

EURO-35

Installation/Operator's 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 distributor from which the dryer was purchased or

American Dryer Corporation

88 Currant Road

Fall River MA 02720-4781

Telephone: +1 (508) 678-9000 / Fax: +1 (508) 678-9447

e-mail: techsupport@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/operator's 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. **EURO-35** _____

DISTRIBUTORS NAME _____

Serial Number(s) _____

Replacement parts can be obtained from your distributor 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 orders 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: Lors des opérations d'entretien des commandes étiqueter tous les fils avant de les déconnecter. Toute erreur de câblage peut être une source de danger et de panne.»

CAUTION

DRYER(S) 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 DRYER(S) 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 door switch or the heat circuit devices 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 and/or specified in the installation/operator's manual included with the dryer.

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

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

Table of Contents

SECTION I

IMPORTANT INFORMATION..... 3

- A. Receiving and Handling 3
- B. Safety Precautions 4

SECTION II

SPECIFICATIONS 6

- A. Specifications 6

SECTION III

INSTALLATION PROCEDURES 8

- A. Unpacking/Setting Up 8
- B. Location Requirements 9
- C. Dryer Enclosure Requirements 10
- D. Fresh Air Supply 11
- E. Exhaust Requirements 12
- F. Electrical Information..... 18
- G. Gas Information 26
- H. Steam Information 30
- I. Preparation For Operation/Start-Up 35
- J. Preoperational Tests 36
- K. Preoperational Instructions 37
- L. Shut Down Instructions 40

SECTION IV

SERVICE/PARTS INFORMATION 41

- A. Service 41
- B. Parts 41

SECTION V

WARRANTY INFORMATION 42

- A. Returning Warranty Card(s)..... 42
- B. Parts 42
- C. Returning Warranty Card(s)..... 42

SECTION VI	
ROUTINE MAINTENANCE	44
A. Cleaning	44
B. Adjustments	45
C. Lubrication	45
D. Lint Drawer Removal	46
 SECTION VII	
TECHNICAL INFORMATION	47
A. Data Label	47
 SECTION VIII	
REVERSING TIMER SPIN/DWELL ADJUSTMENTS.....	49
 SECTION IX	
PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT	
COMPONENTS	50

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 +1 (508) 678-9000.

IMPORTANT: The dryer <i>must be</i> transported and handled in an upright position at all 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 machine, 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 solvent will create a fire hazard.

WARNING: *DO NOT* use heat for drying articles that contain plastic, foam, sponge rubber, or similarly textured rubberlike materials. Drying in a heated 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 burner area, exhaust duct work, and area around the back of the dryer. The frequency of inspection and cleaning can best be determined from experience at each location.

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

8. A ground (earth) connection **must be** provided and installed in accordance with local or regional codes. In the absence of these codes, grounding **must be** suitable for the appliance category in accordance with national installation regulations of the country of destination.

NOTE: Failure to do so will VOID THE WARRANTY.

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

WARNING: PERSONAL INJURY or FIRE COULD RESULT.

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 complete can create a fire hazard.

12. **DO NOT** operate steam dryers with more than 125 PSI (8.62 bars) steam pressure. Excessive steam pressure can damage 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.**

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.

SECTION II

SPECIFICATIONS

A. SPECIFICATIONS

MAXIMUM CAPACITY (DRY WEIGHT)		75 lbs.	34 kg
BASKET (TUMBLER) DIAMETER		37"	94 cm
BASKET (TUMBLER) DEPTH		36"	91.5 cm
BASKET (TUMBLER) MOTOR		1 HP*	.746 kw
DOOR OPENING (DIAMETER)		21-1/2"	54.61 cm
BASKET (TUMBLER) VOLUME		22.4 cu. ft.	.634 cu.m.
DRYERS PER 20'/40' CONTAINER		10/20	
DRYERS PER 6m/12m CONTAINER		10/20	
DRYERS PER 45'/48' TRUCK		24/24	
DRYERS PER 14m/15m TRUCK		24/24	
Gas	VOLTAGE AVAILABLE	120-460v 1ø-3ø 3, 4w 50/60 Hz	
	APPROX. WEIGHT (UNCRATED)	833 lbs.	377.8 kg
	APPROX. WEIGHT (CRATED)	883 lbs.	400.5 kg
	HEAT INPUT	200,000 btuh	50,400 kcal/hr
	AIRFLOW	1,200 cfm	33.98cmm
	INLET PIPE CONNECTION	3/4" F.P.T.**	--
Electric	OVEN SIZE		
	KW	BTUH (60 Hz)	KCAL/HR (50 Hz)
	30	102,390	25,800
	33	--	28,370
	36	122,870	30,950
	40	--	34,390
	APPLIED VOLTAGE/PHASE/APPROX. AMP DRAW***		
	KW	208/1ø 60 Hz 50 Hz	240/1ø 50/60 Hz
	30	-- --	--
	33	-- --	--
*** Steam	VOLTAGE AVAILABLE		
	120-460v 1ø - 3ø 3, 4w 50/60 Hz		
	APPROX. WEIGHT (UNCRATED)		864 lbs.
	APPROX. WEIGHT (CRATED)		914 lbs.
	AIRFLOW		1350 cfm
	COMPRESSED AIR VOLUME		.75 cfh
	AIR CONNECTION		1/8" F.P.T.
	STEAM CONSUMPTION		BOILER HP NORMAL LOAD
	238.7 lbs/hr	108.3 kg/hr	7
	OPERATING PRESSURE		SUPPLY CONNECTION**
	125 psi max	8.6 bar	1"

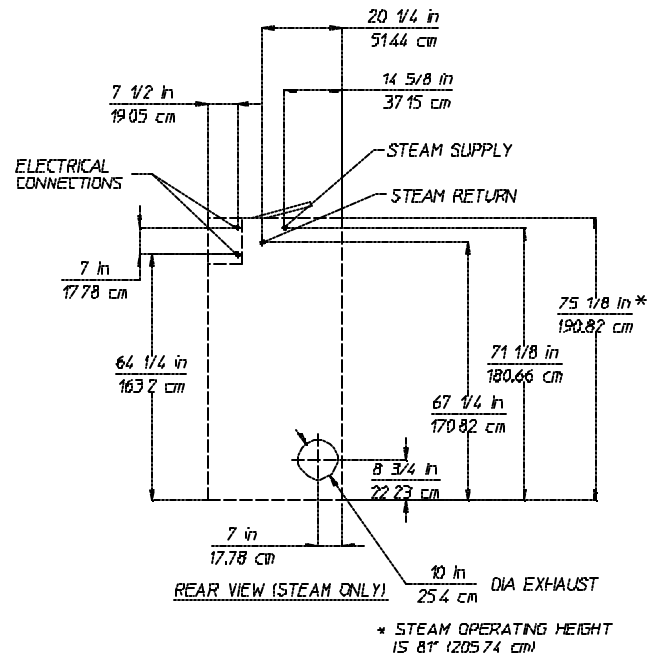
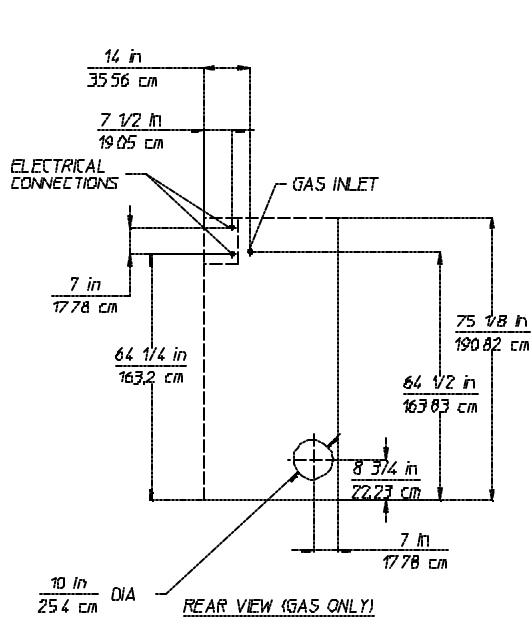
Shaded areas are in metric equivalents

- * EURO-35 50 Hz 1-phase (1ø) non-reversing dryers use a 3/4 HP motor. **ALL** EURO-35 reversing dryers are supplied with two 3-phase motors standard: a 1 HP blower motor and a 1/2 HP drive motor.
- ** Size of piping to dryer varies with installation conditions. Contact factory for assistance.
- *** Contact factory for information not listed, 3-phase (3ø) figures shown are for 3-wire service.
- **** Specify air-operated or electromechanical steam damper system. Air-operated steam damper system **must be** provided with clean, dry and regulated 80 psi +/-10 psi (552 kPa +/- 69 kPa) air supply.

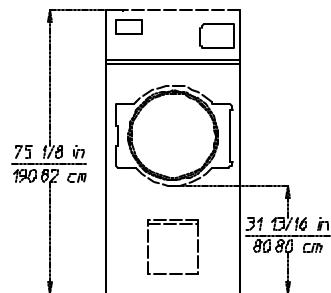
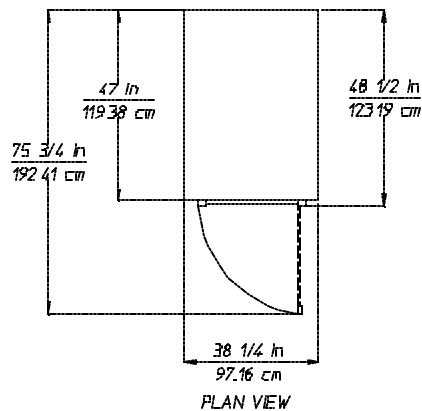
NOTE: ADC reserves the right to make changes in specifications at any time without notice or obligation.

Specifications

EURO-35

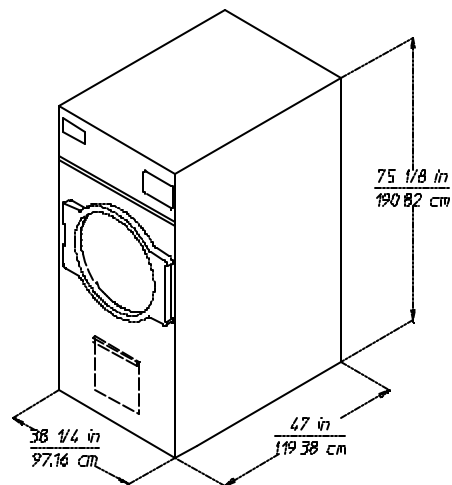


SPEC331



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FRONT VIEW



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

SECTION III

INSTALLATION PROCEDURES

Installation **should be** performed by competent technicians in accordance with local and national regulations or codes of the country of destination.

IMPORTANT: If connection to this appliance is made with flexible hose it ***must be*** suitable for the appliance category in accordance with national installation regulations of the country of destination, and if in doubt the installer must contact the supplier. The manufacturer of this appliance ***DOES NOT*** recommend the use of flexible gas supply line/hose.

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.

NOTE: For OPL dryer models equipped with locks, the lock used is a dummy lock and no key is supplied or needed. The lock can be turned with any key, a screwdriver, a small coin, or any small sharp object. For coin-operated dryers, the MK-100 (master key for both the Control Door and Lint Door) ***should be*** made accessible because it will be needed throughout various phases in the installation of the dryer.

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.

1. Leveling Dryer

The dryer is equipped with four (4) leveling legs, one 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.

B. LOCATION REQUIREMENTS

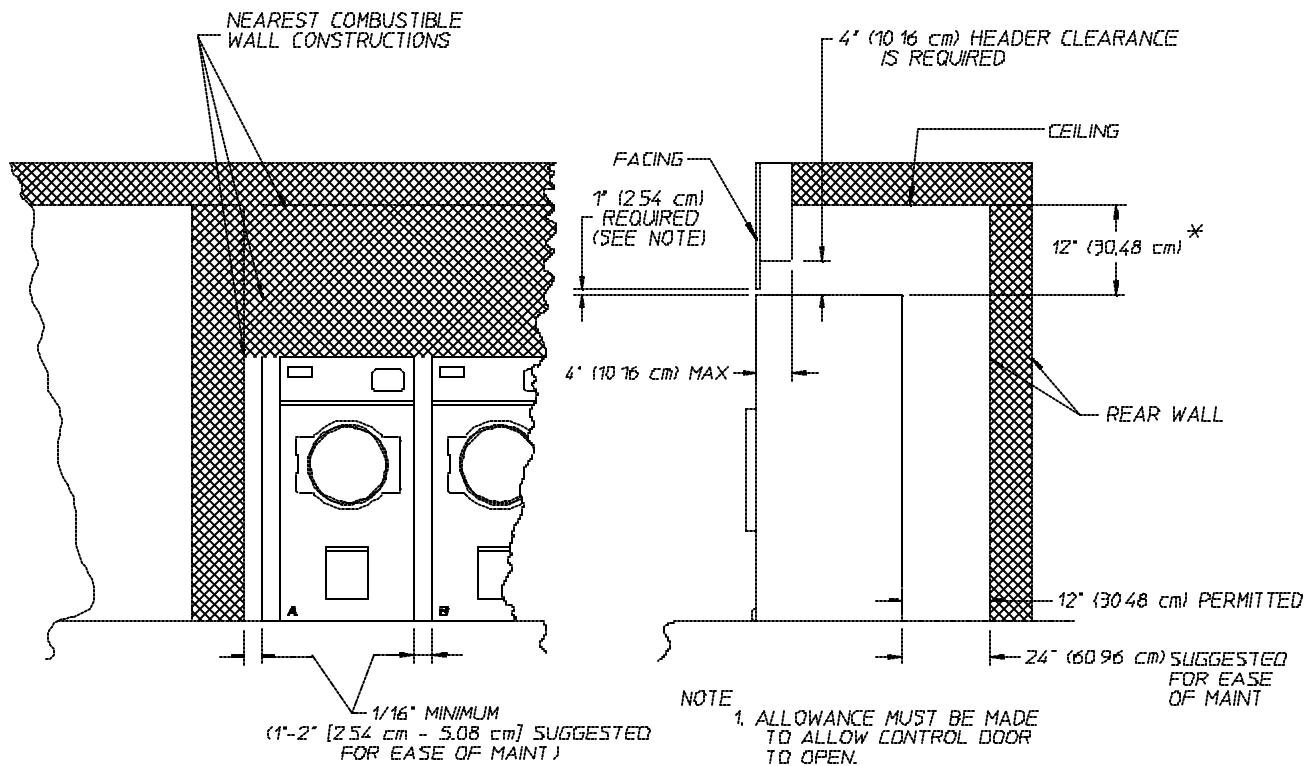
Before installing the dryer, be sure the location conforms to local and national codes and ordinances.

