

ML-55HS

(Gas/Electric/Steam)

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 vapor and liquids in the vicinity of this or any other appliance.

— **WHAT DO YOU 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 dans le voisinage de cet appareil ou de tout autre appareil.

— **QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ:**

- * Ne pas tenter d'allumer d'appareil.
- * Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous vous trouvez.
- * Évacuez la pièce, le bâtiment ou la zone.
- * Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- * Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

— L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.



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

American Dryer Corporation

88 Currant Road

Fall River MA 02720-4781

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

e-mail: techsupport@amdry.com

www.amdry.com

ADC Part No. 113000

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 or 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 dans le voisinage 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.

Important

For your convenience, log the following information:

DATE OF PURCHASE _____ **MODEL NO.** **ML-55HS** _____

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 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: Lors des opérations d'entretien des commandes étiqueter tous fils avant de les déconnecter. Toute erreur de câblage peut être une source de danger et de panne.»

CAUTION

DRYERS SHOULD NEVER BE LEFT UNATTENDED WHILE IN OPERATION.

WARNING

**CHILDREN SHOULD NOT BE ALLOWED TO PLAY ON OR NEAR THE DRYERS.
CHILDREN SHOULD BE SUPERVISED IF NEAR DRYERS IN OPERATION.**

FOR YOUR SAFETY

DO NOT DRY MOP HEADS IN THE DRYER.

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

WARNING

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

WARNING

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

WARNING

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

IMPORTANT

PLEASE OBSERVE ALL SAFETY PRECAUTIONS displayed on the equipment 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.

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

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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/or 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 basket (tumbler) section of the dryer <i>must be</i> transported and handled in an upright position at <u>ALL</u> times.
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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 any of the back guards, outer tops, or service panels removed. **PERSONAL INJURY or FIRE COULD RESULT.**

1. **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
2. 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 also may be a fire hazard.

7. A program **should be** established for the inspection and cleaning of lint in the heating unit area, exhaust ductwork, and inside 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.

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 door switches, lint door switch, heat safety circuit 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. **DO NOT** operate steam dryers with more than 125 PSI (8.6 bars) steam pressure. Excessive steam pressure can cause damage to the steam coil and/or harm personnel.

13. Replace leaking flexible hoses or other steam fixtures immediately. **DO NOT** operate the dryer with leaking flexible hoses. **PERSONAL INJURY MAY RESULT.**

14. The normal PH level for copper type steam coils **must be** maintained between a value of 8.5 to 9.5. For steel type steam coils the PH level **must be** maintained between a value of 9.5 to 10.5. These limits are set to limit the acid attack of the steam coils.

IMPORTANT: Coil failure due to improper PH level will VOID THE WARRANTY.

15. **READ and FOLLOW ALL CAUTION and DIRECTION LABELS ATTACHED TO THE DRYER.**

16. For safety, proper operation, and optimum performance, the dryer **must not be** operated with a load less than sixty-six percent (66%), 36 pounds (16 kg) of its rated capacity.

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

SECTION II

SPECIFICATIONS/COMPONENT IDENTIFICATION

A. SPECIFICATIONS

WITHOUT HEAT RECLAIMER						WITH HEAT RECLAIMER										
MAXIMUM CAPACITY (DRY WEIGHT)	55 lbs		25 kg													
BASKET (TUMBLER) DIAMETER	37"		94 cm													
BASKET (TUMBLER) DEPTH	30"		76.2 cm													
BASKET (TUMBLER) VOLUME	18.67 cu. ft.		0.528 cu. m.													
MOTOR (HORSEPOWER)	3/4 HP		0.56 kw													
DOOR OPENING	31-3/8"		79.7 cm													
APPROX. WEIGHT (UNCRATED)	585 lbs		265 kg		630 lbs	286 kg										
APPROX. WEIGHT (CRATED)	645 lbs		293 kg		690 lbs	313 kg										
GAS																
AIRFLOW	600 cfm		17 cmm		375 cfm	10.6 cmm										
HEAT INPUT	160,000 btu/hr		40,320 kcal/hr		140,000 btu/hr	35,280 kcal/hr										
GAS INLET	1/2"				1/2"											
VOLTAGE AVAILABLE	120 VOLTS OR 230 VOLTS															
ELECTRIC																
AIRFLOW			600 cfm				17 cmm									
OVEN SIZE			APPLIED VOLTAGE/PHASE													
Kw	btu/hr	kcal/hr	AMPS	208/1ø		240/1ø		208/3ø		240/3ø		380/3ø		416/3ø		460/3ø
	60 Hz	50 Hz		60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	
	20	68,260		17,200	103	---	90	---	---	---	---	---	33	---	---	---
	24	81,910		20,640	---	---	---	---	70	---	62	62	---	---	36	31
	30	102,390		25,800	---	---	---	---	86	---	75	75	---	---	---	44
STEAM*†																
AIRFLOW			600 cfm						17 cmm							
STEAM CONSUMPTION			BOILER HP NORMAL LOAD				OPERATING STEAM PRESSURE				STEAM SUPPLY			STEAM RETURN		
144.7 lb/hr	65.7 kg/hr		4.2				125 psi		8.6 bar		1"			1"		

Shaded areas are stated in metric equivalents

* Specify Air-Operated Steam Damper system or Electromechanical Steam Damper system when ordering.

† Air-Operated Steam Damper system **must be** provided with a clean, dry, regulated 80 psi ± 10 psi (5.52 bars ± 0.68 bars).

Air connection is 1/8" N.P.T. Air volume requirement is 0.75 cfh (0.02cmh).

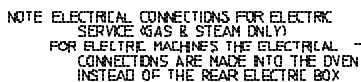
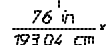
IMPORTANT: Steam dryers **must be** provided with clean, dry, regulated 80 PSI ± 10 PSI (5.52 bars ± 0.68 bars) air supply.

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

MLS-55



PLAN VIEW



SPEC170

* OPERATING HEIGHT FOR STEAM UNIT IS 81" (20574cm)

FRONT VIEW

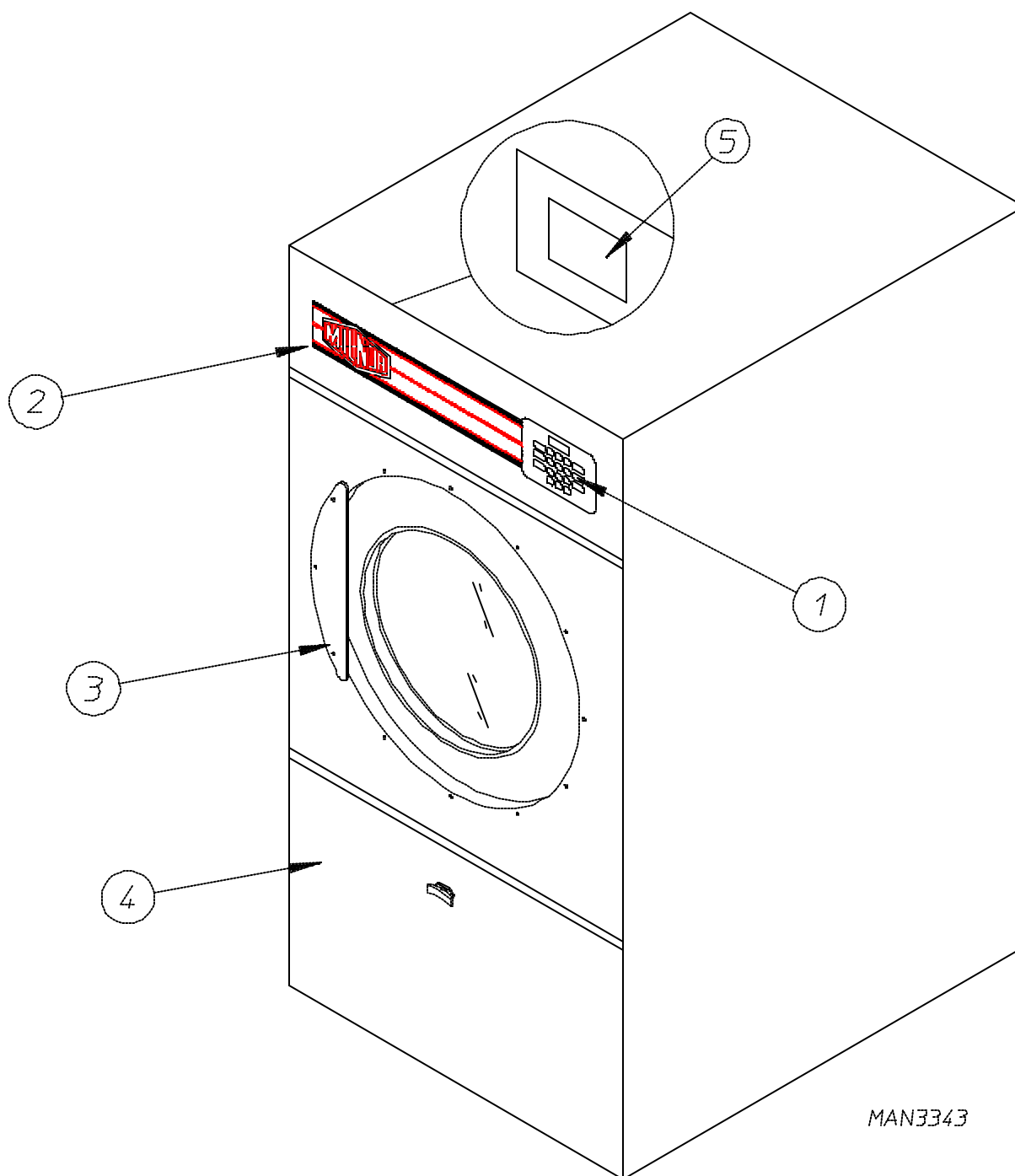
*** $\frac{8 \text{ in}}{20.32 \text{ cm}}$ DIA EXHAUST CONNECTION REAR VIEW

** DUCT WORK SIZE VARIES WITH
INSTALLATION CONDITIONS

7

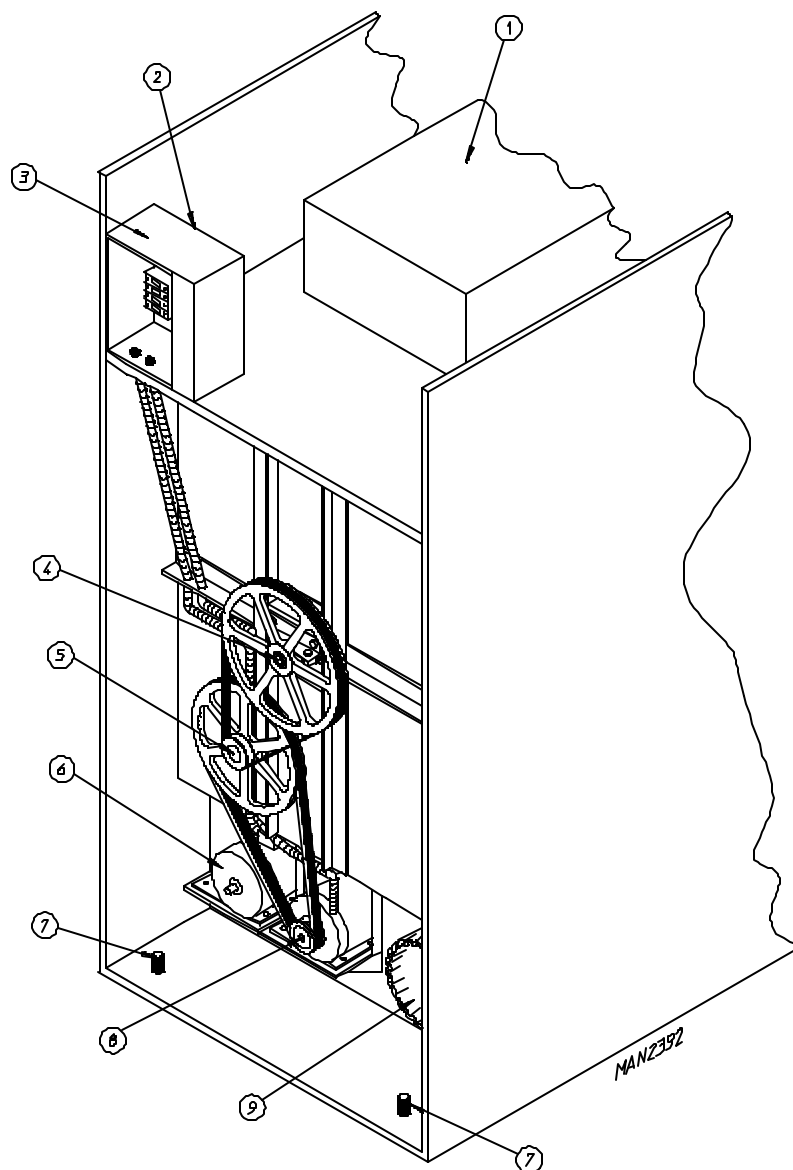
B. COMPONENT IDENTIFICATION

1. Dryer Front View



<u>Illus. No.</u>	<u>Description</u>
1	Controls
2	Control (top access) Door Assembly
3	Main Door Assembly
4	Lint Compartment Area (lint screen located behind door)
5	Data Label and Installation Label (located on the backside of the upper control door).

