

AD-236 Installation Manual

Phase 7



WARNING:

FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury, death or property damage.

- 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 appliances.
 - 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.



AVERTISSEMENT:

RISQUE D'INCENDIE OU D'EXPLOSION

Le non-respect des avertissements de sécurité pourrait entraîner des blessures graves, la mort ou des dommages matériels.

- N'entreposer pas et n'utilisez pas d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.
- QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ
 - Ne tentez pas d'allumer d'appareil.
 - Ne touchez à aucun interrupteur. Ne vous servez pas des téléphones se trouvant dans le bâtiment où vous vous trouvez.
 - Évacuez la pièce, le bâtiment ou la zone.
 - Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
 - Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.
- L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.



American Dryer Corporation

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e-mail: mdl-service@whirlpool.com / www.adclaundry.com

Retain This Manual in a Safe Place for Future Reference

This product embodies advanced concepts in engineering, design, and safety. If this product is properly maintained, it will provide many years of safe, efficient, and trouble free operation.

Only qualified technicians should service this equipment.

OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment or specified in the installation manual included with the dryer.

The following “**FOR YOUR SAFETY CAUTION**” must be posted near the dryer 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.

POUR VOTRE SÉCURITÉ

Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables à proximité de cet appareil ou de tout autre appareil.

We have tried to make this manual as complete as possible and hope you will find it useful. The manufacturer reserves the right to make changes from time to time, without notice or obligation, in prices, specifications, colors, and material, and to change or discontinue models. The illustrations included in this manual may not depict your particular dryer exactly.

IMPORTANT

For your convenience, log the following information:

DATE OF PURCHASE _____ MODEL NO. **AD-236**

RESELLER'S NAME _____

Serial Number(s) _____

Replacement parts can be obtained from your reseller or the ADC factory. When ordering replacement parts from the factory, you can FAX your order to ADC at +1 (508) 678-9447 or telephone your order directly to the ADC Parts Department at +1 (269) 923-3000. Please specify the dryer model number and serial number in addition to the description and part number, so that your order is processed accurately and promptly.

These instructions are only valid if the following country code is on the appliance... If this code is not present on the appliance, it is necessary to refer to the technical instructions which will provide the necessary information concerning the modification of the appliance to the condition of use for the country.

In accordance with EN ISO 3166-1, the names of countries shall be represented by the following codes:

GB United Kingdom
IE Ireland

“IMPORTANT NOTE TO PURCHASER”

Information must be obtained from your local gas supplier on the instructions to be followed if the user smells gas. These instructions must be posted in a prominent location near the dryer.

In the State of Massachusetts, the following installation instructions apply:

- Installations and repairs must be performed by a qualified or licensed contractor, plumber, or gas fitter qualified or licensed by the State of Massachusetts.
- Acceptable Shut-off Devices: Gas Cocks and Ball Valves installed for use shall be listed.
- A flexible gas connector, when used, must not exceed 4 feet (121.9 cm).

IMPORTANT

YOU MUST DISCONNECT AND LOCKOUT THE ELECTRIC SUPPLY AND THE GAS SUPPLY OR THE STEAM SUPPLY BEFORE ANY COVERS OR GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, OR TESTING OF ANY EQUIPMENT PER OSHA (Occupational Safety and Health Administration) STANDARDS.

Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper operation.

Attention: Au moment de l'entretien des commandes, étiquetez tous les fils avant de les débrancher. Des erreurs de câblage peuvent entraîner un fonctionnement inadéquat.

CAUTION

DRYERS SHOULD NEVER BE LEFT UNATTENDED WHILE IN OPERATION.

WARNING

CHILDREN SHOULD NOT BE ALLOWED TO PLAY ON OR NEAR THE DRYER(S).

CHILDREN SHOULD BE SUPERVISED IF NEAR DRYERS IN OPERATION.

FOR YOUR SAFETY

DO NOT DRY MOP HEADS IN THE DRYER.

DO NOT USE DRYER IN THE PRESENCE OF DRY CLEANING FUMES.

WARNING

UNDER NO CIRCUMSTANCES should the dryer door switches, lint drawer switch, or heat safety circuit ever be disabled.

DO NOT MODIFY THIS APPLIANCE.

The dryer *must never be* operated with any of the back guards, outer tops, or service panels removed. **PERSONAL INJURY OR FIRE COULD RESULT.**

DRYER MUST NEVER BE OPERATED WITHOUT THE LINT FILTER/SCREEN IN PLACE, EVEN IF AN EXTERNAL LINT COLLECTION SYSTEM IS USED.

If a hi-limit switch trips, a service call is required to investigate the reason and resolve the issue.

IMPORTANT

PLEASE OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment and/or specified in the installation manual included with the dryer.

Dryer *must not be* installed or stored in an area where it will be exposed to water and/or weather.

The wiring diagram for the dryer is located in the front electrical control box area.

IMPORTANT

Dryer *must be* installed in a location/environment, which the ambient temperature remains between 40° F (4.44° C) and 130° F (54.44° C).

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SECTION I

SAFETY PRECAUTIONS

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 loss of life.

WARNING: The dryer *must never be* operated with any of the back guards, outer tops, or service panels removed. **PERSONAL INJURY OR FIRE COULD RESULT.**

1. **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
2. **DO NOT** spray aerosols in the vicinity of this appliance while it is in operation.
3. Purchaser/user should consult the local gas supplier for proper instructions to be followed in the event the user smells gas. The instructions **should be** posted in a prominent location.
4. WHAT TO DO IF YOU SMELL GAS:
 - a. **DO NOT** try to light any appliance.
 - b. **DO NOT** touch any electrical switch.
 - c. **DO NOT** use any phone in your building.
 - d. Clear the room, building, or area of **ALL** occupants.
 - e. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - f. If you **cannot** reach your gas supplier, call the fire department.
5. Installation and service **must be** performed by a qualified installer, service agency, or gas supplier.
6. Dryer(s) **must be** exhausted to the outdoors.
7. Although **ADC** produces a very versatile dryer, there are some articles that, due to fabric composition or cleaning method, **should not be** dried in it.

WARNING: Dry only water washed fabrics. **DO NOT** dry articles spotted or washed in dry cleaning solvents, a combustible detergent, industrial chemicals, or "all purpose" cleaner. **EXPLOSION COULD RESULT.**

WARNING: **DO NOT** dry rags or articles coated or contaminated with gasoline, kerosene, oil, paint, or wax. **EXPLOSION COULD RESULT.**

WARNING: **DO NOT** dry mop heads. Contamination by wax or flammable solvents will create a fire hazard.

WARNING: *DO NOT* use heat for drying articles that contain plastic, foam, sponge rubber, or similarly textured rubberlike materials. Drying in a heated tumbler may damage plastics or rubber and may be a fire hazard.

8. The possible presence of residual quantities of aggressive or decomposed chemicals in the load may produce damage to the machine and harmful fumes.
9. A program **should be** established for the inspection and cleaning of lint in the burner area, exhaust ductwork, and area around the back of the dryer. The frequency of inspection and cleaning can best be determined from experience at each location.

WARNING: The collection of lint in the burner area and exhaust ductwork can create a potential fire hazard.

10. For personal safety, the dryer **must be** electrically grounded in accordance with local codes and/or National Electric Code ANSI/NFPA 70, or in Canada, Canadian Electric Code CSA C22.1.

NOTE: Failure to electrically ground the dryer will VOID THE WARRANTY.

11. **UNDER NO CIRCUMSTANCES** should the dryer door switches, lint drawer switch, or heat safety circuit ever be disabled.

WARNING: PERSONAL INJURY OR FIRE COULD RESULT.

12. This dryer is not to be used in the presence of dry cleaning solvents or fumes.
13. Remove articles from the dryer as soon as the drying cycle has been completed.

WARNING: Articles left in the dryer after the drying and cooling cycles have been completed can create a fire hazard.

14. **READ AND FOLLOW ALL CAUTION AND DIRECTION LABELS ATTACHED TO THE DRYER.**

15. For safety, proper operation, and optimum performances, the dryer **must not be** operated with a load less than sixty-six percent (66%), 20 lb (18.14 kg) of its rated capacity.

WARNING: YOU MUST DISCONNECT AND LOCKOUT THE ELECTRIC SUPPLY AND THE GAS SUPPLY BEFORE ANY COVERS OR GUARDS ARE REMOVED FROM THE MACHINE TO ALLOW ACCESS FOR CLEANING, ADJUSTING, INSTALLATION, OR TESTING OF ANY EQUIPMENT PER OSHA (Occupational Safety and Health Administration) STANDARDS.

IMPORTANT: Dryer *must be* installed in a location/environment, which the ambient temperature remains between 40° F (4.44° C) and 130° F (54.44° C).

WARNING: Disconnect power before resetting the hi-limit. The hi-limit is located on the top front of the lint box. Press and release and the hi-limit will reset.

CE ONLY

IMPORTANT: This appliance must only be installed and operated in the country of destination indicated on the dryer’s data plate. If the appliance is to be installed and operated in a country other than the one indicated on the data plate, a data plate amendment must be obtained from American Dryer Corporation.

IEC335 applies.

NOTES _____

SECTION II

SPECIFICATIONS

MAXIMUM CAPACITY (DRY WEIGHT) PER POCKET		30 lb	13.6 kg
TUMBLER DIAMETER		27-1/4"	69.22 cm
TUMBLER DEPTH		30"	76.2 cm
TUMBLER VOLUME PER POCKET		10.1 cu ft	286 L
TUMBLER/DRIVE MOTOR PER POCKET		1/2 hp	0.373 kW
BLOWER/FAN MOTOR PER POCKET		1/2 hp	0.373 kW
DOOR OPENING (DIAMETER)		21-1/2"	54.61 cm
DOOR SILL HEIGHT TOP POCKET / BOTTOM POCKET		51-1/4" / 13-1/2"	130.2 cm / 34.3 cm
WATER CONNECTION		N / A	
DRYERS PER 20'/40' CONTAINER		11 / 22	
DRYERS PER 48'/53' TRUCK		30 / 33	
GAS	VOLTAGE AVAILABLE	120-240V 1,3ø 2,3w	50/60 Hz
	APPROXIMATE NET WEIGHT	850 lb	385.5 kg
	APPROXIMATE SHIPPING WEIGHT	900 lb	408.2 kg
	AIRFLOW PER POCKET 60 Hz	400 cfm	11.33 cmm
	50 Hz	333 cfm	9.44 cmm
	HEAT INPUT PER POCKET	80,000 Btu/hr	20,160 kcal/hr
	EXHAUST CONNECTION (DIAMETER)	8"	20.32 cm
	COMPRESSED AIR CONNECTION	N / A	
	COMPRESSED AIR VOLUME	N / A	
	INLET PIPE CONNECTION	3/4" M.N.P.T.	
ELECTRIC	VOLTAGE AVAILABLE	N / A	
	APPROXIMATE NET WEIGHT		
	APPROXIMATE SHIPPING WEIGHT		
	AIRFLOW PER POCKET		
	EXHAUST CONNECTION (DIAMETER) PER POCKET		
	COMPRESSED AIR CONNECTION		
	COMPRESSED AIR VOLUME		
	OVEN SIZE PER POCKET		
	kW Btu/hr kcal/hr		
STEAM	VOLTAGE AVAILABLE	N / A	
	APPROXIMATE NET WEIGHT		
	APPROXIMATE SHIPPING WEIGHT		
	AIRFLOW PER POCKET		
	STEAM CONSUMPTION PER POCKET		
	OPERATING STEAM PRESSURE		
	EXHAUST CONNECTION (DIAMETER) PER POCKET		
	COMPRESSED AIR CONNECTION		
	COMPRESSED AIR VOLUME		
	BOILER HORSEPOWER (NORMAL LOAD) PER POCKET		
	SUPPLY CONNECTION PER POCKET		
	RETURN CONNECTION PER POCKET		

