

AD-20 Installation Manual

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

— 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.



For replacement parts, contact the reseller from which the dryer was purchased or

American Dryer Corporation

88 Currant Road

Fall River MA 02720-4781 U.S.A.

Telephone: (508) 678-9000 / Fax: (508) 678-9447

e-mail: techsupport@amdry.com

www.amdry.com

Retain This Manual In A Safe Place For Future Reference

American Dryer Corporation products embody 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. **ADC** 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-20

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 (508) 678-9447 or telephone your order directly to the **ADC** Parts Department at (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.

IMPORTANT

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

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

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

CAUTION

DRYERS SHOULD NEVER BE LEFT UNATTENDED WHILE IN OPERATION.

WARNING

CHILDREN SHOULD NOT BE ALLOWED TO PLAY ON OR NEAR THE DRYER(S).
CHILDREN SHOULD BE SUPERVISED IF NEAR DRYERS IN OPERATION.

FOR YOUR SAFETY

DO NOT DRY MOP HEADS IN THE DRYER.

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

WARNING

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

WARNING

The dryer *must never be* operated with the back guard removed. **PERSONAL INJURY OR FIRE COULD RESULT.**

WARNING

DRYER ***MUST NEVER BE*** OPERATED WITHOUT THE LINT FILTER/SCREEN IN PLACE.

IMPORTANT

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

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

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SECTION I

IMPORTANT INFORMATION

A. RECEIVING AND HANDLING

The dryer is shipped in a protective stretch wrap cover with protective cardboard corners and top cover (or optional box) as a means of preventing damage in transit. Upon delivery, the dryer and packaging, and wooden skid **should be** visually inspected for shipping damage. If any damage whatsoever is noticed, inspect further before delivering carrier leaves.

Dryers damaged in shipment:

1. **ALL** dryers **should be** inspected upon receipt and before they are signed for.
2. If there is suspected damage or actual damage, the trucker's receipt **should be** so noted.
3. If the dryer is damaged beyond repair, it **should be** refused. Those dryers, which were not damaged in a damaged shipment, **should be** accepted, but the number received and the number refused **must be** noted on the receipt.
4. If you determine that the dryer was damaged after the trucker has left your location, you should call the delivering carrier's freight terminal immediately and file a claim. The freight company considers this concealed damage. This type of freight claim is very difficult to get paid and becomes extremely difficult when more than a day or two passes after the freight was delivered. It is your responsibility to file freight claims. Dryer/parts damaged in transit **cannot** be claimed under warranty.
5. Freight claims are the responsibility of the consignee, and **ALL** claims **must be** filed at the receiving end. **ADC** assumes no responsibility for freight claims or damages.
6. If you need assistance in handling the situation, please contact the **ADC** Traffic Manager at (508) 678-9000.

IMPORTANT: The dryer *must be* transported and handled in an upright position at **ALL** times.

B. SAFETY PRECAUTIONS

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

WARNING: The dryer *must never be* operated with the back guard removed. **PERSONAL INJURY OR FIRE COULD RESULT.**

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

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

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

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

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

7. A program **should be** established for the inspection and cleaning of lint in the 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 exhaust ductwork can create a potential fire hazard.

8. 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 do so will VOID THE WARRANTY.

9. UNDER NO CIRCUMSTANCES should the dryer main door switch, lint drawer switch, or the heat circuit devices ever be disabled.

WARNING: PERSONAL INJURY OR FIRE COULD RESULT.

10. This dryer is not to be used in the presence of dry cleaning solvents or fumes.
11. 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.

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

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

SECTION II

SPECIFICATIONS

A. SPECIFICATIONS

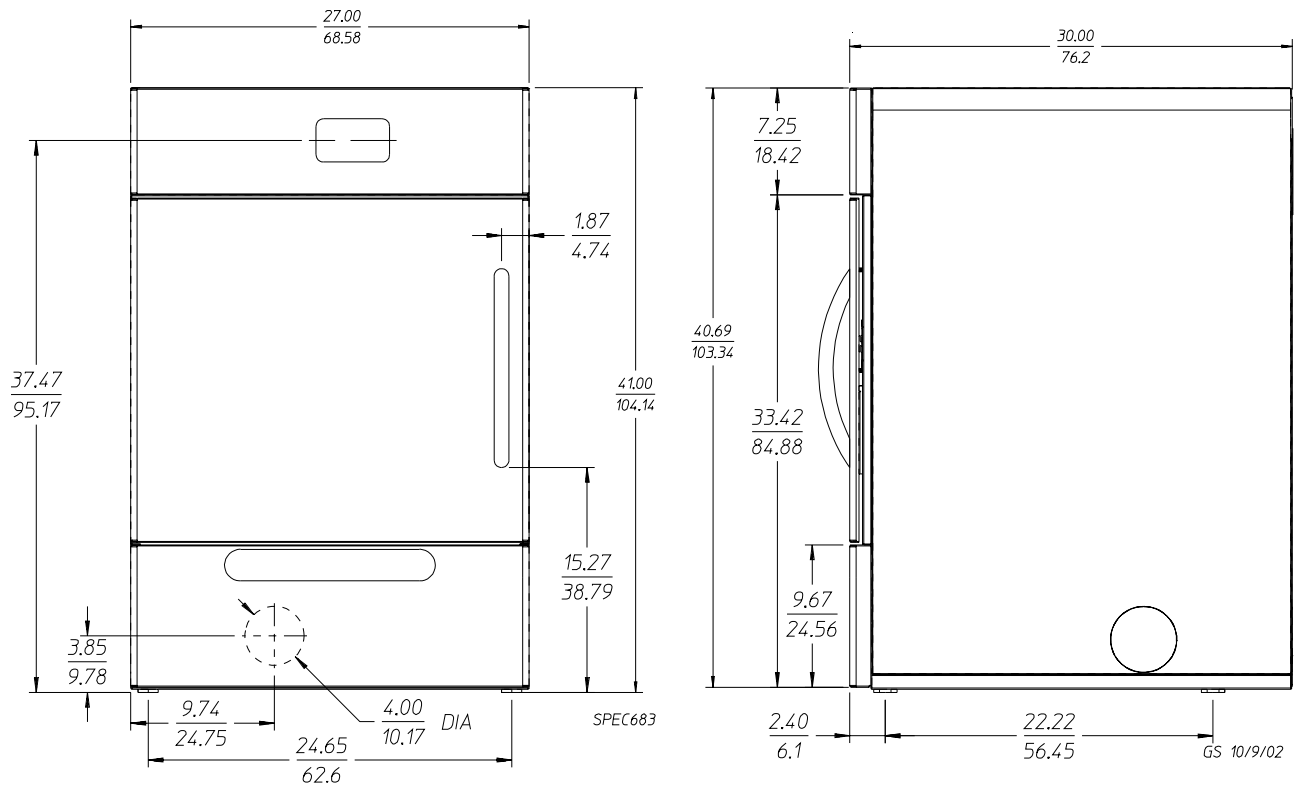
MAXIMUM CAPACITY (DRY WEIGHT)		20 lbs	9 kg
BASKET (TUMBLER) DIAMETER		25.75"	65.4 cm
BASKET (TUMBLER) DEPTH		24"	60.95 cm
BASKET (TUMBLER) MOTOR		1/4 HP	0.19 kw
BLOWER MOTOR		1/8 HP	0.1 kw
BASKET (TUMBLER) VOLUME		7.5 cu.ft.	0.21 cu.m.
VENT CONNECTION		4"	10.2 cm
CABINET WIDTH		27"	68.6 cm
CABINET DEPTH		30"	76.2 cm
CABINET HEIGHT		41"	104 cm
Gas	VOLTAGE AVAILABLE	120v /60 Hz/1 ϕ , 240v/60 Hz/1 ϕ , 240v/50 Hz/1 ϕ	
	HEAT INPUT	40,000 btu/hr	10,080 kcal/hr
	AIRFLOW	240 cfm	6.79 cmm
	INLET PIPE CONNECTION	3/8" N.P.T.	
Electric	OVEN SIZE	1 ϕ 3 ϕ	5.4 kw 8.1 kw
	VOLTAGE AVAILABLE	240v/60 Hz/1 ϕ , 240v/50 Hz/1 ϕ , 416v/50 Hz/3 ϕ	

