

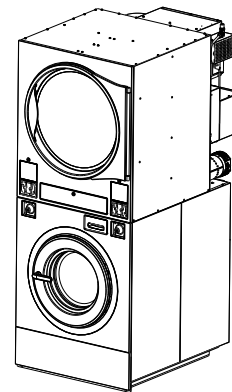
Stacked Washer-Extractor/ Tumble Dryer

Stacked 30 Pound (13/13 Kilogram) Capacity

Stacked 50 Pound (22/22 Kilogram) Capacity

Designs 1 and 2

Refer to Page 15 for Model Identification



STX1C_SVG

Original Instructions

Keep These Instructions for Future Reference.

CAUTION: Read the instructions before using the machine.

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

Installation must conform with local codes or, in the absence of local codes, with:

In the U.S.A., installation must conform to the latest edition of the American National Standard Z223.1/ NFPA 54 “National Fuel Gas Code” and Standard ANSI/NFPA 70 “National Electric Code.”

In Canada, installation must comply with Standards CAN/CSA-B149.1 Natural Gas and Propane Installation Code and CSA C22.1, latest edition, Canadian Electric Code, Part I.

In Australia and New Zealand, installation must comply with the Gas Installations Standard AS/NZS 5601 Part 1: General Installations.

In Europe, before installation, check that the local distribution conditions, nature of gas and pressure, and the adjustment of the appliance are compatible.

This equipment has been designed and certified to comply with IEC/EN 60335 electrical safety standards for tumble dryers.



Read all instructions before using tumble dryer.

IMPORTANT: If it is unavoidable that fabrics that contain vegetable or cooking oil or have been contaminated by hair care products be placed in a tumble dryer, they should first be washed in hot water with extra detergent. This will reduce, but not eliminate, the hazard.



WARNING

FOR YOUR SAFETY, the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or death.

W033



DANGER

Electric shock hazard will result in death or serious injury. Disconnect all electric power to appliance and accessories and wait five (5) minutes before servicing.

W925

Units are IPx4 when enclosed per these instructions.



WARNING

- **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**
- **WHAT TO DO IF YOU SMELL GAS:**
 - **Do not try to light any appliance.**
 - **Do not touch any electrical switch; do not use any phone in your building.**
 - **Clear the room, building or area of all occupants.**
 - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
 - **If you cannot reach your gas supplier, call the fire department.**
- **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

W052

IMPORTANT: Information must be obtained from a local gas supplier on instructions to be followed if the user smells gas. These instructions must be posted in a prominent location. Step-by-step instructions of the above safety information must be posted in a prominent location near the tumble dryer for customer use.

IMPORTANT: Post the following statement in a prominent location

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

IMPORTANT: The installer must fully test the tumble dryer after installation and demonstrate to the owner how to operate the machine.

IMPORTANT: The machine shall only be installed in a room separated from inhabited rooms, incorporating appropriate ventilation specified in the National Installation Regulations.

IMPORTANT: The tumble dryer is not to be used if industrial chemicals have been used for cleaning.



WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumble dryer before servicing.
- Close gas shut-off valve to gas tumble dryer before servicing.
- Close steam valve to steam tumble dryer before servicing.
- Never start the tumble dryer with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.

W002R1



WARNING

- Installation of unit must be performed by a qualified installer.
- Install tumble dryer according to manufacturer's instructions and local codes.
- DO NOT install a tumble dryer with flexible plastic venting materials. If flexible metal (foil type) duct is installed, it must be of a specific type identified by the appliance manufacturer as suitable for use with tumble dryer. Refer to section on connecting exhaust system. Flexible venting materials are known to collapse, be easily crushed, and trap lint. These conditions will obstruct tumble dryer airflow and increase the risk of fire.

W752R1



CAUTION

TO AVOID THE RISK OF FIRE THIS DRYER MUST BE EXHAUSTED OUTDOORS.

W928



WARNING

To reduce the risk of serious injury: Avoid contact with hot surfaces.

W927



WARNING

Electrical shock hazard can cause death or serious injury. To reduce the risk of electric shock, disconnect all electric power to appliance and accessories before servicing.

W929



WARNING

Moving parts hazard can cause serious injury. Disconnect electric power to unit before servicing. Unexpected start of machinery will occur if the unit is equipped with the extended tumble feature.

W937



WARNING

Lint compartment must be cleaned daily

To avoid the risk of fire:

- Use for drying water washed fabrics only.
- DO NOT dry articles containing foam rubber, plastic, or similarly textured rubber like materials.
- DO NOT put articles soiled with cooking oil in dryer as cooking oil may not be removed during washing. Due to the remaining oil the fabric may catch on fire by itself.
- DO NOT put articles soiled with flammable liquids or flammable cleaning solvents in dryer.

W930



CAUTION

- Risk of fire, a clothes dryer produces combustible lint. Exhaust outdoors. Care should be taken to prevent the accumulation of lint around the exhaust opening and in the surrounding area.
- DO NOT reach into the dryer until all moving parts have stopped.
- DO NOT let children play on or in the dryer.

W931

In Australia and New Zealand:



WARNING

- **DO NOT** operate this appliance before reading the instruction booklet.
- **DO NOT** place articles on or against this appliance.
- **DO NOT** store chemicals or flammable materials or spray aerosols near this appliance.
- **DO NOT** operate with panels, covers or guards removed from this appliance.
- **DO NOT** load materials containing flammable solvents into this appliance.
- If repeated ignition reset is required, the dryer should not be used and a service call booked.



Risk of fire/flammable material.

W926

The following information applies to the state of Massachusetts, USA.

- This appliance can only be installed by a Massachusetts licensed plumber or gas fitter.
- This appliance must be installed with a 36 inch [91 cm] long flexible gas connector.
- A “T-Handle” type gas shut-off valve must be installed in the gas supply line to this appliance.
- This appliance must not be installed in a bedroom or bathroom.

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. How-

ever, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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



CAUTION

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

W1004

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

Limited Channels Fixed For Use In USA: IEEE 802.11b or 802.11g or 802.11n(HT20) operation of this product in the U.S. is firmware-limited to Channel 1 through 11.

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

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

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

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

EUROPE

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

- EMC Directive 2014/30/EU

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

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

- Radio Equipment Directive 2014/53/EU

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

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

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

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

AUSTRALIA/NEW ZEALAND

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

BRAZIL ANATEL

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

CHINA SRRC

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

JAPAN

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

MEXICO IFETEL

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

SOUTH KOREA (KC)

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

TAIWAN

The information in this section applies to products bearing the Taiwan National Communications Commission mark:

This telecom equipment has complied with NCC regulations.

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

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

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

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

THAILAND

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

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

Manufacturing Date

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

Recommended Program For Nominal Load

The wash program recommended in this manual is for a nominal load at rated load capacity. Refer to programming manual for details of 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 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 (Tumble Dryer)

	WARNING
To reduce the risk of fire, electric shock, serious injury or death to persons when using your tumble dryer, follow these basic precautions.	
W776R1	

Save These Instructions

- Read all instructions before using the tumble dryer.

- Install the tumble dryer according to the INSTALLATION instructions. Refer to the EARTHING (grounding) instructions for the proper earthing (grounding) of the tumble dryer. All connections for electrical power, earthing (grounding) and gas supply 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 tumble dryer where it will be exposed to water and/or weather. The tumble dryer cannot be used in a closed room where the air supply is insufficient. If necessary, ventilation grids must be installed in the doors or the windows.
- This tumble dryer must not be activated without lint screen filter.
- When you perceive a gas odor, immediately shut off the gas supply and ventilate the room. Do not power on electrical appliances and do not pull electrical switches. Do not use matches or lighters. Do not use a phone in the building. Warn the installer, and if so desired, the gas company, as soon as possible.
- To avoid fire and explosion, keep surrounding areas free of flammable and combustible products. Regularly clean the cylinder and exhaust tube should be cleaned periodically by competent maintenance personnel. Daily remove debris from lint screen filter and inside of filter compartment.
- Do not use or store flammable materials near this appliance.
- Do not place into tumble dryer articles that have been previously cleaned in, washed in, soaked in or spotted with gasoline or machine oils, vegetable or cooking oils, cleaning waxes or chemicals, dry-cleaning solvents, thinner or other flammable or explosive substances as they give off vapors that could ignite, explode or cause fabric to catch on fire by itself.
- Do not spray aerosols in the vicinity of this appliance while it is in operation.
- Items such as foam rubber (latex foam), shower caps, waterproof textiles, rubber backed articles and clothes or pillows filled with foam rubber pads should not be dried in the tumble dryer. Do not use the appliance to dry materials with a low melting temperature (PVC, rubber, etc.).
- Do not tumble fiberglass curtains and draperies unless the label says it can be done. If they are dried, wipe out the cylinder with a damp cloth to remove particles of fiberglass.
- Do not allow children to play on or in the dryer. Close supervision of children is necessary when the dryer is used near children. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. This is a safety rule for all appliances.
- Cleaning and user maintenance shall not be made by children without supervision.
- Children less than three years should be kept away unless continuously supervised.
- Do not reach into the tumble dryer if the cylinder is revolving.

- Use tumble dryer only for its intended purpose, drying fabrics. Always follow the fabric care instructions supplied by the textile manufacturer and only use the dryer to dry textiles that have been washed in water. Only insert spin-dried linen in the dryer to avoid damage to dryer.
- Always read and follow manufacturer's instructions on packages of laundry and cleaning aids. Follow 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.
- Remove laundry immediately after tumble dryer stops.
- DO NOT operate the tumble dryer if it is smoking, grinding or has missing or broken parts or removed guards or panels. DO NOT tamper with the controls or bypass any safety devices.
- Tumble dryer will not operate with the loading door open. DO NOT bypass the door safety switch to permit the tumble dryer to operate with the door open. The tumble dryer will stop rotating when the door is opened. Do not use the tumble dryer if it does not stop rotating when the door is opened or starts tumbling without pressing the START mechanism. Remove the tumble dryer from use and call for service.
- Tumble dryer will not operate with lint panel open. DO NOT bypass lint panel door safety switch to permit the tumble dryer to operate with the lint panel door open.
- Do not alter this tumble dryer from factory construction except as otherwise described in the technical instructions.
- Always clean the lint filter daily. Keep area around the exhaust opening and adjacent surrounding area free from the accumulation of lint, dust and dirt. The interior of the tumble dryer and the exhaust duct should be cleaned periodically by qualified service personnel.
- Solvent vapors from dry-cleaning machines create acids when drawn through the heater of the drying unit. These acids are corrosive to the tumble dryer as well as the laundry load being dried. Be sure make-up air is free of solvent vapors.
- At the end of each working day, close off all main supplies of gas, steam and electricity.

IMPORTANT: For fire suppression equipped tumble dryers, electricity and water should NOT be turned off.

- Do not repair or replace any part of the tumble dryer, 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 and lockout the electrical power to the tumble dryer before servicing. Disconnect power by shutting off appropriate breaker or fuse.
- Activation of the emergency stop switch stops all tumble dryer control circuit functions, but DOES NOT remove all electrical power from tumble dryer.

- Exhaust ductwork should be examined and cleaned annually after installation.
- Before the tumble dryer is removed from service or discarded, remove the door to the drying compartment and the door to the lint compartment.
- Failure to install, maintain, and/or operate this tumble dryer 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. Observe and be aware of other labels and precautions that are located on the machine. They are intended to provide instruction for safe use of the machine. Common sense, caution and care must be exercised when installing, maintaining, or operating the tumble dryer.

Always contact your dealer, distributor, service agent or the manufacturer about any problems or conditions you do not understand.

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

Important Safety Instructions (Washer-Extractor)

	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.
- **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 machine. 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.
- 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.
- 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

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.

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	

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Introduction

Model Identification

Information in this manual is applicable to these models. **Refer to the machine serial plate for the model number.**

S30 (13/13 Kg) Stacked Washer-Extractor/Tumble Dryer * Only available in gas and electric							
HSA030N	HSK030L	SS030E-A	SS030N-A	SSG030L	SSK030L	SST030L	UST030E
HSG030E	HSK030N	SS030F-A	SSA030N	SSG030N	SSK030N	SST030N	UST030N
HSG030N	HST030N	SS030L-A	SSG030E	SSJ030D	SST030E		

S50 (22/22 Kg) Stacked Washer-Extractor/Tumble Dryer * Only available in gas							
HSA050N	HSK050L	HST050N	SS050N-A	SSG050L	SSJ050D	SSK050N	SST050N
HSG050N	HSK050N	SS050L-A	SSA050N	SSG050N	SSK050L	SST050L	UST050N

Heater Digit (Position 6)							
E - Electric							
L - L.P. Gas							
N - Natural Gas							

Vended Control Suffixes		
Control Digit (position 7)	Actuation Digit (position 8)	Example Control Suffix Combination
V - Touch Control	C - Single Coin Drop E - Electronic Coin Drop L - Prep for Central Pay Y - Prep for Card	VC - Touch Control, Single Coin Drop VX - Touch Control, Prep for Coin

OPL Control Suffixes		
Control Digit (position 7)	Actuation Digit (position 8)	Example Control Suffix Combination
F - Dual Digital Control	N - OPL	FN- Dual Digital Control, OPL

Contact Information

If service is required, contact the nearest Factory Authorized Service Center.

If you are unable to locate an authorized service center or are unsatisfied with the service performed on your unit, contact the source from which you purchased your unit.

When calling or writing about your unit, PLEASE GIVE THE MODEL AND SERIAL NUMBERS. The model and serial numbers are located on the serial plate. The serial plate will be in the location shown in *Figure 1*.

Date Purchased _____

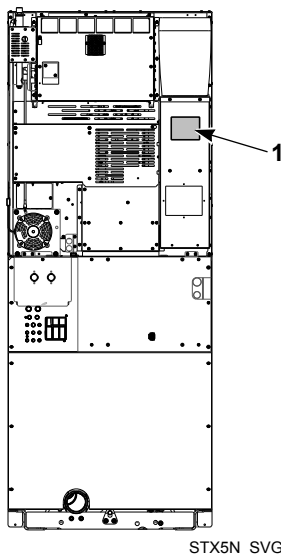
Model Number _____

Serial Number _____

Please include a copy of your bill of sale and any service receipts you have.

	WARNING
To reduce the risk of serious injury or death, DO NOT repair or replace any part of the unit or attempt any servicing unless specifically recommended in the user-maintenance instructions or in published user-repair instructions that you understand and have the skills to carry out.	
W329	

If replacement parts are required, contact the source from where you purchased your unit.



NOTE: An alternate serial plate is located on the front of the machine on the inside of the loading door hinge.

1. Serial Plate

Figure 1

Replacement Parts

If literature or replacement parts are required, contact the source from which the machine was purchased or contact Alliance Laundry Systems at +1 (920) 748-3950 for the name and address of the nearest authorized parts distributor.

Customer Service

For technical assistance, contact your local distributor or contact:
 Alliance Laundry Systems
 Shepard Street

Introduction

P.O. Box 990
Ripon, WI 54971-0990
U.S.A.
www.alliancelaundry.com
Phone: +1 (920) 748-3121 Ripon, Wisconsin

Specifications and Dimensions

Specifications and Dimensions

Refer to machine serial plate for additional specifications.

Specifications		30	50
Weights and Shipping Information			
Net Weight (approximate): Pounds [kg]		Gas 765 [347]	930 [422]
		Electric 795 [361]	
Standard Packaging Weight: Pounds [kg]		Gas 795 [361]	950 [431]
		Electric 825 [374]	
Slat Crate Packaging Weight: Pounds [kg]		Gas 925 [420]	1130 [513]
		Electric 955 [433]	
Standard Packaging Shipping Dimensions: Inch [mm]		36.5 x 48 x 84 [927 x 1219 x 2134]	36.5 x 54 x 89 [927 x 1372 x 2261]
Standard Packaging Shipping Volume: ft ³ [m ³]		71 [2.4]	102 [2.9]
Slat Crate Packaging Shipping Dimensions: Inch [mm]		41 x 51 x 91 [1041 x 1295 x 2311]	41 x 57 x 91 [1041 x 1448 x 2311]
Slat Crate Packaging Shipping Volume: ft ³ [m ³]		110 [3.1]	123 [3.5]
Noise Emissions			
Noise level measured during operation at operator position of 3.3 feet [1 meter] in front of machine and 5.2 feet [1.6 meters] from floor, dBA Washer-Extractor/ Tumble Dryer	Wash	57/60	55/63
	Extract (100G)	55/60	61.5/65
	Extract (200G)	60/62	66/67.5
TUMBLE DRYER			
Cylinder Information			
Cylinder Size: Inch [mm]		30.0 x 26.0 [762 x 660]	33.0 x 30.0 [838 x 762]

Table 1 continues...

Specifications	30	50
Cylinder Capacity (dry weight): Pounds [kg]	30 [13]	50 [22]
Cylinder Volume: feet ³ [Liter]	10.6 [300]	14.8 [420]
Operational Information		
Drive Motor: Horsepower [kW]	0.3 [0.2]	0.5 [0.4]
Fan Motor: Horsepower [kW]	0.3 [0.2]	0.5 [0.4]
Air Outlet Diameter: Inch [mm]	Elliptical 8.0 [200]	Elliptical 10.0 [250]
Maximum Airflow: C.F.M. [l/sec]	400 [188]	600 [283]
Maximum Static Back Pressure: Inch W.C. [mbar, kPa]	0.50 [1.2, 0.12]	0.50 [1.2, 0.12]
Minimum Static Back Pressure: Inch W.C. [mbar, kPa]	0.0 [0.0, 0.0]	0.0 [0.0, 0.0]
Heat dissipation of surface area exposed to conditioned air: Btu/ft ² [Joules/m ²]	60 [680,000]	60 [680,000]
Door Opening Information		
Door Opening Diameter: Inch [mm]	22.7 [576]	26.9 [684]
Door Hinge Side	Right	Right
Door Maximum Open Angle: Degrees	180	180
Gas Models		
Gas Connection	1/2 NPT	1/2 NPT
Gas Burner Rating: BTU/hr. [kW, MJ/hr.]	73,000 [21.4, 77.0]	95,000 [27.8, 100]
Electric Models		
Heating Element Rating: Kilowatts	3 Phase - 21 1 Phase - 9	Not Applicable
WASHER-EXTRACTOR		
Wash Cylinder Information		
Cylinder diameter, in. [mm]	24.0 [610]	26.3 [668]

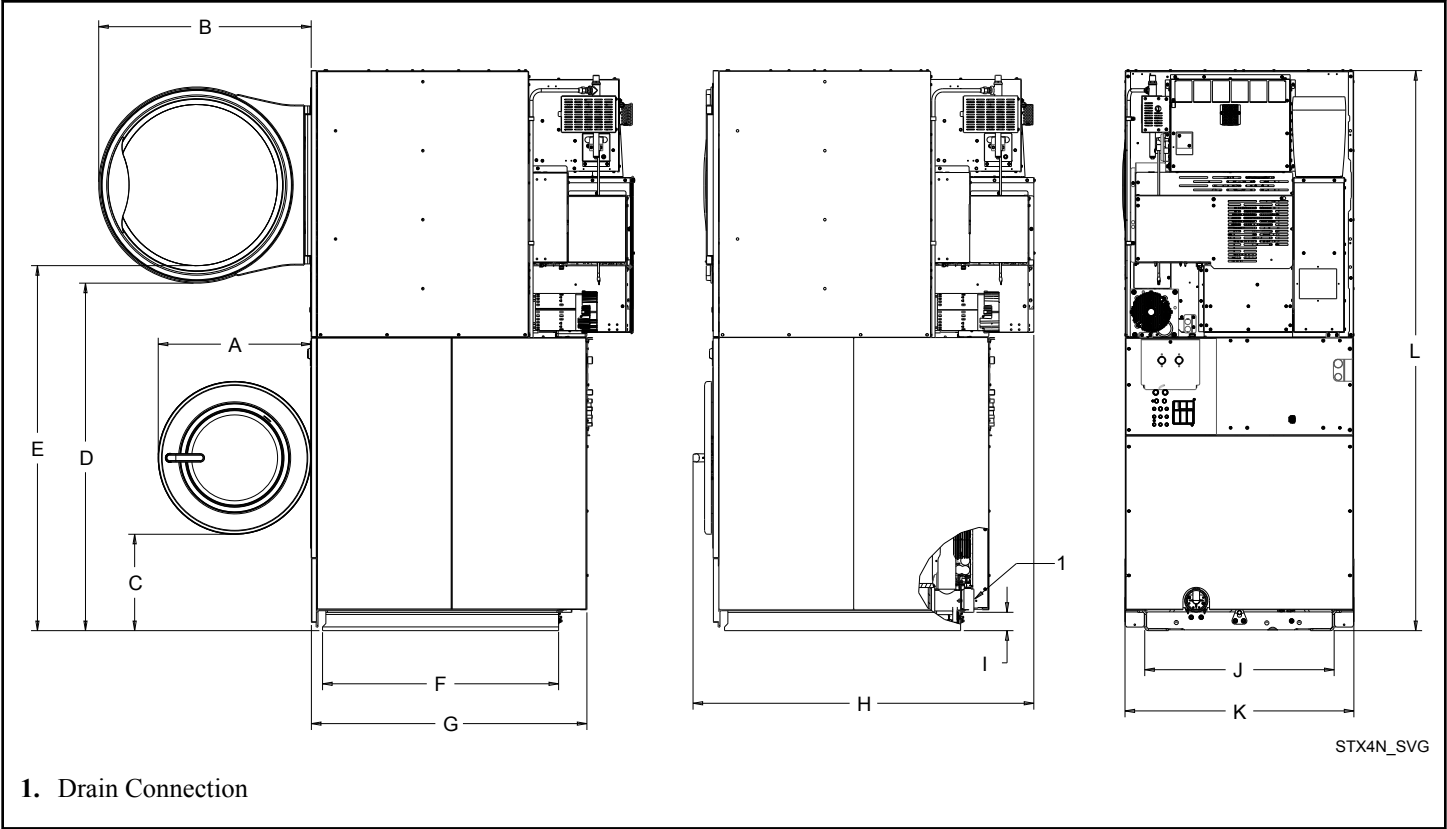
Table 1 *continues...*

Specifications	30	50
Cylinder depth, in. [mm]	16.0 [406]	20.3 [515]
Cylinder volume, ft³ [l]	4.2 [119]	6.3 [178]
Cylinder capacity, lbs. [kg]	30 [13]	50 [23]
Perforation size, in. [mm]	0.188 [4.78]	0.188 [4.78]
Perforation open area, %	18.6	18.8
Door Opening Information		
Door opening size, in. [mm]	14.3 [363]	16.3 [414]
Height of door bottom above floor, in. [mm]	14.0 [356]	14.6 [370]
Height of door opening above floor, in. [mm]	17.0 [431]	17.7 [451]
Power Consumption		
Average power used per cycle, kW-hr. (X-voltage, non-heat models)	0.12	0.16
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
Drive motor power, hp [kW]	1 [0.75]	2 [1.5]
Cylinder Speeds		
Gentle wash/reverse, RPM [G]	34 [0.4]	33 [0.4]
Wash/reverse, RPM [G]	48 [0.8]	46 [0.8]
Distribution, RPM [G]	86 [2.5]	82 [2.5]
Very low extract, RPM [G]	282 [27]	269 [27]
Low extract, RPM [G]	485 [80]	464 [80]
Medium extract, RPM [G]	542 [100]	518 [100]
High extract, RPM [G]	606 [125]	579 [125]
Very high extract, RPM [G]	664 [150]	635 [150]
Ultra high extract, RPM [G]	766 [200]	733 [200]

Table 1

NOTE: All IEC machines are shipped with an adapter to convert the gas connection threads to BSPT (from NPT).

