

AD-444 Installation Manual

Phase 5 / DMC

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-444**

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.

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 standards.

Please observe all safety precautions displayed on the equipment and/or specified in the installation manual included with the dryer.

CAUTION

Dryer(s) should never be left unattended while in operation.

“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.»

WARNING

Children should not be allowed to play on or near the dryer(s). Children should be supervised if near dryer(s) in operation.

Under no circumstances should the dryer door switch, lint door 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.

The dryer must never be operated without the lint filter/screen in place, even if an external lint collection system is used.

FOR YOUR SAFETY

Do not dry mop heads in the dryer. Do not use dryer in the presence of dry cleaning fumes.

The dryers 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.

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

- Installations and repairs must be performed by a qualified or licensed contractor, plumber, or gasfitter qualified or licensed by the State of Massachusetts.
- If using a ball valve, it shall be a T-handle type.

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List of Acronyms

DMC	Dual Microprocessor Controller
D.M.S.	Drill Measurement Size
HVAC	Heating, Ventilating, and Air-Conditioning
in WC	Inches of Water Column
L.C.D.	Liquid Crystal Display
L.E.D.	Light Emitting Diode
OSHA	Occupational Safety and Health Administration
R.M.A.	Return Material Authorization
UL	Underwriters Laboratory

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.

The dryer must never be operated with any of the back guards, outer tops, or service panels removed. Personal injury or fire could result.

Keep dryer area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

Do not spray aerosols in the vicinity of this appliance while it is in operation.

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.

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 gas supplier.

Dryers must be exhausted to the outdoors.

Although the manufacturer 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, combustible detergents, industrial chemicals, or "all purpose" cleaner. Explosion could result.

Do not dry rags or articles coated or contaminated with gasoline, kerosene, oil, paint, or wax. Explosion could result.

Do not dry mop heads. Contamination by wax or flammable solvents will create a fire hazard.

Do not use heat for drying articles that contain plastic, foam, sponge rubber, or similarly textured rubber materials. Drying in a heated tumbler may damage plastics or rubber and also may be a fire hazard.

The possible presence of residual quantities of aggressive or decomposed chemicals in the load may produce damage to the machine and harmful fumes.

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.

For personal safety, the dryer, when installed must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.1.

NOTE: Failure to electrically ground the dryer properly will void the warranty.

Under no circumstances should the dryer door switch, lint door switch, or heat safety circuit ever be disabled.

WARNING

Personal injury or fire could result should the dryer door switch, lint door switch, or heat safety circuit ever be disabled.

This dryer is not to be used in the presence of dry cleaning solvents or fumes.

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.

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

Read and follow all caution and direction labels attached to the dryer.

For safety, proper operation, and optimum performance, the dryer must not be operated with a load less than sixty-six percent, 20 lb (9.1 kg) of its rated capacity.

WARNING

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 standards.

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).

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.

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Specifications

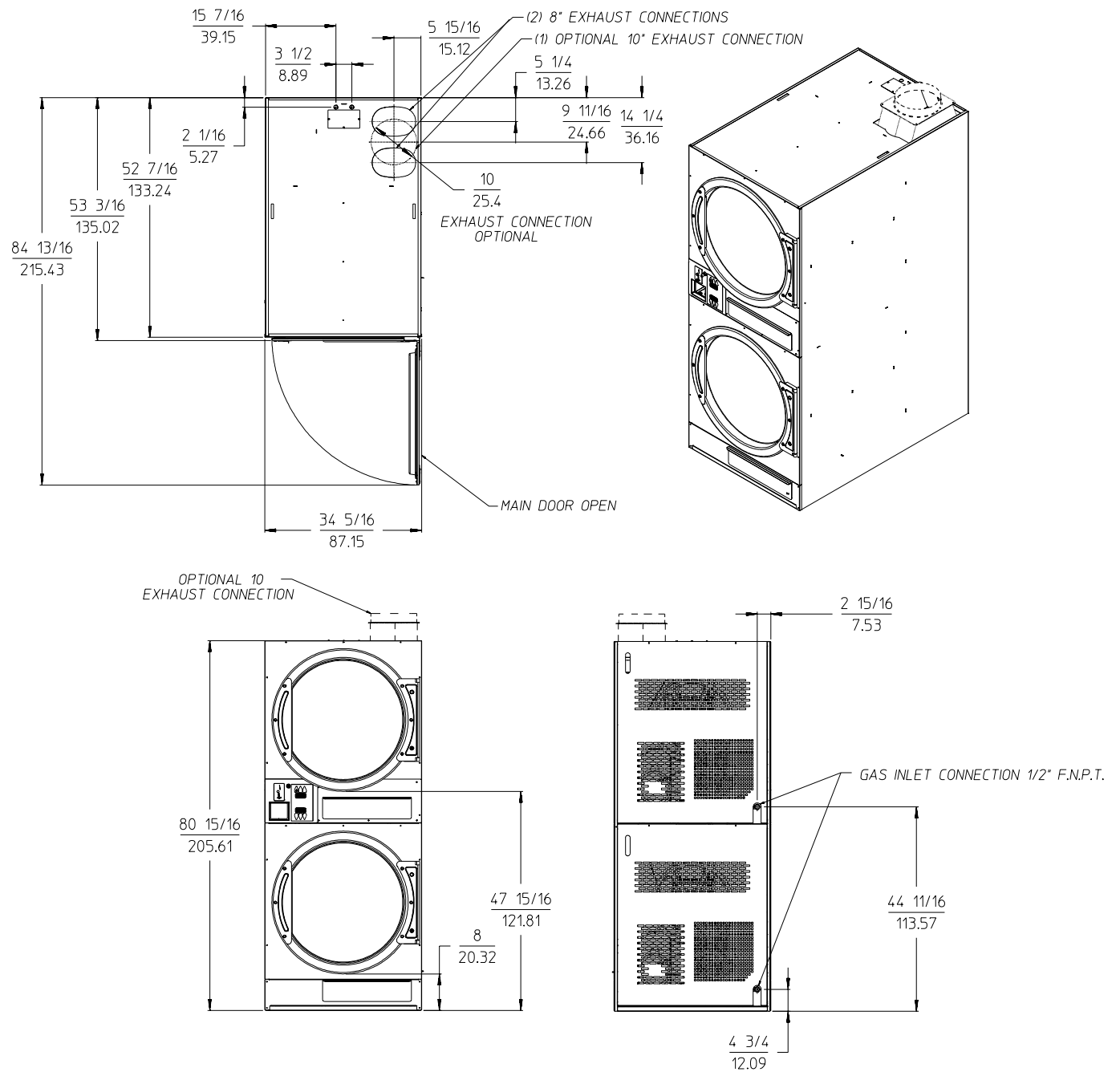
MAXIMUM CAPACITY (DRY WEIGHT) PER POCKET			45 lb	20.41 kg
TUMBLER DIAMETER			32-3/4"	83.19 cm
TUMBLER DEPTH			30"	76.20 cm
TUMBLER VOLUME PER POCKET			14.6 cu ft	413.43 L
TUMBLER / DRIVE MOTOR PER POCKET			3/4 hp	0.56 kW
BLOWER / FAN MOTOR PER POCKET			N / A	
DOOR OPENING (DIAMETER)			27"	68.58 cm
DOOR SILL HEIGHT TOP POCKET / BOTTOM POCKET			50-1/4" / 10-1/4"	127.64 cm / 26.04 cm
WATER CONNECTION			N / A	
DRYERS PER 20' / 40' CONTAINER			8 / 16	
DRYERS PER 48' / 53' TRUCK			25 / 27	
GAS	VOLTAGE AVAILABLE		120-240V 1ø 2w 60 Hz	
	APPROXIMATE NET WEIGHT		905 lb	410.5 kg
	APPROXIMATE SHIPPING WEIGHT		940 lb	426.4 kg
	AIRFLOW PER POCKET		530 cfm	15 cmm
	HEAT INPUT PER POCKET		106,000 Btu/hr	26,712 kcal/hr
	EXHAUST CONNECTION (DIAMETER)		(2) 8" Standard (1) 10" Optional	(2) 20.32 cm (1) 25.4 cm
	COMPRESSED AIR CONNECTION		N / A	
	COMPRESSED AIR VOLUME		N / A	
	INLET PIPE CONNECTION PER POCKET		1/2"	
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		
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