Shaded areas are stated in metric equivalents

* Contact factory for information not listed, 3-phase (3 ϕ) figures shown are for 4-wire service, non-reversing.

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

Specifications AD-20



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

SECTION III

INSTALLATION PROCEDURES

Installation **should be** performed by competent technicians in accordance with local and state 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 (Liquid Propane [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).

A. UNPACKING/SETTING UP

Remove protective shipping material (i.e., plastic wrap and optional shipping box) from 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 unskid the dryer, locate and remove the two (2) bolts securing the base of the dryer to the wooden skid.

With the skid removed, to make it easier to slide the dryer into its final position, slightly lower **ALL** four (4) leveling legs, so that the dryer will slide on the legs instead of the base frame.

B. 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 (Liquid Propane [L.P.] Gas) or LATEST EDITION (for General Installation and Gas Plumbing).

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

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

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

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

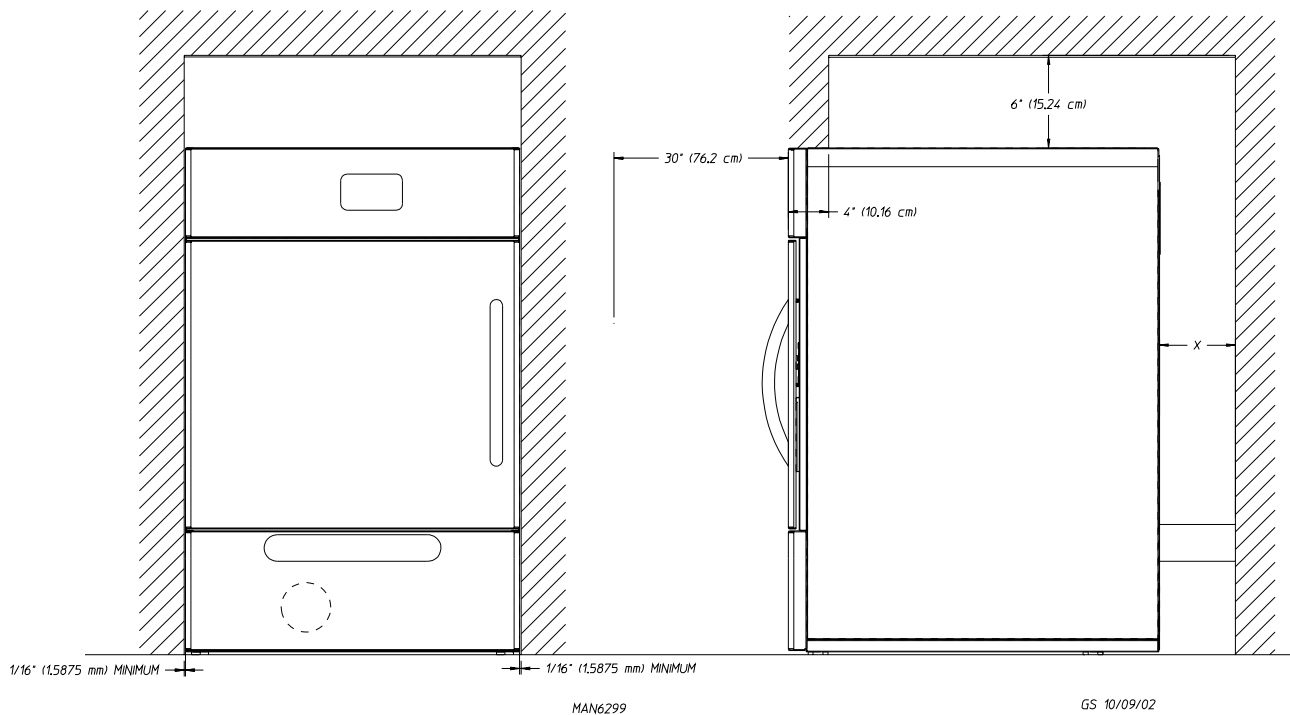
9. The dryer **must be** installed with a proper exhaust duct connection to the outside.
10. The dryer **must be** installed with provisions for adequate combustion and make-up air supply.

