

OPERATOR'S MANUAL

for

DRH80 Series Dryers

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

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.

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

– WHAT TO DO IF YOU SMELL GAS

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

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

Post the following "For Your Safety" caution 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.

It is important that you read this Manual and retain it for future reference. For service or replacement parts, contact the distributor in your area or the manufacturer.

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.

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.

You, the purchaser, must post in a prominent location instructions to be followed in the event the user smells gas. Consult your local gas supplier for procedure to be followed if the odor of gas is present.

TABLE OF CONTENTS

| | PAGE NO. |
|---------------------------------------|----------|
| DRYER DIMENSIONS (Figure 1) | 3 |
| UNCRATING | 4 |
| DRYER INSTALLATION | 4 |
| DRYER EXHAUST SYSTEM (Figure 2) | 5, 6 |
| DRYER SHUTDOWN | 7 |
| OPERATING INSTRUCTIONS | 7 |
| SERVICING DRYER | 7 |
| PREVENTATIVE MAINTENANCE | 8 |

WARNINGS ABOUT USE AND OPERATION

It is **ABSOLUTELY ESSENTIAL** that the dryer be grounded to a known earth (zero) ground. This is not only for personal safety, but is necessary for proper operation.

THIS DRYER IS EQUIPPED WITH AN OVER-TEMPERATURE THERMOSTAT located on the right side of the return lint hood assembly (open lower service door). Should the dryer cease to operate, refer to your "Service Procedure and Parts Data" book for instructions.

CHECK THIS THERMOSTAT WHEN INSTALLING DRYER to assure it is not tripped. Impacts such as rough handling in shipment, may trip the thermostat.