Shaded areas are stated in metric equivalents

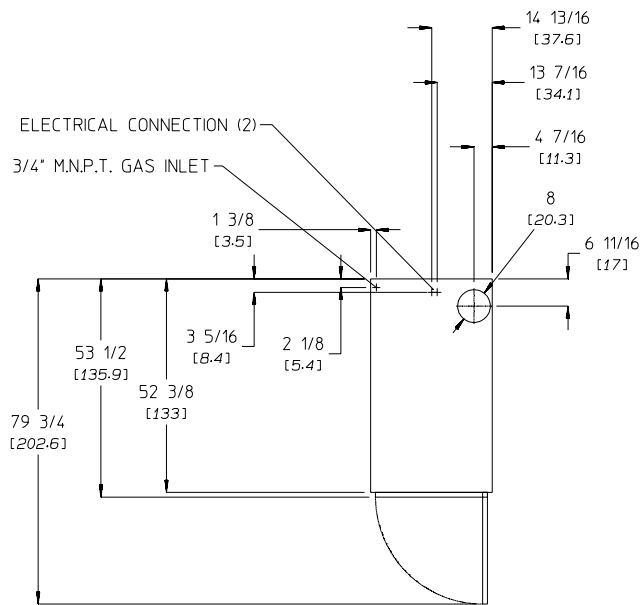
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NOTE: ADC reserves the right to make changes in specifications at any time without notice or obligation.

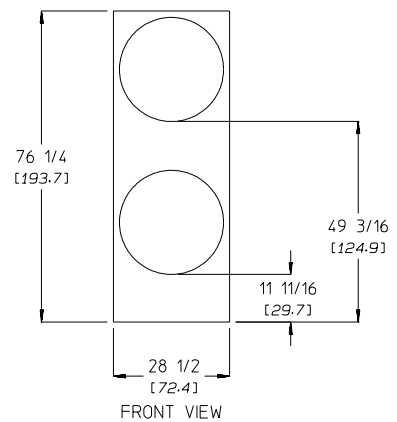
SPECIFICATIONS

DRYER NOTES:

- ° DUCTWORK SIZE VARIES WITH INSTALLATION CONDITIONS.
- ° EXHAUST STATIC PRESSURE MUST BE NO LESS THAN 0 AND MUST NOT EXCEED 0.3" (0.74 MB) WATER COLUMN.



PLAN VIEW



FRONT VIEW

NOTE: ADC reserves the right to make changes in specifications at any time without notice or obligation.

SECTION III

INSTALLATION PROCEDURES

Installation **should be** performed by competent professional in accordance with local, state, and country codes. In the absence of these codes, the installation **must conform** to applicable American National Standards: National Fuel Gas Code ANSI Z223.1/NFPA 54 and National Electric Code ANSI/NFPA 70, or in Canada, the installation **must conform** to applicable Canadian Standards: Natural Gas and Propane Installation Code CSA B149.1 and Canadian Electric Code CSA C22.1.

A. UNPACKING / SETTING UP

Remove protective shipping material (i.e., plastic wrap and/or optional shipping box) from dryer.

NOTE: The access keys for the service doors are included in the information packet shipped in the tumbler. These keys **should be** removed and put in a safe place, yet made accessible because they **will be** needed throughout various phases in the installation of the dryer.

Dryers are shipped with a coin box and coin box faceplate ONLY. The coin box lock is not included and **must be** purchased elsewhere or the lock can be ordered as a parts order from the **ADC** Parts Department at +1 (269) 923-3000.

The dryer can be moved to its final location while still attached to the skid or with the skid removed. To unskid the dryer, locate and remove the four (4) bolts securing the base of the dryer to the wooden skid. Two (2) are at the rear of the base and two (2) are located in the front. Once the bolts are removed, slide the dryer off of the skid.

With the skid removed, to make it easier to slide the dryer into its final position, slightly lower **ALL** the leveling legs so that the dryer will slide on the legs instead of the base frame. The dryer is equipped with four (4) leveling legs, one (1) at each corner of the dryer base.

B. LOCATION REQUIREMENTS

Before installing the dryer, ensure the location conforms to local codes and ordinances. In the absence of such codes or ordinances the location **must conform** with National Fuel Gas Code ANSI Z223.1/NFPA 54, or in Canada, the installation **must conform** to applicable Canadian Standards: Natural Gas and Propane Installation Code CSA B149.1.

1. The dryer **must be** installed on a sound level floor capable of supporting its weight. Carpeting **must be** removed from the floor area that the dryer is to rest on.

IMPORTANT: “The dryer ***must be*** installed on noncombustible floors only.”

2. The dryer **must not be** installed or stored in an area where it will be exposed to water and/or weather.
3. The dryer is for use in noncombustible locations.
4. Provisions for adequate air supply **must be** provided as noted in this manual (refer to **Fresh Air Supply Requirements** in Section D).
5. Clearance provisions **must be** made from combustible construction as noted in this manual (refer to **Dryer Enclosure Requirements** in Section C).
6. Provisions **must be** made for adequate clearances for servicing and for operation as noted in this manual (refer to **Dryer Enclosure Requirements** in Section C).
7. The dryer **must be** installed with a proper exhaust duct connection to the outside as noted in this manual (refer to **Exhaust Requirements** in Section E).
8. The dryer **must be** located in an area where correct exhaust venting can be achieved as noted in this manual (refer to **Exhaust Requirements** in Section E).

IMPORTANT: The dryer ***should be*** located where a minimum amount of exhaust duct will be necessary.

9. The dryer **must be** installed with adequate clearance for air openings into the combustion chamber.

CAUTION: This dryer produces combustible lint and ***must be*** exhausted to the outdoors. Every 6 months, inspect the exhaust ducting and remove any lint build up.

IMPORTANT: The dryer ***must be*** installed in a location/environment, which the ambient temperature remains between 40° F (4.44° C) and 130° F (54.44° C).

C. DRYER ENCLOSURE REQUIREMENTS

Bulkheads and partitions **must be** made of noncombustible materials and **must be** located a minimum of 12-inches (30.48 cm) above the dryer outer top, except along the front of the dryer which may be partially closed in if desired. It is suggested that the dryer be positioned about 2 feet (0.61 meters) away from the nearest obstruction, for ease of installation, maintenance, and service (to be measured from the back guard).

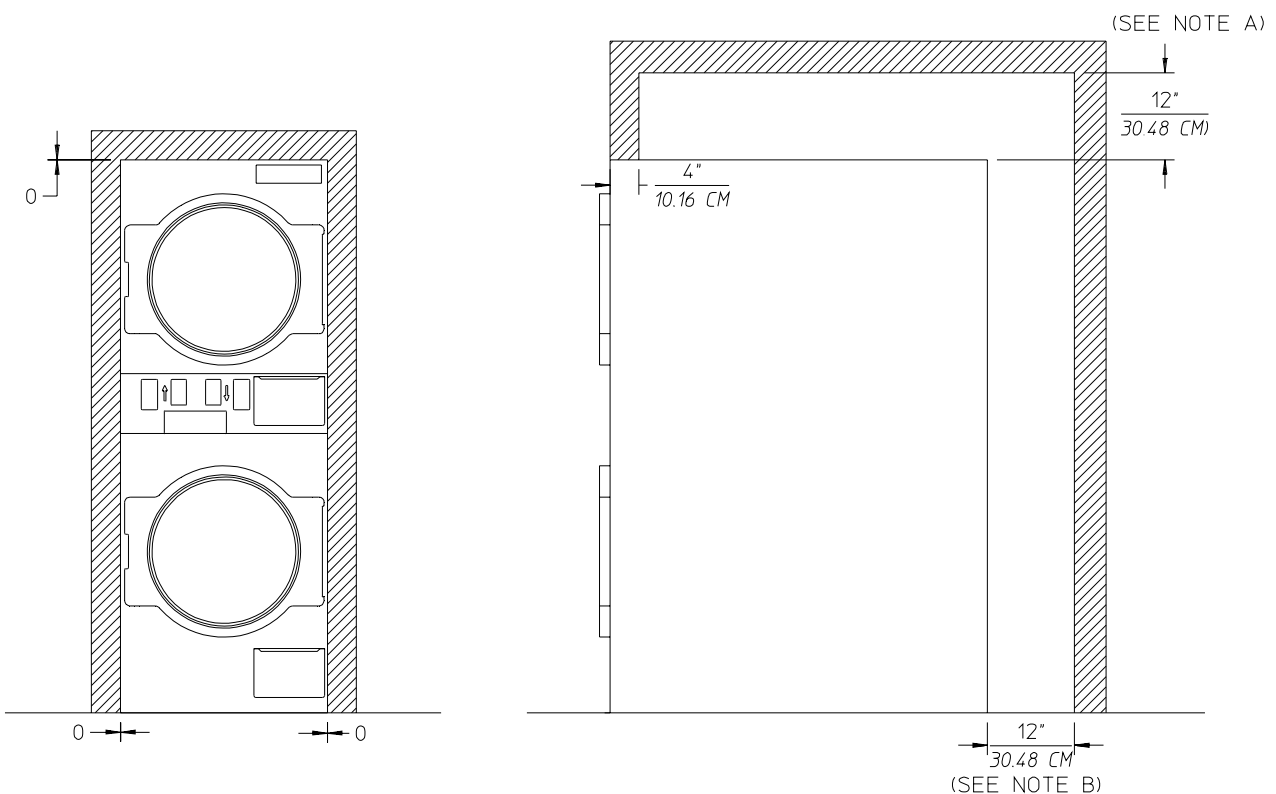
NOTE: Allowances **must be** made for opening the control door.

Dryers may be positioned sidewall to sidewall. However, a 1/16" (1.5875 mm) minimum allowance **must be** made for the opening and closing of the control door. Refer to the **illustration** below for details.

NOTE: Air considerations are important for proper and efficient operation.

IMPORTANT: When fire sprinkler systems are located above the dryers, a minimum of 18-inches (45.72 cm) above the dryer console (module) is required.

CLEARANCES SHOWN ARE MINIMUM DIMENSIONS TO NEAREST COMBUSTIBLE MATERIALS.



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NOTES:

A. MINIMUM OF 12" (30.48 CM) CLEARANCE IS ACCEPTABLE FOR EASE OF INSTALLATION AND SERVICE (POWER CONNECTIONS), AT LEAST 18" (45.72 CM) IS RECOMMENDED.

B. MINIMUM OF 12" (30.48 CM) CLEARANCE IS ACCEPTABLE FOR EASE OF INSTALLATION, MAINTANCE AND SERVICE, AT LEAST 24" (61 CM) IS RECOMMENDED.

