305]
	V-speed	8 [203]	8 [203]	12 [305]	12 [305]	15 [381]

Table 18

Foundation Requirements

Existing Floor (refer to *Table 19*)



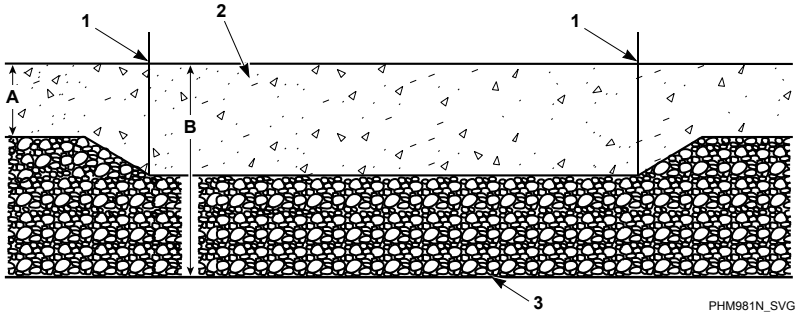
1. Existing Floor with 3500 PSI (minimum) Concrete
2. Compacted Fill (minimum 6 in. [152 mm])

Figure 18

Existing Floor, in. [mm]					
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)**	4 [102]	4 [102]	6 [152]	9 [229]

Table 19

New Monolithic Floor (refer to *Table 20*)



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

Figure 19

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

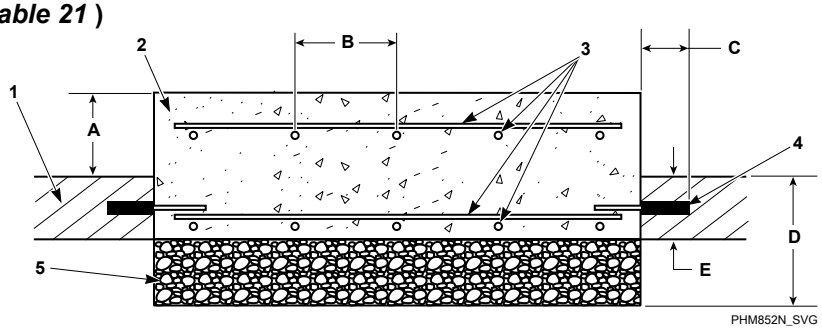
continues...

Table 20

New Monolithic Floor, in. [mm]					
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 6 in. [152 mm] fill) (minimum)**	10 [254]	10 [254]	12 [305]	15 [381]

Table 20

Elevated Pad (refer to *Table 21*)



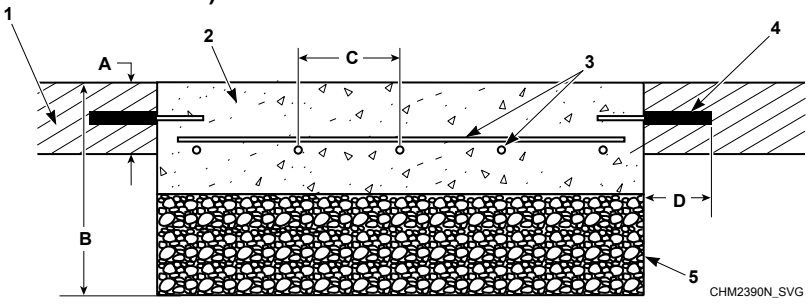
1. Existing Floor
2. 3500 PSI (minimum) Concrete
3. Reinforcing Bar
4. Perimeter Reinforcing Bar
5. Compacted Fill (minimum 6 in. [152 mm])

Figure 20

Elevated Pad, in. [mm]					
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)**	8 [203]	8 [203]	8 [203]	8 [203]
B	**Distance between reinforcing bars (maximum)**	12 [305]	12 [305]	12 [305]	12 [305]
C	**Length of reinforcing bar extending into existing floor (minimum)**	2.5 [64]	2.5 [64]	2.5 [64]	2.5 [64]
D	**Total depth of foundation (concrete plus 6 in. [152 mm] fill) (minimum)**	10 [254]	10 [254]	12 [305]	15 [381]
E	**Required thickness of existing floor (minimum)**	4 [102]	4 [102]	6 [152]	9 [229]

Table 21

Tie-in to Existing Floor (refer to *Table 22*)



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

Figure 21

Tie-in to Existing Floor, in. [mm]					
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)**	4 [102]	4 [102]	6 [152]	9 [229]
B	**Total depth of foundation (concrete plus 6 in. [152 mm] fill)(minimum)**	10 [254]	10 [254]	12 [305]	15 [381]
C	**Distance between reinforcing bars (minimum)**	12 [305]	12 [305]	12 [305]	12 [305]
D	**Length of reinforcing bar extending into existing floor (minimum)**	2.5 [64]	2.5 [64]	2.5 [64]	2.5 [64]

Table 22

Machine Mounting and Grouting

NOTE: After the concrete has cured completely and the cast-in-place method was used, refer to *Figure 23* and proceed to Step 7. If acrylic adhesive anchors are desired, refer to *Figure 22* and proceed with Step 1 after concrete has cured completely.

1. Refer to *Table 23* 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 23*.
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 1/2 inch [1.27 cm] 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

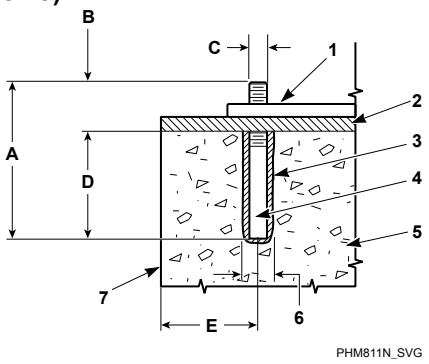
19. After the grout is completely cured, torque the locknuts to 150 ± 15 ft.-lbs. – one after the other – until all are tightened evenly and the machine is fastened securely to the floor.

    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 23*)

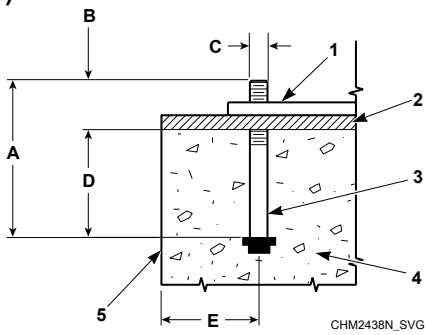


1. Machine Frame Base
2. Grout 1/2 in. [13 mm]
3. Acrylic Adhesive*
4. Anchor Bolt* (minimum Grade 5 SAE rating)
5. Concrete
6. Drill Hole Size per Manufacturer Requirements
7. Edge of Pad

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

Figure 22

Cast-in-place Anchors (refer to *Table 23*)



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

Figure 23

Minimum Anchoring Specifications, in. [mm]							
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	6 [152]	6 [152]	6 [152]	6 [152]	8-3/4 [216]	8-3/4 [216]
B	Thread Extension	2-1/2 [64]	2-1/2 [64]	2-1/2 [64]	2-1/2 [64]	2-3/4 [70]	2-3/4 [70]
C	Bolt Diameter	5/8 [16]	5/8 [16]	5/8 [16]	5/8 [16]	3/4 [19]	3/4 [19]
D	Embedment Depth	3-1/2 [89]	3-1/2 [89]	3-1/2 [89]	3-1/2 [89]	6 [152]	6 [152]
E	Distance from Bolt Center to Edge of Concrete Pad	5.26 [134]	5.26 [134]	6.19 [157]	8.9 [226]	8.94 [227]	8.94 [227]
* 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 23

Floor Load Data							
Specification		**20**	**30**	**40**	**60**	**80**	**100**
Static floor load, lbs. [kN]		430 [1.91]	550 [2.45]	690 [3.07]	920 [4.09]	1590 [7.07]	1690 [7.51]
Static pressure, lbs.-ft ^{2} [kN-m ^{2}]		97 [4.64]	95 [4.55]	98 [4.69]	105 [5.03]	140 [6.70]	149 [7.13]
Dynamic floor load, lbs. [kN]		420 [1.86]	630 [2.80]	840 [3.74]	1260 [5.61]	1680 [7.48]	1680 [7.48]
Dynamic floor pressure, lbs.-ft2 [kN-m ^{2}]		96 [4.60]	109 [5.22]	119 [5.70]	143 [6.85]	149 [7.13]	149 [7.13]
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, lbs.-ft. [kN-m]		805 [1.09]	1260 [1.71]	1820 [2.47]	2770 [3.76]	4330 [5.87]	4330 [5.87]
Maximum vertical load, lbs. [kN]		800 [3.56]	1130 [5.03]	1460 [6.49]	2060 [9.16]	3090 [13.75]	3160 [14.06]

Table 24

Drain Connection Requirements

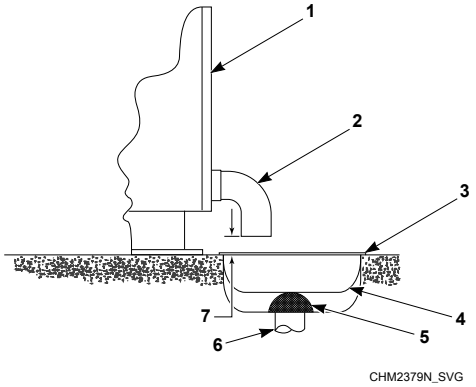
IMPORTANT: Machine must be installed in accordance with all local codes and ordinances.

