

AD-4545

Installation/Operator Manual

WARNING: For your safety the information in this manual must be followed to minimize the risk of fire or explosion and to prevent property damage, personal injury or death.

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

— WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Clear the room, building or area of all occupants.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

— Installation and service must be performed by a qualified installer, service agency or the gas supplier.

AVERTISSEMENT: Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

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

— QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:

- Ne pas tenter d'allumer d'appareils.
- Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment.
- 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.



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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-4545**

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 (508) 678-9000. 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.

“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.

⚠ WARNING

Proposition 65

Use of this product could expose you to substances from fuel combustion that contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

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.

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

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 et dangereux.»

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(es), lint door/drawer switch(es), or heat safety circuit(s) ever be disabled.

The dryer must never be operated with any of the back guards 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 behind the control panel.

Table of Contents

Safety Precautions 4

Specifications 6

Installation Procedures 8

Location Requirements	8
Unpacking/Setting Up	8
Dryer Enclosure Requirements	8
Fresh Air Supply Requirements	9
Exhaust Requirements	9
Electrical Information	11
Gas Information	13
Water Information	14
Preparation for Operation/Start-Up	15
Preoperational Test	15
Preoperational Instructions	15
Shutdown Instructions	16

Service/Parts Information 16

Service	16
Parts	16

Warranty Information 16

Returning Warranty Cards	16
Warranty	16
Returning Warranty Parts	16

Routine Maintenance 17

Cleaning	17
Adjustments	18

Data Label Information 18

List of Acronyms

HVAC	Heating, Ventilating, and Air-Conditioning
in WC	Inches of Water Column
L.C.D.	Liquid Crystal Display
L.E.D.	Light Emitting Diode
L.P.	Liquid Propane
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 and to prevent property damage, personal injury, or loss of life.

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

Failure to properly install, maintain, and/or operate dryer according to this manual and operator's manuals included with dryer may result in conditions, which can cause serious injury, death and/or property damage.

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

Purchaser and 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, 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.

Items that have been spotted or soaked with vegetable or cooking oil constitute a fire hazard and should not be placed in a tumble dryer.

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.

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 must be electrically grounded in accordance with local codes and/or 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.



Note

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



Warning

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

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.

For safety, proper operation, and optimum performance, the dryer must not be operated with a load less than 66% 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).

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

Use this dryer only for its intended purpose, drying fabrics.

The "cool down" cycle of tumble dryers should be used to reduce the temperature of the items. They should not be removed from the tumble dryer or piled or stacked while hot.

Fabric softeners or similar products should not be used in a tumbler dryer to eliminate the effects of static electricity unless this practice is specifically recommended by the manufacturer of the fabric softener or product.

**Warning**

To reduce the risk of personal injury, install lockable doors to prevent public access to the rear of the dryers.

Exhaust duct outlet should be checked periodically for blockages, and if any found, removed.

**Important**

A means of restraint must be used to prevent straining of the gas supply when the appliance is moved.

An external means of power removal (disconnect device) must be provided by the installer.

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.

**Warning**

This appliance must only operate with the gas type indicated on the dryer's data plate. If the appliance is converted (gas type is changed), a data plate amendment must be obtained from American Dryer Corporation.

This appliance may cause spillage of products of combustion from an open-flue appliance fitted in the same room, and that such an appliance shall be tested for clearance of products with the appliance in operation and all windows and doors closed.