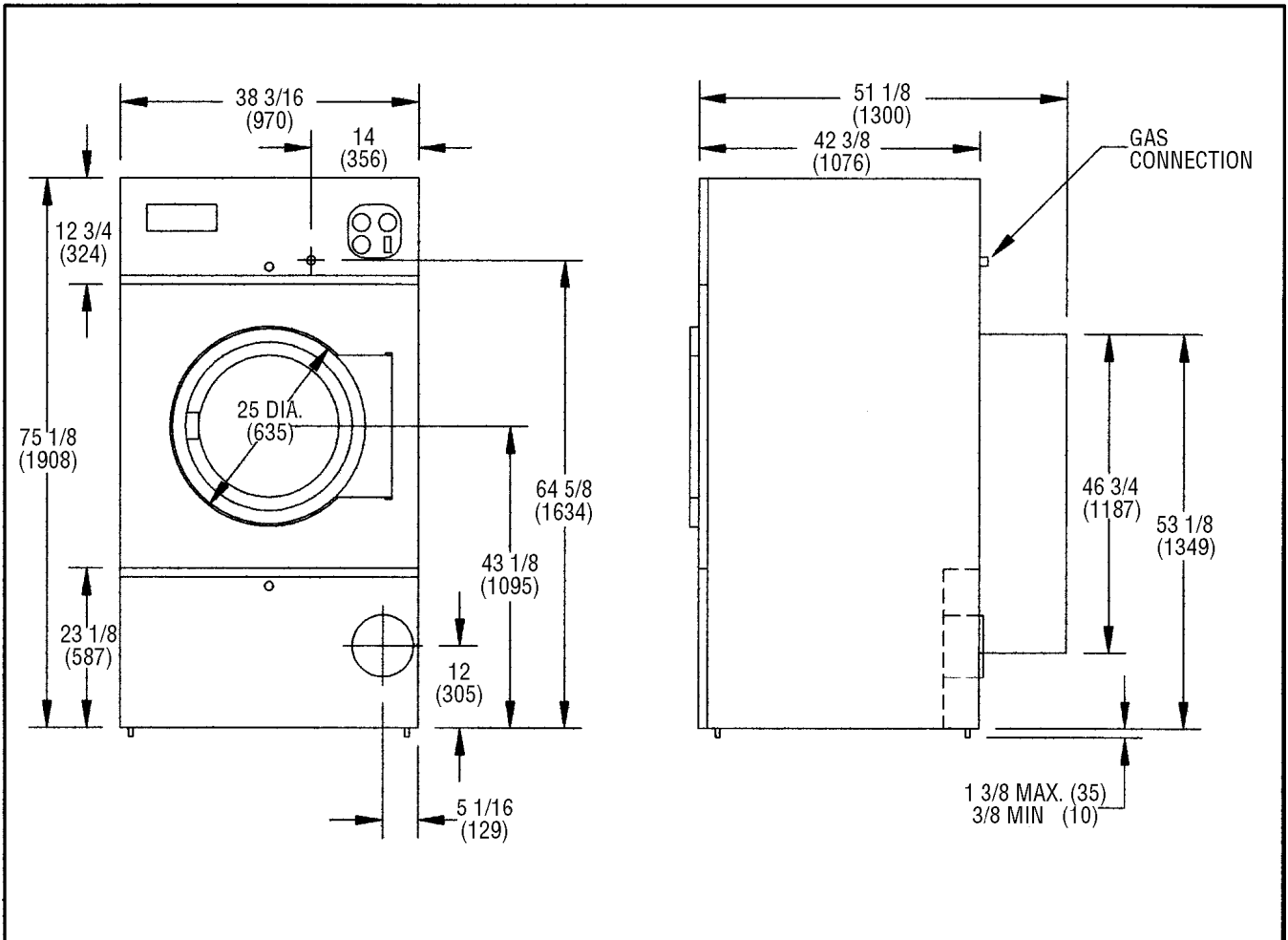


FIGURE 1 – Dryer Dimensions. Inches (mm)

INSTALLATION AND OPERATING INSTRUCTIONS

COMMERCIAL DRYER

UNCRATING

1. Remove cardboard container and innerpack.
2. Complete the uncrating as described in the procedure listed on the instruction sheet taped to the loading door glass.

DRYER INSTALLATION

1. **CODE CONFORMITY.** All commercial dryer installations must conform with local codes or, in the absence of local codes, with the latest edition of the National Fuel Gas Code ANSI Z223.1A. Canadian installations must comply with current Standard CAN/CGA-B1 49 (.1 or .2) Installation Code for Gas Burning Appliances or Equipment, and local codes if applicable. The appliance, when installed, must be electrically grounded in accordance with the latest edition of the National Electrical Code, ANSI/NFPA70, or, when installed in Canada, with Standard CSA C22.1 Canadian Electrical Code Part 1.

2. **INSTALLATION CLEARANCES:** This unit may be installed at the following alcove clearance. (millimeters)

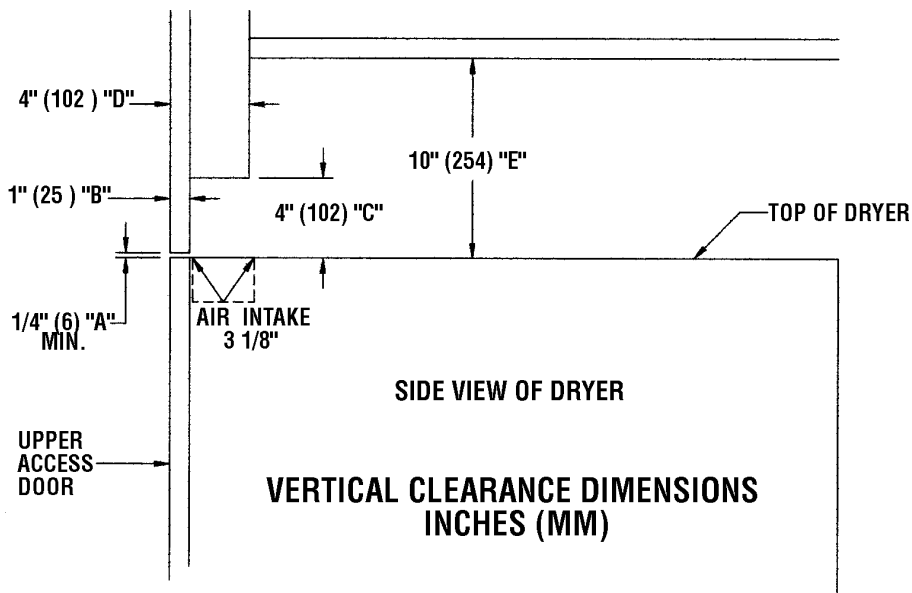
- I. Left Side 0"
- II. Right Side 0"
- III. Back 18" (457) (Certified for 1" (25) clearance; however, 18" (457) clearance is necessary behind the belt guard to allow servicing and maintenance.)
- IV. Front 48" (1220) (to allow use of dryer)
- V. Top Refer to figure labelled "Vertical Clearance Dimensions".
 AB. Certification allows 0" clearance at the top 1" (25) back from the front. However, a 1/2" (12) clearance is required to allow opening the upper service door.
 CD. A 4" (102) clearance is required at the top between 1" (25) and 4" (102) from front.
 E. A 10" (254) clearance is required from top at all other points.
- VI. Floor This unit may be installed upon a combustible floor.