Cabinet Dimensions

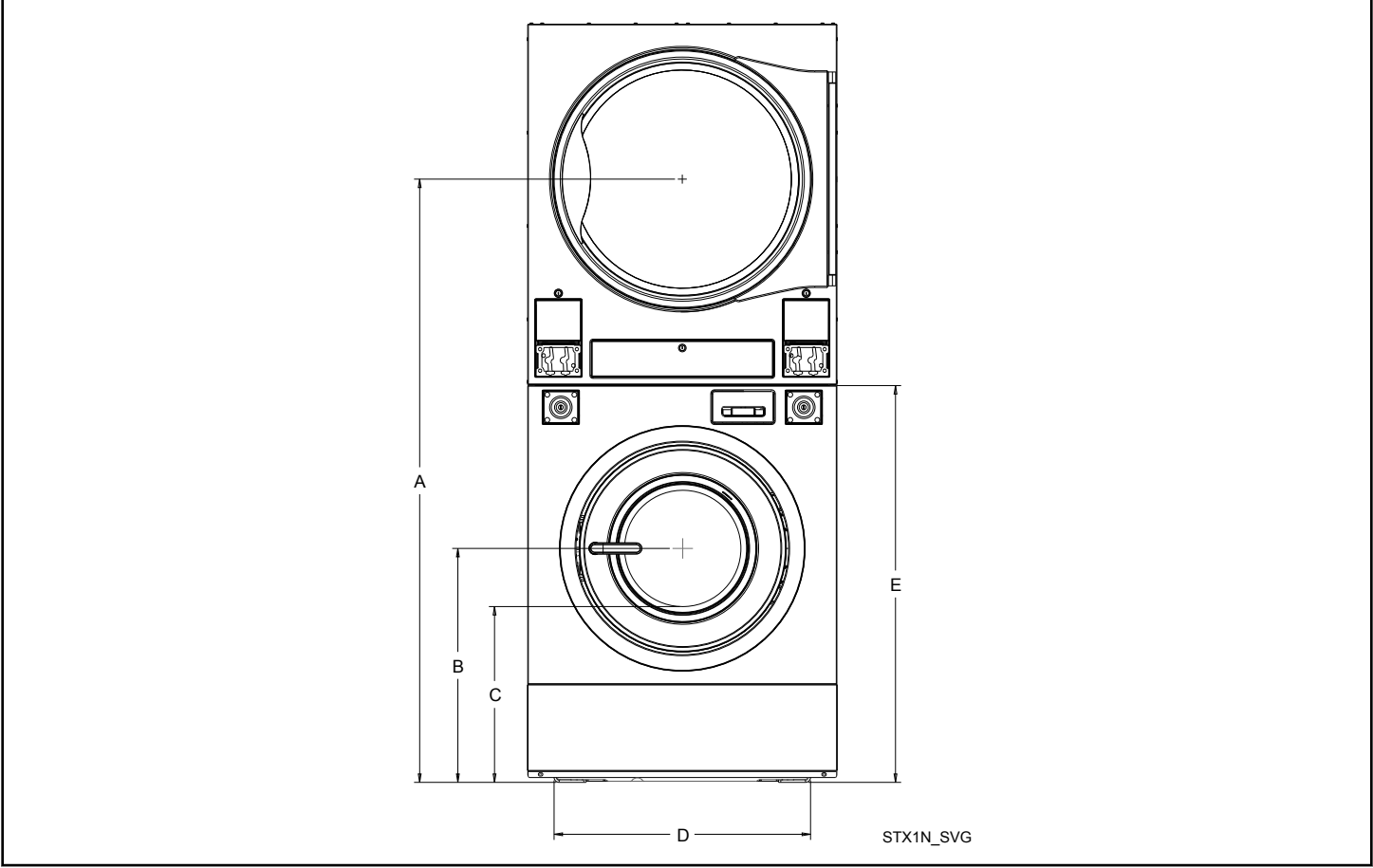


Machine Dimensions, in. [mm]						
Models	A	B	C	D	E	F
30	19.3 [489]	28.4 [720]	14.0 [355]	51.3 [1303]	54.0 [1370]	31.5 [800]
50	23.0 [585]	32.0 [812]	14.5 [368]	52.3 [1328]	54.9 [1395]	35.5 [902]

Table 2

Models	G	H	I	J	K	L
30	36.2 [920]	45.5 [1152]	2.5 [63]	23.9 [606]	31.4 [797]	79.7 [2023]
50	41.5 [1053]	51.3 [1302]	2.8 [70]	28.5 [724]	34.4 [875]	84.3 [2141]

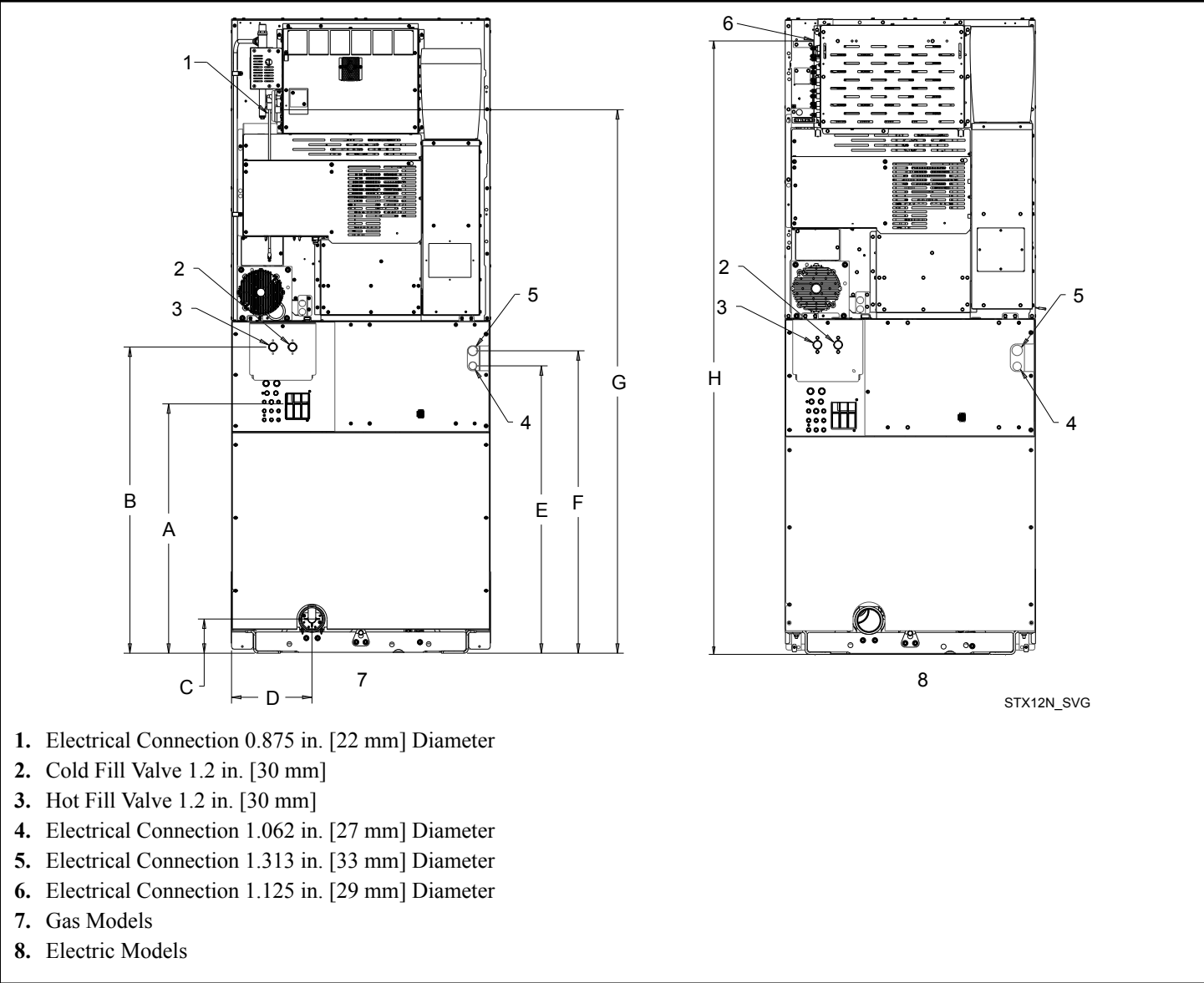
Front Machine Dimensions



Models	Machine Dimensions, in. [mm]				
	A	B	C	D	E
30	64.0 [1625]	24.0 [610]	18.2 [462]	26.4 [669]	42.0 [1068]
50	67.0 [1703]	26.0 [660]	19.5 [496]	28.5 [724]	44.1 [1120]

Table 3

Rear Machine Dimensions

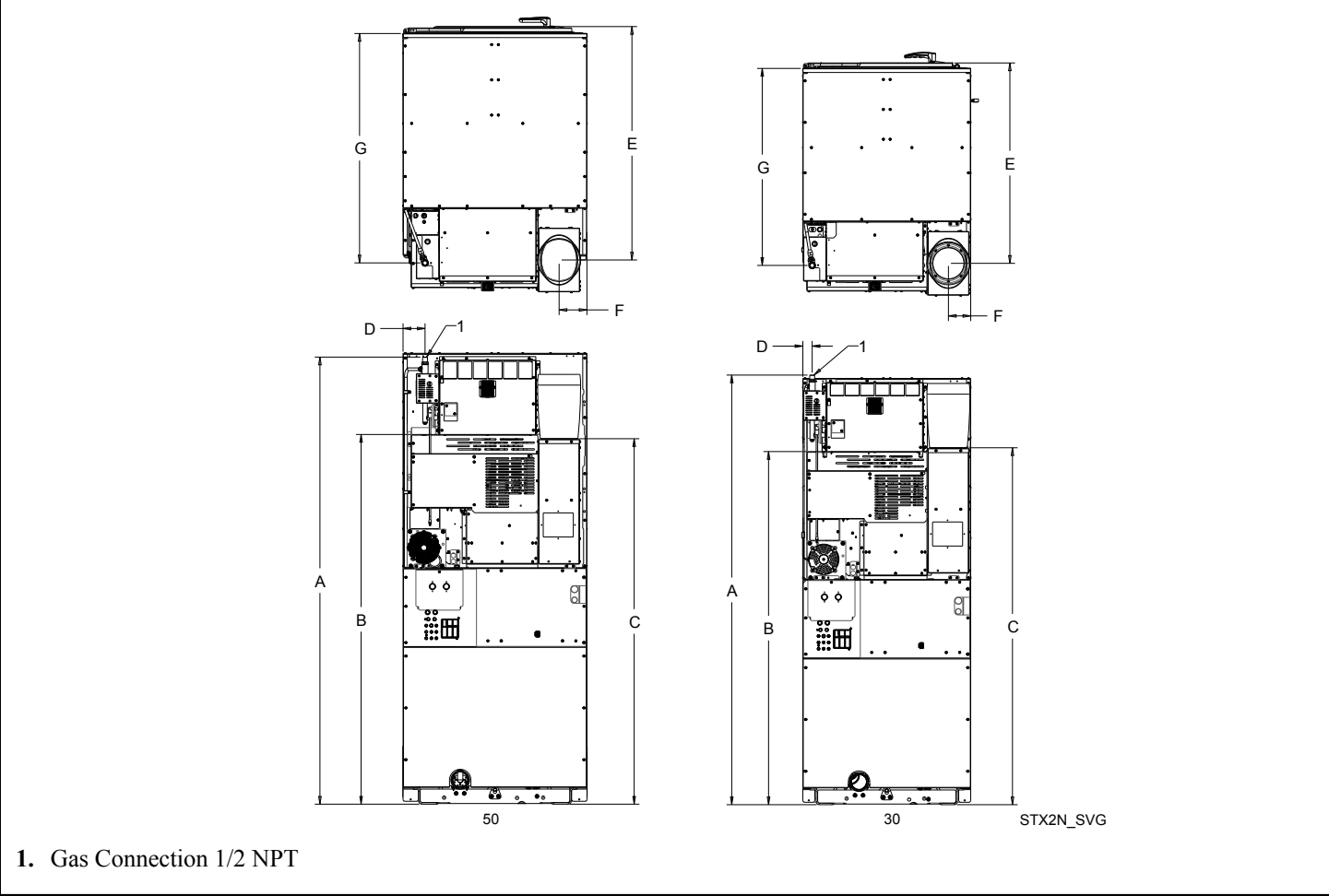


Machine Dimensions, in. [mm]				
Models	A	B	C	D
30	31.3 [794]	38.8 [986]	4.3 [108]	10.5 [267]
50	33.1 [841]	40.7 [1033]	4.5 [115]	10.7 [271]

Table 4

Models	E	F	G	H
30	36.1 [917]	38.1 [968]	69.1 [1755]	77.0 [1955]
50	38.2 [970]	40.2 [1021]	72.2 [1834]	Not Applicable

Exhaust and Gas Connection Locations



Exhaust and Gas Connection Dimensions, in. [mm]					
Models	Diameter		A	B	C
30	Gas and 3 Ph Electric Elliptical Fit 8.0 [200]	1 Ph Electric Round Fit 4.0 [100]	80.3 [2040]	66.0 [1677]	66.7 [1695]
50	Elliptical Fit 10.0 [255]		83.6 [2123]	69.1 [1755]	68.3 [1735]

Table 5

Models	D	E	F	G
30	1.7 [44]	37.5 [951]	4.2 [107]	36.8 [935]
50	4.1 [104]	43.6 [1108]	5.2 [132]	42.9 [1089]

Mounting Bolt Hole Locations

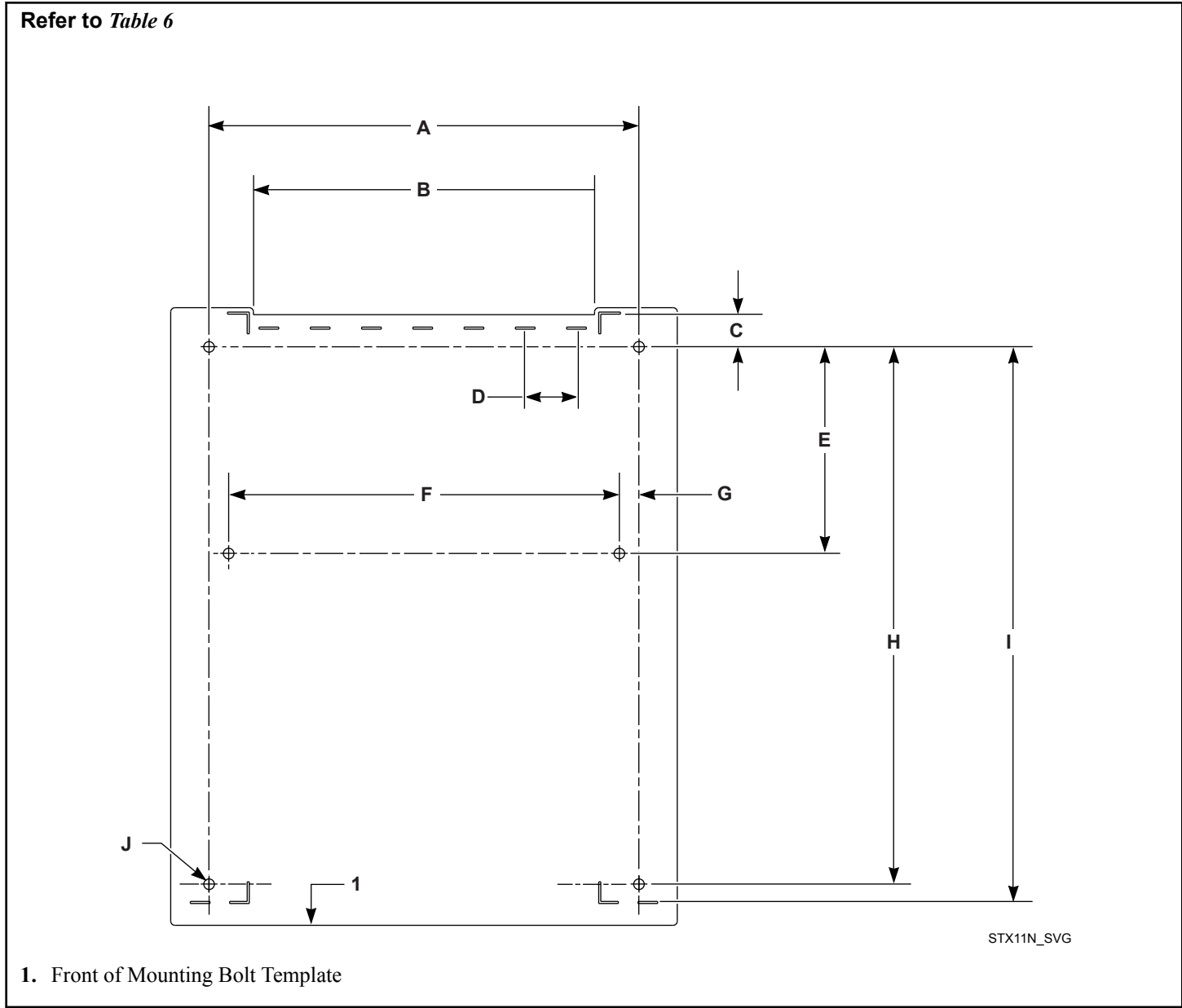


Figure 2

Mounting Bolt Hole Locations, in. [mm]		
Specification	30	50
A	23.886 [607]	26 [660]
B	18.87 [479]	20.63 [524]
C	1.81 [46]	1.98 [50]
D	2.813 [71]	3.1 [79]
E	10.5 [267]	12.5 [318]
F	23.5 [597]	23.626 [600]
G	0.188 [5]	1.187 [30]
H	28.938 [735]	32.5 [826]
I	29.69 [754]	33.54 [852]
J	0.641 [16]	0.641 [16]

Table 6

Floor Mounting Layout

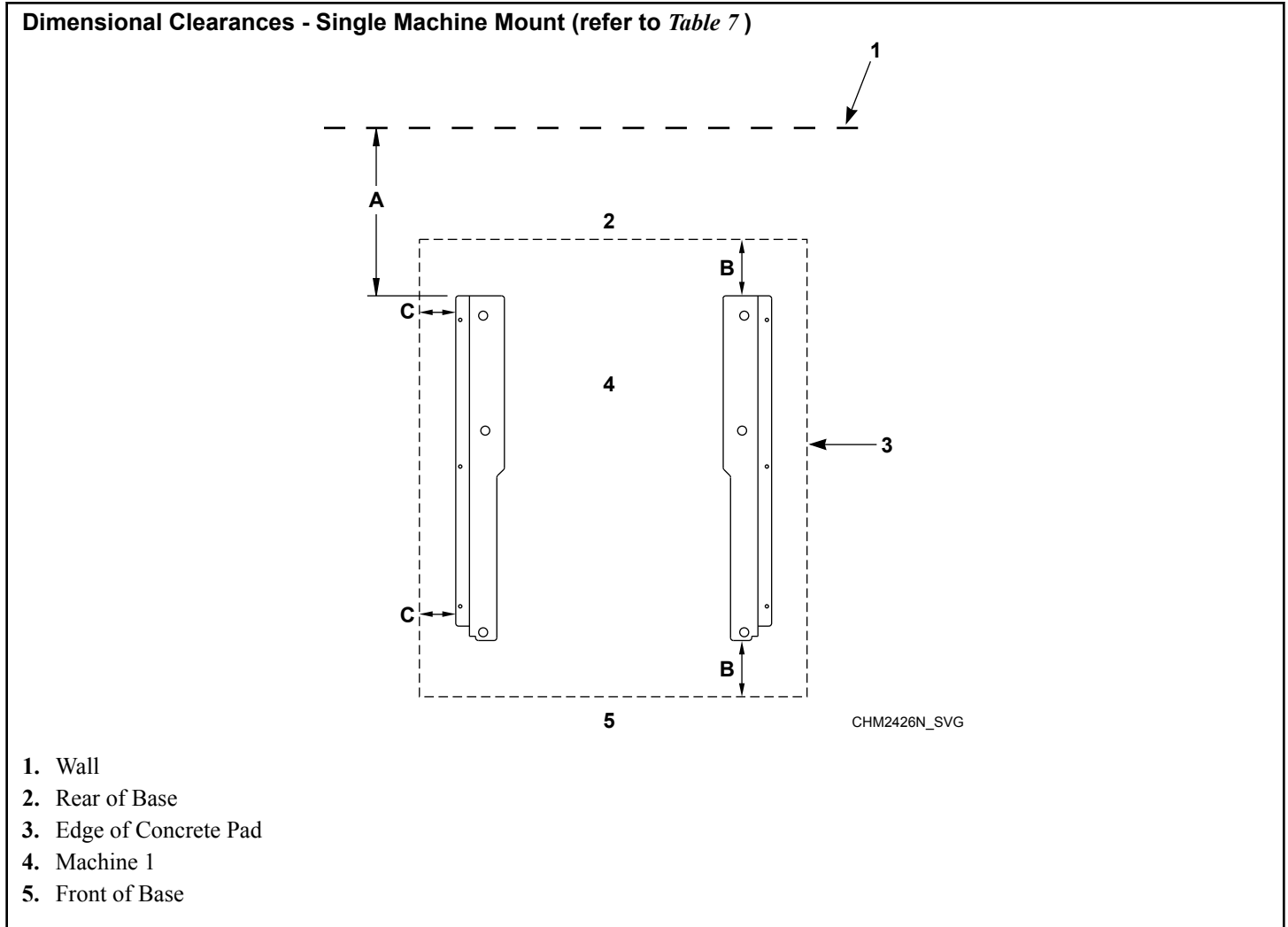


Figure 3

Dimensional Clearances - Single Machine Mount, in. [mm]			
Description		30	50
A	Distance to wall (minimum)	34.5 [876]	34.5 [876]
B	Distance of machine base to edge of pad (minimum)	4 [102]	3.99 [101]
C	Distance of machine base to edge of pad (minimum)	1.27 [32]	0.95 [24]

Table 7

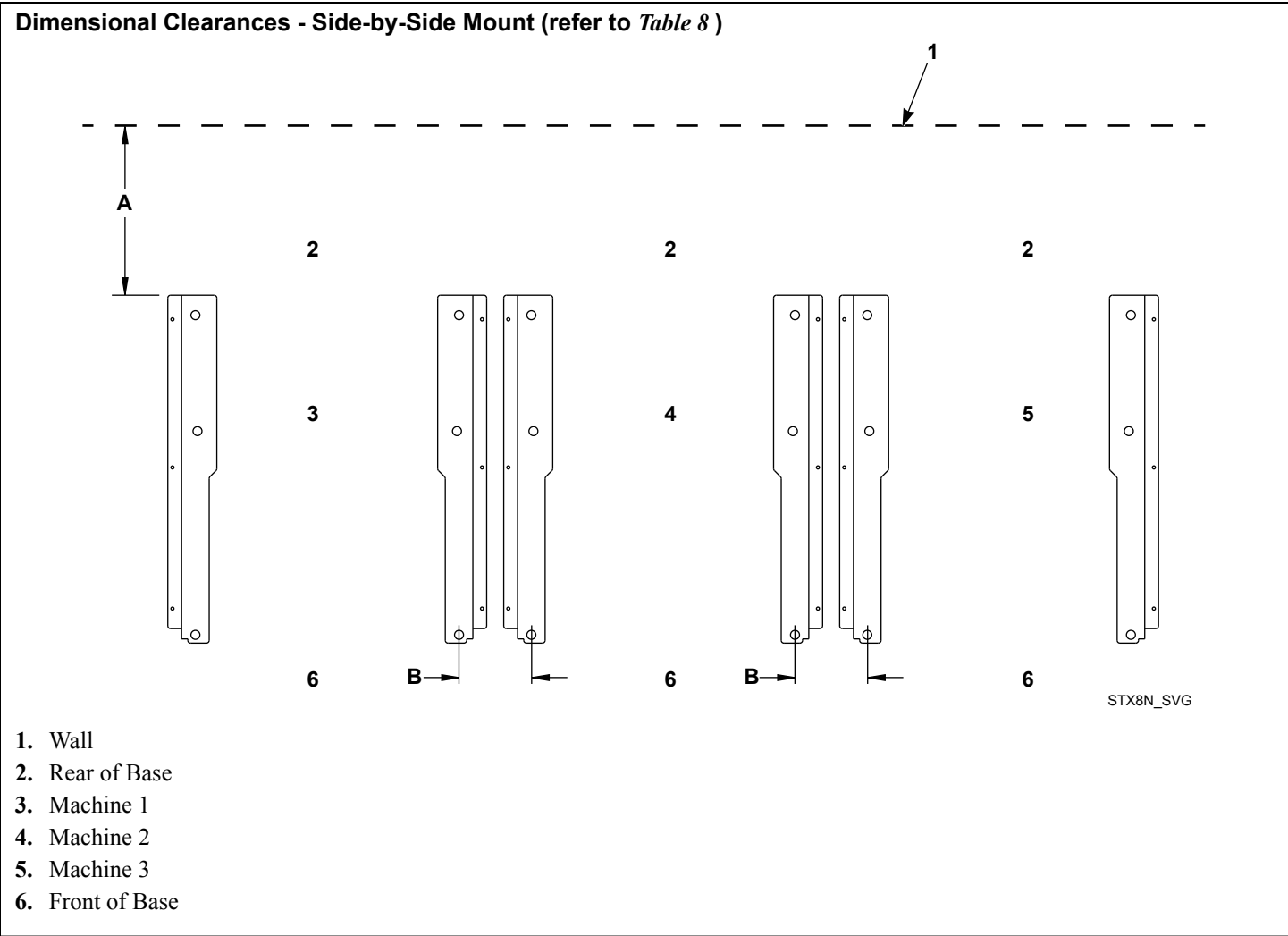


Figure 4

Dimensional Clearances - Side-by-Side Mount, in. [mm]			
Description		30	50
A	Distance to wall (minimum)	36.4 [925]	37.2 [945]
B	Mounted without bases (minimum)	7.55 [192]	8.35 [212]

Table 8

Installation

Pre-Installation Inspection

Upon delivery, visually inspect the crate, carton and parts for any visible shipping damage. If the crate, carton, or cover is damaged or 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.

Remove the crate and protective cover as soon as possible and check the items listed on the packing list. Advise the carrier of any damaged or missing articles as soon as possible. A written claim should be filed with the carrier immediately if articles are damaged or missing.

IMPORTANT: Remove the yellow shipping wire tie securing the airflow switch.

IMPORTANT: Warranty is void unless machine is installed according to instructions in this manual. Installation should comply with minimum specifications and requirements detailed in this manual and applicable local gas fitting regulations, municipal building codes, water supply regulations, electrical wiring regulations, and any other relevant statutory regulations. Due to varied requirements, applicable local codes should be thoroughly understood and all pre-installation work arranged for accordingly.

Materials Required (Obtain Locally)	
All Models	Fused disconnect switch or circuit breaker on 1 Phase models. Circuit breaker on 3 Phase models.
Gas Models	One gas shut-off valve for gas service line to each tumble dryer.

IMPORTANT: 3 Phase Only – Each machine must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of “single phasing” and causing premature failure of the motor(s).

Location Requirements

The machine must be installed on a level floor. Floor covering materials such as carpeting or tile should be removed.

To assure compliance, consult local building code requirements. The machine must not be installed or stored in area where it will be exposed to water and/or weather.

IMPORTANT: DO NOT block the airflow at the rear of the machine with laundry or other articles. Doing so would prevent adequate air supply to the combustion chamber of the machine.

