



OWNER'S MANUAL

30 Lb. Laundry Dryer



MODELS

GAS

L28US30G
L28UR30G

STEAM

L28UR30S

ELECTRIC

L28UR30E

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THIS MANUAL MUST BE GIVEN TO THE EQUIPMENT OWNER.

MAN2030 (ECN5752) 8/99 IH

IMPORTANT NOTICES—PLEASE READ

For optimum efficiency and safety, we recommend that you read the manual before operating the equipment. Store this manual in a file or binder and keep for future reference.



WARNING: Purchaser must post the following notice in a prominent location:



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

- Do not store or use gasoline or other flammable vapors or 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.



WARNING: In the event the user smells gas odor, instructions on what to do must be posted in a prominent location. This information can be obtained from the local gas supplier.



WARNING: Purchaser must post the following notice in a prominent location:



FOR YOUR SAFETY

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



WARNING: A clothes dryer produces combustible lint and should be exhausted outside the building. The dryer and the area around the dryer should be kept free of lint.



WARNING: Be safe, before servicing machine, the main power should be shut off.



WARNING: Wear safety shoes to prevent injuries.

**ATTENTION: L'ACHETEUR DOIT PLACER L'AVERTISSEMENT
SUIVANT DANS UN ENDROIT CLAIR ET VISIBLE:**

AVERTISSEMENT. Assurez-vous de bien suivre les instructions donnees dans cette notice pour reduire au minimum le risque d'incendie ou d'explosion ou pour eviter tuot dommage materiel, 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 a aucun interrupteur. Ne pas vous servir des telephones se trouvant dans le batiment ou vous vous trouvez.
- Evacuez la piece, le batiment ou la zone.
- Appelez immediatement 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 etre assures par un installateur ou un service d'entretien qualifie ou par le fournisseur de gaz.

**ATTENTION: L'ACHETEUR DOIT PLACER L'AVERTISSEMENT
SUIVANT DANS UN ENDROIT CLAIR ET VISIBLE:**

POUR VOTRE SECURITE

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.



WARNING: To avoid fire hazard, do not dry articles containing foam rubber or similar texture materials. Do not put into this dryer flammable items such as baby bed mattresses, throw rugs, undergarments (brassieres, etc.) and other items which use rubber as padding or backing. Rubber easily oxidizes causing excessive heat and possible fire. These items should be air dried.



WARNING: Synthetic solvent fumes from drycleaning machines create acids when drawn through the dryer. These fumes cause rusting of painted parts, pitting of bright or plated parts, and completely removes the zinc from galvanized parts, such as the tumbler basket. If drycleaning machines are in the same area as the tumbler, the tumbler's make-up air must come from a source free of solvent fumes.



WARNING: Do not operate without guards in place.



WARNING: Check the lint trap often and clean as needed but at least a minimum of once per day.



WARNING: Alterations to equipment may not be carried out without consulting with the factory and only by a qualified engineer or technician. Only **Manufacturers** parts may be used.



WARNING: Remove clothes from dryer as soon as it stops. This keeps wrinkles from setting in and reduces the possibility of spontaneous combustion.



WARNING: Be safe - shut main electrical power and gas supply off externally before attempting service.



WARNING: Never use drycleaning solvents, gasoline, kerosene, or other flammable liquids in the dryer. ***FIRE AND EXPLOSION WILL OCCUR. NEVER PUT FABRICS TREATED WITH THESE LIQUIDS INTO THE DRYER. NEVER USE THESE LIQUIDS NEAR THE DRYER..***



WARNING: Do not place items exposed to cooking oils in your dryer. Items contaminated with cooking oils may contribute to a chemical reaction that could cause a load to catch fire.



WARNING: Never let children play near or operate the dryer. Serious injury could occur if a child should crawl inside and the dryer is turned on.



WARNING: Never tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer. These fibers cause skin irritation if they become mixed with other fabrics.



WARNING: Before operating gas ignition system - purge air from natural gas or propane gas lines per manufacturer's instructions.



WARNING: To reduce the risk of electric shock, disconnect this appliance from the power supply before attempting any user maintenance other than cleaning the lint trap. Turning the controls to the OFF position does not disconnect this appliance from the power supply.

CISSELL DRYER WARRANTY

The Cissell Manufacturing Company (Cissell) warrants all new equipment (and the original parts thereof) to be free from defects in material or workmanship for a period of two (2) years from the date of sale thereof to an original purchaser for use, except as hereinafter provided. With respect to non-durable parts normally requiring replacement in less than two (2) years due to normal wear and tear, and with respect to all new repair or replacement parts for Cissell equipment for which the two (2) year warranty period has expired, or for all new repair or replacement parts for equipment other than Cissell equipment, the warranty period is limited to ninety (90) days from date of sale. The warranty period on each new replacement part furnished by Cissell in fulfillment of the warranty on new equipment or parts shall be for the unexpired portion of the original warranty period on the part replaced.

With respect to electric motors, coin meters and other accessories furnished with the new equipment, but not manufactured by Cissell, the warranty is limited to that provided by the respective manufacturer.

Cissell's total liability arising out of the manufacture and sale of new equipment and parts, whether under the warranty or caused by Cissell's negligence or otherwise, shall be limited to Cissell repairing or replacing, at its option, any defective equipment or part returned f.o.b. Cissell's factory, transportation prepaid, within the applicable warranty period and found by Cissell to have been defective, and in no event shall Cissell be liable for damages of any kind, whether for any injury to persons or property or for any special or consequential damages. The liability of Cissell does not include furnishing (or paying for) any labor such as that required to service, remove or install; to diagnose troubles; to adjust, remove or replace defective equipment or a part; nor does it include any responsibility for transportation expense which is involved therein.

The warranty of Cissell is contingent upon installation and use of its equipment under normal operating conditions. The warranty is void on equipment or parts; that have been subjected to misuse, accident, or negligent damage; operated under loads, pressures, speeds, electrical connections, plumbing, or conditions other than those specified by Cissell; operated or repaired with other than genuine Cissell replacement parts; damaged by fire, flood, vandalism, or such other causes beyond the control of Cissell; altered or repaired in any way that effects the reliability or detracts from its performance, or; which have had the identification plate, or serial number, altered, defaced, or removed.

No defective equipment or part may be returned to Cissell for repair or replacement without prior written authorization from Cissell. Charges for unauthorized repairs will not be accepted or paid by Cissell

CISSELL MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY, STATUTORY OR OTHERWISE, CONCERNING THE EQUIPMENT OR PARTS INCLUDING, WITHOUT LIMITATION, A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, OR A WARRANTY OF MERCHANTABILITY. THE WARRANTIES GIVEN ABOVE ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. CISSELL NEITHER ASSUMES, NOR AUTHORIZES ANY PERSON TO ASSUME FOR IT, ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE MANUFACTURE, USE OR SALE OF ITS EQUIPMENT OR PARTS.

For warranty service, contact the distributor from whom the Cissell equipment or part was purchased. If the distributor cannot be reached, contact Cissell.

IDENTIFICATION NAMEPLATE

The identification nameplate is located on the rear wall of the dryer. It contains the dryer serial number, product number, model number, electrical specifications and other important data that may be needed when servicing and ordering parts, wiring diagrams, etc. Do not remove this nameplate.

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30 LB. LAUNDRY DRYER



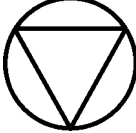

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SYMBOLS

The following symbols are used in this manual and/or on the machine:

| Symbol | Description |
|---|--|
|  | NOTE! |
|  | Hot! Do Not Touch Heiß! Nicht Berühren Haute temperature! Ne pas toucher Caliente! no tocar |
|  | dangerous voltage tension dangereuse Gefährliche elektrische Spannung tension peligrosa |
|  | on marche Ein conectado |
|  | off arrêt Aus desconectado |
|  | start demarrage Start arranque de un movimiento |
|  | emission of heat in general émission de chaleur en general Warmeabgabe allgemein emisión de calor |
|  | cooling refroidissement Kühlen enfriamiento |

SYMBOLS

| Symbol | Description |
|--|---|
|  | <p> rotation in two directions rotation dans les deux sens Drehbewegung in zwei Richtungen movimiento rotativo en los dos sentidos </p> |
|  | <p> direction of rotation sens de mouvement continu de rotation Drehbewegung in Pfeilrichtung movimiento giratorio o rotatorio en el sentido de la flecha </p> |
|  | <p>End of Cycle</p> |
|  | <p> caution attention Achtung atencion; precaucion </p> |
| | |

Unpacking/General Installation (All Dryers)

UNPACKING

Upon arrival of the equipment, any damage in shipment should be reported to the carrier immediately.

Upon locating permanent location of a unit, care should be taken in movement and placement of equipment.

See outline clearance diagrams for correct dimensions.

Remove all packing material such as: tape, manuals, skid, etc.

Leveling: Use spirit level on top of dryer. Adjust leveling bolts on dryer (see adjustable leveling bolts in maintenance section).

Check voltage and amperes on rating plate before installing the dryer.

The construction of the dryers permits installation side-by-side to save space or to provide a wall arrangement. Position dryer for the least amount of exhaust piping and elbows, and allow free access to the rear of dryer for future servicing of belts, pulleys and motors. Installation clearance from all combustable material is 0" ceiling clearance, 0" rear clearance, and 0" side clearance.

GENERAL INSTALLATION (ALL DRYERS)

Before operating dryer, open basket door and remove blocking between front panel and basket. Read the instruction tags, owner's manual, warnings, etc.

IMPORTANT

Opening the clothes loading door deactivates the door switch to shut off the motors, fan, gas, steam, or electric element. To restart the dryer, close the door and press in the push to start button and hold briefly.

IMPORTANT

This dryer is designed for a capacity maximum load. Overloading it will result in long drying times and damp spots on some clothes.