*Units may be installed in direct contact with an adjacent dryer, providing allowance is made for opening upper and lower service doors.

Do not obstruct the flow of combustion and ventilation air.

Maintain minimum of 1" clearance between duct and combustible material.

Refer to installation label attached to the inside surface of the upper door of the dryer for other installation information.



3. **MAKE-UP AIR.** Adequate make-up air (1200 CFM) must be supplied to replace air exhausted by dryers on all types of installations. Provide a minimum of 1.5 square feet make-up air opening to the outside for each dryer. This is a net requirement of effective area. Screens, grills or louvers which will restrict the flow of air must be considered. Consult the supplier to determine the free area equivalent for the grill being used.

The source of make-up air should be located sufficiently away from the dryers to allow an even airflow to the air intakes of all dryers. Multiple openings should be provided.

NOTE: The following considerations must be observed for gas dryer installations where dry cleaners are installed. The sources of all make-up air and room ventilation air movement to all dryers must be located away from any dry cleaners. This is necessary so that solvent vapors will not be drawn into the dryer inlet ducts. Dry cleaner solvent vapors will decompose in contact with an open flame such as the gas flame present in clothes dryers. The decomposition products are highly corrosive and will cause damage to the dryer(s), ducts and clothes loads.

4. **ELECTRICAL REQUIREMENTS.** (Refer to schematic and wiring diagram). This dryer is equipped with a reconnectable motor and control transformer for use on 208–240V–1PH–60Hz or 110–125V–1PH–60Hz. The control voltage is 24V, 60 Hz. The electrical power requirements necessary to operate the unit satisfactorily are listed on the serial plate located on the back panel of each dryer. The electrical connection should be made to the terminal in the control box on the rear of the unit, using a wire size adequate to handle the amperage and voltage listed on the serial plate, but never smaller than No. 12 AWG wire. The ground lug must be connected to a good external ground.

Individual circuit breakers for each unit are recommended. The schematic and wiring diagram are located on the belt guard on the back of the machine.

5. **GAS REQUIREMENTS.** The complete gas requirements necessary to operate the dryer satisfactorily are listed on the serial plate located on the back panel of the dryer.

The inlet gas connection to the unit is 1/2 inch pipe thread. However, the size of the piping to supply the dryer should be determined by reference to the National Fuel Gas Code ANSI Z223.1A and consultation with the local gas supplier.

A joint compound resistant to the action of liquefied petroleum gases should be employed in making pipe connections.

A drip tee should be provided in the gas piping entering the unit to catch dirt and other foreign articles.

All pipe connections should be checked for leakage with soap solution. Never check with an open flame.

For altitudes above 2,000 feet (610m) it is necessary to derate the BTU input. Contact your local distributor for instructions.

L.P. gas conversion kits are available for this dryer. Contact your local distributor.

6. **PRESSURE TESTING.** 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.

The dryer must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG.

7. **EXHAUST INSTALLATION.** (Refer to Figure 2 at the end of section 7.) Exhausting of the dryer(s) should be planned and constructed so that no air restrictions occur. Any restriction due to pipe size or type of installation can cause slow drying time, excessive heat, and lint in the room.

From an operational standpoint, incorrect or inadequate exhausting can cause a cycling of the high limit thermostat which shuts off the main burners and results in inefficient drying.

Individual exhausting of the dryers is recommended. All heat, moisture, and lint should be exhausted outside by attaching a pipe of the proper diameter to the dryer adapter collar and extending it out through an outside wall. This pipe must be very smooth on the inside, as rough surfaces tend to collect lint which will eventually clog the duct and prevent the dryer from exhausting properly. All elbows must be smooth on the inside. All joints must be made so the exhaust end of one pipe is inside the next one downstream. The addition of an exhaust pipe tends to reduce the amount of air the blower can exhaust. This does not affect the dryer operation if held within practical limits. For the most efficient operation, it is recommended that no more than 20 feet (6m) of straight 8" diameter pipe be used with two right angle elbows. When more than two elbows are used, two feet of straight pipe should be removed for each additional elbow. No more than four right angle elbows should be used to exhaust a dryer.

Maintain minimum 1" (25) clearance between duct and combustible material.