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

C. DRYER ENCLOSURE REQUIREMENTS

Bulkheads and partitions **should be** made of noncombustible materials and **must be** located a minimum of twelve (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: Allowance **must be** made for opening the control door.

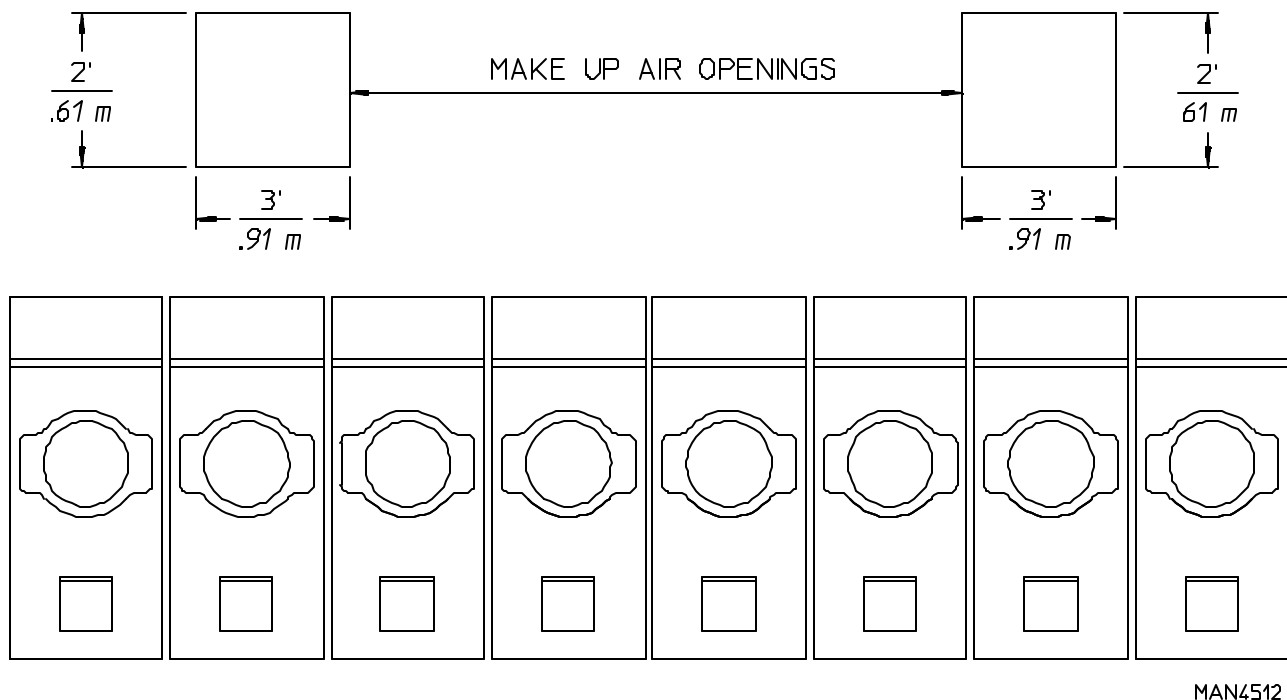
Dryers may be positioned side wall to side wall. However, a 1/16" (0.16 cm) minimum allowance **must be** made for the opening and closing of the control doors. It is suggested that the dryer be positioned about 2 feet (0.61 meters) away from the nearest obstruction for ease of installation, maintenance, 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.

D. FRESH AIR SUPPLY

The EURO-35 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 1-1/2 square feet (.14 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 openings 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.

EXAMPLE: For a bank of eight (8) dryers, two (2) unrestricted openings measuring 2 feet by 3 feet - .61 meters by .91 meters - (6 square feet [.56 square meters] is acceptable).



MAN4512

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 motors and other dryer components.

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

E. EXHAUST REQUIREMENTS

Exhaust duct work **should be** designed and installed by a qualified professional. Improperly sized duct work will create excessive back pressure which results in slow drying, increased use of energy, and shutdown of the burner by the airflow (sail) switch, burner hi-limit, or lint chamber hi-heat protector thermostat.

Wherever possible, it is suggested that a separate (single) exhaust duct be provided for each dryer.

CAUTION: IMPROPERLY SIZED OR INSTALLED EXHAUST DUCT WORK CAN CREATE A POTENTIAL FIRE HAZARD.

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

The exhaust duct work **should be** laid out in such a way that the duct work travels as directly as possible to the outdoors with as few turns as possible. The shape of the duct work is not critical so long as the minimum cross section area is provided. Single or independent dryer venting is recommended.

It is suggested that the use of 90° turns be avoided; use 30° or 45° angles instead.

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

IMPORTANT: When connecting duct work to the dryer exhaust duct, be sure that when screws are used they ***DO NOT*** restrict the operation (both opening and closing) of the damper.

NOTE: When the exhaust duct passes through a wall, ceiling, or roof made of combustible materials, the opening must be 2-inches (5 cm) larger (all the way around) than the duct. The duct ***must be*** centered within this opening.

To protect the outside end of horizontal duct work from the weather, a 90° elbow bent downward **should be** installed where the exhaust exits the building. If the duct work 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 (i.e., roof or ground level).

IMPORTANT: *DO NOT* use screens or caps on the outside of opening of exhaust duct work.

IMPORTANT: Exhaust back pressure measured by a manometer at the dryer exhaust duct area ***must not*** exceed 0.3 inches of water column (0.75 mbar).

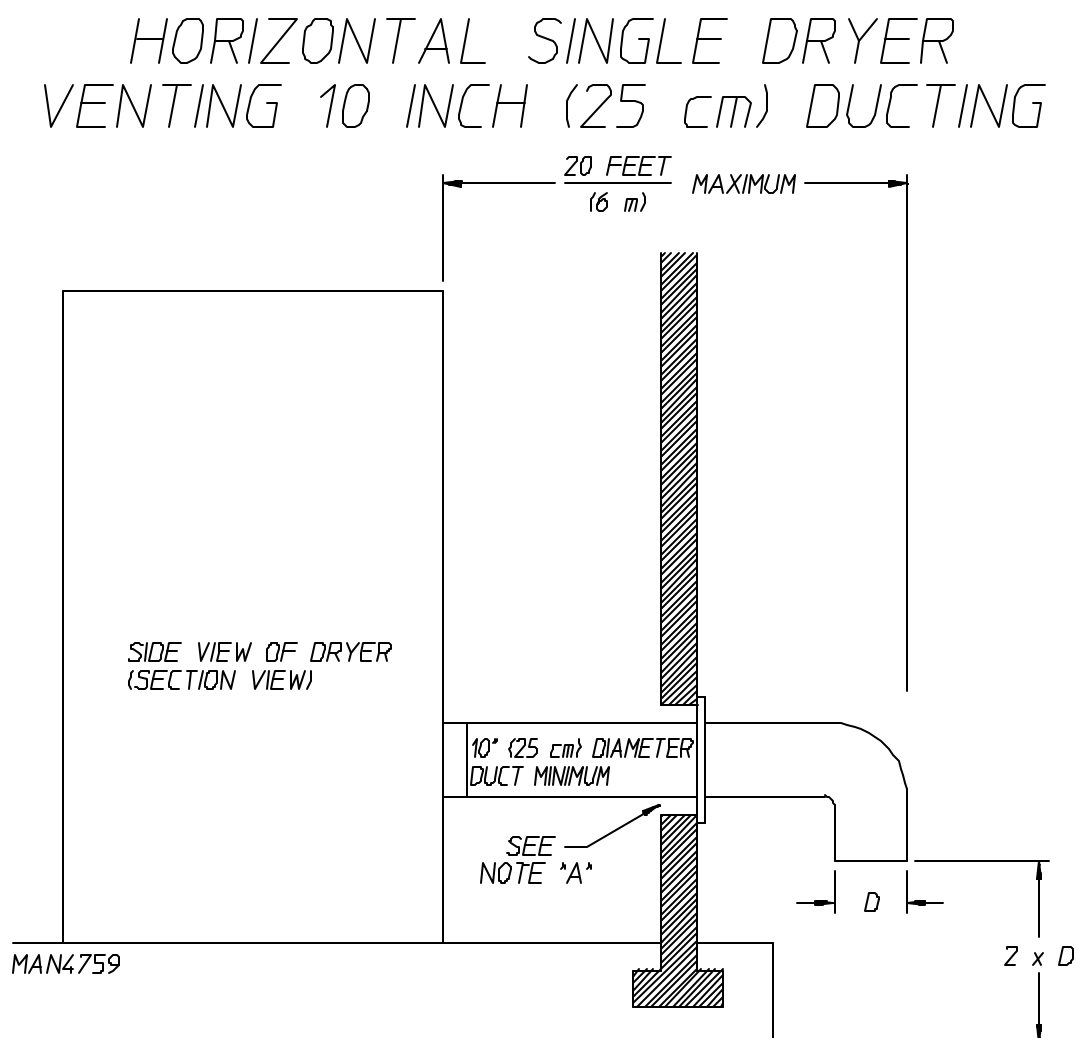
SINGLE DRYER VENTING

IMPORTANT: For exhaust duct runs up to 20 feet (6 meters), a minimum size of 10-inches (25 cm) *must be* used.

HORIZONTAL VENTING

When a single 10-inch (25 cm) horizontal vent is used, the duct work to the outlet **cannot** exceed 20 feet (6 m) (refer to **Illus. A below**). This calculation of 20 feet (6 m) compensates or allows for the use of a maximum of only one (1) elbow (which is the outside outlet protection).

Illus. A

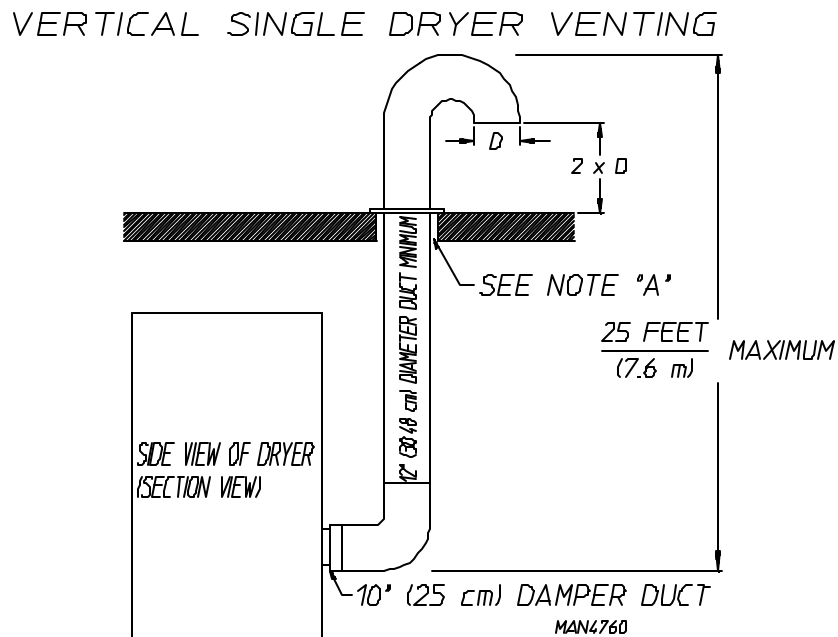


NOTE A OPENING MUST BE TWO (2) INCHES (5 cm) LARGER THAN THE DUCT (ALL THE WAY AROUND)
THE DUCT MUST BE CENTERED WITHIN THIS OPENING.

VERTICAL VENTING

When vertical single 12-inch (30.48 cm) venting is used (refer to **Illus. B below**), the duct work from the dryer to the outside outlet **cannot** exceed 25 feet (7.6 meters) (refer to **Illus. B below**). This calculation compensates for the use of a maximum of three (3) elbows including the two (2) elbows creating the 180° (turned downward) outside outlet.

Illus. B



NOTE A OPENING MUST BE TWO (2) INCHES (5 cm) LARGER THAN THE DUCT (ALL THE WAY AROUND)
THE DUCT MUST BE CENTERED WITHIN THIS OPENING

If the length of the duct run or quantity of elbows used exceeds the above noted specifications, the cross section area of the duct work **must be** increased in proportion to the number of elbows or duct run added.

IMPORTANT: Minimum duct size for a dryer that is vented horizontally is 10-inches (25.4 cm) for a round duct (or different cross section with an area of 80 square inches [516.12 square centimeters]).

IMPORTANT: Minimum duct size for a dryer that is vented vertically is 12-inches (30.48 cm) for a round duct (or different cross section with an area of 115 square inches [741.93 square centimeters]).

IMPORTANT: Never reduce the duct size anywhere downstream of the dryer.

IMPORTANT: For extended duct work runs, the cross section area of the duct can only be increased to an extent. For extended duct work runs, a professional HVAC firm *should be* consulted for proper venting information.

MULTIPLE DRYER (Common) VENTING

If it is not feasible to provide separate exhaust ducts for each dryer, ducts for individual dryers may be channeled into a common main duct. Each dryer is provided with a back draft damper. The individual ducts should enter the bottom or side of the main duct at an angle not more than 45° in the direction of the airflow.