D. FRESH AIR SUPPLY REQUIREMENTS

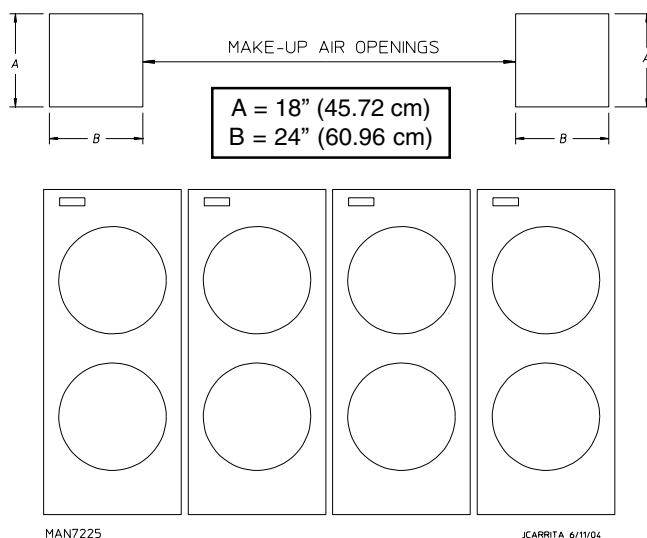
This appliance may only be installed in a room that meets the appropriate ventilation requirements specified in the national installation regulations.

When the dryer is operating, it draws in room air, heats it, passes this air through the tumbler, and exhausts it out of the building. Therefore, the room air **must be** continually replenished from the outdoors. If the make-up air is inadequate, drying time and drying efficiency will be adversely affected. Ignition problems and sail switch “fluttering” problems may result, as well as premature motor failure from overheating.

Air supply (make-up air) **must be** given careful consideration to ensure proper performance of each dryer. An unrestricted source of 800 cfm (22.66 cmm) is necessary for each dryer. As a general rule, an unrestricted air entrance from the outdoors (atmosphere) of a minimum of 1-1/2 square feet (0.41 square meters) is required for each dryer. The area **must be** enlarged if louvers or registers cover the openings. The dryer **must be** installed with provisions for adequate combustion and make-up air supply.

To compensate for the use of registers or louvers used over the openings, this make-up air **must be** increased by approximately thirty-three percent (33%). Make-up air openings **should not be** located in an area directly near where exhaust vents exit the building.

It is not necessary to have a separate make-up air opening for each dryer. Common make-up air openings are acceptable. However, they **must be** set up in such a manner that the make-up air is distributed equally to **ALL** the dryers.



EXAMPLE: For a bank of four (4) dryers, a total make-up air opening of 6 square feet (0.55 square meters) is required. Two (2) unrestricted openings measuring 18-inches by 24-inches (45.72 cm by 60.96 cm) are acceptable.

Allowances **must be** made for remote or constricting passageways or where dryers are located at excessive altitudes or predominantly low pressure areas.

IMPORTANT: Make-up air **must be** provided from a source free of dry cleaning solvent fumes. Make-up air that is contaminated by dry cleaning solvent fumes will result in irreparable damage to the motors and other dryer components.

NOTE: Component failure due to dry cleaning solvent fumes will VOID THE WARRANTY.

E. EXHAUST REQUIREMENTS

Exhaust ductwork **should be** designed and installed by a qualified professional. Improperly sized ductwork will create excessive back pressure which results in slow drying, increased use of energy, overheating of the dryer, and shut down of the burner by the airflow (sail) switches, burner hi-limits, or tumbler hi-limit thermostats. The dryer **must be** installed with a proper exhaust duct connection to the outside.

The design of the flue system **shall be** such that any condensate formed when operating the appliance from cold shall either be retained and subsequently re-evaporated or discharged.

CAUTION: This dryer produces combustible lint and **must be** exhausted to the outdoors.

**CAUTION: IMPROPERLY SIZED OR INSTALLED EXHAUST DUCTWORK CAN
CREATE A POTENTIAL FIRE HAZARD.**

The ductwork **should be** laid out in such a way that the ductwork travels as directly as possible to the outdoors with as few turns as possible.

1. Single Dryer Venting

Where possible, it is suggested to provide a separate exhaust duct for each dryer. The exhaust ductwork **should be** laid out in such a way that the ductwork travels as directly as possible to the outdoors with as few turns as possible. It is suggested that the use of 90° turns be avoided; use 30° and/or 45° bends instead. The radius of the elbows **should preferably be** 1-1/2 times the diameter of the duct. The shape of the ductwork is not critical as long as the minimum cross-sectional area is provided.

IMPORTANT: Exhaust back pressure measured by a manometer/magnehelic in the exhaust duct **must be** no less than 0 and **must not exceed** 0.3 inch water column (0.74 mb) with both tumblers operating.

NOTE: It is recommended that exhaust or booster fans not be used in the exhaust ductwork system except where necessary to maintain exhaust back pressure (in the exhaust duct) between zero and 0.3 inch water column with both tumblers operating. Where employed, booster fans must not activate the dryer airflow proving switch (sail switch) when the dryer **is not** in operation.

It is suggested that the ductwork from each dryer **must not exceed** 20 feet (6.1 meters) with no more than two (2) elbows. If the ductwork exceeds 20 feet (6.1 meters) or has numerous elbows, the cross-sectional area of the ductwork **must be** increased in proportion to the length or number of elbows in it.

IMPORTANT: For extended ductwork runs, the cross-sectional area of the ductwork can only be increased to an extent. When the ductwork approaches the maximum limits as noted in this manual, a professional heating, ventilating, and air-conditioning (HVAC) firm **should be** consulted for proper venting information.

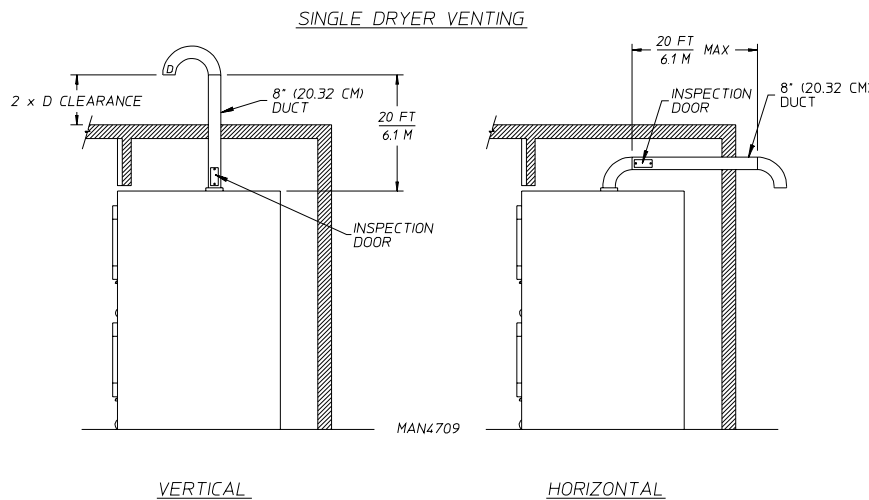
NOTE: As per the National Fuel Gas Code, "Exhaust ducts for Type 2 clothes dryers shall be constructed of sheet metal or other noncombustible material. Such ducts shall be equivalent in strength and corrosion resistance to ducts made of galvanized sheet steel not less than 0.0195 inches (26 gauge [0.5 mm]) thick."

ALL ductwork **should be** smooth inside with no projections from sheet metal screws or other obstructions, which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. **ALL** ductwork joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust ductwork for periodic inspection and cleaning of lint from the ductwork.

NOTE: When the exhaust ductwork passes through a wall, ceiling, or roof made of combustible materials, the opening **must be** 2-inches (5.08 cm) larger than the duct (all the way around). The duct **must be** centered within this opening.

Outside Ductwork Protection

To protect the outside end of the horizontal ductwork from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the ductwork travels vertically up through the roof, it **should be** protected from the weather by using a 180° turn to point the opening downward. In either case, allow at least twice the diameter of the duct between the duct opening and the nearest obstruction.



IMPORTANT: DO NOT use screens, louvers, or caps on the outside opening of the exhaust ductwork.

2. Multiple Dryer (Common) Venting

If it is not feasible to provide a separate exhaust duct for each dryer, ducts from individual dryers may be channeled into a “common main duct.” The individual ducts should enter the bottom or the side of the main duct at an angle not more than 45° in the direction of the airflow. The main duct **should be** tapered with the diameter increasing before each individual 8-inch (20.32 cm) duct is added.

IMPORTANT: No more than eight (8) dryers **should be** connected to one (1) main common duct (refer to the **illustration** on the following page).

The main duct may be any shape as long as the minimum cross-sectional area is provided. The **illustration** on the following page shows the minimum cross-sectional area for multiple dryer venting. These figures **must be** increased in proportion as the result of whatever changes or additions are made to this ductwork run. Two examples are if ductwork length from last dryer to where duct exits the building exceeds limits noted (20 feet [6.1 meters]) or, if ductwork runs from last dryer to where duct exits the building has more than one (1) elbow (including outside protection).

F. ELECTRICAL INFORMATION

1. Electrical Requirements

ALL electrical connections must be made by a properly licensed and competent electrician. This is to ensure that the electrical installation is adequate and conforms to local, state, and national regulations or codes of the country of destination. In the absence of such codes, **ALL** electrical connections, materials, and workmanship **must conform** to the applicable requirements of National Electric Code ANSI/NFPA 70, or in Canada, Canadian Electric Code CSA C22.1.

For personal safety, the dryer **must be** electrically grounded in accordance with local codes and/or National Electric Code ANSI/NFPA 70, or in Canada, Canadian Electric Code CSA C22.1.

IMPORTANT: Failure to comply with these codes or ordinances, and/or the requirements stipulated in this manual can result in personal injury or component failure.

NOTE: Component failure due to improper installation will VOID THE WARRANTY.

Each pocket **should be** connected to an independently protected branch circuit. The dryer **must be** connected with copper wire only. ***DO NOT use aluminum wire, it could create a fire hazard.*** The copper conductor wire/cable **must be** of proper ampacity and insulation in accordance with electric codes for making **ALL** service connections.

NOTE: The use of aluminum wire will VOID THE WARRANTY.

IMPORTANT: A separate protected circuit **must be** provided to each pocket.

NOTE: An individual ground circuit must be provided to each dryer, do not daisy chain.

IMPORTANT: The dryer **must be** connected to the electric supply shown on the data label. In the case of 208 VAC or 240 VAC, the supply voltage must match the electric service specifications of the data label **exactly**.

IMPORTANT: The wire size **must be** properly sized to handle the related current.

WARNING: **208 VAC AND 240 VAC ARE NOT THE SAME**. Any damage done to dryer components due to improper voltage connections will automatically VOID THE WARRANTY.

NOTE: Component failure due to improper voltage application will VOID THE WARRANTY.

NOTE: ADC reserves the right to make changes in specifications at any time without notice or obligation.