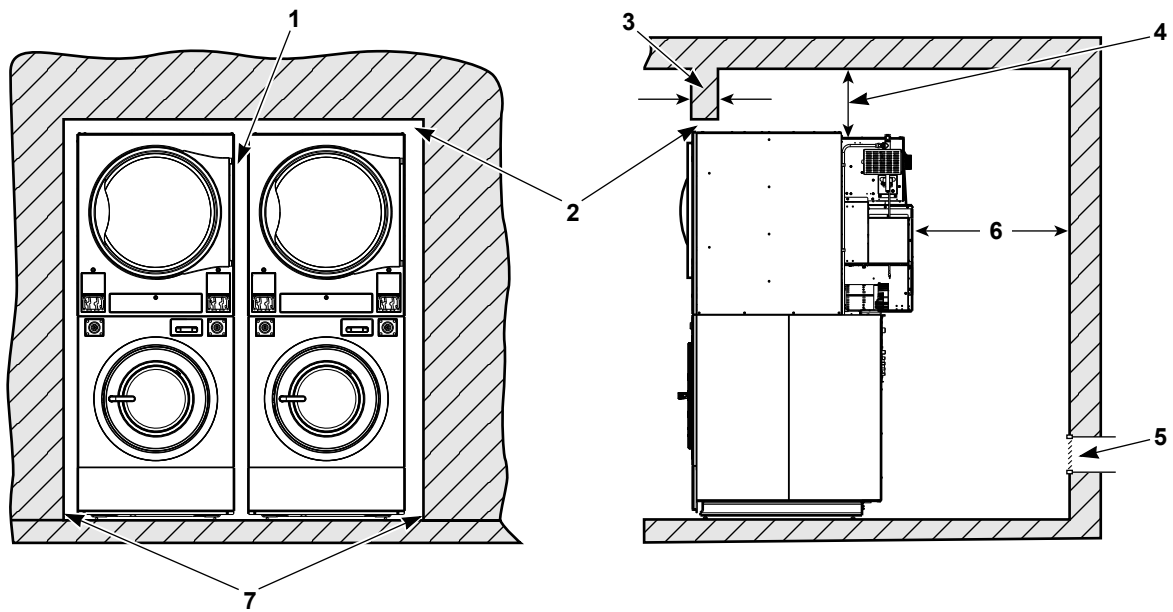
A typical machine enclosure is shown in *Figure 5*.

IMPORTANT: Install machines with sufficient clearance for servicing and operation, refer to *Figure 5*.

IMPORTANT: The machine must not be installed behind a lockable door, a sliding door or a door with a hinge on the opposite side to that of the machine, in such a way that a full opening of the machine door is restricted.

	WARNING
To reduce the risk of severe injury, clearance of tumble dryer cabinet from combustible construction must conform to the minimum clearances, and/or local codes and ordinances.	
W770R1	

If rear of machine or water supply is located in an area where it will be exposed to cold/freezing temperatures, provisions must be made to protect these water lines from freezing.



TMB2694N_SVG

NOTE: Shaded areas indicate adjacent structure.

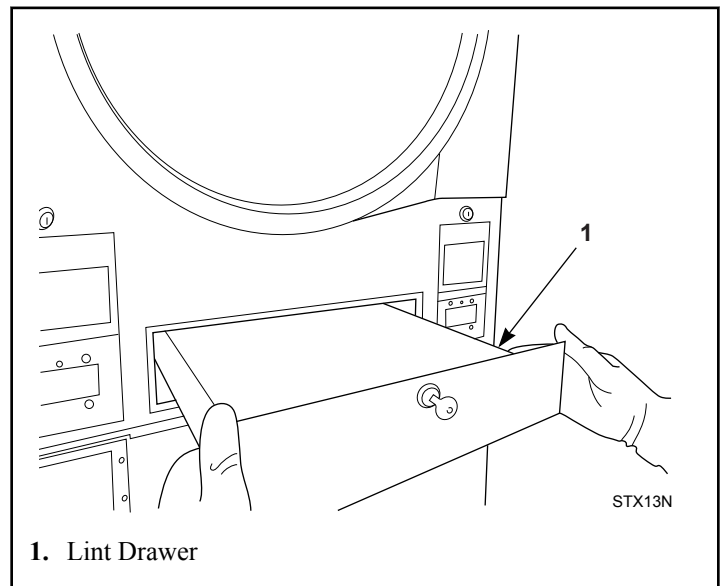
1. 0.0 in. [0 mm] minimum, 0.5 in. [13 mm] recommended between machines for removal or installation
2. Allow 2-4 in. [51-100 mm] opening at top of machine to aid in removal or installation. A removable trim piece may be used to conceal the opening; zero clearance allowed for trim.
3. 4 in. [100 mm] maximum header thickness
4. Minimum clearance permitted for remainder: 12 in. [300 mm]
5. Provision for make-up air
6. 24 in. [610 mm] minimum, 36 in. [910 mm] recommended for maintenance purposes
7. 0.0 in. [0 mm] minimum, 0.25 in. [6 mm] recommended for removal or installation purposes

Figure 5

Removing Dryer

Use the following steps if the installation requires removal of the dryer. Four people are required to perform this task. The entire machine is top heavy and extreme care must be taken when removing the dryer portion of the machine. The top portion of S30 models weighs 285 lbs. [129 kg] and S50 models weigh 335 lbs. [152 kg].

1. Remove lint drawer. Refer to *Figure 6*.



1. Lint Drawer

Figure 6

2. Locate two T-20 torx screws in the lint compartment and remove using a T20 bit and ratchet. Refer to *Figure 7*.

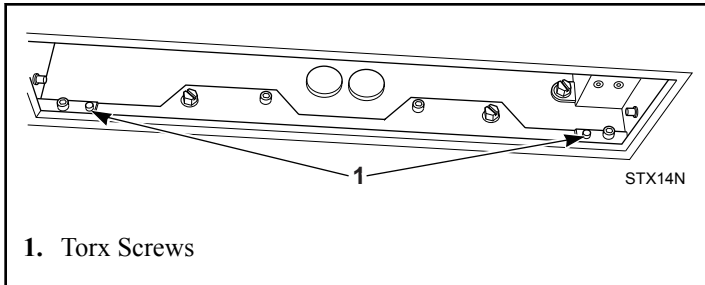


Figure 7

3. Locate two L-brackets on back of unit, one on each side. Remove two screws attaching the bracket to the dryer. Leave the L-bracket mounted to the washer. Refer to *Figure 8*.

NOTE: Use a 5/16" socket and a driver with a long extension to remove the screws from the L-bracket mounted under the motor (as shown below).

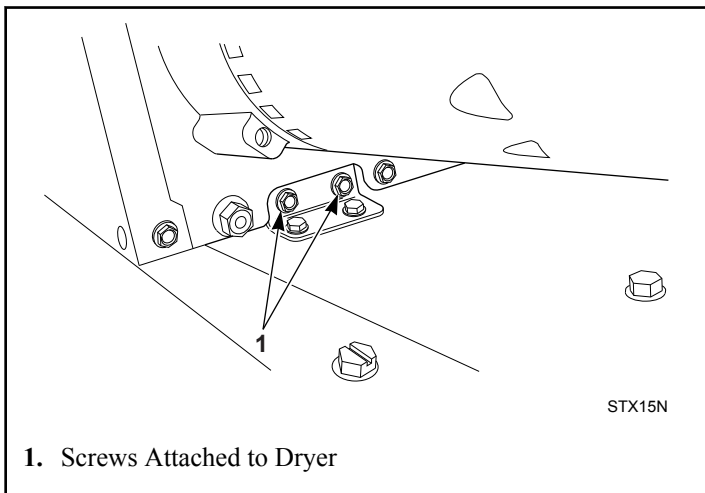


Figure 8

4. Detach valve panel from rear panel by removing screw. Refer to *Figure 9*.



Figure 9

5. Lift bottom tab of valve panel out of rear panel opening. Refer to *Figure 10*.

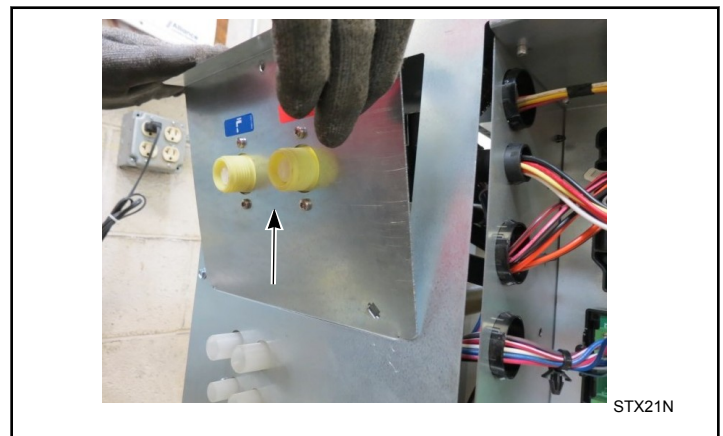


Figure 10

6. Remove four screws attaching fill valve to valve panel. Refer to *Figure 11*.

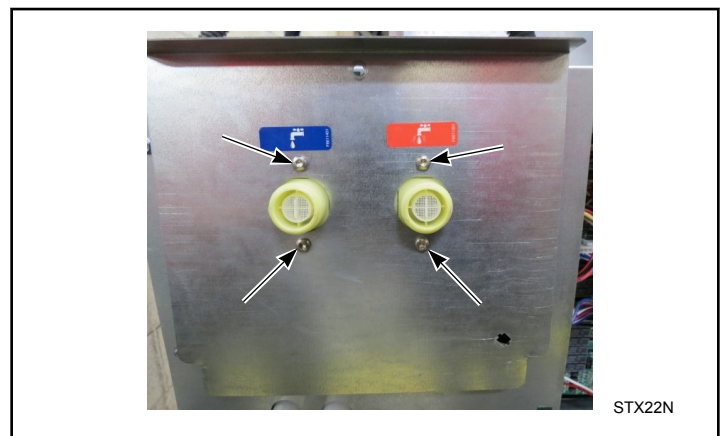


Figure 11

7. If possible, leave the harness bundled and secured with the wire tie. If you have trouble with Step 8, you may need to cut the tie and give slack to the harness. Refer to *Figure 12*.

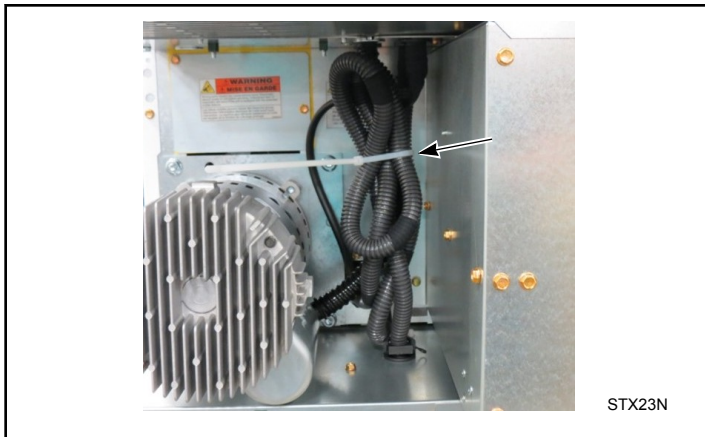


Figure 12

8. Pull harness retaining clip out of strain relief. Refer to *Figure 13* and *Figure 14*.

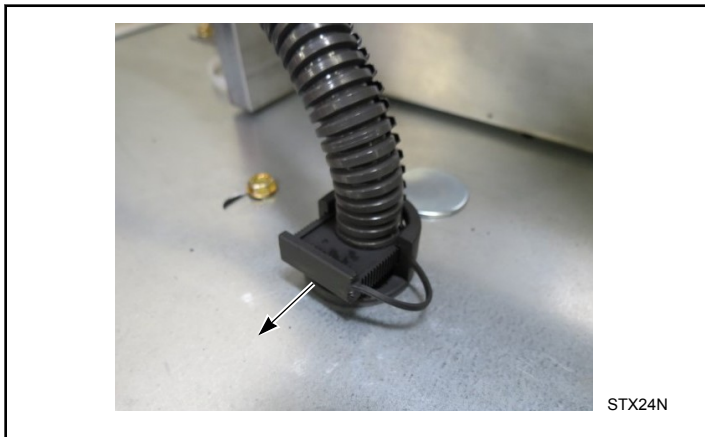


Figure 13



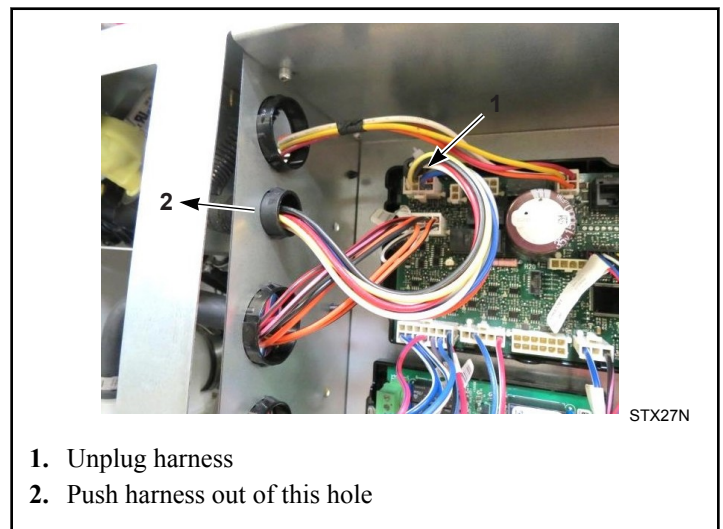
Figure 14

9. Work strain relief out of oblong hole in top rear center pan. Set aside for reinstallation later. Refer to *Figure 15*.



Figure 15

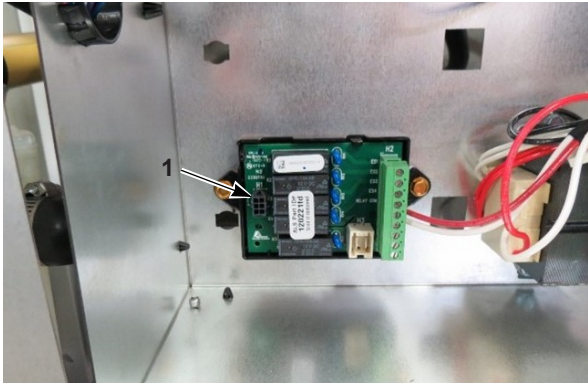
10. Unplug harness from board where shown. Push in retaining tabs of harness connector and push connector out of hole in control box. Refer to *Figure 16*.



1. Unplug harness
2. Push harness out of this hole

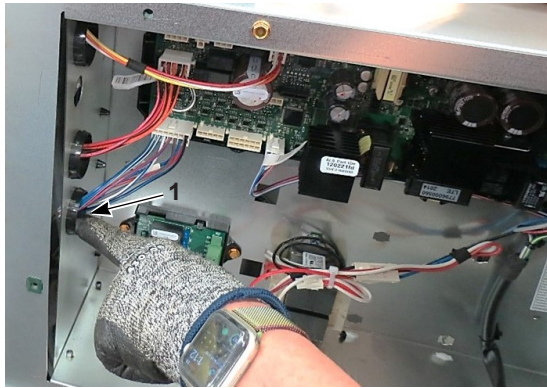
Figure 16

11. THIS STEP FOR OPL MACHINES ONLY: Unplug harness from board where shown in *Figure 17*. Push harness out of hole in control box. Refer to *Figure 18*.



1. Unplug harness here

Figure 17



1. Push harness through here

Figure 18

12. Feed one or two tumble dryer harnesses out of side of control box. Refer to *Figure 19*.

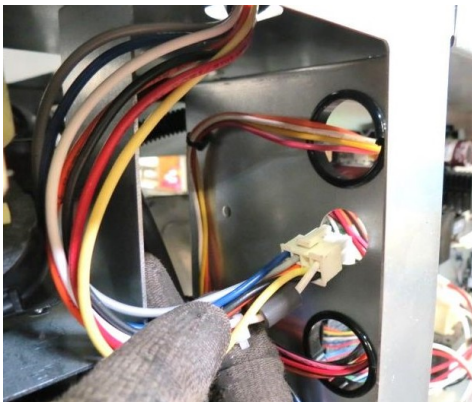


Figure 19

13. Feed one or two tumble dryer harnesses up and out through holes in rear pan. Refer to *Figure 20*.

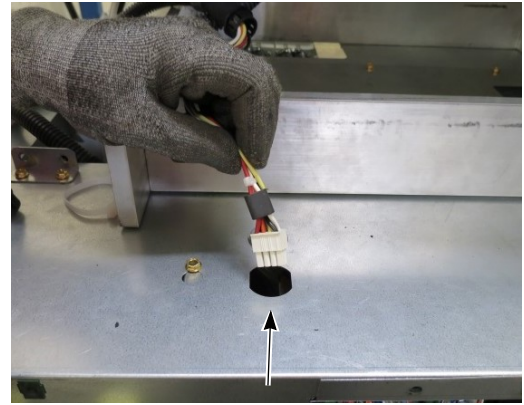
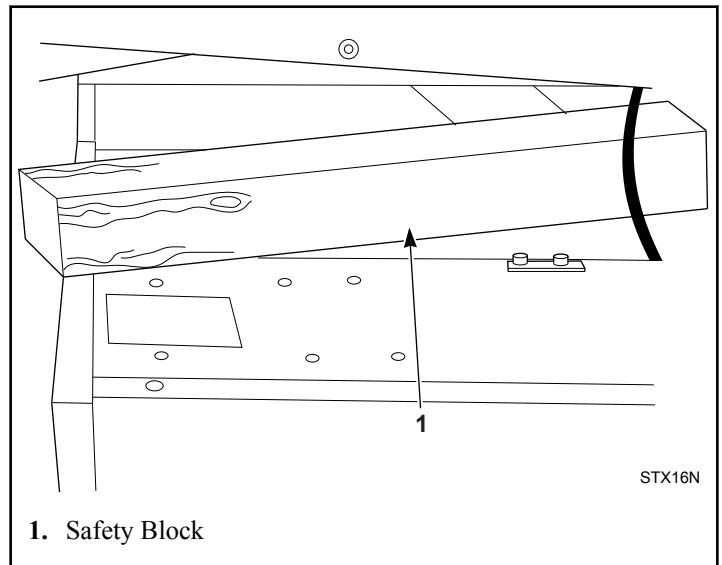


Figure 20

14. Carefully separate the dryer from the washer by lifting the dryer a few inches. Place two safety blocks (such as 4x4 blocks of wood) between the washer and dryer to brace the machine. Refer to *Figure 21*.

IMPORTANT: Dryer is back heavy. Use care when lifting.

NOTE: Make sure pressure hose and wire harnesses are clear of safety blocks.



1. Safety Block

Figure 21

15. Disconnect pressure hose and quick disconnects on wire harness. Refer to *Figure 22*.

NOTE: Secure pressure hose and wire harness so they do not fall inside machine.

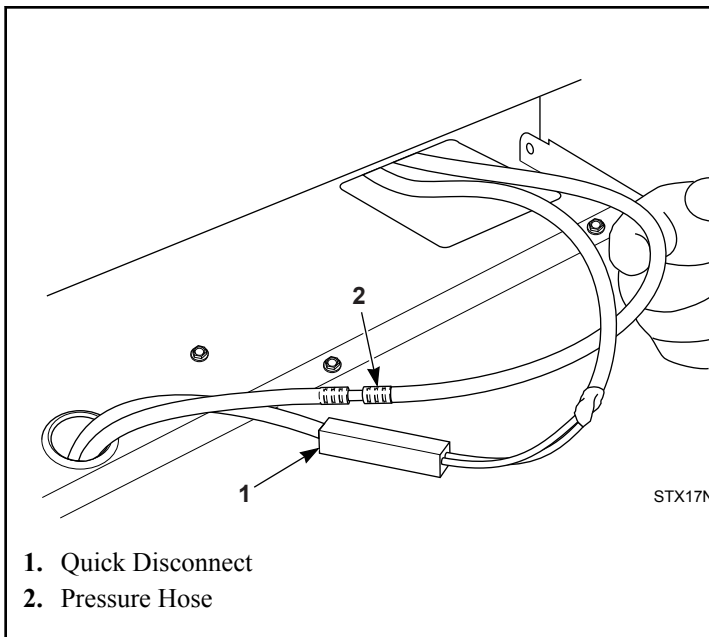


Figure 22

16. Support all four corners of the dryer. Lift and set dryer on a level surface. Refer to *Figure 23*.

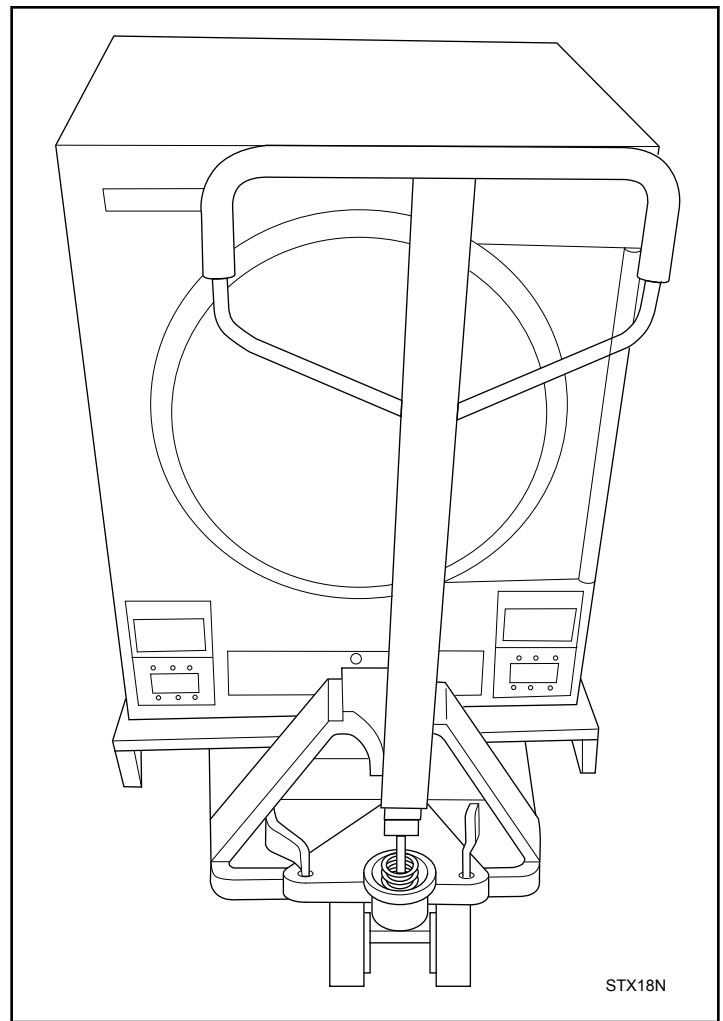


Figure 23

17. Move washer and dryer into place.

18. For reassembly:

- a. Place safety blocks on the washer and place dryer back on top of the washer.
- b. Connect pressure hose and quick disconnect on harness.
- c. Support dryer and remove safety blocks. Carefully position dryer back on washer, making sure pressure house and harnesses are not pinched.
- d. Reroute and connect all harnesses that were disconnected.
- e. Reattach fill valve to valve panel and reattach valve panel onto back of machine.
- f. Reinstall all hardware: two L-brackets at rear of machine and two screws in lint compartment.

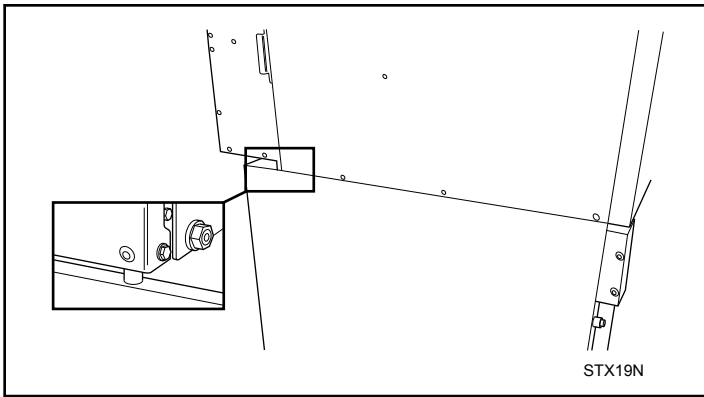


Figure 24

For new foundations a mounting bolt template is available at extra cost. For all installations a concrete hardware kit is available at extra cost.

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

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

Machine Installation on Existing Floor

The existing floor slab must be reinforced concrete without voids under slab and meet depth requirements per *Table 9*. If the floor meets these requirements, refer to *Figure 25* and proceed to *Machine Mounting and Grouting*.

If the floor does not meet these requirements, refer to *Figure 26* and proceed to *Machine Mounting and Grouting*.

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.