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

C. DRYER ENCLOSURE REQUIREMENTS

Bulkheads and partitions **should be** made of noncombustible materials and **must be** located a minimum of 6-inches (15.24 cm) above the dryer's outer top; except along the front of the dryer which may be closed if desired.

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



X = 12-inch (30.48 cm) minimum, 24-inches (60.96 cm) is suggested for ease of maintenance.

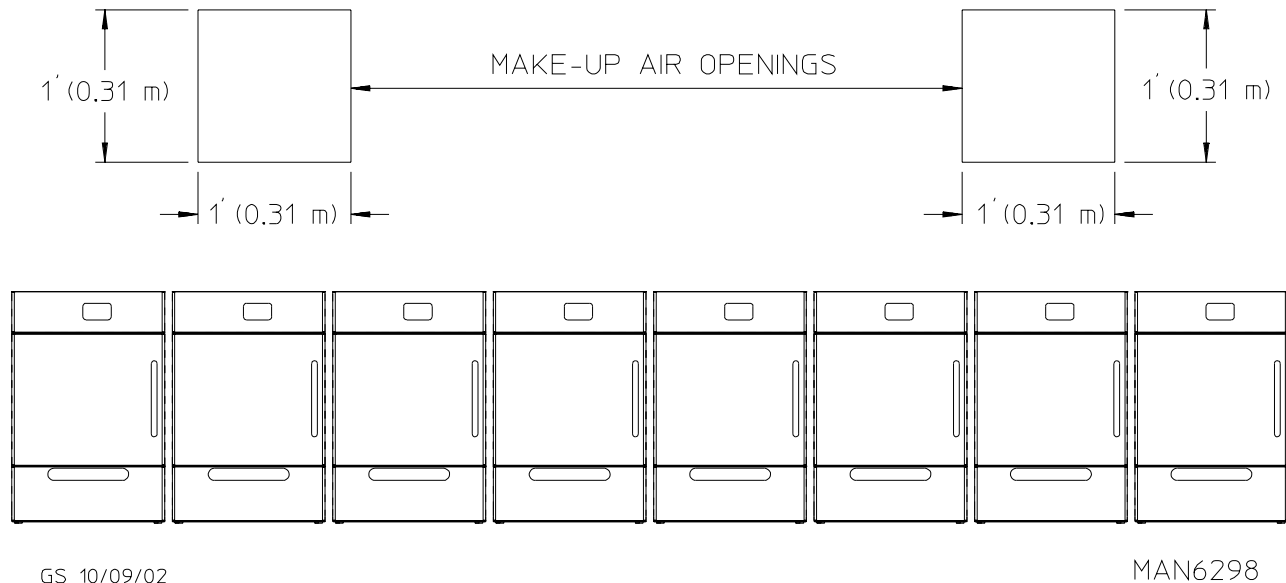
NOTE: Air considerations are important for proper and efficient operation.

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 and the lint door. It is suggested that the dryer be positioned about 2 feet (0.61 meters) away from the nearest obstruction for ease of installation, maintenance, and service (to be measured from the back guard). Refer to the **illustration above** for details.

D. FRESH AIR SUPPLY REQUIREMENTS

The AD-20 air supply (make-up air) **must be** given careful consideration to assure proper performance of each dryer. An unrestricted source of air is necessary for each dryer. As a general rule, an unrestricted air entrance from the outdoors (atmosphere) of a minimum of 1/4 square feet (0.023 square meters) is required for each dryer. If registers or louvers are installed over the openings, then the area **must be** increased. 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 the dryers. The dryer **must be** installed with provisions for adequate combustion and make-up air supply.

EXAMPLE: For a bank of eight (8) dryers, two (2) unrestricted openings measuring 1 foot by 1 foot (0.31 meters by 0.31 meters), (1 square foot [0.93 square meters]) are acceptable.



TYPICAL INSTALLATION SHOWING MAKE-UP AIR OPENINGS

IMPORTANT: 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 excessive altitudes or predominantly low pressure areas.

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

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

E. EXHAUST REQUIREMENTS

DO NOT use a nonmetal flexible vent or a metal vent that is smaller than 4" (10.2 cm) in diameter or exhaust hoods with magnetic latches.

DO NOT exhaust dryer into a chimney, furnace, cold air vent, attic, crawl space, or any other vent used for venting.

DO NOT install flexible vent in enclosed walls, ceilings, or floors.

IMPORTANT: Observe ALL governing codes and ordinances.

Exhaust your dryer to the outside. Moisture and lint indoors may cause:

1. Lint to gather around the dryer where it can be fuel for a fire.
2. Moisture damage to woodwork, furniture, paint, wallpaper, carpet, etc...
3. Housecleaning problems and health problems.

A 4" (10.2 cm) diameter vent is required. A rigid or flexible metal vent **must be** used. **DO NOT** use a plastic or a foil covered vent.

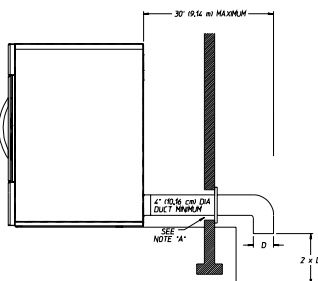
Use a heavy metal vent. **DO NOT** use a plastic or metal foil vent. A rigid metal vent is recommended to prevent crushing and kinking. A flexible metal vent **must be** fully extended and supported when the dryer is in its final position. Remove excess flexible vent to avoid sagging and kinking that may result in reduced airflow.

If using an existing exhaust system, clean lint from entire length of system and make exhaust hood is not plugged with lint. Replace any vinyl or metallized plastic foil vent with rigid metal or flexible metal vent.

Use duct tape to seal ALL joints. **DO NOT** use screws or other fastening devices that extend into the interior of the vent to secure vent.

Service check: Back pressure in any exhaust system used **must not exceed** 0.6 inches (1.49 mb) water column (W.C.) measured with an incline manometer at the point that exhaust vent connects to the dryer.