2. Electrical Service Specifications

GAS MODELS					
ELECTRICAL SERVICE SPECIFICATIONS (PER POCKET)					
IMPORTANT: 208 VAC AND 240 VAC ARE NOT THE SAME. When ordering, <i>specify exact voltage</i>. NOTES: A. When fuses are used they must be dual element, time delay, current limiting, class RK1 or RK5 ONLY. Calculate/determine correct fuse value, by applying either local and/or National Electrical Codes to listed appliance amp draw data. B. Circuit breakers are thermal-magnetic (industrial) motor curve type ONLY. For others, calculate/verify correct breaker size according to appliance amp draw rating and type of breaker used. C. Circuit breakers for 3-phase (3Ø) dryers must be 3-pole type.					
SERVICE VOLTAGE	PHASE	WIRE SERVICE	APPROX. AMP DRAW		CIRCUIT BREAKER
			60 Hz	50 Hz	
120	1Ø	2	8.7	—	15
208	1Ø	2	5.2	—	15
240	1Ø	2	4.8	4.7	15
208	3Ø	3	3.0	—	15
240	3Ø	3	3.2	—	15

12/5/14

3. Grounding

A ground (earth) connection **must be** provided and installed in accordance with local, state, and national regulations or codes of the country of destination. In the absence of these codes, grounding **must conform** to applicable requirements of National Electric Code ANSI/NFPA 70, or in Canada, the installation **must conform** to applicable Canada Standards: Canadian Electric Code CSA C22.1. The ground connection may be to a proven earth ground at the location service panel.

For added personal safety, when possible, it is suggested that a separate ground wire (sized per local codes) be connected from the ground connection of the dryer to a grounded cold water pipe. **DO NOT ground to a gas pipe or hot water pipe**. The grounded cold water pipe must have metal-to-metal connection **ALL** the way to the electrical ground. If there are any nonmetallic interruptions, such as, a meter, pump, plastic, rubber, or other insulating connectors, they **must be** jumped out with no. 4 copper wire and securely clamped to bare metal at both ends.

IMPORTANT: For personal safety and proper operation, the dryer **must be** grounded.

Provisions are made for ground connection in each dryer at the electrical service connection area.

4. Electrical Connections

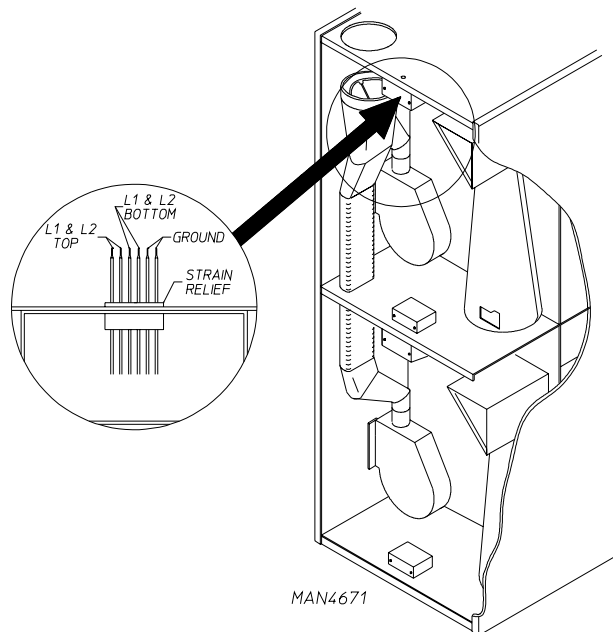
A wiring diagram is located inside the control box for connection data.

If local codes permit, power to the dryer can be made by the use of a flexible U.L. listed power cord/pigtail (wire size **must conform** to rating of dryer), or the dryer can be hard wired directly to the service breaker panel. In both cases, a strain relief **must be** installed where the wiring enters the dryer.

IMPORTANT: A separate protected circuit **must be** provided to each pocket.

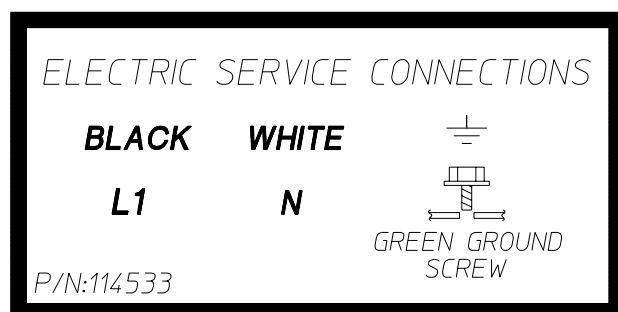
Single-Phase (1Ø) Hookup

The electrical input connections on **ALL** single-phase (1Ø) dryers are made into the junction box located at the upper rear of the dryer. A separate circuit servicing each pocket **must be** provided.



Single-Phase Electrical Lead Connections		
Black + Positive	White or Red + Neutral or L2	Green + Ground

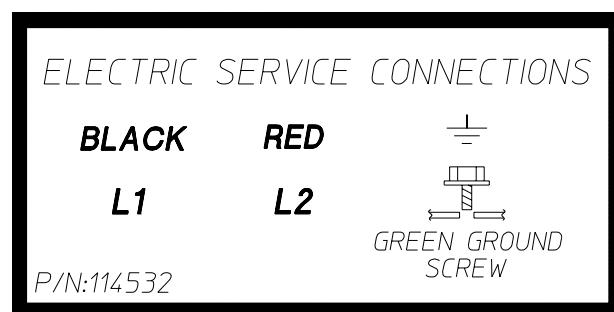
FOR 110V APPLICATIONS



MAN6886

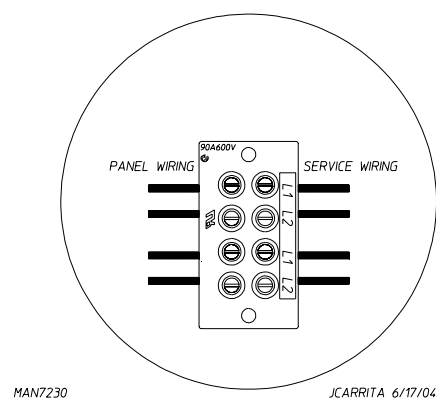
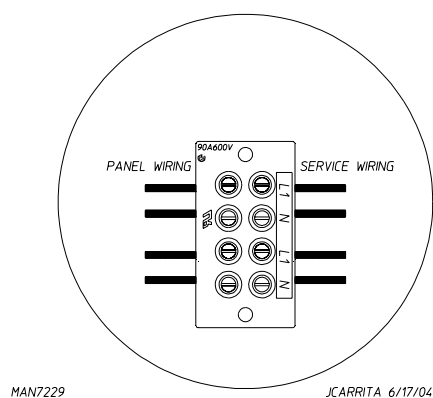
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FOR 208-230/240V APPLICATIONS



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SGAGNON 9/15/03



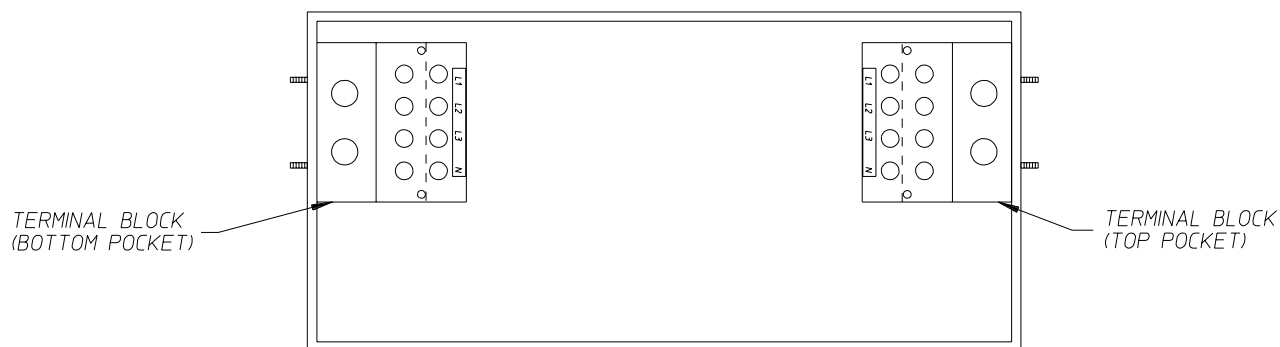
A ground lug is provided in the rear electrical box to connect your service ground.

5. 3-Phase (3Ø) Wiring Connections

The only electrical input connections to the dryer are the 3-phase (3Ø) power leads (L1, L2, L3, and sometimes Neutral) and ground. Single-phase (1Ø) power for the control circuits is done internally to the dryer. No single-phase (1Ø) input connection is required on a 3-phase (3Ø) dryer.

3-Phase (3Ø) Hookup

For gas dryers manufactured for operation at 3-phase (3Ø), the electrical input connections are made at the terminal blocks located in the top electrical box at the rear of the dryer.



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G. GAS INFORMATION

It is your responsibility to have **ALL** plumbing connections, materials, and workmanship conform to local and state regulations or codes of the country of destination. In the absence of such codes, **ALL** plumbing connections, materials, and workmanship **must conform** to the applicable local requirements. In the USA this is National Fuel Gas Code ANSI Z223.1/NFPA 54, or in Canada, Natural Gas and Propane Installation Code CSA B149.1.

In Australia, the fuel gas code is AS/NZS5601, local authority, gas, electricity, and any other relevant statutory regulations.

IMPORTANT: Failure to comply with these codes or ordinances, and/or the requirements stipulated in this manual, can result in personal injury and improper operation of the dryer

The dryer and its individual shutoff valves **must be** disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa). The dryer **must be** isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure test of the gas supply system at test pressures equal to or less than 1/2 psig (3.5 kPa).

IMPORTANT: Failure to isolate or disconnect the dryer from supply as noted could cause irreparable damage to the gas valve, which will VOID THE WARRANTY.

WARNING: FIRE OR EXPLOSION COULD RESULT DUE TO FAILURE OF ISOLATING OR DISCONNECTING THE GAS SUPPLY AS NOTED.

1. Gas Supply

The gas dryer installation **must meet** the American National Standard...National Fuel Gas Code ANSI Z223.1-LATEST EDITION, or in Canada, the Canadian Installation Codes CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (Propane Gas) or LATEST EDITION, as well as local codes and ordinances and **must be** done by a qualified professional.

NOTE: Undersized gas piping will result in ignition problems, slow drying, increased use of energy, and can create a safety hazard.

The dryer **must be** connected to the type of heat/gas indicated on the dryer label. If this information does not agree with the type of gas available, **DO NOT operate the dryer**. Contact the reseller who sold the dryer or the **ADC** factory.

IMPORTANT: Any burner changes or conversions **must be** made by a qualified professional.

The input ratings shown on the dryer data label are for elevations up to 2,000 feet (610 meters), unless elevation requirements of over 2,000 feet (610 meters) were specified at the time the dryer order was placed with the factory. The adjustment or conversion of dryers in the field for elevations over 2,000 feet (610 meters) is made by changing each burner orifice. If this conversion is necessary, contact the reseller who sold the dryer or the **ADC** factory.

IMPORTANT: THIS GAS DRYER **IS NOT** PROVIDED WITH AN INTERNAL GAS SUPPLY SHUTOFF AND AN EXTERNAL GAS SUPPLY SHUTOFF **MUST BE** PROVIDED.

2. Technical Gas Data

a. Gas Specifications

For Australia, refer to data plate.

TYPE OF GAS				
	NATURAL		PROPANE	
Manifold Pressure*	3.5 inches W.C.	8.7 mb	10.5 inches W.C.	26.1 mb
In-Line Pressure	6.0 - 12.0 inches W.C.	14.92 - 29.9 mb	11.0 - 13.0 inches W.C.	27.4 - 32.37 mb

Shaded areas are stated in metric equivalents

* Measured at gas valve pressure tap when the gas valve is on.

b. Gas Connections:

Inlet connection ----- 3/4" M.P.T.
 Inlet supply size ----- 3/4" Pipe (minimum)
 Btu/hr input (per dryer) ----- 160,000 (40,320 kcal/hr)
 Btu/hr input (per pocket) ----- 80,000 (20,160 kcal/hr)

1) Natural Gas

Regulation is controlled by the dryer's gas valve's internal regulator. Incoming supply pressure **must be** consistent between a minimum of 6.0 inches (14.92 mb) and a maximum of 12.0 inches (29.9 mb) water column (W.C.) pressure.