Single Machine Foundation Requirements

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

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

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

Foundation Requirements

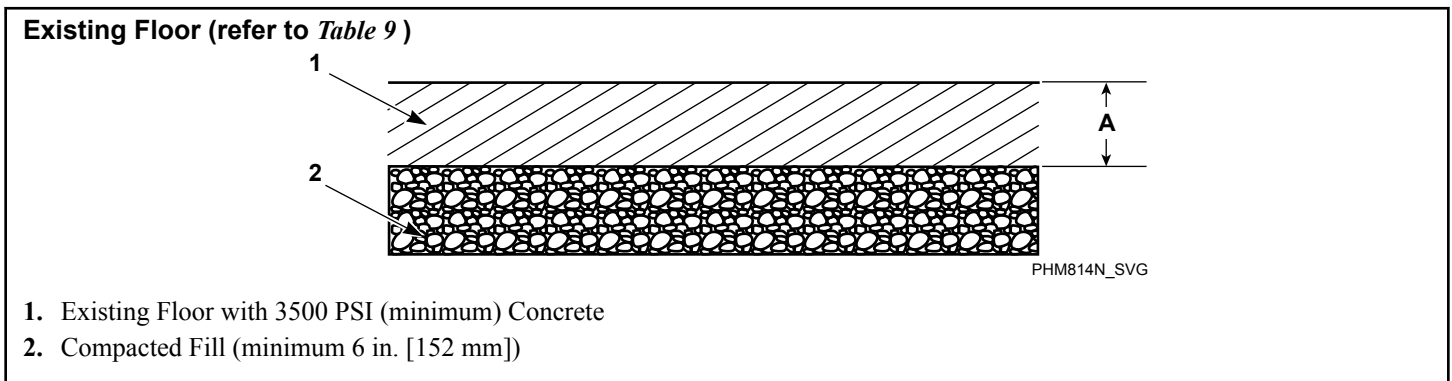


Figure 25

Existing Floor, in. [mm]		
Description		
	30	50
A	Required thickness of existing floor (minimum)	V-speed 6 [152]
		F-speed 4 [102]

Table 9

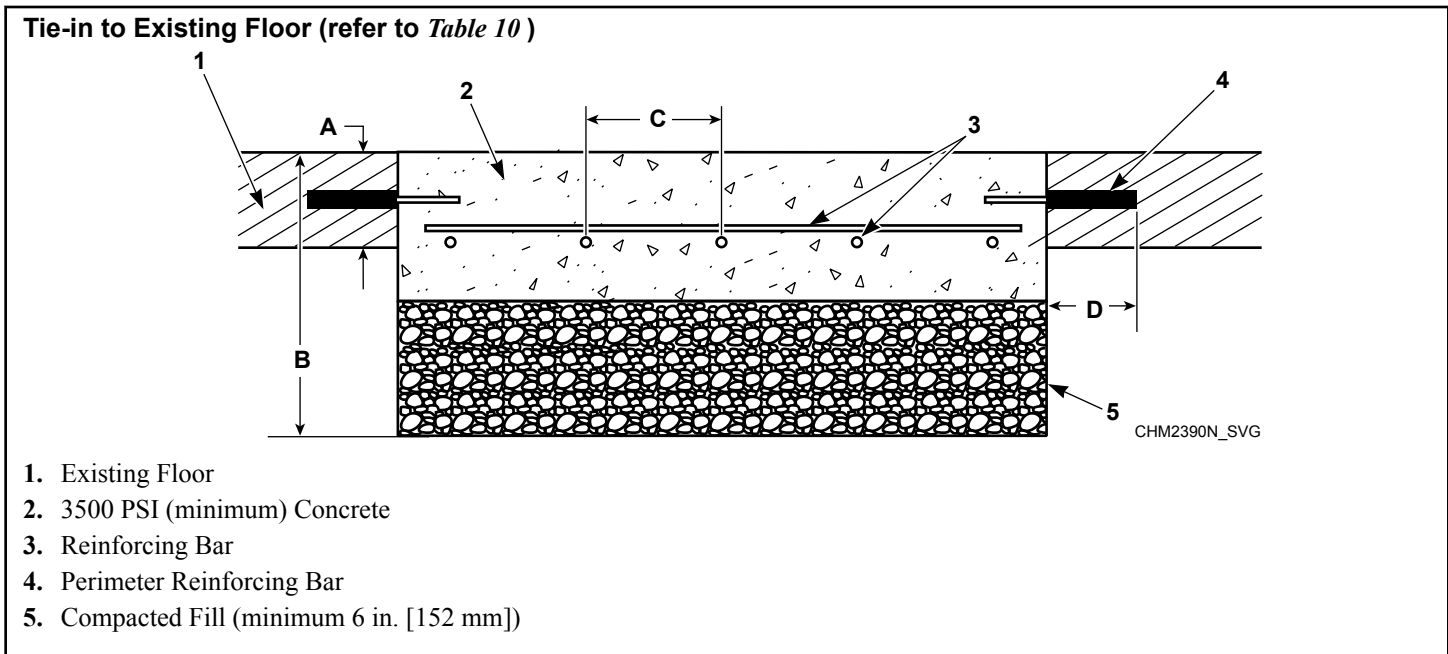


Figure 26

Tie-in to Existing Floor, in. [mm]		
Description		
	30	50
A	Required thickness of existing floor (minimum)	V-speed 6 [152]
		F-speed 4 [102]
B	Total depth of foundation (concrete plus 6 in. [152 mm] fill)(minimum)	V-speed 12 [305] F-speed 10 [254]
C	Distance between reinforcing bars (minimum)	12 [305]
D	Length of reinforcing bar extending into existing floor (minimum)	2.5 [64]

Table 10

Machine Mounting and Grouting

NOTE: After the concrete has cured completely and the cast-in-place method was used, refer to *Figure 28* and proceed to Step 7. If acrylic adhesive anchors are desired, refer to *Figure 27* and proceed with Step 1 after concrete has cured completely.

1. Refer to *Table 11* 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 11*.
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 carefully over the bolts.

Attention: Installation must be done by at least two people to avoid damage to property or personal injury.

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.

9. Raise and level the machine 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 20 degrees in any direction.	
W1062	

10. Completely fill the space between the 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 to anchor bolts.

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

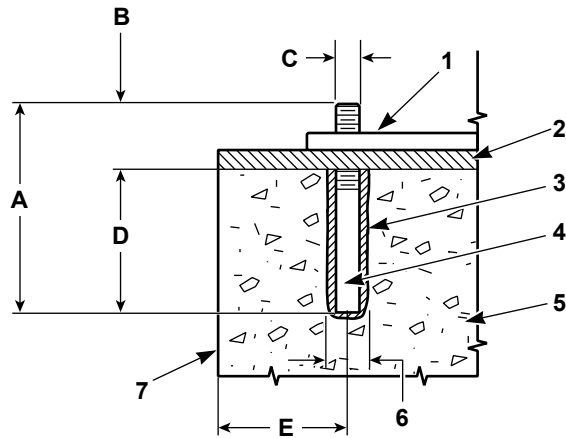
IMPORTANT: Refer to bolt manufacturer's recommended adhesive cure times.

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

NOTE: If installing directly to finished floor, wait until grout is completely cured.

14. 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 floor.

Acrylic Adhesive Anchors (refer to *Table 11*)

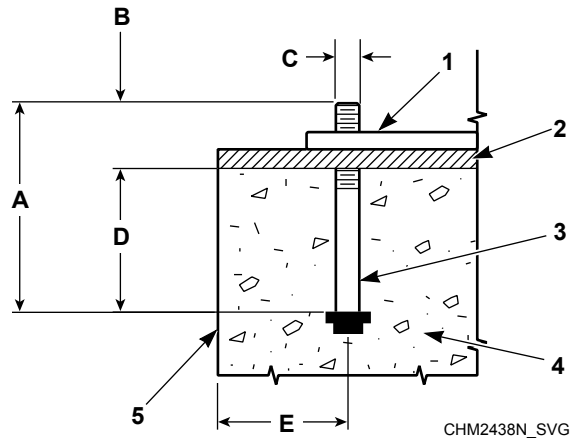


NOTE: *Available for purchase through the distributor. If not purchasing from a distributor, procure acrylic adhesive rated for commercial-grade vibratory machine installations.

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

Figure 27

Cast-in-place Anchors (refer to *Table 11*)



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

Figure 28

Minimum Anchoring Specifications, in. [mm]		
Description		30
		50
Number of Bolts		4 or 6*
A	Bolt Length	6 [152]
B	Thread Extension	2-1/2 [64]
C	Bolt Diameter	5/8 [16]
D	Embedment Depth	3-1/2 [89]
E	Distance from Bolt Center to Edge of Concrete Pad	6.19 [157]
* The four (4) corner bolts are required and the two (2) center bolts are optional for 30 models when mounting a machine to floor.		

Table 11

Floor Load Data		
Specification	30	50
Static floor load, lbs. [kg]	965 [438]	1210 [549]
Static pressure, lbs.-ft ² [kPa]	175 [8.38]	180 [8.62]
Dynamic floor load, lbs. [kg]	630 [286]	840 [381]
Dynamic floor pressure, lbs.-ft ² [kPa]	109 [5.22]	119 [5.70]
Dynamic load frequency, Hz	V-speed 12.8 F-speed 9.0	V-speed 12.2 F-speed 8.6
Maximum moment about machine base, lbs.-ft. [N-m]	1260 [1708]	1820 [2475]
Maximum vertical load, lbs. [kg]	1130 [513]	1460 [662]

Table 12

Drain Connection Requirements

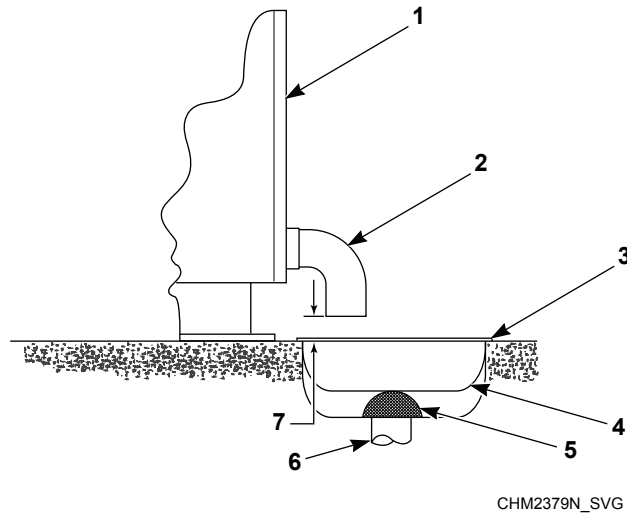
IMPORTANT: Machine must be installed in accordance with all local codes and ordinances.

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.

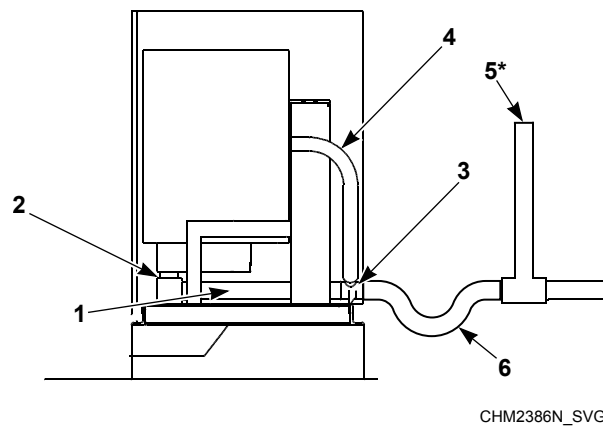
Drain Trough System



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 29

Direct Drain System



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

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

Figure 30

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	30	50
Drain connection size, in.	3*	3*
Overflow drain connection size, in.	2-1/4	2-1/4
Number of drain outlets	1	1
Drain flow capacity, gal/min [l/min]	30 [114]	40 [151]
Maximum discharge (level 30), gal [l]	23.9 [90]	27.4 [104]
Recommended drain pit size, ft ³ [l]	2.5 [71]	3.5 [128]
* Also works with 3 inch OD PVC pipe if connected to inside of drain tee connector.		

Table 13

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

Connections should be supplied by a hot and a cold water line of at least the sizes shown in *Water Supply Line Sizing*. 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 3500.1.

Water Supply Information	
Specification	Requirement
Water inlet connection size, in.	3/4
Thread pitch, GHT [BSPP]	3/4 x 11-1/2 [3/4 x 14]

Table 14 continues...

Water Supply Information	
Specification	Requirement
Number of water inlets	2
Recommended pressure, psi [kPa]	30-85 [200-570]
Maximum inlet flow capacity per machine, gal/min at 85 psi [l/min at 1232 Pa]	10.5 [40]
Extra water inlet flow, gal/min at 85 psi [l/min at 1232 Pa]	5.2 [20]

Table 14

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 15

Suitable air cushions (risers) should be installed in supply lines to prevent “hammering.” Refer to *Figure 31*.

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

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

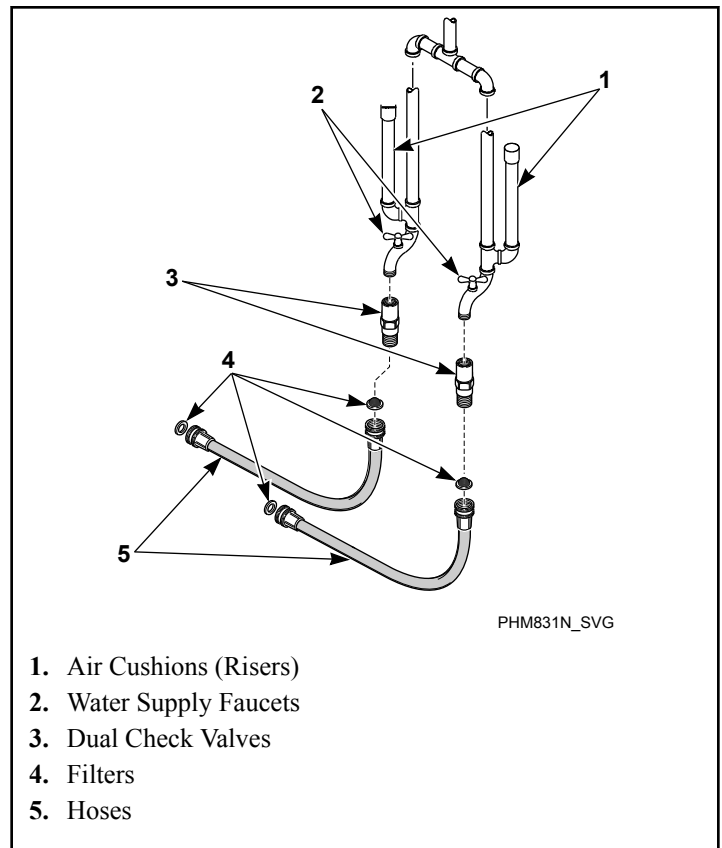


Figure 31

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 31*.

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



Figure 32



Figure 33

Connect Inlet Hoses

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

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

1. Before installing hoses, flush the building's water system at the machine connection valves for at least two (2) minutes.
2. Remove the two (2) plain rubber washers and two (2) filter screens from the accessories bag supplied with the machine.
3. Install one (1) plain rubber washer onto one end and one (1) filter screen into the other end of each fill hose. The screens must be facing outward toward the water supply. Refer to *Figure 34*.
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.
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: DO NOT cross thread or overtighten couplings. This will cause them to leak.

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

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

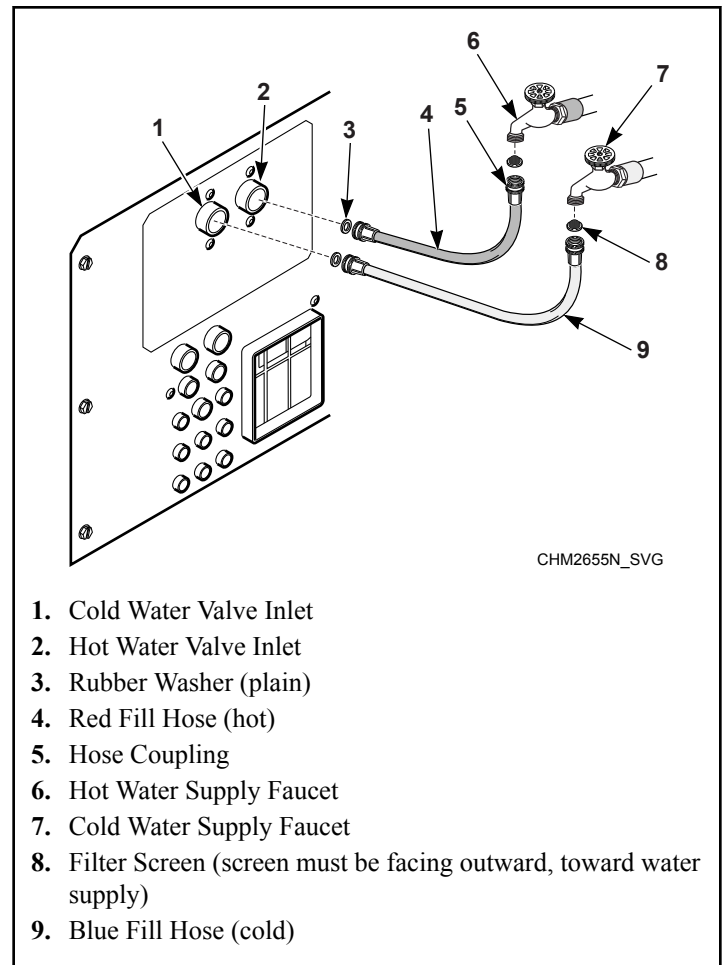


Figure 34

Plumbing Diagrams

Side View (refer to *Table 16*)

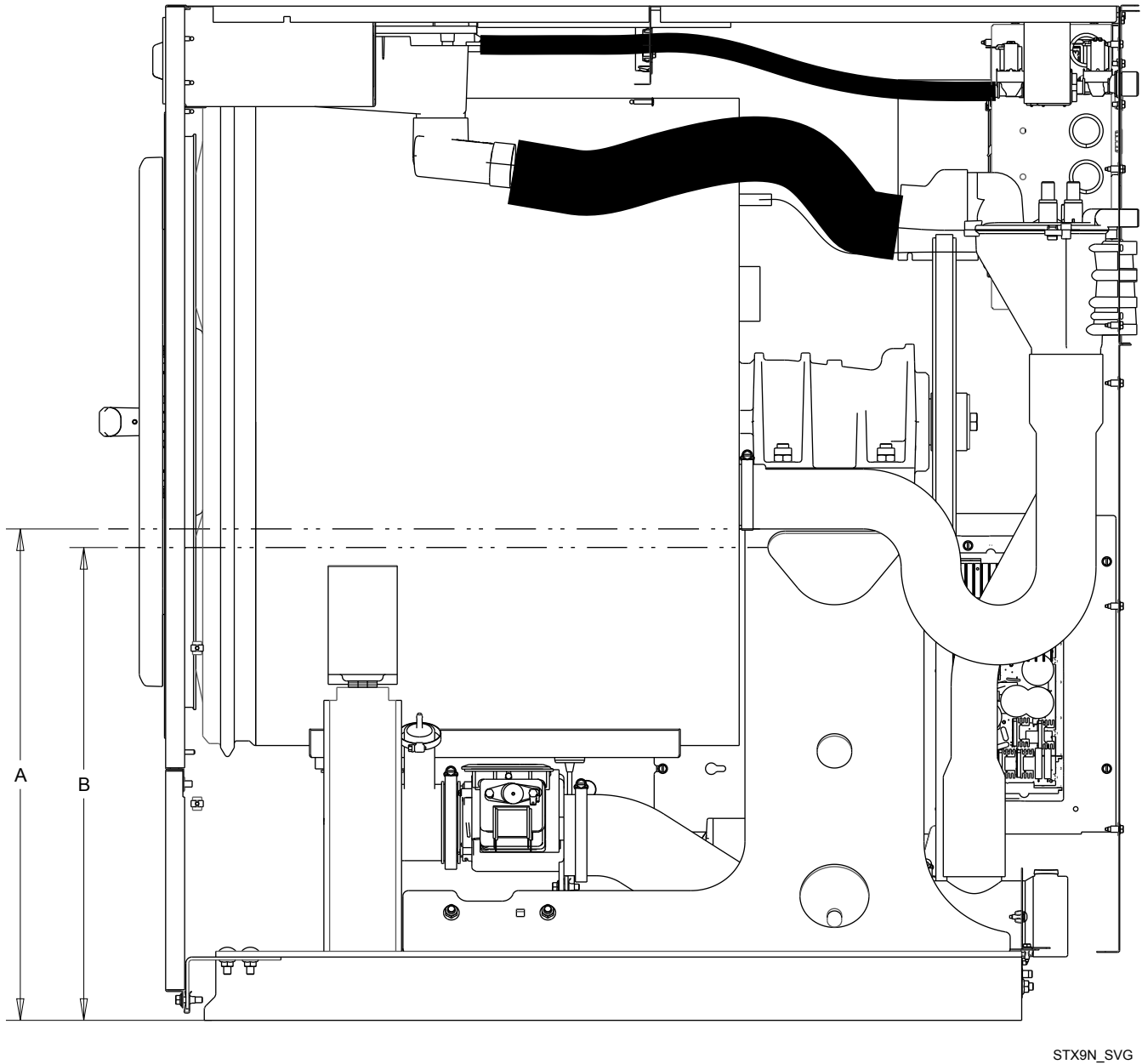
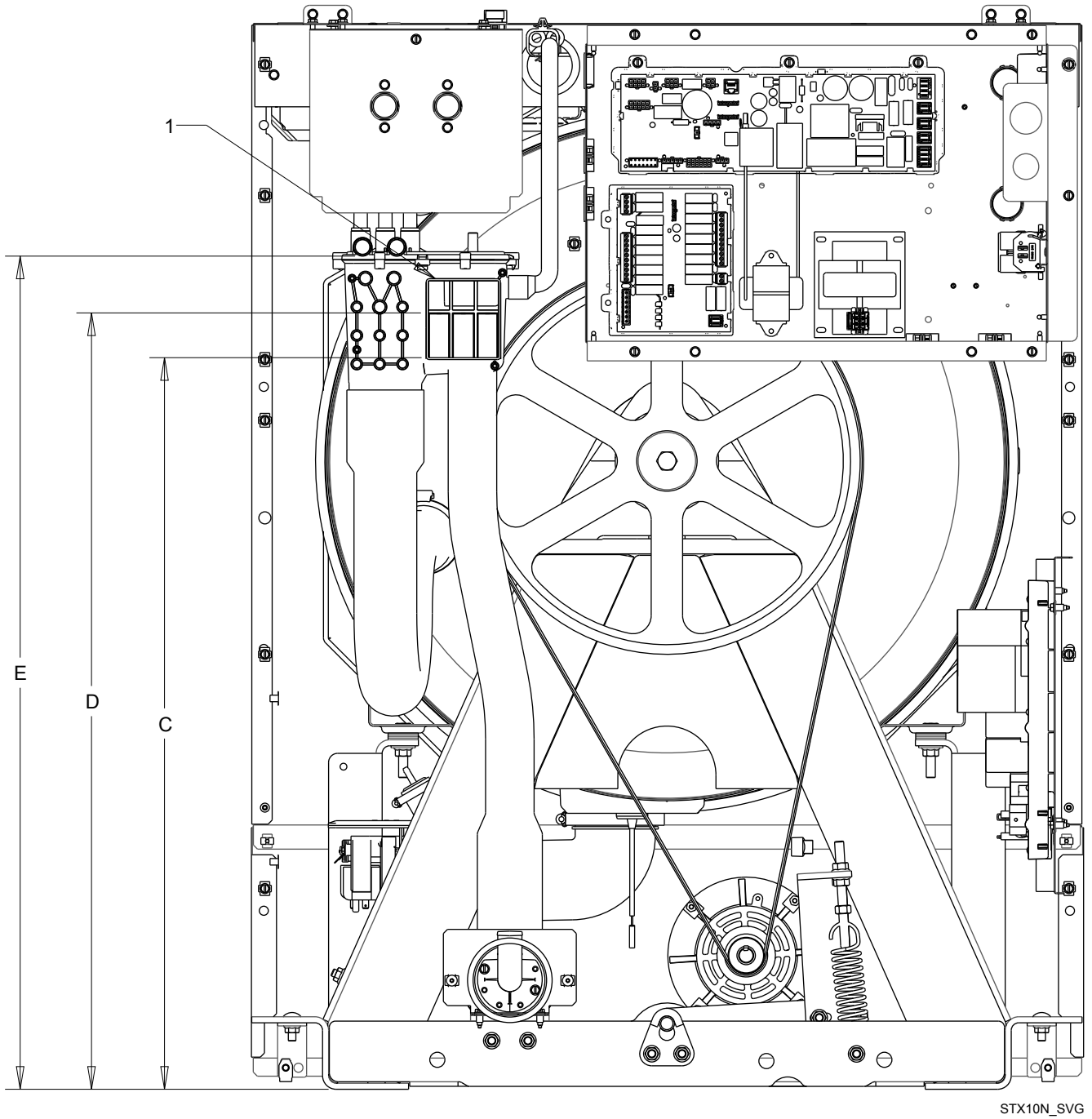


Figure 35

Rear View (refer to *Table 16*)



1. Vacuum Breaker Overflow

Figure 36

Plumbing Diagram, in. [mm]			
Description		30	50
A	Maximum overflow height	21.4 [544]	23.1 [587]
B	Maximum operating water level	17.0 [432]	19.9 [505]
C	Vaccum breaker overflow	28.4 [722]	30.3 [769]
D	Vaccum breaker overflow centerline	30.3 [769]	32.1 [816]
E	Inlet Valves	33.0 [838]	34.9 [885]

Table 16

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 39* 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.

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 38*.

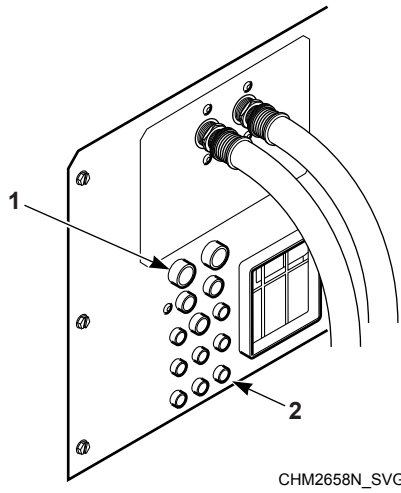
IMPORTANT: Be careful to only drill through the first wall so as not to damage the machine.