NOTES _____

NOTES _____

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				BLOWER DRIVEN BY TUMBLER MOTOR			
DOOR OPENING (DIAMETER)				27"	68.6 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	1,3ø	2,3w	50/60 Hz
	APPROXIMATE NET WEIGHT			1,015 lb	460.40 kg		
	APPROXIMATE SHIPPING WEIGHT			1,050 lb	476.27 kg		
	AIRFLOW PER POCKET	60 Hz	600 cfm	16.99 cmm			
		50 Hz	500 cfm	14.16 cmm			
	HEAT INPUT PER POCKET			112,000 Btu/hr	28,230 kcal/hr		
	EXHAUST CONNECTION (DIAMETER) PER POCKET			(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			3/4" M.N.P.T.				
			3/4" F.B.S.P.T. (CE and Australia Only)				
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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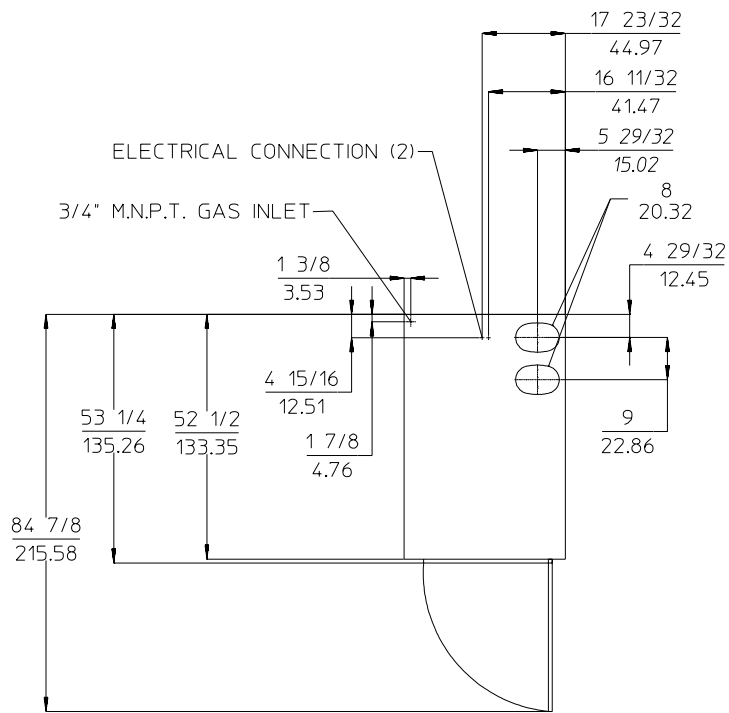
Note

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

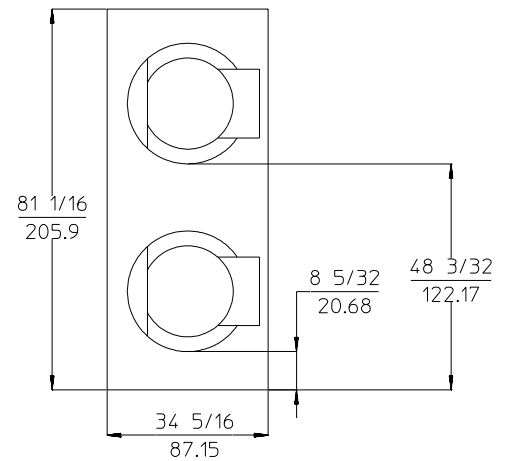
Specifications

DRYER NOTES:

- * DUCTWORK SIZE VARIES WITH INSTALLTION CONDITIONS.
- * EXHAUST STATIC PRESSURE MUST BE NO LESS THAN 0 AND MUST NOT EXCEED 0.6 (1.48 MB) WATER COLUMN.



PLAN VIEW



FRONT VIEW

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: ANSI Z223.1-LATEST EDITION (National Fuel Gas Code) or ANSI/NFPA NO. 70-LATEST EDITION (National Electrical Code) or in Canada, the installation must conform to applicable Canadian Standards: CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (L.P. Gas) or LATEST EDITION (for General Installation and Gas Plumbing) or Canadian Electrical Codes Parts 1 & 2 CSA C22.1-1990 or LATEST EDITION (for Electrical Connections).

Location Requirements

Before installing the dryer, be sure the location conforms to local codes and ordinances. In the absence of such codes or ordinances the location must conform with the National Fuel Gas Code ANSI.Z223.1 LATEST EDITION, or in Canada, the installation must conform to applicable Canadian Standards: CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (L.P. Gas) or LATEST EDITION (for General Installation and Gas Plumbing).

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.

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


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.

Caution
 *This dryer produces combustible lint and must be exhausted to the outdoors. Every 6 months, inspect the exhaust ducting and remove any lint buildup.*

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).*

Unpacking/Setting Up

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

Important
 *Dryer must be transported and handled in an upright position at all times.*

The dryer can be moved to its final location while still attached to the skid or with the skid removed. To remove the skid from the dryer, locate and remove the 4 bolts securing the base of the dryer to the wooden skid. Bolts are located next to the leveling legs in each corner.