11/29/16

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

Specifications



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

Installation Procedures

WARNING

Excessive Weight Hazard

Use two or more people and mechanical equipment to lift, move and install dryer.

Failure to do so can result in back or other injury.

Installation should be performed by competent professional in accordance with local, state, and country codes.

Leveling Dryer

The dryer is equipped with 4 leveling legs, 1 at each corner of the base. For optimum performance the dryer should be level front-to-back and side-to-side.

Tools Required

- Utility Knife to remove packaging
- 9/16" Box wrench or 9/16" socket to remove pallet bolts
- #2 Phillips screwdriver to open box cover
- Pipe wrench for gas connections

Leveling feet adjustment

- TORX® T20 TORX® T25 to open front and rear to get foot adjustment ends
- 1/4" socket or 1/4" open end wrench to make the adjustment

®TORX is a registered trademark of Textron Innovations, Inc.

Location Requirements

WARNING



Explosion Hazard

Keep flammable materials and vapors, such as gasoline, away from dryer.

Do not install in a garage.

Failure to do so can result in death, explosion, or fire.

Before installing the dryer, be sure the location conforms to local, state, and country codes. In the absence of such codes or ordinances, the installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1 or LATEST EDITION (for General Installation and Gas Plumbing).

The operation of this dryer may affect the operation of other types of gas dryers, which take their air for safe combustion from the same room. If in doubt, consult the dryer manufacturer(s).

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.

Provisions for adequate air supply must be provided as noted in this manual (refer to Fresh Air Supply Requirements section).

Clearance provisions must be made from combustible construction as noted in this manual (refer to Dryer Enclosure Requirements section).

Provisions must be made for adequate clearances for servicing and for operation as noted in this manual (refer to Dryer Enclosure Requirements section).

The dryer must be installed with a proper exhaust duct connection to the outside as noted in this manual (refer to Exhaust Requirements section).

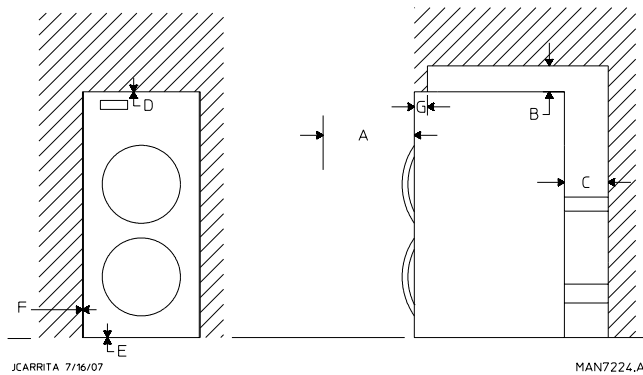
The dryer must be located in an area where correct exhaust venting can be achieved as noted in this manual (refer to Exhaust Requirements section).

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

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

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).