HORIZONTAL SINGLE DRYER VENTING 4" (10.16 cm) DUCTING

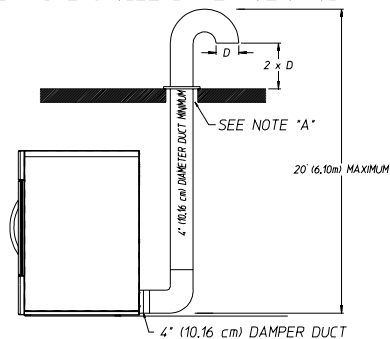


NOTE A: OPENING MUST BE 2-INCHES (5.08 cm) LARGER THAN THE DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING.

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VERTICAL SINGLE DRYER VENTING



NOTE A: OPENING MUST BE 2-INCHES (5.08 cm) LARGER THAN THE DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING.

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IMPORTANT VENTING REMINDERS

1. Ductwork size and installation **should be** done by a qualified professional.
2. The dryer **must be** exhausted to the outdoors.
3. Ductwork **should be** routed as short as possible to the outdoors with as few elbows as possible.
4. Avoid 90° turns, use 30° or 45° turns instead.
5. The inside of the ductwork **should be** as smooth as possible with no projections from sheet metal screws.
Ducts added should overlap the duct to which it is to be connected.
6. **ALL** ducts **should be** taped to prevent moisture and lint from escaping into the building.
7. Inspection or clean out doors **should be** installed throughout strategic points in the ductwork for periodic inspection and cleaning.
8. Wherever the ductwork passes through 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.
9. The outside of the ductwork **must be** protected from the weather. A 90° elbow **must be** used for horizontal run and when vertically through a roof by using a 180° turn to point the opening downward. The distance between the exhaust duct and the nearest obstruction (i.e., roof or ground) **must be** twice the diameter of the duct.
10. **DO NOT** use screens, louvers, or caps on the outside opening of the exhaust ductwork.
11. Exhaust back pressure measured by a manometer at the dryer exhaust duct area **must be** no less than 0 and **must not exceed** 0.6 inches (1.49 mb) of water column (W.C.).

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

12. Exhaust ductwork outlets **should not be** located in an area directly where the make-up air openings are located.

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

F. ELECTRICAL INFORMATION

1. Electrical Requirements

It is your responsibility to have **ALL** electrical connections made by a properly licensed and competent electrician to assure 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.

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.

IMPORTANT: Each circuit *must be* connected to an independently protected branch circuit.

IMPORTANT: USE ONLY COPPER CONDUCTOR CABLE of proper ampacity and insulation in accordance with electric codes for making service connections.

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

IMPORTANT: A separate circuit servicing each dryer *must be* provided.

2. Electrical Service Specifications

a. Electric Service

1) Gas Models ONLY

IMPORTANT: The dryer *must be* connected to the electric supply shown on the data label that is affixed to the upper left area of the inner back panel.

IMPORTANT: USE ONLY COPPER CONDUCTOR CABLE of proper ampacity and insulation in accordance with electric codes for making service connections.

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

2) Electric Models ONLY

ALL electrically heated dryers **must be** connected to the electric service shown on the dryer's data label, which is affixed to the upper left area of the inner back panel. The connecting wires **must be** properly sized to handle the rated current.

NOTE: Electrically heated service (amperage) specifications/requirements **are not** available at the time of printing. Contact factory for update.

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

3. 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 (no. 18 minimum) be connected from the ground connection of the dryer to a grounded cold water pipe. **DO NOT ground to a gas pipe or hot water pipe**. The grounded cold water pipe must have metal to metal connection **ALL** the way to the electrical ground. If there are any nonmetallic interruptions, such as, a meter, pump, plastic, rubber, or other insulating connectors, they **must be** jumped out with no. 4 copper wire and securely clamped to bare metal at both ends.

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

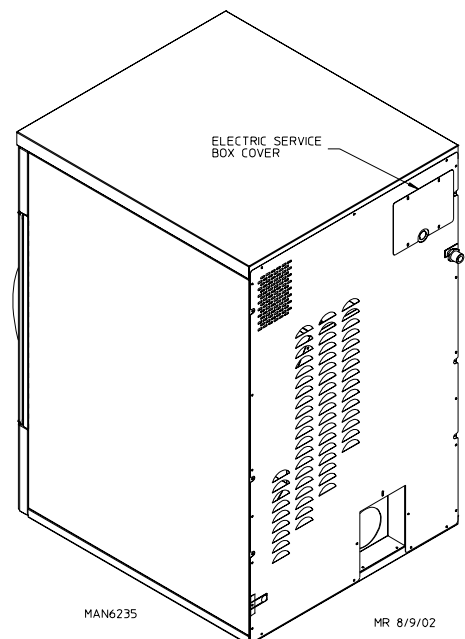
Provisions are made for ground connection in each dryer at the electrical service connection area.

4. Electrical Connections

A wiring diagram is located inside the rear electric box.