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 3 inches [76 mm] 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.

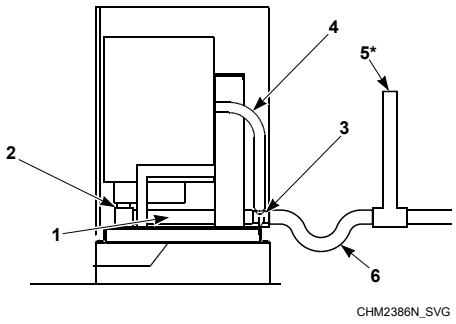
Drain Trough System



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

Figure 24

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 25

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, gal/min [l/min]	25 [95]	30 [114]	40 [151]	50 [189]	55 [208]	55 [208]
Maximum discharge (level 30), gal [l]	11.2 [42]	23.9 [90]	27.4 [104]	30.8 [117]	43.4 [165]	53.3 [202]
Recommended drain pit size, ft ^{3} [l]	2.0 [57]	2.5 [71]	3.5 [128]	5.7 [161]	8.0 [221]	9.5 [269]
* Also works with 3 inch OD PVC pipe if connected to inside of drain tee connector.						

Table 25

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 1-3/8 inch [35 mm] outside diameter drain hose.

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

Table 26

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

Table 27

Drain Flow Rate - 208-240 Volt/60 Hertz	
Drain Height	**Flow Rate gallons per minute [liters per minute]**
3 ft. [0.9 m]	9.4 [35.5]
5 ft. [1.5 m]	7.6 [28.8]

continues...

Table 28

Drain Flow Rate - 208-240 Volt/60 Hertz	
Drain Height	**Flow Rate gallons per minute [liters per minute]**
6 ft. [1.8 m]	6.6 [25.1]
7 ft. [2.1 m]	5.6 [21.2]
8 ft. [2.4 m]	4.3 [16.4]

Table 28

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] 150°F [51°C] and the recommended maximum water inlet temperature for on-premises models is 150°F [66°C] 140°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 30*. 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 29

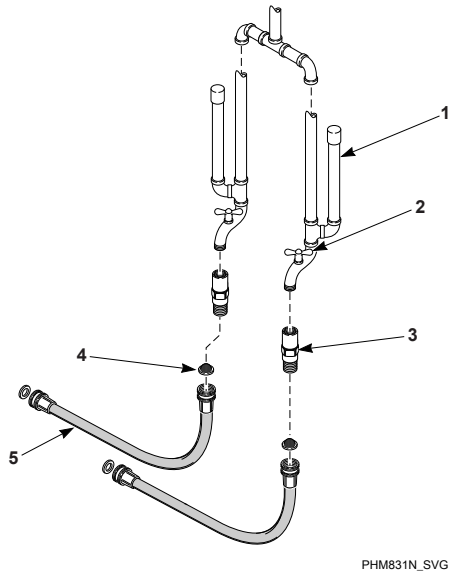
Water Supply Line Sizing, in.		
Number of Machines	Supply Line Size	
	Main	Hot/Cold
1	3/4	3/4
2	1	3/4
3	1-1/4	1
4	1-1/2	1

Table 30

Suitable air cushions (risers) should be installed in supply lines to prevent "hammering." Refer to *Figure 26*.

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.



1. Air Cushions (Risers)
2. Water Supply Faucets
3. Dual Check Valves
4. Filters
5. Hoses

Figure 26

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 26*.

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

Figure 27

Figure 28

Connect Inlet Hoses (20-40 Models)

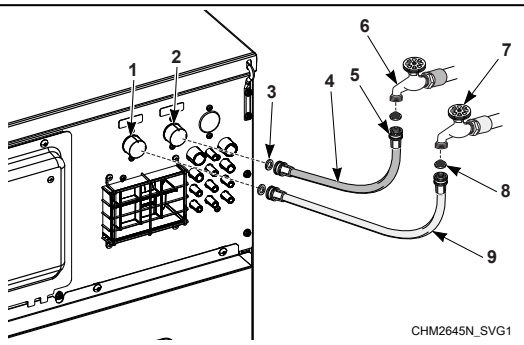
To connect water service to a machine with hoses, use the following procedure:

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 29*.
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 reinstall 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.



1. Cold Water Valve Inlet
2. Hot Water Valve Inlet
3. Rubber Washer (plain)
4. Red Fill Hose (hot)
5. Hose Coupling
6. Hot Water Supply Faucet
7. Cold Water Supply Faucet
8. Filter Screen (screen must be facing outward, toward water supply)
9. Blue Fill Hose (cold)

Figure 29

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

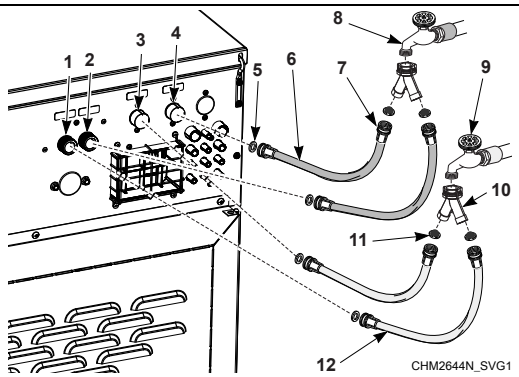
To connect water service (for laundries with two [2] supply faucets) to a machine with hoses, use the following procedure:

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 30*.
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 30*.
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 30*.
9. Using pliers, screw approximately 1/4 turn.

   IMPORTANT: DO NOT cross thread or overtighten couplings. This will cause them to leak.
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 reinstall 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.



1. Cold Tub Fill Valve Inlet
2. Hot Tub Fill Valve Inlet
3. Cold Water Main Fill
4. Hot Water Main Fill
5. Rubber Washer (plain)
6. Red Fill Hose (hot)
7. Hose Coupling
8. Hot Water Supply Faucet
9. Cold Water Supply Faucet
10. Y-connection
11. Filter Screen (screen must be facing outward, toward water supply)
12. Blue Fill Hose (cold)

Figure 30

Plumbing Diagrams

20-60 Models - Side View (refer to *Table 31*)