If the exhaust pipe passes through a wall, a metal sleeve of slightly larger diameter should be set in the wall and the exhaust pipe passed through this sleeve. This practice is required by some local codes and is recommended in all cases to protect the wall. This type of installation should have a means provided to prevent rain and high winds from entering the exhaust when the dryer is not in use. A hood with a hinged damper can be used for this purpose. Another method would be to point the outlet end of the pipe downward to prevent entrance of wind and rain. In either case, the outlet should be kept clear, by at least 24" (610m), of any objects which would cause an air restriction.

Never install a protective screen over the exhaust outlet.

When exhausting a dryer straight up through a roof, the overall length of the duct has the same limits as exhausting through a wall. A rain cap must be placed on top of the exhaust and must be of such a type as to be free from clogging. The type using a cone shaped "roof" over the pipe is suitable for this application.

Exhausting the dryer into a chimney or under a building is not permitted under any conditions. In both cases, there is a danger of lint build-up which can be highly combustible.

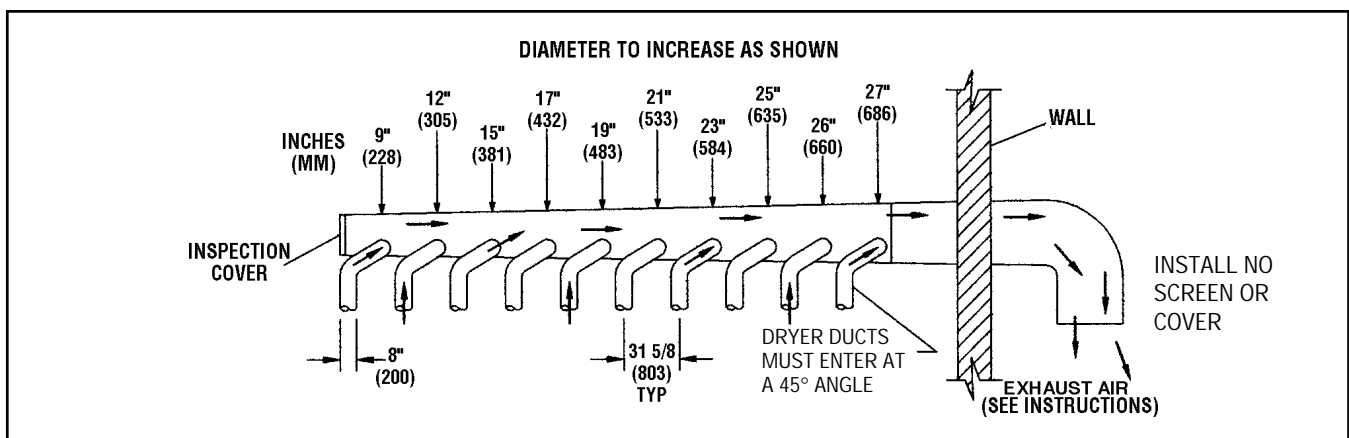


Figure 2 – Dryer Exhausting Using A Main Discharge Duct.

Installation of several dryers where a main discharge duct is necessary, will need the following considerations for installation (see Fig. 2). Individual 8" ducts from the dryers into the main discharge duct should be at a 45 degree angle in the direction of discharge air flow.

NOTE: Never install the individual 8" ducts at a right angle into the main discharge duct. The individual ducts from the dryers can enter at the sides or bottom of the main discharge duct. Figure 2 indicates the various round main duct diameter to use with the individual dryer ducts. The main duct can be rectangular or round, provided adequate air flow is maintained. For each individual dryer, the total exhausting (main discharge duct plus duct outlet from the dryer) should not exceed the equivalent of 20 feet (6m) and two elbows. The diameter of the main discharge duct at the last dryer must be maintained to exhaust end.

NOTE: A small diameter duct will restrict air flow; a large diameter duct will reduce air velocity -- both contributing to lint build up. An inspection door should be provided for periodic clean-out of the main duct.

8. DRYER IGNITION (SOLID STATE IGNITION). The solid state ignition system lights the main burner gas by spark. The gas is ignited and burns only when the gas-valve relay (in the electronic controller) calls for heat. The procedure for first-time starting of a dryer is as follows:

A. First, review and comply with the "Warnings About Use and Operation" found on the inside front cover of this manual. Be sure the electrical power supply is connected correctly. The white wire is to be connected to the L2(N) terminal in the control box and the black wire to the L1 terminal (power leg). The dryer MUST be properly grounded. Connect the ground lug to a good external ground.

B. Make sure all gas supply lines are purged of air. close the main gas shut-off valve and wait for five minutes before turning the valve back on.

C. Turn on main electrical power switch, set thermostat knob on high, close loading door, operate manual timer to energize dryer, and actuate push to start switch. It is necessary that sufficient time is on the timer to assure the dryer is not in the cool down period.