2. Dryer Rear View



<u>Illus. No.</u>	<u>Description</u>
1	Heating Unit
2	1/8" Compressed Air Supply Inlet (located behind the electric service relay box on steam models ONLY)
3*	Electric Service Relay Box
4	Basket (Tumbler) Bearing Mount Assembly
5	Idler Bearing Mount Assembly
6	Blower Motor Assembly (Reversing Models ONLY)
7	Leveling Leg (rear)
8	Basket (Drive) Motor Assembly
9	Dryer Exhaust

* Electric service connections for gas and steam models are made in this box.

NOTE: 1/8-inch compressed air supply inlet (for steam models only) is located behind the electric service relay box.

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. 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).

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 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 the manual (refer to **Exhaust Requirements** in Section E).

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

B. UNPACKING/SETTING UP

Remove protective shipping material (i.e., plastic wrap, and/or 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 un-skid the dryer, locate and remove the four (4) bolts securing the base of the dryer to the wooden skid. Two (2) are at the rear base (remove the back panel for access), and two (2) are located in the bottom of the lint chamber. To remove the two (2) bolts located in the lint chamber area, remove the lint door.

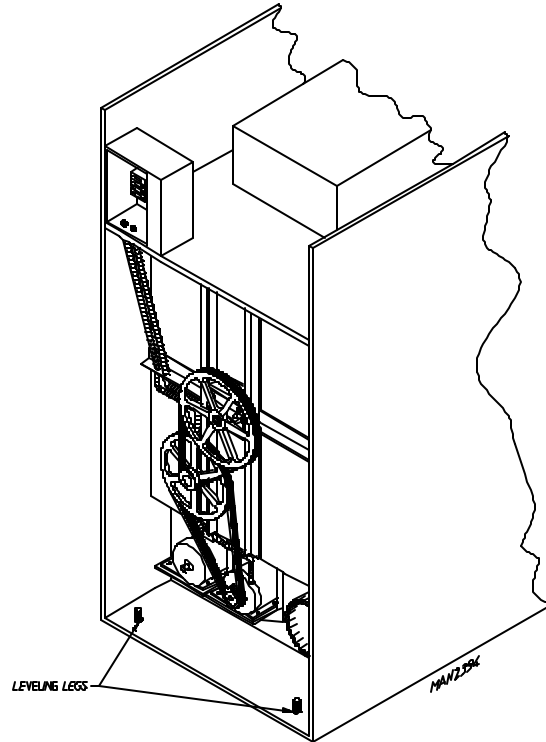
With the skid removed, to make it easier to slide the dryer into its final position, slightly lower **ALL** four (4) leveling legs, so that the dryer will slide on the legs instead of the base frame.

To increase bearing life and improve efficiency, the dryer **should be** tilted slightly to the rear.

The basket (tumbler) is supported during shipping by a wooden block. **REMOVE THIS BLOCK BEFORE STARTING THE DRYER.**

IMPORTANT: For microprocessor controller (computer) or (computer) models, this wooden block *must be* removed before connecting power to the dryer or irreparable damage to the basket (tumbler) will result.

The lint coops of **ALL** ML-55 dryers are supported during shipping by a bracket. **REMOVE THIS BRACKET BEFORE STARTING THE DRYER.**

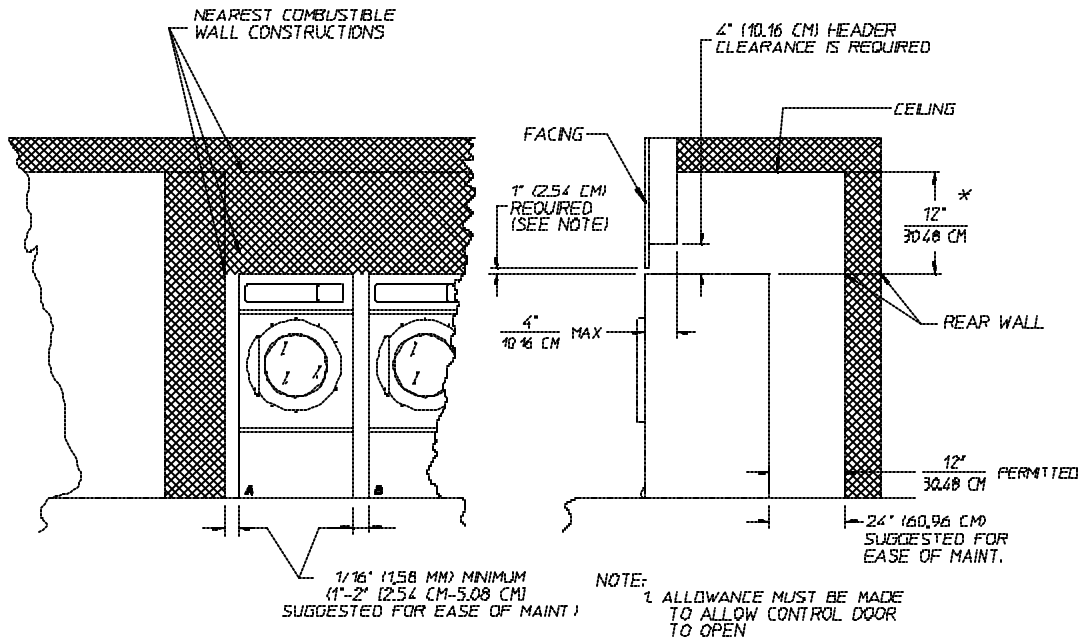


1. Leveling Dryer

The dryer is equipped with four (4) leveling legs, one (1) at each corner of the base. Two (2) are located at the rear of the dryer base, and two (2) are located in the lint chamber (coop). To increase bearing life and improve efficiency, the dryer **should be** tilted slightly to the rear.

C. DRYER ENCLOSURE REQUIREMENTS

Bulkheads and partitions **should be** made of noncombustible materials and **must be** located a minimum of 12-inches (30.48 cm), 18-inches (45.72 cm) or more is recommended for ease of installation, maintenance, and service, above the dryer outer top, except along the front of the dryer which may be partially closed in if desired. The clearance between the bulkhead header and the dryer **must be** a minimum of 4-inches (10.16 cm) and **must not** extend more than 4-inches (10.16 cm) to the rear of the front. The bulkhead facing **must not be** closed in **ALL** the way to the top of the dryer. A 1-inch (2.54 cm) clearance is required.



*IN CASES WHERE SPRINKLER HEADS ARE OVER THE DRYERS 18\" (45.72 CM) IS SUGGESTED

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INSTALLATION: DRYER CLEARANCE TO ADJACENT WALL STRUCTURES.

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

Dryers may be positioned sidewall to sidewall. However, a 1/16-inch (1.58 mm) minimum allowance **must be** made for 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.

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

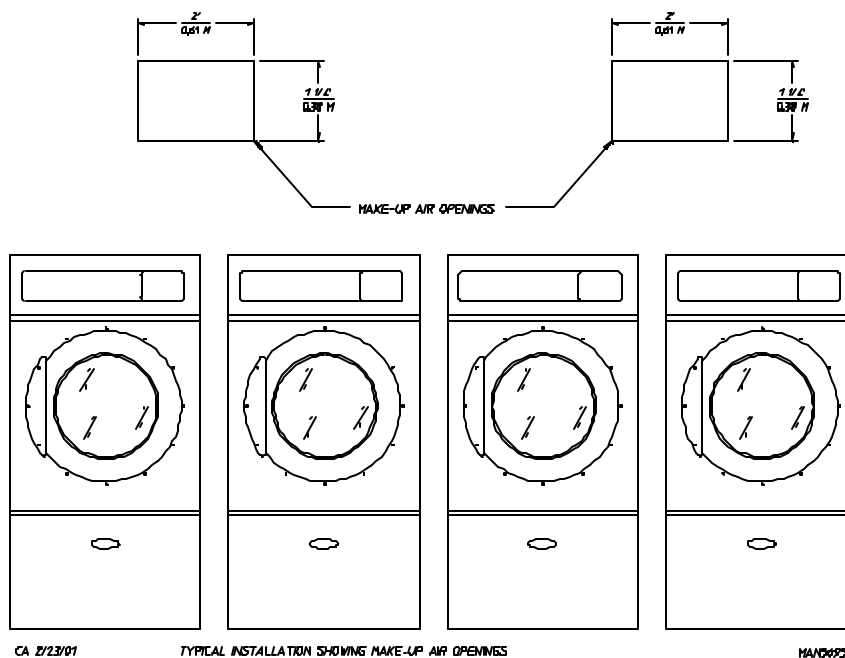
IMPORTANT: Even though a minimum of only 12-inches (30.48 cm) is required, 18-inches (45.72 cm) or more is suggested. The additional clearance is advantageous for ease of installation and service.

IMPORTANT: When fire sprinkler systems are located above the dryers, a minimum of 18-inches (45.72 cm) above the dryer console (module) is required. Dryers may be positioned sidewall to sidewall however, a 1/16-inch (1.58 mm) minimum allowance is required between dryers (or wall) for ease of installation and maintenance. Allowances **must be** made for the opening and closings of the control door and the lint door.

D. FRESH AIR REQUIREMENTS

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

Air supply (make-up air) **must be** given careful consideration to assure proper performance of each dryer. An unrestricted source of air is necessary for each dryer. An airflow of 600 cfm (cubic feet per minute) - 17 cmm (cubic meters per minute) **must be** supplied to each gas, electric, and steam dryer. As a general rule, an unrestricted air entrance from the outdoors (atmosphere) of a minimum of 1-1/4 square foot (0.12 square meters) is required for each dryer.



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

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

EXAMPLE: For a bank of (4) dryers, two (2) unrestricted openings measuring 2 feet by 1-1/4 feet (0.61 meters by 0.38 meters), 5 square feet (0.47 square meters) is acceptable

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

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

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

E. EXHAUST REQUIREMENTS

1. General Exhaust Ductwork Information

Exhaust ductwork **should be** designed and installed by a qualified professional. Improperly sized ductwork will create excessive back pressure which results in slow drying, increased use of energy, overheating of the dryer, and shutdown of the burner by the airflow (sail) switches, burner hi-limits, or basket (tumbler) hi-heat thermostats.

CAUTION: DRYER *MUST BE* EXHAUSTED TO THE OUTDOORS.

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

The ductwork **should be** laid out in such a way that the ductwork travels as directly as possible to the outdoors with as few turns as possible. Single or independent dryer venting is recommended.

Horizontal Venting:

When single dryer venting is used, the length of ductwork from the dryer to the outside exhaust outlet, **must not exceed** 15 feet (4.6 meters). The minimum diameter of this ductwork **must be** at least 8-inches (20.32 cm). In the case of multiple (common) dryer venting, the distance from the last dryer to the outside exhaust outlet **must not exceed** 15 feet (4.6 meters). The shape of the ductwork is not critical so long as the minimum cross-sectional area is provided. It is suggested that the use of 90° turns be avoided; use 30° and/or 45° angles instead. The radius of the elbows **should preferably be** 1-1/2 times the diameter of the duct. Including basket (tumbler)/dryer elbow connections or elbows used for outside protection from the weather, no more than two (2) elbows **should be** used in the exhaust duct run. If more than two (2) elbows are used, the cross-sectional area of the ductwork **must be** increased. ALL ductwork **should be** smooth inside with no projections from sheet metal screws or other obstructions, which will collect lint. When adding ducts, the duct to be added should overlap the duct to which it is to be connected. ALL ductwork joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust ductwork for periodic inspection and cleaning of lint from the ductwork.