Dryer Enclosure Requirements



- A The requirement to allow the dryer door to open completely is 33.5-inches (85.1 cm).
- B A minimum overhead clearance of 12-inches (30.48 cm) is required.
- C Dryer should be positioned a minimum of 12-inches (30.48 cm) away from the nearest obstruction. 24-inches (60.96 cm) is recommended for ease of installation, maintenance, and service.
- D 1/16" (1.5875 mm) minimum is required.
- E Flooring should be level or below dryer cabinet for ease of removing panels during maintenance.
- F 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, along with the removal of panels during maintenance.
- G 4-inch (10.16 cm) maximum.

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.

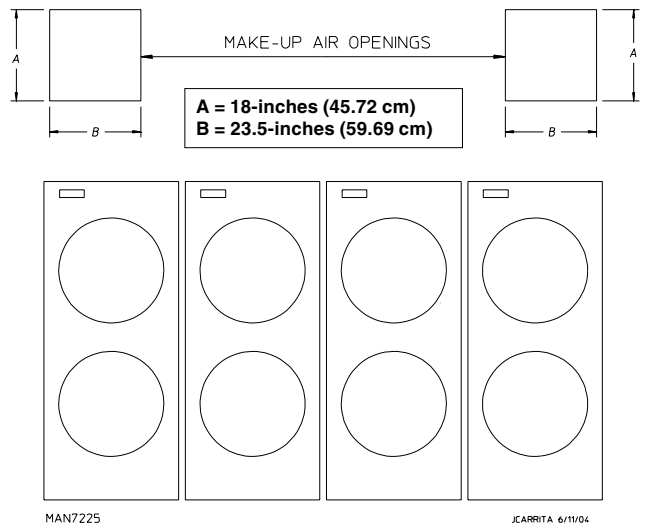
When the dryer is operating, it draws in room air, heats it, passes this air through the tumbler, and exhausts it out of the building. Therefore, the room air must be continually replenished from the outdoors. If the make-up air is inadequate, drying time and drying efficiency will be adversely affected.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

Air supply (make-up air) must be given careful consideration to ensure proper performance of each dryer. Fresh air ventilation openings shall not be blocked and/or sealed. As a general rule, an unrestricted air entrance from the outdoors of 212 inch² (1,367 cm²) is required for each dryer. (Based on 1 inch² [6.5 cm²] per 1,000 Btu [252 kcal].)

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 dryers supplied by the openings: 4 dryers x 212 inch² per dryer = 848 inch² total
 $848 \text{ inch}^2 \div 2 \text{ openings} = 424 \text{ inch}^2 \text{ per opening.}$
 $424 \text{ inch}^2 = 18 \text{ inch} \times 23.5 \text{ inch.}$

Therefore: for a bank of four dryers, 2 unrestricted openings measuring 18-inches by 23.5-inches (45.72 cm by 59.69 cm) are acceptable.



To compensate for the use of registers or louvers used over the openings, this area must be increased by approximately 33%. In the example above, when adding louvers or registers, the 18-inch dimension can be increased by 33% up to 24 inches ($18 \times 1.3333 = 24$). Therefore for a bank of 4 dryers, 2 openings with louvers or registers measuring 24-inches x 23.5-inches (60.96 cm x 59.69 cm) are acceptable. Make-up air openings should not be located in an area directly near where exhaust vents exit the building.

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

IMPORTANT: Make-up air must be 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.

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, and shutdown of the burner by the airflow (sail) switch, burner hi-limits, or lint chamber hi-limit protector thermostat. The dryer must be installed with a proper exhaust duct connection to the outside.

⚠ WARNING



Fire Hazard

Use a heavy metal vent.

Do not use a plastic vent.

Do not use a metal foil vent.

Failure to follow these instructions can result in death or fire.

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 26 gauge (0.0195-inches [0.50 mm]) thick."

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. Single or independent dryer venting is recommended. 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. All ductwork should be smooth inside with no projections from sheet metal screws or other obstructions, which will collect lint. When adding ducts, overlap the duct being 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.

IMPORTANT: Exhaust back pressure measured by a manometer/magnehelic in the exhaust duct must be no less than 0 and must not exceed 0.6 in WC (1.5 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 0.6 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.

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.

The ductwork for this dryer must be suitable for the appliance category in accordance with national installation regulations of the country of destination.

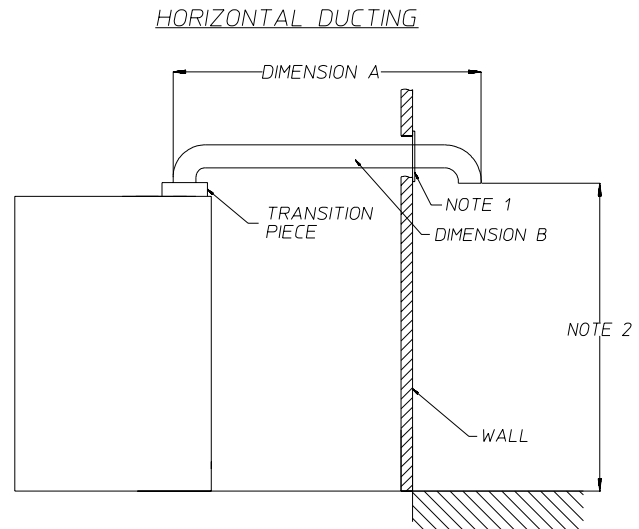
Outside Ductwork Protection

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 (refer to the diagram).