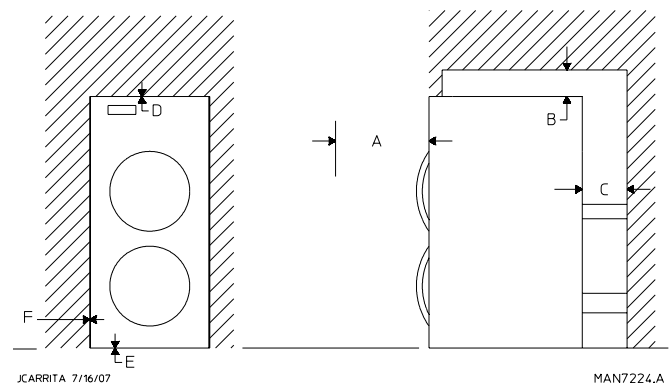
With the skid removed, use caution and assure all 4 leveling legs are fully retracted, if the dryer is to be slid into its final position.

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.

Dryer Enclosure Requirements

Bulkheads and partitions should be made of noncombustible material.



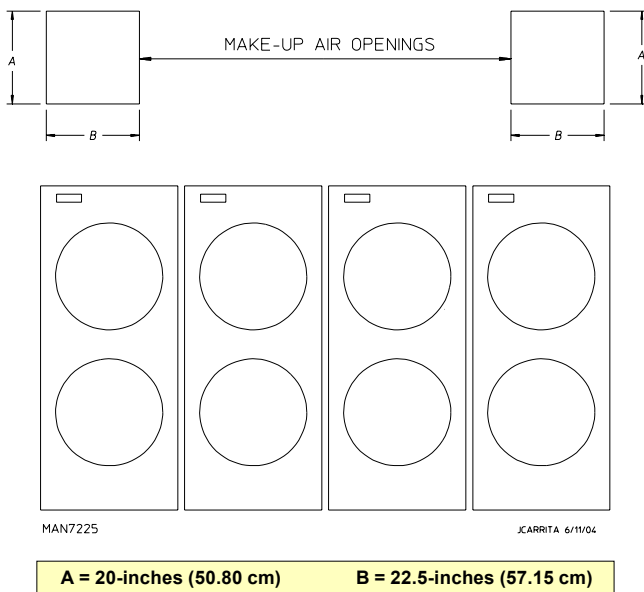
- A The requirement to allow the door to open completely is 33.5-inches (85.1 cm).
- B A minimum overhead clearance of 12-inches (30.48 cm) is required.
- C Dryer should be positioned a minimum of 12-inches (30.48 cm) away from the nearest obstruction. 24-inches (60.96 cm) is recommended for ease of 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.

Fresh Air Supply Requirements

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 224 inch² (1,445 cm²) is required. (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 4 dryers, 2 unrestricted openings measuring 20-inches by 22.5-inches (50.80 cm by 57.15 cm) are acceptable.

To compensate for the use of registers or louvers used over the openings, this area must be increased by approximately 33%. 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.



Caution

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

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. 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

It is recommended that exhaust or booster fans not be used in the exhaust ductwork system.

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 (1.48 mb).



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.

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 for this appliance 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

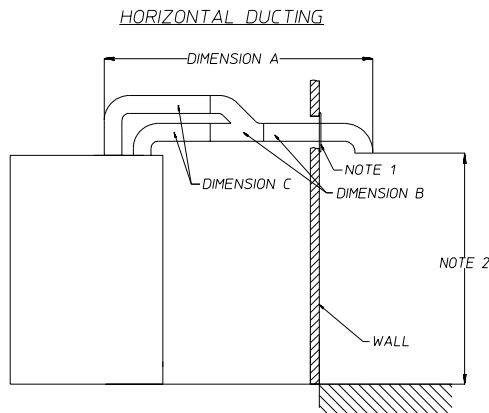
Do not use screens, louvers, or caps on the outside opening of the exhaust ductwork.

Single Dryer Venting

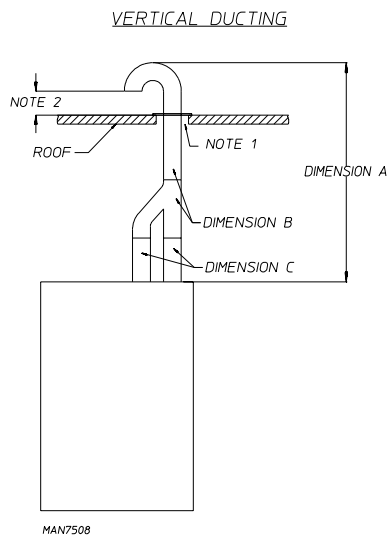


Important

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.