The main common duct may be any shape so long as the minimum cross-sectional area is provided. The main duct should be tapered with the diameter increasing before each individual 10-inch (25 cm) duct is added (refer to **Illus. C** for Horizontal Venting and **Illus D** for Vertical Venting).

IMPORTANT: No more than four (4) dryers maximum *should be* connected to one (1) main common duct with a vertical run.

NOTE: Distance between dryer single ducts being connected to the main common duct *must be* a minimum of 38-1/4" - 97.15 cm - (dryer width).

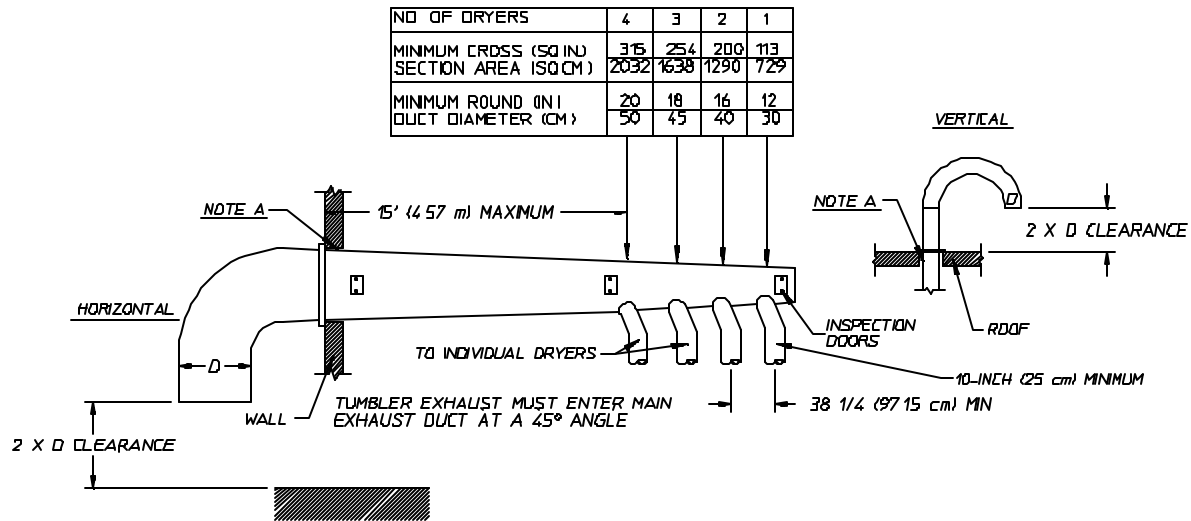
Duct work *should be* laid out in such a manner where allowances are made at rear area of the dryer for removal of rear service panels or guards.

The **illustrations** on **page 16** show the minimum cross-section area for multiple dryer venting. These figures **must be** increased in proportion if the main duct run from the last dryer to where it exhausts has numerous elbows or is unusually long.

IMPORTANT: For extended duct work runs, the cross-section area of the duct can only be increased to an extent. For extended duct work runs, a professional HVAC firm *should be* consulted for proper venting information.

Refer to **page 16** for Multiple Dryer Horizontal Venting and Vertical Venting examples/illustrations.

**MULTIPLE DRYER VENTING (GAS/ELECTRIC) WITH 10" (25 cm) DIAMETER
(1200 CFM) EXHAUST CONNECTIONS AT COMMON DUCT**



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

FORMULAS TO CALCULATE DUCTING CROSS SECTIONAL AREA

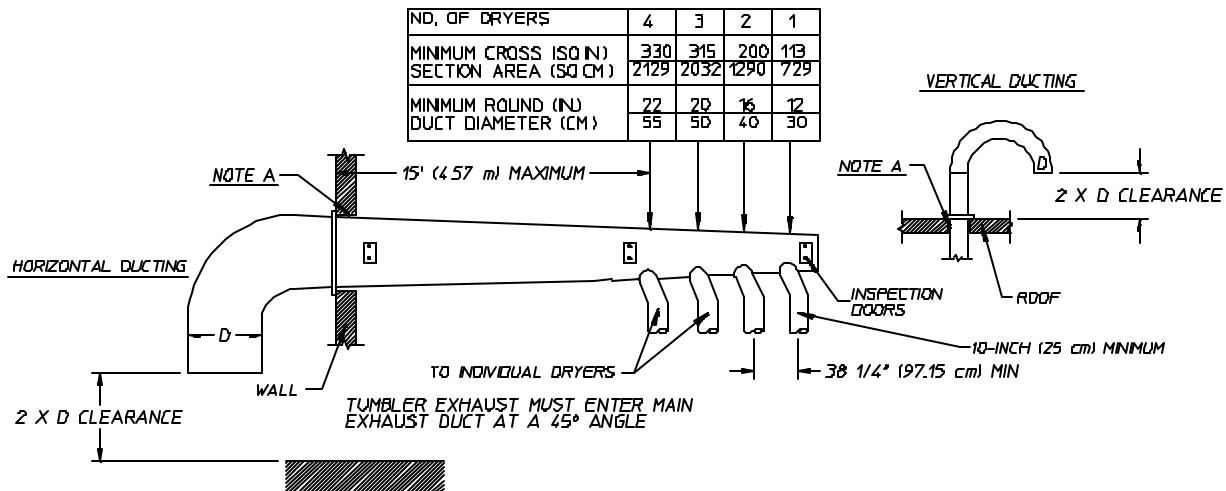
CROSS SECTIONAL AREA OF A ROUND DUCT = $785 \times D^2$ WHERE D = DIAMETER OF THE DUCT

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

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

MAN4761

**MULTIPLE DRYER VENTING (STEAM)
WITH 10" (25 cm) DIAMETER (1350 CFM) EXHAUST CONNECTIONS AT COMMON DUCT**



**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 = $785 \times D^2$ 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 TWO (2) INCHES (5.08 cm) LARGER THAN DUCT (ALL THE WAY AROUND). THE DUCT MUST BE CENTERED WITHIN THIS OPENING

MAN4762

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. Duct work **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 size of the ductwork~~ **must be** a minimum of 10-inches (25.4 cm) for horizontal runs and 12-inches (30.48 cm) for vertical runs (refer to previous page **[page 16]**).
6. The inside of the duct work **should be** as smooth as possible with no projections from sheet metal screws.
7. Ducts added **should overlap** the duct to which it is to be connected.
8. **ALL** ducts **should be** taped to prevent moisture and lint from escaping into the building.
9. Inspection or clean out doors **should be** installed throughout strategic points in the duct work for periodic inspection and cleaning.
10. Wherever the duct passes through combustible materials, the opening **must be** 2 inches (5.08 cm) larger (all the way around) than the duct. The duct **must be** centered within this opening.
11. The outside of the duct work **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.
12. **DO NOT** use screens or caps on the outside opening of the exhaust duct work.
13. Exhaust back pressure measured by a manometer at the dryer exhaust duct area **must not** exceed 0.3 inches of water column (W.C.) - 0.75 mbar.
14. Exhaust duct work outlets **should not be** located in an area directly where make-up air openings are located.

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

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 national regulations or codes.

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 and Steam Models ONLY

EURO-35 (GAS) EURO-35 (STEAM)

IMPORTANT: 208 VAC and 230/240 VAC ARE NOT THE SAME. When ordering, specify *exact voltage*.

NOTES: A. Fuse ratings are dual-element, time-delay, current limiting, class RK1 or RK5 **ONLY**.
B. Circuit breakers are thermal magnetic (industrial) type **ONLY**. For others, calculate/verify correct breaker size according to appliance amp draw rating and type of breaker used.
C. Circuit breakers for 3Ø dryers **must be** 3-pole type.

SERVICE VOLTAGE	PHASE	WIRE SERVICE	APPROX. AMP DRAW	MINIMUM WIRE SIZE*	FUSING Dual Element Time Delay	CIRCUIT BREAKER
120	1Ø	2	13	#10	20	20
208	1Ø	2	8	#14	12	15
208	3Ø	3/4	5	#14	8	15
230	1Ø	2	7	#14	12	15
230	3Ø	3/4	5	#14	8	15
240	1Ø	2	7	#14	12	15
380/400	3Ø	3/4	3	#14	5	15
416	3Ø	3/4	3	#14	5	15
460	3Ø	3/4	3	#14	5	15

* AWG Stranded Wire ... for individual lengths less than 100 feet (30.48 m).

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 back side of the upper/top 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.

b. Electric Models ONLY

EURO-35 (ELECTRIC)

IMPORTANT: 208 VAC and 240 VAC ARE NOT THE SAME. When ordering, specify *exact voltage*.

NOTE:

- A. Fuse ratings are dual-element, time-delay, current limiting, class RK1 or RK5 **ONLY**.
- B. Circuit breakers are thermal magnetic (industrial) type **ONLY**. For others, calculate/verify correct breaker size according to appliance amp draw rating and type of breaker used.
- C. Circuit breakers for 3Ø dryers **must be** 3-pole type.

APPLIED VOLTAGE/PHASE

Kw	APPROX. AMP DRAW	208/1Ø	240/1Ø	208/3Ø	240/3Ø	380/3Ø	416/3Ø	460/3Ø
30		--	--	88	77	--	45	41
33		--	--	---	--	53	--	--
36		--	--	104	92	--	53	48
40		--	--	--	--	--	59	--

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 back side of the upper/top control door. In the case of 208 VAC or 240 VAC, the supply voltage ***must match*** the electric service specifications of the data label exactly.

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

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

NOTE: 3-Phase (3Ø) figures shown are for 3-wire service **ONLY**.

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 local or regional codes. In the absence of these codes, grounding **must be** suitable for the appliance category in accordance with national installations of the country of destination.

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

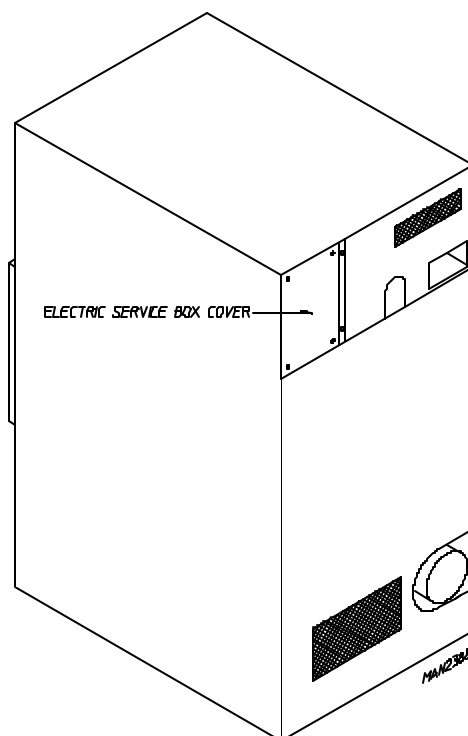
NOTE: A wiring diagram is located in the front electrical control box for connection data.

a. Gas and Steam Models ONLY

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

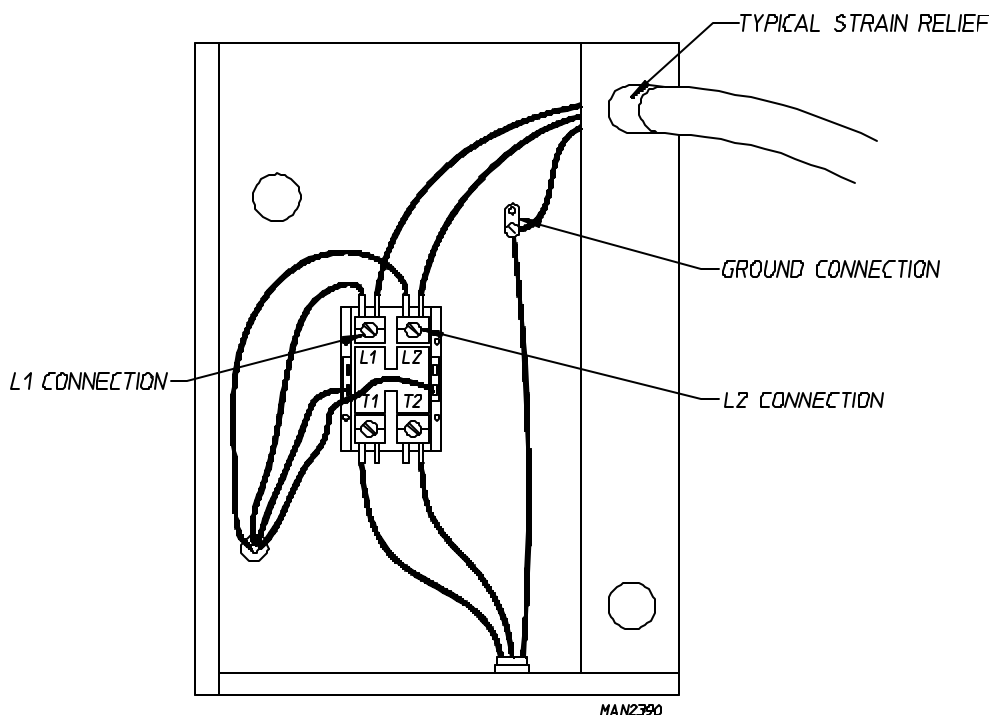
1) Single-Phase (1Ø) Wiring Connections/Hookup

The electrical input connections on **ALL** single-phase (1Ø) gas dryers 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 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 (for Non-Reversing Models Only)