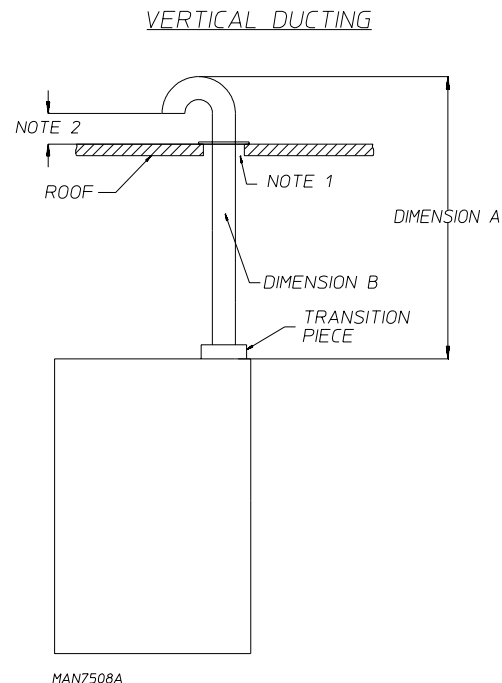
IMPORTANT: Do not use screens, louvers, or caps on the outside opening of the exhaust ductwork.

Single Dryer Venting with Transition Piece

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 HVAC firm should be consulted for proper venting information.



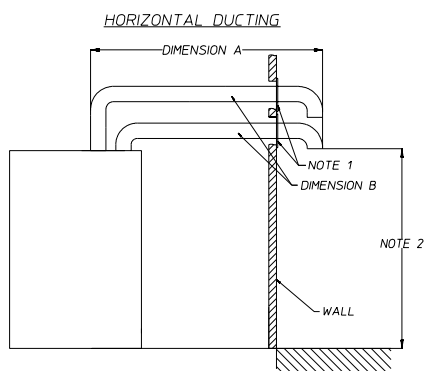
A = 20 feet (6.10 meters)
B = 10-inches (25.4 cm)



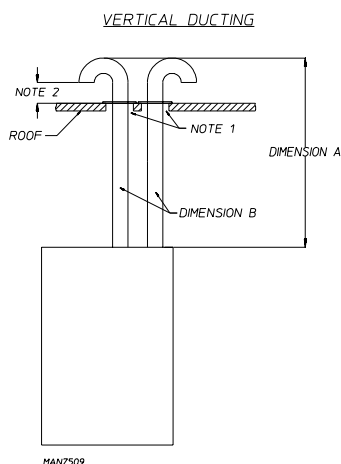
NOTE 1 Opening from combustible materials must be 2-inches (5.08 cm) larger than the duct (all the way around). The duct must be centered within this opening.

NOTE 2 Distance should be 2 times the diameter of the duct to the nearest obstruction.

Single Dryer Venting without Transition Piece



A = 20 feet (6.10 meters)
B = 8-inches (20.32 cm)



MAN7509

The length of the ductwork from the dryer to the outside exhaust outlet must not exceed 20 feet (6.09 meters). The minimum diameter of this ductwork must be at least 8-inches (20.32 cm) when each pocket/tumbler is vented individually and 10-inches (25.4 cm) when both pockets/tumblers are combined. Including tumbler/dryer elbow connections or elbows used for outside protection from the weather, no more than two 90° elbows should be used in the exhaust duct run. If more than the equivalent of two 90° elbows are used, the cross-sectional area of the ductwork must be increased.

Multiple Dryer (Common) Venting

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 HVAC firm should be consulted for proper venting information.

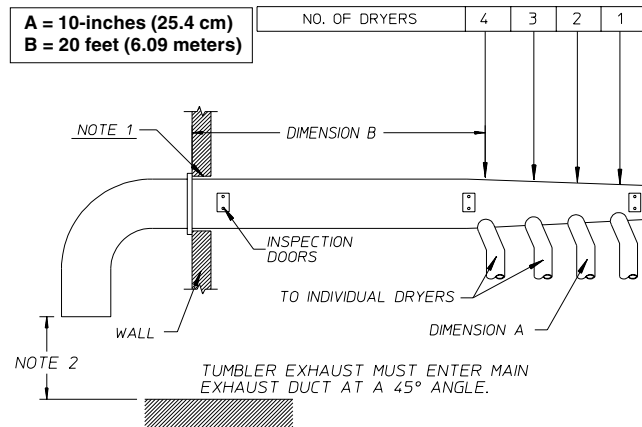
If it is not feasible to provide separate exhaust ducts for each dryer, ducts from individual dryers may be channeled into a "common main duct." The individual ducts should enter the bottom or side of the main duct at an angle not more than 45° in the direction of airflow. The main duct should be tapered, with the diameter increasing before each individual duct is added. The minimum diameter of the individual ductwork must be at least 8-inches (20.32 cm) for individual pockets/tumblers or 10-inches (25.4 cm) for individual dryers.

IMPORTANT: To maintain proper performance, no more than 4 dryers should be connected to 1 main common duct.

The illustration below shows the minimum cross-sectional area for multiple dryer round or square venting. These figures must be increased if the main duct run from the last dryer to where it exhausts to the outdoors is longer than 20 feet (6.09 meters) or has more than 1 elbow in it.

Multiple Dryer Venting with 10-Inch (25.4 cm) Diameter
1,060 cfm (30.02 cmm) Exhaust Connections at Common Duct

NUMBER OF DRYERS		4	3	2	1
MINIMUM CROSS-SECTIONAL AREA	SQ IN	254	200	155	80
	SQ CM	1638	1290	999	516
MINIMUM ROUND DUCT DIAMETER	IN	18	16	14	10
	CM	45.72	40.64	35.56	25.4



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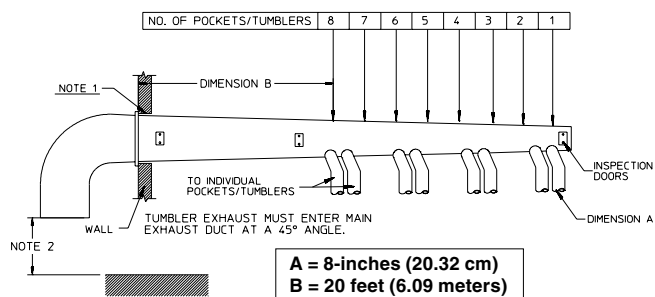
MAN7212

NOTE 1 Opening from combustible materials must be 2-inches (5.08 cm) larger than the duct (all the way around). The duct must be centered within this opening.