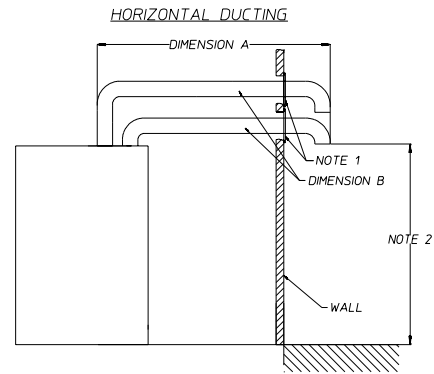


A = 20 feet (6.10 meters)
B = 10-inches (25.4 cm)
C = 8-inches (20.32 cm)

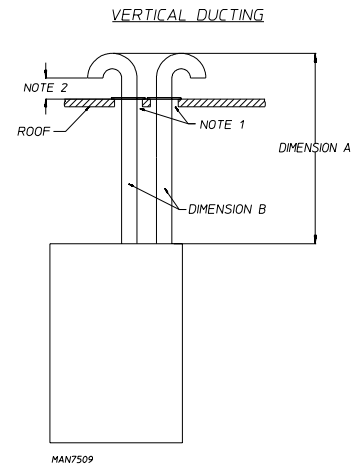


NOTE 1 Opening from combustible materials must be 2-inches (5.08 cm) larger than the duct (all the way around). The duct must be centered within this opening.

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



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



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 3 90° elbows should be used in the exhaust duct run. If more than the equivalent of 3 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.



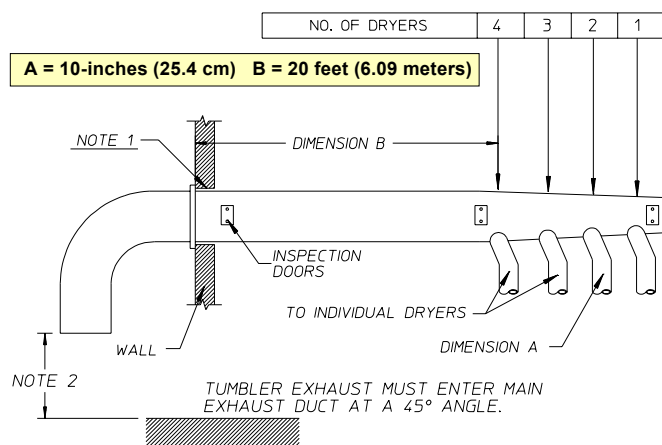
Important

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
1,200 cfm (33.98 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



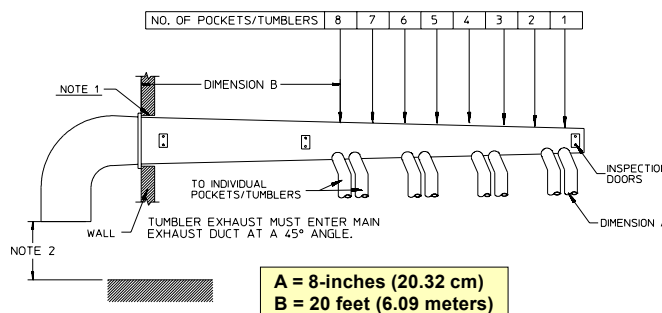
JCARRITA 04/21/04

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- 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
600 cfm (16.99 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

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- 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, state, and national regulations or codes of the country of origin. 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.

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. An individual ground circuit must be provided to each pocket, do not daisy chain.

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.

Important

! A separate protected circuit must be provided to each pocket.

It is necessary to have a power disconnect for each pocket. These disconnects must be located within 30 feet (9 meters) of the unit and also be identified as being one of two power sources supplying a dryer.

The dryer must be connected to the electric supply shown on the data label. In the case of 208 VAC or 230/240 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 230/240 VAC are not the same. Any damage done to dryer components due to improper voltage connections will automatically void the warranty.

Electrical Service Specifications


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	12.0	—	15
230	1Ø	2	6.5	—	15
208	3Ø	3	3.0	—	15
240	3Ø	3	3.2	—	15

5/19/08

Grounding

A ground (earth) connection must be provided and installed in accordance with local, state, and national regulations or codes of the country of origin. 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 behind the control panel 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.