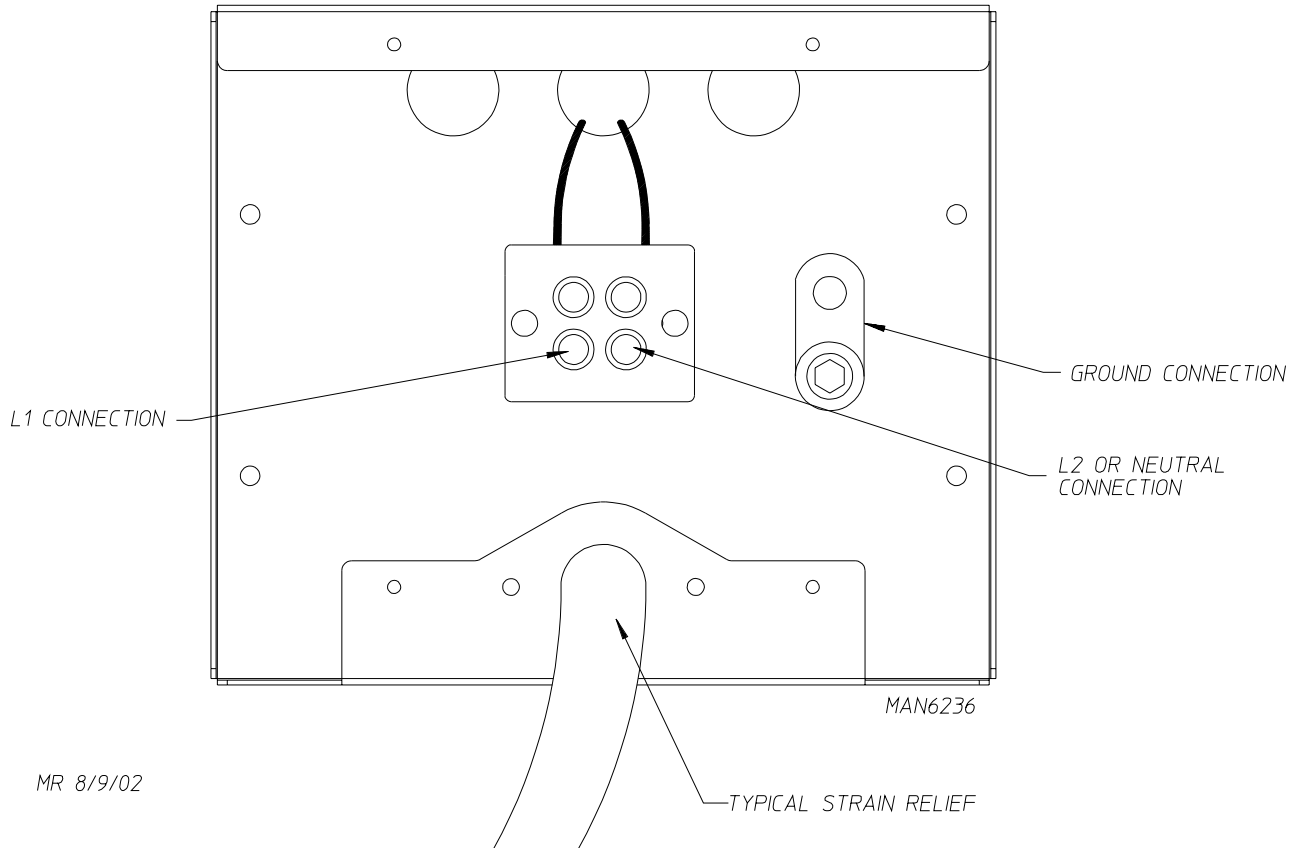
NOTE: A CIRCUIT SERVICING EACH DRYER MUST BE PROVIDED.

The electrical input connections on **ALL** dryers are made into the rear service box located at the upper right area of the dryer.



a. Gas Models Only

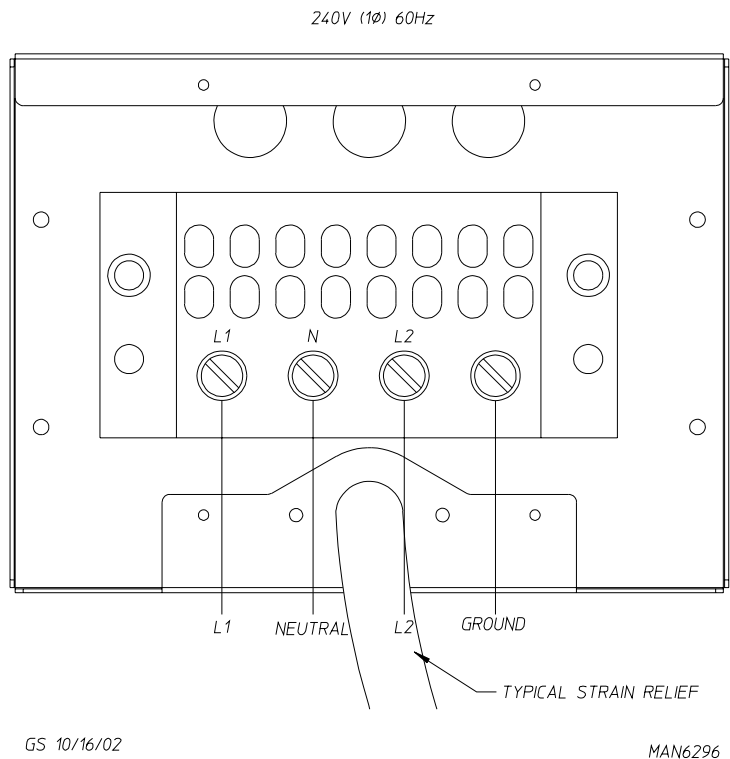
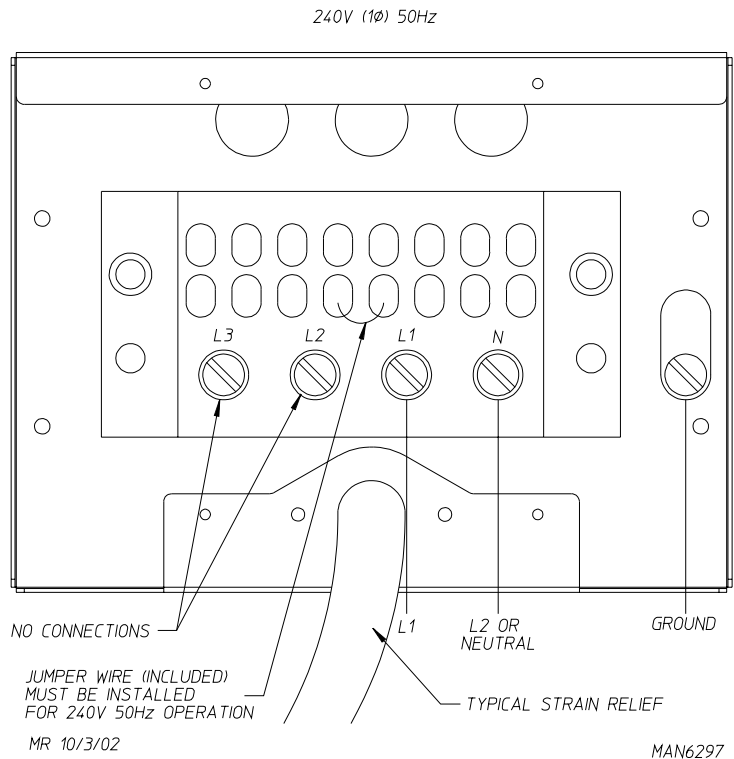
1) Single-Phase (1 ϕ) Wiring Connections/Hookup