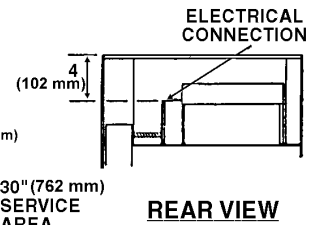
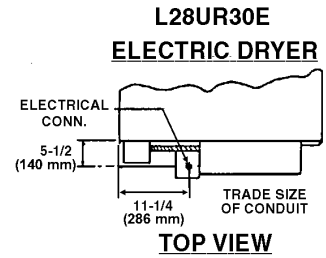
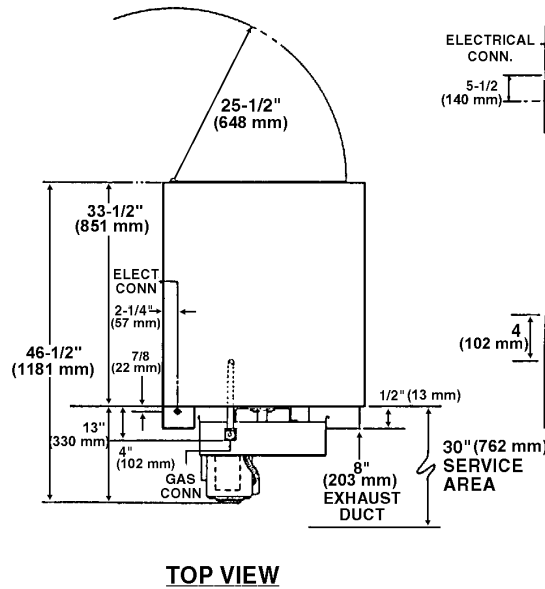
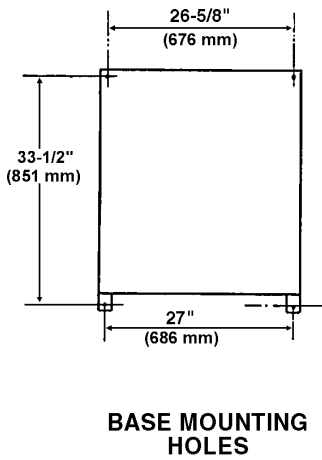
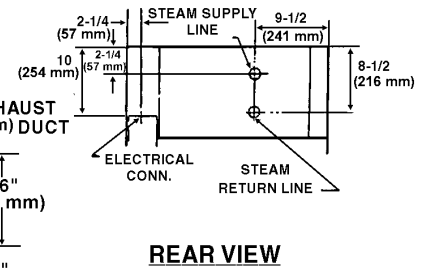
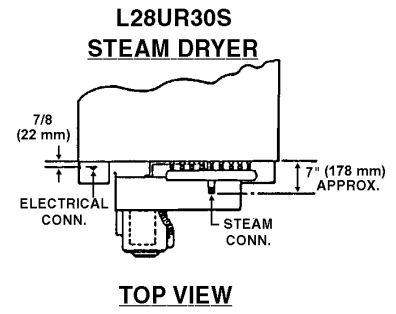
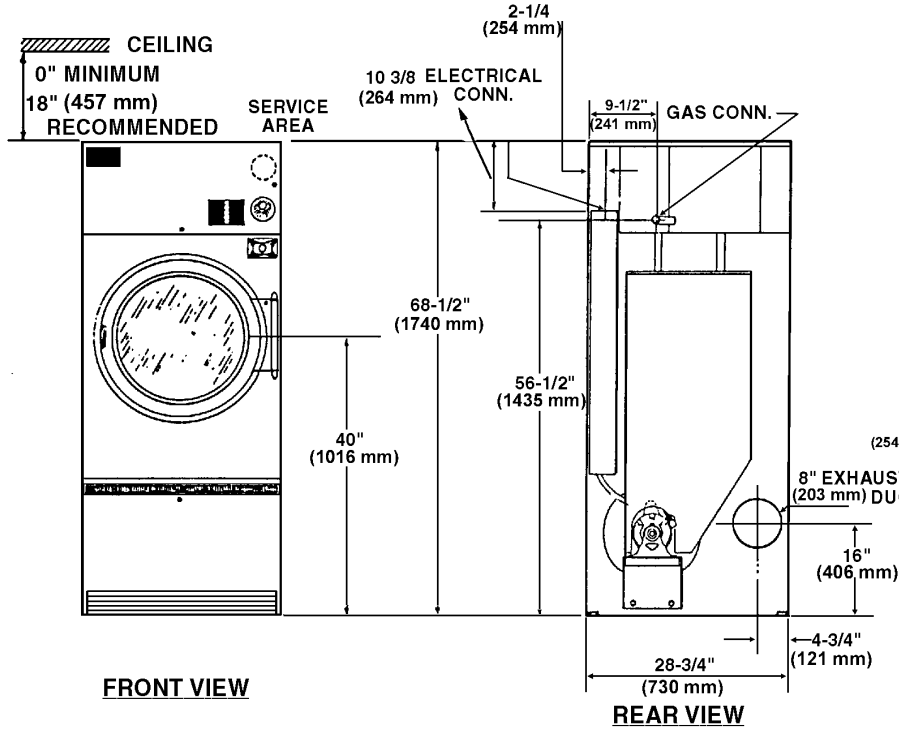
IMPORTANT

Maximum operating efficiency is dependent upon proper air circulation. The lint screen must be kept cleaned daily to insure proper air circulation throughout the dryer.

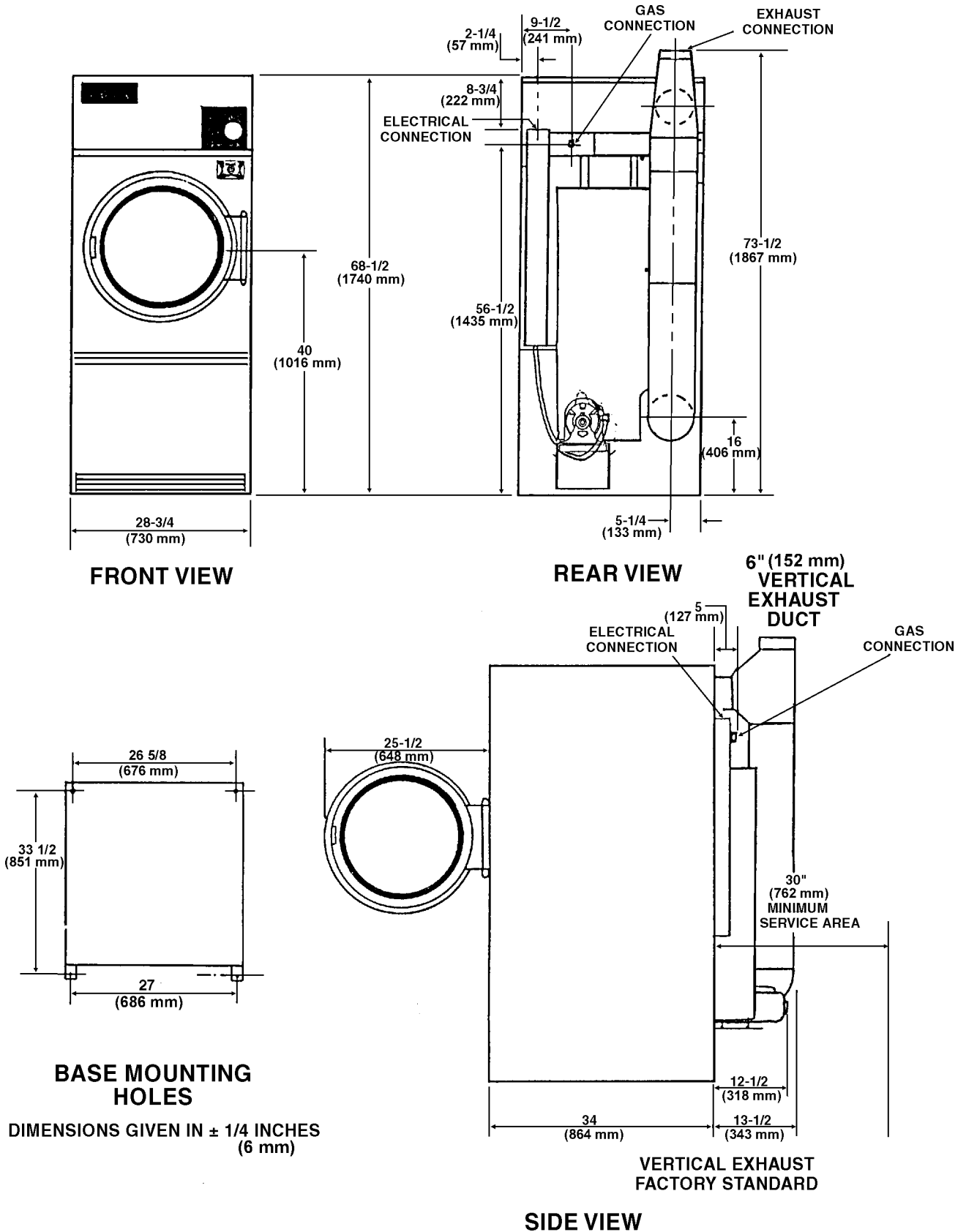
IMPORTANT

Provide adequate clearance for air opening into the combustion chamber.