D. Natural gas and liquefied petroleum gas fired dryers both operate in the same manner. When the thermostat contacts are closed (indicating a demand for heat), the solid state ignition control will automatically supply energy to the spark gap and to the redundant gas valve. Spark will continue until a flame is detected by the sensing probe, but not longer than 10 seconds. If the gas fails to ignite in 10 seconds the gas valve closes. It is then necessary to interrupt electrical power to the ignition system before making another attempt at lighting the burners. This can be done by opening the dryer door and allowing the dryer to come to a stop for 15 seconds, then closing the door and actuating the push-to-start button. The dryer will then repeat the ignition trial cycle.

9. **MAIN BURNER ADJUSTMENT.** The primary air shutter of each main burner must be properly adjusted for the correct air-gas ratio. Adjust the shutter by closing it sufficiently to give a blue flame with a yellow tip. Next open the shutter until the yellow tips are at a minimum. Securely lock each shutter in position by tightening the screw after adjusting the shutter.

DRYER SHUTDOWN

1. **SOLID STATE IGNITION MODELS.** To render the dryer inoperative turn off the main gas shut-off valve and disconnect power to the dryer.

OPERATING INSTRUCTIONS

1. Place the clothes load to be dried in the cylinder and close the dryer door. The clothes should be well separated. Untangling following washing may be necessary for proper drying.
2. Set the temperature selector to the desired setting for the type of clothes to be dried.

RECOMMENDED TEMPERATURE SETTING:

| <u>LOAD</u> | <u>TEMPERATURE</u> |
|----------------------|--------------------|
| Delicate | Warm |
| Perma-Press/Personal | Medium |
| 100% Cottons | Hot |

3. Set the drying timer for the time estimated to dry the load of clothing.
4. Set the cool-down timer if cool-down is desired.
5. Press the start switch and hold momentarily until dryer reaches operating speed.

IMPORTANT: Normally, dryer operation will continue uninterrupted through the complete cycle determined by number time set on timer. However, opening the loading door will interrupt the circuits and the drive motor and main burners will cease to function. The signal light will remain on and the time cycle will continue independent of the interruption until expiration of the time on the timers or until drying cycle is resumed by closing the door and restarting the dryer to continue drying the clothes. Either the drying timer or the cool-down timer may be cancelled at any time by turning the knob counter-clockwise to "off".

6. The drying time depends on the size of the load and the type of clothes, the amount of water left in the clothes from the washer, and the room temperature and humidity.

CAUTION: DAMAGE CAN OCCUR IF ANY FABRIC, INCLUDING 100% COTTON IS RUN FOR AN EXTENDED PERIOD OF TIME ON "HOT" AFTER THE CLOTHES ARE DRY.

IMPORTANT: Clothes should be removed as soon as possible after the cycle is completed and the dryer is shut off, to prevent any excessive wrinkling.

SERVICING THE DRYER

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

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.

PREVENTIVE MAINTENANCE INSTRUCTIONS

DAILY

1. Clean lint screen. Use soft brush if necessary.
2. Check lint screen for tears. Replace if necessary.
3. Clean lint from lint screen compartment.

MONTHLY

1. Remove lint accumulation from end bells of motor.
2. Remove lint from meter compartment and meter mechanism.
3. Remove lint and dirt accumulation from top of the dryer and all areas above, below and around the burners and burner housing. Failure to keep this portion of the dryer clean can lead to a build-up of lint creating a fire hazard.
4. Place a few drops of light oil on clothes door hinge.

QUARTERLY

1. Check belts for looseness, wear or fraying.
2. Inspect gasket of door glass for excessive wear.
3. Check tightness of all fasteners holding parts to support channel.
4. Check tightness of all set screws.
5. Inspect impeller for tightness of blades to hub.
6. Check tightness of tumbler shaft retaining cap screw.
7. Remove back inspection plate and check tumbler thru-bolts for tightness.
8. Remove lint accumulation from primary air ports in burners.
9. Grease pivot pins and tension arms where in contact with each other.
10. Apply a few drops of oil to each spacer tube on the tension arm assembly.

SEMI-ANNUALLY

1. Remove and clean main burners.
2. Remove all orifices and examine for dirt and hole obstruction.
3. Remove all lint accumulation. Remove front panel, lint screen housing and remove lint accumulation.

ANNUALLY

1. Check intermediate pulley bearings for wear.
2. Check and remove any lint accumulation from exhaust system.