2) Propane Gas

Dryers made for use with propane gas have the gas valve's internal pressure regulator blocked open so that the gas pressure **must be** regulated upstream of the dryer. The pressure measured at each gas valve pressure tap **must be** a consistent 10.5 inches (26.1 mb) water column. There is no regulator or regulation provided in a propane dryer. The water column pressure **must be** regulated at the source (propane tank) or an external regulator **must be** added to each dryer.

		TYPE OF GAS						Propane Conversion Kit Part Number***
Btu/hr Rating**	kcal/hr Rating	Natural			Propane			
		Qty.**	D.M.S.*	Part No.	Qty.**	D.M.S.*	Part No.	
80,000	20,160	1	#18	140829	1	#38	140814	882396

Shaded area is stated in metric equivalent

* Drill Measurement Size (D.M.S.) equivalents are as follows:

Natural Gas #18 = 0.1695" (4.3053 mm).

Propane Gas #38 = 0.1015" (2.5781 mm).

** Per pocket/tumbler.

*** Includes parts for both tumblers.

3. Piping Connections

ALL components/materials **must conform** to National Fuel Gas Code Specifications ANSI Z223.1-LATEST EDITION, or in Canada, CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (Propane Gas) or LATEST EDITION (for General Installation and Gas Plumbing), as well as local codes and ordinances and **must be** done by a qualified professional. It is important that gas pressure regulators meet applicable pressure requirements, and that gas meters be rated for the total amount of **ALL** the appliance Btu being supplied.

Installer within Australia – refer to AS/NZS5601.1 for guidance on gas supply pipe sizing required for this appliance installation.

The dryer is provided with a 3/4" N.P.T. inlet pipe connection located at the upper right hand corner (when viewed from the rear) of the dryer. The minimum pipe size (supply line) to the dryer is 3/4". For ease of servicing, the gas supply line of each dryer must have its own shutoff valve.

The size of the main gas supply line (header) will vary depending on the distance this line travels from the gas meter or in the case of propane gas, the supply tank, the number of tees, other gas operated appliances on the supply line, etc. Specific information regarding supply line size **should be** determined by the gas supplier.

NOTE: Undersized gas supply piping can create a low or inconsistent pressure, which will result in erratic operation of the burner ignition system.

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 3/4-inch (19.05 mm) pipe loop be installed in the supply line servicing the bank of dryers. An in-line pressure regulator **must be** installed in the gas supply line (header) if (natural) gas line pressure exceeds 12.0 inches (29.9 mb) water column (W.C.) pressure. (Refer to the **illustrations** on the following page for details.)

IMPORTANT: Water column pressure of 3.5 inches (8.7 mb) for natural gas dryers and 10.5 inches (26.1 mb) for propane gas is required at the gas valve pressure tap of each dryer for proper and safe operation.

A plugged tap 1/8" N.P.T. minimum, accessible for a pressure gauge connection, must be installed in the main gas supply line immediately upstream of the dryers.

IMPORTANT: Pipe joint compounds that resist the action of natural gas and propane gas **must be** used.

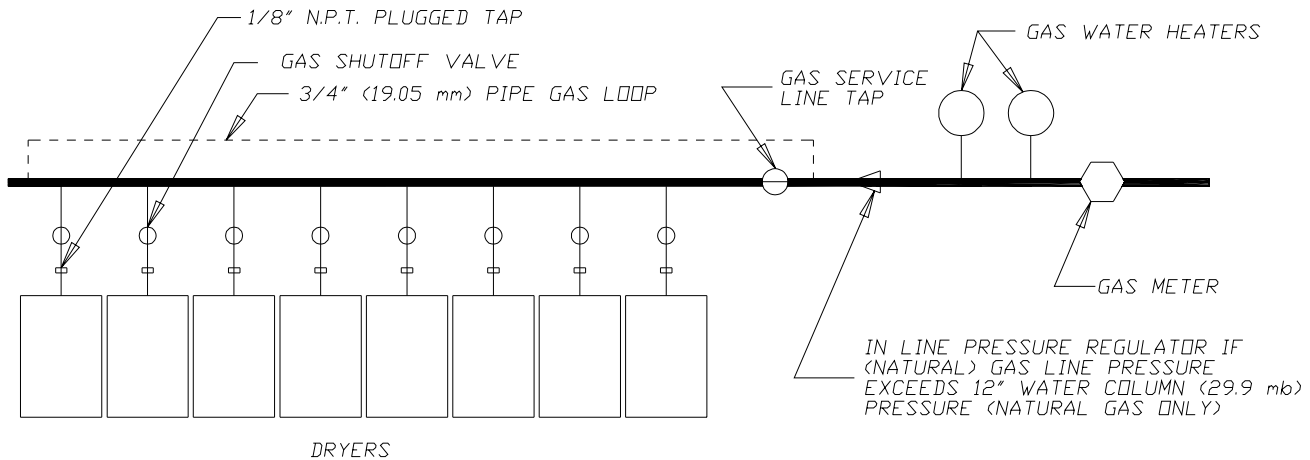
IMPORTANT: Test **ALL** connections for leaks by brushing on a soapy water solution (liquid detergent works well).

WARNING: **NEVER TEST FOR LEAKS WITH A FLAME!!!**

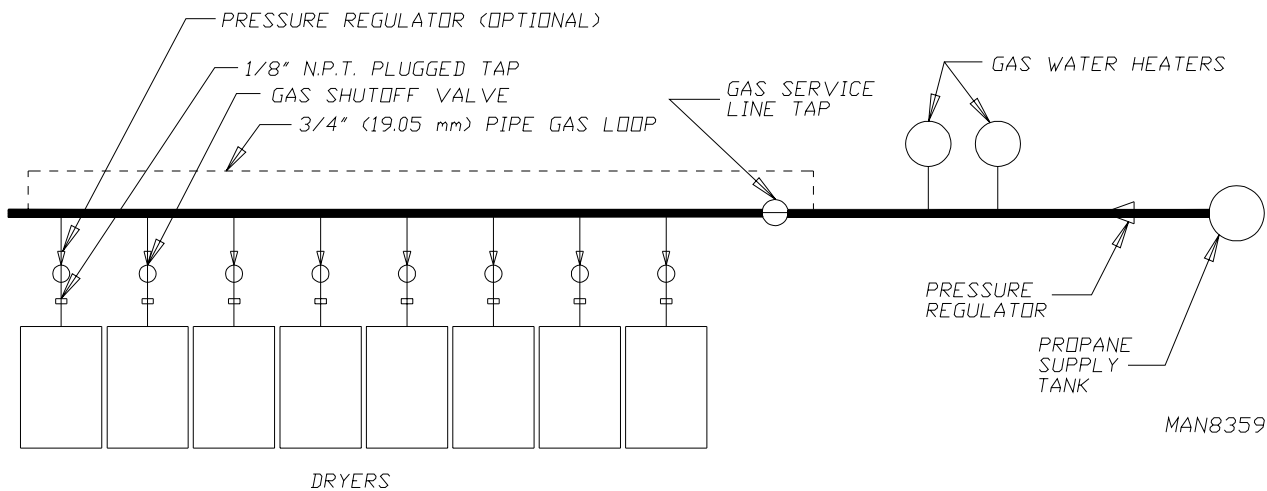
IMPORTANT: The dryer and its individual shutoff valve **must be** disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

NOTE: The dryer ***must be*** isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure test of the gas supply system at test pressures equal to or less than 1/2 psig (3.5 kPa).

TYPICAL NATURAL GAS INSTALLATION



TYPICAL PROPANE GAS INSTALLATION



H. PREPARATION FOR OPERATION / START-UP

The following items **should be** checked before attempting to operate the dryer:

1. Read **ALL** “**CAUTION**,” “**WARNING**,” and “**DIRECTION**” labels attached to the dryer.
2. Check incoming supply voltage to be sure that it is the same as indicated on the dryer data label. In the case of 208 VAC OR 230/240 VAC ***THE SUPPLY VOLTAGE MUST MATCH THE ELECTRIC SERVICE EXACTLY.***
3. Check to ensure that the dryer is connected to the type of heat/gas indicated on the dryer data label.
4. The sail switch damper assemblies are installed and pre-adjusted at the factory prior to shipping. However, each sail switch adjustment **must be** checked to ensure that this important safety control is functioning.
5. Be sure that **ALL** gas shutoff valves are in the open position.
6. Be sure **ALL** back panels (guards) and electric box covers have been replaced.
7. Check **ALL** service doors to ensure that they are closed and secured in place.
8. Be sure the lint drawers are securely in place.
9. Rotate the tumblers (both top and bottom) by hand to make sure they both move freely.
10. Check bolts, nuts, screws, terminals, and fittings for security.
11. Check tumbler bearing setscrews to ensure they are **ALL** tight.

I. PREOPERATIONAL INSTRUCTIONS

1. Coin Mode
 - a. When the microprocessor controller (computer) is in the ready state, the liquid crystal display (L.C.D.) screen will display “READY, INSERT AMOUNT TO START” or “READY, INSERT \$XX.XX TO START”.
 - b. Insert coin(s). Once the correct AMOUNT TO START has been inserted, the L.C.D. will display “SELECT TEMPERATURE”.
 - c. Select temperature by pressing “HI”, “MED”, or “LO”. The cycle will start and the L.C.D. will display the Dry Cycle selected and the remaining time.
 - d. The dryer will continue through the drying and cooling cycles, until the vended time has expired.
 - e. In Coin Mode, if more time is desired the customer will have to insert more credit. The dryer can be stopped by pressing the “PAUSE” key or opening the main door. Press either “HI”, “MED”, or “LOW” key after pressing the “PAUSE” key or closing the main door to restart the dryer.

NOTE: To stop dryer, open main door or press the pause key. Continuation of the cycle will resume only after the door has been closed and any of the three (3) temperature selection is pressed.

- f. Upon completion of the drying and cooling cycles, the tone (buzzer) will sound and the dryer will go into the Wrinkle Guard Mode for 99 minutes, or until the main door has been opened.

IMPORTANT: For more detailed information regarding the microprocessor controller (computer) on your dryer, refer to the microprocessor user's manual included with the dryer.

2. Free Mode

- a. When the controller is in the ready state and no cycle is in progress, the L.C.D. screen will display "SELECT TEMPERATURE".
- b. Select temperature by pressing "HI", "MED", OR "LO". The cycle will start and the controller will display the Dry Cycle selected and the remaining time.
- c. The dryer will continue through the drying and cooling cycles, until the drying time has expired.
- d. In Free Mode, if more or less time is desired in a cycle press and hold either the "HI" or "LO" key for 3-seconds. The control will now display the remaining time in the cycle. Pressing the "HI" key will increase the number of minutes remaining. Pressing the "LO" key will decrease the number of minutes remaining. The dryer can be stopped by pressing the "PAUSE" key or opening the main door. Press either "HI", "MED", or "LOW" key after pressing the "PAUSE" key or closing the main door to restart the dryer.