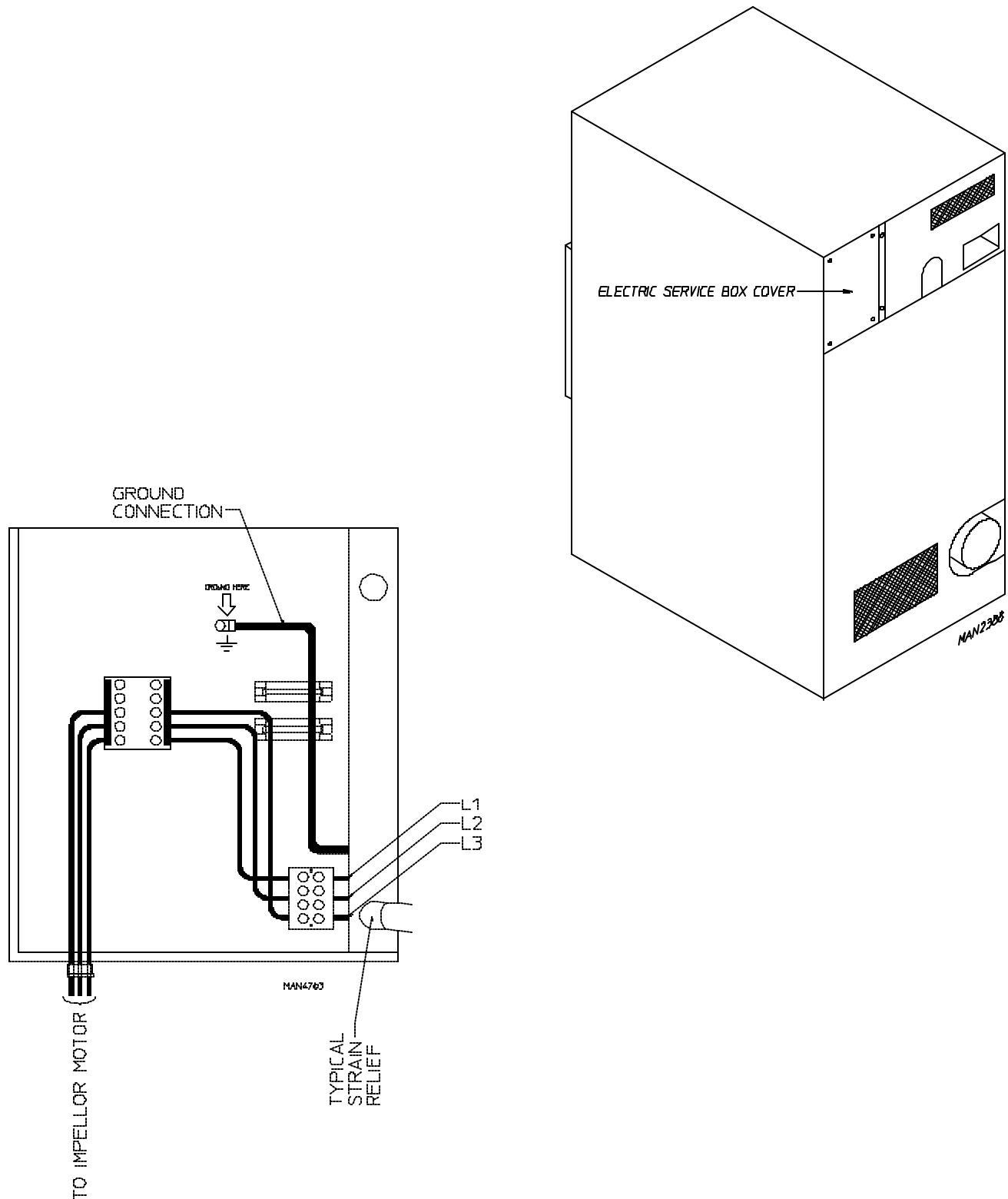
The electrical connections on **ALL** 3-phase (3Ø) gas and steam dryers are made into the rear service box located at the upper left area of the dryer. Electrical connections for electrically heated dryers are made in the electric oven area located at the upper rear area of the dryer.

NOTE: A CIRCUIT SERVING 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 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**.



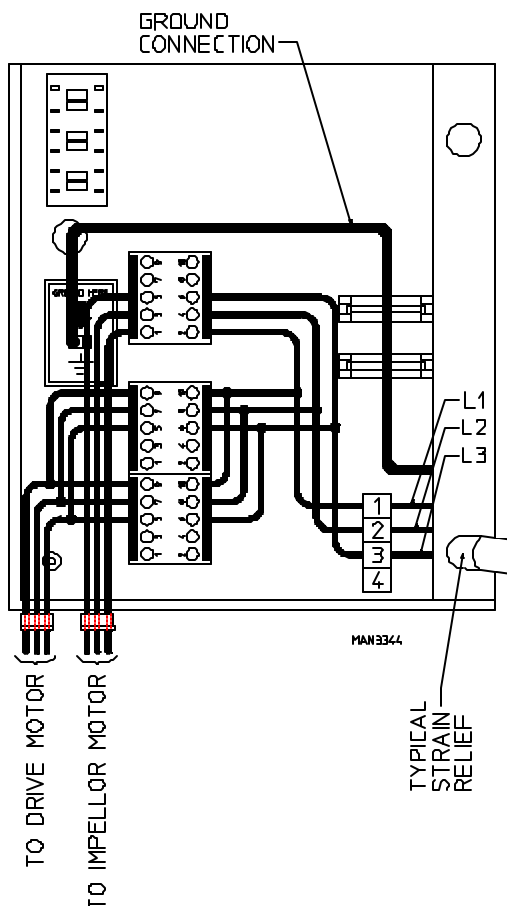
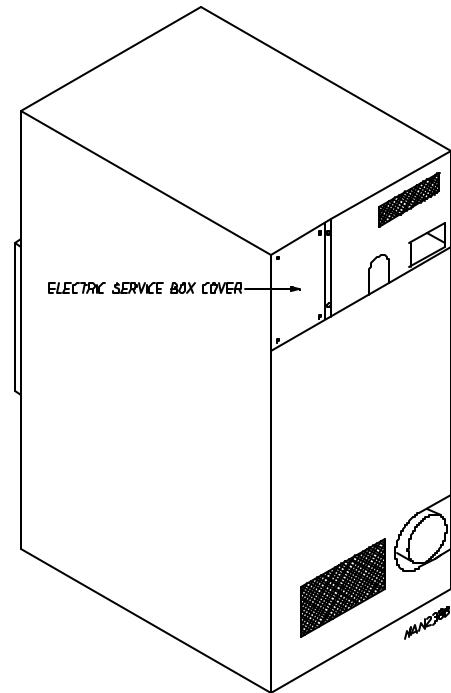
3) 3-Phase (3 ϕ) Wiring Connections/Hookup (for Reversing Models Only)

The electrical connections on **ALL** 3-phase (3 ϕ) gas dryers 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 serving each dryer *must be* provided.

If local codes permit, power to a gas or steam dryer can be made by the use of flexible 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 three phase (3 ϕ) dryer.



For gas dryers 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

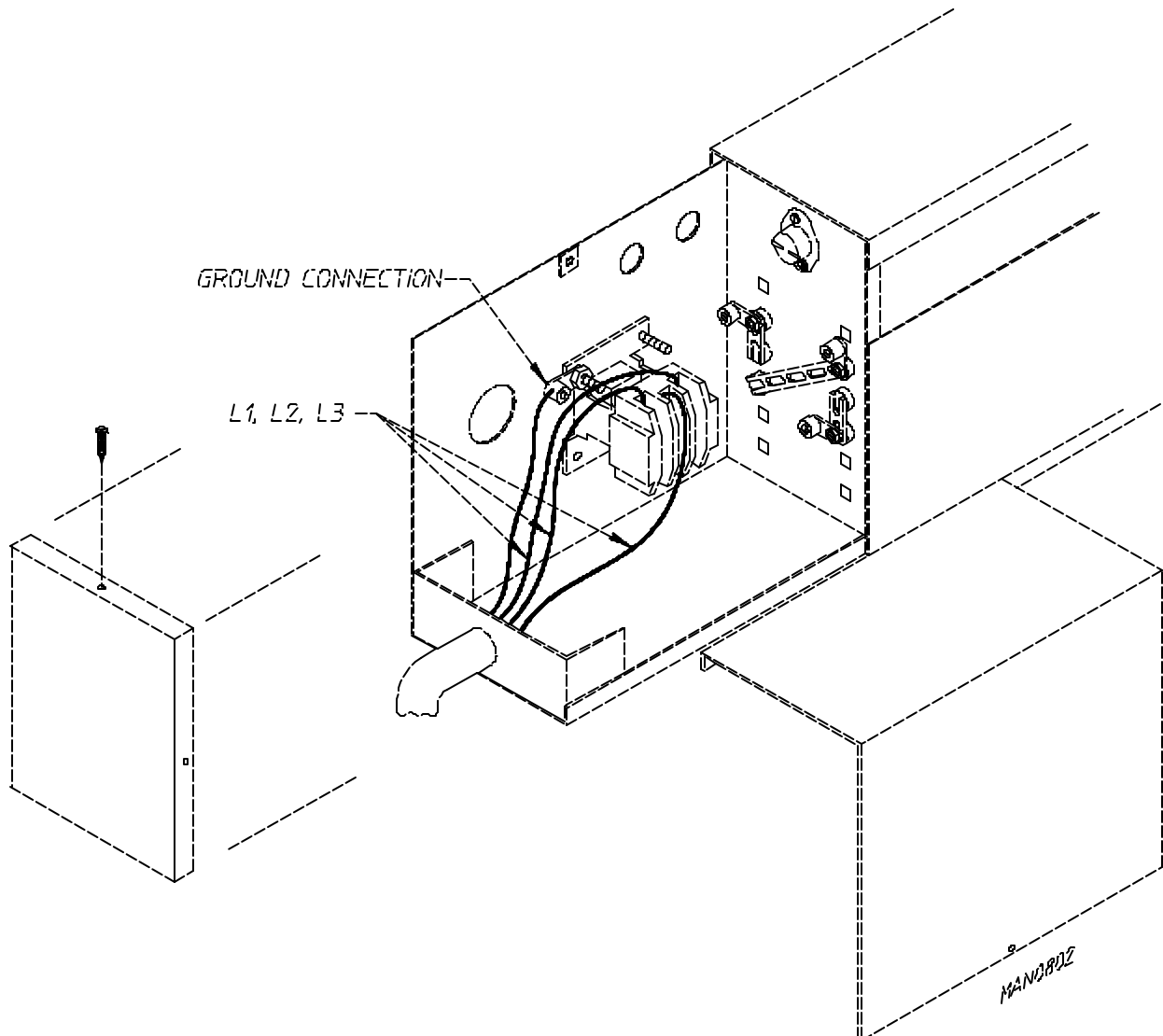
The only electrical input connections to the dryer are the 3-phase (3 ϕ) power leads (L1, L2, L3, and sometimes neutral) and ground. Single-phase (1 ϕ) power for the control circuit and for any single-phase (1 ϕ) motors (if present) is done internally to the dryer by the factory at the oven contactor. 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 dryers data label.

IMPORTANT: A SEPARATE CIRCUIT SERVING 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 national regulations or codes of the country of destination.

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 and its individual shut-off 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 shut-off valve during any pressure test of the gas supply piping 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** 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 behind the right control box door. If this information does not agree with the type of gas available, **DO NOT operate the dryer**. Contact the distributor who sold the dryer or the **ADC** factory.

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

The input ratings shown on the dryer data label are for elevations up to 2,000 feet (610 meters), unless elevation requirements of over 2,000 feet (610 meters) were specified at the time the dryer order was placed with the factory. The adjustment or conversion of dryers in the field for elevations over 2,000 feet (610 meters) are made by changing each burner orifice. If this conversion is necessary, contact the distributor 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 ----- 3/4" inch N.P.T.

Inlet supply size ----- 3/4" inch N.P.T. (minimum)

Heat input (per dryer) ---- 200,000 Btu/Hr (50,400 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 water column (W.C.) - 29.9 mb - 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 water column (26.1 mb). There is no regulator or regulation provided in an L.P. dryer. The 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	
EURO-35	200,000 Btu/Hr	50,400	4	#29	140820	4	#47	140805	490453

Shaded area is stated in metric equivalent

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

Natural Gas #29 = .1360" (3.454mm)

Liquid Propane Gas .. #47 = .0785" (1.994mm)

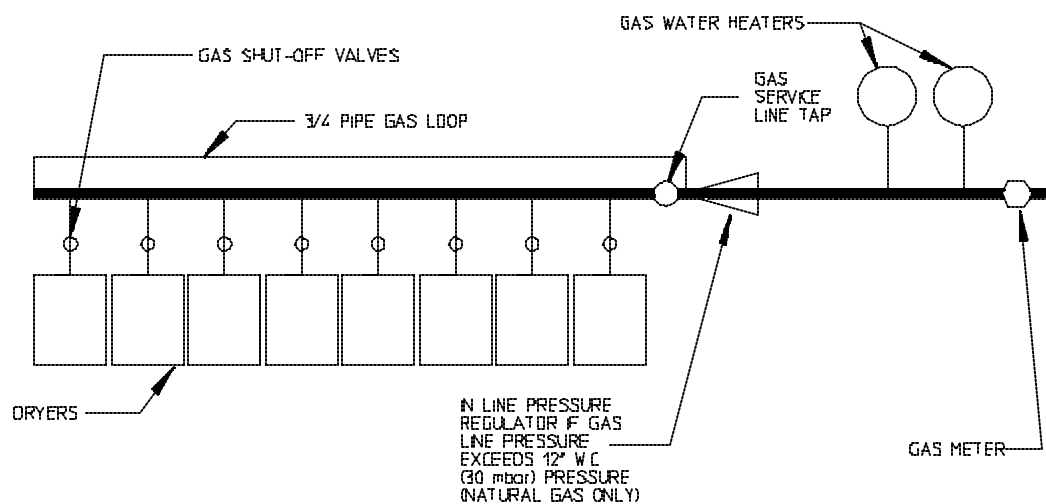
3. Piping Connections

ALL components/materials **must conform** to any National Gas Code specifications. It is important that gas pressure regulators meet applicable pressure requirements and that gas meters be rated for the total amount of **ALL** the appliance BTU's being supplied.