If local codes permit, power to the dryer can be made by the use of a flexible U.L. listed power cord or 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.

b. Electric Models Only

1) Single-Phase (1 ϕ) Wiring Connections/Hookup

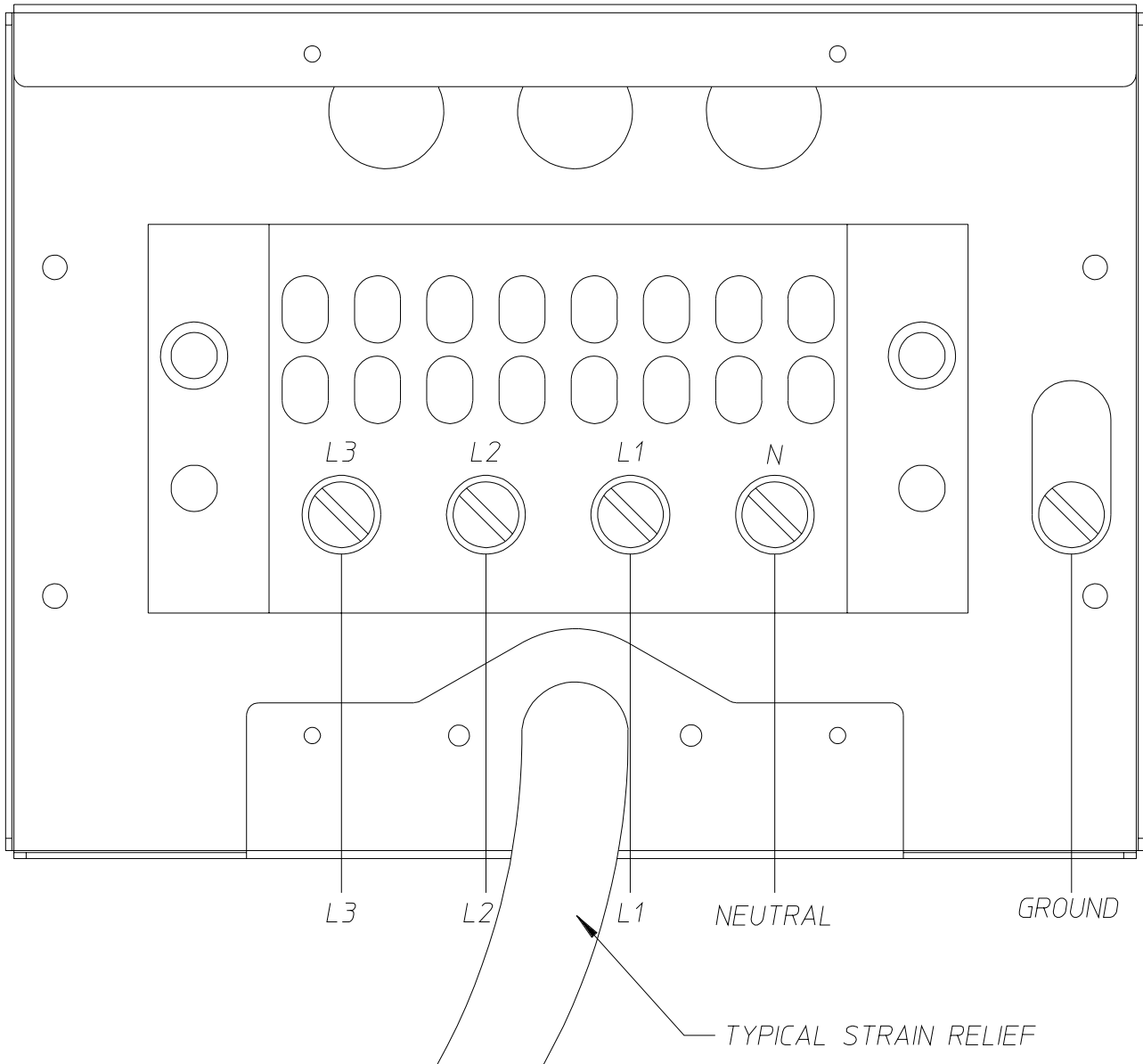


If local codes permit, power to the dryer can be made by the use of a flexible U.L. listed power cord or pigtail (wire size **must conform** to rating of dryer), or the dryer can be hard wired directly to the service breaker panel. In both cases, a strain relief **must be** installed where the wiring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

c. Electric Models Only

1) 3-Phase (3 ϕ) Wiring Connections/Hookup

416V (3 ϕ) 50Hz



MR 10/3/02

MAN6295

If local codes permit, power to the dryer can be made by the use of a flexible U.L. listed power cord or 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.

AD-20

ELECTRICAL SERVICE SPECIFICATIONS (PER DRYER)

- 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	
Gas	120	1Ø	2	10.9	---	15
	240	1Ø	3		6	15
	240	1Ø	3	5.8	---	15
Electric	240	1Ø	3	---	28.5	35
	240	1Ø	3	28.3	---	35
	416	3Ø	4	---	18	25

IMPORTANT: Figures shown are for non-reversing models ONLY.

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

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

G. GAS INFORMATION

It is your responsibility to have **ALL** plumbing connections made by a qualified professional to assure 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 (Liquid Propane [L.P.] Gas) or LATEST EDITION.

IMPORTANT: FAILURE TO COMPLY WITH CODES OR ORDINANCES, AND/OR REQUIREMENTS IN THIS MANUAL, CAN RESULT IN PERSONAL INJURY AND IMPROPER OPERATION OF THE DRYER.

The dryer **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 an external manual shutoff valve during any pressure test of the gas supply system at test pressures equal to or less than 1/2 psig (3.5 kPa).

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

WARNING: FIRE OR EXPLOSION COULD RESULT.

1. Gas Supply

The gas dryer installation **must meet** the American National Standard...National Fuel Gas Code ANSI Z223.1-LATEST EDITION, or in Canada, the Canadian Installation Codes CAN/CGA-B149.1 M91 (Natural Gas) or CAN/CGA-B149.2-M91 (L.P. 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 affixed to the upper left area of the inner back panel. 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 **ADC** factory.