3. Heat Circuit Operational Test

- a. When a gas dryer is first started (during initial start-up), it has a tendency not to ignite on the first ignition attempt. This is because the gas supply piping is filled with air, so it may take a few minutes for the air to be purged from the lines.

NOTE: During the purging period, check to be sure that **ALL** gas shutoff valves are open.

NOTE: Gas dryers are equipped with a Direct Spark Ignition (DSI) system, which has internal diagnostics. If ignition **is not** established after three (3) attempts, the heat circuit in the DSI module will LOCKOUT until it is manually reset. To reset the DSI system, open and close the main door and restart the dryer.

- b. Once ignition is established, a gas pressure test **should be** taken at the gas valve pressure tap of each dryer to ensure that the water column (W.C.) pressure is correct and consistent.

NOTE: Water column pressure requirements (measured at the pressure tap of the gas valve body):

Natural Gas ----- 3.5 inches (8.7 mb) water column.
Propane Gas ----- 10.5 inches (26.1 mb) water column.

IMPORTANT: There is no regulator provided in a propane dryer. The water column pressure **must be** regulated at the source (propane tank) or an external regulator **must be** added to each dryer.

4. Make a complete operational check of **ALL** the operating controls to ensure that the timing is correct and that the temperatures are set properly.
5. Make a complete operational check of **ALL** safety-related circuits (i.e., door switches, hi-limit thermostats, sail switches, and tumbler safety thermostats, etc.).

NOTE: To check for proper sail switch operation, open the main door and while holding main door switch plunger in, start the dryer. The dryer should start but the heat circuit **should not be** activated (on). If the heat (burner) does activate, shut the dryer off and make the necessary adjustments.

6. Each tumbler **should be** operated through one (1) complete cycle to ensure that no further adjustments are necessary and that **ALL** components are functioning properly.

TUMBLER COATING

The tumbler is treated with a protective coating. We suggest dampening old garments or cloth material with a solution of water and nonflammable mild detergent and tumbling them in the tumbler to remove this coating.

7. Computer Programs and Selections

Each microprocessor controller (computer) has been preprogrammed by the factory with the most commonly used program (parameter) selections. If microprocessor controller (computer) program changes are required, refer to the computer programming manual, which was shipped with the dryer.

8. On models manufactured for 3-phase (3Ø) electrical input voltage, check the electrical service phase sequence. While the dryer is operating, check to see if the tumblers are rotating in the clockwise (CW) direction (when viewed from the front of the dryer). If the tumblers rotate counterclockwise (CCW), the phasing is incorrect. Reverse the two (2) leads at connection L1, L2, or L3 of the power supply of the dryer.

J. SHUTDOWN INSTRUCTIONS

If the dryer is to be shutdown (taken out of service) for a period of time, the following **must be** performed:

1. Discontinue power to the dryer either at the external disconnect switch or the circuit breaker.
2. Discontinue the heat supply:

GAS MODELS – discontinue the gas supply.

SHUT OFF external gas supply shutoff valve.

SECTION IV

SERVICE / PARTS INFORMATION

A. SERVICE

Service **must be** performed by a qualified trained technician, service agency, or gas supplier. If service is required, contact the reseller from whom the **ADC** equipment was purchased. If the reseller **cannot** be contacted or is unknown, contact the **ADC** Service Department for a reseller in your area.

NOTE: When contacting the **ADC** Service Department, be sure to give them the correct **model number** and **serial number** so that your inquiry is handled in an expeditious manner.

B. PARTS

Replacement parts **should be** purchased from the reseller from whom the **ADC** equipment was purchased. If the reseller **cannot** be contacted or is unknown, contact the **ADC** Parts Department for a reseller in your area. Parts may also be purchased directly from the factory by calling the **ADC** Parts Department at +1 (269) 923-3000 or you may FAX in your order at +1 (508) 678-9447.

NOTE: When ordering replacement parts from the **ADC** reseller or the **ADC** factory be sure to give them the correct **model number** and **serial number** so that your parts order can be processed in an expeditious manner.

SECTION V

WARRANTY INFORMATION

A. RETURNING WARRANTY CARDS

Before any dryer leaves the **ADC** factory test area, a warranty card is placed on the back side of the main door glass. These warranty cards are intended to serve the customer where we record the individual installation date and warranty information to better serve you should you file a warranty claim.

If a warranty card did not come with your dryer, contact the **ADC** Warranty Department or the **ADC** Service Department at +1 (269) 923-3000.

IMPORTANT: A separate warranty card ***must be*** completed and returned for each individual dryer.

NOTE: Be sure to include the installation date when returning the warranty card(s).

B. WARRANTY

For a copy of the **ADC** commercial warranty covering your particular dryer(s), contact the **ADC** reseller from whom you purchased the equipment and request a dryer warranty form. If the reseller **cannot** be contacted or is unknown, warranty information can be obtained from the factory by contacting the **ADC** Warranty Department at +1 (269) 923-3000.

NOTE: Whenever contacting the **ADC** factory for warranty information, be sure to have the dryer's **model number** and **serial number** available so that your inquiry can be handled in an expeditious manner.

C. RETURNING WARRANTY PARTS

ALL dryer or parts warranty claims or inquiries **should be** addressed to the **ADC** Warranty Parts Department. To expedite processing, the following procedures **must be** followed:

1. No parts are to be returned to **ADC** without prior written authorization ("Return Material Authorization" [R.M.A.]) from the factory.

NOTE: An R.M.A. is valid for only thirty (30) days from date of issue.

The R.M.A. issued by the factory, as well as any other correspondence pertaining to the returned part(s), **must be** included inside the package with the failed merchandise.

2. Each part **must be** tagged with the following information:
 - a. **Model number** and **serial number** of the dryer from which part was removed.
 - b. Nature of failure (be specific).
 - c. Date of dryer installation.
 - d. Date of part failure.
 - e. Specify whether the part(s) being returned is for a replacement, a credit, or a refund.

NOTE: If a part is marked for a credit or a refund, the invoice number covering the purchase of the replacement part **must be** provided.

NOTE: Warranty tags (ADC P/N 450064) are available at “no charge” from ADC upon request.

3. The company returning the part(s) must clearly note the complete company name and address on the outside of the package.
4. **ALL** returns **must be** properly packaged to ensure that they are not damaged in transit. *Damage claims are the responsibility of the shipper.*

IMPORTANT: No replacements, credits, or refunds **will be** issued for merchandise damaged in transit.

5. **ALL** returns **should be** shipped to the ADC factory in such a manner that they are insured and a proof of delivery can be obtained by the sender.
6. **Shipping charges are not the responsibility of ADC. ALL returns should be “prepaid” to the factory. Any “C.O.D.” or “COLLECT” returns will not be accepted.**

IMPORTANT: No replacements, credits, or refunds **will be** issued if the claim **cannot** be processed due to insufficient information. The party filing the claim **will be** notified in writing, either by “FAX” or “CERTIFIED MAIL – Return Receipt Requested,” as to the information necessary to process claim. If reply **is not** received by the ADC Warranty Department within thirty (30) days from the FAX/letter date, then no replacements, credits, or refunds **will be** issued, and the merchandise **will be** discarded.

SECTION VI

ROUTINE MAINTENANCE

A. CLEANING

A program and/or schedule **should be** established for periodic inspection, cleaning, and removal of lint from various areas of the dryer, as well as throughout the ductwork system. The frequency of cleaning can best be determined from experience at each location. Maximum operating efficiency is dependent upon proper air circulation. The accumulation of lint can restrict this airflow. If the guidelines in this section are met, an **ADC** dryer will provide many years of efficient, trouble free, and most importantly, safe operation.

WARNING: LINT FROM MOST FABRICS IS HIGHLY COMBUSTIBLE. THE ACCUMULATION OF LINT CAN CREATE A POTENTIAL FIRE HAZARD.

WARNING: KEEP DRYER AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE, AND OTHER FLAMMABLE VAPORS AND LIQUIDS.

NOTE: Suggested time intervals shown are for average usage, which is considered six (6) to eight (8) operational (running) hours per day.

IMPORTANT: Dryer produces combustible lint and **must be** exhausted to the outdoors. Every 6 months, inspect the exhaust ducting and remove any lint buildup.

SUGGESTED CLEANING SCHEDULE

EVERY THIRD OR FOURTH LOAD

Clean the lint screen every third or fourth load. A clogged lint screen will cause poor dryer performance. Open the lint drawer, brush the lint off of the lint screen, and remove the lint. Inspect the lint screen and replace if torn.

NOTE: The frequency of cleaning the lint screens can best be determined from experience at each location.

WEEKLY

Clean lint accumulation from the lint chamber, thermostat, and microprocessor temperature sensor (sensor bracket) area.

WARNING: TO AVOID HAZARD OF ELECTRICAL SHOCK, DISCONTINUE ELECTRICAL POWER SUPPLY TO THE DRYER.

90 DAYS

1. Remove lint from around tumbler, drive motors, and surrounding areas.
2. Remove lint from gas valve burner area with a dusting brush or vacuum cleaner attachment.

3. Clean any lint accumulation in and around the motor casing openings.

NOTE: To prevent damage, avoid cleaning or touching the direct spark ignitor assembly.

EVERY 6 MONTHS

Inspect and remove lint accumulation in customer furnished exhaust ductwork system and from dryer's internal exhaust ducting.

NOTE: To remove the lint drawer, pull out until it stops. There is a hinge attached to the back, which functions as a stopper. Open this hinge and the drawer may be removed. To reinstall align lint drawer with tracks, slide in a few inches, and reset the drawer-stop (hinge).

NOTE: THE ACCUMULATION OF LINT IN THE EXHAUST DUCTWORK CAN CREATE A POTENTIAL FIRE HAZARD.

NOTE: *DO NOT* OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR. CHECK BACK DRAFT DAMPERS IN THE EXHAUST DUCTWORK. INSPECT AND REMOVE ANY LINT ACCUMULATION, WHICH CAN CAUSE THE BACK DRAFT DAMPER TO BIND OR STICK.

NOTE: A back draft damper that is sticking partially closed can result in slow drying and shut down of heat circuit safety switches or thermostats.

NOTE: If the hi-limit trips due to a high temperature occurrence, you must disconnect power before resetting. To reset, press and release the reset button, hi-limits are located on the top front of the lint box and on the burner.

NOTE: When cleaning the dryer cabinet(s), avoid using harsh abrasives. A product intended for the cleaning of appliances is recommended.

B. ADJUSTMENTS

7 DAYS AFTER INSTALLATION AND EVERY 6 MONTHS THEREAFTER

Inspect bolts, nuts, screws, setscrews, grounding connections, and nonpermanent gas connections (unions, shutoff valves, and orifices). Motor and drive belts **should be** examined. Cracked or seriously frayed belts **should be** replaced. Tighten loose V-belts when necessary. Complete operational check of controls and valves. Complete operational check of **ALL** safety devices (door switches, lint drawer switch, sail switch, and hi-limit thermostats).