Vertical Venting:

When single dryer venting is used, the length of the ductwork from the dryer to the outside exhaust outlet **must not exceed** 15 feet (4.6 meters). The minimum diameter of this ductwork **must be** at least 8-inches (20.32 cm). In the case of multiple (common) dryer venting, the distance from the last dryer to the outside exhaust outlet **must not exceed** 15 feet (4.6 meters). The shape of the ductwork is not critical so long as the minimum cross-sectional area is provided. It is suggested that the use of 90° turns be avoided; use 30° and/or 45° angle 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, the duct to be added should overlap the duct to which it is to be connected. ALL ductwork joints **must be** taped to prevent moisture and lint from escaping into the building. Inspection doors **should be** installed at strategic points in the exhaust ductwork for periodic inspection and cleaning of lint from the ductwork.

IMPORTANT: Exhaust back pressure measured by a manometer in the exhaust duct ***must not exceed*** 0.3 inches (0.74 mb) of water column (W.C.).

IMPORTANT: Minimum ductwork diameter for horizontal venting is 8-inches (20.32 cm) and for vertical venting the minimum is 8-inches (20.32 cm).

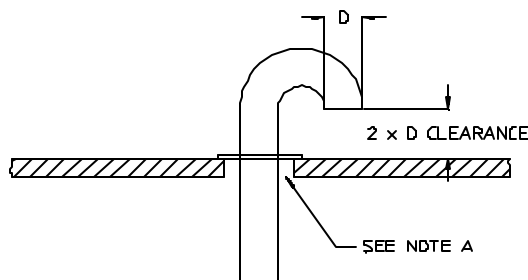
NOTE: When the exhaust ductwork passes through a wall, ceiling, or roof made of combustible materials, the opening **must be** 2-inches (5.08 cm) larger than the duct (**ALL** the way around). The duct **must be** centered within this opening.

a. Outside Ductwork Protection

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

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

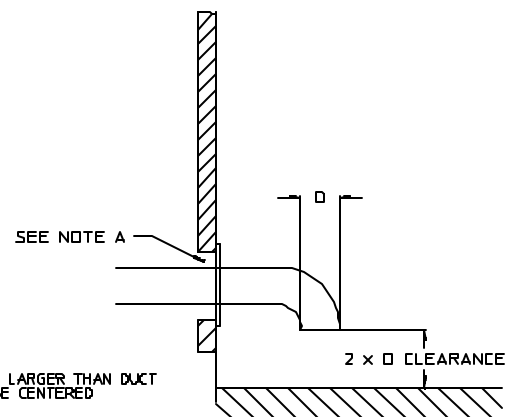
VERTICAL DUCTING



MAN4589

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

HORIZONTAL DUCTING



2. Single Dryer Venting

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

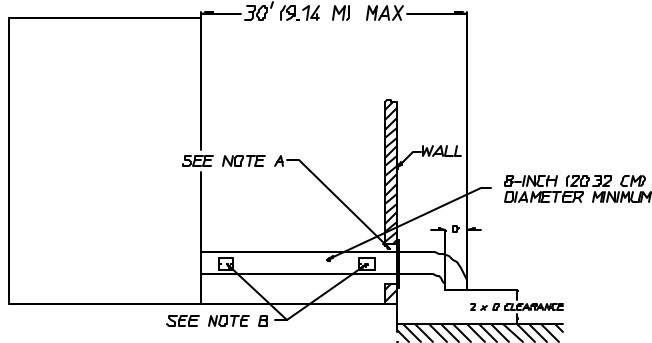
IMPORTANT: Minimum duct size for a dryer that is vented horizontally is 8-inches (20.32 cm) for a round duct or an equivalent of 54 square inches (348.4 square centimeters). **THE DUCT SIZE MUST NOT BE REDUCED ANYWHERE DOWNSTREAM OF THE DRYER.**

IMPORTANT: Exhaust back pressure measured by a manometer at each basket (tumbler) exhaust duct area **must not exceed** 0.3 inches (0.74 mb) of water column (W.C.).

IMPORTANT: Minimum duct size for a dryer that is vented vertically is 8-inches (20.32 cm) for a round duct or an equivalent of 54 square inches (348.4 square centimeters). **THE DUCT SIZE MUST NOT BE REDUCED ANYWHERE DOWNSTREAM OF THE DRYER.**

SINGLE DRYER VENTING

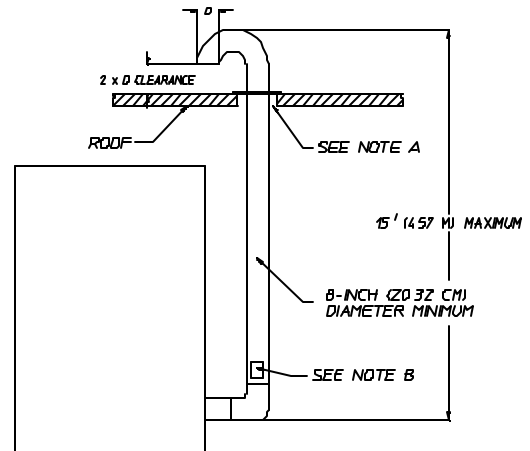
HORIZONTAL DUCTING



NOTE "A"- OPENING MUST BE TWO (2) INCHES (5.08 CM) LARGER THAN DUCT (ALL THE WAY AROUND) THE DUCT MUST BE CENTERED WITHIN THIS OPENING

"B"- INSPECTION DOORS SHOULD BE INSTALLED AT STRATEGIC POINTS FOR PERIODIC INSPECTION AND CLEANING

VERTICAL DUCTING



MAN4594

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

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

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

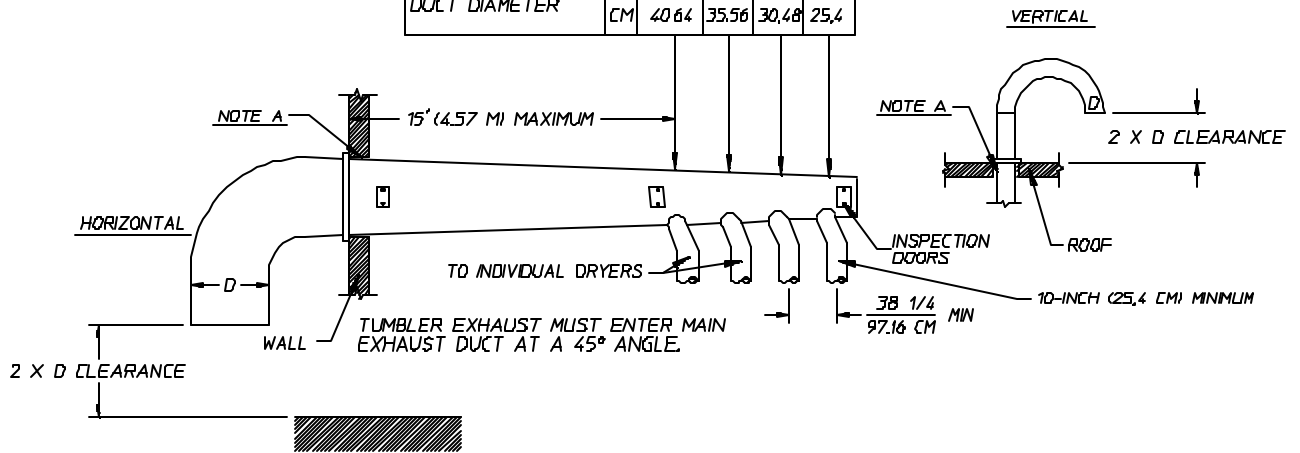
a. Outside Ductwork Protection

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

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

MULTIPLE DRYER VENTING (ML-55) WITH 8" (20,32 CM) DIAMETER
(1200 CFM [34 CMM]) EXHAUST CONNECTIONS AT COMMON DUCT

NO. OF DRYERS		4	3	2	1
MINIMUM CROSS SECTION AREA	SQ. IN.	200	155	115	80
	SQ. CM	1290,32	1000	742	516,13
MINIMUM ROUND DUCT DIAMETER	IN	16	14	12	10
	CM	40,64	35,56	30,48	25,4

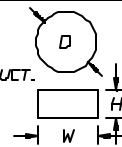


IMPORTANT- NO MORE THAN 4 DRYERS CAN
BE CONNECTED TO ONE COMMON DUCT (VENT).

FORMULAS TO CALCULATE DUCTING CROSS SECTIONAL AREA

CROSS SECTIONAL AREA OF A ROUND DUCT = .785 (19939 mm) $\times D^2$ WHERE D = DIAMETER OF THE DUCT.

CROSS SECTIONAL AREA OF A RECTANGULAR DUCT = W \times H WHERE W = WIDTH AND H = HEIGHT.



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.

MAN5701

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 with local and state regulations or codes. In the absence of such codes, **ALL** electrical connections, material, and workmanship **must conform** to the applicable requirements of the National Electrical Code ANSI/NFPA NO. 70-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 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 dryer **should be** connected to an independently protected branch circuit. The dryer **must be** connected with copper wire only. ***DO NOT use aluminum wire which could cause a fire hazard.*** The copper conductor wire/cable **must be** of proper ampacity and insulation in accordance with electric codes for making **ALL** service connections.

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

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

2. Electrical Service Specifications

a. Gas Models and Steam Models ONLY

MLG-55 (Gas) MLS-55 (Steam)						
ELECTRIC SERVICE SPECIFICATIONS (PER DRYER)						
IMPORTANT: 208 VAC and 230/240 VAC <u>ARE NOT THE SAME</u> . When ordering, specify <i>exact voltage</i> .						
NOTES: A. Fuse ratings are dual-element, time-delay, current limiting, class RK1 or RK5 ONLY . 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		MINIMUM WIRE SIZE	CIRCUIT BREAKER
			60 Hz	50 Hz		
120	1ø	2	12	---	*	25
208	1ø	2	7.1	---	*	15
230/240	1ø	2	6.5	---	*	15
208	3ø	3/4	3.1	---	*	15
230/240	3ø	3/4	3.1	3.7	*	15
380/400	3ø	3/4	---	2.2	*	15
416	3ø	3/4	---	2.3	*	15
460/480	3ø	3/4	2	---	*	15

* AWG Stranded Wire Type...size wire as per National Electrical Code or local codes.
 (Motor lead type wire is recommended.)

IMPORTANT: Figures shown are for non-reversing models ONLY. For reversing models contact the factory.

IMPORTANT: ~~The dryer~~ **must be** connected to the electric supply shown on the data label that is affixed to the backside of the upper control door. In the case of 208 VAC or 230/240 VAC, the supply voltage **must match** the electric service specifications of the data label **exactly**.

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

WARNING: **208 VAC and 230/240 VAC ARE NOT THE SAME**. Any damage done to dryer components due to improper voltage connections will automatically **VOID THE WARRANTY**.

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

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 non-metallic 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

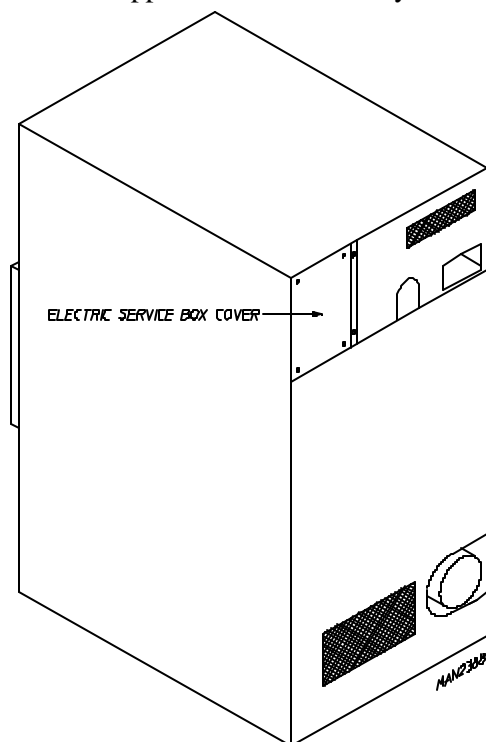
NOTE: A wire diagram is located in the front electrical control box for connection data.

a. Gas and Steam Models ONLY

NOTE: A CIRCUIT SERVICING EACH DRYER MUST BE PROVIDED.