NOTE 2 Distance should be 2 times the diameter of the duct to the nearest obstruction.

Multiple Dryer Venting with 8-Inch (20.32 cm) Diameter
530 cfm (15.01 cmm) Exhaust Connections at Common Duct

NUMBER OF DRYERS		8	7	6	5	4	3	2	1
MINIMUM CROSS-SECTIONAL AREA	SQ IN	254	200	155	80				
	SQ CM	1638	1290	999	516				
MINIMUM ROUND DUCT DIAMETER	IN	18	16	14	10				
	CM	45.72	40.64	35.56	25.4				



JCARRITA 7/16/07

MAN7510

NOTE 1 Opening from combustible materials must be 2-inches (5.08 cm) larger than the duct (all the way around). The duct must be centered within this opening.

NOTE 2 Distance should be 2 times the diameter of the duct to the nearest obstruction.

Electrical Information

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 and state regulations or codes. In the absence of such codes, all electrical connections, materials, and workmanship must conform to the applicable requirements of the National Electrical Code ANSI/NFPA NO. 70-LATEST EDITION or in Canada, the Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION.

For personal safety, the dryer, when installed must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical 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, which could cause 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.

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.

The manufacturer reserves the right to make changes in specifications at any time without notice or obligation.

Electrical Service Specifications

Gas Models Only

ELECTRICAL SERVICE SPECIFICATIONS (PER POCKET)					
IMPORTANT: 208 VAC AND 230/240 VAC ARE NOT THE SAME. When ordering, specify exact voltage.					
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	12	—	15
208	1Ø	2	7	—	15
220	1Ø	2	6.8	—	15
230	1Ø	2	6.5	—	15
240	1Ø	2	6.5	—	15

Check your national and local codes for breaker and wire sizes 11/7/16

Grounding

A ground (earth) connection must be provided and installed in accordance with state and local codes. In the absence of these codes, grounding must conform to applicable requirements of the National Electrical Code ANSI/NFPA NO. 70-LATEST EDITION, or in Canada, the installation must conform to applicable Canada Standards: Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION. 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 (size 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 a wire (size per local codes) 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.

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 UL 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.

Gas Models Only

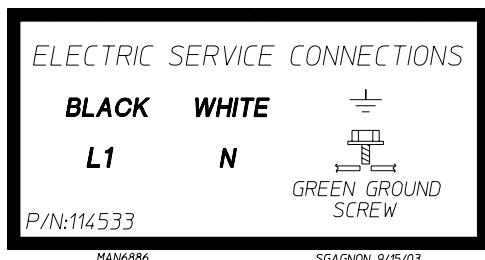
IMPORTANT: A separate protected circuit must be provided to each pocket.

Single-Phase (1Ø) Wiring Connections/Hookup

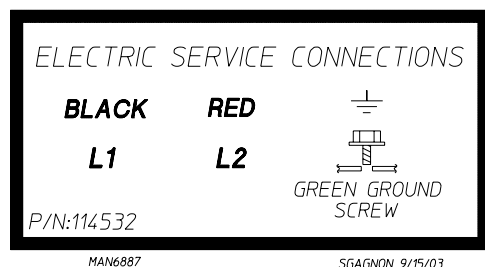
The electrical input connections on all single-phase (1Ø) gas dryers are made into the junction box located at the top left rear area of the dryer (refer to [page 7](#)).

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

For 110V Single-Phase Applications



For 208-240V Single-Phase Applications



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

Gas Information

It is your responsibility to have all plumbing connections made by a qualified professional to ensure that the gas plumbing installation is adequate and conforms to local and state regulations or codes. In the absence of such codes, all plumbing connections, materials, and workmanship must conform to the applicable requirements of the 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.

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.

Each dryer must have its own manual shutoff valve to provide isolation of the dryer from the gas supply.

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). The dryer must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing 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 can cause irreparable damage to the gas valve voiding the warranty.

⚠ WARNING

Fire or explosion could result due to failure of isolating or disconnecting gas supply as noted.

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 data 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 contact the manufacturer.

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 contact the manufacturer.

IMPORTANT: This gas dryer is not provided with an internal gas supply shutoff and an external gas supply shutoff must be provided.

Technical Gas Data

Gas Specifications

For Australia, refer to data plate.

Type of Gas	Manifold Pressure*	In-Line Pressure
Natural	3.5 in WC	6.0 - 12.0 in WC
	8.7 mb	14.92 - 29.9 mb
Propane	10.5 in WC	11.0 - 12.0 in WC
	26.1 mb	27.4 - 29.9 mb

Shaded areas are stated in metric equivalents

* Measured at outlet side of gas valve pressure tap when gas valve is on.

Gas Connections (per pocket):

Inlet connection 1/2" N.P.T. (female)
 Inlet supply size 1/2" Pipe (minimum)
 Btu/hr input 106,000 (26,711 kcal/hr)

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 in WC (14.92 mb) and a maximum of 12.0 in WC (29.9 mb) pressure.