L28UR30 Outline Dimensions—Gas, Steam and Electric Models



L28US30 Outline Dimensions—Gas Model



General Specifications

GENERAL SPECIFICATIONS FOR 30 lb. LAUNDRY DRYERS

| | |
|----------------------------------|--|
| Basket Load Capacity | 30 lb (13.6 kg) Dryweight |
| Basket Size | 27 1/4" (720 mm) Diameter x 30 1/4" (760 mm) Deep |
| Total Amps, Voltage, Cycle | Refer to rating plate on dryer |
| Floor Space | UR models: 68 1/2" H (1740 mm) x 28 3/4" W (730 mm) x 47 1/2" Deep (1207 mm) US models: 68" H (1727 mm) x 28 3/4" W (730 mm) x 47 1/2" Deep (1207 mm) |
| Exhaust Air Duct Size | UR: 8" Diameter (203 mm) US: 6" Diameter (152 mm) |
| Pressure Maximum | 3" Static Pressure |

30 lb. GAS ENERGY-SAVER SPECIFICATIONS

| | |
|--------------------------------|---|
| Maximum Air Displacement | 350 cfm (595 m ³ /h) |
| *Btu Input | 80,000 Btu per hour (natural and LP gases) |
| Dryer Gas Burners | Natural gas—3.5" (8.7 mbar) WC regulated pressure. LP gas—11" (27 mbar) WC gas pressure. |
| Gas Supply | 1/2" (DN15) pipe connection |
| Net Weight | 495 lb (225 kg) approx. |
| Domestic Shipping Weight | 526 lb (239 kg) approx. (1 carton) |
| Export Shipping Weight | 664 lb (301 kg) approx. (1 box) |

30 lb. GAS (STANDARD) SPECIFICATIONS

| | |
|-----------------------------------|---|
| Maximum Air Displacement | 700 cfm (1190 m ³ /h) |
| Recommended Operating Range | 530-630 cfm (900-1070 m ³ /h) |
| Gas Supply | 1/2" (DN15) pipe connection |
| *Btu Input | 100,000 Btu per hour (natural and LP gases) |
| Electronic Ignition | Direct spark ignition system |
| Net Weight | 437 lb (198 kg) approx. |
| Domestic Shipping Weight | 472 lb (214 kg) approx. (1 carton) |
| Export Shipping Weight | 476 lb (216 kg) approx. (1 box) |
| Export Shipping Dimensions | 74" L (1880 mm) x 31" W (787 mm) x 52" H (1321 mm) |

* Input ratings as shown are for elevations up to 2000 ft. (610 m).
For elevations above 2000 ft., ratings should be reduced 4% for each
1000 ft. (305 m) above sea level.

General Specifications

**30 lb. STEAM MODEL
SPECIFICATIONS**

| | |
|---|--|
| Maximum Air Displacement | 700 cfm (1190 m ³ /h) |
| Recommended Operating Range | 530-630 cfm (900-1070 m ³ /h) |
| Steam Supply Connection | 3/4" (DN20) |
| Steam Return Connection | 3/4" (DN20) |
| Operating Steam Pressure | 7-15 lb (3.18-6.9 kg) low pressure 100 lb (56.7 kg) high pressure |
| Steam Consumption | 3.4 BHP - 117.3 lb (53.21 kg/h. with normal load - high pressure 2.6 BHP - 89.7 lb (40.69 kg/h. with normal load - low pressure |
| Net Weight | 478 lb (217kg) |
| Domestic Shipping Weight (approx. 1 carton) | 522 lb (237kg) |
| Export Shipping Weight (approx. 1 box) | 526 lb (239 kg) |
| Export Shipping Dimensions | 74" L (1880 mm) x 35" W (889 mm) x 55" H (1397 mm) |

**30 LB. ELECTRIC MODEL
SPECIFICATIONS**

| | |
|---|--|
| Maximum Air Displacement | 700 cfm (1190 m ³ /h) |
| Recommended Operating Range | 530-630 cfm (900-1070 m ³ /h) |
| Heater Input | 21 kW/h (18,061 kcal/h) |
| Total Heater Current | See chart on separate page |
| Net Weight (approx.) | 463 lb (210 kg) |
| Domestic Shipping Weight (approx. 1 carton) | 498 lb (226kg) |
| Export Shipping Weight (approx. 1 box) | 513 lb (233kg) |
| Export Shipping Dimensions | 74" L (1880 mm) x 31" W (787mm) x 52" H (1321 mm) |

NOTE:
See electric heating unit section for further specifications.

Main Drive Motors

| <u>Motor No.</u> | <u>Voltage</u> | <u>Hz.</u> | <u>Phase</u> | <u>HP</u> | <u>kW</u> | <u>Amps</u> | <u>RPM</u> |
|-------------------------|-----------------------|-------------------|---------------------|------------------|------------------|--------------------|-------------------|
| MTR300 | 115/200-240 | 60 | 1 | 1/2 | .37 | 6.2/3.1 | 1725 |
| MTR300 | 200-240 | 50 | 1 | 1/2 | .37 | 3.7 | 1425 |
| MTR214 | 208-230/460 | 60 | 3 | 1/2 | .37 | 2.5/1.1 | 1725 |
| MTR302 | 200-240/346-415 | 50 | 3 | 1/2 | .37 | 2.0/1.0 | 1425 |
| MTR302 | 220/380 | 60 | 3 | 1/2 | .37 | 1.8/0.9 | 1725 |

Note: All motors have built-in thermal overload protection.

General Information

GENERAL INFORMATION

The dryer is so designed that when an operator opens the dryer door, the basket and exhaust fan stops. You can expect fast drying from a laundry dryer. Hot, dry air is properly and effectively moved through the basket and exhausted through a lint trap to the atmosphere. The dryer comes equipped with an inclined, self-cleaning lint screen. In this system, lint accumulates on the underside of the screen until a blanket approximately 1/4" (6 mm) thick is formed. This blanket of lint will fall from the screen to the bottom of the dryer cabinet and should be removed daily, or as required, to prevent an over accumulation.

Permanent press, durable press and other modern day fabrics require the care that your laundry dryers now provide.

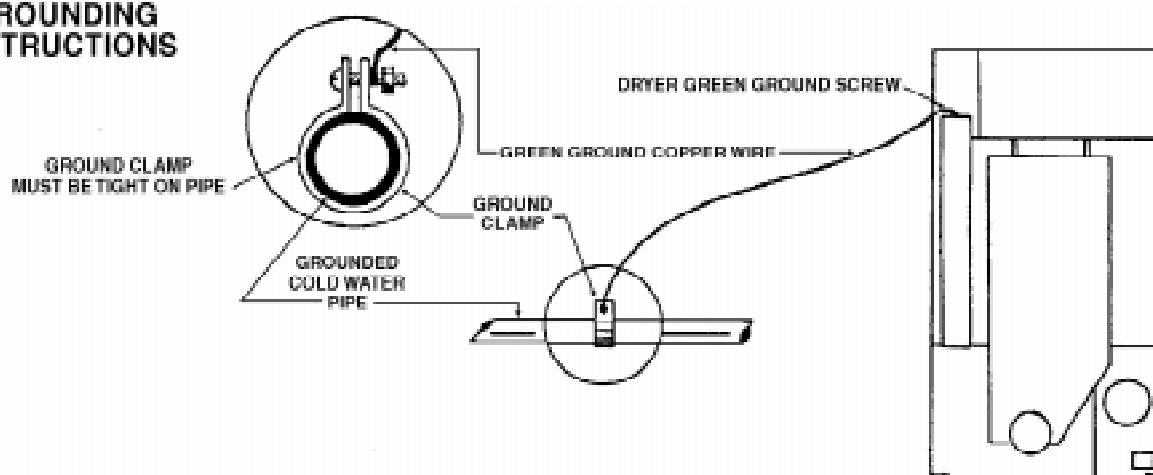
DRYER COOL-DOWN

At the end of the drying cycle, a timed "cool-down" control automatically takes over and continues the rotation of the fan and basket without heat until the garment load reaches a safe cool temperature. This function is performed at the end of each drying cycle and continues for two minutes.

Dryers must be electrically grounded by a separate #14 or larger green wire from the grounding terminal within the service connection box to a cold water pipe, or through the fourth green wire properly grounded and connected to the grounding terminal. In all cases, the

Grounding Instructions (Illustration)

GROUNDING INSTRUCTIONS



ELECTRICAL CONNECTIONS

grounding method must comply with local electrical code requirements; or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70* or the *Canadian Electrical Code, CA C22.1*.

See wiring diagram furnished with dryer. Your dryer is completely wired at the factory and it is only necessary for the electrician to connect the power leads to the wire connectors within the service connection box on the rear of the dryer. Do not change wiring without consulting factory as you may void the factory warranty. Do not connect the dryer to any voltage or current other than that specified on the dryer rating plate. (Wiring diagram is located on rear wall of dryer.)

ELECTRICAL CONTROLS SERVICING

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 operations d'entretien des commandes, etiqueter tous les fils avant de les deconnecter. Toute erreur de cablage peut etre une source de danger et de panne.

Piping Recommendations

**PIPING
RECOMMENDATIONS**

1. Trap each dryer individually. Always keep the trap clean and in good working condition.
2. When dryer is on the end of a line of equipment, extend header at least 4 feet (1.22 m) beyond dryer. Install globe valve, union, check valve and by-pass trap at end of line. If gravity return to boiler, omit trap.
3. Insulate steam supply and return line for safety of operator and safety while servicing dryer.
4. Keep dryer in good working condition. Repair or replace any worn or defective parts.