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	
Number of external liquid supply connections	12

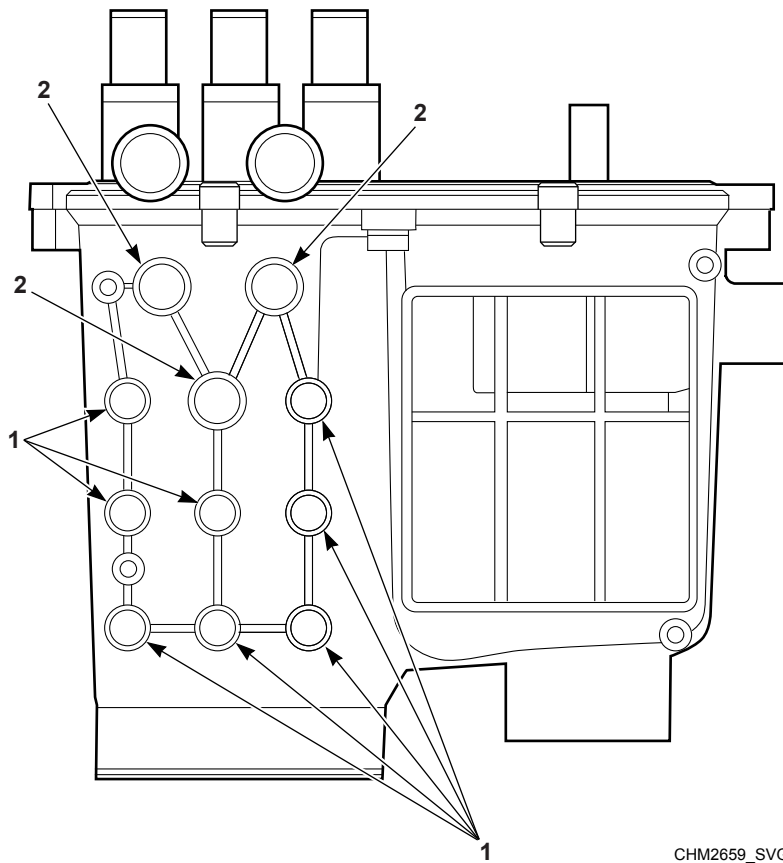
Table 17

Connection for Chemical Supply Hoses (refer to *Figure 38* for detail of chemical supply connector)

1. Chemical Supply Connector
2. External Liquid Supply Connection Ports (13)

Figure 37

External Liquid Supply Connection Ports

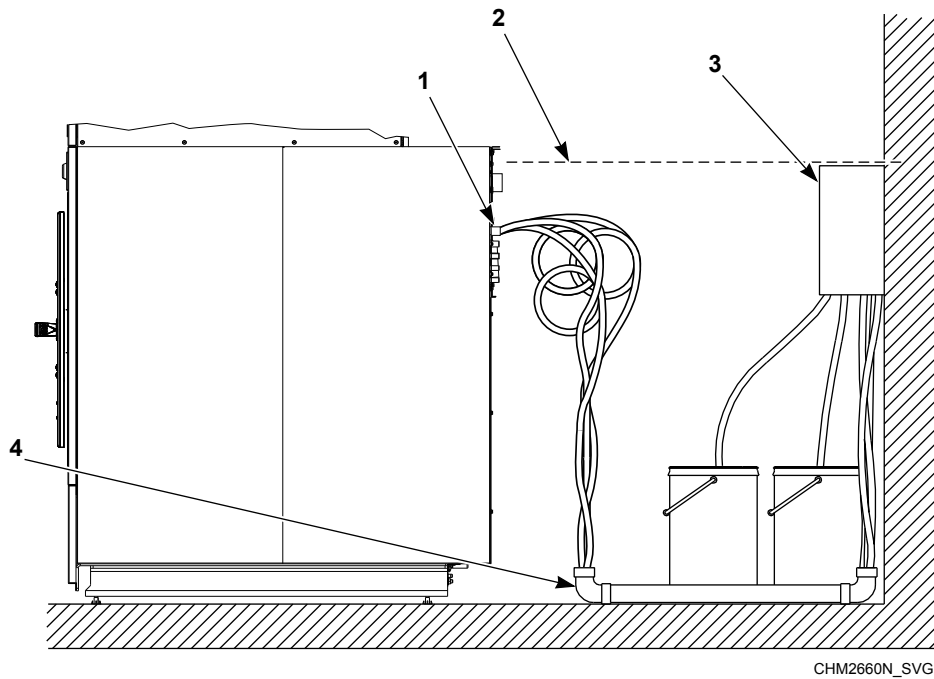


CHM2659_SVG

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

Figure 38

Chemical Supply Setup



CHM2660N_SVG

* Use a check valve on the end of tubing

† Pumps must be mounted below the injection point

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

Figure 39

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 40* and *Figure 41*. 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 a way that may conflict with the suggested methods provided on the Optional External Supply Wiring Diagram.

W699

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

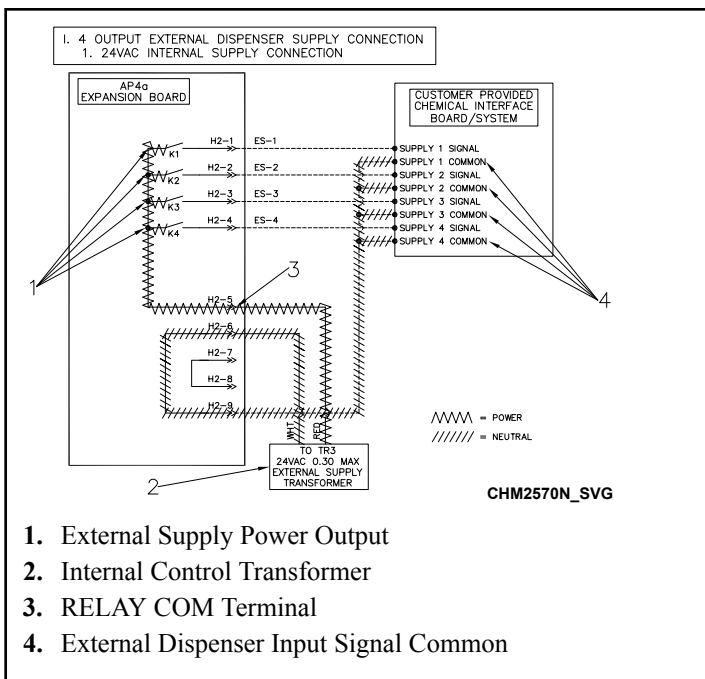


Figure 40

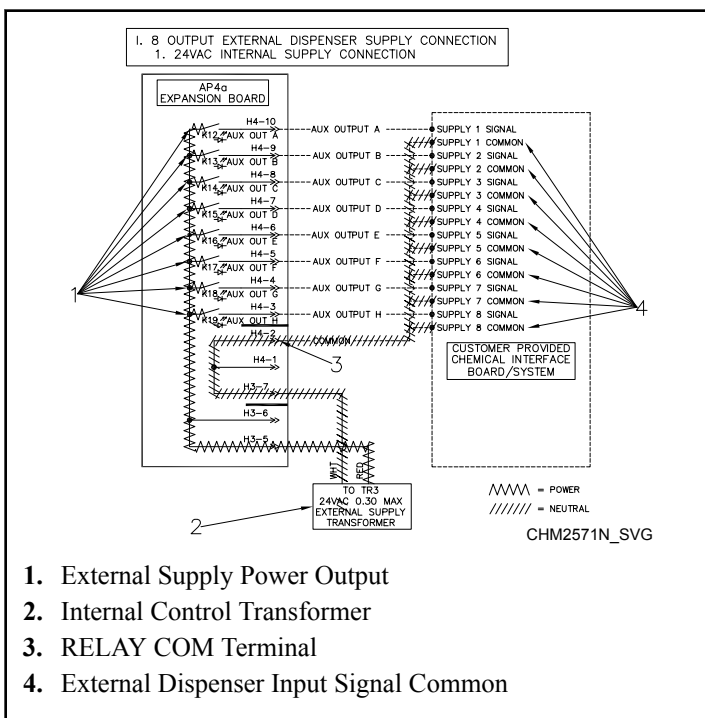


Figure 41

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 42* and *Figure 43*.

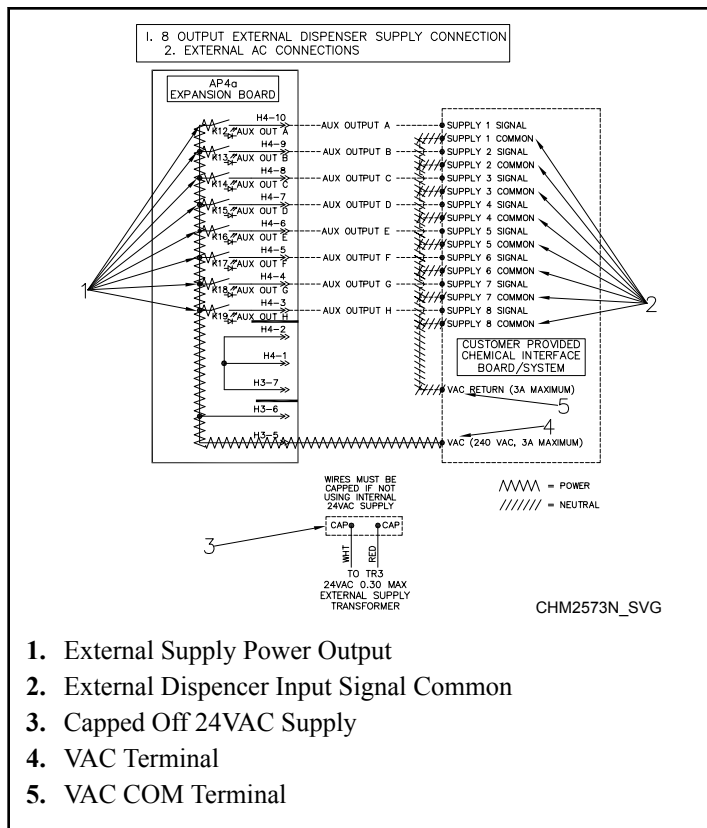


Figure 42

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.

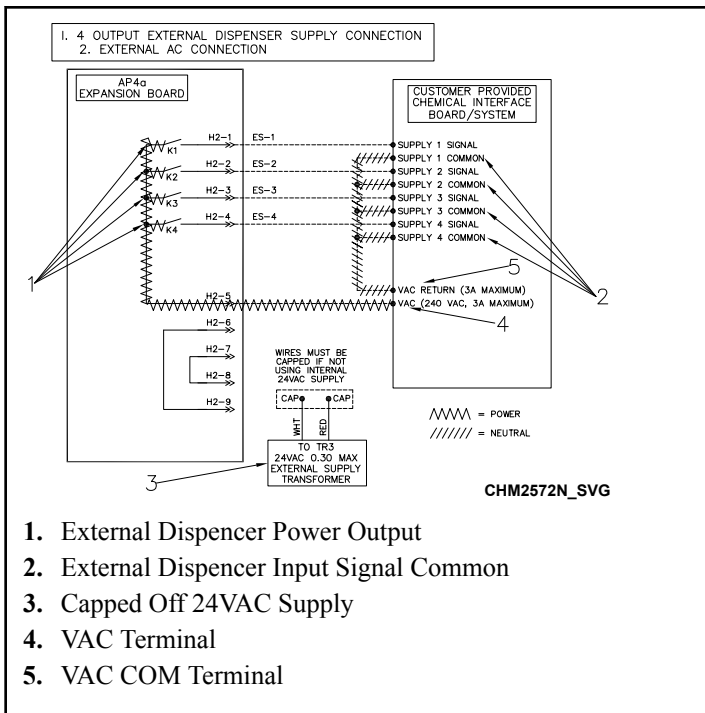


Figure 43

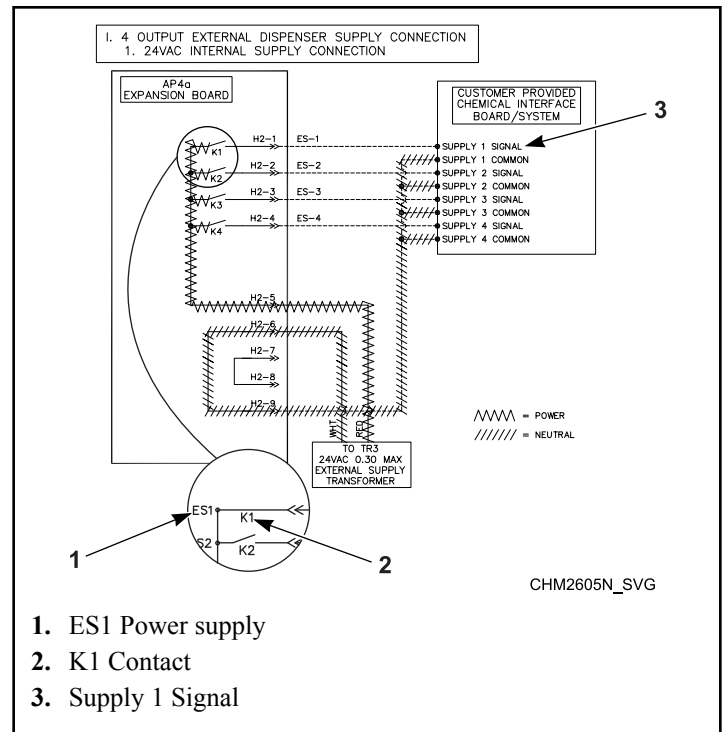


Figure 44

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 44* for Internal Supply Connection or *Figure 46* 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 45* for Internal Supply Connection or and *Figure 47* for External AC Connection.

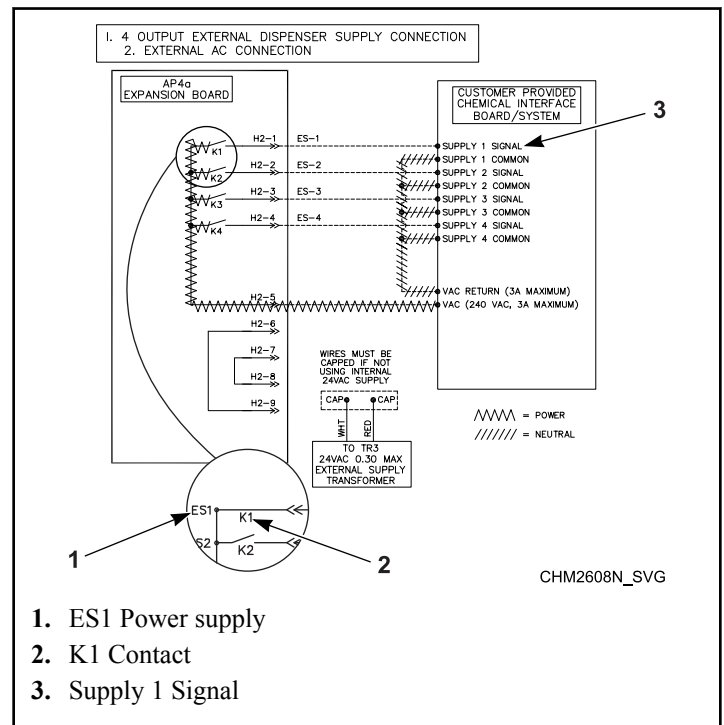


Figure 45

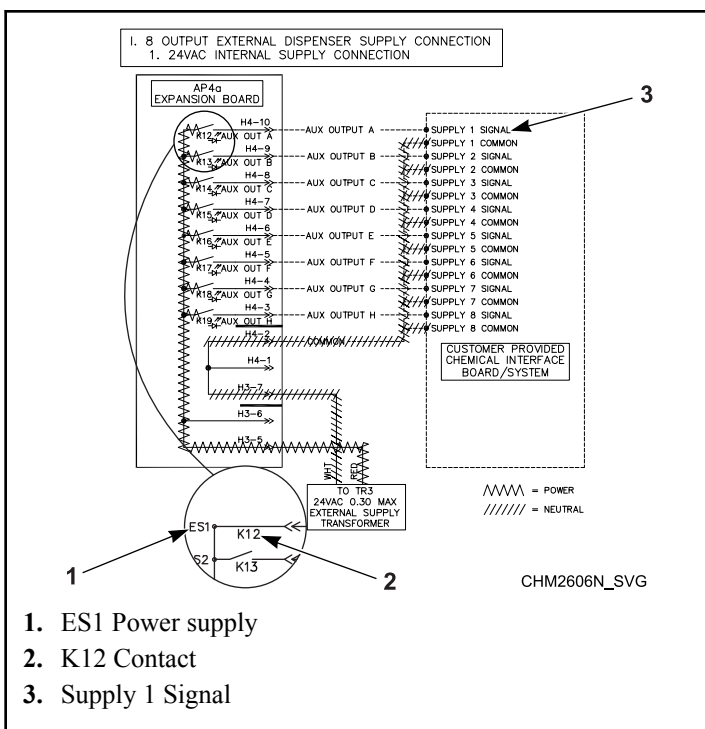


Figure 46

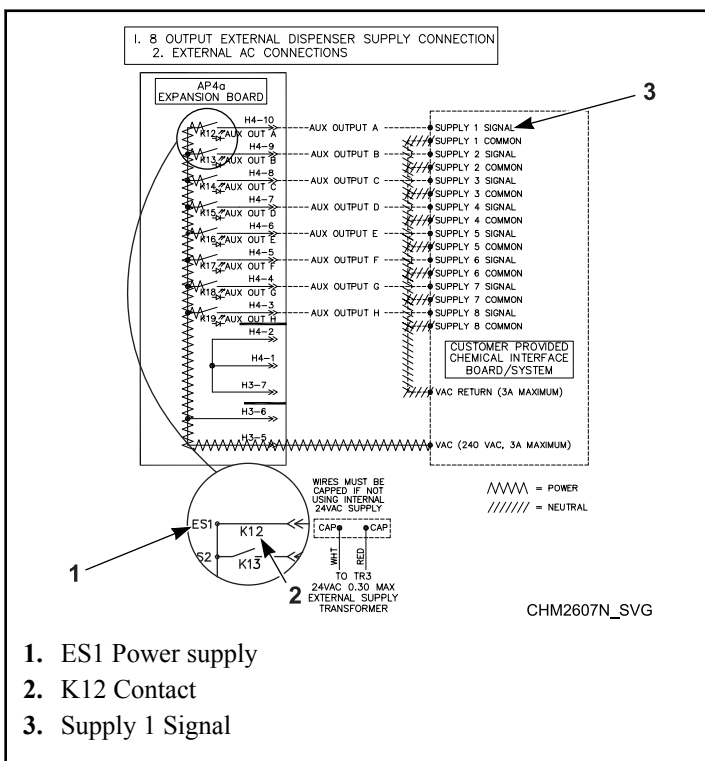


Figure 47

Before Placing Tumble Dryer into Service

1. Ensure all panels and guards are in place.

2. Remove and discard wire tie from the airflow switch so it can swing freely.
3. Pull out emergency stop button, if applicable.
4. Turn on electrical supply.
5. Open the supply valve for gas heated machines.
6. After performing the previous checks, start the machine by pressing START. (Refer to the Operating section for detailed instructions.) Open the loading door. The cylinder should stop rotating within seven seconds after the door is opened a maximum of 0.79 inches [20 mm]. If it does not, adjust the loading door switch. Refer to Adjustments section.
7. **Gas Models:** Start the machine and check the burner flame. Adjust the air inlet shutter as required. Refer to Adjustments section.

IMPORTANT: The electronic ignition system will attempt to light the gas by sparking for the “trial for ignition” period. If gas does not ignite within this period, the ignition control will go into a safety lock-out and the valve will no longer open until the control is reset. On IEC models the electronic ignition system must be manually reset. The control will pause the cycle and indicate that the ignition control needs to be reset. To reset the ignition control, press start key on the control while the access panel is open. The control will then prompt for the start key to be pressed again to restart the cycle. On all models, ignition lockout may occur due to air in the gas line or the gas shut-off valve being in the OFF position. If the air is bled out of the gas line, the gas shut-off valve is in the ON position, the gas service is properly connected and the machine continues to have heater errors and/or prompts for the ignition control to be reset, remove the machine from service.

8. Load the cylinder with a full load of clean rags and run to remove oil or dirt from cylinder.
9. Check the airflow switch operation by opening the lint panel; be sure to remove shipping wire tie from airflow switch prior to operation. Temporarily tape down the lint panel safety switch located behind the upper left corner of the lint panel. The heating systems should shut off when the lint panel is opened a maximum of 1.5 inches [38 mm] .

The airflow switch operation may be affected by shipping wire tie still in place, lack of make-up air, or an obstruction in the exhaust duct. These should be checked. If there is a problem, contact an authorized service person.

IMPORTANT: Remove tape from the lint panel safety switch before proceeding to the next step.



WARNING

Do not operate tumble dryer if airflow switch is faulty. An explosive gas mixture could collect in tumble dryer if airflow switch does not operate properly.

W407R1

10. Clean cylinder by running a load of wet rags on one maximum heat cycle.

Models	Prepurge Time (seconds)	Interpurge Time (seconds)	Trial for Ignition (seconds)	Reset Lockout Condition By:
IEC	23	23	10	Press start key with access panel open.

If the machine does not meet ANY of the listed requirements, remove machine from use. Refer to *Removing Machine from Service* section.

Required for IEC Models Only (Tumble Dryer)

Once machine is installed, please be sure to complete the following items:

- Review and verify machine operation with customer.
- Leave all literature and a signed Declaration of Conformity with customer.
- Review machine warranty information with customer.
- Apply cautionary stickers in language appropriate to country of sale. Market language label kits have been provided in the literature packet located in the cylinder. Position appropriate market language labels on the machine in the following regions prior to placing machine into service, if applicable:
 - On front panel at the periphery of cylinder access opening
 - On electrical box cover(s)
 - On rear panel

Exhaust Requirements - Tumble Dryer

Exhaust Requirements

	CAUTION
Risk of fire. A clothes dryer produces combustible lint. Exhaust outdoors. Consult technical instructions for detailed exhaust specifications. W933	

	WARNING
To reduce the risk of fire, DO NOT use plastic or thin foil ducting to exhaust the tumble dryer. W773R1	

	WARNING
To reduce the risk of fire and accumulation of combustible gases, DO NOT exhaust tumble dryer air into a window well, gas vent, chimney or enclosed, un-ventilated area such as an attic wall, ceiling, crawl space under a building, or concealed space of a building. W059R1	

Layout

Whenever possible, install tumble dryers along an outside wall where duct length can be kept to a minimum, and make-up air can be easily accessed. Construction must not block the airflow at the rear of the tumble dryer. Doing so would prevent adequate air supply to the tumble dryer combustion chamber.

Make-Up Air

A tumble dryer is forced air exhausted and requires provisions for make-up air to replace air exhausted by tumble dryer.

IMPORTANT: Do not obstruct flow of combustion and ventilation air.

Required Make-Up Air Opening (to the outside) for Each Tumble Dryer, in. ² [cm ²]	
Model	Opening
30	110 [710]
50	144 [930]

Make-up air openings with louvers will restrict airflow. The opening must be increased to compensate for area taken up and restrictions created by louvers. Contact the louver manufacturer for the exact specifications.

Make-up air openings in rooms containing tumble dryer(s) and/or gas fired hot water heater or other gravity vented appliances must be increased sufficiently to prevent downdrafts in any of the vents when all tumble dryers are in operation. Do not locate gravity vented appliances between tumble dryer(s) and make-up air openings. If it is necessary to duct make-up air to tumble dryer(s), increase area of duct work by 25% to compensate for restrictions in air movement.

Venting

	WARNING
To reduce the risk of fire due to increased static pressure, we do not recommend installation of in-line secondary lint filters or lint collectors. If secondary systems are mandated, frequently clean the system to assure safe operation. W749	

IMPORTANT: Installing in-line filters or lint collectors will cause increased static pressure. Failure to maintain the secondary lint system will decrease tumble dryer efficiency and may void machine warranty.

For maximum efficiency and minimum lint accumulation, tumble dryer air must be exhausted to the outdoors by the shortest possible route.

Proper sized exhaust ducts are essential for proper operation. All elbows should be sweep type. Exhaust ducts must be assembled so the interior surfaces are smooth, so the joints do not permit the

accumulation of lint. DO NOT use plastic, thin foil or Type B flexible ducts - rigid metal ducts are recommended. Use exhaust ducts made of sheet metal or other noncombustible material. DO NOT use sheet metal screws or fasteners on exhaust pipe joints which extend into the duct and catch lint. Use of duct tape or pop-rivets on all seams and joints is recommended, if allowed by local codes.

Verify that old ducts are thoroughly cleaned out before installing new tumble dryer(s).