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 in WC (26.1 mb). 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					
Btu/hr Rating*	kcal/hr Rating*	Natural			Propane		
		Qty.*	D.M.S.**	Part No.	Qty.*	D.M.S.**	Part No.
106,000	26,711	1	#11	140847	1	#31	140818
Propane Conversion Kit Part Number 884419							

Shaded area is stated in metric equivalent

* Per pocket.

** D.M.S. equivalents are as follows:

Natural Gas #11 = 0.191" (4.851 mm).
 Propane Gas #31 = 0.120" (3.048 mm).

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 two 1/2" N.P.T. female pipe connections located at the rear of the dryer (refer to [page 7](#)).

If a separate feed is provided for each tumbler from the main supply line (header), then a 1/2" (12.7 mm) line connection is sufficient. However, if the top and bottom tumbler connections are connected together, the supply from the header must be increased to 3/4-inch (19.05 mm). It is recommended that a gas shutoff valve be provided to the gas supply line of each dryer for ease in servicing.

IMPORTANT: When plumbing upper and lower tumblers together, as illustrated below, supply connection must be a minimum of 3/4" (19.05 mm).

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.

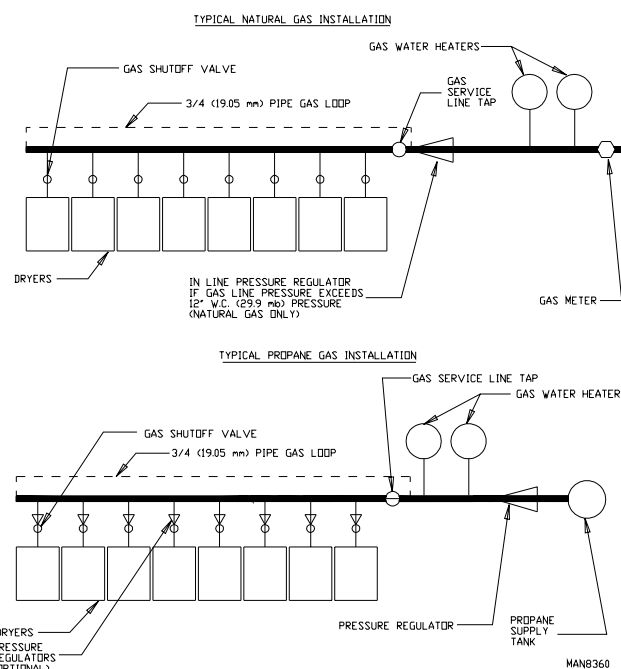
Test all connections for leaks by brushing on a soapy water solution (liquid detergent works well).

WARNING

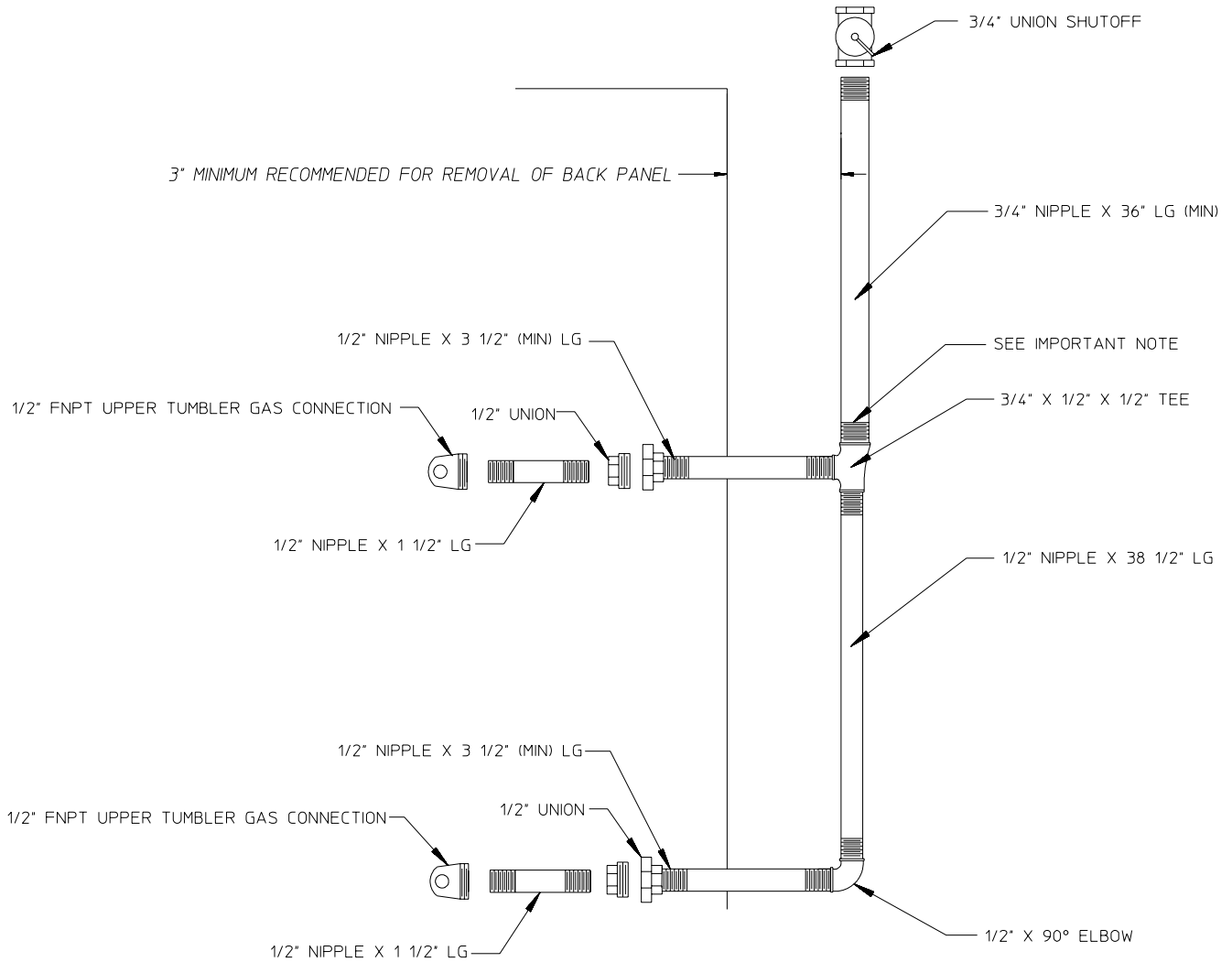
NEVER TEST FOR LEAKS WITH A FLAME!!!