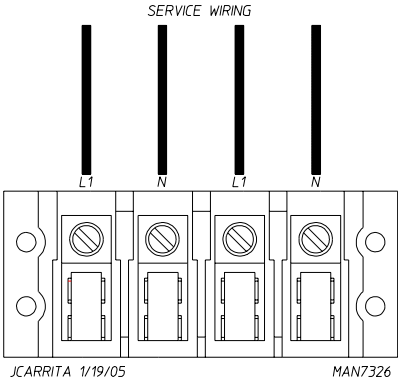
For CE Models Only

The means for disconnection from the supply must be incorporated into wiring having a minimum contact separation of 3.0 mm in all poles.

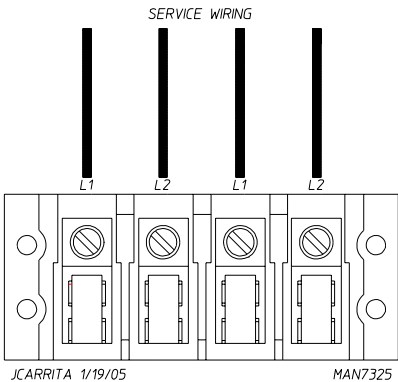
Single-Phase (1Ø)
Wiring Connections/Hookup


The electrical input connections are made into the rear service box located at the top rear of the dryer. The ground connection is made to the copper lug, also provided in this box. To gain access, the service box cover must be removed.

120-240V Application with Neutral



208-240V Application without Neutral



**Caution**
The dryer must be grounded. A ground lug has been provided for this purpose.

Input connection wiring must be sized properly to handle the dryer's current draw. This information is printed on the dryer's data label.

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 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/CGAB149.2-M91 (L.P. Gas) or LATEST EDITION.

In Australia, the fuel gas code is AS 5601 / AG 601, local authority, gas, electricity, and any other relevant statutory regulations.

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.



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.

For ease of service, the individual gas supply line of each dryer must have its own manual shutoff valve.

Failure to isolate or disconnect the dryer from supply as noted can cause irreparable damage to the gas valve, voiding the warranty.

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) for non-CE dryers or 50 mb for CE dryers.



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) for non-CE dryers or 50 mb for CE dryers.



Warning

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



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 data label and pressure must be confirmed. 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.

The input ratings shown on the 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

If connection to this appliance is made with a flexible hose, it must be suitable for the appliance category in accordance with national installation regulations of the country of destination, and if in doubt the installer must contact the supplier. The manufacturer of this appliance does not recommend the use of flexible gas supply line/hose. An external gas supply shutoff must be provided.

Pipe joint compounds that resist the action of natural, propane, and butane gases must be used.



Warning (CE Dryers Only)

This appliance must only be operated with the gas type indicated on the dryer's data plate. If the appliance is converted (gas type changed), a data plate amendment must be obtained from American Dryer Corporation for CE approved units.

Gas Connections

Inlet connection 3/4" M.N.P.T.

Inlet supply size 3/4" Diameter Pipe (minimum)

Piping/Connections

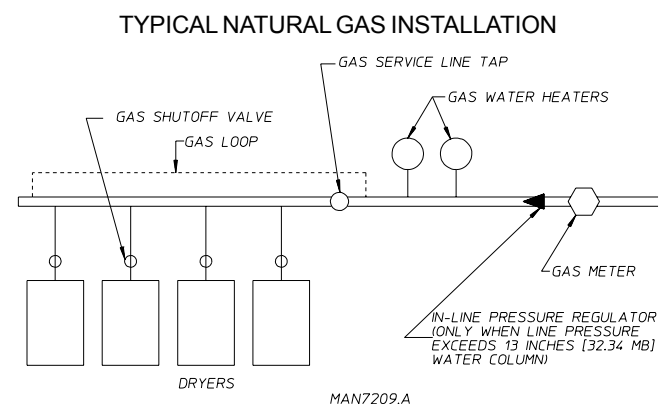
The dryer is provided with a 3/4" N.P.T. inlet pipe connection at the rear of the dryer. It is recommended that a gas shutoff valve be provided to the gas supply line of each dryer for ease in servicing.

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 L.P. 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.