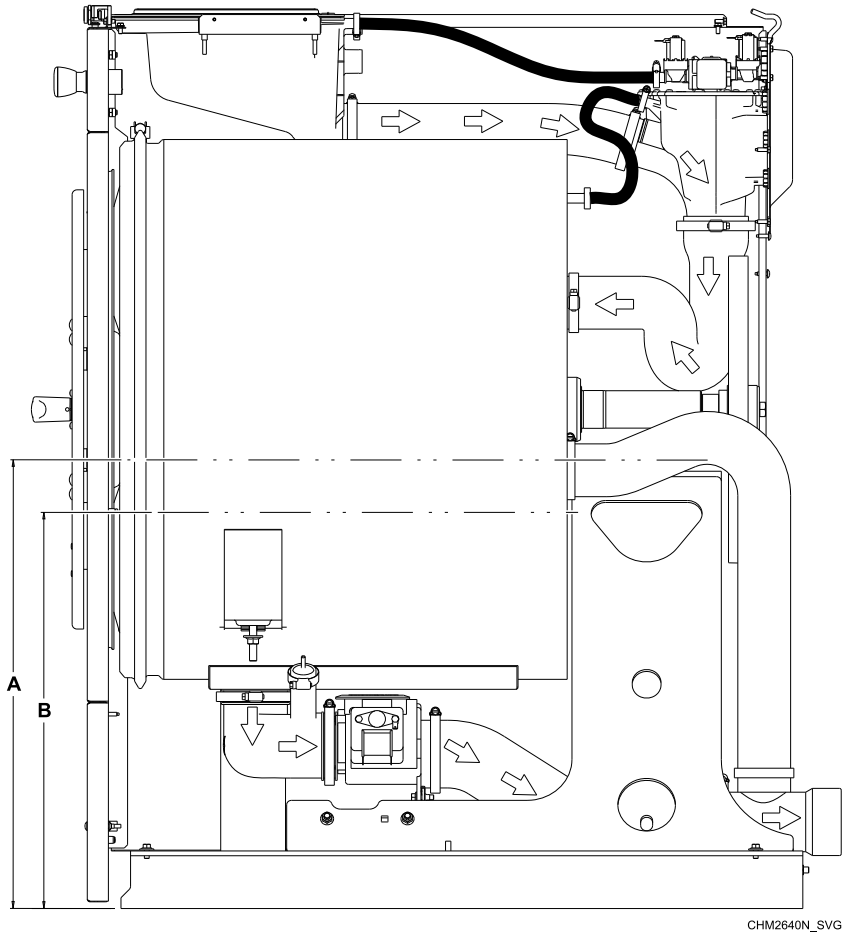
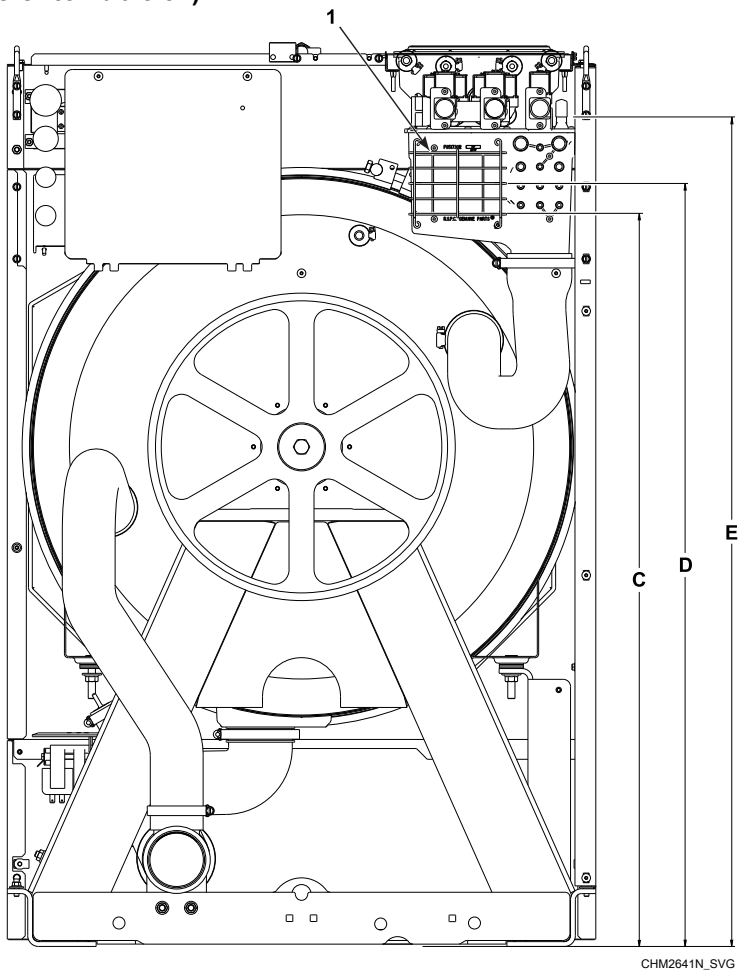


Figure 31

20-60 Models - Rear View (refer to *Table 31*)



1. Vacuum Breaker Overflow

Figure 32

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

Table 31

60-100 Models - Side View (refer to *Table 32*)

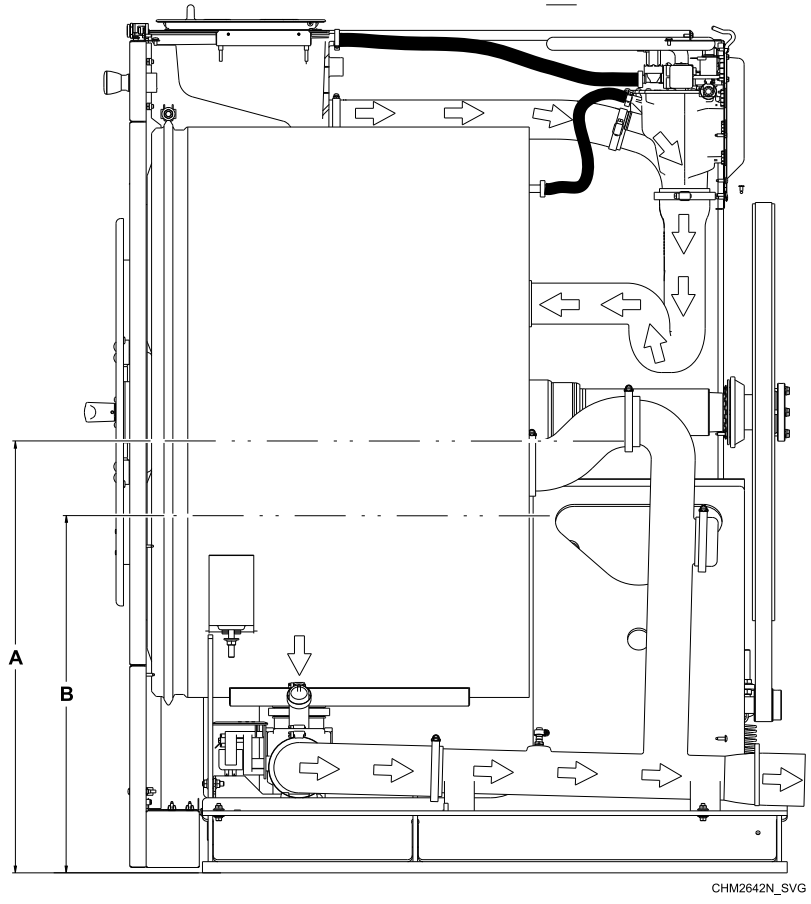
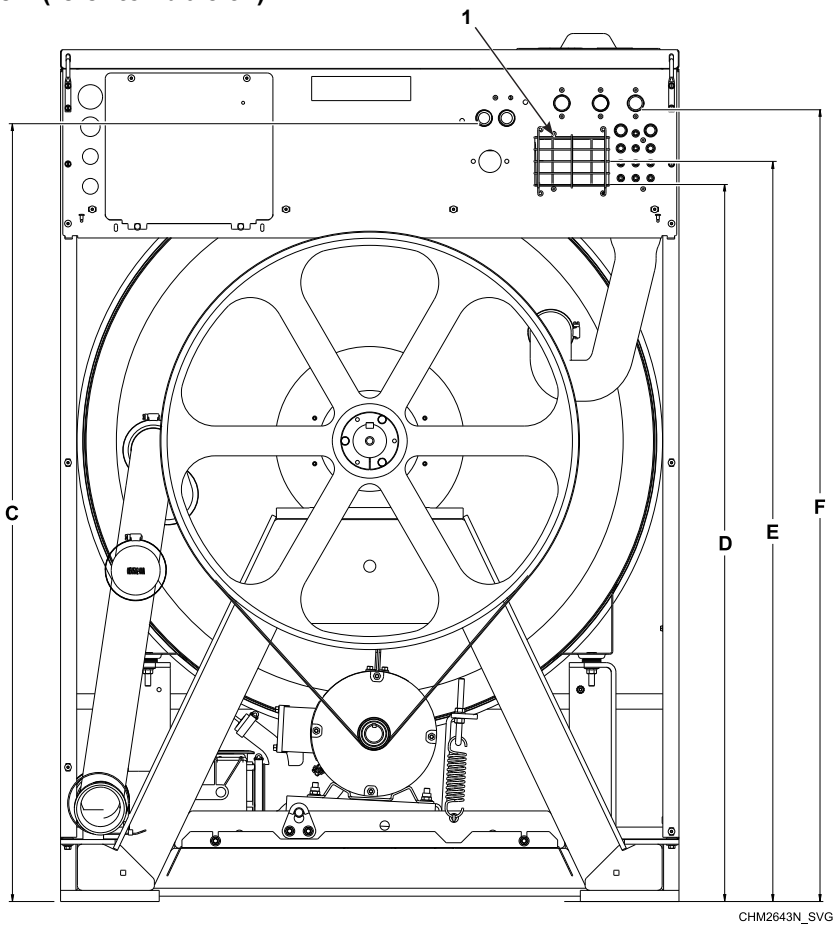


Figure 33

60-100 Models - Rear View (refer to *Table 32*)



1. Vacuum Breaker Overflow

Figure 34

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

Table 32

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 10mm ^{2}.

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 33* 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).*

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.

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 33

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: 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 50 feet [15 m] 50 to 100 feet [15 m] . Use next larger size for runs of 50 to 100 feet [15 to 30 m] 100 feet [15 to 30 m] . Use two (2) sizes larger for runs greater than 100 feet [30 m] .

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 35*.