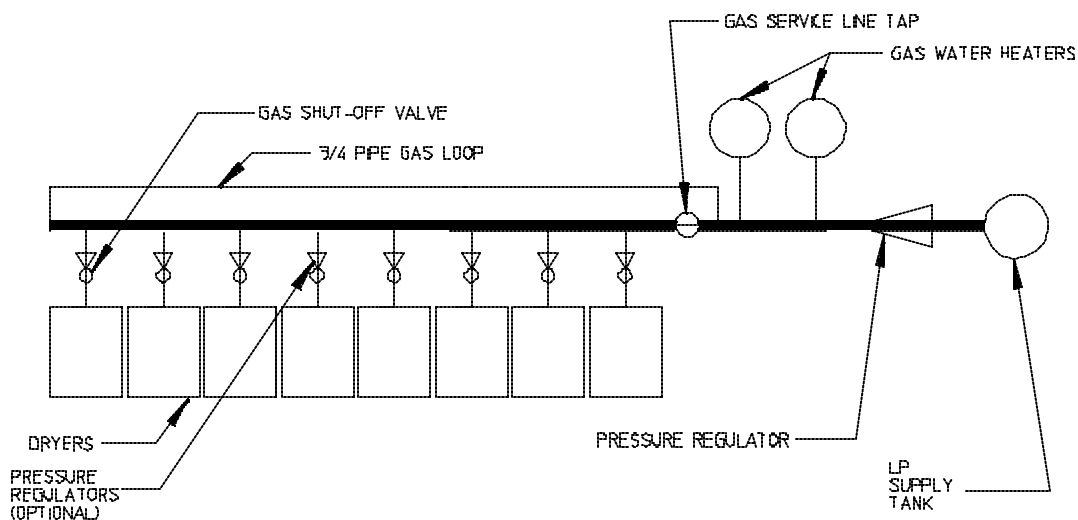
The dryer is provided with a 3/4" N.P.T. inlet pipe connection extending out the back area of the burner box. The minimum pipe size (supply line) to the dryer is 3/4" N.P.T. For ease in servicing, the gas supply line of each dryer **must have** its own shut-off valve.

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. (liquid propane) gas, the supply tank, other gas-operated appliances on the same line, etc. Specific information regarding supply line size **should be** determined by the gas supplier.

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



TYPICAL NATURAL GAS INSTALLATION



TYPICAL L.P. GAS INSTALLATION

HAN510

Consistent gas pressure is essential at **ALL** gas connections. It is recommended that a 3/4-inch pipe gas loop be installed in the supply line serving 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 of water column (30 mbar) pressure. Refer to the illustrations on the **previous page (page 28)**.

NOTE: A water column test pressure of 3.5 inches (8.7 mbar) for natural gas and 10.5 inches (26.2 mbar) for L.P. (liquid propane) 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 any National Gas Code specifications. It is important that gas pressure regulators meet applicable pressure requirements and that gas meters be rated for the total amount of **ALL** the appliance BTU's being supplied.

IMPORTANT: The dryer and its individual shut-off 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 shut-off 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 national regulations or codes.

Care **must be** exercised when leveling steam dryers into final position. After leveling the dryer, check the downward pitch of the heat exchanger from front to rear with a level. Likewise, check the downward pitch of the return condensate manifold toward its outlet part. Absence of these downward pitches will result in probable water hammer and premature heat exchanger fracture and leakage.

The presence of condensate in the steam will cause water hammer and subsequent heat exchanger failure. The steam supply connection **must be** taken from the top of a well-dripped steam main. If the supply run-out to the dryer exceeds 20 feet (6 meters), it **should be** dripped just before the control valve with a proper trap and dirt pocket.

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

NOTE: The EURO-35 is manufactured with a pneumatic (piston) damper system which requires an external supply of air 80 PSI +/- 10 PSI (5.5 bar +/- 0.7 bar).

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

OPERATING STEAM PRESSURE		
MAXIMUM	125 psig	862 kPa
MINIMUM	100 psig*	689 kPa
HEAT INPUT (Normal Load)	7 Bhp	
CONSUMPTION (Approximate) @ 125 PSI	239 lbs/hr	108 kg/hr

Shaded areas are stated in metric equivalents.

* Minimum operating pressure for optimum results.

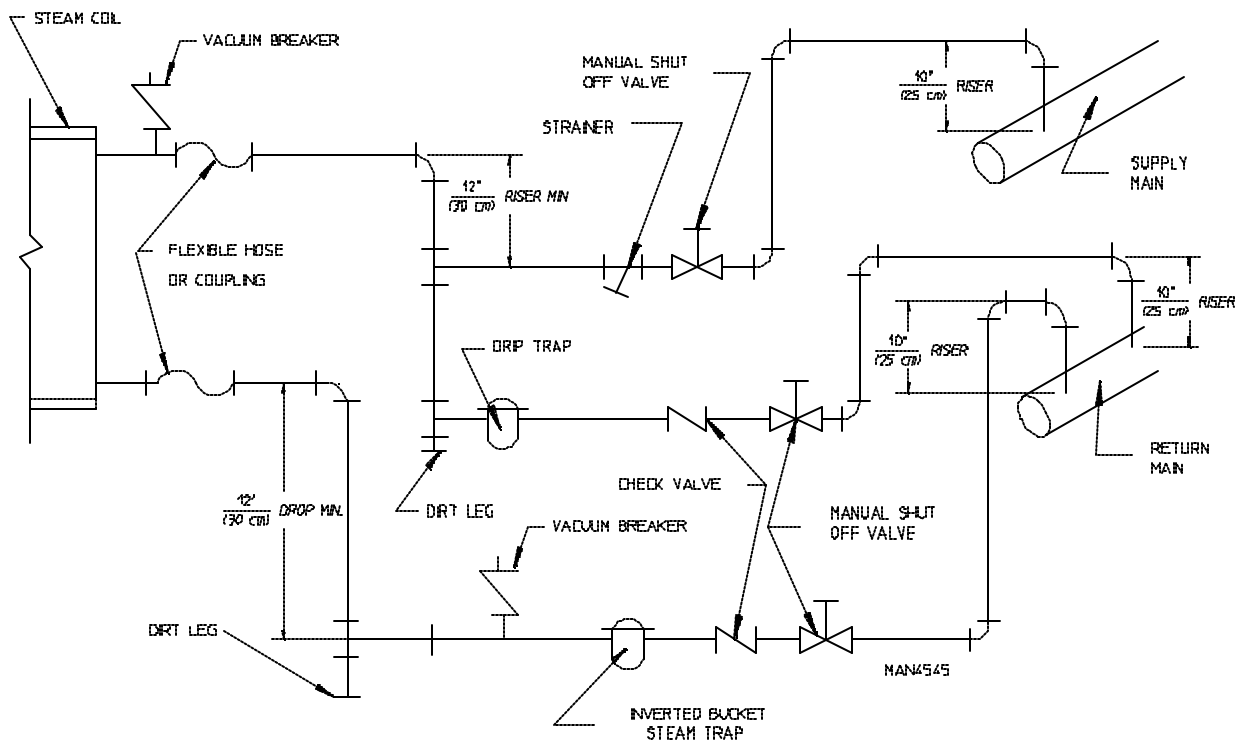
3. Installation Instructions

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.

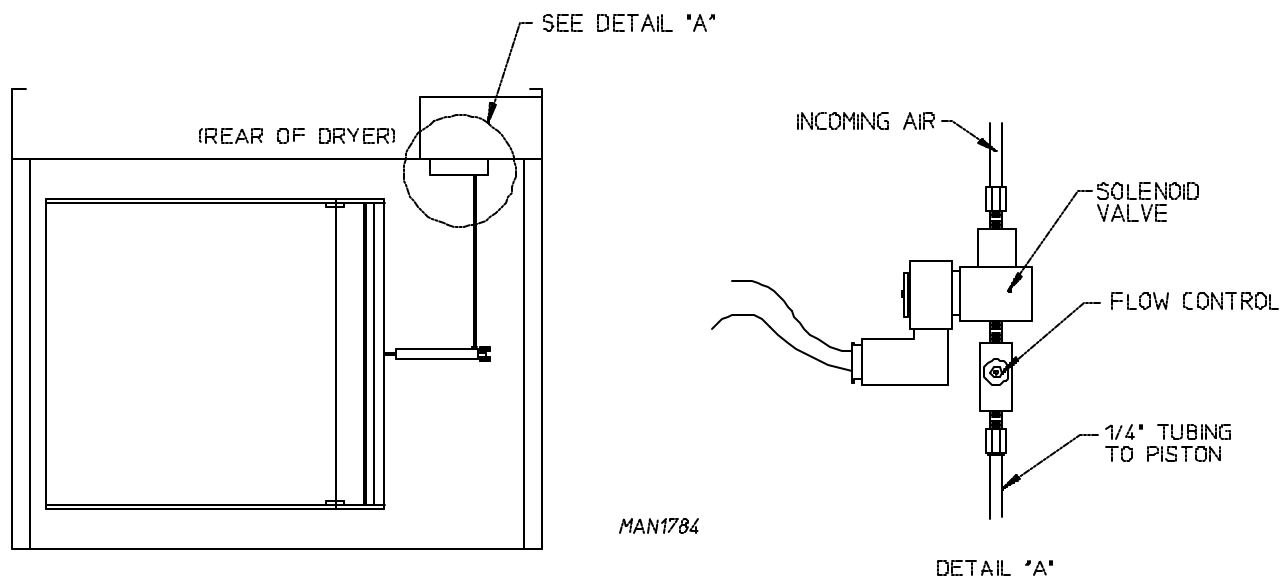
- a. The pressure of the condensate in the steam supply will cause water hammer and subsequent heat exchanger (steam coil) failure. The steam supply connection into the main supply line **must be** made with a minimum 10-inch (25 cm) riser. This will prevent any condensate from draining towards the dryer.
 - b. The steam supply piping to the dryer must include a 12-inch (30 cm) rise along with a drip trap and check valve. This will prevent any condensate from entering the steam coil.
 - c. 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.
 - d. Shut-off 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.
 - e. Install an inverted bucket steam trap and check valve at least 12-inches (30 centimeters) below the steam coil as close to the coil as possible.
- 1) A trap with capacity of 700 pounds (320 Kg) of condensate per hour at 125 psi (862 kPa) is needed for each unit.
- f. 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 for every one (1) foot (0.64 cm/30.5 cm) 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.



4. Steam Damper Air System Connections

The EURO-35 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.



a. Air Requirements

There is no air requirement for dryers with the Electromechanical Steam Damper Option.

COMPRESSED AIR SUPPLY	AIR PRESSURE	
Normal	80 psi	552 kPa
Minimum Supply	70 psi	483 kPa
Maximum Supply	90 psi	621 kPa

Shaded areas are stated in metric equivalents.

b. Air Connection

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

c. Air Regulation

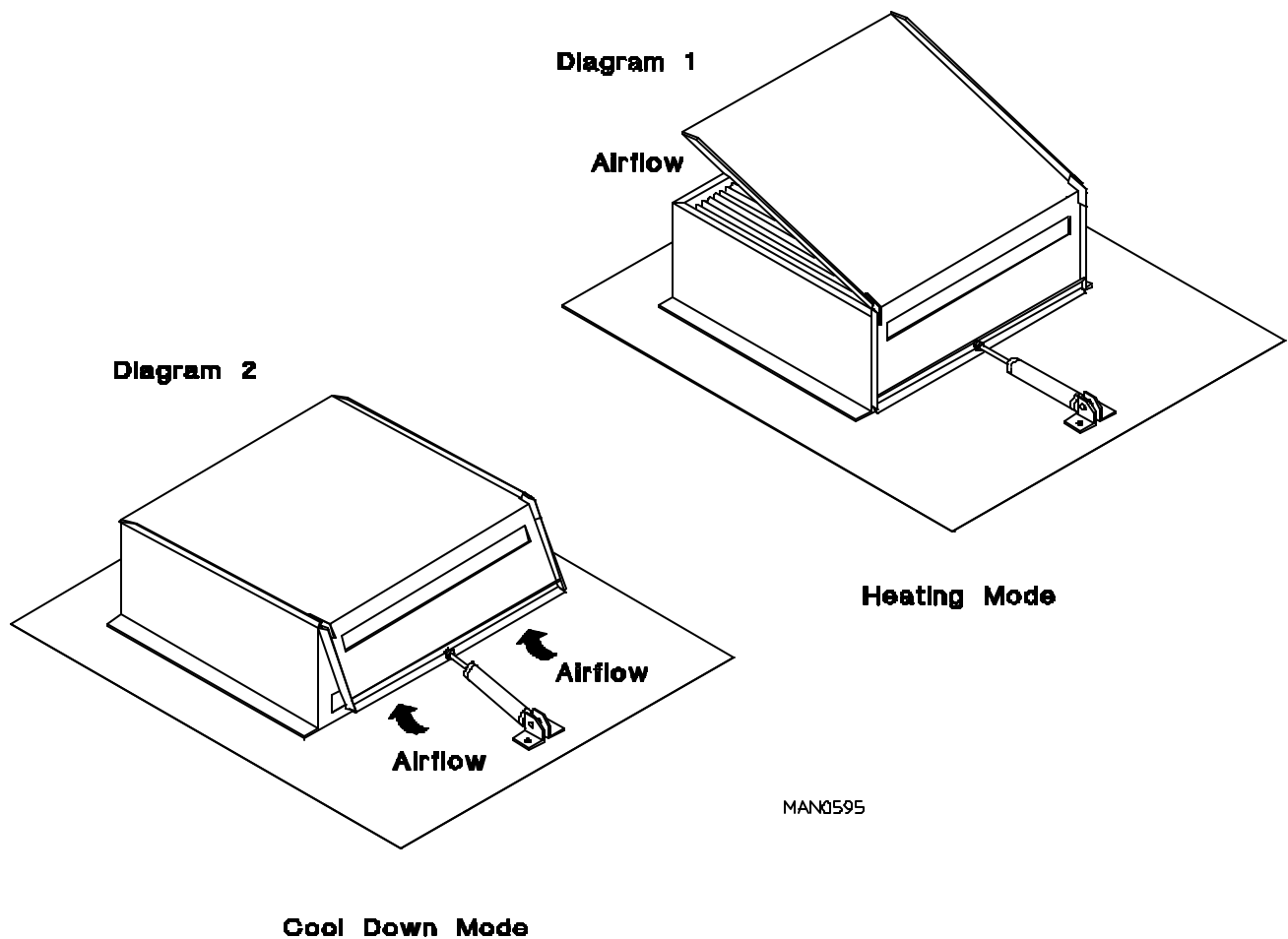
No air regulator or filtration is provided with the dryer. External regulation/filtration of 80 psi (552 kPa) **must be** provided. It is suggested that a regulator/filter gauge arrangement be added to the compressed air line just before the dryer connection. This is necessary to insure that correct and clean air pressure is achieved.