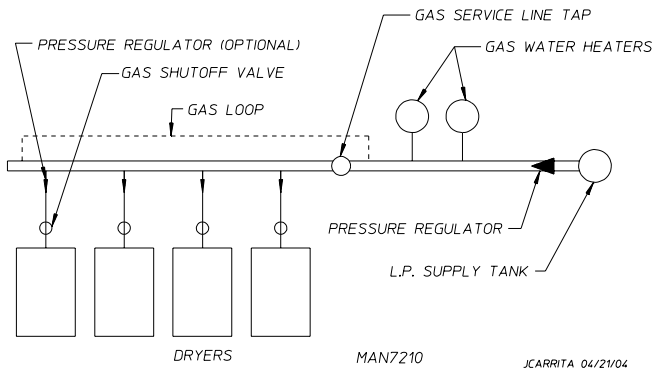


Note

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



TYPICAL L.P. GAS INSTALLATION



Consistent gas pressure is essential at all gas connections. It is recommended that a 3/4-inch (19.05 mm) pipe gas loop be installed in the supply line servicing a bank of dryers. An in-line pressure regulator must be installed in the gas supply line (header) if the (natural) gas pressure exceeds 13.0 in WC (32.34 mb) pressure.

A plugged tap, 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, L.P., and butane gases 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!!!

Water Information

Before You Start

Check Local Codes and Permits

Call your local water company or the proper municipal authority for information regarding local codes.



Important

It is your responsibility to have all plumbing connections made by a qualified professional to ensure that the plumbing installation is adequate and conforms to local, state, and federal regulations or codes.

It is the installer's or owner's responsibility to see that the required water pressure, pipe size, or connections are provided. The manufacturer assumes no responsibility if the fire suppression system is not connected, installed, or maintained properly.

Installation Water Supply

The fire suppression system must be supplied with a minimum water pipe size of 1/2-inch (12.7 mm) and be provided with 40 psi +/- 20 psi (2.75 bar +/- 1.37 bar) of pressure.

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



Warning

If the water in the supply line or water solenoid valve freezes, the fire suppression system will be inoperative!!

Water Connections

The water connection is made to the 3/4"-11.5 NH hose adaptor, which is shipped in the tumbler and must be installed to the 1/2" N.P.T. water connection, located at the upper rear of the dryer. A flexible supply line/coupling must be used in an effort to avoid damaging the electric water solenoid valve.



Note

The 3/4"-11.5 NH is a standard hose coupling screw thread. It is not to be confused with 3/4" N.P.T. The sealing of an NH connection is made with a washer opposed to the mating threads of an N.P.T. assembly. The 2 thread designs are not compatible.

It is recommended that a filter or strainer be installed in the water supply line.



Important

Flexible supply line/coupling must be used. Solenoid valve failure due to hard plumbing connections will void warranty.

The dryer is to be connected to the water mains using a new hose set and the old hose set should not be reused.

Optional Manual Bypass

Provisions are made in the dryer's fire suppression system for the installation of an optional manual bypass. The connections for the manual bypass are made at the "cross" or "four way" fitting located in the outlet supply side of the water solenoid valve. The manual ball cock shutoff valve must be located outside of the dryer at a distance from the dryer where it is easily accessible. The use and connection of this manual bypass is at the option or discretion of the owner.

The water connection for the manual bypass is made to the "cross" or "four way" fitting, which has a 3/8" F.N.P.T. and a coupling must be used to provide the minimum 1/2-inch (12.7 mm) supply (feed) line.

Electrical Requirements

No independent external power source or supply connection is necessary. The 24-volt power to operate the fire suppression system is accomplished internally in the dryer (from the dryer controls).



Warning

Electrical power must be provided to the dryer at all times. If the main electrical power supply to the dryer is disconnected, the fire suppression system is inoperative!!

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 data label. In the case of 208 VAC or 230/240 VAC, the supply voltage must match the electric service exactly.
- GAS MODELS – Check to ensure that the dryer is connected to the type of heat/gas indicated on the dryer data label.
- GAS MODELS – Be sure that all gas shutoff valves are in the open position.
- Be sure all back panels (guards) and electric box covers are in place.
- Be sure the service doors are closed and securely in place.
- Be sure the lint door/drawer is securely in place.
- Rotate the tumbler (drum) by hand to be sure it moves freely.
- Check bolts, nuts, screws, terminals, and fittings for tightness and security.
- Check that the vent is connected to the dryer and is exhausted to the outdoors.

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.

Turn on electric power to the dryer.

Refer to the Operating Instructions for starting your particular model dryer.

Gas Dryers

Open all shutoff valves.

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.