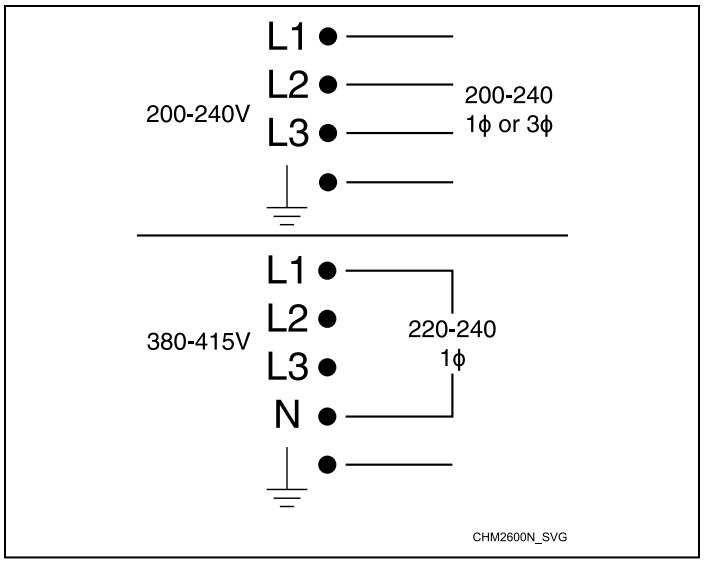


Figure 35

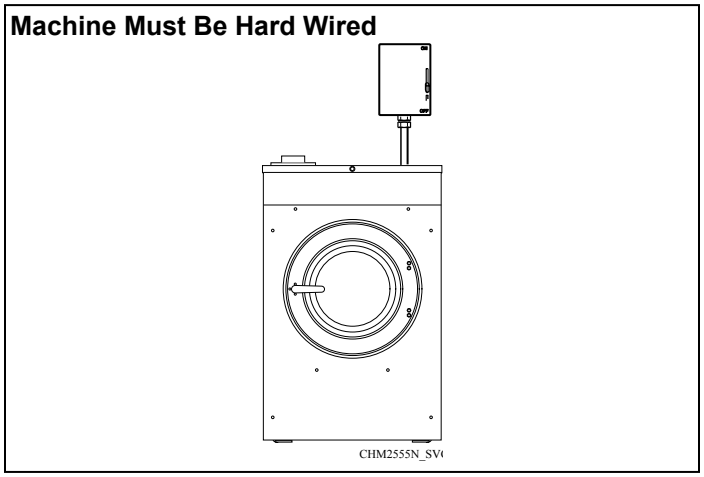


Figure 36

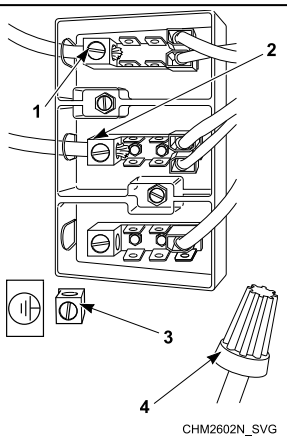
NOTE: Electrical receptacle must be located so that it is easily accessible with machine in place. An intermediate shut-off box with a 3 mm gap is required to meet EN 60335-1, clauses 24.3 and 22.2 or 3.5 mm gap is required to meet Standard IEC 60335-1, clauses 24.3 and 22.2. Gap is defined as the minimum 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 37*.

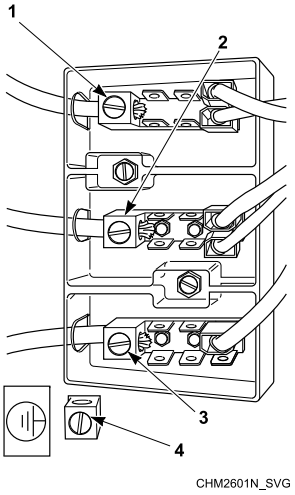


1. L1
2. L2/N
3. Ground
4. Neutral (capped)

Figure 37

Three-Phase Connections

For three-phase input, connect L1, L2, L3 and Ground as shown in *Figure 38*.



1. L1
2. L2
3. L3
4. Ground

Figure 38

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

Grounding

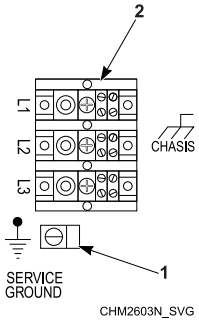
For personal safety and proper operation, the machine must be grounded in accordance with state and local codes. If such codes are not available, grounding must conform to the National Electric Code, article 250 (current edition). The ground connection must be made to a proven earth ground, not to conduit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

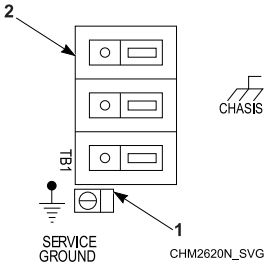
Machines with Electric Heat



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

Figure 39

Machines without Electric Heat



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

Figure 40

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 104°F [40°C] 194ºF [40°C] ambient temperature. Follow your local electrical codes. Use only copper conductors, rated for 194ºF [90°C] 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 34

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 35

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 36

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 37

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 38

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 39

CE Approval

NOTE: Wire sizing listed in this table is based on Article 310, Table 310.16 of the NEC; at 104°F [40°C] 194ºF [40°C] ambient temperature. Follow your local electrical codes. Use only copper conductors, rated for 194ºF [90°C] 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 40

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 40

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 41

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 42

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 43

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 44

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 45

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 43* 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 42*).

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

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 42* .

   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

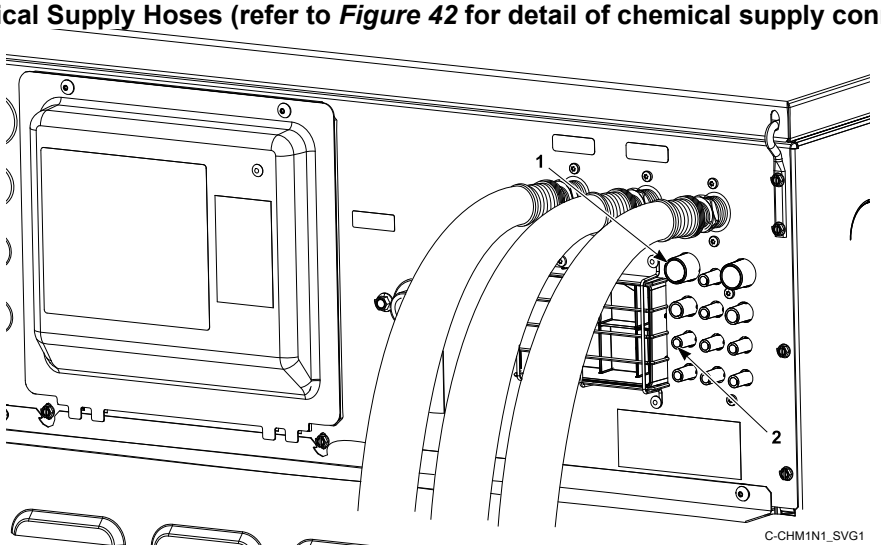
Drill out plugs and nipples before making supply hose connection. Failure to do so can cause buildup of pressure and risk a tubing rupture.

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 46

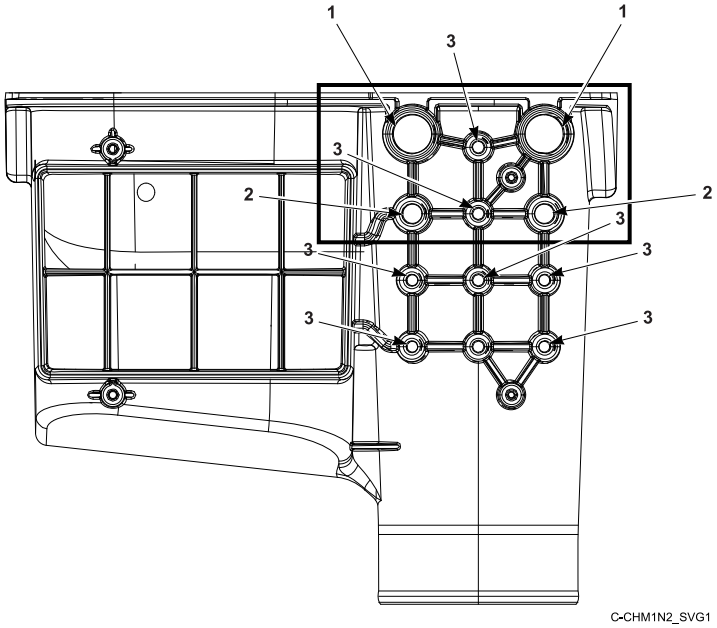
Connection for Chemical Supply Hoses (refer to *Figure 42* for detail of chemical supply connector)



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

Figure 41

External Liquid Supply Connection Ports

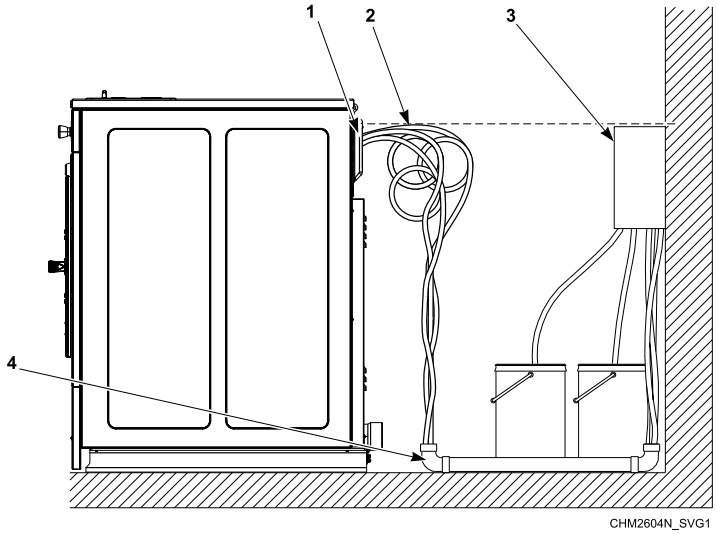


NOTE: A flush manifold system can only be connected through the top 6 ports (boxed).