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, other gas-operated appliances on the same 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.



TYPICAL GAS CONNECTIONS



MAN7783

Preparation for Operation / Start-Up

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

Read all "caution," "warning," and "direction" labels attached to the dryer.

Check incoming supply voltage to be sure that it is the same as indicated on the dryer data label.

Gas Models – check to ensure that the dryer is connected to the type of heat/gas indicated on the dryer data label.

The sail switch damper assembly was installed and adjusted at the factory prior to shipping. However, each sail switch adjustment must be checked to ensure that this important safety control is functioning.

Check bolts, nuts, screws, terminals, and fittings for tightness.

Gas Models – be sure that all gas shutoff valves are in the open position.

Be sure all back guard panels and service box covers have been replaced.

Check the lint door to ensure that it is closed and secured in place.

Rotate the tumbler by hand to be sure it moves freely.

Preoperational Test

All dryers are thoroughly tested and inspected before leaving the factory. However, a preoperational test should be performed before the dryer is publicly used. It is possible that adjustments have changed in transit or due to marginal location (installation) conditions. Installer must instruct the user on how to correctly operate the dryer before leaving.

Turn on electric power to the dryer.

Refer to the operating instructions for starting your particular model dryer.

Gas Dryers

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 model dryers are equipped with an ignition system, which has internal diagnostics. If ignition is not established after one time, the heat circuit in the ignition module will attempt two more ignitions (total of three ignition attempts). If there is no flame after the third ignition attempt, the module will lock out until it is manually reset. To reset the ignition system, open and close the main door and restart the dryer.

A burner gas pressure measurement should be taken at the gas valve outlet pressure tap of each gas valve to ensure that the water column pressure is correct and consistent.

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

Natural Gas..... 3.5 in WC (8.7 mb).

Propane Gas..... 10.5 in WC (26.1 mb).

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.

Make a complete operational check of all safety related circuits:

Door Switch(es)

Hi-Limit Thermostats

Cycling Thermostats

Sail Switch

Make a complete operational check of all operating controls.

NOTE: If computer program changes are required, refer to the computer programming section of the manual supplied with the dryer.

The dryer should be operated through one 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.

Preoperational Instructions

Coin Models

Microprocessor Controller (Computer)

When the microprocessor controller (computer) is in the ready state, the L.C.D. screen will display "FILL" followed by the amount to start.

Insert coin(s). Once the correct "Amount to Start" has been inserted, the L.C.D. will display "PUSH".

Select temperature by pressing "HI," "LO," or "PERM PRESS." The cycle will start and the L.C.D. will display the Dry Cycle selected and the remaining time.

The dryer will continue through the drying and cooling cycles, until the vended time has expired.

NOTE: To stop the dryer, open the main door. Continuation of the cycle will resume only after the door has been closed and any of the three temperature selection buttons is pressed.

Upon completion of the drying and cooling cycles, the tone (buzzer) will sound and the dryer will go into the Anti-Wrinkle Mode, if active, for up to 99 minutes, or until the main door or lint drawer 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.

Shutdown Instructions

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

Discontinue power to the dryer either at the external disconnect switch or the circuit breaker.

Discontinue the gas supply (for gas models only):

Shut off external gas supply shutoff valve.

Service / Parts Information

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 equipment was purchased. If the reseller cannot be contacted or is unknown, contact the Service Department for a reseller in your area.

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

Parts

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

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

Warranty Information

Warranty Registration

Visit us at www.adclaundry.com and register all of your new dryers by clicking on "Warranty" under the "Service" menu.

Warranty

For a copy of the commercial warranty covering your particular dryer(s), contact the 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 Warranty Department at +1 (269) 923-3000.

NOTE: Whenever contacting the 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.

Returning Warranty Parts

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

No parts are to be returned without prior written authorization (R.M.A.) from the factory.

NOTE: An R.M.A. is valid for only 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 component.

Each part must be tagged with the following information:

Model number and serial number of the dryer from which part was removed.

Nature of failure (be specific).

Date of dryer installation.

Date of part failure.

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.

Warranty tags (P/N 450064) are available at "no charge" from ADC upon request.

The company returning the part(s) must clearly note the complete company name and address on the outside of the package.

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.

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.

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 Warranty Department within 30 days from the FAX/letter date, then no replacements, credits, or refunds will be issued, and the merchandise will be discarded.

Routine Maintenance

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.

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 to eight operational (running) hours per day.

IMPORTANT: Dryers produce combustible lint and must be exhausted to the outdoors. Every six months, inspect the exhaust ducting and remove any lint buildup.

Suggested Cleaning Schedule

Every Third or Fourth Load

Clean the lint drawer screen every third or fourth load. A clogged lint screen will cause poor dryer performance. Inspect the lint screen and replace if torn.