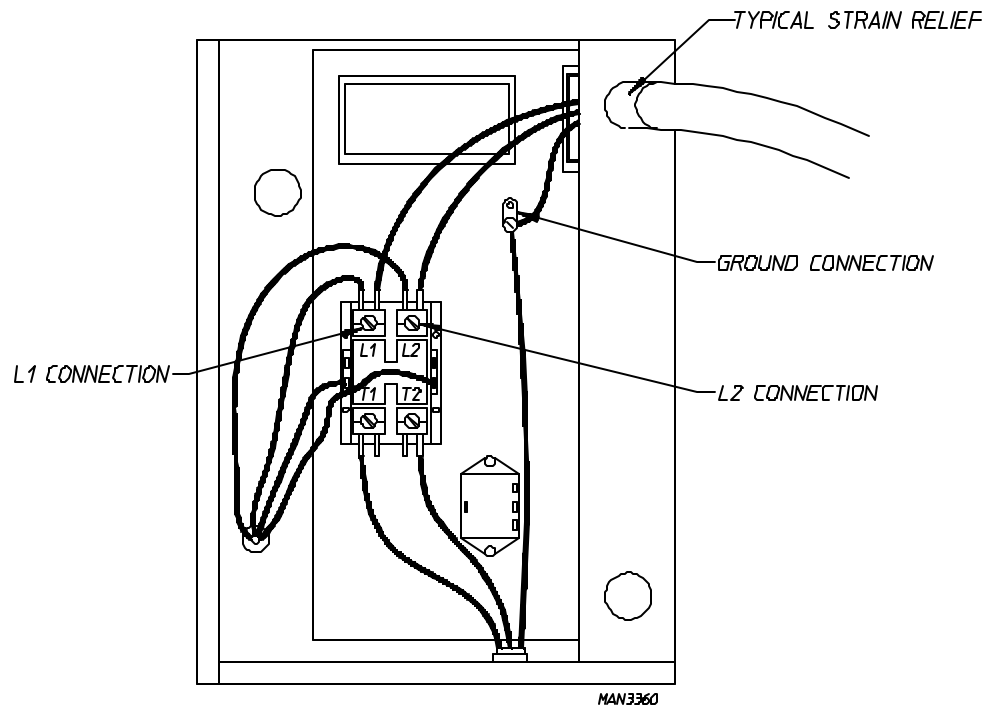
1) Single-Phase (1 ϕ) Wiring Connections (Hookup)

The electrical connections on **ALL** single-phase (1 ϕ) gas and steam dryers are made into the rear service box located at the upper left area of the dryer.



Actual electrical wire connections are made to the L1 and L2 terminals of the motor contactor located in the rear service box mentioned above. The ground connection is also made to the copper lug also provided in this box.

SINGLE-PHASE (1Ø) ELECTRICAL CONNECTIONS LEADS		
Black + Positive	White - Neutral	Green Ground
or L2		



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

2) 3-Phase (3Ø) Wiring Connections/Hookup "NON-REVERSING MODELS ONLY"

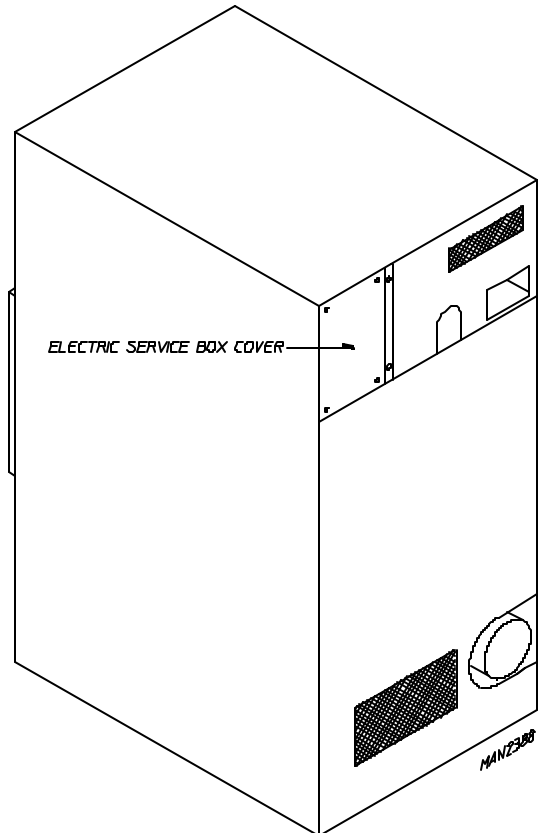
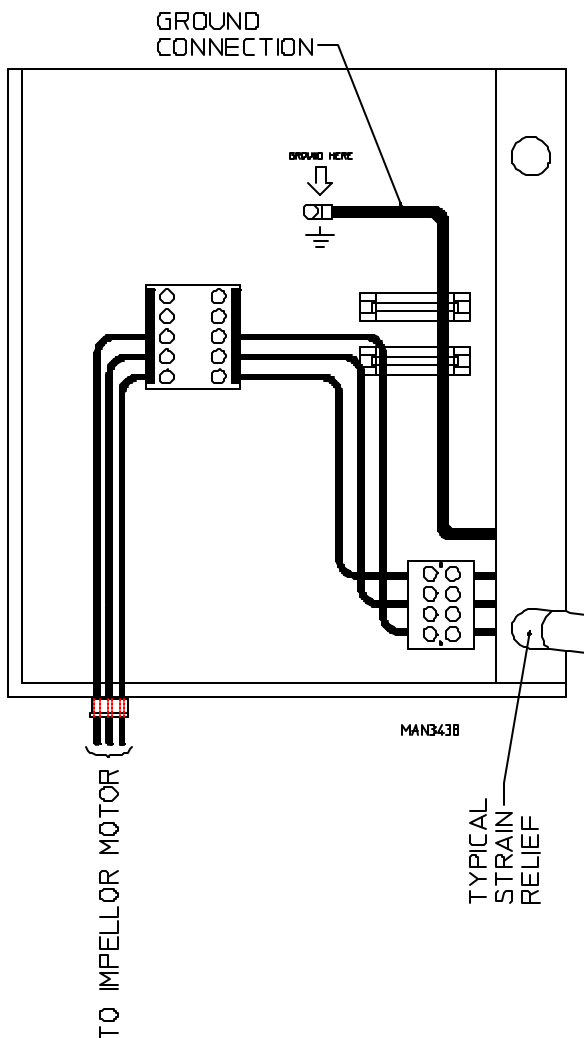
The electrical connections on **ALL** 3-phase (3Ø) gas and steam dryers are made into the rear service box located at the upper left area of the dryer. Electrical connections for electrically heated dryers are made in the electric oven area located at the upper rear area of the dryer.

NOTE: A CIRCUIT SERVICING EACH DRYER *MUST BE* PROVIDED.

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

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

For gas and steam dryers manufactured for operation at 3-phase (3 ϕ), the electrical connections are made at the power distribution block located in the service box at the rear, upper left corner of the dryer. The ground connection is made to the copper lug also provided in this box. To gain access to the service box contactor, the service box cover **must be** removed.



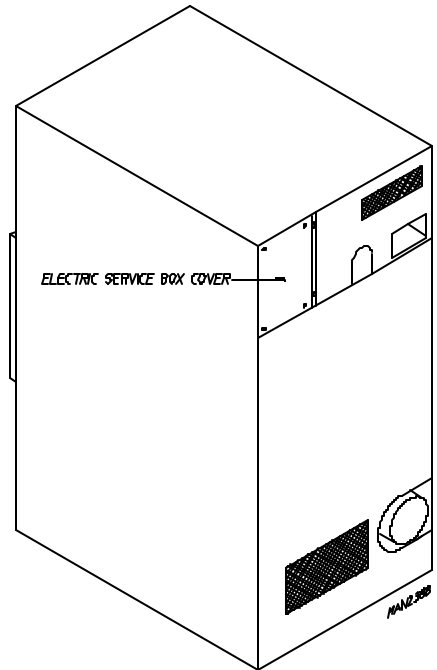
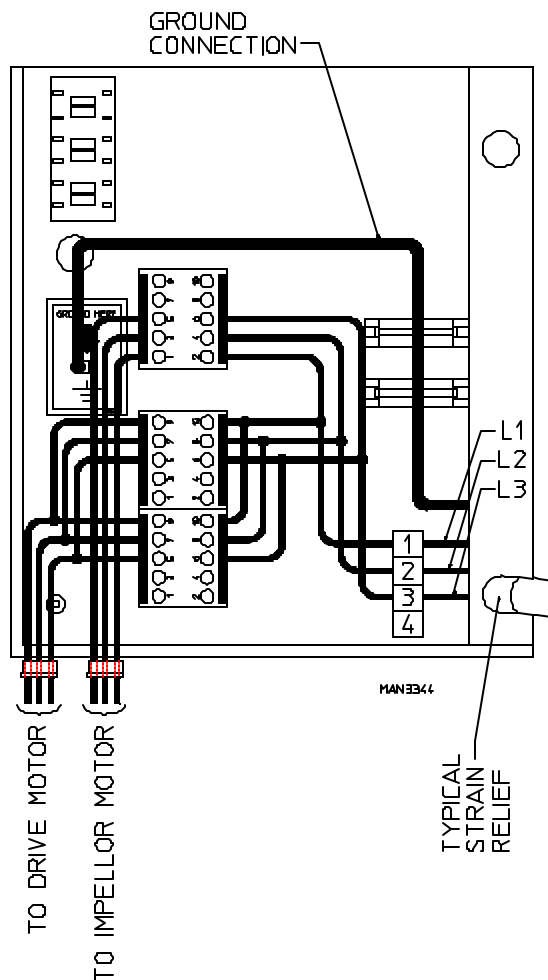
3) 3-Phase (3 ϕ) Wiring Connections/Hookup "REVERSING MODELS ONLY"

The electrical connections on **ALL** 3-phase (3 ϕ) gas and steam dryers are made into the rear service box located at the upper left area of the dryer. Electrical connections for electrically heated dryers are made in the electric oven area located at the upper rear area of the dryer.

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

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

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



For gas and steam dryers manufactured for operation at 3-phase (3 ϕ), the electrical connections are made at the power distribution block located in the service box at the rear, upper left corner of the dryer. The ground connection is made to the copper lug also provided in this box. To gain access to the service box contactor, the service box cover **must be** removed.

b. Electrically Heated Models Only

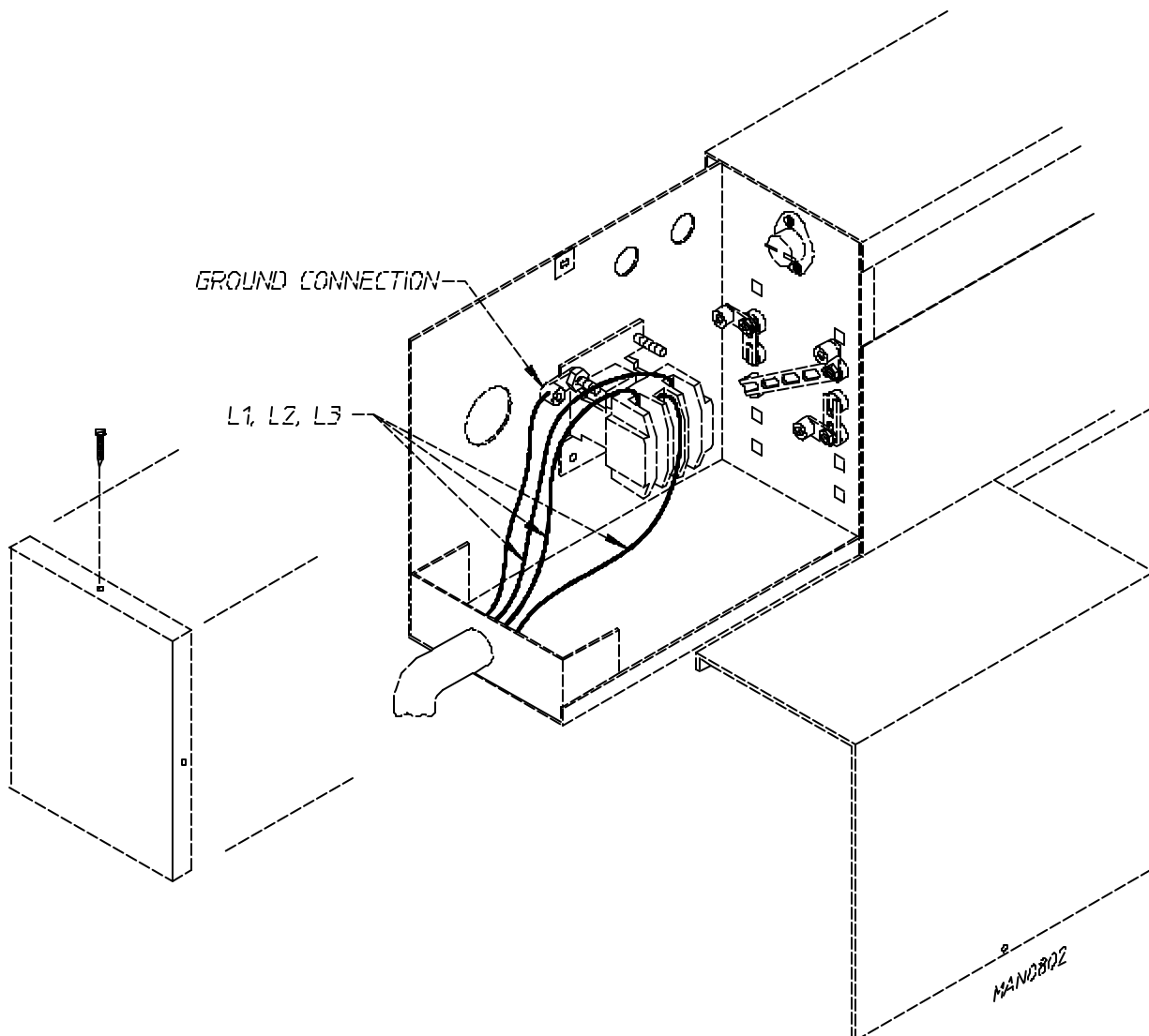
The only electrical input connections to the dryer are the 3-phase (3 ϕ) power leads (L1, L2, L3, and sometimes neutral) and ground. Single-phase (1 ϕ) power for the control circuit and for any single-phase (1 ϕ) motors (if present) is done internally to the dryer by the factory at the oven contactor. No single-phase (1 ϕ) input connection is required on a 3-phase (3 ϕ) dryer.