**STEAM HEATING
UNITS**

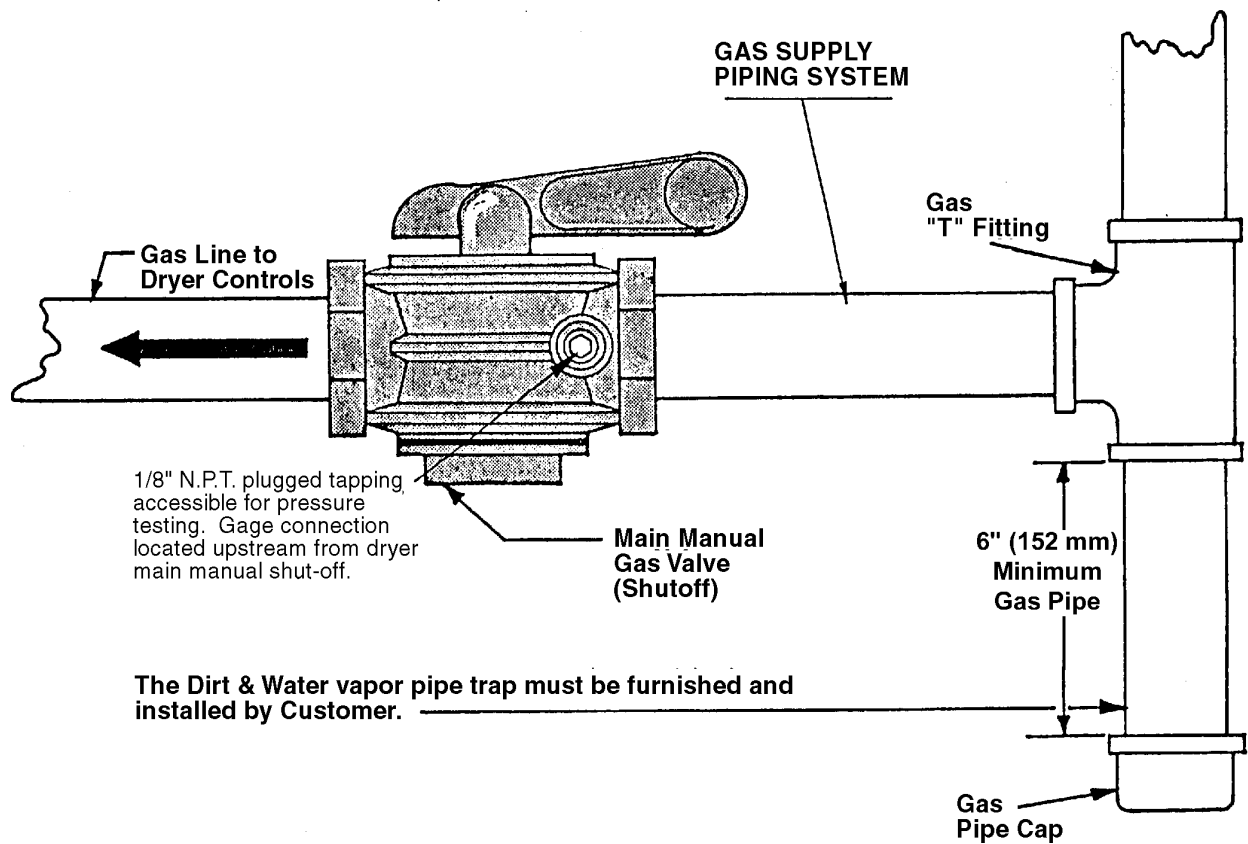
1. Keep steam coils clean.
2. Check periodically and clean as often as required.
3. Remove lint and dirt accumulation from coil fins periodically as dirty lint-laden coil fins decrease the efficiency of steam-heated dryers.

**GAS PIPING
INSTALLATION**

1. The installation must conform with local codes, or in the absence of local codes with the *National Fuel Gas Code, ANSI Z223.1* or the *CAN/CGA-B149, Installation Codes*.
2. Check identification nameplate for type of gas for dryer.
3. Check the altitude of dryer.
4. Check with utilities company for proper gas pressure and gas supply line.
5. Natural gas only—check the gas pressure inlet supply to dryer, 11 inches (27 mbar) water column maximum. Manifold pressure—3.5 inches (8.7 mbar) water column pressure.
6. L.P. gas only—manifold pressure—13 inches (32 mbar) water column maximum.

CAUTION: Low gas pressure and intermittent gas will cause gas ignition problems and inadequate drying of laundry.

Gas Piping Installation (Illustration)



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 psi (3.5 kPa).

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 psi (3.5 kPa).

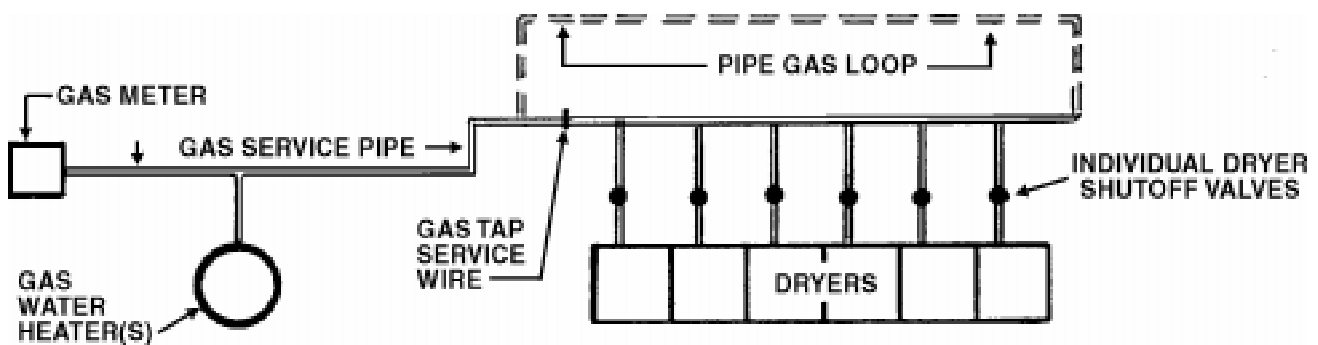
Gas Service Installation Instructions

GAS SERVICE INSTALLATION INSTRUCTIONS

The size of the gas service pipe is dependant upon many variables, such as tees, lengths, etc. Specific pipe size should be obtained from the gas supplier. Refer to the "Gas Pipe Size" chart in this manual for general gas pipe size information.

CAUTION: Gas loop piping must be installed as illustrated to maintain equal gas pressure for all dryers connected to a single gas service

Other gas-using appliances should be connected upstream from the loop.



**WARNING:
LIQUIFIED PETROLEUM GASES ONLY!**

GAS PRESSURE REGULATOR FOR LIQUIFIED PETROLEUM GASES

A gas pressure regulator for liquified petroleum gases is not furnished on gas heated clothes dryers. This regulator is normally furnished by the installer. In accordance with American Gas Association (AGA) standards, a gas pressure regulator, when installed indoors, must be equipped with a vent limiter or a vent line must be installed from the gas pressure regulator vent to the outdoors.