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



Note

Water column pressure requirements (measured at the pressure tap of the gas valve body) must be verified.



Important

In most cases there is no regulator provided in an L.P. dryer. The water column pressure must be regulated at the source (L.P. tank), or an external regulator must be added to each dryer.

Safety Related Circuits

Make a complete operational check of all safety related circuits:

- Door Switch(es)
- Hi-Limit Thermostats
- Sail Switch

Make a complete operational check of all operating controls.

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.

Microprocessor Programs/Selections

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

Preoperational Instructions _____



Important

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

Coin Models

Microprocessor Controller (Computer)

When the microprocessor controller (computer) is in the ready state, the L.C.D. screen will display "Ready, Insert \$XX.XX (amount) to Start".

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

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.

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



Note

To stop the dryer, open main door. Continuation of the cycle will resume only after the door has been closed and any one of the 3 temperature selections is pressed.

Non-Coin Models

Microprocessor Controller (Computer)

The L.E.D. display reads "READY" (no cycle in progress).

Press the letter on the keypad corresponding to the cycle desired (e.g. key "D").

The dryer will then start (i.e. blower, tumbler, and heat).

The L.E.D. display will read MANUAL DRYING CYCLE D, ___ MIN REMAIN.



Note

The dryer can be stopped at any time by pressing the "STOP/CLEAR" key, at this time the dryer will go into a cycle pause. If the "STOP/CLEAR" key is pressed again at this point, the cycle that was in progress will be cancelled and returned to the "READY" state.

When the programmed drying time has expired, the non-coin microprocessor controller (computer) will proceed into the Cool Down Cycle.

Once the Cool Down Cycle begins at the end of the heat cycle, the L.E.D. display will read COOL DOWN TEMP ___/___ MINUTES remaining. At the end of the heat cycle, the dryer will shut off the heat and continue the fan and tumbler until the Cool Down Time or temperature is reached.

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 heat supply:

Gas Models – Discontinue the gas supply.

Shut off external gas supply shutoff valve.

Shut off internal gas supply shutoff valve located in the gas valve burner area.

Service/Parts Information

Service

Service must be performed by a qualified trained technician. 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 (508) 678-9000 or you may FAX in your order at +1 (508) 678-9447.



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

Returning Warranty Cards

Before any dryer leaves the factory test area, a warranty card is placed on the inside 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 Warranty Department or the Service Department at +1 (508) 678-9000.



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).

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 (508) 678-9000.



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 merchandise.

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 credit, replacement, 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 (Part No. 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 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 a 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 airflow. The accumulation of lint can restrict this airflow. If the guidelines in this section are met, the 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 6 to 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. The lint door/drawer is located just below the loading door of the dryer. Open the lint door/drawer, brush the lint off the lint screen, and remove the lint. Inspect lint screen and replace if torn.

 **Note**
To remove the lint drawer from the dryer first pull the screen out roughly half way and lift the clips on the lower left and right side of the lint drawer up. Now you will be able to pull the lint drawer completely out.

 **Important**
The frequency of cleaning the lint screen can best be determined from experience at each location.

Weekly


Clean lint accumulation from lint chamber, thermostat, and microprocessor temperature sensor area.

 **Warning**
To avoid the hazard of electrical shock, discontinue electrical supply to the dryer.

90 Days


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

Clean any lint accumulation in and around the motor(s) casing opening.

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

Every 6 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 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.

7 Days After Installation and Every 12 Months Thereafter

Data Label Information

Diagram of a gas furnace control panel with numbered callouts 1 through 7 pointing to various labels and controls:

- 1: MODEL
- 2: SERIAL NUMBER
XXXXXX
- 3: TYPE OF HEAT
GAS/NATURAL
- 4: ORIFICE SIZE
- 5: ORIFICE SIZE (also points to 4)
- 6: ELECTRIC SERVICE
- 7: GAS MANIFOLD PRESSURE

Other labels on the panel include:

- HEAT INPUT (0 TO 2,000 FT.)*
- MINIMUM GAS SUPPLY PRESSURE
- MAXIMUM GAS SUPPLY PRESSURE
- FOR USE WITH GASES
- CLOTHES DRYER, VOL. II
- *FOR CANADIAN INSTALLATIONS WITH ELEVATIONS BETWEEN 2,000 AND 4,500 FT.
- HEAT INPUT*
- ORIFICE SIZE*

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 L.P. 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.

[illegible]

NOTES