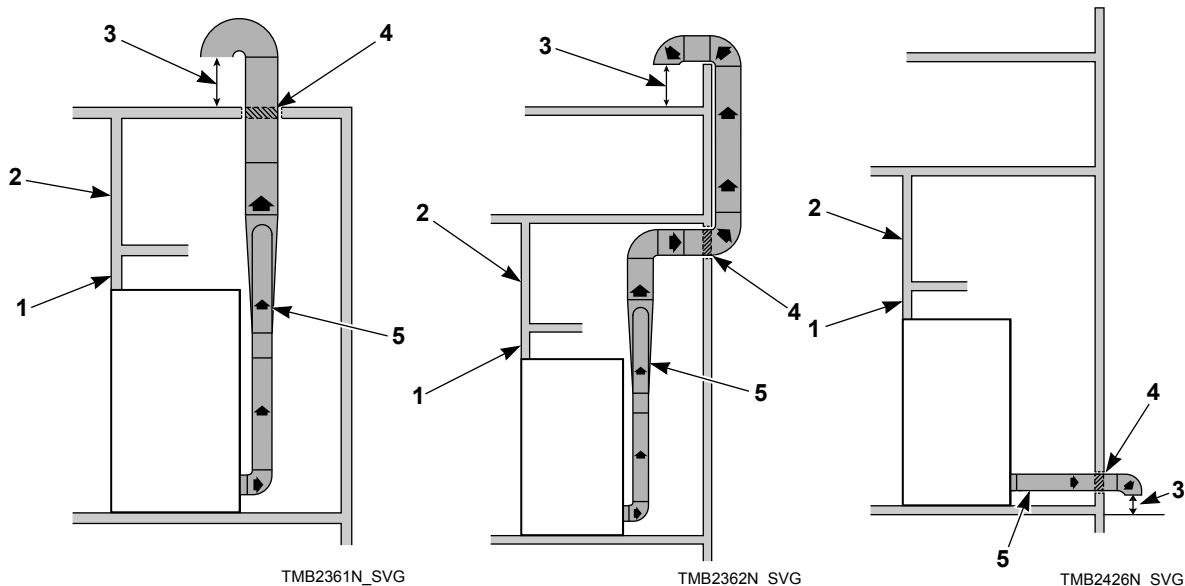
NOTE: Exhaust ducts must be constructed of sheet metal or other noncombustible material. Such ducts must be equivalent in strength and corrosion resistance to ducts made of galvanized sheet steel not less than 0.02 inches [0.50 mm] thick.

Where the exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes. The space around the duct may be sealed with noncombustible material. Refer to *Figure 48*.

IMPORTANT: For best performance provide an individual exhaust duct for each tumble dryer. Do not install a gas water heater in a room containing tumble dryers. It is better to have the water heater in a separate room with a separate air inlet.

NOTE: Proper venting will ensure that any condensate is subsequently re-evaporated and discharged.

	WARNING
Improperly sized or assembled ductwork causes excess back pressure which results in slow drying, lint collecting in the duct, lint blowing back into the room, and increased fire hazard.	
W355	



1. Removable strip of panel in framing wall to permit removal of tumble dryer from framing wall
2. Partition or bulkhead
3. Minimum distance between exhaust opening and roof, ground or other obstruction, 36 in. [910 mm]
4. 2.0 in. [50 mm] minimum clearance on both sides of duct
5. Exhaust airflow – maximum length of rigid duct 14 ft. [4.3 m] or 7.9 ft. [2.4 m] of flexible metal duct

Figure 48

NOTE: Do not install wire mesh or screen in exhaust duct opening to avoid lint build-up or impacting proper discharge of air from tumble dryers.

NOTE: Where exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes.

NOTE: Inside of duct must be smooth. Do not use sheet metal screws to join sections.

NOTE: Locate exhaust far enough away from make-up air location to prevent re-introduction.

Consult your local building code for regulations which may also apply.

Individual Venting

For maximum efficiency and performance, it is preferred to exhaust tumble dryer(s) individually to the outdoors.

IMPORTANT: At no point may the cross sectional area of installed venting be less than the cross sectional area of the exhaust outlet of the tumble dryer.

The exhaust duct must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified in the Specifications and Dimensions Table or on the installation sticker on the rear of the tumble dryer.

NOTE: Static back pressure must be measured with the tumble dryer running.

The maximum allowable length venting is 14 feet [4.3 m] and two 90° elbows or equivalent. If the equivalent length of a duct required for an installation exceeds the maximum allowable equivalent length, the diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross section area of a rectangular duct must be increased by 20% for each additional 20 feet [6.1 m]. Refer to *Table 18* to determine equivalent venting.

Duct Diameter	Equivalent Length of Rigid Straight Duct
8 in. [203 mm]	One 90° elbow = 9.3 ft. [2.8 m]
10 in. [254 mm]	One 90° elbow = 11.6 ft. [3.5 m]
12 in. [305 mm]	One 90° elbow = 14 ft. [4.3 m]
14 in. [356 mm]	One 90° elbow = 16 ft. [4.9 m]
16 in. [406 mm]	One 90° elbow = 18.7 ft. [5.7 m]
18 in. [457 mm]	One 90° elbow = 21 ft. [6.4 m]
Equivalent Length (meter) = 1.17 x Duct Diameter (mm)	

Table 18

Example: A 12 inch [305 mm] diameter duct's equivalent length of 14 feet [4.3 m] of duct and two 90° elbows is:

Equivalent Length

= 14 ft. [4.3 m] + (2) 90° elbows

= 14 ft. [4.3 m] + 14 ft. [4.3 m] + 14 ft. [4.3 m]

= 42 ft. [12.8 m]

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

NOTE: The maximum length of a flexible metal duct must not exceed 7.9 ft. [2.4 m] as required to meet UL2158, clause 7.3.2A.

Manifold Venting

IMPORTANT: Do not exhaust tumble dryers into a flue used by other appliances.

While it is preferable to exhaust tumble dryers individually to the outdoors, a main collector duct may be used if it is sized according to *Figure 50* and *Figure 51*. This illustration indicates minimum diameters, and should be increased if the collector length exceeds 14 feet [4.3 m] and two 90° elbows. The diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross sectional area of a rectangular or square duct must be increased 20% for each additional 20 feet [6.1 m]. Refer to *Table 19* to determine equivalent ducting sizing. The collector duct may be rectangular or square in cross section, as long as the area is not reduced. Provisions **MUST** be made for lint removal and cleaning of the collector duct.

The vent collector system must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified in the Specifications and Dimensions Table or on the installation sticker on the rear of tumble dryer. Static back pressure must be measured with all tumble dryers vented into the collector operating.

NOTE: Never connect a tumble dryer duct at a 90° angle to the collector duct. Refer to *Figure 49*. Doing so will cause excessive back pressure, resulting in poor performance. Never connect two tumble dryer exhaust ducts directly across from each other at the point of entry to the collector duct.

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

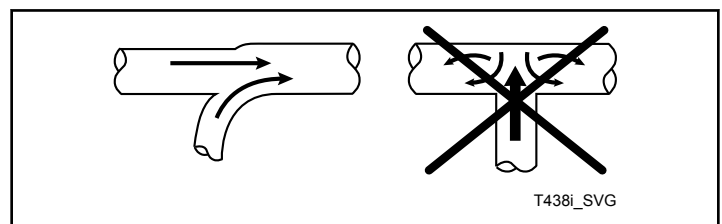


Figure 49

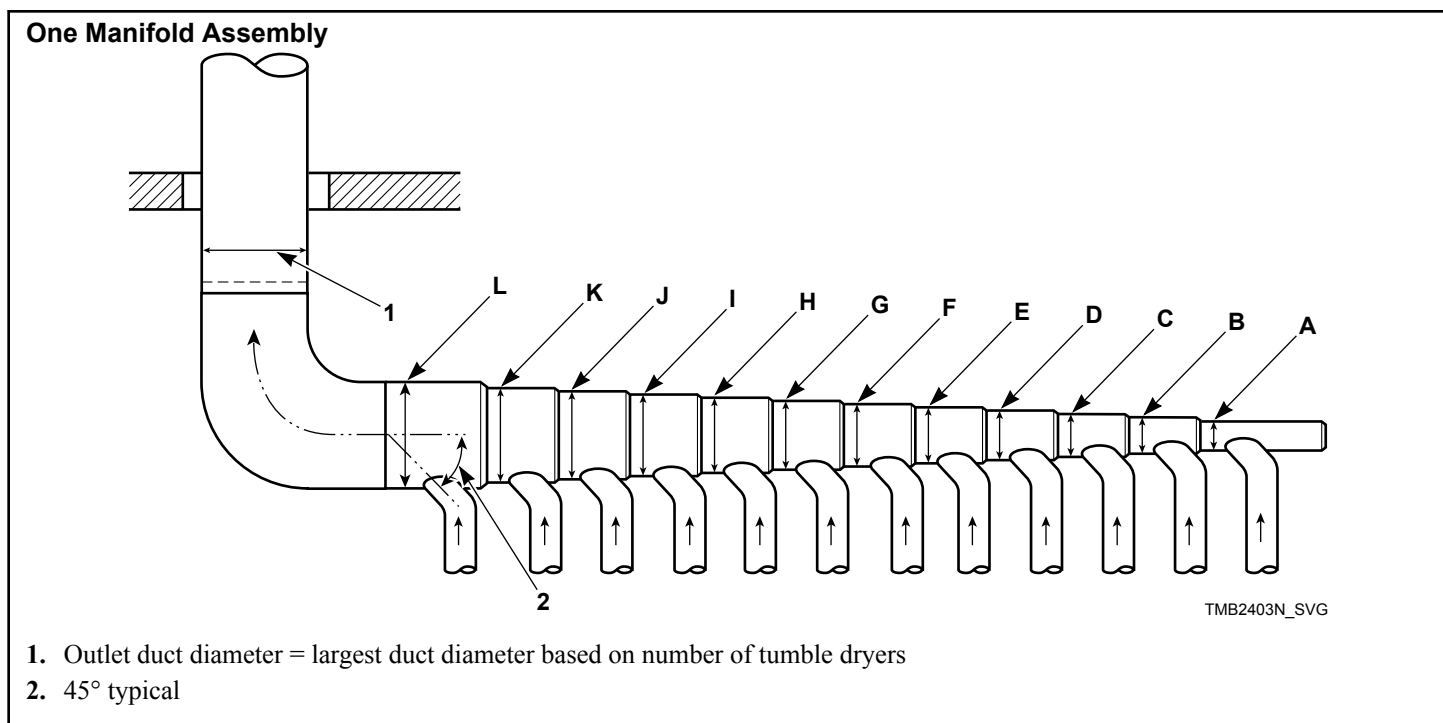


Figure 50

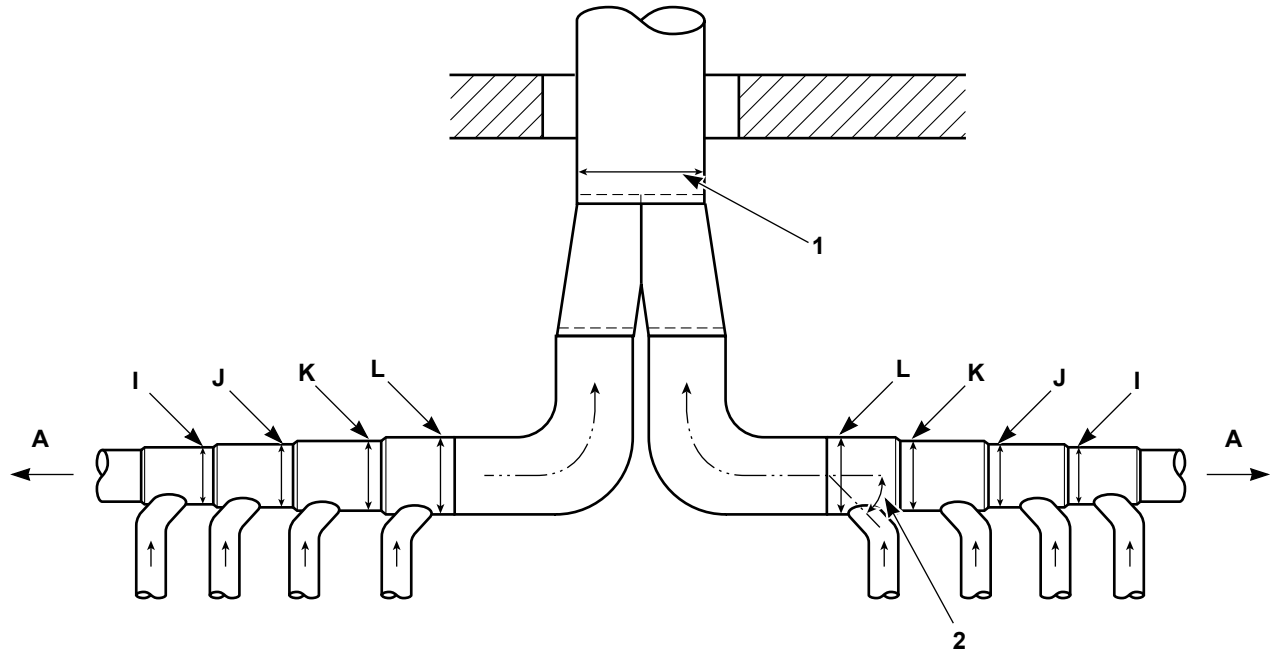
Duct Station	30	50
A	8 in. [203 mm]	10 in. [254 mm]
B	12 in. [305 mm]	15 in. [381 mm]
C	15 in. [381 mm]	18 in. [457 mm]
D	17 in. [432 mm]	21 in. [533 mm]
E	19 in. [483 mm]	24 in. [610 mm]
F	21 in. [533 mm]	26 in. [660 mm]
G	23 in. [584 mm]	28 in. [711 mm]
H	24 in. [610 mm]	30 in. [762 mm]
I	26 in. [660 mm]	32 in. [813 mm]
J	27 in. [686 mm]	33 in. [838 mm]
K	28 in. [711 mm]	35 in. [889 mm]
L	30 in. [762 mm]	36 in. [914 mm]

Table 19

NOTE: *Table 19* represents tumble dryers with the same vent size. If multiple vent sizes are used, consult a local HVAC specialist.

NOTE: Duct clean-out recommended every 6 feet [0.18 m].

Two Manifold Assemblies



TMB2018N_SVG

1. Outlet duct diameter = combined largest duct diameter of both sides
2. 45° typical

Figure 51

Refer to *Table 19* for measurements for each manifold.

Gas Requirements - Tumble Dryer

Gas Requirements

	CAUTION
- Thoroughly test all piping for leaks before operating. All fittings and piping must be tight and supported against breakage and vibration. - Turn off primary gas line shut off cock when not in use (overnight, weekends, holidays, etc.).	
W934	

	WARNING
To reduce the risk of fire or explosion, DO NOT CONNECT THE GAS LINE TO THE TUMBLE DRYER IF THE GAS SERVICE IS NOT THE SAME AS THAT SPECIFIED ON THE TUMBLE DRYER SERIAL PLATE! It will first be necessary to convert the gas burner orifice and gas valve. Appropriate conversion kits are available.	
W060R1	

	WARNING
To reduce the risk of gas leaks, fire or explosion, use a new flexible stainless steel connector.	
W774	

IMPORTANT: Any product revisions or conversions must be made by the Manufacturer's Authorized Dealers, Distributors or local service personnel.

IMPORTANT: The tumble dryer must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system. Gas supply pressure must never exceed 1/2 PSI [3.5 mbar] during leak testing. Gas supply must provide 6.5+/-1.5 inches [16.32+/-3.7 mbar] with all gas appliances firing.

NOTE: For gas valves with a manual shut-off switch on the gas valve, the shut-off switch does not protect the valve from this pressure test. Use the individual manual shut-off valve from the gas supply piping system to protect the gas valve.

IMPORTANT: The installation must comply with local codes or, in the absence of local codes:

- with the latest edition of the "National Fuel Gas Code," ANSI Z223.1/NFPA 54 in the U.S.A.
- with CAN/CSA-B149.1 Natural Gas and Propane Installation Code in Canada
- In Australia and New Zealand, installation must comply with the Gas Installations Standard AS/NZS 5601 Part 1: General Installations.
- In the EU, installation must comply with the installation regulations of the country of destination.

IMPORTANT: For Australian models, do not remove the gas type label on the rear of the unit.

Obtain specific gas service pipe size from the gas supplier. Refer to *Table 21* and *Table 22* for general pipe size.

The following must be furnished and installed by the customer for the gas service line to each tumble dryer. Refer to *Figure 52*.

- Sediment traps
- Shut-off valves
- Supply pressure taps (1/8 NPT minimum) (refer to *Figure 52*)
- Union at gas supply connection (listed to ANSI Z21.24 and CSA 6.10)

It is important that equal pressure be maintained at all tumble dryer gas connections. This can be done by installing a 1 inch pipe gas loop to maintain equal pressure at all gas connections. Refer to *Figure 56*.

	WARNING
To reduce the risk of fire or explosion, if the tumble dryer is to be connected to Liquefied Petroleum (L.P.) gas, a vent to the outdoors must be provided in the room where the tumble dryer is installed.	
W062R1	

Before installation, check that the local distribution conditions, nature of gas and pressure, and the adjustment of the appliance are compatible.

NATURAL GAS supply pressures with all gas appliances running (tumble dryers, water heaters, space heaters, furnace, etc.):

	North America Models	Australia Models	CE Models
Maximum	10.5 in. w.c.	2.61 kPa	Refer to <i>Table 20</i>
Recommend- ed	6.5 in. w.c	1.62 kPa	
Minimum	5 in. w.c.	1.13 kPa	

An in-line pressure regulator may be required if the line pressure exceeds 10.5 water column inches [26.1 mbar, 2.61 kPa] with all gas appliances running.

PROPANE/LIQUID PETROLEUM GAS (L.P.G.) supply pressures with all gas appliances running (tumble dryers, water heaters, space heaters, furnace, etc.):

	North America Models	Australia Models	CE Models
Maximum	13 in. w.c.	N/A	Refer to <i>Table 20</i>
Recommend- ed	11 in. w.c.	N/A	
Minimum	10 in. w.c.	N/A	

Gas Category	Country	Gas	Category	Supply Pressure (mbar)			Manifold Pressure (mbar)
				nominal	minimum	maximum	
II _{2H3B/P}	BG, CY, CZ, DK, EE, FI, HR, LT, NO, SE, SI SK	G20	2H	20	17	25	8.0
		G30/31	3B/P (30)	30 (28-30)	25	35	*
II _{2H3B/P}	HU	G20	2H	25	18	33	8.0
		G30/31	3B/P	50	42.5	57.5	27.5
II _{2H3B/P}	AT, CH	G20	2H	20	17	25	8.0
		G30/31	3B/P	50	42.5	57.5	27.5
II _{2H3+}	CH, ES, GB, GR, IE, IT, TR	G20	2H	20	17	25	8.0
		G30	3+ (28-30/37) Butane	30 (28-30)	25	35	*
		G31	3+ (28-30/37) Propane	37	25	45	*
II _{2E3B/P}	PL	G20	2E	20	17	25	8.0
		G30	3B/P	30 (28-30)	25	35	*
II _{2E3B/P}	LU	G20	2E	20	17	25	8.0
		G30/31	3B/P	50	42.5	57.5	27.5
II _{2E3B/P} II _{2E(LL)3B/P}	DE	G20	2E(LL)/2E	20	17	25	8.0
		G25	2E(LL)	20	17	25	12.0
		G30/31	3B/P	50	42.5	57.5	27.5
II _{2E(r)3+}	FR	G20	2E(r)	20	17	25	8.0
		G25	2E(r)	20	17	25	12.0
		G30	3+ (30/37) Butane	30 (28-30)	25	35	*
		G31	3+ (30/37) Propane	37	25	45	*
II _{2L3B/P}	NL	G25	2L	25	20	30	12.0
		G30	3B/P	30 (28-30)	25	35	*

Table 20 continues...

Gas Category	Country	Gas	Category	Supply Pressure (mbar)			Manifold Pressure (mbar)
				nominal	minimum	maximum	
II _{2L3B/P}	RO	G25	2L	20	17	25	12.0
		G30	3B/P	30 (28-30)	25	35	*
I _{3B/P}	IS, MT	G30	3B/P	30 (28-30)	25	35	*
I _{2E(R)}	BE	G20	2E(R) 20/25	20	17	25	8.0
		G25	2E(R) 20/25	20	17	25	12.0
I ₃₊	BE	G30	3+ (28-30/37) Butane	30 (28-30)	25	35	*
		G31	3+ (28-30/37) Propane	37	25	45	*
* Appliance regulator out of action							

Table 20

Check manifold pressure. It is important that gas be supplied to the tumble dryer in accordance with the requirements on the serial plate. Refer to table below and *Figure 1*. If the manifold pressure required adjustment, refer to *How to Adjust Gas Valve Governor/Regulator*.

	North America Models	Australia Models	CE Models
Natural Gas	3.5 in. w.c.	0.87 kPa	Refer to <i>Table 20</i>
Propane/ L.P.G.	10.5 in. w.c.	N/A	

The connection of gas supply to the appliance shall be made with a flexible hose suitable for the appliance category in accordance with national installation regulations of the country of destination. If in doubt, the installer shall contact the supplier.

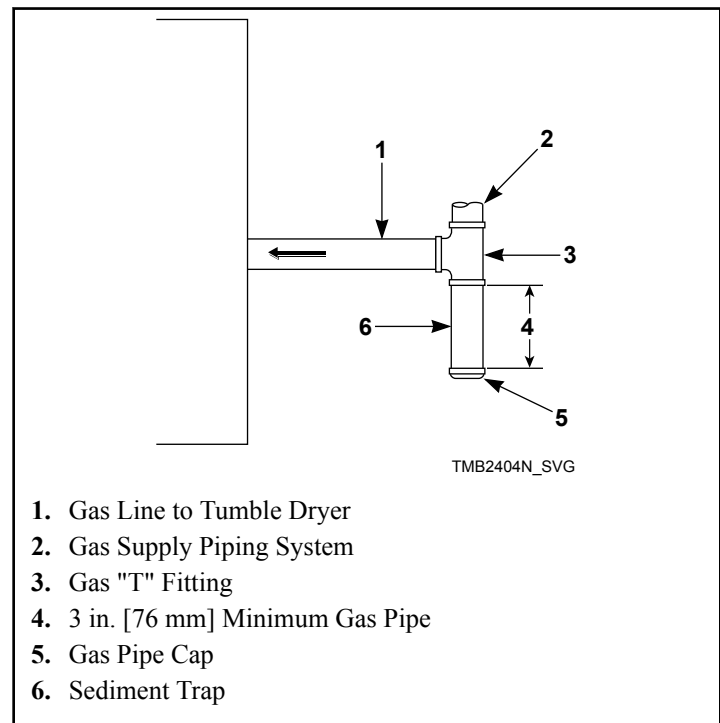


Figure 52

How to Change Burner Orifice Size

1. Disconnect electrical power from tumble dryer. Close gas shut-off valve to tumble dryer. Refer to *Figure 53*.

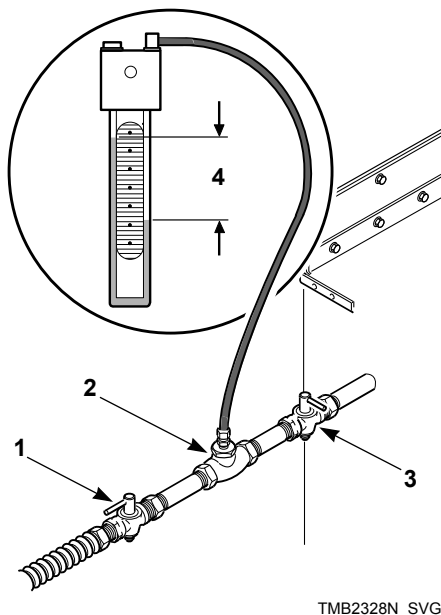


WARNING

When converting the tumble dryer to a different gas or pressure, first verify that the supply inlet pressure is equipped with a pressure regulator (located ahead of the tumble dryer) that will maintain the gas supply at the inlet pressure specified.

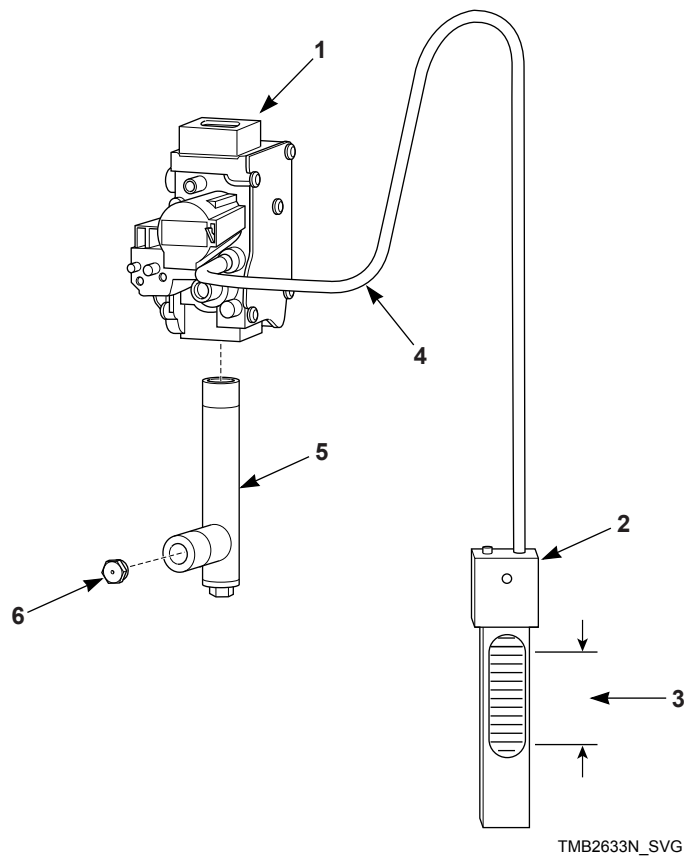
W430R1

2. Remove orifice holder. Unscrew orifice holder nut near gas valve. Remove the burner orifice(s) from orifice holder. Refer to *Figure 54*.
3. Install the new, correct burner orifice(s). Refer to *Figure 55* and *Table 1*. Torque each to 9 – 10 Nm.
4. Reinstall orifice holder assembly to gas valve, making certain burner orifice(s) are in line with burner tube opening. Refer to *Figure 55*.
5. Commission tumble dryer for use.