Gas Pipe Size Chart

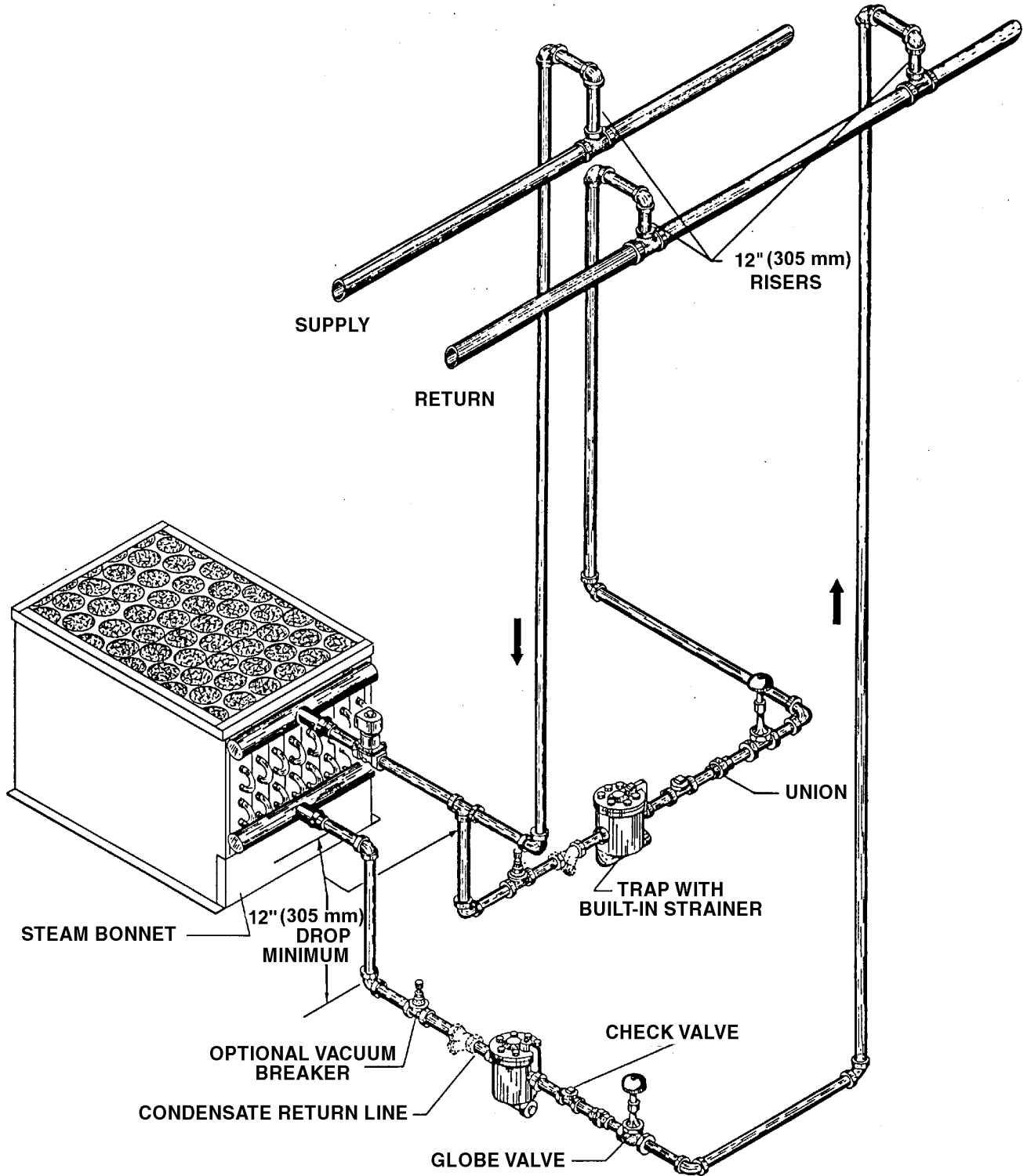
| TOTAL BTU/HR (for LP Gas correct total BTU/HR below by multiplying by .6) | TOTAL KCAL | GAS PIPE SIZE FOR 1000 BTU (250 KCAL) NATURAL GAS AT 7" (17.8 CM) W.C. PRESSURE | | | | | |
|--|---------------|--|---------------------|---------------------|----------------------|---------------------|----------------------|
| | | In figuring total length of pipe, make allowance for tees and elbows. | | | | | |
| | | (25 ft.) 7,62 m | (50 ft.) 15,24 m | (75 ft.) 22,86 m | (100 ft.) 30,48 m | (125 ft.) 38,1 m | (150 ft.) 45,72 m |
| 60,000 | 15000 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 80,000 | 20000 | 3/4 | 3/4 | 3/4 | 1 | 1 | 1 |
| 100,000 | 25200 | 3/4 | 3/4 | 1 | 1 | 1 | 1 |
| 120,000 | 30200 | 3/4 | 1 | 1 | 1 | 1 | 1 |
| 140,000 | 35200 | 3/4 | 1 | 1 | 1 | 1 | 1 1/4 |
| 160,000 | 40300 | 3/4 | 1 | 1 | 1 1/4 | 1 1/4 | 1 1/4 |
| 180,000 | 45300 | 1 | 1 | 1 | 1 1/4 | 1 1/4 | 1 1/4 |
| 200,000 | 50400 | 1 | 1 | 1 1/4 | 1 1/4 | 1 1/4 | 1 1/2 |
| 300,000 | 75600 | 1 | 1 1/4 | 1 1/4 | 1 1/2 | 1 1/2 | 1 1/2 |
| 400,000 | 100800 | 1 1/4 | 1 1/4 | 1 1/2 | 1 1/2 | 1 1/2 | 2 |
| 500,000 | 126000 | 1 1/4 | 1 1/2 | 1 1/2 | 2 | 2 | 2 |
| 600,000 | 151200 | 1 1/2 | 1 1/2 | 2 | 2 | 2 | 2 |
| 700,000 | 176400 | 1 1/2 | 2 | 2 | 2 | 2 | 2 1/2 |
| 800,000 | 202000 | 1 1/2 | 2 | 2 | 2 | 2 1/2 | 2 1/2 |
| 900,000 | 230000 | 2 | 2 | 2 | 2 1/2 | 2 1/2 | 2 1/2 |
| 1,000,000 | 250000 | 2 | 2 | 2 | 2 1/2 | 2 1/2 | 2 1/2 |
| 1,100,000 | 270000 | 2 | 2 | 2 1/2 | 2 1/2 | 2 1/2 | 2 1/2 |
| 1,200,000 | 300000 | 2 | 2 | 2 1/2 | 2 1/2 | 2 1/2 | 2 1/2 |
| 1,300,000 | 330000 | 2 | 2 1/2 | 2 1/2 | 2 1/2 | 2 1/2 | 3 |
| 1,400,000 | 350000 | 2 | 2 1/2 | 2 1/2 | 2 1/2 | 3 | 3 |
| 1,500,000 | 380000 | 2 | 2 1/2 | 2 1/2 | 2 1/2 | 3 | 3 |
| 1,600,000 | 400000 | 2 | 2 1/2 | 2 1/2 | 3 | 3 | 3 |
| 1,700,000 | 430000 | 2 | 2 1/2 | 2 1/2 | 3 | 3 | 3 |
| 1,800,000 | 450000 | 2 1/2 | 2 1/2 | 3 | 3 | 3 | 3 |
| 1,900,000 | 480000 | 2 1/2 | 2 1/2 | 3 | 3 | 3 | 3 |
| 2,000,000 | 504000 | 2 1/2 | 2 1/2 | 3 | 3 | 3 | 3 1/2 |
| 2,200,000 | 550000 | 2 1/2 | 3 | 3 | 3 | 3 1/2 | 3 1/2 |
| 2,400,000 | 605000 | 2 1/2 | 3 | 3 | 3 | 3 1/2 | 3 1/2 |
| 2,600,000 | 650000 | 2 1/2 | 3 | 3 | 3 1/2 | 3 1/2 | 3 1/2 |
| 2,800,000 | 705000 | 2 1/2 | 3 | 3 | 3 1/2 | 3 1/2 | 3 1/2 |
| 3,000,000 | 750000 | 2 1/2 | 3 | 3 1/2 | 3 1/2 | 3 1/2 | 4 |
| 3,200,000 | 806000 | 3 | 3 | 3 1/2 | 3 1/2 | 3 1/2 | 4 |
| 3,400,000 | 850000 | 3 | 3 1/2 | 3 1/2 | 3 1/2 | 4 | 4 |
| 3,600,000 | 907000 | 3 | 3 1/2 | 3 1/2 | 3 1/2 | 4 | 4 |
| 3,800,000 | 960000 | 3 | 3 1/2 | 3 1/2 | 4 | 4 | 4 |
| 4,000,000 | 1000000 | 3 | 3 1/2 | 3 1/2 | 4 | 4 | 4 |

Steam Piping Installation Instructions

STEAM PIPING INSTALLATION INSTRUCTIONS

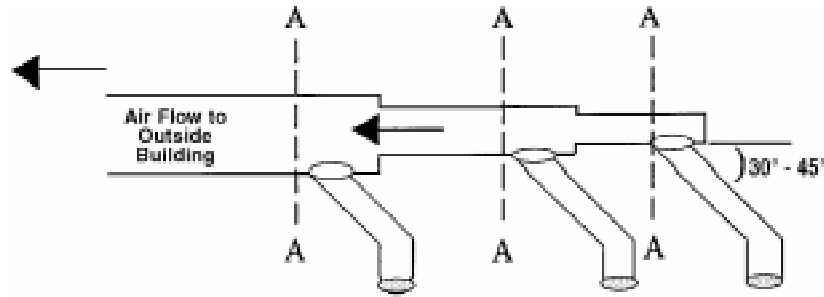
1. Set and anchor dryer in position. Machine should be level to assure proper steam circulation.
2. To prevent condensate draining from headers to dryer, piping should have a minimum 12" (305 mm) above respective header. Do not make steam connection to header with a horizontal or downwardly facing tee or elbow.
3. Whenever possible, horizontal runs of steam lines must drain, by gravity, to respective steam header. Water pockets, or an improperly drained steam header will provide wet steam, causing improper operation of dryer. If pockets or improper drainage cannot be eliminated, install a by-pass trap to drain condensate from the low point in the steam supply header to the return.
4. In both steam supply and steam return line, it is recommended that each have a 3/4" (DN 20) union and 3/4" (DN 20) globe valve. This will enable you to disconnect the steam connections and service the dryer while your plant is in operation.
5. Before connecting trap and check valve to dryer, open globe valve in steam supply line and allow steam to flow through dryer to flush out any dirt and scale from dryer. This will assure proper operation of trap when connected.
6. After flushing system, install bucket trap (with built-in strainer) and check valve. For successful operation of dryer, install trap 18" (457 mm) below coil and as near to the dryer as possible. Inspect trap carefully for inlet and outlet markings and install according to trap manufacturer's instructions. If steam is gravity returned to boiler, omit trap but install check valve in return line near dryer.
7. Install union and globe valve in return line and make final pipe connections to return header.

Steam Piping Installation (Illustration)



Dryer Installation With Multiple Exhaust

For Exhaust Duct less than 14 feet (4.3 m) and 2 elbows equivalent and less than 0.3 inches (7.6 mm) water column static pressure.



DRYER EXHAUSTS

Area of section "A-A" must be equal to the sum of dryer exhaust pipes entering multiple exhaust pipe. (See chart below.)

MODELS: L28FD30, L28US30, L36FD30, L36US30, L36US36, L44FD42

No. of dryers
Duct diameter
(in inches)

(in cm)

| | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 6 | 9 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 23 | 24 | 25 | 26 | 26 | 27 | 28 | 28 | 29 | 30 |
| 15 | 23 | 27 | 30 | 35 | 38 | 41 | 43 | 46 | 48 | 51 | 53 | 56 | 58 | 58 | 61 | 63 | 66 | 66 | 68 | 71 | 71 | 73 | 76 |

MODELS: L28CD30, L28UR30, L36CD30, L36UR30, L36UR36, L36AR36, L44FD42

No. of dryers
Duct diameter
(in inches)

(in cm)

| | | | | | | | | | | | | | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 8 | 12 | 14 | 16 | 18 | 20 | 22 | 23 | 24 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 20 | 30 | 25 | 41 | 46 | 51 | 56 | 58 | 61 | 66 | 68 | 71 | 73 | 76 | 78 | 81 | 84 | 86 | 89 | 91 | 94 | 97 | 99 | 100 |

MODELS: L44CD42, L50CD42

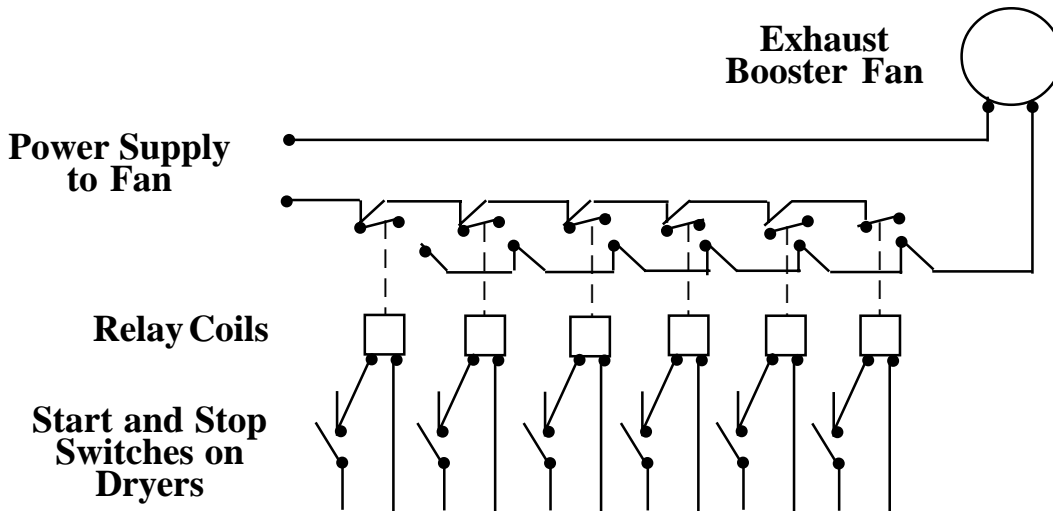
No. of dryers
Duct diameter
(in inches)