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

The input ratings shown on the dryer data label are for elevations up to 2,000 feet (609.6 meters), unless elevation requirements of over 2,000 feet (609.6 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 (609.6 meters) is made by changing each burner orifice. If this conversion is necessary, contact the reseller who sold the dryer or contact the **ADC** factory.

2. Technical Gas Data

a. Gas Specifications

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

Shaded areas are stated in metric equivalents

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

b. Gas Connections

Inlet connection ----- 3/8" N.P.T.
 Inlet supply size ----- 3/8" N.P.T. (minimum)
 Btu/hr input (per dryer) ---- 40,000 (10,080 kcal/hr)

1) Natural Gas

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

2) Liquid Propane (L.P.) Gas

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

			TYPE OF GAS						L.P. Conversion Kit Part Number
ADC MODEL NUMBER	BTU Per Hour Rating	kcal/hr Rating	Natural			Liquid Propane			
			Qty.	D.M.S.*	Part Number	Qty.	D.M.S.*	Part Number	
AD-20	40,000	10,080	1	#31	140868	2	#49	140869	883610

Shaded area is stated in metric equivalent

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

Natural Gas #31 = 0.1200" (3.048 mm).
 Liquid Propane Gas #49 = 0.0730" (1.8542 mm).

3. Piping Connections

ALL components/materials **must conform** to National Fuel Gas Code Specifications ANSI Z223.1-LATEST EDITION, or in Canada, CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (Liquid Propane [L.P.] 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 BTUs being supplied.

The dryer is provided with a 3/8-inch N.P.T. inlet pipe connection located at the right side of the base of the dryer. The minimum pipe size (supply line) to the dryer is 3/8-inch N.P.T. For ease in servicing, the gas supply line of each dryer must have its own shutoff valve.

IMPORTANT: The gas supply line to each dryer *must be* a minimum of 3/8-inch (9.5 mm). **DO NOT REDUCE THIS PIPE SIZE REQUIREMENT.**

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.

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 1/2-inch (12.7 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 12.0 inches (29.9 mb) of water column (W.C.) pressure. Refer to the **illustrations** on the previous page.

NOTE: A water column test pressure of 3.5 inches (8.7 mb) for natural gas and 10.5 inches (26.1 mb) for liquid propane (L.P.) dryers is required at the gas valve pressure tap of each dryer for proper and safe operation.

A 1/8-inch N.P.T. plugged tap, accessible for a test gauge connection, **must be** installed in the main gas supply line immediately upstream of each dryer.

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

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

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

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 (L.P. 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 BTUs being supplied.

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

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

H. PREPARATION FOR OPERATION/START-UP

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

1. Read **ALL** “**CAUTION,**” “**WARNING,**” and “**DIRECTION**” labels attached to the dryer.
2. Check incoming supply voltage to be sure that it is the same as indicated on the dryer data label affixed to the left side panel area behind the top control (access) door.
3. **GAS MODELS** - check to assure that the dryer is connected to the type of heat/gas indicated on the dryer data label.
4. **GAS AND ELECTRIC MODELS** - the sail switch damper assembly was installed and adjusted at the factory prior to shipping. However, each sail switch adjustment **must be** checked to assure that this important safety control is functioning.
5. Check bolts, nuts, screws, terminals, and fittings for tightness.
6. **GAS MODELS** - be sure that **ALL** gas shutoff valves are in the open position.
7. Check that the back guard panel and the electrical box cover have been replaced.
8. Check the lint drawer to assure that it is closed and secured in place.

<p>IMPORTANT: If during installation the lint door safety chain was disconnected, it <i>must be</i> reconnected or personal injury may result.</p>

9. Rotate the basket (tumbler/drum) by hand to be sure it moves freely.
10. Check terminals and fittings for security.

I. PREOPERATIONAL TESTS

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.

1. Turn on electric power to the dryer.
2. Refer to the Operating Instructions for starting your particular model dryer.
3. **GAS MODELS ONLY**
 - a. When a gas dryer is first started (during initial start-up), it has a tendency not to ignite on the first ignition attempt. This is because the gas supply piping is filled with air, so it may take a few minutes for the air to be purged from the lines.

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

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

IMPORTANT: 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.

4. Make a complete operational check of **ALL** safety related circuits:
 - a. Door Switch(es)
 - b. Hi-Limit Thermostats
 - c. Cycling Thermostat
 - d. **GAS AND ELECTRIC MODELS ONLY** - Sail Switch

NOTE: The sail switch can be checked for proper operation by opening the lint door while heating circuit (gas burner/electric oven) is active (on). The heating unit should shut off within a few seconds. If not, make necessary adjustments to the sail switch.

5. 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.

6. The dryer **should be** operated through one (1) complete cycle to assure that **ALL** components are functioning properly.

J. SHUT DOWN INSTRUCTIONS

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

1. Discontinue power to the dryer either at the external disconnect switch or the circuit breaker.
2. Discontinue the heat supply:
 - a. ***GAS MODELS*...discontinue the gas supply.**
 - 1) **SHUT OFF external gas supply shutoff valve.**

SECTION IV

SERVICE/PARTS INFORMATION

A. SERVICE

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

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

B. PARTS

1. Replacement parts **should be** purchased from the reseller from whom the **ADC** equipment was purchased. If the reseller **cannot** be contacted or is unknown, contact the **ADC** Parts Department for a reseller in your area. Parts may also be purchased directly from the factory by calling the **ADC** Parts Department at (508) 678-9000 or you may FAX in your order at (508) 678-9447.

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

SECTION V

WARRANTY INFORMATION

A. RETURNING WARRANTY CARDS

1. Before any dryer leaves the **ADC** factory test area, a warranty card is placed on the back side of the main door glass. These warranty cards are intended to serve the customer where we record the individual installation date and warranty information to better serve you should you file a warranty claim.
 - a. If a warranty card did not come with your dryer, contact the **ADC** Warranty Department or the **ADC** Service Department at (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).

B. WARRANTY

For a copy of the **ADC** commercial warranty covering your particular dryer(s), contact the **ADC** reseller from whom you purchased the equipment and request a dryer warranty form. If the reseller **cannot** be contacted or is unknown, warranty information can be obtained from the factory by contacting the **ADC** Warranty Department at (508) 678-9000.