1. Gas Shut-Off Valve (Ahead of pressure tap) (Shown in open position) (Not Supplied)
2. Pressure Tap
3. Gas Shut-Off Valve (Shown in closed position) (Not Supplied)
4. Specified Local Inlet Pressure

Figure 53



NOTE: For IEC gas valves, attach manometer to end of orifice holder. For Australia and North America gas valves, attach manometer to the outlet pressure port on the gas valve.

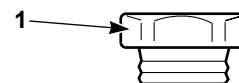
1. Gas Valve
2. Manometer
3. Required Burner Manifold Pressure
4. Connect Over Loosened Hex Pressure Tap Screw
5. Orifice Holder
6. Burner Orifice

Figure 54

How to Adjust Gas Valve Governor/Regulator

1. Check gas burner orifice (manifold) pressure as follows. Refer to *Figure 54*.
2. Remove screw plug from pressure tap.
3. Connect a “U”-tube manometer (or similar pressure gauge) to the burner orifice (manifold) pressure tap.
4. Start tumble dryer and note pressure once flame is burning. Remove regulator cap and adjust regulator screw until the burner orifice pressure per applicable table is achieved. Replace regulator cap. Refer to *Figure 54*.
5. Commission tumble dryer for use.

Burner Orifice



1. Size Stamped on Orifice

Figure 55

Installing CE Gas Tumble Dryer

This information is to be used when installing gas tumble dryers in countries and/or on gases different than the machine's factory configuration. Tumble Dryers are supplied from the factory for operation with natural gas categories 2H, 2E, 2L, 2E(LL), 2E(r),

2E(R) or unregulated L.P.G. categories 3 B/P, 3+. To install tumble dryers for regulated LPG category 3B/P requires a conversion kit.

Tumble dryers are built in two different configurations:

- Natural Gas – regulated/governor
- Liquefied Petroleum Gas (L.P.G.) – not regulated/no governor

For converting models from Natural Gas to L.P.G., order the appropriate kit listed in *Gas Requirements* section.

Serial plates supplied from the factory are configured for:

- Natural Gas, standard rate
 - AT/BG/CH/CY/CZ/DK/EE/FI/HR/LT/NO/SE/SI/SK: $\Pi_{2H3B/P}$
 - CH/ES/GB/GR/IE/IT/TR: Π_{2H3+}
 - DE/LU/PL: $\Pi_{2E3B/P}$
- Natural Gas, Eco rate
 - AT/BG/CH/CY/CZ/DK/EE/ES/FI/GB/GR/HR/IE/IT/LT/NO/SE/SI/SK/TR: I_{2H}
 - DE/LU/PL: I_{2E}
- L.P.G.
 - BE/CH/ES/FR/GB/GR/IE/IT/TR: I_{3+}

These instructions pertain to the situations when the country of use or gas supply is different than that on the serial plate. When installing in a different country, peel off the appropriate country sticker (included in literature packet with tumble dryer) and apply it to the serial plate over the existing country information. Adjust manifold pressure as applicable, per *Table 1*.

Units installed in France (FR) require a gas connection adapter having ISO228 (BSPP, G) parallel threads and a sealing washer. The adapter must have a sufficient flat area to seat the sealing washer.

Adjusting Manifold Pressure for Natural Gas G20 or G25

1. If country/gas category designation required is not listed on the serial plate, affix the appropriate country/gas category label supplied over the main serial plate designations.
2. Verify gas supply pressure and adjust as necessary. Refer to *Figure 1*.
3. Verify manifold pressure. Refer to *How to Adjust Gas Valve Governor/Regulator* and adjust as necessary.

Adjusting Supply Pressure for L.P.G. G30 or G31

1. If country/gas category designation required is not listed on the serial plate, affix the appropriate country/gas category label over the main serial plate designations.
2. Verify gas supply pressure and adjust as necessary. Refer to *Figure 1*.

Converting From Natural Gas to L.P.G. or From Unregulated L.P.G. to Regulated L.P.G.

1. Refer to table below to determine conversion kit part number required.
2. Follow instructions supplied in conversion kit.

	North America Models	CE Models
30	70550208	70551907
50	70550209	70551908

CE GASES refer to *Installing CE Gas Tumble Dryer* section.

Start-Up Procedure

Turn on gas and check all pipe connections (internal and external) for gas leaks with a non-corrosive leak detection fluid. Purge air in gas service line by operating the tumble dryers in the drying mode. If burner does not light and unit goes into lockout, press start key on the control while the access panel is open. The control will then prompt for the start key to be pressed again to re-start the cycle. Repeat these steps until burner ignites. Use pipe compound, resistant to actions of L.P. gas, on all pipe threads.

	WARNING
Check all pipe connections, internal and external, for gas leaks using a non-corrosive leak detection fluid. To reduce the risk of explosion or fire, DO NOT USE AN OPEN FLAME TO CHECK FOR GAS LEAKS! Gas connections should be checked daily for leakage.	
W924	

Gas Supply Pipe Sizing and Looping

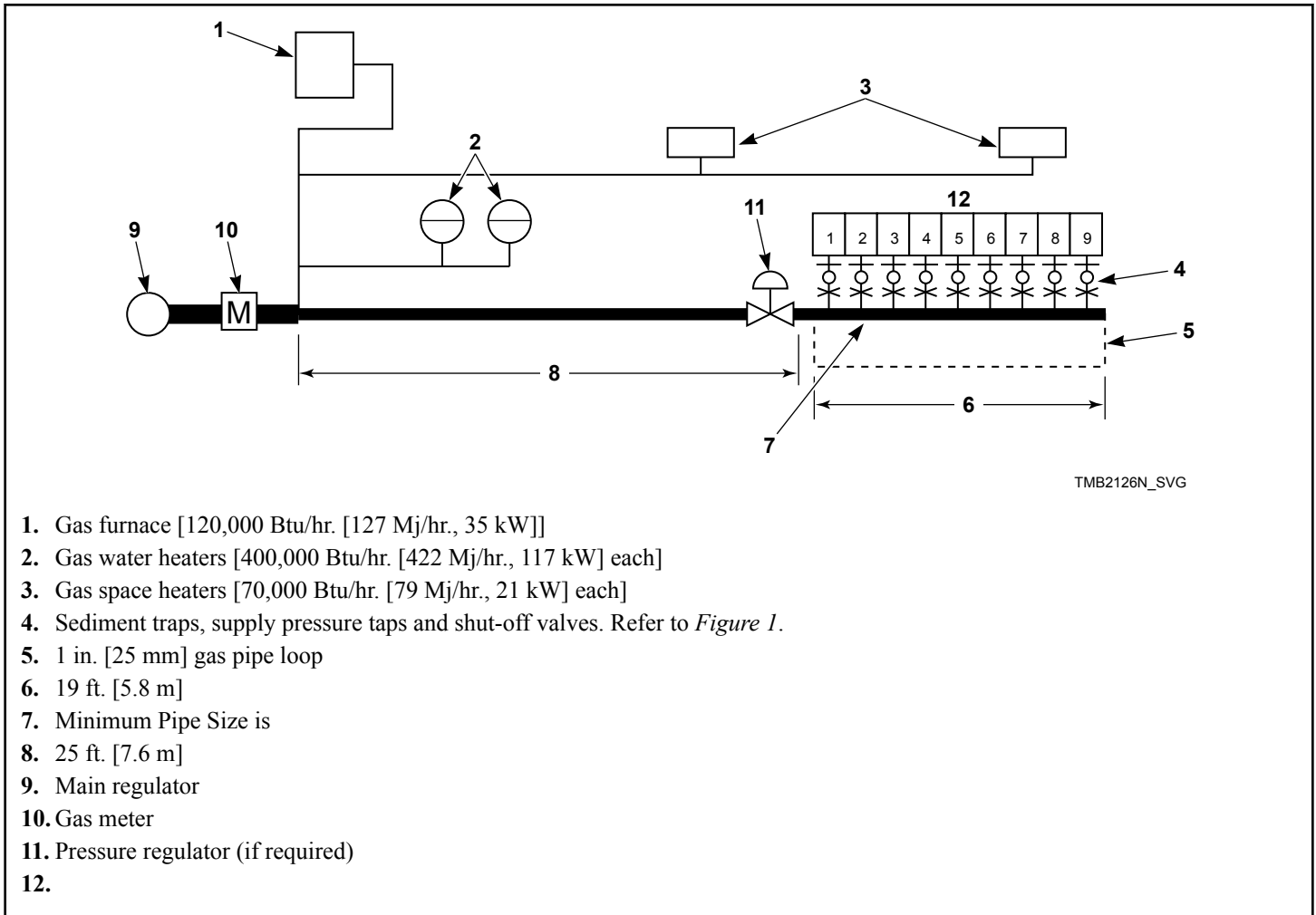


Figure 56

SAMPLE CALCULATIONS:

Equivalent length = Total length of main gas supply pipe to the far end of the tumble dryers.
 = 25 ft. + 19 ft. [7.6 m + 5.8 m] gas supply pipe
 = 44 ft. [13.4 m] Total Gas Line

Using *Table 21*, the main supply pipe diameter should be .

IMPORTANT: Gas loop piping must be installed as illustrated to equalize gas pressure for all tumble dryers connected to single gas service. Other gas using appliances should be connected upstream from loop.

Low Pressure Gas Pipe Sizes

NOTE: Sizing calculations based on National Fuel Gas Code.

Gas Pipe Size Required for 1000 BTU Natural Gas (Standard Conditions) at Upstream Pressure— 7.0 ± 1.5 inches water column pressure [17.4 ± 4.0 mbar, 1.74 ± 0.37 kPa]						
Gas Appliances Total BTU/hr.	Equivalent Length					
	25 feet [7.6 m]	50 feet [15.2 m]	75 feet [22.9 m]	100 feet [30 m]	125 feet [38 m]	150 feet [46 m]
	Based on 0.3 inches Water Column Pressure Drop for Length Given Sizes shown in Gas Pipe Nominal Size (NPT)					
100,000	3/4	3/4	3/4	1	1	1
120,000	3/4	3/4	1	1	1	1
140,000	3/4	1	1	1	1	1
160,000	3/4	1	1	1	1-1/4	1-1/4
180,000	3/4	1	1	1-1/4	1-1/4	1-1/4
200,000	1	1	1	1-1/4	1-1/4	1-1/4
300,000	1	1-1/4	1-1/4	1-1/4	1-1/2	1-1/2
400,000	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2	1-1/2
500,000	1-1/4	1-1/2	1-1/2	1-1/2	1-1/2	2
600,000	1-1/4	1-1/2	1-1/2	2	2	2
700,000	1-1/2	1-1/2	2	2	2	2
800,000	1-1/2	1-1/2	2	2	2	2
900,000	1-1/2	2	2	2	2	2-1/2
1,000,000	1-1/2	2	2	2	2-1/2	2-1/2
1,100,000	1-1/2	2	2	2	2-1/2	2-1/2
1,200,000	1-1/2	2	2	2-1/2	2-1/2	2-1/2
1,300,000	2	2	2-1/2	2-1/2	2-1/2	2-1/2
1,400,000	2	2	2-1/2	2-1/2	2-1/2	2-1/2
1,500,000	2	2	2-1/2	2-1/2	2-1/2	2-1/2
1,600,000	2	2	2-1/2	2-1/2	2-1/2	3

Table 21 *continues...*

Gas Pipe Size Required for 1000 BTU Natural Gas (Standard Conditions) at Upstream Pressure— 7.0 ± 1.5 inches water column pressure [17.4 ± 4.0 mbar, 1.74 ± 0.37 kPa]						
Gas Appliances Total BTU/hr.	Equivalent Length					
	25 feet [7.6 m]	50 feet [15.2 m]	75 feet [22.9 m]	100 feet [30 m]	125 feet [38 m]	150 feet [46 m]
	Based on 0.3 inches Water Column Pressure Drop for Length Given Sizes shown in Gas Pipe Nominal Size (NPT)					
1,700,000	2	2-1/2	2-1/2	2-1/2	3	3
1,800,000	2	2-1/2	2-1/2	2-1/2	3	3
1,900,000	2	2-1/2	2-1/2	3	3	3
2,000,000	2	2-1/2	2-1/2	3	3	3
2,200,000	2	2-1/2	3	3	3	3
2,400,000	2-1/2	2-1/2	3	3	3	3-1/2
2,600,000	2-1/2	2-1/2	3	3	3-1/2	3-1/2
2,800,000	2-1/2	3	3	3	3-1/2	3-1/2
3,000,000	2-1/2	3	3	3-1/2	3-1/2	3-1/2
For L.P. Gas, correct the total Btu/hr by multiplying it by 0.6. The answer is the equivalent Btu on the above chart.						

Table 21

High Pressure Gas Pipe Sizes

NOTE: Sizing calculations based on National Fuel Gas Code.

IMPORTANT: A high pressure regulator is required at each machine.

Gas Pipe Size Required for 1000 BTU Natural Gas (Standard Conditions) at Upstream Pressure — 2.0 ± 0.4 PSI [138 ± 28 mbar, 13.7 ± 2.7 kPa]						
Gas Appliances Total BTU/hr.	Equivalent Length					
	25 feet [7.6 m]	50 feet [15.2 m]	75 feet [22.9 m]	100 feet [30 m]	125 feet [38 m]	150 feet [46 m]
	Based on 1 PSI Pressure Drop for Length Given Sizes shown in Gas Pipe Nominal Size (NPT)					
100,000	1/2	1/2	1/2	1/2	1/2	1/2
120,000	1/2	1/2	1/2	1/2	1/2	1/2
140,000	1/2	1/2	1/2	1/2	1/2	1/2
160,000	1/2	1/2	1/2	1/2	1/2	1/2
180,000	1/2	1/2	1/2	1/2	1/2	1/2
200,000	1/2	1/2	1/2	1/2	1/2	1/2
300,000	1/2	1/2	1/2	1/2	1/2	3/4
400,000	1/2	1/2	1/2	1/2	1/2	3/4
500,000	1/2	1/2	1/2	3/4	3/4	3/4
600,000	1/2	1/2	3/4	3/4	3/4	3/4
700,000	1/2	3/4	3/4	3/4	3/4	1
800,000	1/2	3/4	3/4	3/4	3/4	1
900,000	1/2	3/4	3/4	3/4	3/4	1
1,000,000	3/4	3/4	3/4	3/4	1	1
1,100,000	3/4	3/4	3/4	3/4	1	1
1,200,000	3/4	3/4	3/4	1	1	1
1,300,000	3/4	3/4	3/4	1	1	1-1/4
1,400,000	3/4	3/4	1	1	1	1-1/2
1,500,000	3/4	3/4	1	1	1	1-1/4
1,600,000	3/4	3/4	1	1	1	1-1/4

Table 22 *continues...*

Gas Pipe Size Required for 1000 BTU Natural Gas (Standard Conditions) at Upstream Pressure — 2.0 ± 0.4 PSI [138 ± 28 mbar, 13.7 ± 2.7 kPa]						
Gas Appliances Total BTU/hr.	Equivalent Length					
	25 feet [7.6 m]	50 feet [15.2 m]	75 feet [22.9 m]	100 feet [30 m]	125 feet [38 m]	150 feet [46 m]
	Based on 1 PSI Pressure Drop for Length Given Sizes shown in Gas Pipe Nominal Size (NPT)					
1,700,000	3/4	1	1	1	1	1-1/4
1,800,000	3/4	1	1	1	1	1-1/4
1,900,000	3/4	1	1	1	1	1-1/4
2,000,000	3/4	1	1	1	1-1/4	1-1/4
2,200,000	3/4	1	1	1-1/4	1-1/4	1-1/4
2,400,000	1	1	1	1-1/4	1-1/4	1-1/2
2,600,000	1	1	1-1/4	1-1/4	1-1/4	1-1/2
2,800,000	1	1	1-1/4	1-1/4	1-1/4	1-1/2
3,000,000	1	1	1-1/4	1-1/4	1-1/4	1-1/2
For L.P. Gas, correct the total Btu/hr by multiplying it by 0.6. The answer is the equivalent Btu on the above chart.						

Table 22

High Altitude Burner Orifice Sizing

For proper operation at altitudes above 2,000 feet [610 m], the gas burner orifice size must be reduced to ensure complete com-

bustion. Heat input derate of 4% per 1,000 feet [305 meters] of altitude above sea level. Refer to *Table 23* or *Table 24*.

For IEC models, consult local gas supplier.

Model	Market	Gas	Altitude	Burner Orifice			
			feet [meters]	No.	inches [mm]	Quantity	Part No.
30	T, G, A, H, J, K, R, U	Natural Gas	2,001-4,000 [610-1,220]	23	0.1540 [3.91]	2	M401020
			4,001-6,000 [1,221-1,830]	25	0.1495 [3.80]		M402997
			6,001-8,000 [1,831-2,440]	27	0.1440 [3.66]		M400998
			8,001-10,000 [2,441-3,050]	---	0.1378 [3.50]		70476601
	T, G, H, R	L.P. Gas	2,001-4,000 [610-1,220]	42	0.0935 [2.37]		M403017
			4,001-6,000 [1,221-1,830]	---	0.0906 [2.30]		70070905
			6,001-8,000 [1,831-2,440]	---	0.0866 [2.20]		70070906
			8,001-10,000 [2,441-3,050]	45	0.0820 [2.08]		M401027
	U	L.P. Gas	2,001-4,000 [610-1,220]	45	0.0820 [2.08]		M401027
			4,001-6,000 [1,221-1,830]	47	0.0785 [1.99]		M400999
			6,001-8,000 [1,831-2,440]	48	0.0760 [1.93]		M401001
			8,001-10,000 [2,441-3,050]	49	0.0730 [1.85]		M401018
	J	L.P. Gas	2,001-4,000 [610-1,220]	45	0.0820 [2.08]		M401027
			4,001-6,000 [1,221-1,830]	46	0.0810 [2.06]		M401003
			6,001-8,000 [1,831-2,440]	48	0.0760 [1.93]		M401001
			8,001-10,000 [2,441-3,050]	49	0.0730 [1.85]		M401018

Table 23

Model	Market	Gas	Altitude	Burner Orifice			
			feet [meters]	No.	inches [mm]	Quantity	Part No.
50	T, G, A, H, J, K, R, U	Natural Gas	2,001-4,000 [610-1,220]	17	0.1730 [4.39]	2	M411374
			4,001-6,000 [1,221-1,830]	18	0.1695 [4.31]		M402988
			6,001-8,000 [1,831-2,440]	20	0.1610 [4.09]		M401002
			8,001-10,000 [2,441-3,050]	23	0.1510 [3.91]		M401020
	T, G, H, R	L.P. Gas	2,001-4,000 [610-1,220]	36	0.1065 [2.71]		M411375
			4,001-6,000 [1,221-1,830]	38	0.1015 [2.58]		M411376
			6,001-8,000 [1,831-2,440]	40	0.0980 [2.49]		M406361
			8,001-10,000 [2,441-3,050]	42	0.0935 [2.37]		M403017
	U	L.P. Gas	2,001-4,000 [610-1,220]	45	0.0820 [2.08]		M401027
			4,001-6,000 [1,221-1,830]	47	0.0785 [1.99]		M400999
			6,001-8,000 [1,831-2,440]	48	0.0760 [1.93]		M401001
			8,001-10,000 [2,441-3,050]	49	0.0730 [1.85]		M401018
	J	L.P. Gas	2,001-4,000 [610-1,220]	42	0.0935 [2.37]		M403017
			4,001-6,000 [1,221-1,830]	2.3 mm	0.0906 [2.30]		70070905
			6,001-8,000 [1,831-2,440]	43	0.0890 [2.26]		M406184
			8,001-10,000 [2,441-3,050]	44	0.0860 [2.18]		M401011

Table 24

Electrical Requirements

Electrical Requirements

	WARNING
- To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance other than cleaning the lint trap for dryers. Turning the controls to the OFF position does not disconnect this appliance from the power supply. - To reduce the risk of fire and electric shock, check with a qualified service person for proper grounding procedures. Improper connection of the equipment grounding conductor may result in a risk of electric shock. - Certain internal parts are intentionally not grounded and may present a risk of electric shock only during servicing. Service Personnel - Do not contact the following parts while the appliance is energized: Input/Output Board and Variable Frequency Drive, including the heat sinks. - This appliance shall be installed in accordance with the rules in force, and dryers used only in a sufficiently ventilated space. Consult technical instruction before installation and use of this appliance.	
W935	

	CAUTION
Outside of Europe, to reduce the risk of injury or component failure, if electrical supply is coming from a three phase service, DO NOT connect a "High Leg" or "Stinger Leg" to a single phase machine. On a three phase machine, if there is a "High Leg" or "Stinger Leg" it should be connected to L3.	
W938	

	WARNING
The appliance must not be supplied through an external switching device, such as a timer, or connected to a circuit that is regularly switched on and off by a utility.	
W943	

IMPORTANT: Electrical connections must be made by a qualified electrician using data on serial plate, installation manuals and wiring diagram provided with tumble dryer and according to local codes. Install a circuit breaker as close to the tumble dryer as possible. If more than one tumble dryer is being installed, a circuit breaker must be provided for each.

NOTE: Connect tumble dryer to an individual branch circuit not shared with lighting or other equipment.

NOTE: 3 Phase Tumble Dryers Only - Do not use fuses to avoid the possibility of "single phasing" and causing premature failure of the motors.

	WARNING
In case of servicing (or putting the tumble dryer out of order), disconnect the tumble dryer from the main supply by switching off the circuit breaker.	
W796	

Electrical Installation Requirements

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

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

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

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

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

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

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

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

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

Wiring Diagram

NOTE: Wiring diagram location: inside electrical box.

The wiring diagram part number is in the lower portion of the electrical data on the serial plate.

Wiring for Central Pay

Applicable for the following control suffixes (position 7 and 8 of the model number): BL, NL, VL and WL.

IMPORTANT: Tumble dryers may have one of two types of central pay configurations: a 12vDC self-contained version or an unpowered version requiring a customer-supplied power source and resistor. Refer to Central Pay Option diagram provided with tumble dryer for specifications. Incorrect application may cause component damage.

System Connections

Connection to central pay systems will be made in the rear junction box of the tumble dryer. For T30 and T45 models, connection for both the lower control and upper control will be made in the upper junction box.

Locate the harness with Black, Red, White with Red Stripe and Orange with Black Stripe wires. For T30 and T45 models, the upper and lower harness can be identified by a yellow label on the harness tubing indicating "UPPER" and a white label on the harness tubing indicating "LOWER".

The wire colors will be the same regardless of control type. Splice the after-market central pay system wires to the tumble dryer control wire harness as follows.

Wire Colors	Description
Red	Start Pulse Signal Input
Black	Start Pulse Signal Input
White with Red Stripe	"Machine Available" Signal Output
Orange with Black Stripe	"Machine Available" Signal Output

Start Pulse Requirements

All control types will consider a pulse valid if it is between 10 and 1000 milliseconds in length, with a minimum of 25 milliseconds between pulses.

Grounding Instructions

NOTE: To ensure protection against shock, this machine **MUST** be electrically grounded in accordance with the local codes, or in the absence of local codes, with the latest edition of the National Electrical Code ANSI/NFPA No. 70. In Canada the electrical connections are to be made in accordance with CSA C22.1 latest edition Canadian Electrical Code, or local codes. Electrical work should be done by a qualified electrician.

This machine must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electric shock by providing a path of least resistance for electric current. This machine must be connected to a grounded metal, permanent wiring system; or an equipment grounding conductor must be run with the circuit conductors and connected to the appropriate ground location.

- Metal conduit and/or BX cable is not considered ground.
- Connecting the Neutral from the electrical service box to the tumble dryer ground screw does not constitute a ground.

- A dedicated ground conduit (wire) must be connected between the electrical service box ground bar and machine ground screw.

	WARNING
To reduce the risk of electrical shock, de-energize the electrical circuit being connected to the tumble dryer before making any electrical connections. All electrical connections should be made by a qualified electrician. Never attempt to connect a live circuit.	
W409R1	

	CAUTION
Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.	
W071	

Service/Ground Location (Tumble Dryer)

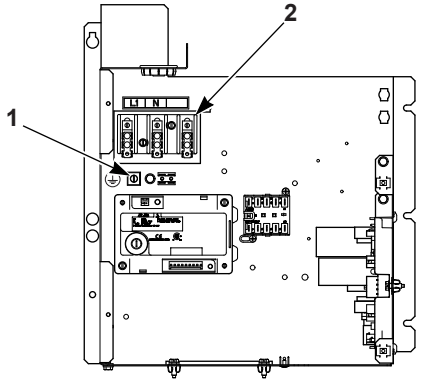
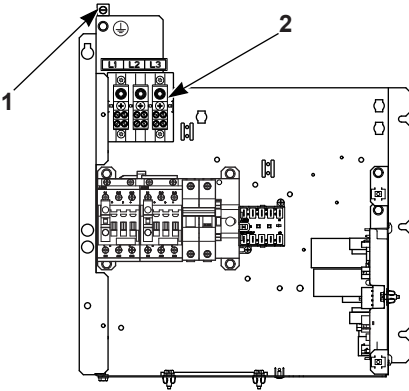
Model	Heat Source	Ground and Terminal Block Locations
30 50	Gas	 TMB2616N_SVG 1. Ground 2. Power Distribution Block

Table continues...