(in cm)

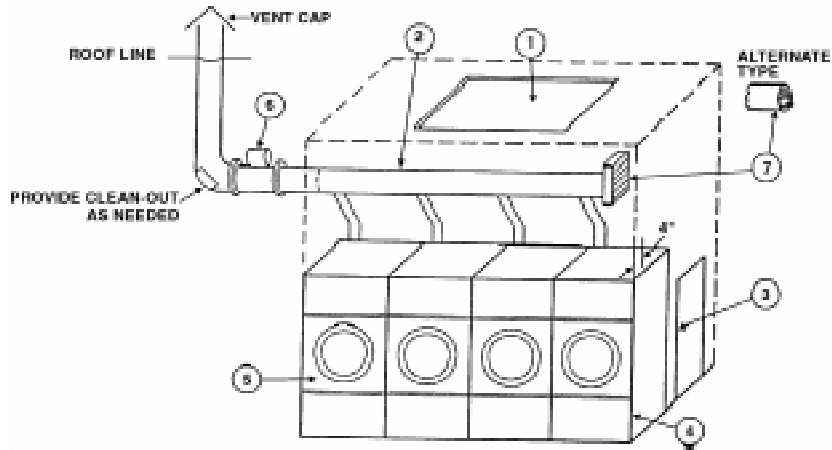
| | | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 12 | 17 | 21 | 24 | 27 | 30 | 32 | 34 | 36 | 38 | 40 | 42 |
| 30 | 43 | 53 | 61 | 68 | 76 | 81 | 86 | 91 | 97 | 100 | 106 |

AUTOMATIC ELECTRICAL CONTROL FOR EXHAUST FAN

For one or more dryers to start fan.



Dryer Installation With Multiple Exhaust



DRYER INSTALLATION WITH MULTIPLE EXHAUST

For Exhaust Duct more than 14 feet (5 m) and 2 elbows equivalent and more than 0.3 inches (8 mm) water column static pressure.
(See illustration on next page.)

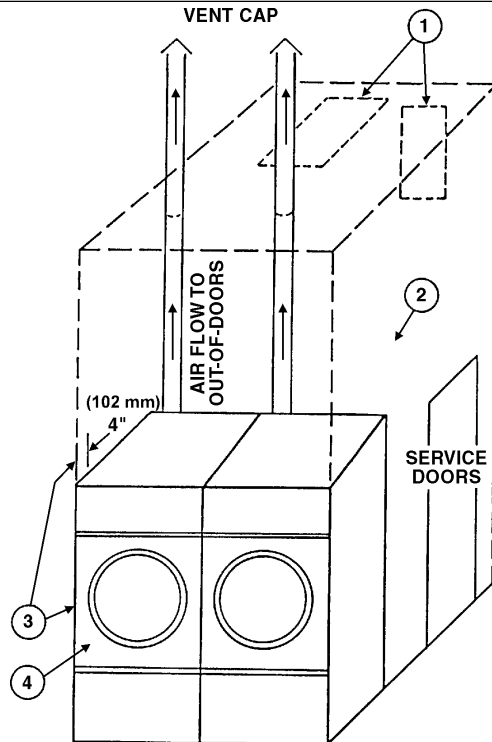
1. Make-up air from outside building may enter enclosure from top or side walls. (See *Dryer Make-up Air Requirements Chart*)
2. Use constant diameter duct with area equal to the sum of dryer duct areas.
EXAMPLE: 6-8 inches (203 mm) diameter duct = 1-19.6 inches (498 mm) diameter duct in area. Use 20 inches (508 mm) diameter duct or diameter to match tube-axial fan.
3. Enclosure (plenum) with service door. This separates the dryer air from room comfort air. If dryers use room air instead of outside air, the heat loss can be another 25 Btu/h (6.3 kcal/h) for each cubic foot per minute (cfm) used.
4. Zero inches clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
5. Heat loss into laundry room from dryer fronts *only* is about 60 Btu/h per square foot (15 kcal/h per 0.1m²).
6. Flange mounted, belt driven tube-axial fan. Fan must run when one or more dryers are running. See *suggested Automatic Electrical Control Wiring Diagram on previous page*. Must meet local electrical codes. Fan air flow (cfm) (m³/h.) is equal to sum of dryer air flows, but static pressure (SP) is dependent on length of pipe and number of elbows.
7. Barometric bypass damper—Adjust to *closed flutter position* with all dryers and exhaust fan running. Must be located within enclosure.

CAUTION: *Never install hot water heaters or other gas appliances in the same room as dryers. Never install cooling exhaust fans in the same room as dryers.*

CAUTION: *Never exhaust dryers with other types of equipment.*



Dryer Installation With Separate Exhaust (Preferred)



DRYER INSTALLATION WITH SEPARATE EXHAUST (PREFERRED)



For ductwork less than 14 feet (5 m) and 2 elbows equivalent and less than 0.3 inches (8 mm) water column static pressure:

NEVER exhaust the dryer into a chimney.

NEVER install wire mesh screen over the exhaust or make-up air area.

NEVER exhaust into a wall, ceiling, or concealed space.

1. Make-up air opening from outside the building may enter the enclosure from the top or side walls. (*See Dryer Make-up Air Requirements Chart*)
2. Enclosure (plenum) with service door. This separates the dryer air from the room comfort air. If dryers use room air instead of outside air, additional heat loss can be another 25 Btu/h (6.3 kcal/h) for each cubic foot per minute (cfm) (1.8 m³/h) used.
3. Zero inches (mm) clearance to combustible material allowed on sides and at points within 4 inches (100 mm) of front on top.
4. Heat loss into laundry room from dryer front panels is about 60 Btu/h per square foot (15 kcal/h per 0.1m²).

Suggested Minimum Dryer Make-up Air Requirements

| Dryer Model | Dryer Pocket Capacity | | Maximum Air Flow Rate per Pocket | | Duct Size For Service Connection | | Required Make-up Air Area per Pocket | |
|-------------|-----------------------|------|----------------------------------|------|----------------------------------|-----|--------------------------------------|------|
| | lb | kg | cfm | m3/h | inch | mm | sq. inch | cm2 |
| C 30 | 30 | 13.6 | 700 | 1190 | 8 | 203 | 135 | 871 |
| C 30 E/S | 30 | 13.6 | 400 | 680 | 6 | 153 | 77 | 497 |
| C 30 ST | 30 | 13.6 | 450 | 765 | 6 | 153 | 87 | 561 |
| C 50 | 50 | 22.7 | 800 | 1360 | 8 | 203 | 154 | 994 |
| C 50 E/S | 50 | 22.7 | 450 | 765 | 6 | 153 | 87 | 561 |
| C 75 | 75 | 34 | 1000 | 1700 | 8 | 203 | 192 | 1239 |
| C 75 E/S | 75 | 34 | 536 | 911 | 6 | 153 | 103 | 665 |
| C 75 ST | 75 | 34 | 1000 | 1700 | 12 | 305 | 192 | 1239 |
| HD80 | 80 | 36.3 | 1465 | 2490 | 10 | 254 | 282 | 1819 |
| C 110 | 110 | 50 | 2200 | 3740 | 12 | 305 | 422 | 2723 |
| C 110 E/S | 110 | 50 | 850 | 1445 | 8 | 203 | 163 | 1052 |
| C 125 | 125 | 56.7 | 2000 | 3400 | 12 | 305 | 384 | 2477 |
| C 150 | 150 | 68 | 2250 | 3825 | 12 | 305 | 432 | 2787 |
| HD175 | 175 | 79.4 | 2780 | 4726 | 12 | 305 | 534 | 3445 |
| HD190 | 190 | 86.2 | 3000 | 5100 | 12 | 305 | 576 | 3716 |
| WMC/HD20 | 20 | 9.1 | 450 | 765 | 6 | 153 | 87 | 561 |
| WMC/HD30 | 30 | 13.6 | 625 | 1063 | 8 | 203 | 120 | 774 |
| WMC/HD50 | 50 | 22.7 | 700 | 1190 | 8 | 203 | 135 | 871 |
| WMC/HD75 | 75 | 34 | 750 | 1275 | 8 | 203 | 144 | 929 |

Notes:

- 1) The Model C 30 ST has 2 pockets per dryer, each pocket has the above listed characteristics; each pocket is exhausted separately with a 6" (152 mm) duct.
- 2) The Model C 75 ST has 2 pockets per dryer, each pocket has the above listed characteristics; both pockets have one 8" (203 mm) exhaust manifolded into one 12" (305 mm) exhaust duct for connection.
- 3) For the C 30 ST and the C 75 ST Models, the Required Make-up Air Area shown in the table should be doubled since it is shown per pocket, only.
- 4) E/S indicates an Energy Saving Model.

Exhaust and Venting

DRYER AIR FLOW INSTALLATION

Nothing is more important than air flow for the proper operation of a clothes dryer. A dryer is a pump which draws make-up air from the out-of-doors, through the heater, through the clothes and then forces the air through the exhaust duct back to the out-of-doors. Just as in a fluid water pump, there must be a fluid air flow to the inlet of the dryer, if there is to be the proper fluid air flow out of the exhaust duct.