5. Steam Damper System Operation

The steam damper, as shown in the illustration below, allows the coil to stay constantly charged eliminating repeated expansion and contraction. When the damper is opened (Diagram 1), 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).

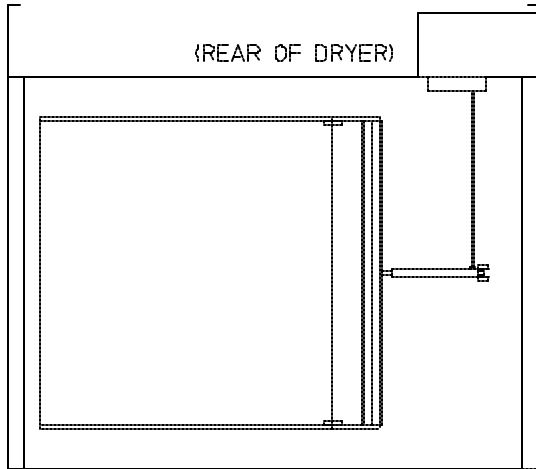
Diagram 2 shows the damper in the cool down (closed) mode, pulling ambient air directly into the basket (tumbler) without passing through the coils.



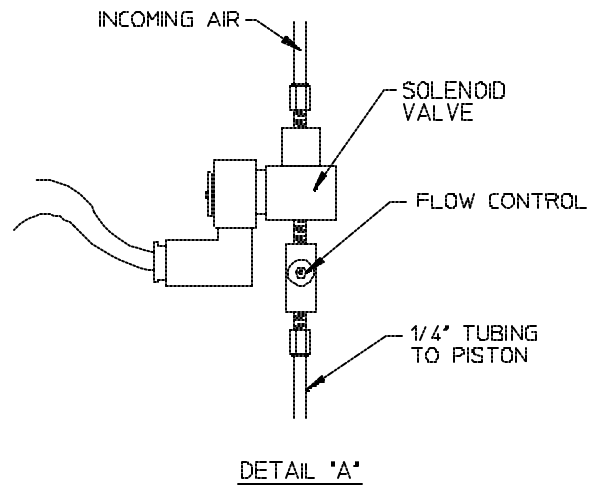
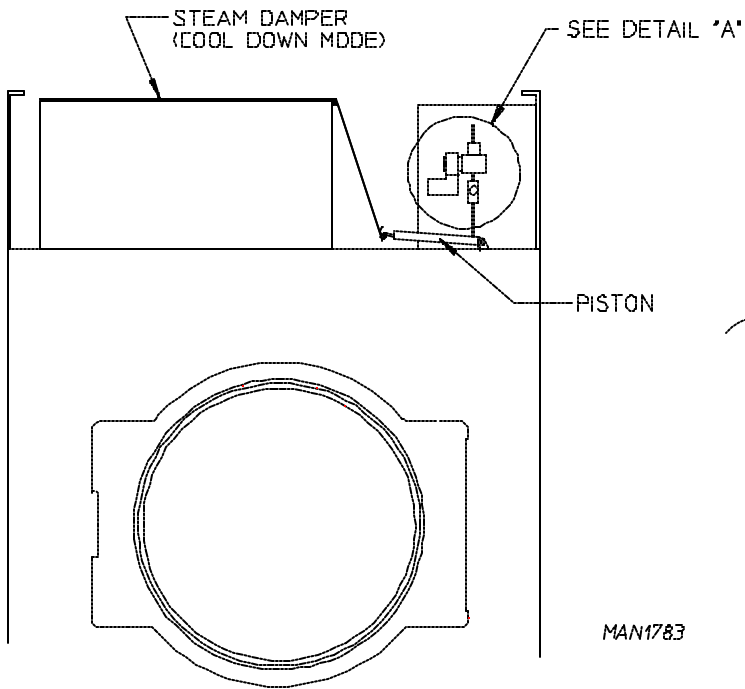
NOTE: With the dryer off or with no air supply, the steam damper is in cool down mode as shown in Diagram 2.

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

Damper operation was tested and adjusted prior to shipping at 80 psi (552 kPa). If damper air 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.



MAN1783

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 back side of the top front control/service 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.**
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 and security.
6. **GAS MODELS** - be sure that **ALL** gas shut-off valves are in the open position.
7. Check **ALL** back guard panels and service box covers have been replaced.
8. Check the lint drawer to assure that it is closed and secured in place.
9. Rotate the basket (tumbler/drum) by hand to be sure it moves freely.
10. **STEAM MODELS** - check to insure that a clean, dry, regulated air supply 80 psi (552 kPa) is connected to the dryer (air operated DAMPER SYSTEM ONLY).
11. **STEAM MODELS** - check to insure **ALL** steam shut-off valves are open.
12. **STEAM MODELS** - check steam damper operation.
13. Check tumbler bearing set screws to insure that they are **ALL** tight.
14. Check vent is connected to the machine and is exhausted to the outdoors.
15. There **should be** a source of fresh air entering the room. This source **should not be** near where the dryer(s) exhaust to the outside.

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.
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 shut-off valves are open.

NOTE: Gas model dryers are equipped with a Hot Surface Ignition (HSI) system which has internal diagnostics. If ignition is not established after one (1) time, the heat circuit in the HSI module will attempt two more ignitions (total of three ignition attempts). If there is no flame after the third ignition attempt the HSI module will lock out until it is manually reset. To reset the HSI (Hot Surface Ignition) 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 (W.C.) pressure requirements (measured at the pressure tap of the gas valve body):

Natural Gas ----- 3.5 Inches Water Column (8.7 mbar)

Liquid Propane (L.P.) Gas ----- 10.5 Inches Water Column (26.2 mbar)

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 drawer. While pushing the lint drawer switch in, start a drying cycle. The heating unit should not activate (wait 30 seconds). If heat does activate, 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 no further adjustments are necessary and that **ALL** components are functioning properly.

IMPORTANT: The dryer basket (tumbler) is treated with a protective coating. **ADC** suggests tumbling old clothes or material in the basket (tumbler), using a mild detergent to remove the protective coating.

7. 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 (impellor/fan) wheel 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.

K. PREOPERATIONAL INSTRUCTIONS

COIN MODELS

1. Automatic Mode (Microprocessor [Computer] Models)

- a. When turning on power or when no cycle is in progress, the L.E.D. (light emitting diode) display will read "FILL" and/or "Amount to Start."
- b. Insert coin(s).

Once correct "Amount to Start" has been inserted the L.E.D. (light emitting diode) display will read "PUSH."

- c. Select temperature by pushing "HI TEMP," "LO TEMP," or "PERM PRESS." The dryer will start, the L.E.D. (light emitting diode) display will read the temperature cycle selected, and the drying time portion of the L.E.D. (light emitting diode) display will read "00" and count upward as time elapses.

IMPORTANT: If the door is opened during a cycle, both the heat and motor will stop. However, the microprocessor controller (computer) will continue to count downward in time. Continuation of the cycle will resume only after the door has been closed and any other of the three (3) temperature selection buttons is again depressed.

- d. Once the preprogrammed dryness level and cool down period have been reached, or the maximum automatic time has expired, the tone (buzzer) will sound for 5 seconds, and the L.E.D. (light emitting diode) display will read "donE," at which time the dryer will shut off.

NOTES: 1. If the Anti-Wrinkle program is active, the L.E.D. (light emitting diode) display will continue to read “donE,” and the microprocessor controller (computer) will proceed through the Anti-Wrinkle program until the maximum “Active Guard Time” has expired or until the door is opened, whichever comes first. The L.E.D. (light emitting diode) display will read “FILL” and/or “Amount to Start.”

2. If the Anti-Wrinkle program is not active or in use, the L.E.D. (light emitting diode) display will read “FILL” and/or “Amount to Start.”

2. Timed Mode (Microprocessor [Computer] Models)

a. When turning on power or when no cycle is in progress, the L.E.D. (light emitting diode) display will read “FILL” and/or “Amount to Start.”

b. Insert coin(s).

Once the correct “Amount to Start” has been inserted the L.E.D. (light emitting diode) display will read “PUSH.”

c. Select temperature by pushing “HI TEMP,” “LO TEMP,” or “PERM PRESS.” The dryer will start, and the L.E.D. (light emitting diode) display will read the temperature cycle selected and the drying time.

d. The dryer will continue through the drying and cooling cycles, showing time counting downward.

IMPORTANT: If the door is opened during a cycle, both the heat and motor will stop. However, the microprocessor controller (computer) will continue to count down in time. Continuation of the cycle will resume only after the door has been closed and any other of the three (3) temperature selection buttons is again depressed.

e. Upon completion of drying and cooling cycles, the tone (buzzer) will sound for 5 seconds, and the L.E.D. (light emitting diode) display will read “donE,” at which time the dryer will shut off.

NOTES: 1. If the Anti-Wrinkle program is active, the L.E.D. (light emitting diode) display will continue to read “donE,” and the microprocessor controller (computer) will proceed through the Anti-Wrinkle program until the maximum “Active Guard Time” has expired or until the door is opened, whichever comes first. The L.E.D. (light emitting diode) display will read “FILL” and/or “Amount to Start.”

2. If the Anti-Wrinkle program is not active or in use, the L.E.D. (light emitting diode) display will read “FILL” and/or “Amount to Start.”

3. Free Dry Mode (Microprocessor [Computer] Models)

a. When turning on power or when no cycle is in progress, the L.E.D. (light emitting diode) display will read “FILL” and/or “FrEE.”

b. Select Temperature...

The dryer will start, the L.E.D. (light emitting diode) display will read the temperature cycle selected, and the drying time portion of the L.E.D. (light emitting diode) display will read "00" and count upward as time elapses, or the vended time will count downward, depending on the program parameter setting.

IMPORTANT: If the door is opened during a cycle, both the heat and motor will stop. However, the microprocessor controller (computer) will continue to count the time, either upward or downward, depending on which parameter is programmed. Continuation of the cycle will resume only after the door has been closed and any other of the three (3) temperature selection buttons is again depressed.

- c. Once the preprogrammed dryness level and cool down period has been reached or the maximum automatic time has expired, whichever comes first, the tone (buzzer) will sound for five (5) seconds, and the L.E.D. (light emitting diode) display will read "donE," at which time the dryer will shut off.

NOTES: 1. If the Anti-Wrinkle program is active, the L.E.D. (light emitting diode) display will continue to read "donE," and the microprocessor controller (computer) will proceed through the Anti-Wrinkle program until the maximum "Active Guard Time" has expired or until the door is opened, whichever comes first. The L.E.D. (light emitting diode) display will read "FILL" and/or "Amount to Start."

2. If the Anti-Wrinkle program is not active or in use, the L.E.D. (light emitting diode) display will read "FILL" and/or "FrEE."

4. Non-Microprocessor (Non-Computer) Models

- a. Turn power on to the dryer.
- b. Insert coin(s) - rotary meter type ONLY.
- c. Select temperature by using rocker switch and selecting "HI TEMP," "LO TEMP," or "PERM PRESS."
- d. Press "Push to Start" button to start the cycle.
- e. Upon completion of the drying and cooling cycles the dryer will shut off.

NOTE: If the door is opened during a cycle, both the heat and motor will stop. Continuation of the cycle will only resume after the door has been closed, and the "Push to Start" button is pressed.

OPL MODELS

NOTE: Before attempting to start the dryer make sure the main door is closed and the lint drawer is securely in place.

- 1. To start the dryer:
 - a. Microprocessor (computer) dryers ...

- 1) Display will read "READY" (meaning no cycle in progress).
- 2) Press the letter on the keyboard (touchpad) corresponding to the cycle desired (i.e., Key "E"). Dryer will start to rotate.
- 3) L.E.D. display will now toggle "Drying" "manual" "Cycle" "30 Min" "Remain" meaning the dryer is in the drying cycle and count down in minutes.

NOTE: Pressing touchpad key "A," "B," "C," "D," and "F" will also start the dryer. The six (6) preprogrammed drying cycles ("A" - "F") have been stored in the microprocessor (computer's) memory. Refer to the Computer Programming Manual supplied with dryer for more specific operating information.

NOTE: The dryer can be stopped at any time by opening main door or by pressing the "STOP" key. To restart the dryer, press the "START" key or preprogrammed cycle key (i.e., "E").