Model	Heat Source	Ground and Terminal Block Locations
30	Electric, low voltage Electric, high voltage	 TMB2620N_SVG NOTE: Connection required in upper and lower junction boxes. 1. Ground 2. Power Distribution Block

Grounding (Washer-Extractor)

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

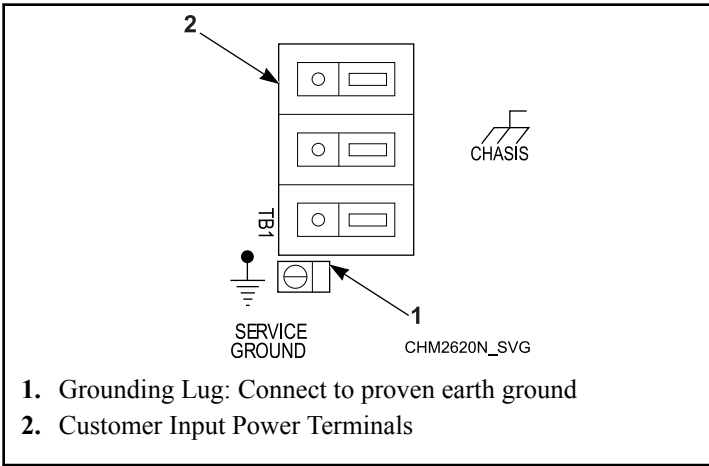


Figure 57

To Connect Electrical Service To Machine

NOTE: All machines require separate service connections for each upper and lower unit. Serial Plate ratings reflect current draw, breaker rating and conductor size recommendations per unit.

The following steps outline the procedure for connecting electrical service to the machine.

- 3 Phase Models – Each machine must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of “single phasing” and causing premature failure of the motor(s).
- Electrical service must be connected using the appropriate permanent rigid metal conduit system.
- Service conductors must be copper only.

For an existing service, determine your service voltage and conductor ampereage. Carefully review the machine serial plate ratings and Electrical Requirements section of this manual. If service is inadequate it must be upgraded by a qualified electrical contractor. Never connect an improper or inadequate service to any machine.

NOTE: The wiring diagram is located inside the junction or contactor box.

1. For new service, install a circuit breaker of proper voltage and current rating as close to each machine as possible.
2. Route service conduit from service breaker panel to machine service connection box. Conduit routing should not obstruct access for maintenance or servicing. Refer to Service/Ground Location.
3. Pull conductors through conduit and attach to circuit breaker and ground connection. Secure service ground wire to the machine grounding screw or lug. Attach service conductors to appropriately labeled positions on the machine terminal block. Make sure all connections are secure.

Electrical Specifications

NOTE: Wire sizing listed in this table is based on Article 310, Table 310.16 of the NEC; at 104°F [40°C] ambient temperature. Follow your local electrical codes. Use only copper conductors, rated for 194°F [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: Wire sizes were obtained from the Canadian Electrical Code for 75 C. wire and are intended for use as a guideline only. Electrical connections should be made by a qualified electrical contractor in accordance with all applicable local and national requirements.

NOTE: Electrical specifications below are subject to change without notice. Always refer to product serial plate for most current specifications of product being installed.



CAUTION

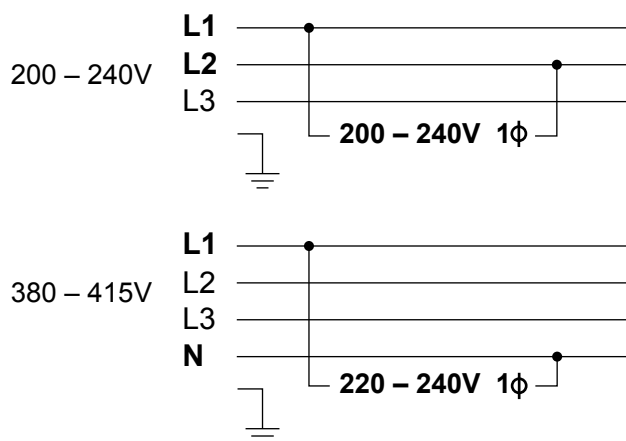
Use copper conductors only with the following rating when wiring appliance to electric supply: Dryer gas and steam heat models require 187°F (75°C) minimum. Dryer electric heat models require 194°F (90°C) minimum.

W936

NOTE: Connect this appliance to an individual branch circuit.

NOTE: 3 Phase Only – Each machine must be connected to its own individual branch circuit breaker, not fuses, to avoid the possibility of “single phasing” and causing premature failure of the motor(s).

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 58.



TMB2471N_SVG

Figure 58

30 Gas Models - Upper Pocket (Tumble Dryer)

Voltage Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker Rating Amps	Wire Size AWG [mm²]
B	100-120	50-60	1	L1, Neutral, and ground	8	15	14 [2.5]
X	200-240	50-60	1	Refer to <i>Figure 58</i>	5	10	14 [2.5]
			3	L1, L2, L3 and ground	3	10	
P	380-415	50-60	3	L1, L2, L3 and ground	3	10	14 [2.5]

Table 25

50 Gas Models - Upper Pocket (Tumble Dryer)

Voltage Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker Rating Amps	Wire Size AWG [mm²]
X	200-240	50-60	1	Refer to <i>Figure 58</i>	6.5	10	14 [2.5]
			3	L1, L2, L3 and ground	3	10	
P	380-415	50-60	3	L1, L2, L3 and ground	3	10	14 [2.5]

Table 26

30 Electric Models - Upper Pocket (Tumble Dryer)

Voltage Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker Rating Amps	Wire Size AWG [mm ²]
D *	200-208	50-60	1	Refer to <i>Figure 58</i>	46	60	6 [16]
F *	200-208	50-60	3	L1, L2, L3 and ground	61	80	4 [25]
E *	230-240	50-60	1	Refer to <i>Figure 58</i>	40	50	8 [10]
G *	230-240	50-60	3	L1, L2, L3 and ground	52	70	4 [25]
H **	380	50-60	3	L1, L2, L3 and ground	33	45	8 [10]
* Use with lower pocket X voltage. ** Use with lower pocket P voltage.							

Table 27

30 Models - Lower Pocket (Washer-Extractor)

Voltage Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker Rating Amps	Wire Size AWG [mm ²]
B	100-120	50-60	1	L1, Neutral and ground	V-speed 12 F-speed 10	15	12 [4]
X *	200	50-60	1	Refer to <i>Figure 58</i>	V-speed 7 F-speed 6	15	14 [2.5]
			3	L1, L2, L3 and ground	4		
P **	380-415	50-60	3	L1, L2, L3 and ground	3	15	14 [2.5]

Table 28 continues...

Voltage Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker Rating Amps	Wire Size AWG [mm ²]
* Use with upper pocket D, E, F, G voltages. ** Use with upper pocket H voltage.							

Table 28

50 Models - Lower Pocket (Washer-Extractor)

Voltage Code	Voltage	Cycle	Phase	Wire	Full Load Amps	Recommended Circuit Breaker Rating Amps	Wire Size AWG [mm ²] AWG
X	200-240	50-60	1	Refer to <i>Figure 58</i>	V-speed 8 F-speed 7	15	14 [2.5]
			3	L1, L2, L3 and ground	V-speed 5 F-speed 4.5		
P	380-415	50-60	3	L1, L2, L3 and ground	V-speed 4 F-speed 3.5	15	14 [2.5]

Table 29

Input Power Conditioning

The drive is suitable for direct connection to input power within the rated voltage of the drive. Listed in *Input Power Condition* 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	• 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 30

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	

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

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 *Electrical Specifications* section for model-specific circuit breaker requirements.

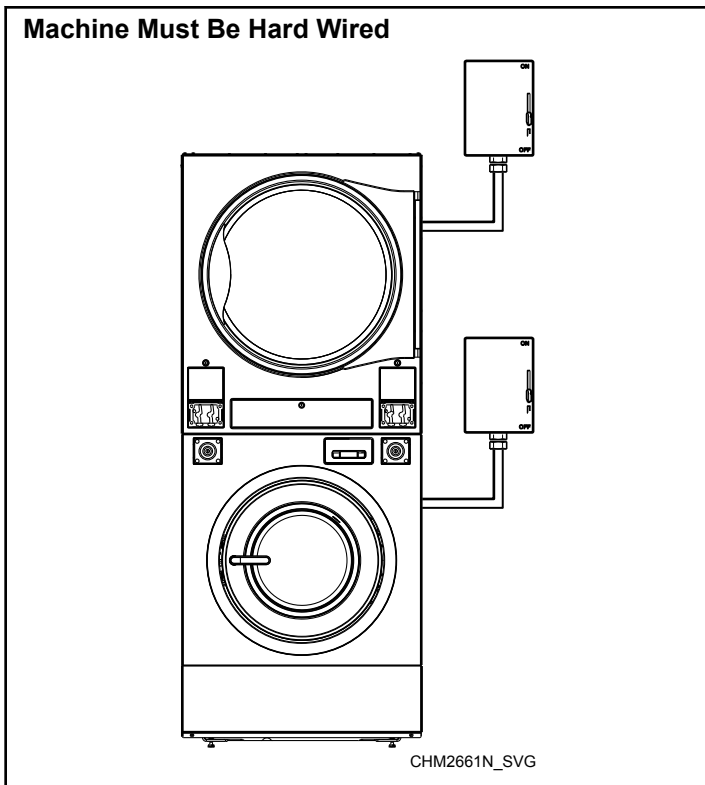


Figure 59

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 60*.

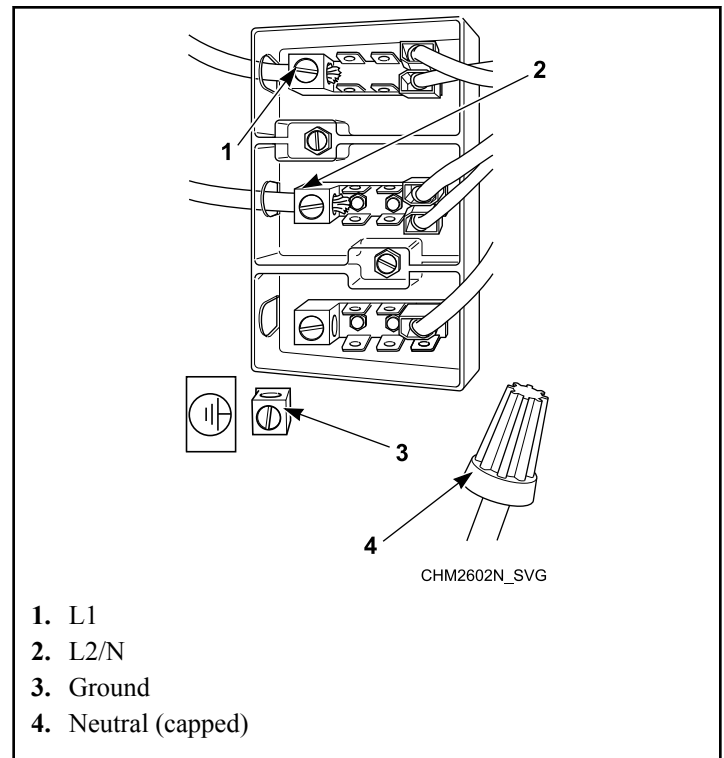


Figure 60

Three-Phase Connections

For three-phase input, connect L1, L2, L3 and Ground as shown in *Figure 61*.

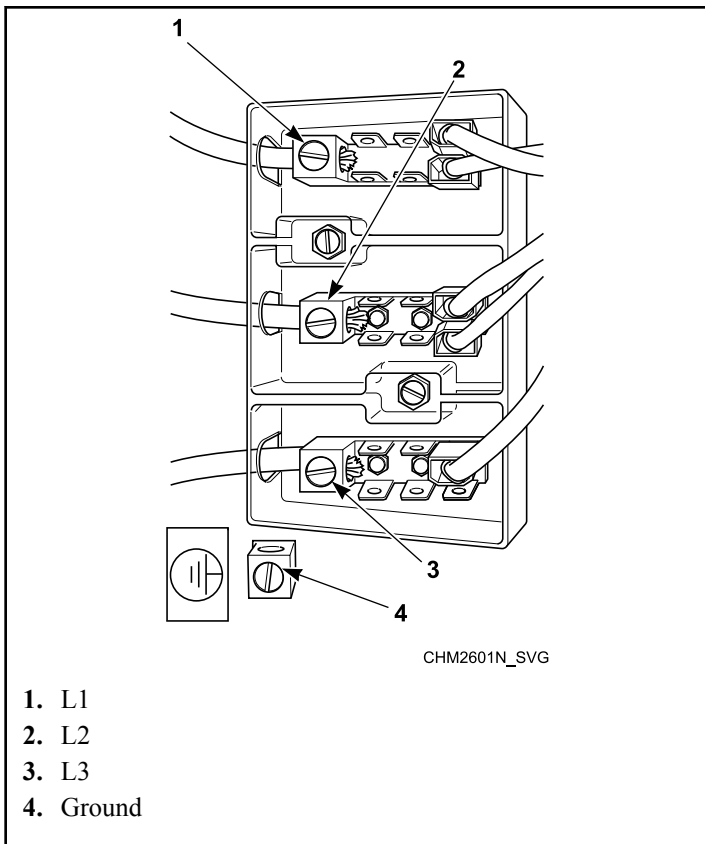


Figure 61

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

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.

Adjustments - Tumble Dryer

Adjustments



WARNING

To reduce the risk of electric shock, fire, explosion, serious injury or death:

- Disconnect electric power to the tumble dryer before servicing.
- Close gas shut-off valve to gas tumble dryer before servicing.
- Close steam valve to steam tumble dryer before servicing.
- Never start the tumble dryer with any guards/panels removed.
- Whenever ground wires are removed during servicing, these ground wires must be reconnected to ensure that the tumble dryer is properly grounded.

W002R1

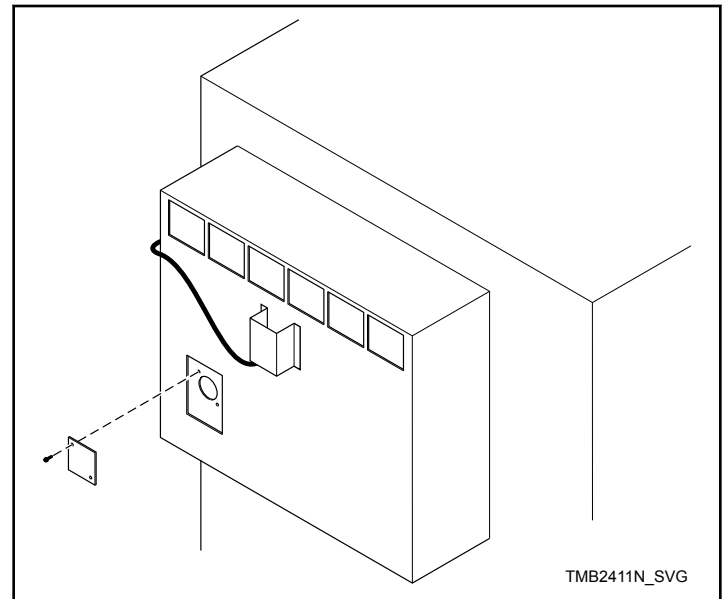


Figure 62

Gas Burner Air Shutter

NOTE: Air inlet shutters on the burner must be adjusted so sufficient air is metered into the system for proper combustion and maximum efficiency. Before adjusting the inlet shutters be sure that all lint is removed from lint compartments and lint screen.

Air shutter adjustments will vary from location to location and will depend on the vent system, number of units installed, make-up air and line gas pressure. Opening the shutter increases the amount of primary air supplied to the burner while closing the shutter decreases the primary air supply. Adjust air shutter as follows:

Refer to *Figure 62*.

1. Remove the burner inspection hole plate.

2. Start the tumble dryer and check the flame pattern. If the flame pattern is straight up, insufficient air is flowing through the tumble dryer. A flame pattern that flares to the right and left indicates no air is flowing through the tumble dryer. Correct air and gas mixture is indicated if the flame pattern is primarily blue, with small yellow tips, and bends to the right of the heater section. Too little air is indicated if the flame is yellow, lazy and smokey. (A whistling sound from burner could also be caused by an improper air shutter setting.)
3. To adjust the air shutter, loosen air inlet shutter adjusting screw.
4. Open or close air shutter as necessary to obtain proper flame intensity.
5. After air shutter is adjusted for proper flame, tighten air shutter adjusting screw securely.

Airflow Switch

The airflow switch is set at the factory for proper operation. No adjustment necessary.

The airflow switch operation may be affected by shipping wire tie still in place, lack of make-up air, or an obstruction in the exhaust duct. These should be checked and the required corrective action taken.



WARNING

The tumble dryer must not be operated if the airflow switch does not operate properly. Faulty airflow switch operation may cause an explosive gas mixture to collect in the tumble dryer.

W072R1

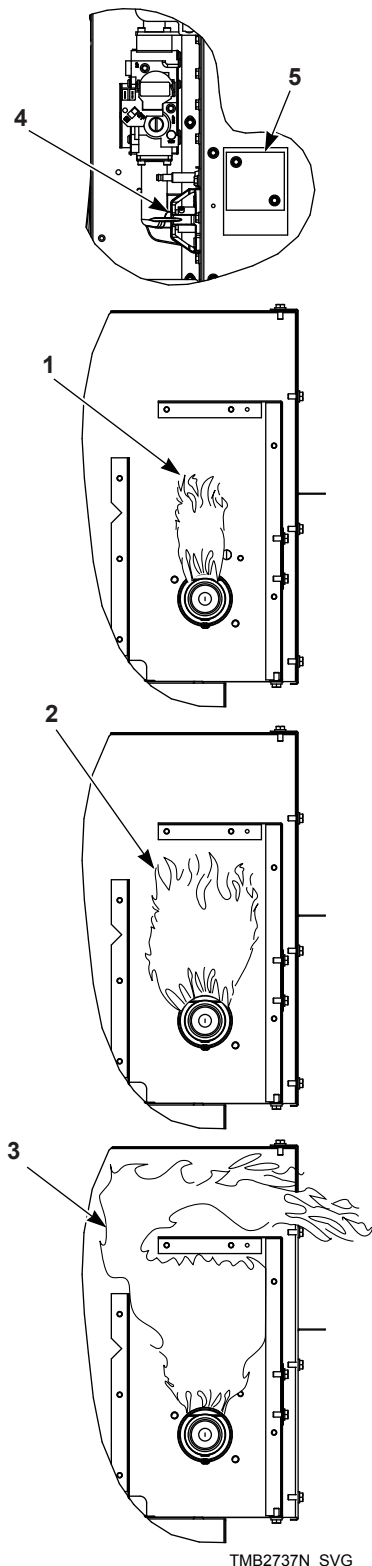
IMPORTANT: Airflow switch vane must remain closed during operation. If it opens and closes during the drying cycle, this indicates insufficient airflow through the tumble dryer. If switch remains open, or pops open and closed during the cycle, the heating system will shut off. The cylinder and fan will continue to operate even though the airflow switch is indicating insufficient airflow.

NOTE: To properly mount the airflow switch bracket, or in case of a load not drying, the airflow switch bracket may need to be checked for proper alignment. Be sure the locator pins are securely in their respective holes before tightening the bracket mounting screws. This will assure proper alignment of the airflow switch arm in the channel of the airflow switch bracket and prevent binding of the arm.

Loading Door Switch

The door switch should be adjusted so the cylinder stops when door is opened 0.79 inches [20 mm]. This switch is a normally open switch and is closed by the switch actuator when the door is closed. If adjustment is required, refer to *Figure 64* and proceed as follows:

1. Close door and start tumble dryer, slowly open loading door. Cylinder and heat system should shut off when door is open 0.79 inches [20 mm].
2. Slowly close the loading door. When door is 0.79 inches [20 mm] or less from being fully closed, the door switch actuating bracket (located on the door) should depress the button and the switch arm with an audible “click.”
3. If the actuating bracket does not operate the switch at the appropriate door closure, bend the actuating switch arm in or out to achieve proper actuation.



TMB2737N_SVG

1. Proper Airflow
2. Insufficient Airflow
3. No Airflow
4. Air Shutter Adjusting Screw
5. Burner Inspection Hole

Figure 63

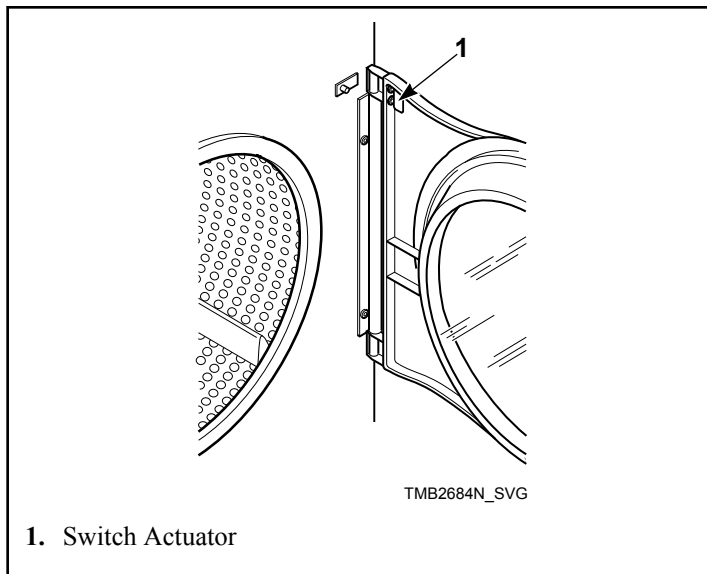


Figure 64

Manual Resettable Thermostat

NOTE: The manual resettable thermostat is located on blower housing top surface behind rear guard.

If thermostat trips, contact a qualified service technician.

Door Strike

The door strike must be adjusted to have sufficient tension to hold loading door closed against force of the load tumbling against it. There is proper adjustment of pull force when 8 to 15 pounds [35.6 N – 66.7 N] is required to open door.

If adjustment is required, refer to *Figure 65* and proceed as follows:

1. To adjust, open door, loosen acorn nut, and turn door strike screw in or out as required.
2. Retighten acorn nut.

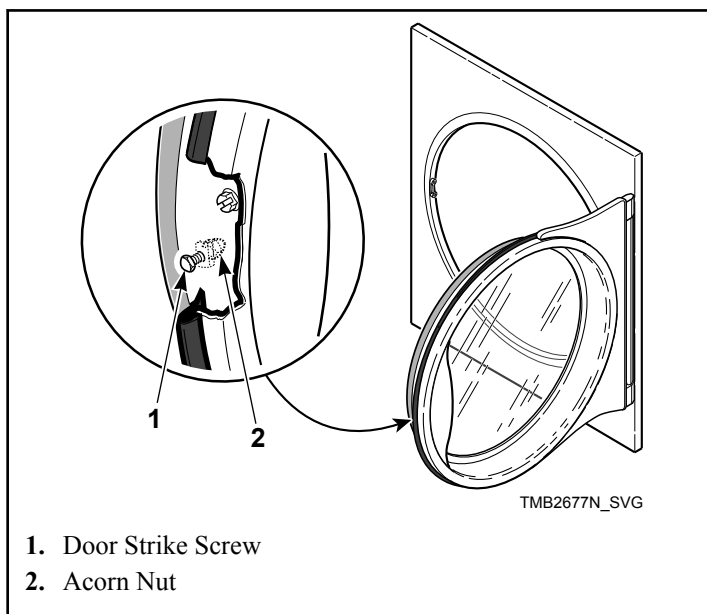


Figure 65

Before You Call for Service

Won't Start	Won't Heat	Clothes Not Dry	Possible Reason – Corrective Actions
•			Insert correct coin(s) or valid card if applicable.
•			Close the loading door tightly.
•			Close lint panel tightly.
•			Press the PUSH-TO-START or START pad/button.
•			Be sure power cord is plugged all the way into the electrical outlet and hard or direct wire connections are tight.
•			Check the main fuse and circuit breaker.
•			Check fuses located in the machine.
	•		Insufficient airflow.
	•		Gas shut-off valve in OFF position.
	•		Are controls properly set?
	•		Broken drive belt. Call the service person.
	•	•	Tumble dryer is in Cool Down Mode.
	•	•	Lint screen clogged. Clean lint screen.
	•	•	Exhaust duct to outside is blocked. Clean out.

Removing Machine from Service

If the machine is to be removed from service, perform the following steps where applicable:

1. Turn off electrical supply external to machine.
2. Turn off electrical disconnect on machine.
3. Turn off gas supply external to machine.
4. Turn off manual gas shut-off valve on machine.
5. Turn off steam supply external to machine.
6. Remove all electric, gas and steam connections.

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 66*. 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.

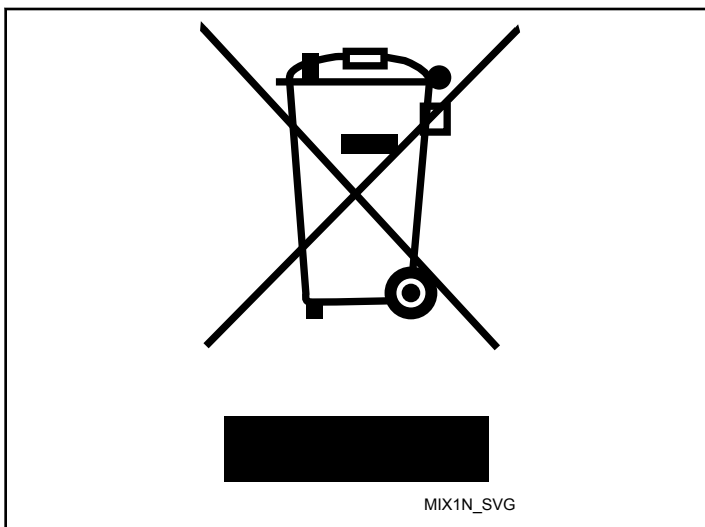


Figure 66