In summary, there must be the proper size out-of-doors inlet air opening (4-6 times the combined areas of the air outlet) and an exhaust duct, size and length of which allows flow through the dryer with no more than 0.3 inches (7.6 mm) water column static pressure in the exhaust duct.

In some instances, special fans are required to supply make-up air, and/or boost exhaust fans are required for both regular and energy saving models.

EXHAUST DUCT

FOR BEST DRYING:

1. Exhaust duct maximum length 14 feet (4.3 m) of straight duct and maximum of two 90° bends.
2. Use 45° and 30° elbows wherever possible.
3. Exhaust each dryer separately.
4. Use 2 feet (0.6 m) of straight duct on dryer before installing an elbow on Energy-Saver models only.
5. **Do not** install wire mesh or other restrictions in the exhaust duct.
6. Use clean-outs in the exhaust duct and clean periodically when needed.
7. **Never** exceed 0.3 inches (7.6 mm) water column static pressure in the exhaust duct.
8. Inside surface of the duct must be smooth.
9. Recommend pop rivets for duct assembly.

MAKE-UP AIR

FOR BEST DRYING:

1. Provide opening to the out-of-doors in accordance with the following:
For each dryer—
6 inches (152 mm) diameter exhaust requires a 1 square feet (0.1 m²) opening for make-up air.
8 inches (203 mm) diameter exhaust requires a 2 square feet (0.2 m²) opening for make-up air.
12 inches (305 mm) diameter exhaust requires a 4 square feet (0.4 m²) opening for make-up air.
2. Use barometric shutters in the inlet air opening to control air when dryers are not running.

OTHER RECOMMENDATIONS

Other Recommendations

To assure compliance, consult local building code requirements.

TROUBLESHOOTING

Troubleshooting

Hot dryer surfaces, scorched clothes, slow drying, lint accumulations, or air switch malfunction are indicators of exhaust duct and/or make-up air problems.

Rules for Safe Operation of Dryer

RULES FOR SAFE OPERATION OF DRYER

1. Be sure your dryer is installed properly in accordance with the recommended instructions.
2. **CAUTION**
Be safe—shut main electrical power supply and gas supply off externally before attempting service.
3. **CAUTION**
Never use drycleaning solvents: gasoline, kerosene, or other flammable liquids in the dryer. ***Fire and explosion will occur.***
Never put fabrics treated with these liquids into the dryer.
Never use these liquids near the dryer.
Always keep the lint screen clean.
Never use heat to dry items that contain plastic, foam or sponge rubber, or rags coated with oils, waxes or paints. The heat may damage the material or create a fire hazard. Rubber easily oxidizes, causing excessive heat and possible fire.
Never dry the above items in the dryer.
4. **Never** let children play near or operate the dryer. Serious injury will occur if a child should crawl inside and the dryer is turned on.
5. **Never** use dryer door opening and top as a step stool.
6. Read and follow manufacturer's instructions on packages of laundry and cleaning aids. Heed any warnings or precautions.
7. **Never** tumble fiberglass materials in the dryer unless the labels say they are machine dryable. Glass fibers break and can remain in the dryer and could cause skin irritation if they become mixed into other fabrics.
8. Reference: Lighting and shut-down instructions and wiring diagrams are located on the rear wall of the dryer cabinet.
9. The dryer must not be installed or stored in an area where it will be exposed to water and/or weather.

ENERGY-SAVING TIPS

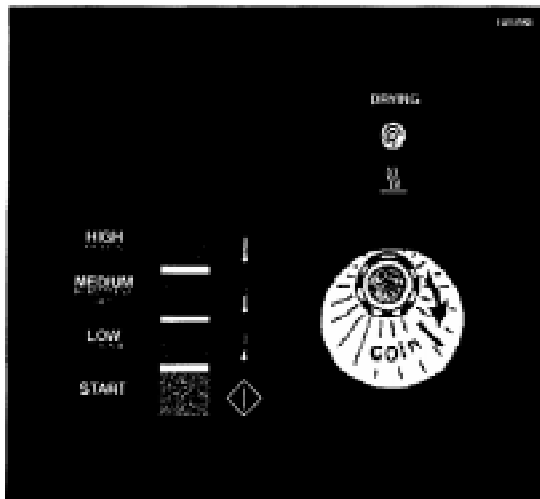
1. Install dryer so that you can use short, straight venting. Turned elbows and long vent tubing tend to increase drying time. Longer drying time means the use of more energy and higher operating costs.
2. Operate dryer using full-size loads. Very large loads use extra energy. Very small loads waste energy.
3. Dry light-weight fabrics separately from heavy fabrics. You will use less energy and get more even drying results by drying fabrics of similar weight together.
4. Clean the lint screen area daily. A clean lint screen helps give faster, more economical drying.
5. **Do not** open the dryer door while drying. You let warm air escape from the dryer into the room.
6. Unload the dryer as soon as it stops. This saves having to re-start your dryer to remove wrinkles.

Operating Instructions—Coin Meter Models

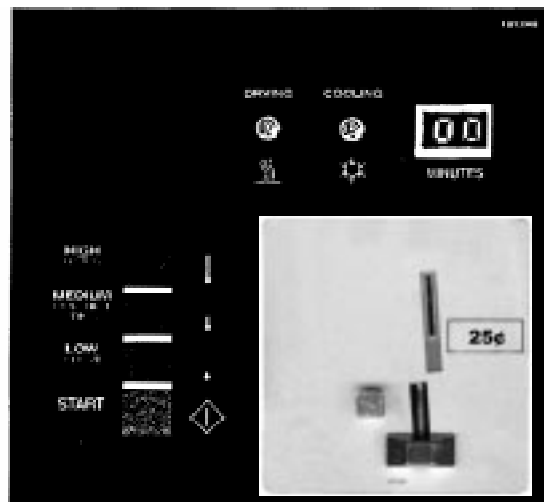
OPERATING INSTRUCTIONS—COIN METER MODELS

OPERATING INSTRUCTIONS—COIN METER MODELS

1. After loading the dryer with water washed clothes, close the loading door.
2. **ELECTRO-MECHANICAL COIN METER:** Insert proper coin(s) in slot and turn knob until it stops.
COMPUTERIZED COIN METER: Insert coin. Amount of drying time will appear on the digital display. Maximum time is 99 minutes. Additional coins may be vended any time during the cycle.
3. Select temperature setting using proper push button.
HIGH—185° F (85° C) exhaust temperature, *heavy fabrics and hard to dry, (cottons and linens).*
MEDIUM—150° F (66° C) exhaust temperature, *permanent press, synthetic blends.*
LOW—135° F (57° C) exhaust temperature, *delicate, sheer fabrics.*
4. Press the “**Start**” button to start the drying and cooling cycles.



ELECTRO-MECHANICAL COIN METER



COMPUTERIZED COIN METER

WHAT IS HAPPENING AFTER STEP 4:

1. Digital Display will count down time remaining in cycle (Computerized Coin Meter).
2. The fan motor and basket will revolve.
3. The heat source will be energized.
4. The heated air will mix with the wet clothes and evaporate the moisture.
5. The thermostats will operate at a safe temperature.
6. The heat will shut off and the cooling cycle will begin.

IMPORTANT

IMPORTANT

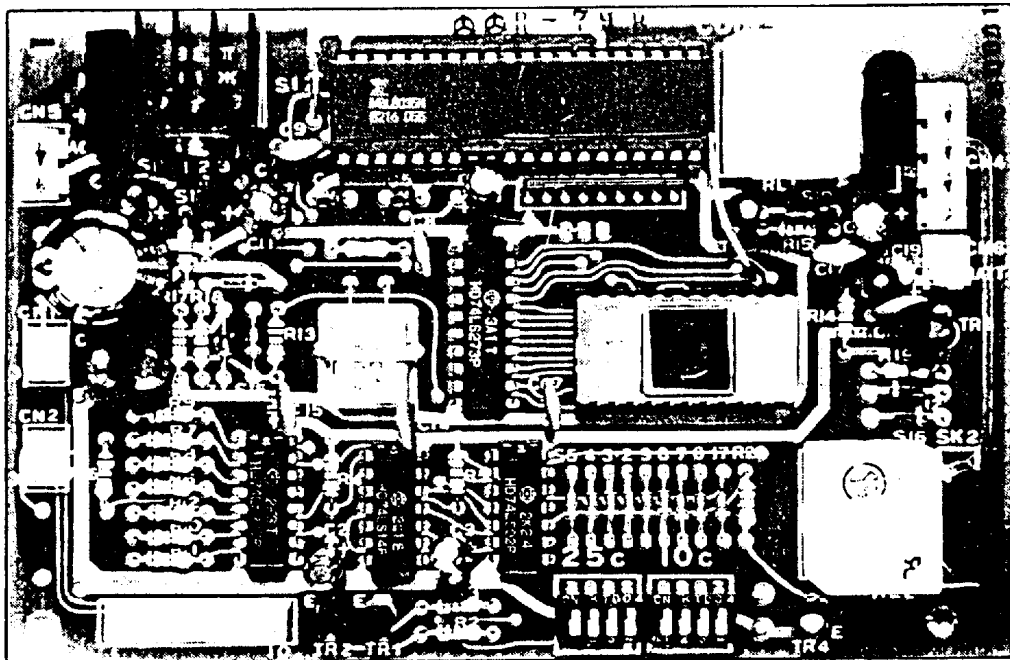
If the tumbler door is opened during the drying cycle, the fan and heat will shut off. Press **“START”** button to resume the cycle.

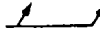
This dryer is designed for a capacity maximum load. Overloading it will result in longer drying time and damp spots on some of the load.

Maximum operating efficiency depends on proper air flow. The lint screen must be kept clean daily to insure proper circulation of air throughout the dryer.