NOTE: Selection (setting) changes can be made at any time during the drying cycle by pressing the "CLEAR/STOP" key twice. The L.E.D. display will return to "READY" at which time a new cycle selection can be made.

b. Dual Timer Dryers

- 1) Turn drying timer knob to the desired number of drying minutes.
- 2) Turn cooling timer knob to the desired number of cooling minutes (fo follow drying minutes).
- 3) Select "High Temp," "Lo Temp," or "Perm Press."
- 4) Push the "Push To Start" button.
- 5) To stop dryer, 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 shut-off valve.**
 - 2) **SHUT OFF internal gas supply shut-off valve located in the gas valve burner area**
 - b. ***STEAM MODELS ... discontinue the steam supply.***
 - 1) **SHUT OFF external (location furnished) shut-off valve.**
 - 2) **SHUT OFF internal steam valves in the supply lines and the return lines.**

SECTION IV

SERVICE/PARTS INFORMATION

A. SERVICE

1. Only properly licensed or trained technicians should service the dryer. If service is required, contact the distributor from whom the **ADC** equipment was purchased. If the distributor **cannot** be contacted or is unknown, contact the **ADC** Service Department for a distributor 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 distributor from whom the **ADC** equipment was purchased. If the distributor **cannot** be contacted or is unknown, contact the **ADC** Parts Department for a distributor in your area. Parts may also be purchased directly from the factory by calling the **ADC** Parts Department at +1 (508) 678-9000 or you may FAX in your order at +1 (508) 678-9447.

NOTE: When ordering replacement parts from the **ADC** dealer 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 the **ADC** Service Department at +1 (508) 678-9000.

B. WARRANTY

For a copy of the **ADC** commercial warranty covering your particular dryer(s), contact the **ADC** distributor from whom you purchased the equipment and request dryer warranty form. If the distributor *cannot* be contacted or is unknown, warranty information can be obtained from the factory by contacting the **ADC** Warranty Department at +1 (508) 678-9000.

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

C. RETURNING WARRANTY PARTS

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

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

NOTE: An R.M.A. ("Return Material Authorization") is valid for only sixty (60) 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 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 duct work 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 THIRD or FOURTH LOAD

Clean the lint screen every third or fourth load. A clogged lint screen will cause poor dryer performance. The lint screen is located in a drawer below the main door. Open the lint drawer, brush or vacuum 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 DRYERS

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 HVAC supply houses.

90 DAYS

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

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

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

WARNING: INSPECT and REMOVE ANY LINT ACCUMULATION WHICH CAN CAUSE THE BACK DRAFT DAMPER TO BIND OR STICK.

NOTE: A back draft damper that is sticking partially closed can result in slow drying and 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

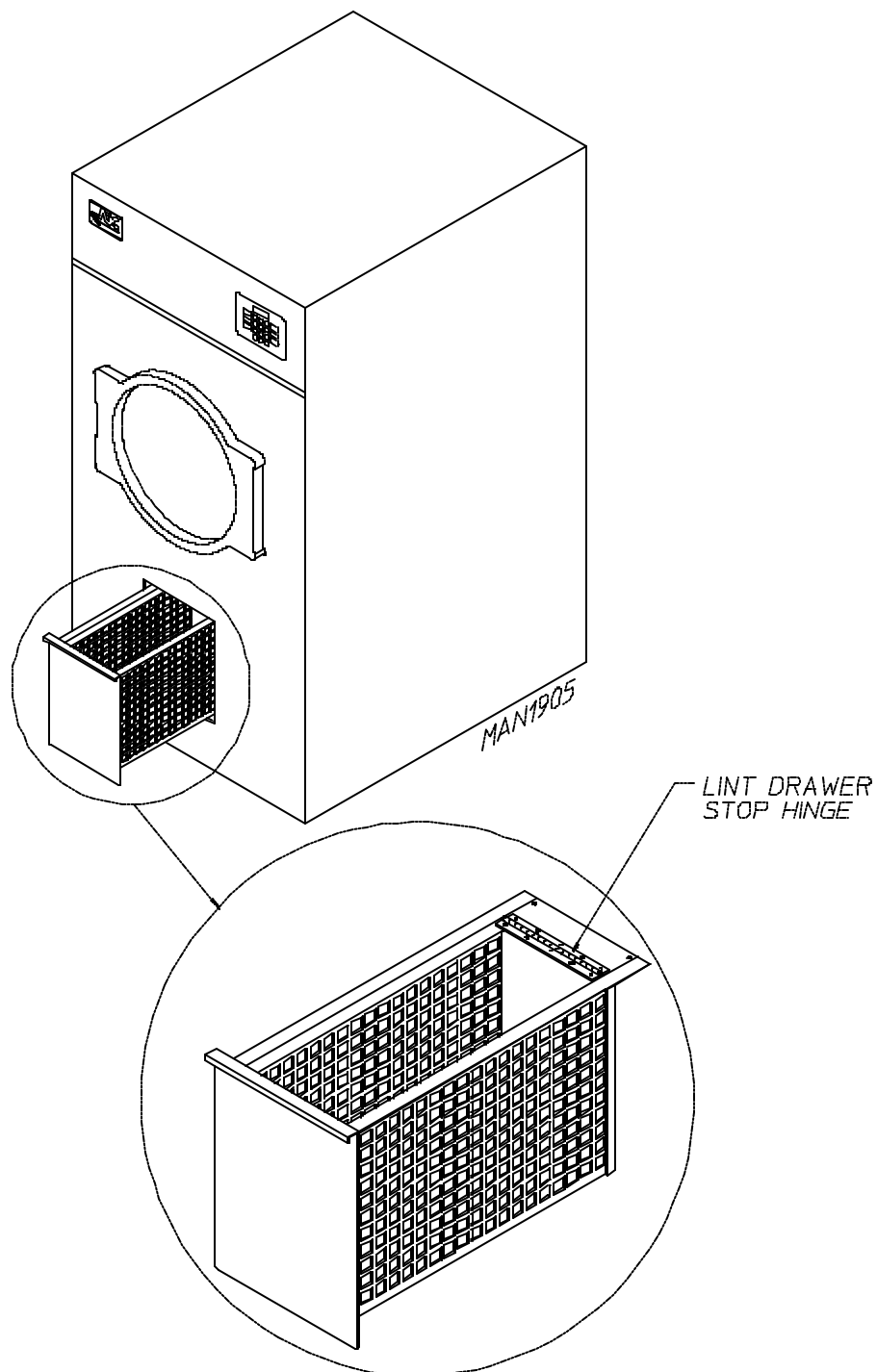
Inspect bolts, nuts, screws, (bearing set screws), non-permanent gas connections (unions, shut-off valves, orifices, and grounding connections). Motor and drive belts **should be** examined. Cracked or seriously frayed belts **should be** replaced. Tighten loose V-belts when necessary. Complete operational 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 motor bearings, idler bearings...and under normal/most conditions the tumbler bearings are permanently lubricated. It is physically possible to re-lubricate the tumbler bearings if you choose to do so even though this practice *is not necessary*. Use Shell Alvania #3 or its equivalent. The tumbler bearings used in the dryer **do not have** a grease fitting. Provisions are made in the bearing housing for the addition of a grease fitting which can be obtained elsewhere, or from **ADC** by ordering kit Part No. 882159, which includes two (2) fittings.

D. LINT DRAWER REMOVAL

To remove the lint drawer from the dryer pull drawer out approximately halfway. Rotate/move lint drawer stop hinge (refer to the illustration below) downward and pull drawer out.



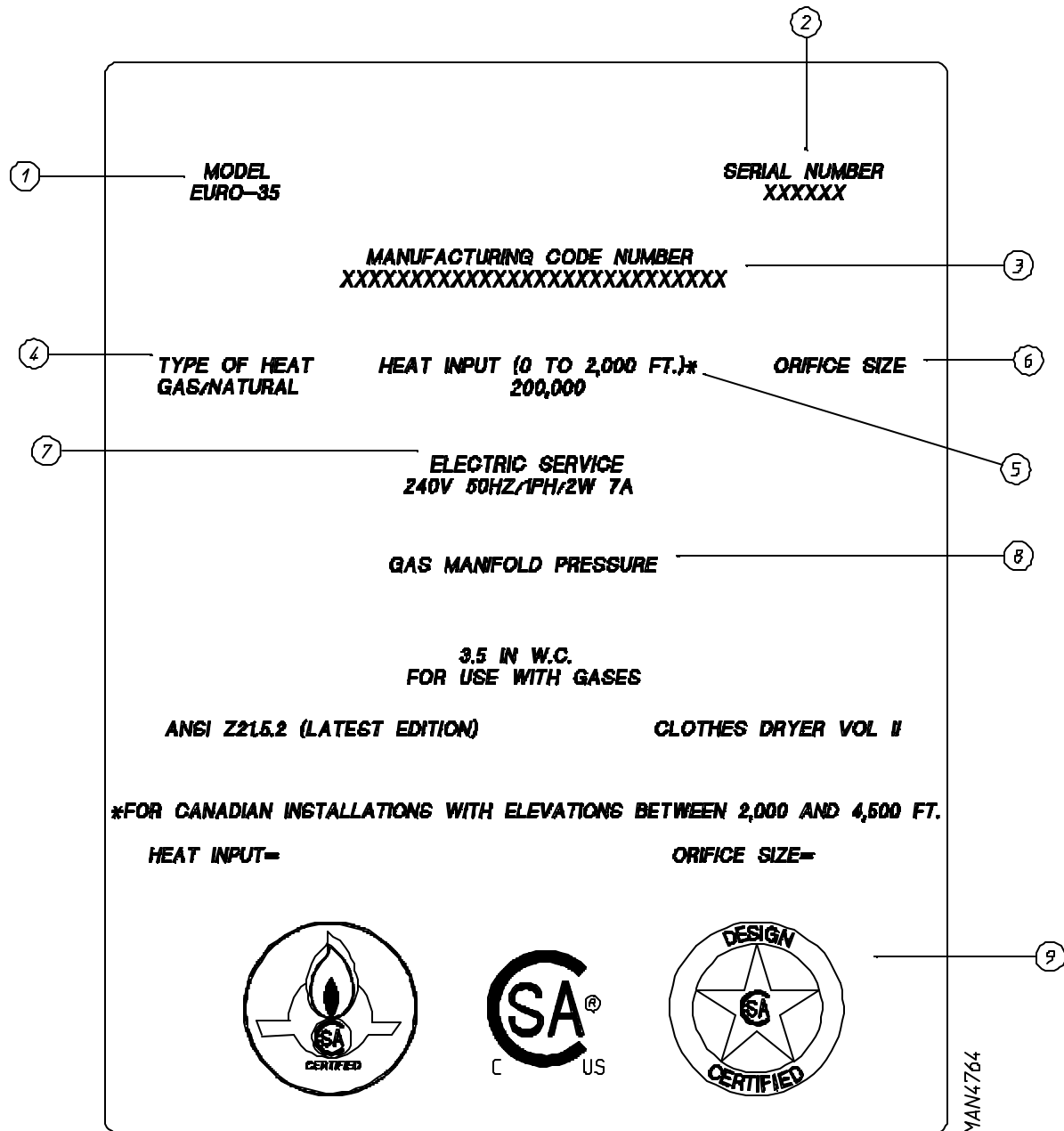
IMPORTANT: After replacing the lint drawer back into the dryer, be sure to rotate/move hinge back to the upward stop position.

SECTION VII

TECHNICAL 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**. This information is on the data label located on the inside of the control door. When contacting **ADC** please have the model number and serial number available.

THE DATA LABEL

1. MODEL DRYER

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

The type of heat describes the type heat for your particular dryer; gas (either natural gas or liquid propane [L.P.]), 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)

eg., Canadian Gas Association.

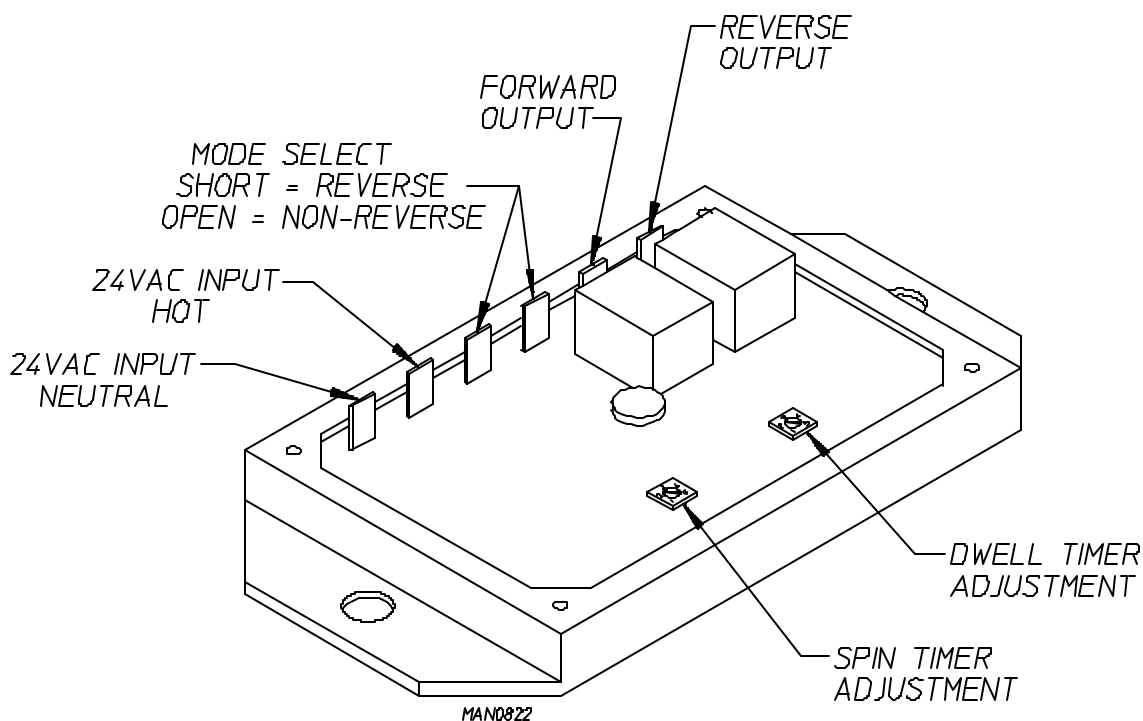
SECTION VIII

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					
Switch Position Number	1	2	3	4	5
Time in Seconds*	30	60	90	120	150
DWELL (STOP) TIME	1	2	3	4	5
Switch Position Number	5	6	8	10	12
* Values shown are +/- 1 second.					