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

Figure 42

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 43

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 44* and *Figure 45*. 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

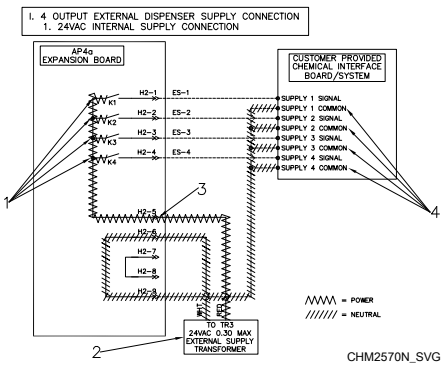
NOTE: Using the Internal 24VAC 300 Milliamp Control Transformer is recommended by Alliance Laundry Systems.

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.

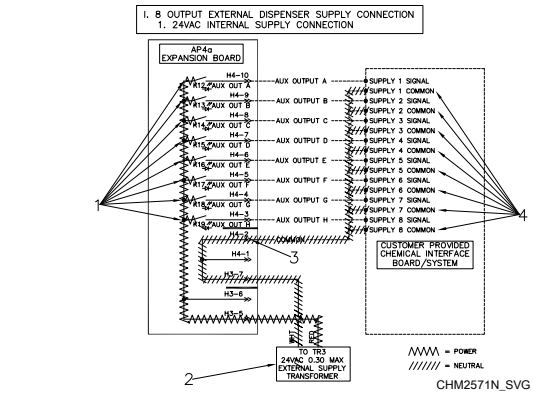
W699

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



1. External Supply Power Output
2. Internal Control Transformer
3. RELAY COM Terminal
4. External Dispenser Input Signal Common

Figure 44



1. External Supply Power Output
2. Internal Control Transformer
3. RELAY COM Terminal
4. External Dispenser Input Signal Common

Figure 45

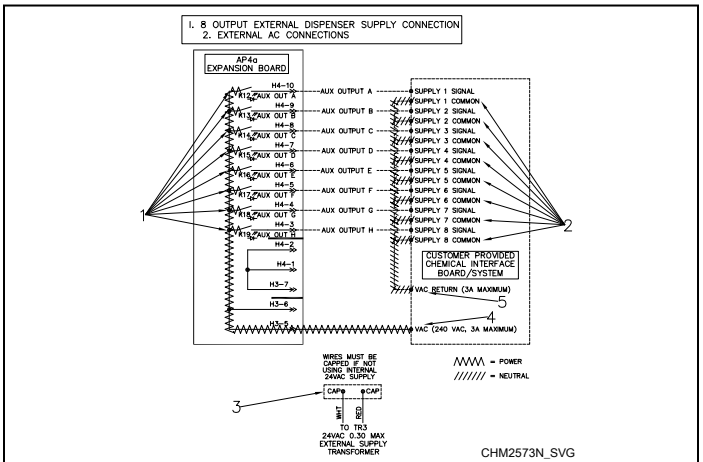
Chemical Injection Using External AC Power Source

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.

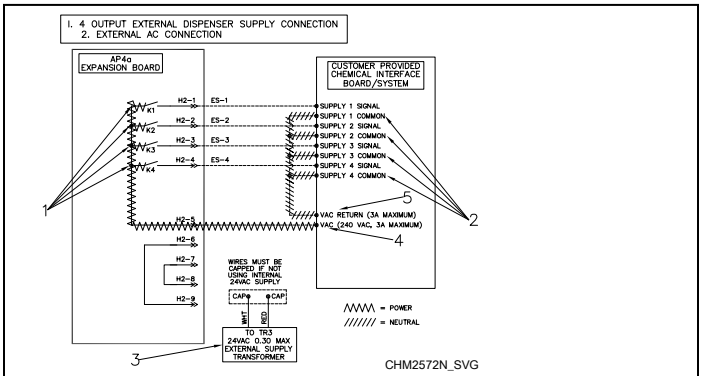
IMPORTANT: The external power must supply power of 240VAC or less and be protected at 3 Amps or less.

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 46* and *Figure 47*.



1. External Supply Power Output
2. External Dispencer Input Signal Common
3. Capped Off 24VAC Supply
4. VAC Terminal
5. VAC COM Terminal

Figure 46



1. External Dispencer Power Output
2. External Dispencer Input Signal Common
3. Capped Off 24VAC Supply
4. VAC Terminal
5. VAC COM Terminal

Figure 47

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.

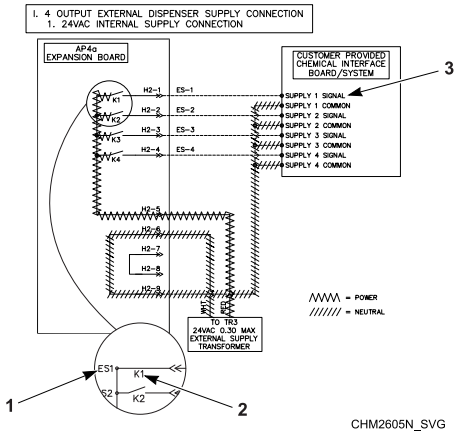
W699

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.

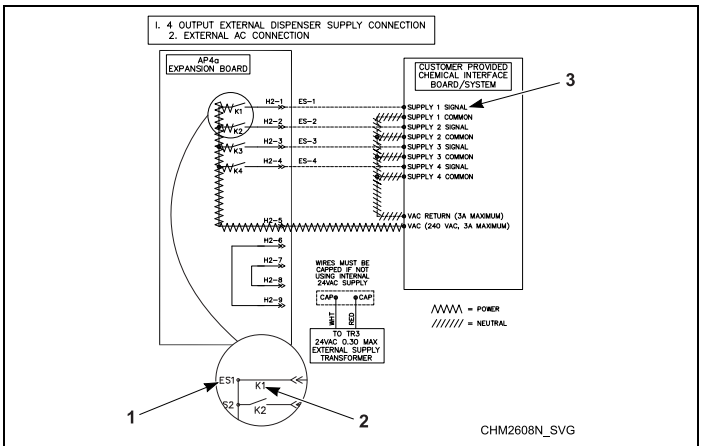
For example of a 4-signal board, if ES1 is selected the K1 contact will close and power will be supplied to Supply 1 Signal. The contact will remain closed for the amount of time programmed in control. Refer to *Figure 48* for Internal Supply Connection or *Figure 50* for External AC Connection.

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 49* for Internal Supply Connection or and *Figure 51* for External AC Connection.