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.

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

The electrical input connections are made at the electric oven contactor located inside the assembly at the rear center upper section of the dryer. The ground connection is made to a copper lug also provided in this area. To gain access, remove oven rear service cover.



IMPORTANT: A strain relief *must be* used where the input wiring enters the oven assembly.

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 with 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 these codes or ordinances, and/or the requirements stipulated in this manual, can result in PERSONAL INJURY and IMPROPER OPERATION of the dryer.

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

IMPORTANT: Failure to isolate or disconnect the dryer from supply as noted 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 label affixed to the backside of the upper control door. 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 (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) are 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
Inline Pressure	6.0 - 12.0 inches W.C.	14.92 - 29.9 mb	10.5 inches W.C.	26.1 mb

Shaded areas are stated in metric equivalents

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

b. Gas Connections:

Inlet connection ----- 1/2-inch N.P.T.

Inlet supply size ----- 1/2-inch N.P.T. (minimum)

Btu/hr input (per dryer) ----160,000 (40,320 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	
MLG-55	160,000	40,320	3	#29	140820	3	#48	140804	881598

Shaded area is stated in metric equivalent

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

Natural Gas #29 = 0.1360" (3.4544 mm).

Liquid Propane Gas .. #48 = 0.0760" (1.9304 mm).

3. Piping/Connections

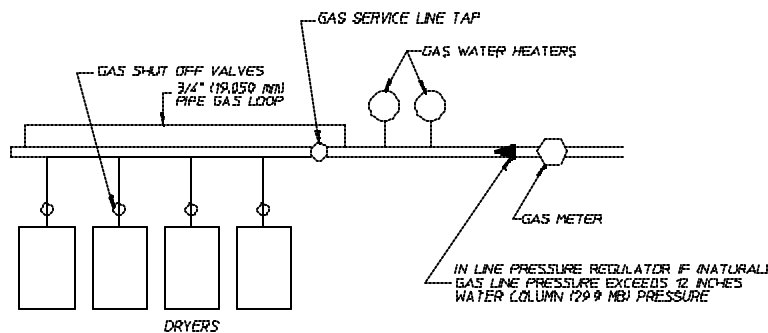
ALL components/materials **must conform** to National Fuel Gas Code Specifications ANSI Z223.1-LATEST EDITION, or in Canada, CAN/CGA-B149.1-M91 (Natural Gas) or CAN/CGA-B149.2-M91 (Liquid Propane [L.P.] Gas) or LATEST EDITION (for General Installation and Gas Plumbing), as well as local codes and ordinances 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 1/2-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 1/2-inch N.P.T. For ease in servicing, the gas supply line of each dryer **must have** its own shutoff valve.

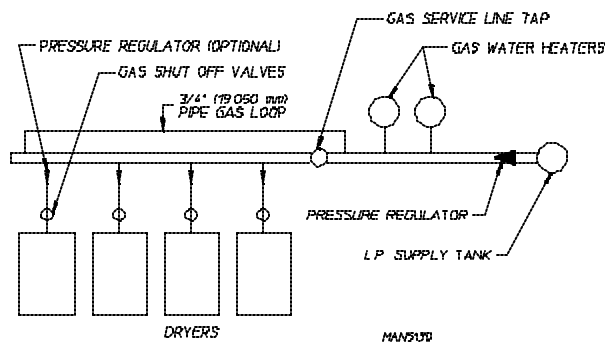
The size of the main gas supply line (header) will vary depending on the distance this line travels from the gas meter or, in the case of (L.P.) gas, the supply tank, other gas operated appliances on the same line, etc. Specific information regarding supply line size **should be** determined by the gas 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 NATURAL GAS INSTALLATION



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 12.0 inches (29.9 mb) of water column pressure (W.C.).

NOTE: A water column (W.C.) 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" 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. STEAM INFORMATION

It is your responsibility to have **ALL** plumbing connections made by a qualified professional to assure that the steam plumbing installation is adequate and conforms with local and state regulations or codes.

IMPORTANT: Failure to comply with the requirements stipulated in this manual can result in component failure which will **VOID THE WARRANTY.**

NOTE: The MLS-55 is manufactured with a pneumatic (piston) damper system, which requires an external supply of air (80 PSI \pm 10 PSI [5.52 bars \pm 0.68 bars]).

1. Steam Coil PH Level

The normal PH level for copper type steam coils **must be** maintained between a value of 8.5 to 9.5. For steel type steam coils the PH level **must be** maintained between a value of 9.5 to 10.5. These limits are set to limit the acid attack of the steam coils.

IMPORTANT: Coil failure due to improper PH level will **VOID THE WARRANTY.**

2. Steam Requirements - High Pressure

Inlet ----- 1-inch supply line connection ----- qty. one (1) at top manifold.

Return ----- 1-inch return line connection ----- qty. one (1) at top manifold.

OPERATING STEAM PRESSURE		
Maximum	125 psig	861.9 kPa
Minimum	100 psig*	689.5 kPa
Heat Input (Normal Load)	4.2 Bhp	
Consumption (Approximate)	144.7 lbs/hr	65.7 kg/hr

Shaded areas are stated in metric equivalents

** Minimum operating temperature for optimum results.*

3. Installation Instructions

To insure an adequate supply of steam is provided, be sure that the steam lines and steam return lines are sized and laid out as stipulated in this manual. Inadequate steam lines and steam return lines or improper steam plumbing will result in poor performance and can cause component failure. Clean, dry steam **must be** provided to the dryer.

IMPORTANT: Steam coil failure due to water hammer by wet steam will VOID THE WARRANTY.

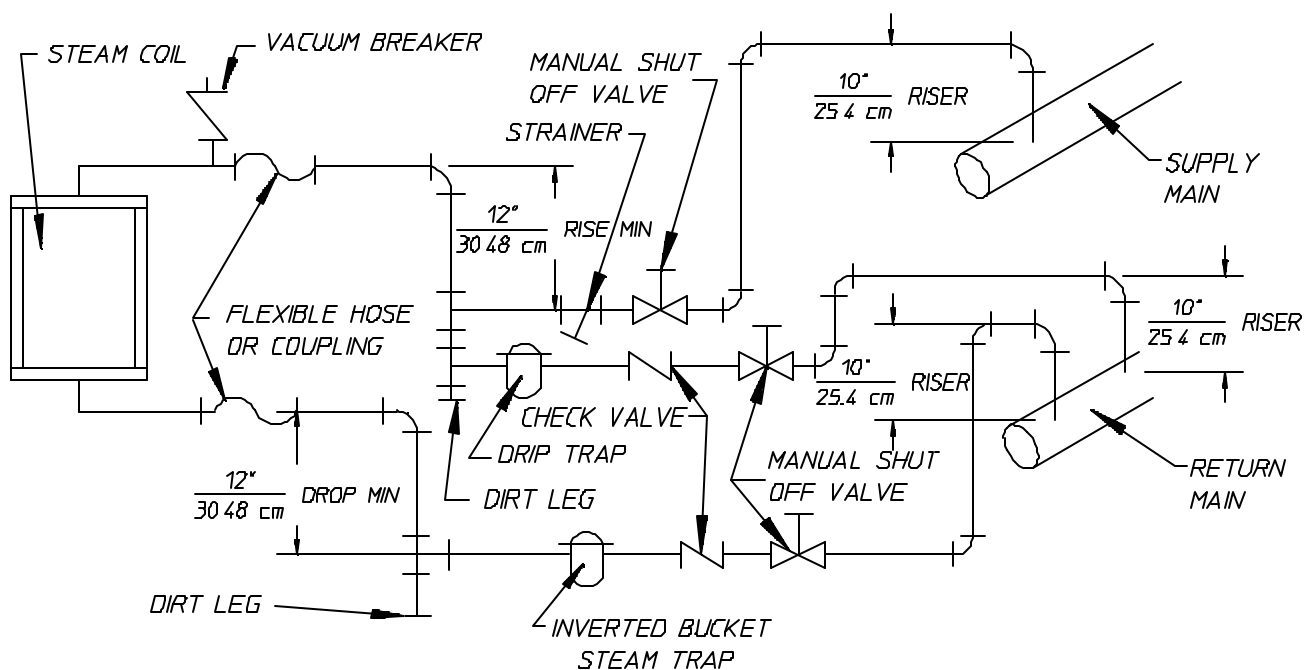
- The pressure of the condensate in the steam supply will cause water hammer and subsequent heat exchanger (steam coil) failure. The steam supply connection into the main supply line **must be** made with a minimum 10-inch (25.4 cm) riser. This will prevent any condensate from draining towards the dryer.
- The steam supply piping to the dryer must include a 12-inch (30.48 cm) rise along with a drip trap and check valve. This will prevent any condensate from entering the steam coil.
- Flexible hoses or couplings **must be** used. The dryer vibrates slightly when it runs and this will cause the steam coil connections to crack if they are hard piped to the supply and return mains.
- Shutoff valves for each dryer **should be** installed in the supply line, return line, and drip trap return line. This will allow the dryer to be isolated from the supply main and the return main if the dryer needs maintenance work.
- Install an inverted bucket steam trap and check valve at least 12-inches (30.48 cm) below the steam coil as close to the coil as possible.
 - A trap with capacity of 400 pounds of condensate per hour (181.5 kg/hr) at 125 PSI (8.6 bars) is needed for each unit.
- The supply line and the return line **should be** insulated. This will save energy and provide for the safety of the operator and maintenance personnel.

- g. Water pockets in the supply line, caused by low points, will provide wet steam to the coil possibly causing steam coil damage. **ALL** horizontal runs of steam supply piping **should be** pitched 1/4-inch (6.35 mm) for every 1 foot (0.30 meters) back towards the steam supply header causing the condensate in the line to drain to the header. Install a bypass trap in any low point to eliminate wet steam.

IMPORTANT: Flexible hose/coupling *must be* used. Coil failure due to hard plumbing connections will VOID THE WARRANTY.