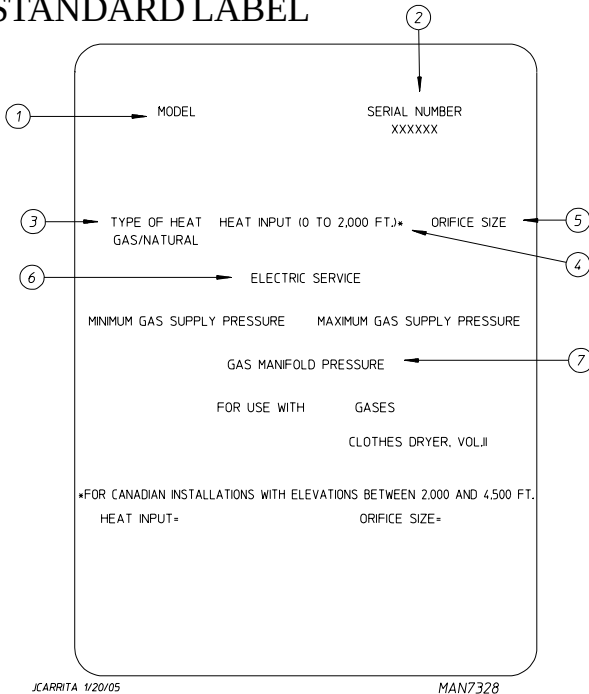
C. LUBRICATION

The motor bearings, idler bearings, and under normal/most conditions the tumbler bearings are permanently lubricated. It is physically possible to relubricate the tumbler bearings if you choose to do so even though this practice is not necessary. Use Shell Alvania #2 grease or its equivalent. The tumbler bearings used in the dryer **DO NOT** have a grease fitting. Provisions are made in the bearing housing for the addition of a grease fitting, which can be obtained elsewhere, or from **ADC** by ordering kit P/N 882159 (includes two [2] fittings).

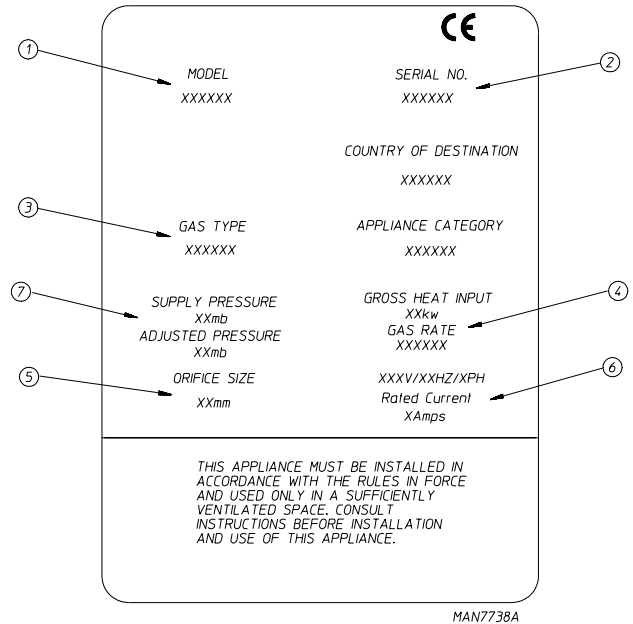
SECTION VII

DATA LABEL INFORMATION

STANDARD LABEL



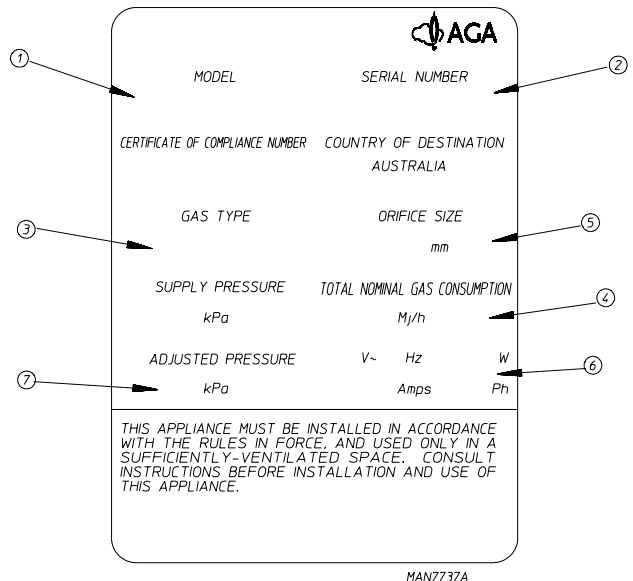
CE LABEL



When contacting **American Dryer Corporation**, certain information is required to ensure proper service/parts information from **ADC**. This information is on the data label that is located on the left sidewall area behind the middle access (control) door. When contacting **ADC** please have the model number as well as the serial number readily available.

1. **MODEL NUMBER** – This describes the style of dryer and type of heat (gas, electric, or steam).
2. **SERIAL NUMBER** – Allows the manufacturer to gather information on your particular dryer.
3. **TYPE OF HEAT** – This describes the type of heat for your particular dryer, gas (either natural gas or propane gas), electric, or steam.
4. **HEAT INPUT** (For Gas Dryers) – This describes the heat input in British thermal units per hour (Btu/hr) or kilowatts (kW).
5. **ORIFICE SIZE** (For Gas Dryers) – Gives the number drill size used.
6. **ELECTRIC SERVICE** – This describes the voltage and current rating for a particular model.
7. **GAS MANIFOLD PRESSURE** (For Gas Dryers) – This describes the manifold pressure taken at the gas valve tap.

AGA LABEL



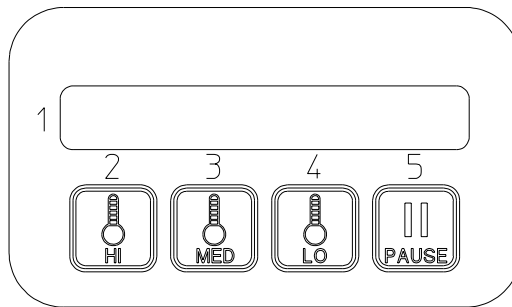
SECTION VIII

PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT COMPONENTS

1. Microprocessor Controller (Computer) Board

Phase 7 Coin/Non-Coin Models

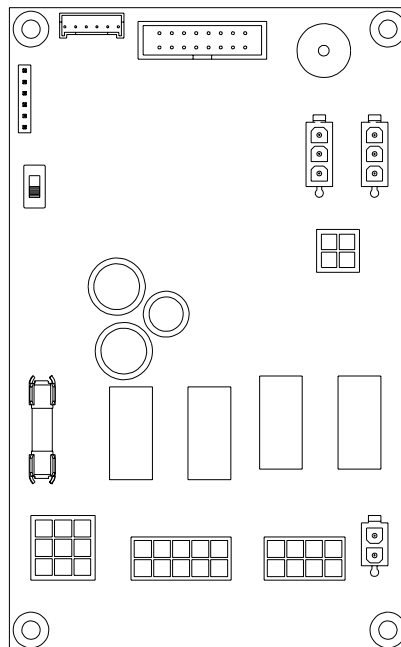
- a. Upon completing installation of the replacement microprocessor controller (computer) board, reestablish power to the dryer.
- b. Start the drying cycle by pressing any temperature selection keys (HI, MED, or LO).



JM 9/17/03

MAN6873

- c. Verify that the applicable indicator lights on the microprocessor controller (computer) board are lit. (Refer to the **illustration below.**)



MAN6875

JM 9/11/03

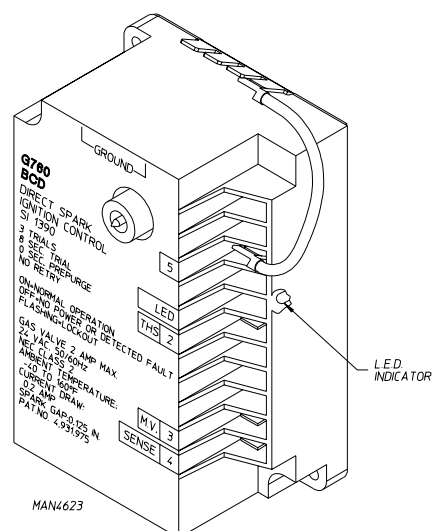
2. For Models with Direct Spark Ignition (DSI) Module (Type I)

Theory of Operation:

Start the drying cycle. When the gas burner ignites within the chosen trial for ignition time (6-seconds), the flame sensor detects gas burner flame and signals the DSI module to keep the gas valve open as long as there is a call for heat. The DSI module will “LOCKOUT” if the gas burner flame is not sensed at the end of the trial for ignition period. The trial for ignition period will be repeated for a total of three (3) retries/trials (the initial try and two [2] more retries/trials). If the flame is not sensed at the end of the third retry/trial (inter-purge period of 30-seconds), the DSI module will “LOCKOUT” (light emitting diode [L.E.D.] diagnostic indicator flashes).

A steady L.E.D. indicator indicates normal operation.

No L.E.D. indicator indicates a power or an internal failure has occurred.



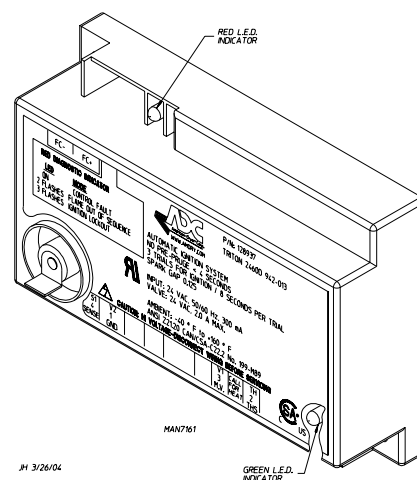
3. For Models with DSI Module (Type II)

Theory of Operation:

Start the drying cycle. When the gas burner ignites within the chosen trial for ignition time (8-seconds), the flame sensor detects gas burner flame and signals the DSI module to keep the gas valve open as long as there is a call for heat. The DSI module will “LOCKOUT” if the gas burner flame is not sensed at the end of the trial for ignition period. The trial for ignition period will be repeated for a total of three (3) retries/trials (the initial try and two [2] more retries/trials). If the flame is not sensed at the end of the third retry/trial (inter-purge period of 30-seconds), the DSI module will “LOCKOUT” (a red L.E.D. diagnostic indicator will flash).

An unlit red L.E.D. diagnostic indicator indicates normal operation.

A lit green L.E.D. diagnostic indicator indicates dryer controller is calling for heat and that **ALL** interlocks have been satisfied.



SECTION IX

COIN PROGRAMMING

Enter the programming mode by placing the switch on the Phase 7 board in the up position while no cycle is in progress. "Program Mode" will then be displayed.

Navigating Within The Programming Mode:

"Med" key to enter a program location.

"Hi-Temp" / "Lo-Temp" keys increase / decrease program location.

"PAUSE" key rejects entry and moves to next program location.

Changing A Parameter Value:

With parameter value displayed pressing "Lo Temp" or "High Temp" changes the parameter value.

"Med" key must be pressed to accept a new parameter.