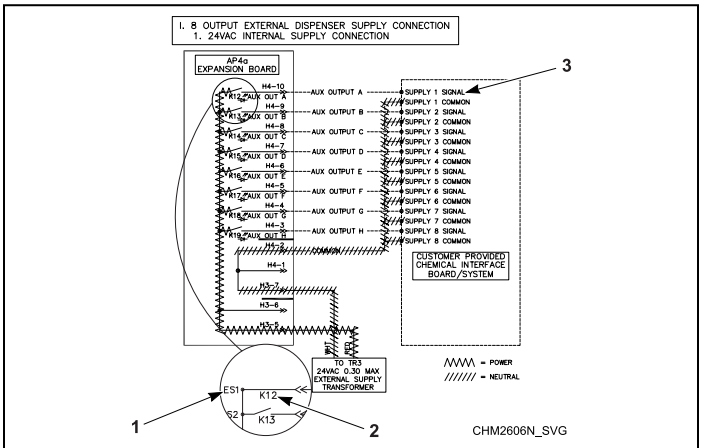
1. ES1 Power supply
2. K1 Contact
3. Supply 1 Signal

Figure 48



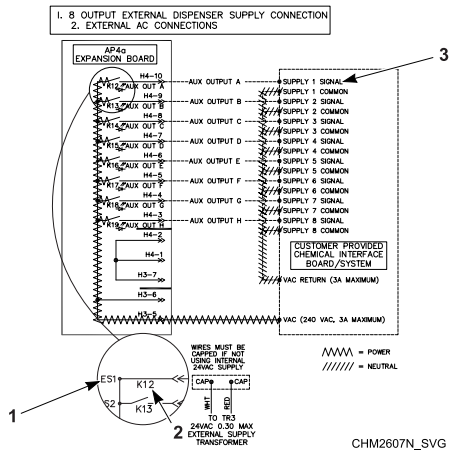
1. ES1 Power supply
2. K1 Contact
3. Supply 1 Signal

Figure 49



1. ES1 Power supply
2. K12 Contact
3. Supply 1 Signal

Figure 50



1. ES1 Power supply
2. K12 Contact
3. Supply 1 Signal

Figure 51

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 52.*

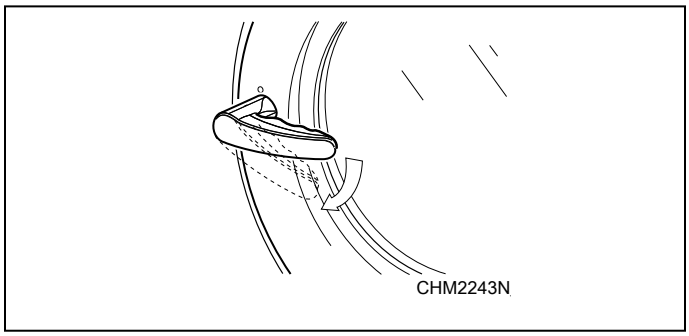


Figure 52

3. Load to capacity whenever possible. DO NOT OVERLOAD. Refer to *Figure 53.*

   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

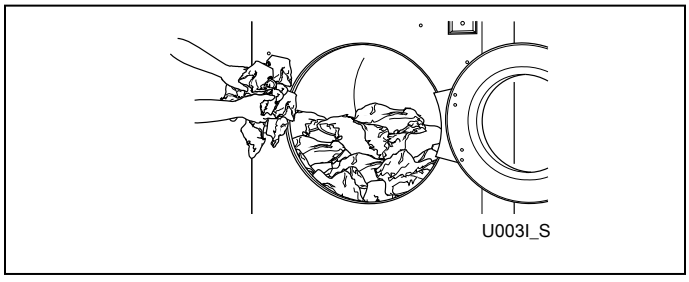


Figure 53

   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 54.*

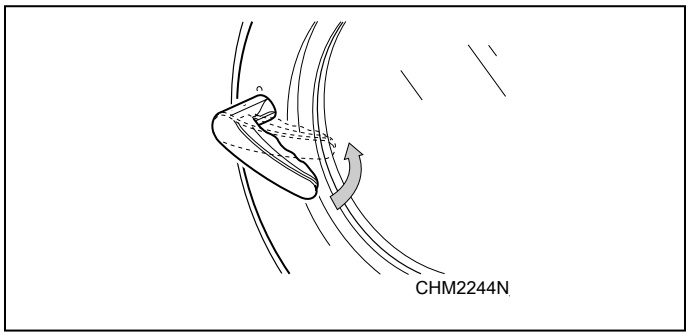


Figure 54

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 125° Fahrenheit [51° Celsius] and hot surfaces.

W748

OPL Control Instructions

NOTE: The control digit is the 7th digit in the model number. Example: HCT020 [Q] N0VXU400000

Models with F Control

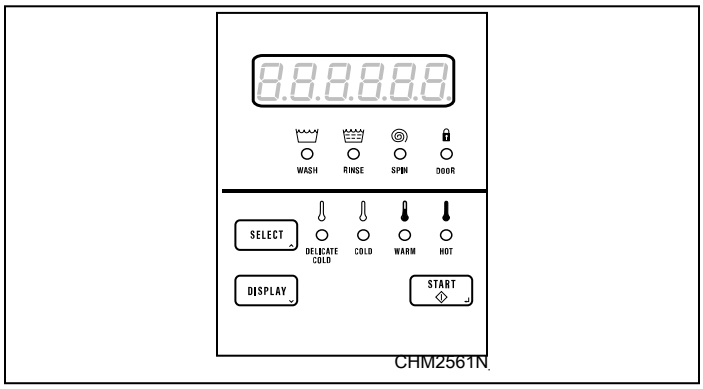


Figure 55

1. If display has gone blank due to sitting idle, press the DISPLAY keypad.
2. Press the SELECT keypad to choose Delicate Cold, Cold, Warm or Hot. The corresponding LED indicates the selection.
3. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
4. Press the START (enter) keypad to select.

   NOTE: Cycles can be changed anytime during the first Fill Step. After the first Fill Step, all cycle keypad presses are ignored.
5. When a cycle is complete, the control displays 00.

HCT, SCA, SCD, SCG, SCH, SCJ, SCT, SCU, UCA, UCD, UCG, UCH, UCJ, UCT and UCU Models with N Control

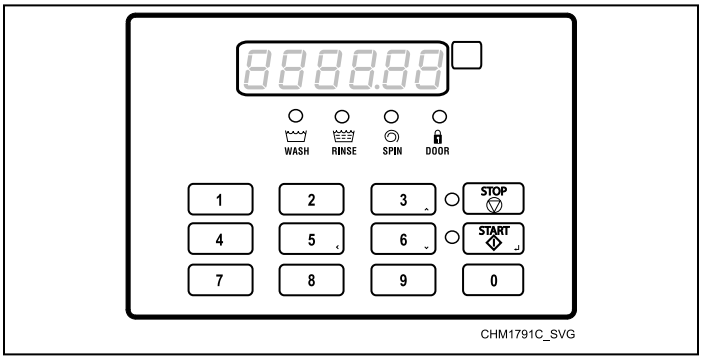


Figure 56

1. If equipped with an optional supply dispenser, add dry supplies to the compartment cups prior to the start of each cycle. Liquid supplies can be injected directly into the supply dispenser by an external chemical supply system.

   NOTE: Supply dispenser compartment cups must not be removed when an external chemical injection supply system is attached to the machine.
2. Press the 1, 2, 3, 4, 5, 6, 7, 8, 9 or 0 keypad to select the desired cycle.
3. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
4. Press the START (enter) keypad to select.

   NOTE: Cycles cannot be changed anytime after the machine is started.
5. When a cycle is complete, the control displays OPEN DOOR.

BCG, HCA, HCD, HCG, HCH, HCJ, HCT, HCU, PCG, SCA, SCG, SCT, UCA, UCD, UCG, UCH, UCJ, UCT and UCU Models with Q Control

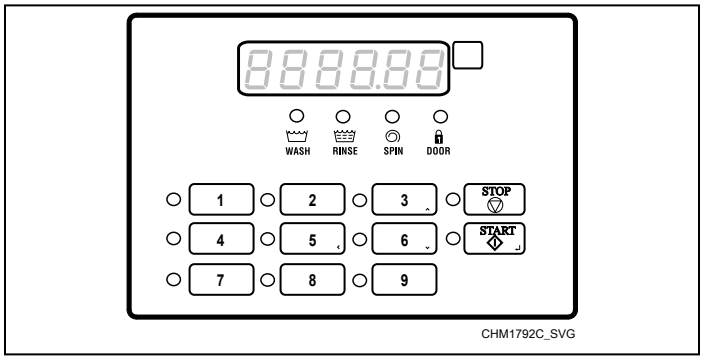


Figure 57

1. Press the 1, 2, 3, 4, 5, 6, 7, 8 or 9 keypad to select the desired cycle.
2. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
3. Press the START (enter) keypad to select.

   NOTE: Cycles cannot be changed anytime after the machine is started.
4. When a cycle is complete, the control displays OPEN DOOR.

Vend Control Instructions

NOTE: The control digit is the 7th digit in the model number. Example: HCT020 [N] C1VXU400000

BCG, HCT and PCG Models with N and W Controls

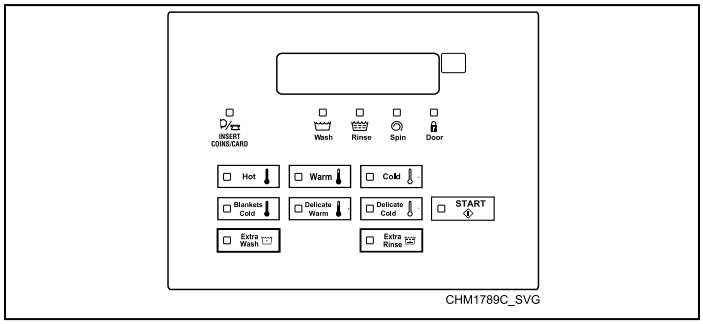


Figure 58

1. Press the Hot, Warm, Cold, Blankets Cold, Delicate Warm or Delicate Cold keypad to choose the desired cycle/temperature. The corresponding LED indicates the selection.
2. Press the Extra Wash and/or Exra Rinse keypads to add modifiers to the cycle. The corresponding LEDs indicate the added modifiers.
3. Insert coin(s) or card as necessary.
   - If the machine is a coin operated unit, add coins. As each coin is added, the vend counts down to the amount remaining.
   - If the machine is a card operated unit, insert and remove card per card system instructions.
   - If the unit is interfaced to a central/remote pay system, go to the central/remote pay console, make payment and select the machine and follow central/remote pay system instructions.
4. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
5. Press the START (enter) keypad to select.