* IMPORTANT

FLEXIBLE HOSE/COUPLINGS MUST BE USED COIL FAILURE
DUE TO HARD PLUMBING CONNECTIONS WILL VOID WARRANTY

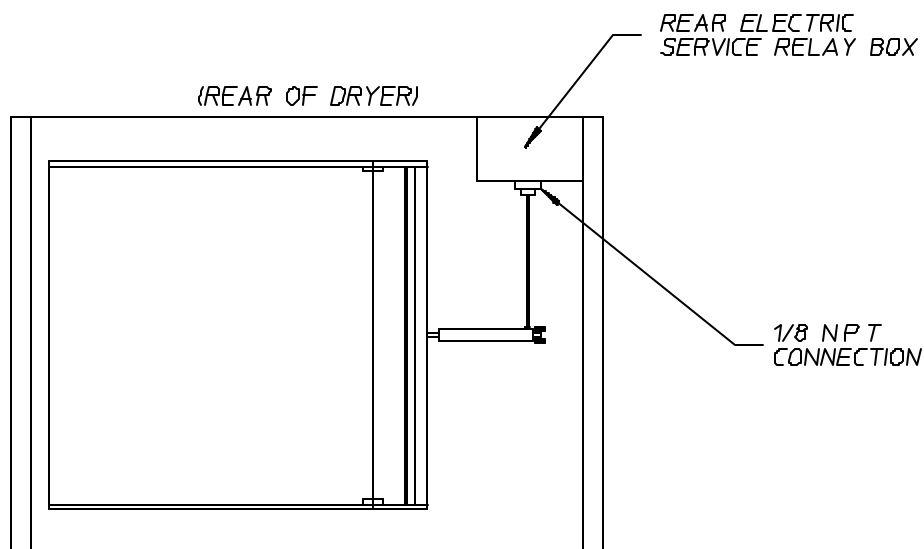


STEAM DAMPER SYSTEM

MAN4593

4. Steam Damper Air System Connections

The MLS-55 is manufactured with a pneumatic (piston) damper system which requires an external supply of compressed air. The air connection is made to the steam damper solenoid valve, which is located at the rear inner top area of the dryer just in front of the electric service relay box.



MAN2497

a. Air Requirements

COMPRESSED AIR SUPPLY	AIR PRESSURE	
Normal	80 PSI	5.52 bars
Minimum Supply	70 PSI	4.83 bars
Maximum Supply	90 PSI	6.21 bars

Shaded areas are stated in metric equivalents

b. Air Connection

Air connection to system -- 1/8-inch N.P.T.

- c. No air regulator or filtration is provided with the dryer. External regulation/filtration of 80 PSI (5.52 bars) **must be** provided. It is suggested that a regulator/filter gauge arrangement be added to the compressed air line just before the dryer connection. This is necessary to insure that correct and clean air pressure is achieved.

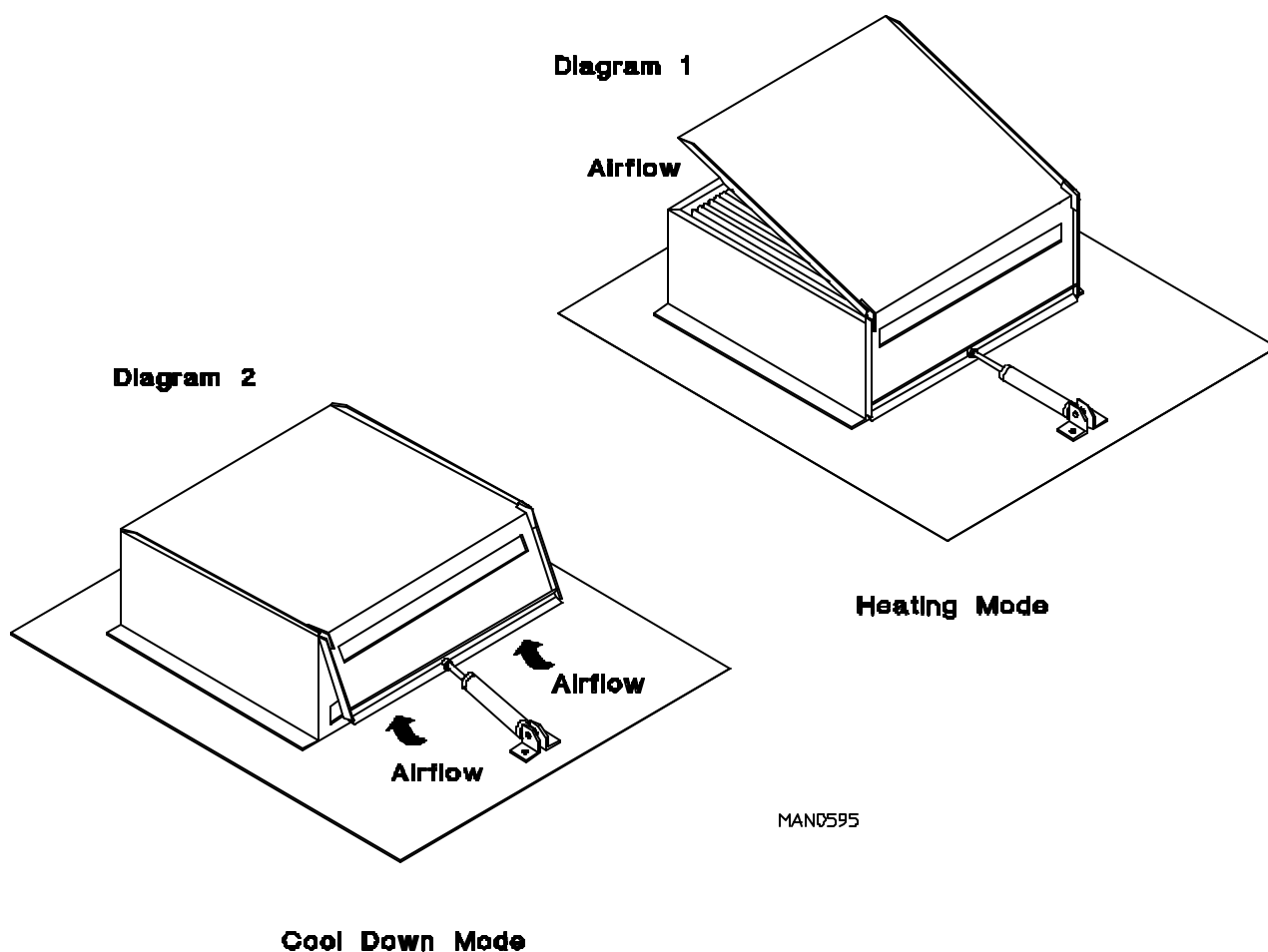
5. Steam System Operation

The MLS-55 steam damper shown in **Diagram 1** in the **illustration below**, allows the coil to stay constantly charged eliminating repeated expansion and contraction. When the damper is opened, the air immediately passes through the already hot coil, providing instant heat to start the drying process. When the damper is closed, ambient air is drawn directly into the basket (tumbler), allowing a rapid cool down (**Diagram 2**).

Diagram 1 shows the damper in the heating (open) mode, allowing heat into the basket (tumbler).

Diagram 2 shows the damper in the cool down (closed) mode, pulling ambient air directly into the basket (tumbler) without passing through the coils.

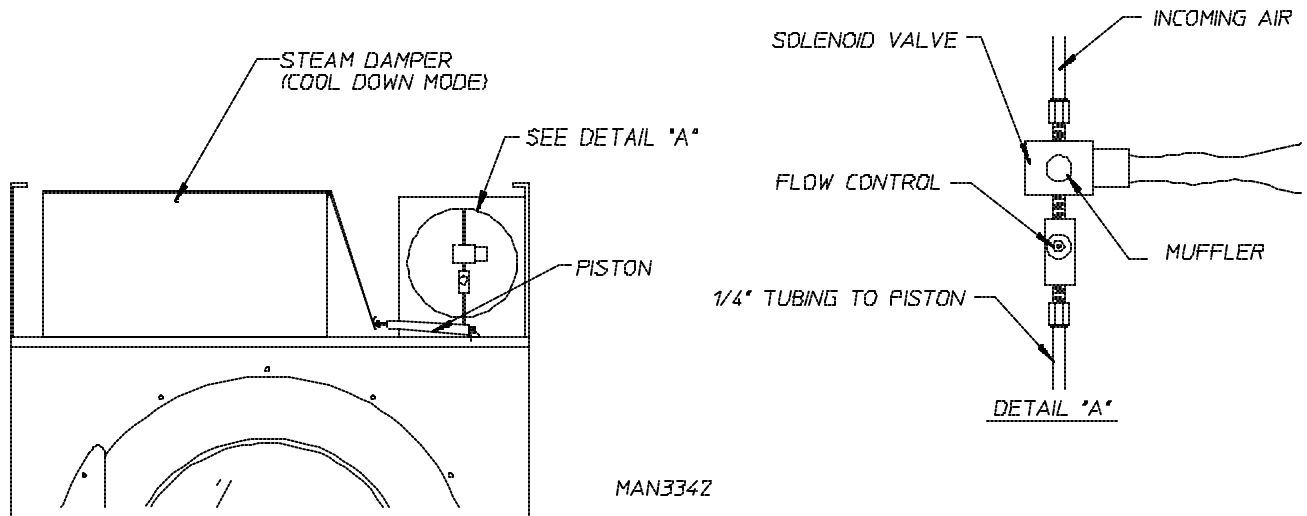
NOTE: With the dryer off or with no air supply, the steam damper is in cool down mode as shown in Diagram 2.



6. Steam Damper Air Piston (Flow Control) Operation Adjustment

Although the steam damper operation was tested and adjusted prior to shipping at 80 PSI (5.52 bars), steam damper operation **must be** checked before the dryer is put into operation. Refer to the previous page for instructions to check steam damper operation. If steam damper adjustment is necessary, locate the flow control valve and make the necessary adjustments as noted below.

NOTE.
TURNING KNOB ON FLOW
CONTROL CLOCKWISE WILL
RESTRICT AIR FLOW. TURNING
COUNTER-CLOCKWISE WILL
ALLOW HIGHER AIR FLOW.



I. 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 backside of the upper control door. In the case of 208 VAC or 230/240 VAC, **THE SUPPLY VOLTAGE MUST MATCH THE ELECTRIC SERVICE EXACTLY.**
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. (Refer to **page 36** for Sail Switch Adjustment).
5. **GAS MODELS** - be sure that **ALL** gas shutoff valves are in the open position.
6. Be sure **ALL** side and base panels are on the dryer.
7. Check **ALL** service doors to insure that they are closed and secure.
8. Be sure the lint door is securely in place.
9. Rotate the basket (tumbler/drum) by hand to be sure it moves freely.
10. Check bolts, nuts, screws, terminals, and fittings for security.
11. **STEAM MODELS** - check to insure air supply (80 PSI [5.52 bars]) is connected to the dryers.
12. **STEAM MODELS** - check to insure **ALL** steam shutoff valves are open.
13. **STEAM MODELS** - check steam damper operation.
14. Check basket (tumbler) bearing setscrews to insure they are **ALL** tight.

J. 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.
 - a. Open **ALL** shutoff valves (gas and steam models only).
2. Refer to the Operating Instructions for starting your particular model dryer.
3. Gas Dryers
 - a. When a gas dryer is first started (during initial start-up), it has a tendency not to ignite on the first ignition attempt. This is because the gas supply piping is filled with air, so it may take a few minutes for the air to be purged from the lines.

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

NOTE: Gas dryers are equipped with a Hot Surface Ignition (HSI) system which has internal diagnostics. If ignition **is not** established within three (3) times, the heat circuit in the HSI module will lockout until it is manually reset. To reset the HSI system, open and close the main door and restart the dryer.

- b. A gas pressure test **should be** taken at the gas valve pressure tap of each dryer to assure that the water column (W.C.) pressure is correct and consistent.

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

Natural Gas ----- 3.5 Inches (8.7 mb) Water Column.

Liquid Propane (L.P.) Gas --- 10.5 Inches (26.1 mb) Water Column.

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. Steam Dryers
 - a. Check to insure that steam damper is functioning properly...
 - 1) The steam damper **should not** "slam" (open or closed) when it reaches the end of (piston) travel. Additionally, the steam damper **should not** bind and/or stop during travel. If either of these conditions exist refer to air adjustment instructions in **Section H**.

5. Electrically Heated Dryers

- a. Check to insure that electric oven/contactors assembly is activating.
6. Make a complete operational check of **ALL** safety related circuits:
- a. Door switch(es)
 - b. Hi-Limit thermostats
 - c. Sail switch (for gas and electric models only)

NOTE: To check for proper sail switch operation (for gas and electric models only), open the main door and while holding main door switch plunger in, start dryer. Dryer should start but heat circuit ***should not be*** activated (on). If the heat system is activated, the sail switch is improperly adjusted and ***must be*** adjusted by bending the actuator arm of the sail switch toward the burner box. If the actuator arm is bent too far toward the burner box of the dryer, the dryer **may not** have heat when needed. After any adjustment to the sail switch, the above procedure ***must be*** repeated to verify proper operation of the sail switch.

7. The dryer **should be** operated through one (1) complete cycle to assure that no further adjustments are necessary and that **ALL** components are functioning properly.

BASKET COATING

The basket (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 basket (tumbler) to remove this coating.