NOTE: The frequency of cleaning the lint screen 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 the hazard of electrical shock, discontinue electrical supply to the dryer.

90 Days

Remove lint from around tumbler, drive motor, and surrounding areas.

Remove lint from the gas valve burner area with a dusting brush or vacuum cleaner attachment.

Clean any lint accumulation in and around both the blower and drive motor casing openings.

NOTE: To prevent damage, avoid cleaning and/or touching ignitor/flame-probe assembly.

Every Six Months

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

NOTE: The accumulation of lint in the exhaust ductwork can create a potential fire hazard.

Do not obstruct the flow of combustion and ventilation air. Check customer furnished back draft dampers in the exhaust ductwork. Inspect and remove any lint accumulation, which can cause the damper to bind or stick.

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

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

Adjustments

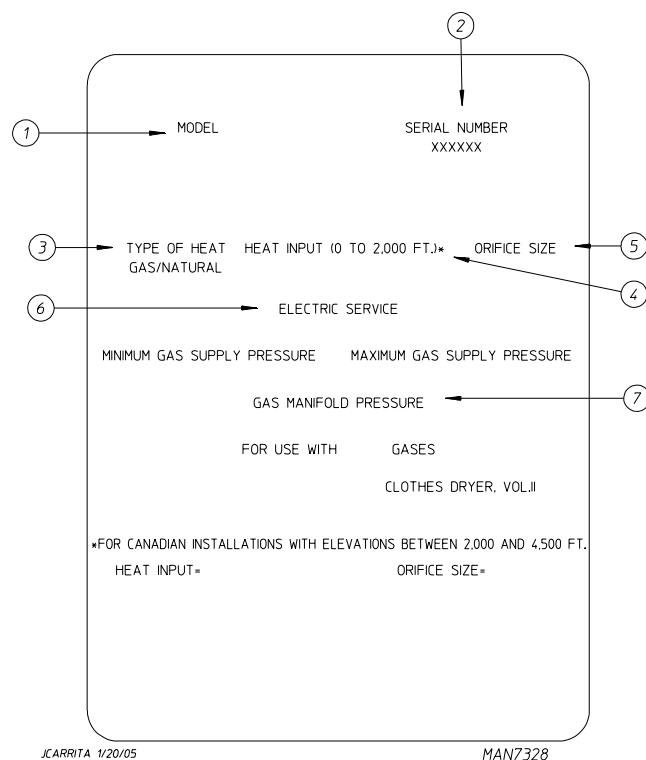
7 Days After Installation and Every Six Months Thereafter

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

Lubrication

The motor 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 fittings).

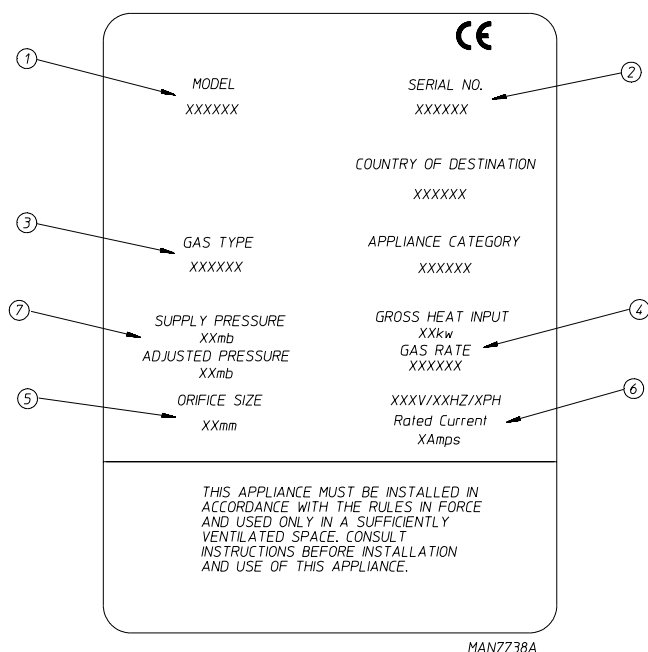
Data Label Information



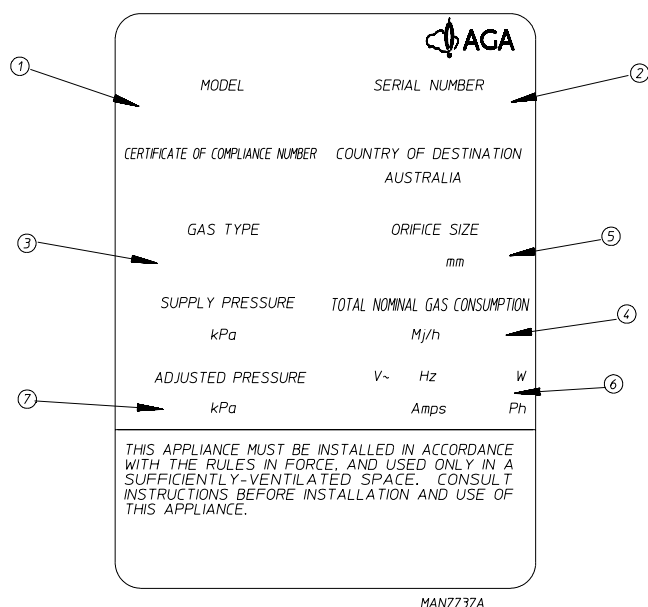
When contacting ADC, certain information is required to ensure proper service/parts information from ADC. This information is on the data label affixed to the right side panel area at the rear of the dryer. When contacting ADC, please have the model number and serial number available.

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.

CE Label



AGA Label



Procedure for Functional Check of Replacement Components

DSI Module

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 retries/trials (the initial try and two 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.