   NOTE: Cycles can be changed anytime during the first Fill Step. After the first Fill Step, all cycle keypad presses are ignored.
6. When a cycle is complete, the control displays OPEN DOOR.

SCA, SCE, SCG, SCJ and SCU Models with N and W Controls

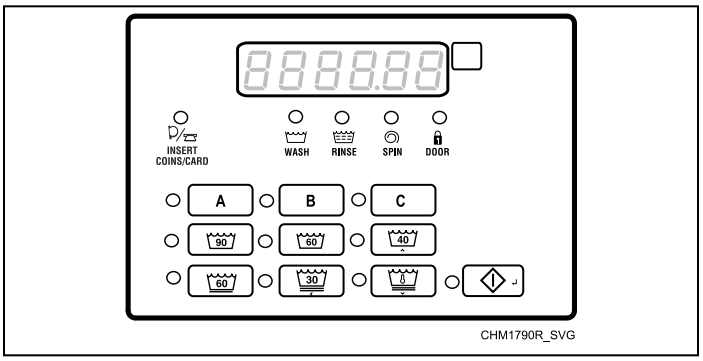


Figure 59

1. Press the Normal 90C, Normal 60C, Normal 40C, Perminant Press 60C, Delecates 30C or Delecates Cold keypad to select the desired cycle/temperature. The corresponding LED indicates the selection.
2. Press the A keypad to run the selected cycle with no modifiers. Press the B and/or C keypads to add modifiers to the selected cycle. The corresponding LEDs indicate the selected modifiers.
3. Insert coin(s) or card as necessary.
   - If the machine is a coin operated unit, add coins. As each coin is added, the vend counts down to the amount remaining.
   - If the machine is a card operated unit, insert and remove card per card system instructions.
   - If the unit is interfaced to a central/remote pay system, go to the central/remote pay console, make payment and select the machine and follow central/remote pay system instructions.
4. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
5. Press the START (enter) keypad to select.

NOTE: Cycles can be changed anytime during the first Fill Step. After the first Fill Step, all cycle keypad presses are ignored.

6. When a cycle is complete, the control displays OPEN DOOR.

DCJ, HCT, SCH and SCT Models with N and W Controls

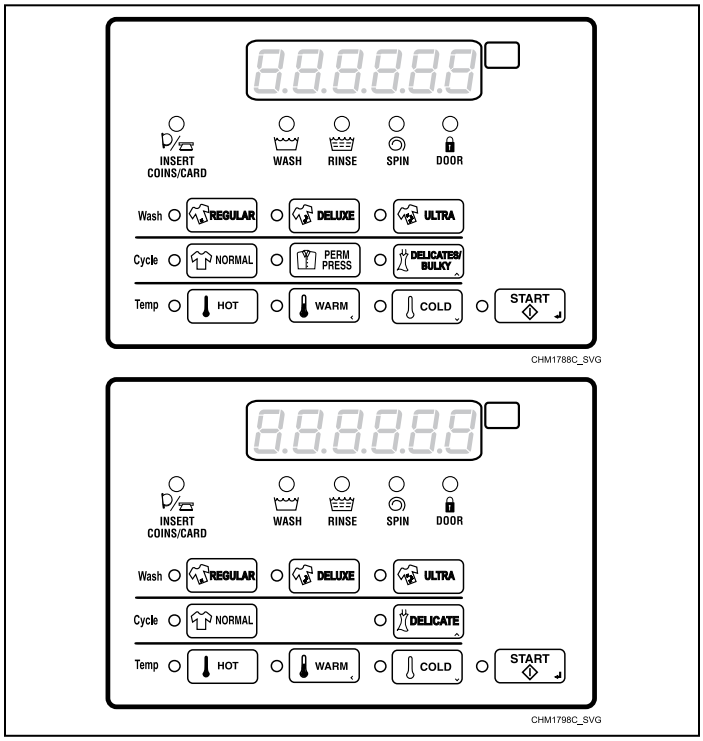


Figure 60

1. Press the Regular, Deluxe or Ultra keypad to choose the desired soil level. The corresponding LED indicates the selection.
2. Press the Normal, Perm Press (if available) or Delicates/ Bulky keypad to choose the desired cycle. The corresponding LED indicates the selection.
3. Press the Hot, Warm or Cold keypad to choose the desired temperature. The corresponding LED indicates the selection.
4. Insert coin(s) or card as necessary.
   - If the machine is a coin operated unit, add coins. As each coin is added, the vend counts down to the amount remaining.
   - If the machine is a card operated unit, insert and remove card per card system instructions.
   - If the unit is interfaced to a central/remote pay system, go to the central/remote pay console, make payment and select the machine and follow central/remote pay system instructions.
5. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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. Press the START (enter) keypad to select.

   NOTE: Cycles can be changed anytime during the first Fill Step. After the first Fill Step, all cycle keypad presses are ignored.
7. When a cycle is complete, the control displays OPEN DOOR.

HCA, HCD, HCE, HCH, HCJ and HCU Models with N and W Controls

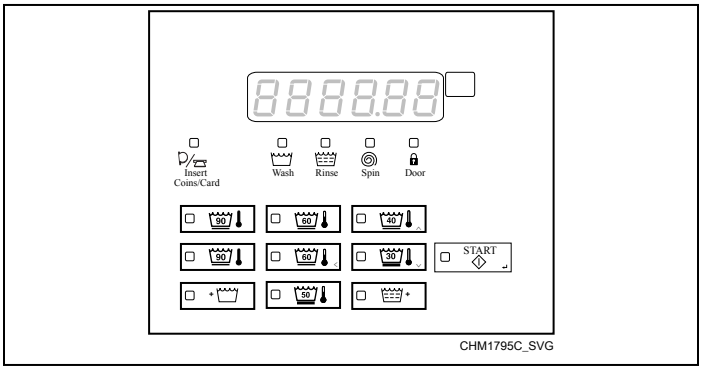


Figure 61

1. Press the Normal 90C, Normal 60C, Normal 40C, Perm Press 90C, Perm Press 60C, Gentle 30C or Perm Press 50C keypad to choose the desired cycle/temperature. The corresponding LED indicates the selection.
2. Press the Extra Wash and/or Extra Rinse keypads to add modifiers to the cycle. The corresponding LEDs indicate the added modifiers.
3. Insert coin(s) or card as necessary.
   - If the machine is a coin operated unit, add coins. As each coin is added, the vend counts down to the amount remaining.
   - If the machine is a card operated unit, insert and remove card per card system instructions.
   - If the unit is interfaced to a central/remote pay system, go to the central/remote pay console, make payment and select the machine and follow central/remote pay system instructions.
4. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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

5. Press the START (enter) keypad to select.

NOTE: Cycles can be changed anytime during the first Fill Step. After the first Fill Step, all cycle keypad presses are ignored.

6. When a cycle is complete, the control displays OPEN DOOR.

SCT Modles with Q Control

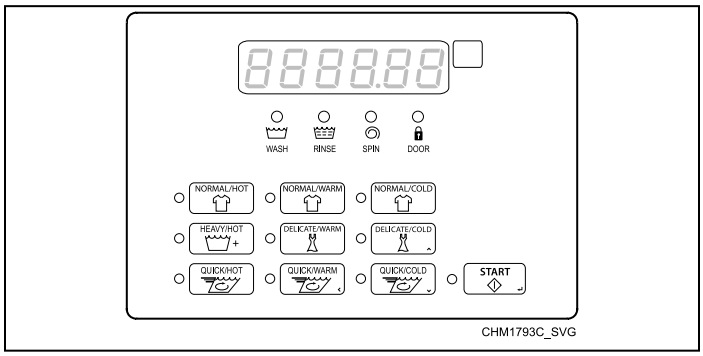


Figure 62

1. Press the Normal/Hot, Normal/Warm, Normal/Cold, Heavy/Hot, Delicate/Warm, Delicate/Cold, Quick/Hot, Quick/Warm or Quick/Cold keypad to select the desired cycle.
2. Insert coin(s) or card as necessary.
   - If the machine is a coin operated unit, add coins. As each coin is added, the vend counts down to the amount remaining.
   - If the machine is a card operated unit, insert and remove card per card system instructions.
   - If the unit is interfaced to a central/remote pay system, go to the central/remote pay console, make payment and select the machine and follow central/remote pay system instructions.
3. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
4. Press the START (enter) keypad to select.