PHASE 7.3.2 COIN PROGRAM LOCATION SUMMARY	
(MAX TEMP 190°F)	
TO ENTER OR EXIT PROGRAMMING MODE TOGGLE PROGRAM SWITCH UP OR DOWN RESPECTIVELY	
KEYPAD LEGEND	
HI KEY- INCREMENT OR TOGGLE	
MED KEY- ENTER	
LO KEY- DECREMENT OR TOGGLE	
PAUSE KEY- EXIT LOCATION WITHOUT SAVING	
PL #01 CONTROL SETTINGS	
LANGUAGE	
TEMP SCALE	
Buzzer Mode	
BEEP COUNT 1 TO 9 BEEPS	
DRY MODE	
PAUSE TIME 0 TO 3 MINUTES	
READY PROMPT	
PL #02 MACHINE SETTINGS	
MODEL	
ROTATION SENSOR	
LINT CLEANING FREQUENCY 0 TO 10 HOURS	
AXIAL THERMISTOR INPUT	
THERMISTOR TEMP SET POINT 100 TO 400°F	
PL #03 HI KEY SETTINGS	
TIME FOR AMOUNT TO START 1 TO 99 MINUTES	
TIME FOR TOP OFF 1 TO 99 MINUTES	
DRY TEMP 100 TO 190°F	
COOL TIME 0 TO 9 MINUTES	
PL #04 MED KEY SETTINGS	
TIME FOR AMOUNT TO START 1 TO 99 MINUTES	
TIME FOR TOP OFF 1 TO 99 MINUTES	
DRY TEMP 100 TO 190°F	
COOL TIME 0 TO 9 MINUTES	
PL #05 LO KEY SETTINGS	
TIME FOR AMOUNT TO START 1 TO 99 MINUTES	
TIME FOR TOP OFF 1 TO 99 MINUTES	
DRY TEMP 100 TO 190°F	
COOL TIME 0 TO 9 MINUTES	
PL #06 VENDING PARAMETERS	
CURRENCY SYMBOL	
VENDING MODE	
VENDING SAFEGUARD	
LEFT COIN DENOMINATION 0.05 TO 25.00	
RIGHT COIN DENOMINATION 0.05 TO 25.00	
AMOUNT TO START 0.05 TO 25.00	
AMOUNT FOR TOP OFF 0.05 TO 25.00	
PL #07 FAULT RECORDING	
NO FAULTS/FAULTS	

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Typical Programming Example

Change a single coin acceptor from factory setting to yield 20 minutes for \$.50, \$.50 as the minimum amount to start, and no differential in regard to temperature key selection.

Settings: Time for Amt to Start (PL03, PL04, PL05) 20
Left Coin Denomination (PL06) \$.25
Amount to Start (PL06) \$.50

Clearing Coin Credit

With no cycle in progress and program switch down, hold "PAUSE" while pressing HI three times, LO twice, and MED once. "Clear Credit?" will appear. Press any key to complete.

Accessing and Clearing Coin Vault Total

Enter program mode by switching program switch (up) while no cycle is in progress.

Press HI – "Coin Vault total is \$XXX" will appear.

Press HI – "Clear Coin Vault Total?" will appear.

Press MED to clear this amount or PAUSE to leave as is.

Hot Keys

In the Coin Mode Hot Keys are enabled while in a cycle by placing the program switch in the up position.

In Free Mode Hot Keys are always enabled.

HI – Remaining credit – coin mode / remaining time – free mode.

MED – Temps – Exhaust / left, S.A.F.E. / right, Axial / middle (Axial dryer).

LO – Tumbler RPM.

S.A.F.E. TEST: Switch to program mode. Press and hold the "PAUSE" key until prompted to press MED to open the water.

L.C.D. Operating Messages

When display reads "Out of Order" pressing LO displays one of the messages listed below:

MODEL FAULT – Wrong model selected at PL01/3rd position.

SAIL SWITCH CLOSED FAULT – Sail switch closed before starting.

SAIL SWITCH OPEN FAULT – Sail switch failed to close after starting.

BURNER HI-LIMIT FAULT – Oven thermostat switch has opened.

EXHAUST HI-LIMIT FAULT – Tumbler thermostat switch has opened.

BURNER CONTROL FAULT – No gas valve signal – Bad DSI unit.

IGNITION FAULT – No flame ignition detected thru all retries.

FLAME FAULT – Flame detected at ignition but failed later.

CLEAN LINT – Due to failure to clean out lint.

CHECK CONTROL BOARD FUSE #2 – Fuse 2 on Phase 7 board is open.

EXHAUST / AXIAL PROBE FAULT – Indicated probe has failed.

ROTATION SENSOR FAULT – Rotation sensor or tumbler drive has failed.

EXHAUST HI-TEMP FAULT – Overheating condition has occurred.

BURNER PURGE FAULT – Gas return signal before heat output.

When display reads "Out of Order" pressing and holding the "PAUSE" key for 3-seconds clears the out of order message provided the out of order condition has been corrected.

"S.A.F.E. System Disabled"

In Coin Mode hold "PAUSE" and "LO" keys down together to display one or the following causes:

OPEN / SHORTED THERMISTOR – Probe or probe circuit bad.

OPEN / SHORTED WATER VALVE – Water valve or circuit bad.

WATER NOT CONNECTED – No water pressure at solenoid valve.

"S.A.F.E. System (was) Activated"

Indicates the S.A.F.E. system is active or was active because a fire was detected. The buzzer sounds at a fast pace while the system is active.

A service call to your local dealer is required to reset the microprocessor controller (computer). Qualified personnel will inspect the dryer and, if it is found to be safe for operation, reset the control.

NON-COIN PROGRAMMING

PHASE 7.2.2 OPL PROGRAMMING LOCATIONS (MAX TEMP 200°F)

TO ENTER PROGRAMMING MODE PRESS [0] & [A] KEYS TOGETHER.

TO EXIT PROGRAMMING MODE PRESS [0] MULTIPLE TIMES
UNTIL DISPLAY RETURNS TO 'READY'.

- 0: SELECT LANGUAGE
- 1: SELECT SYSTEM PARAMETERS
 - 0: DRYER SETUP
 - 0: SELECT MODEL
 - 1: SYSTEM TEMP
 - 2: ENTER LINT CLEANING FREQUENCY 1 TO 10 HOURS
 - 3: ENTER AUDIO ALERT ON TIMES 0 TO 10
 - 4: ROTATION SENSOR
 - 5: BOARD ADDRESS 00 TO ZZ
 - 6: AUTO CYCLE TIME OUT 0 TO 99 MINUTES
 - 1: REVERSING SETUP
 - 0: ENTER SPIN TIME 30 TO 120 SECONDS
 - 1: ENTER STOP TIME 5 TO 10 SECONDS
 - 2: WRINKLE GUARD SETUP
 - 0: WRINKLE GUARD AUDIO ALERT
 - 3: STEAM INJECTION SETUP
- 2: PROGRAM A - F CYCLES
 - SELECT A - F KEY
 - SELECT CYCLE TYPE
 - AUTO
 - 0: REVERSE MODE
 - 1: ENTER DRY TEMP 160°F (71°C) TO 200°F (94°C)
 - 2: ENTER DRYNESS LEVEL
 - 3: ENTER CYCLE ADJUSTMENT VALUE 0 TO 99
 - 4: CONTROLLED COOL DOWN
 - 5: ENTER COOL DOWN TIME 0 TO 99 MINUTES
 - 6: ENTER COOL DOWN TEMP 70°F (21°C) TO 100°F (38°C)
 - MANUAL
 - 0: REVERSE MODE
 - 1: ENTER DRY TIME 0 TO 99 MINUTES
 - 2: ENTER DRY TEMP 100°F (38°C) TO 200°F (94°C)
 - 3: CONTROLLED COOL DOWN
 - 4: ENTER COOL DOWN TIME 0 TO 99 MINUTES
 - 5: ENTER COOL DOWN TEMP 70°F (21°C) TO 100°F (38°C)
 - 6: STEAM INJECTION
- 3: PROGRAM 0 - 40 CYCLES
 - ENTER 0 - 40
 - SELECT CYCLE TYPE
 - AUTO
 - 0: REVERSE MODE
 - 1: ENTER DRY TEMP 160°F (71°C) TO 200°F (94°C)
 - 2: ENTER DRYNESS LEVEL
 - 3: ENTER CYCLE ADJUSTMENT VALUE 0 TO 99
 - 4: CONTROLLED COOL DOWN
 - 5: ENTER COOL DOWN TIME 0 TO 99 MINUTES
 - 6: ENTER COOL DOWN TEMP 70°F (21°C) TO 100°F (38°C)
 - MANUAL
 - 0: REVERSE MODE
 - 1: ENTER DRY TIME 0 TO 99 MINUTES
 - 2: ENTER DRY TEMP 100°F (38°C) TO 200°F (94°C)
 - 3: CONTROLLED COOL DOWN
 - 4: ENTER COOL DOWN TIME 0 TO 99 MINUTES
 - 5: ENTER COOL DOWN TEMP 70°F (21°C) TO 100°F (38°C)
 - 6: STEAM INJECTION
- 4: DEFAULT SETTINGS
 - ENTER PASSWORD
 - (PRESS '1' '2' '3')
 - CONFIRM DEFAULTS

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Phase 7.2.2 Non-Coin Diagnostic Codes

MAIN DOOR OPENED – A main door or door circuit is open.

EXHAUST HIGH TEMP FAULT – Tumbler is above 220° F (104° C).

LINT ACCESS OPEN – Lint drawer or lint door circuit is open.

EXHAUST HIGH LIMIT FAULT – Temp. disk under tumbler is open.

SAIL SWITCH CLOSED FAULT – Sail switch is closed – should be open at the start of a cycle.

SAIL SWITCH OPEN FAULT – Sail switch remained open after the cycle started. Should have closed.

BURNER HIGH LIMIT FAULT – Burner temp. disk has opened.

BURNER IGNITION CONTROL – No signal to gas valve from (DSI) module during trial for ignition time. DSI module is bad.

IGNITION FAULT – Gas valve did not remain open after trial for ignition. Indicates that no flame was detected.

FLAME FAULT – Flame was detected during trial for ignition but failed later.

ROTATION FAULT – Indicates the tumbler is not rotating.

OPEN EXHAUST TEMPERATURE PROBE – Indicates the exhaust temperature probe is open or shorted.

OPEN FIRE SUPPRESSION SYSTEM (F.S.S.) PROBE FAULT – Indicates the temperature probe for the F.S.S. is open or shorted.

LOW VOLTAGE FAULT – Volt dropped below the operating value.

EE PROM FAULT ### – Error in memory location. Fault correction: First cycle power to get the display to read "ENTER PASSWORD". Next press the keys FAA, then press the ENTER key. Press the UP ARROW then "YES" will be displayed. Now press the ENTER key and the display should return to ready.

Inputs (Red L.E.D.)

All indications are with L.E.D. lit

ESTOP – Indicates E-STOP has been pressed.

GAS_V – Indicates the gas valve is open (ON).

BRHL – Indicates the burner high limit disk is closed (temperature below 330° F [166° C]).

SAIL – Indicates the sail switch is closed.

EXHL – Indicates the exhaust high limit disk is closed (temperature below 225° F [107° C]).

MAIN – Indicates the status of main door is closed.

LINT – Indicates the lint drawer is closed.

FUSE – Indicates the status of the control voltage after POWER ON button has been pressed.

Outputs (Green L.E.D.)

All indications are with L.E.D. lit

AUX – This is for a spare output to be programmed.

STEAM – Indicates the status of the steam injection output.

_HEAT – Indicates the status of the heat output.

AIR – Indicates the status of the air jet output.

REV – Indicates the status of the tumbler reverse direction output.

If the request to tumble the drum in the reverse direction is made, then the L.E.D. is ON.

FWD – This L.E.D. will indicate the status of the tumbler forward direction output.

FAN – This L.E.D. will indicate the status of the fan output.