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

C. RETURNING WARRANTY PARTS

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

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

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

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

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

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

NOTE: Warranty tags (ADC Part No. 450064) are available at “no charge” from ADC upon request.

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

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

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

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

SECTION VI

ROUTINE MAINTENANCE

A. CLEANING

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

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

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

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

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

SUGGESTED CLEANING SCHEDULE

EVERY THIRD OR FOURTH LOAD

Clean the lint drawer every third or fourth load. A clogged lint drawer will cause poor dryer performance. The lint drawer is located on the lower front of the dryer. Inspect lint screen and replace if torn.

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

WEEKLY

Clean lint accumulation from 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

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

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

WARNING: *DO NOT* OBSTRUCT THE FLOW OF COMBUSTION AND VENTILATION AIR.

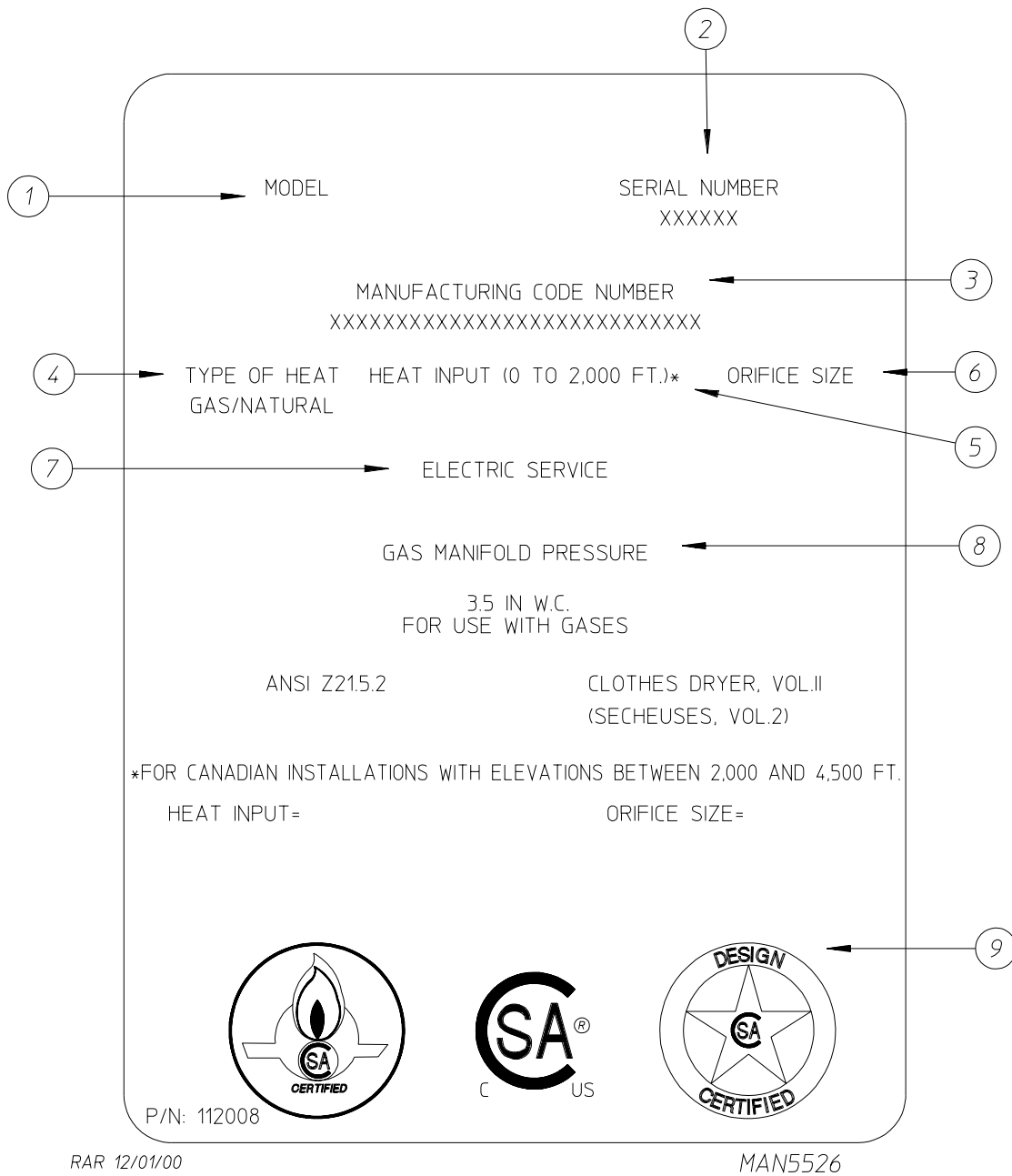
NOTE: When cleaning the dryer cabinet(s), avoid using harsh abrasives. A product intended for the cleaning of appliances is recommended.

SECTION VII

DATA LABEL INFORMATION

A. DATA LABEL

Contact **American Dryer Corporation**



When contacting **American Dryer Corporation** certain information is required to insure proper service/parts information from **ADC**. This information is on the data label located on the left side panel area behind the control (access) door. When contacting **ADC** please have the **model number** and **serial number** available.

THE DATA LABEL

1. MODEL NUMBER

The model number is an **ADC** number, which describes the size of the dryer and the type of heat (gas, electric, or steam).

2. SERIAL NUMBER

The serial number allows **ADC** to gather information on your particular dryer.

3. MANUFACTURING CODE NUMBER

The manufacturing code number is a number issued by **ADC**, which describes **ALL** possible options on your particular model.

4. TYPE OF HEAT

This describes the type of heat for your particular dryer: gas (either natural gas or liquid propane [L.P.] gas) or steam.

5. HEAT INPUT (for GAS DRYERS)

This describes the heat input in British Thermal Units per Hour (BTUH).

6. ORIFICE SIZE (for GAS DRYERS)

Gives the number drill size used.

7. ELECTRIC SERVICE

This describes the electric service for your particular model.

8. GAS MANIFOLD PRESSURE (for GAS DRYERS)

This describes the manifold pressure taken at the gas valve tap.

9. APPLICABLE APPROVAL SEAL(S)

I.E., Canadian Standards Association International.

ADC 113379 1 - 10/16/02-25 2 - 10/17/02-250 3 * 12/03/02-250