NOTE: Cycles cannot be changed anytime after the machine is started.

5. When a cycle is complete, the control displays OPEN DOOR.

HCT Models with Q Control

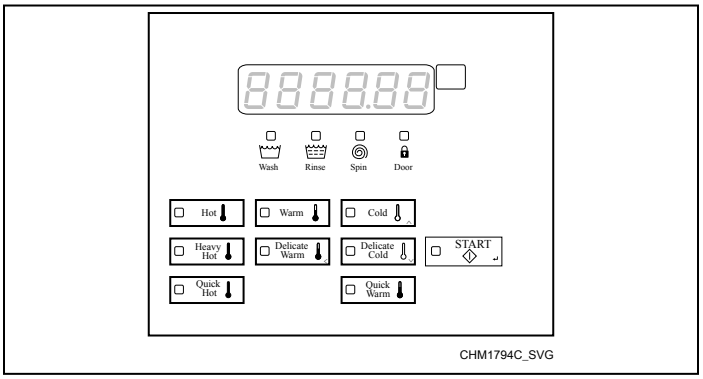


Figure 63

1. Press the Hot, Warm, Cold, Heavy/Hot, Delicate/Warm, Delicate/Cold, Quick/Hot or Quick/Warm keypad to choose the desired cycle/temperature. The corresponding LED indicates the selection.
2. Insert coin(s) or card as necessary.
   - If the machine is a coin operated unit, add coins. As each coin is added, the vend counts down to the amount remaining.
   - If the machine is a card operated unit, insert and remove card per card system instructions.
   - If the unit is interfaced to a central/remote pay system, go to the central/remote pay console, make payment and select the machine and follow central/remote pay system instructions.
3. Add liquid and/or powder supplies to supply dispenser. Refer to *Table 47*.
   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
4. Press the START (enter) keypad to select.

Adding Supplies

NOTE: Cycles can be changed anytime during the first Fill Step. After the first Fill Step, all cycle key-pad presses are ignored.

5. When a cycle is complete, the control displays *OPEN DOOR*.

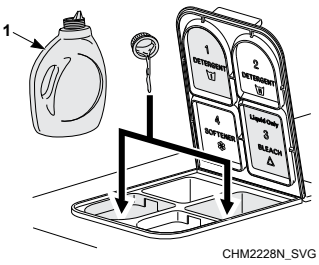
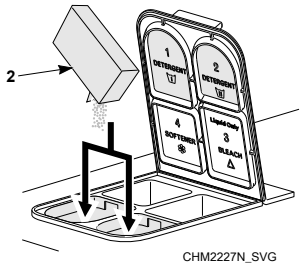
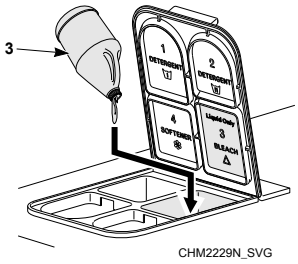
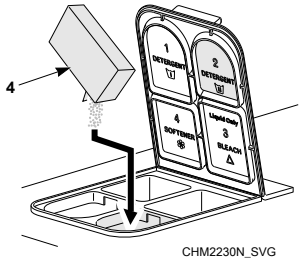
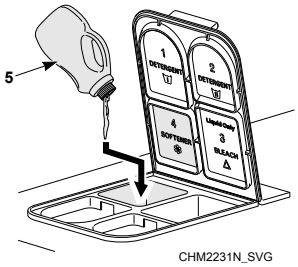
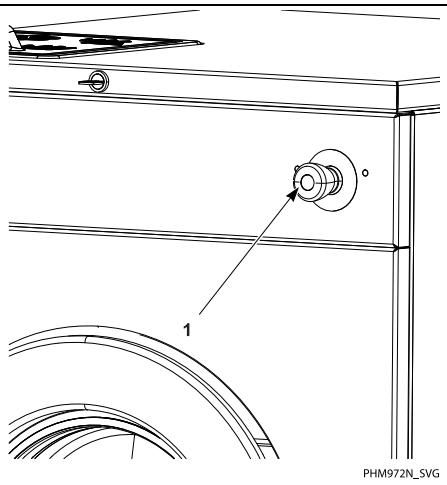
a. DETERGENT	 1. Liquid Detergent	 2. Powder Detergent
b. BLEACH	 3. Liquid Bleach	 4. Powder Bleach
c. SOFTENER	 5. Liquid Softener	

Table 47

Emergency Stop Button (OPL Models Only)

Depress the emergency stop button (refer to *Figure 64*) to terminate machine operation when any unsafe condition is present during machine operation.



1. Emergency Stop Button

Figure 64

1. Press red emergency stop button to stop all action.
2. To restart the machine, pull red emergency stop button out and press START (enter) on the control.

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

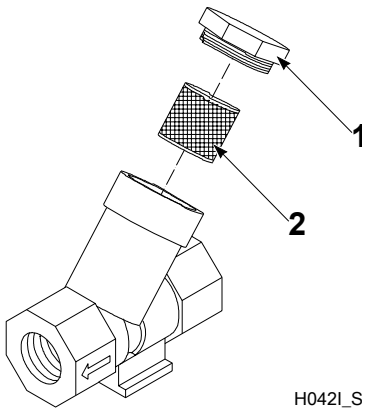
WARNING

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 65*.
   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.



1. Cap
2. Steam Filter Element

Figure 65

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 80 and 100 pound [36.3 and 45.4 kg] 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 (709–871 SUS at 100°F [135–165 cSt at 40°C])
- ISO VG 220 (1047–1283 SUS at 100°F [198–242 cSt at 40°C])
- 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

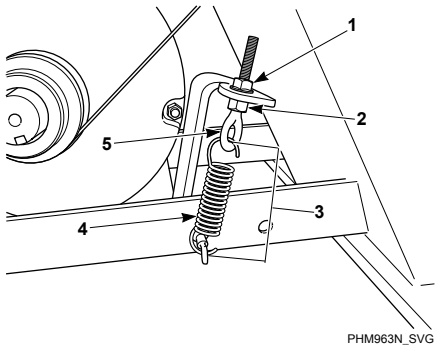
NOTE: Disconnect power to the machine at its source before performing maintenance procedures.

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 .04 inches [1 mm] .
   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 49*) is obtained mid-span. Torque jam nut to spring bracket to 20.6 ± 2 ft.-lbs. Refer to *Figure 66.*



1. Top Nut
2. Jam Nut
3. Spring Length
4. Spring
5. Eyebolt

Figure 66

- **Tension Gauge.** Tighten eyebolt top nut until the proper belt gauge (refer to *Table 49*) is obtained mid-span. Torque jam nut to spring bracket to 20.6 ± 2 ft.-lbs. Refer to *Figure 66.*
- **Spring Length.** Tighten eyebolt top nut until the spring measures the correct distance between the hooks. Refer to *Table 48* . Torque jam nut to spring bracket to 20.6 ± 2 ft.-lbs. Refer to *Figure 66.*

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

Table 48

- **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 66.*

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 .04 inch [1 mm] 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 49

3. Remove any accumulated debris on or near the motor and motor variable frequency drive heat sinks, if applicable.
4. 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.
5. Remove any dust from all electrical components, including coin acceptors if applicable, with compressed air.
6. Inspect hardware for any loose nuts, bolts, screws.
   a. Check the tightness of the motor spring and motor pulley hardware. Also check that the eyebolt is tightened properly.
   b. Tighten motor mounting bolt locknuts and bearing bolt locknuts, if necessary.
   c. Check the bearing mounting bolts to make sure they are torqued properly. Refer to *Table 50.*

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

Table 50

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.

   NOTE: Refer to the *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 67*. 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.

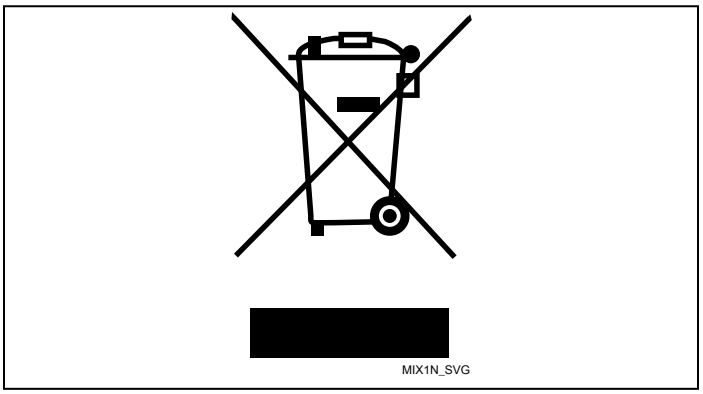


Figure 67