8. Make a complete operational check of **ALL** operating controls.
- a. For microprocessor models check controller (computer) programs/selections...
 - 1) 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.
9. Check the electric service phase sequence (3-phase [3Ø] models only). While the dryer is operating, check to see if the blower wheel (impellor/fan) is rotating in the proper direction. Looking from the front, the blower wheel (impellor/fan) should spin in the clockwise (CW) direction. If it is, the phasing is correct. If the phasing is incorrect, reverse two (2) of the three (3) leads at connections L1, L2, L3 of the power supply to the dryer.

IMPORTANT: If the blower wheel (impellor/fan) is rotating in the wrong direction, this **will not** only drastically reduce drying efficiency, but it can also cause premature component failure.

10. Reversing Models Only - basket (tumbler) dryer **should never be** operated with less than a 30 lb. (14 kg) load (dry weight). The size of the load will affect the coast-down and dwell (stop) times. The basket (tumbler) must come to a complete stop before starting in opposite direction.

a. Microprocessor Models

- 1) Spin and stop are not adjustable in the Automatic Mode and have been preprogrammed into the microprocessor controller (computer) for 150-seconds spin time in the forward direction, 120-seconds in the reverse direction and a 5-second dwell (stop) time.
- 2) Spin and stop times ***are adjustable*** in the Manual (timed) Mode.

b. Dual Timer Models

- 1) Both dwell (stop) time and the basket (tumbler) spin time ***are adjustable***. (Refer to the **illustration on page 47.**)

11. Check to insure that **ALL** setscrews (i.e., basket [tumbler] drive, idler, etc.) are tight.

K. PREOPERATIONAL INSTRUCTIONS

1. To start the dryer...

a. Microprocessor Controller (Computer) Dryers

- 1) The light emitting diode (L.E.D.) display will read "REAdY."
- 2) Press the "E" on the keyboard (touch pad).
- 3) The dryer will start and the display will flash "dRYING MANUAL CYCLE E" "dRY TEMP 180F" "COOL TEMP 80F" "30 REMAIN" "dRUM TEMP."

Refer to the User's Manual for detailed operating instructions.

b. Dual Timer Dryers

- 1) Turn drying timer knob for a time of 20 minutes.
- 2) Select "High Temp."
- 3) Push "Push To Start" Switch.
- 4) To stop dryer, open the main door.

2. To stop the dryer...
 - a. Microprocessor Controller (Computer) Dryer...
 - 1) Press the CLEAR/STOP (red) button on the keyboard (touch pad).
 - 2) Open the main door.
 - b. Dual Timer Dryers
 - 1) Open the main door.

L. 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.**
 - 2) **SHUT OFF internal gas supply shutoff valve located in the gas valve burner area.**
 - b. ***STEAM MODELS* ... discontinue the steam supply.**
 - 1) **SHUT OFF external (location furnished) shutoff valve.**
 - 2) **SHUT OFF internal steam valves in the supply lines and the return lines.**

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 CARD(S)

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, if you file a warranty claim.
 - a. If a Warranty Card did not come with your dryer, contact the **ADC** Warranty Department or **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 PART(S)

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

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

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

- a. The R.M.A. issued by the factory, as well as any other correspondence pertaining to the returned parts, **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 a reply **is not** received by the ADC Warranty Department within thirty (30) days from the FAX/letter date, then no replacement, credit, or refund **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.

SUGGESTED CLEANING SCHEDULE

EVERY SECOND or THIRD LOAD

Clean the lint screen every second or third load. A clogged lint screen will cause poor dryer performance. The lint screen is located behind the lint door in the base of the dryer. Open the lint door, brush the lint off the lint screen, and remove the lint. Inspect lint screen and replace if torn.

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

WEEKLY

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

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

STEAM MODELS - clean the steam coil fins. We suggest using compressed air and a vacuum cleaner with brush attachment.

WARNING: When cleaning steam coil fins, be careful not to bend the fins. If fins are bent, straighten by using a fin comb, which is available from local air conditioning supply house.

90 DAYS

1. Remove lint from around basket (tumbler), drive motors, and surrounding areas.
2. Remove lint from gas valve burner area with a dusting brush or vacuum cleaner attachment.
3. Clean any lint accumulation in and around both the blower and drive motor casing openings.

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 dryers internal exhaust ducting.

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

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

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

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

B. ADJUSTMENTS

7 DAYS AFTER INSTALLATION and EVERY 6 MONTHS THEREAFTER

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

C. LUBRICATION

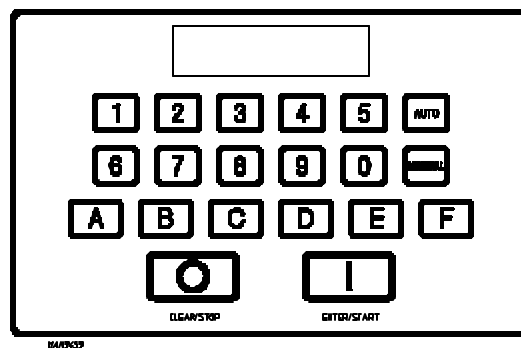
The fan shaft bearings **should be** lubricated every three (3) months. Use Shell Alvania grease NLGI grade 2 or its equivalent. Generically, this grease would be described as an NLGI grade 2 multipurpose industrial grease with a lithium thickener and mineral base oil. Lubrication is necessary. The motor bearings...and under normal/most conditions the basket (tumbler) bearings are permanently lubricated. It is physically possible to re-lubricate the basket (tumbler) bearings if you choose to do so even though this practice may not be necessary. Use Shell Alvania grease NLGI grade 2 or its equivalent. Generically, this grease would be described as an NLGI grade 2 multipurpose industrial grease with a lithium thickener and mineral base oil. The basket (tumbler) bearings used in the dryer **DO NOT** have a grease fitting. Provisions are made in the bearings housing for the addition of grease fitting which can be obtained elsewhere.

SECTION VII

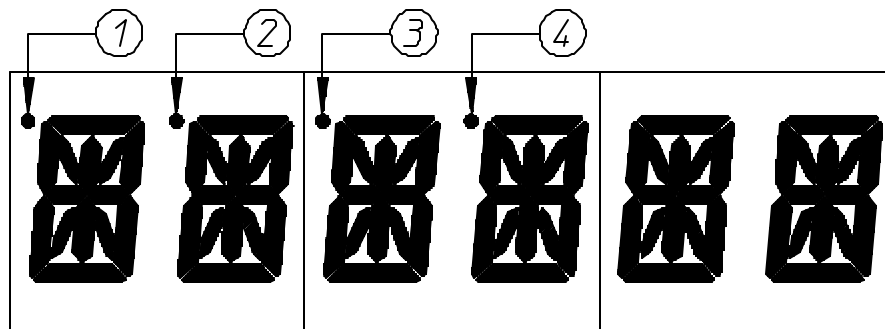
PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT COMPONENTS

1. Microprocessor Controller (Computer) Board

- a. Upon completing installation of the replacement microprocessor controller (computer) board, reestablish power to the dryer.
- b. Start the drying cycle by pressing any of the preset cycles in letters A-F.



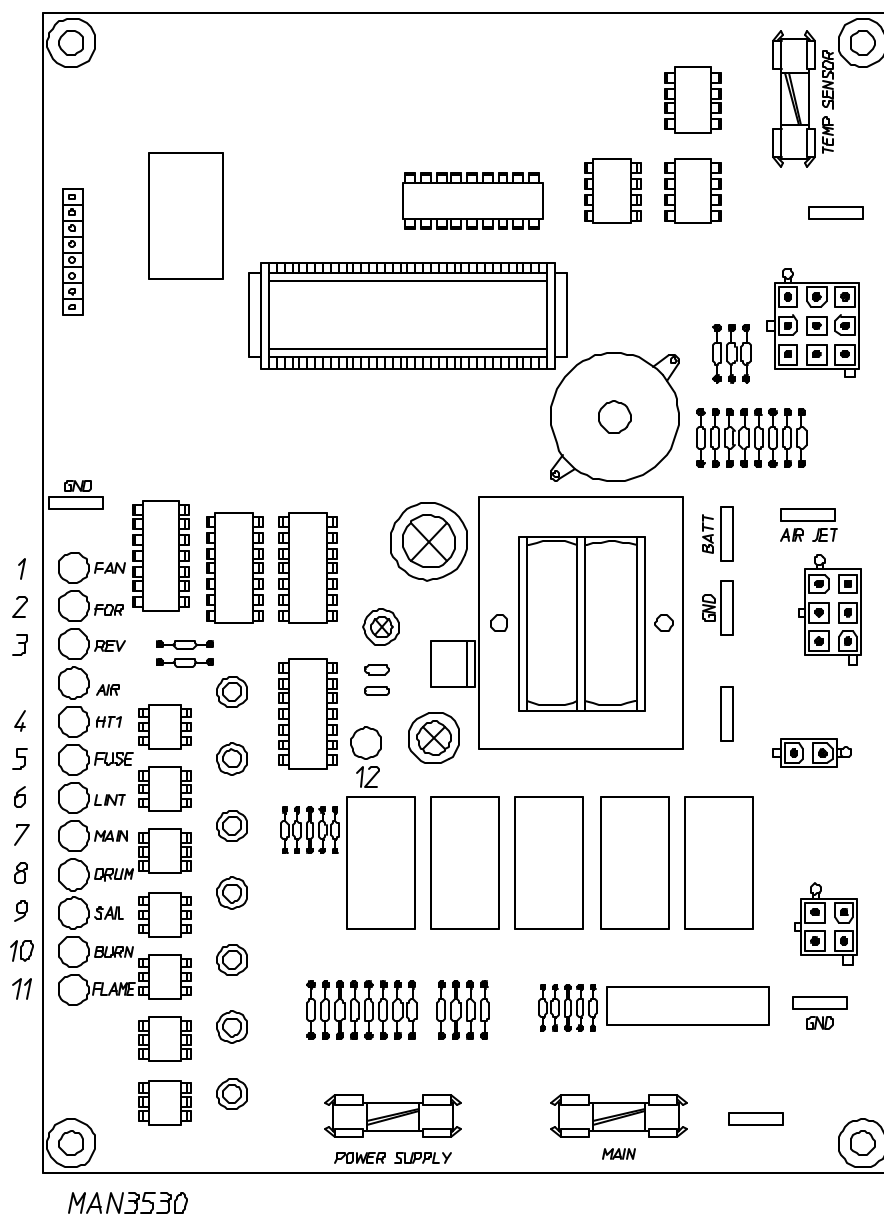
- c. Verify that the motor(s) and the heat indicator dots, in the microprocessor controller (computer) light emitting diode (L.E.D.) display are on. (Refer to the **illustration below.**)



MAN3528

1. Basket (tumbler) in Forward Mode (clockwise [CW]).
2. Basket (tumbler) in Reverse Mode (counterclockwise [CCW]) indicator (for reversing models only).
3. Heat on indicator.
4. On indicator (dryer is in operation mode).

Verify that the motor(s) heat and door indicator lights on the back side of the microprocessor controller (computer) board are lit. (Refer to the **illustration below.**)



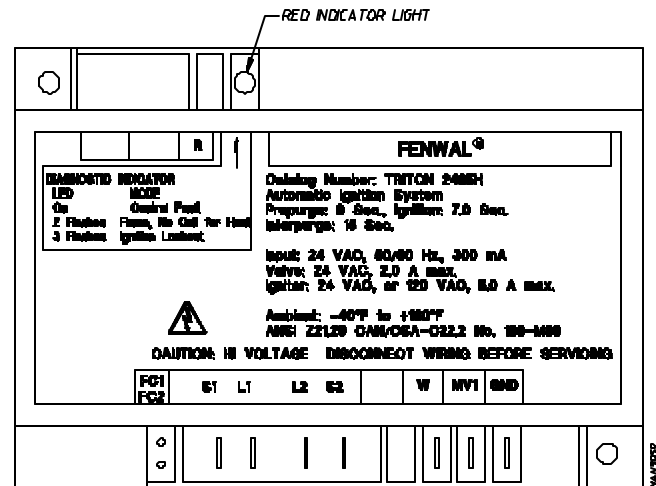
1. "FAN" (Blower) light emitting diode (L.E.D.) indicator
2. "FOR" (Forward) output L.E.D. indicator (for optional Reversing Models Only)
3. "Rev" (Reverse) output L.E.D. indicator (for optional Reversing Models Only)
4. "HT 1" (Heat) output L.E.D. indicator
5. "Fuse" (Main Fuse) input L.E.D. indicator
6. "Lint" (Lint Door) input L.E.D. indicator
7. "Main" (Main Door) input L.E.D. indicator
8. "Drum" (Basket [Tumbler] Hi-Limit) input L.E.D. indicator
9. "Sail" (Sail Switch) input L.E.D. indicator
10. "Burn" (Burner Hi-Limit) input L.E.D. indicator
11. "Flame" (Burner Control Failure) input L.E.D. indicator
12. "Power Supply" L.E.D. input indicator

- d. Open main door. The dryer **must stop** and **ALL** output indicator lights on the back side of the microprocessor controller (computer) board **must go out**. (Refer to the **illustration** on the previous page.)
- e. Try to restart the dryer with the main door open.
- f. The microprocessor controller (computer) board's light emitting diode (L.E.D.) display **must read "DOOR."**
- g. Close the main door and restart the dryer.
- h. Functional check of microprocessor controller (computer) board is complete.