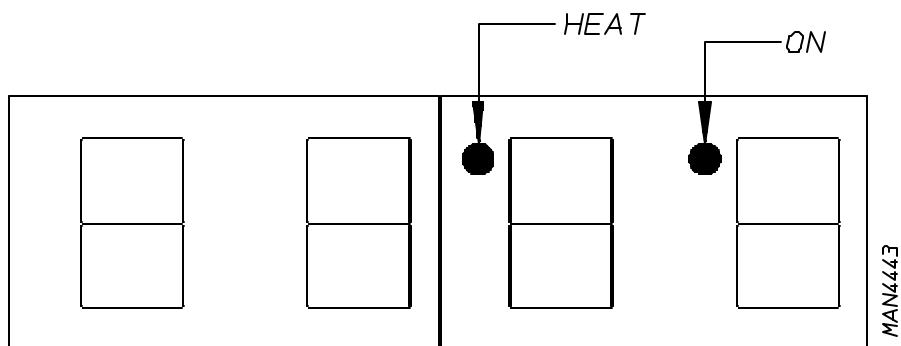
SECTION IX

PROCEDURE FOR FUNCTIONAL CHECK OF REPLACEMENT COMPONENTS

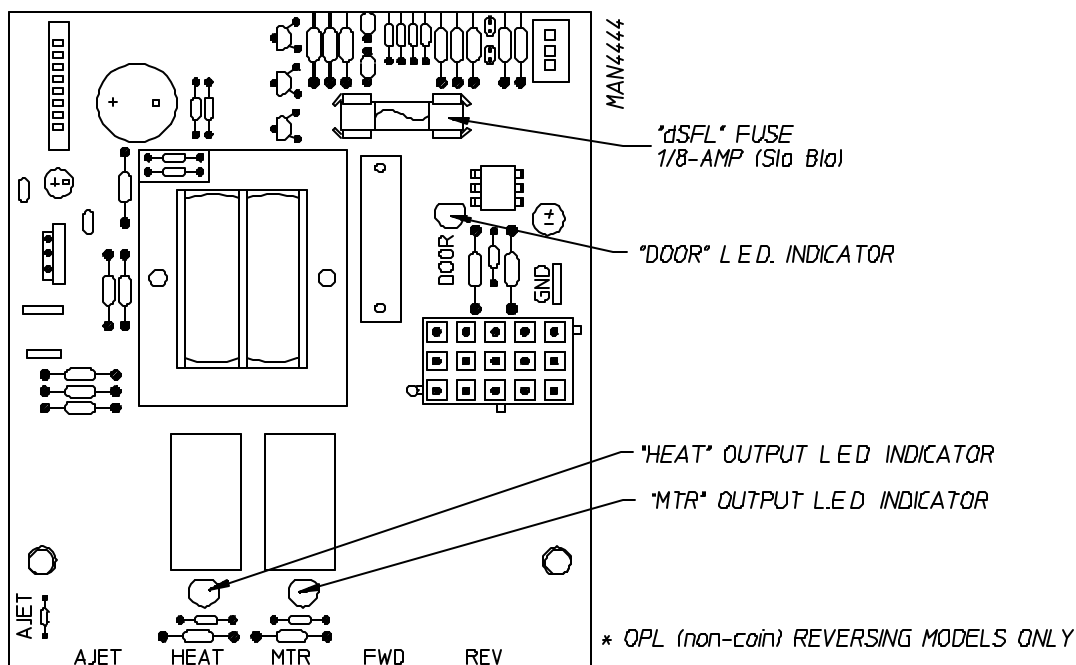
COIN MODELS

1. Microprocessor (computer) Board

- a. Upon completing installation of the replacement microprocessor (computer) board, reestablish power to the dryer.
- b. Start the drying cycle.
- c. Verify that the motor(s) and the heat indicator dots, in the microprocessor (computer) L.E.D. (light emitting diode) display are on. (Refer to the illustration below.)



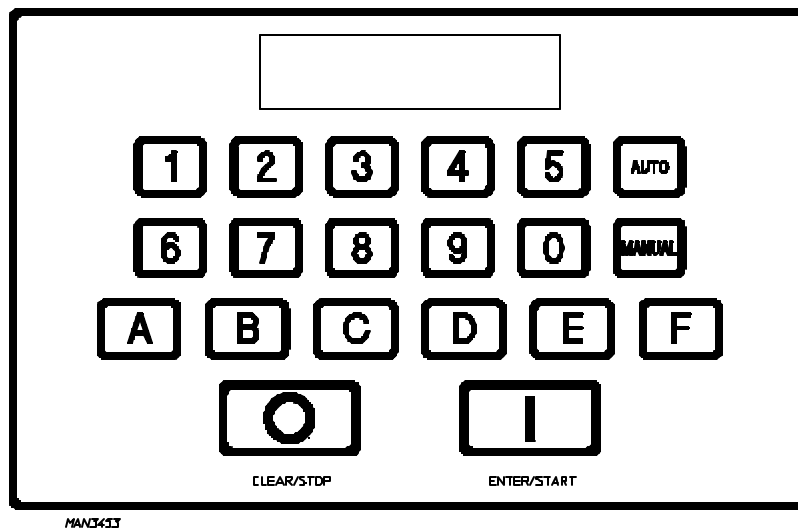
- d. Verify that motor(s) heat, and door indicator lights on the back side of the microprocessor (computer) board are lit. (Refer to illustration below.)



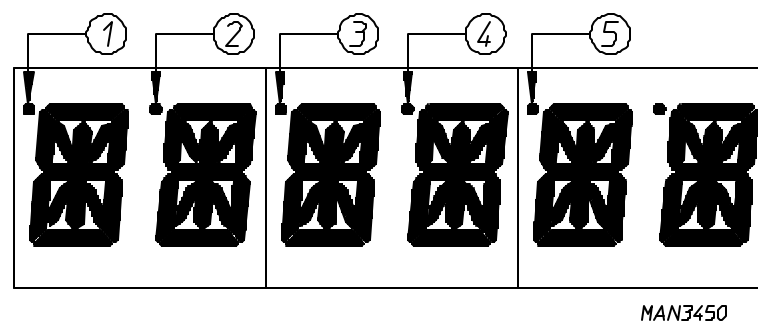
OPL MODELS

1. Microprocessor (computer) Board

- a. Upon completing installation of the replacement microprocessor (computer) board, reestablish power to the dryer.
- b. Start the drying cycle.
- c. Verify that the motor(s) and the heat indicator dots, in the microprocessor (computer) L.E.D. (light emitting diode) display are on. (Refer to the illustration below.)

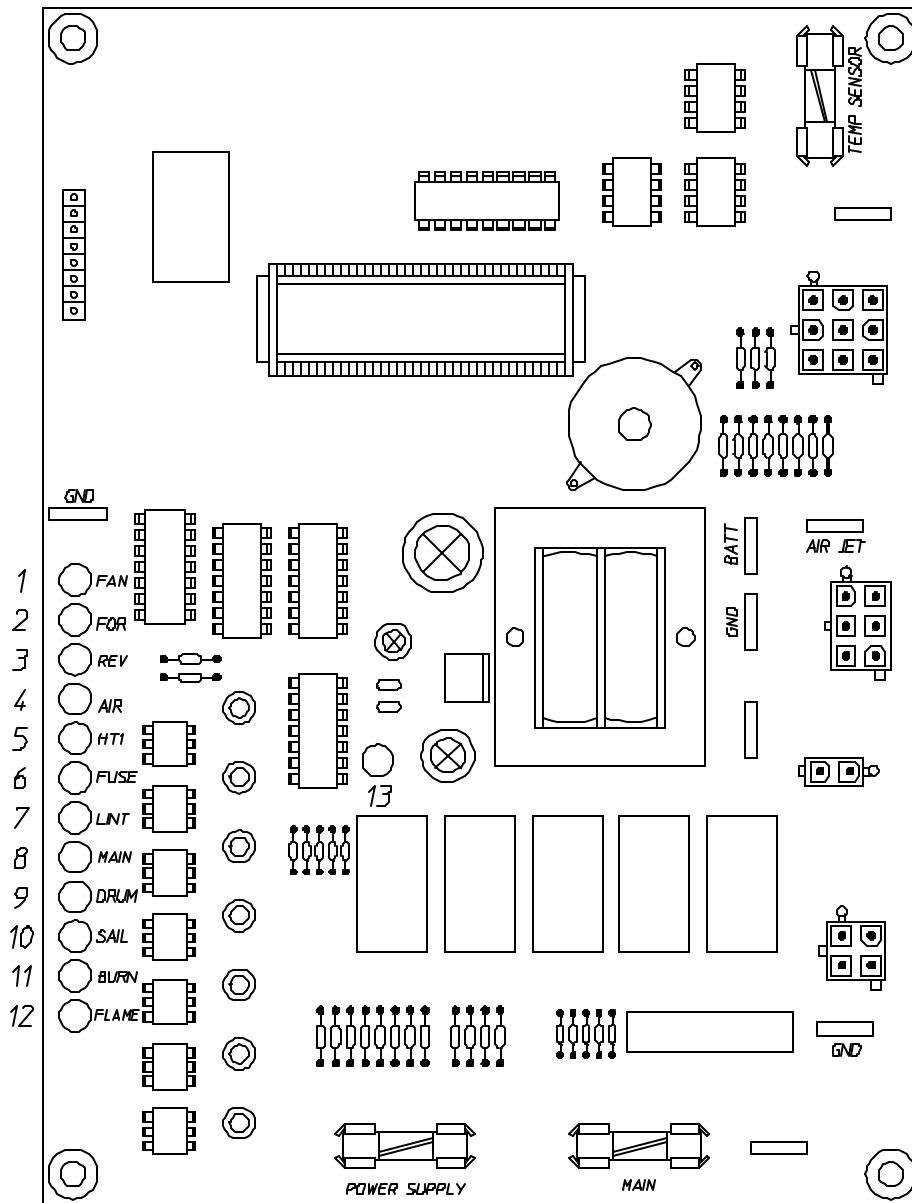


- d. Verify that motor(s) heat, and door indicator lights on the back side of the microprocessor (computer) board are lit. (Refer to illustration below.)



- 1) Basket (tumbler) in Forward Mode (clockwise [CW]) indicator.
- 2) Basket (tumbler) in Reverse Mode (counterclockwise [CCW]) indicator.
- 3) Heat on indicator.
- 4) On indicator (dryer is in operation).
- 5) Air Jet indicator.

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



MAN3449

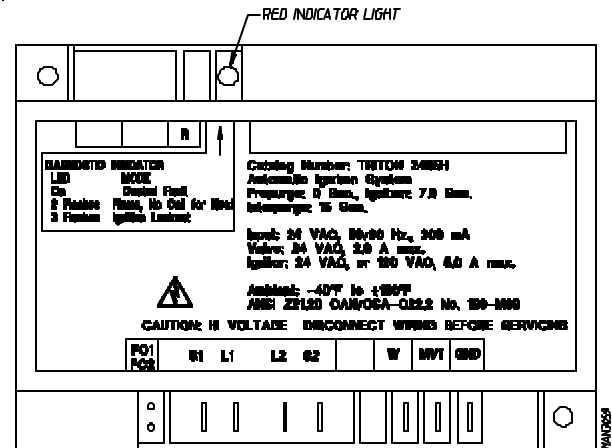
- 1) "FAN" (blower) L.E.D. indicator.
- 2) "FOR" (Forward) output L.E.D. indicator.
- 3) "Rev" (Reverse) output L.E.D. indicator.
- 4) "Air" (Air Jet) output L.E.D. indicator.
- 5) "HT1" (Heat) output L.E.D.
- 6) "Fuse" (Main Fuse) input L.E.D. indicator.
- 7) "Lint" (Lint Door) input L.E.D. indicator.
- 8) "Main" (Main Door) input L.E.D. indicator.
- 9) "Drum" (Tumbler Hi-Limit) input L.E.D. indicator.
- 10) "Sail" (Sail Switch) input L.E.D. indicator.
- 11) "Burn" (Burner Hi-Limit) input L.E.D. indicator.
- 12) "Flame" (Burner Control Failure) input L.E.D. indicator.
- 13) "Power Supply."

- e. Open main door. The dryer **must stop** and **ALL** output indicator lights on the back side of the microprocessor (computer) board **must go out**. (Refer to **illustration** on previous page [page 72].)
- f. Try to restart the dryer with the main door open.
- g. The microprocessor (computer) board's L.E.D. display **must read "DOOR."**
- h. Close the main door and restart the dryer.
- i. Functional check of microprocessor (computer) board is complete.

2. Hot Surface Ignition (HSI) System

- a. Upon completing installation of the replacement Hot Surface Ignition (HSI) module, reestablish power to the dryer.
- b. The HSI module's "red" indicator light will light for up to 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, and a few seconds later the gas valve will be energized. After approximately 4-seconds the Hot Surface ignitor will shut off. **Ignition (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 be 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 a few seconds later the gas valve will be energized and the Hot Surface Ignitor will shut off. Ignition (flame) should be evident for approximately 7-seconds and then shut off.
- h. The HSI (Hot Surface Ignition) module will attempt two (2) additional ignition trials after which the HSI module will lock out and the "red" indicator light will **flash continuously**.
- i. Functional check of the Hot Surface Ignition (HSI) module is complete.
 - 1) Replace the flame sensor wire from the S2 terminal to the HSI module.