2. Hot Surface Ignition (HSI) System

- a. Upon completing installation of the replacement HSI module, reestablish power to the dryer.
- b. The HSI module's "red" indicator light will light up for approximately 5-seconds (self check routine).

If the HSI module's "red" indicator light stays on or flashes continuously, then the HSI module is wired incorrectly or has failed.



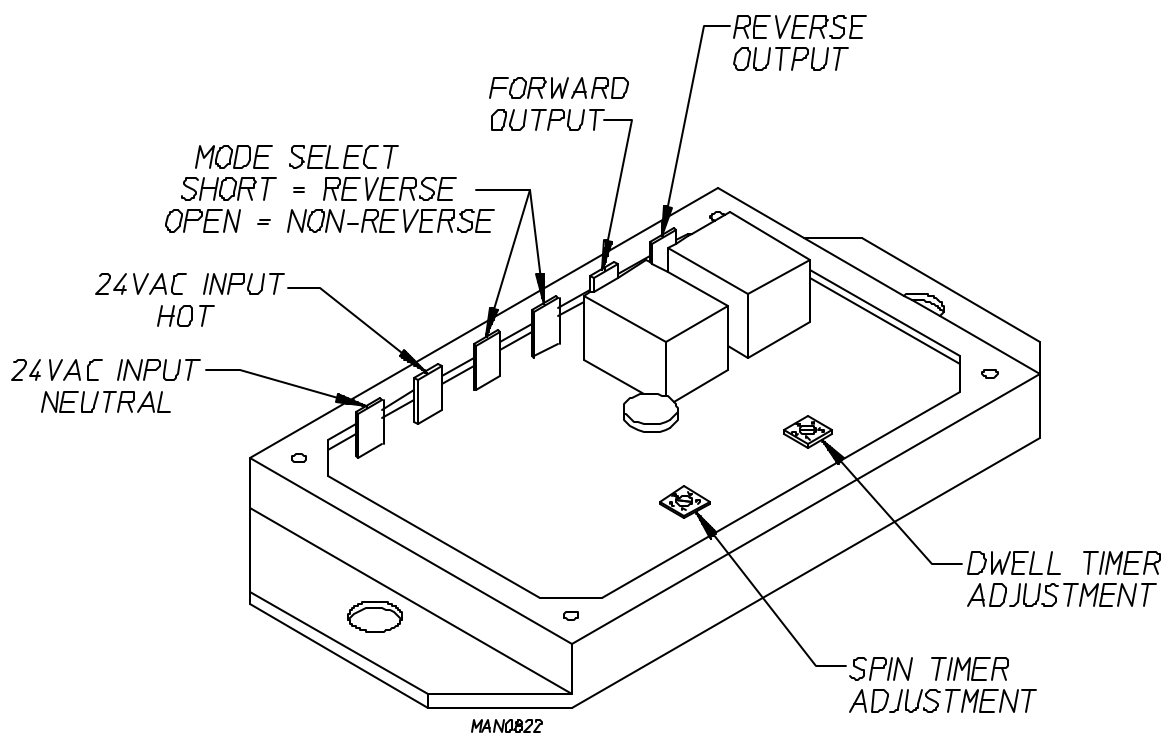
- c. Start the drying cycle.
- d. The Hot Surface Ignitor will turn on. After approximately 4-seconds the hot surface ignitor will shut off and the gas valve will be energized. ***The flame should now be established.***
- e. With the burner flame on, remove the flame sensor wire from the S2 terminal of the HSI module. ***The burner flame must shut off immediately.***
- f. Stop the drying cycle, with the flame sensor wire still removed, restart the drying cycle.
- g. The Hot Surface Ignitor will turn on and after approximately 4-seconds the hot surface ignitor will shut off. The gas valve will be energized and a burner flame **should be** evident for approximately 7-seconds and then shut off.
- h. The HSI module will attempt two (2) additional ignition trials after which the HSI module will lockout and the "red" indicator light ***will flash continuously.***
- i. Functional check of the HSI module is complete.
 - 1) Replace the flame sensor wire from the S2 terminal to the HSI module.

SECTION VIII

REVERSING TIMER SPIN/DWELL ADJUSTMENTS

Dual timer models with "reversing option" have an electric reversing timer in the electric service box which is located in the upper rear area of the dryer.

Both the dwell (stop) time and basket (tumbler) spin time are adjustable by mode selection switches located on the electronic timer (as noted in the **illustration below**).



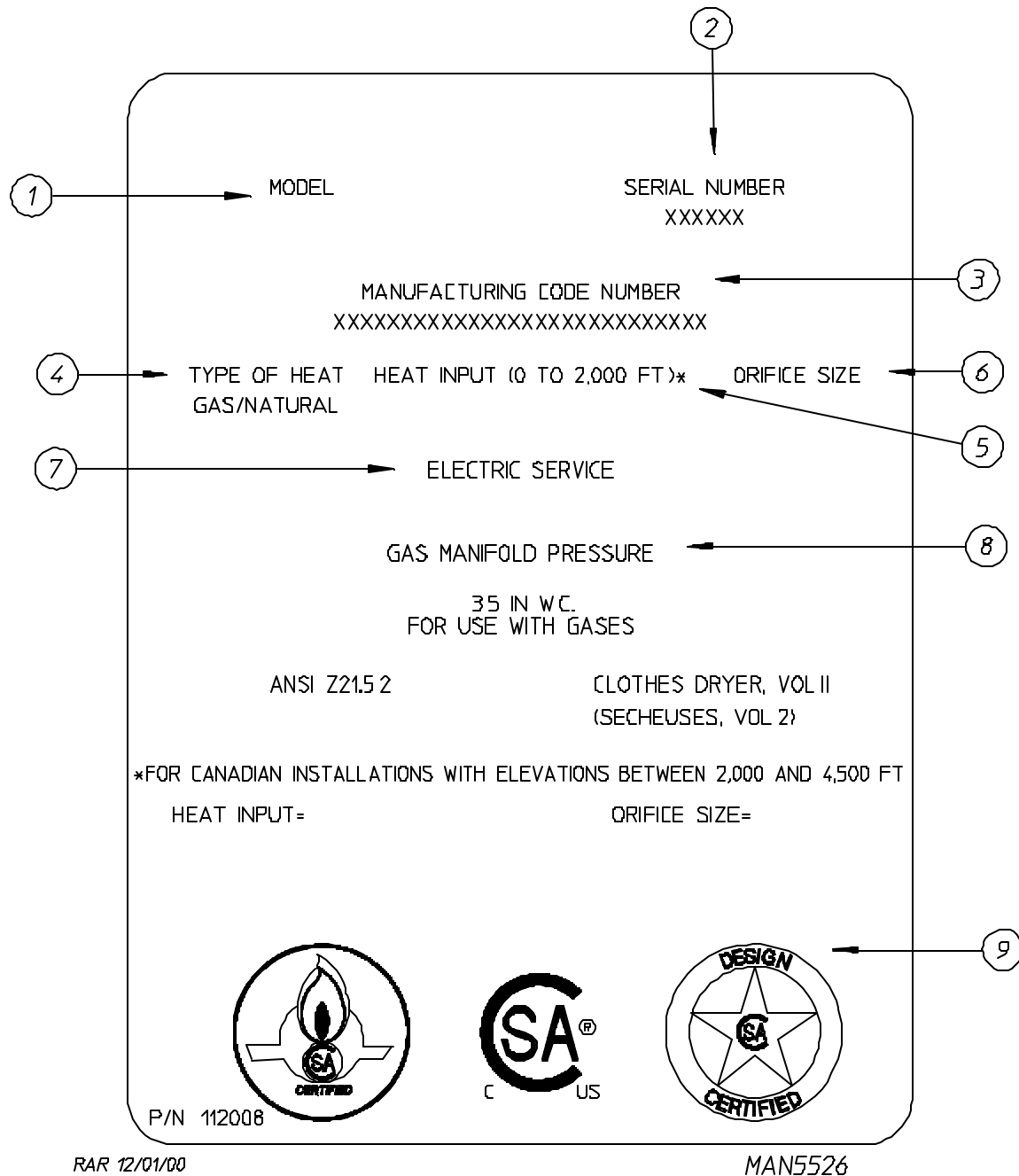
TIMING LEGEND					
SPIN TIME					
Adjustment Position Number	1	2	3	4	5
Time in Seconds*	30	60	90	120	150
DWELL (Stop) TIME					
Adjustment Position Number	1	2	3	4	5
Time in Seconds*	5	6.3	7.6	8.9	10.2
* Values shown are +/- 1 second.					

SECTION IX

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 **American Dryer Corporation**. This information is on the data label located on the backside of the upper control door. When contacting **American Dryer Corporation** 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 (natural 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.

SECTION X

BURNER and BASKET (TUMBLER)/LINT CHAMBER

MANUAL RESET HI-LIMIT INSTRUCTIONS

IMPORTANT

MANUAL RESET HI-LIMIT INSTRUCTIONS

FOR PHASE 6 MODELS (GAS MODELS ONLY)

This dryer was manufactured with a burner manual reset hi-limit and basket (tumbler)/lint chamber hi-limit thermostat which is monitored by the Phase 6 computer. If either manual reset thermostat is open prior to start of the drying cycle, the dryer will start momentarily and then shut down, the Phase 6 computer will display an error code with an audio indication. If the basket (tumbler)/lint chamber hi-limit thermostat is open, the display will read “dRUM SAFETY FAIL.” If the burner hi-limit thermostat is open, the display will read “bURNER SAFETY FAIL.”

If either manual reset hi-limit thermostat opens during a drying cycle, the display will show the applicable error code described above along with an audio indication. If the drum temperature is above 100° F (38° C), the dryer will continue to run with no heat for 3 minutes or until the drum temperature has flattened below 100° F (38° C). The CLEAR/STOP button on the Phase 6 keyboard (touch pad) **must be** pressed to clear the error condition. The open manual reset hi-limit thermostat **must be** reset “manually” prior to the start of the next cycle.

This hi-temperature condition may be caused due to a restricted exhaust, poor airflow, or improper burner operation.

The location of the burner hi-limit is on the right side of the burner box and the basket (tumbler) hi-limit is located in the lint chamber area.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

IMPORTANT

This dryer is equipped with a burner hi-limit and tumbler/lint chamber hi-limit thermostat which must be reset manually.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

ADC P/N: 114093

IMPORTANT

MANUAL RESET HI-LIMIT INSTRUCTIONS

FOR PHASE 6 MODELS

(ELECTRIC OR STEAM MODELS ONLY)

This dryer was manufactured with a manual reset basket (tumbler)/lint chamber hi-limit thermostat which is monitored by the Phase 6 computer. If the manual reset thermostat is open prior to start of the drying cycle, the dryer will start momentarily and then shut down, displaying “dRUM SAFETY FAIL” with an audio indication.

If the manual reset hi-limit thermostat opens during a drying cycle, the display will read “dRUM SAFETY FAIL” with an audio indication. If the drum temperature is above 100° F (38° C), the dryer will continue to run with no heat for 3 minutes or until the drum temperature has flattened below 100° F (38° C). The CLEAR/STOP button on the Phase 6 keyboard (touch pad) **must be** pressed to clear this “dRUM SAFETY FAIL” condition. The open manual reset hi-limit thermostat **must be** reset “manually” prior to the start of the next cycle.

This hi-temperature condition may be caused due to a restricted exhaust, poor airflow, or improper burner operation.

The basket (tumbler) manual reset hi-limit is locked in the chamber area.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

IMPORTANT

This dryer is equipped with a lint chamber hi-limit thermostat which must be reset manually.

WARNING: Discontinue power to dryer before attempting to reset hi-limit.

ADC P/N: 114501