This commercial dryer has keys for the lint door and access door to burners and controls. This is for the safety of the user.

COMPUTERIZED COIN METER

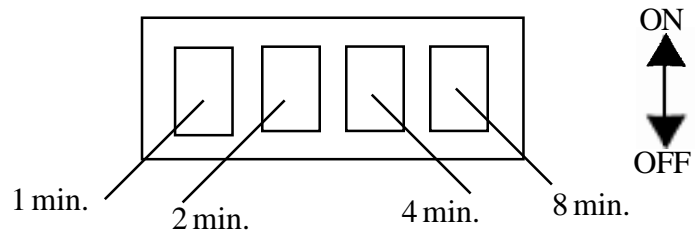


DIP Switch Banks are located here 

Setting Time On Computerized Coin Meter

INSTRUCTIONS FOR SETTING TIME ON COMPUTERIZED COIN METER

1. This control is equipped with two banks of four DIP switches.
2. Each DIP switch bank consists of 4 small switches each with a specified amount of time (minutes), as shown:

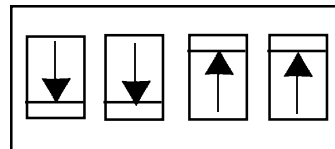


3. To set the time on the DIP bank simply set the appropriate switch to the **ON** (up) position to total the desired amount of time.

NOTE

OFF (down) position equals 0 minute.

EXAMPLE: 25¢ for 12 minutes



MINUTES: 0 + 0 + 4 + 8 = 12 min.

Service Savers

TROUBLESHOOTING

To help you troubleshoot the dryer, we list below the most common reasons for service calls and some answers to the problems. Before you call service, please review the following items:

DRYER WON'T START

DRYER WON'T START

1. Is the door completely closed?
2. Are the controls set to the “**on**” position?
3. Did you push the “**start**” control?
4. Has a fuse blown or a circuit breaker tripped?
5. Are the fuses tight?
6. Check for low voltage.
7. Has the bonnet thermostat (gas only) tripped? If so, push to reset.

DRYER WON'T HEAT

DRYER WON'T HEAT

1. Is the dryer set for “**cooling time**” rather than “**drying time**”?
2. Are the gas valve in the dryer and the valve on the main gas line turned on?
3. Check for low or intermittent gas pressure.
4. Check spark ignition module diagnostic light.

CLOTHES ARE NOT SATISFACTORILY DRY

CLOTHES ARE NOT SATISFACTORILY DRY

1. *Timed cycle*—Did you allow enough heating time before the cool-down part of the cycle?
2. Is the lint screen blocked?
3. Is the exhaust duct to the outside clean and not blocked? (*A blocked exhaust will cause slow drying and other problems.*)

GAS DRYER IGNITION

GAS DRYER IGNITION

Refer to the page on “*Instructions for the Direct Ignition System Operation*”. Check to see if the manual gas valve is open. Then reset the dryer controls. All panels, covers, and doors must be in place and closed before starting the dryer.

VERY IMPORTANT

VERY IMPORTANT

When calling the factory for service, always refer to the model number and serial number.

Troubleshooting Chart

Troubleshooting Chart

| TROUBLE | CAUSE | REMEDY |
|--|--|---|
| Motor will not start. | No power. | Check fuses on circuit breakers. Make sure main control switch is "on". Check bonnet thermostat (gas only). |
| | Incorrect power. | Check power source; voltage, phase and frequency must be the same as specified on electrical rating plate. |
| | Time off. | Check timer for proper setting or check coin meter for properly vending. |
| | Loose wiring connections. | Check wire connections in electrical box on rear of dryer. |
| | Loading door open. | Close door. |
| | Door switch out of adjustment. | Adjust switch by removing front panel and bend actuator lever to clear switch button 3/8" with front panel in place. |
| | Defective door switch. | Replace switch. |
| | Defective basket motor contactor. | Replace contractor. |
| Motor tripping on thermal. | Tripped/defective safety thermostat on gas bonnet. | Reset/replace thermostat. |
| | Low voltage. | Check voltage at motor terminals. Voltage must be within $\pm 10\%$ of voltage shown on motor rating plate. If not, check with local power company for recommended corrective measures. |
| | Inadequate wiring. | Check with local power company to insure that wiring is adequately sized for load. |
| | Loose connections. | Check all electrical connections and tighten any loose connections. |
| | Inadequate air. | Check installation sheet for recommended make-up air openings. |
| Poor housekeeping. | Clean lint accumulation on and around motors. | |
| Dryer does not stop at end of time period. | Defective timer. | Replace timer. |
| Motor runs but basket will not revolve. | V-belt broken. | Replace V-belt. |
| | V-belt loose. | Adjust belt tension. |
| | Motor pulley loose. | Tighten set screw. |
| | Basket overloaded. | Remove load. |

Troubleshooting Chart

Troubleshooting Chart

| TROUBLE | CAUSE | REMEDY |
|---------------------------|---|---|
| Dryer noisy or vibrating. | Not leveled. | Check manual for proper leveling procedures. |
| | Fan out of balance. | Accidental damage to the fan blade can change the dynamic balance. Damaged fans should be replaced. |
| | Basket rubbing. | Adjust basket clearance. |
| | V-belt sheaves. | Tighten set screws. Make sure sheaves are in proper alignment. |
| | Belt. | Adjust belt tension. |
| | Foreign objects. | Occasionally screws, nails, etc, will hang in the basket perforations and drag against the sweep sheets surrounding the basket. Such foreign objects should be removed immediately. |
| Dryer runs, but no heat. | Incorrect voltage. | Check for correct control voltage - 120V. |
| | No voltage. | Check power supply, check secondary voltage on transformer and check wiring and wiring diagram. |
| | Direct spark ignition module defective. | Replace direct spark ignition module. |
| | Defective gas valve. | Replace coil assembly. |
| | Gas turned off. | Turn manual gas valve on. |
| | Defective door switch. | Replace door switch. |
| | Air switch not operating. | Clean out lint compartment daily. Check back draft damper for foreign objects, lint accumulation or other causes that may prevent damper from opening. Check duct work for lint build-up. Check installation sheet to insure that duct work and make-up air openings are adequately sized. Check exhaust outlet. If a screen has been improperly installed on the outlet, it may be clogged with lint or frozen over in winter. NEVER install a screen on the exhaust outlet. Vacuum within dryer drops to .09 inches of water column, or less, for normal operation of dryer. Vacuum reading (in inches of water) should range between .15 and .3 inches. Vacuum reading can be made with a vacuum U-gauge by removing a sheet metal screw in the front panel of dryer and inserting the rubber tube of the vacuum gauge into screw opening. |

Troubleshooting Chart

Troubleshooting Chart

| TROUBLE | CAUSE | REMEDY |
|---|---|---|
| Dryer runs, but no heat. (continued) | Air switch out of adjustment. | See air switch adjustment sheet. |
| | Air switch defective. | Replace air switch. |
| | Gas pressure too low. | Check manifold pressure and adjust to pressure specified on rating plate. If this pressure cannot be obtained, have gas supplier check main pressure. |
| | Improper orifice. | Orifices have been sized for type of gas specified on rating plate. Check with gas supplier to determine specifications for gas being used. If different from rating plate, contact factory and obtain proper orifices. |
| | Electric power to heating unit turned off. | Turn power on. |
| | Line fuse or heater circuit fuse blown to unit. | Replace fuse. |
| | Defective relay. | Replace relay. |
| | Defective electric elements. | Replace elements. |
| | Defective thermostat. | Replace thermostat. |
| | Defective safety overload thermostat. | Replace thermostat. |
| | Lint compartment door open. | Close door. |
| Main burners burning improperly. | Burner air shutters closed. | Open for blue flame. |
| | Dirt in burner. | Blow out. |
| | High gas pressure. | Adjust gas pressure per rating plate. |
| | Orifice too large. | Send to factory for correct orifices. |
| | Restricted or blocked exhaust. | Clean exhaust. |
| Main burner cycles on and off. | Direct spark ignition defective. | Replace direct spark igniter. |
| Low or high gas flame. | Incorrect main burner orifices. | Replace orifices. Check factory for correct size. |

Troubleshooting Chart

Troubleshooting Chart

| TROUBLE | CAUSE | REMEDY |
|-------------------------------|--|---|
| Dryer too hot. | Incorrect main burner orifice. | Replace orifices. Check factory for correct size. |
| | Inadequate make-up air. | Make-up air must be 4 to 6 times the exhaust area of the dryer. |
| | Lint accumulated. | Remove lint. |
| | Exhaust duct dampers. | Must be full open or replace. |
| | High gas pressure. | Adjust gas pressure per rating plate. |
| | Partially restricted or inadequately sized exhaust system. | Check service section for recommended sizes. Remove obstructions or lint build up from duct work. NEVER use smaller size exhaust duct. ALWAYS use larger size. |
| | Defective thermostat. | Replace thermostat. |
| Dryer runs no steam to coils. | Valve closed. | Check all valves in steam supply and return. Make sure they are open. |
| | Steam trap blocked. | Remove and clean. Replace if defective. |
| | Solenoid valve. | On dryers using solenoid temperature control, check operation of solenoid valve by advancing thermostat. |
| | Thermostat. | On dryers using solenoid temperature control, thermostat controls operation of solenoid valve. If defective, replace thermostat. |
| | Check valve installed incorrectly. | Check for inlet and outlet marking on check valve and invert if necessary. |
| | Strainer clogged. | Remove plug and blow down strainer or remove and clean thoroughly if heavily clogged. |
| Water in steam line. | Steam piping installed incorrectly. | Check piping per steam installation instructions. |
| | Trap not functioning. | Check trap for size and capacity. If dirty and sluggish, clean thoroughly or replace. Check return line for high back pressure, or another trap charging against the trap functioning improperly. |

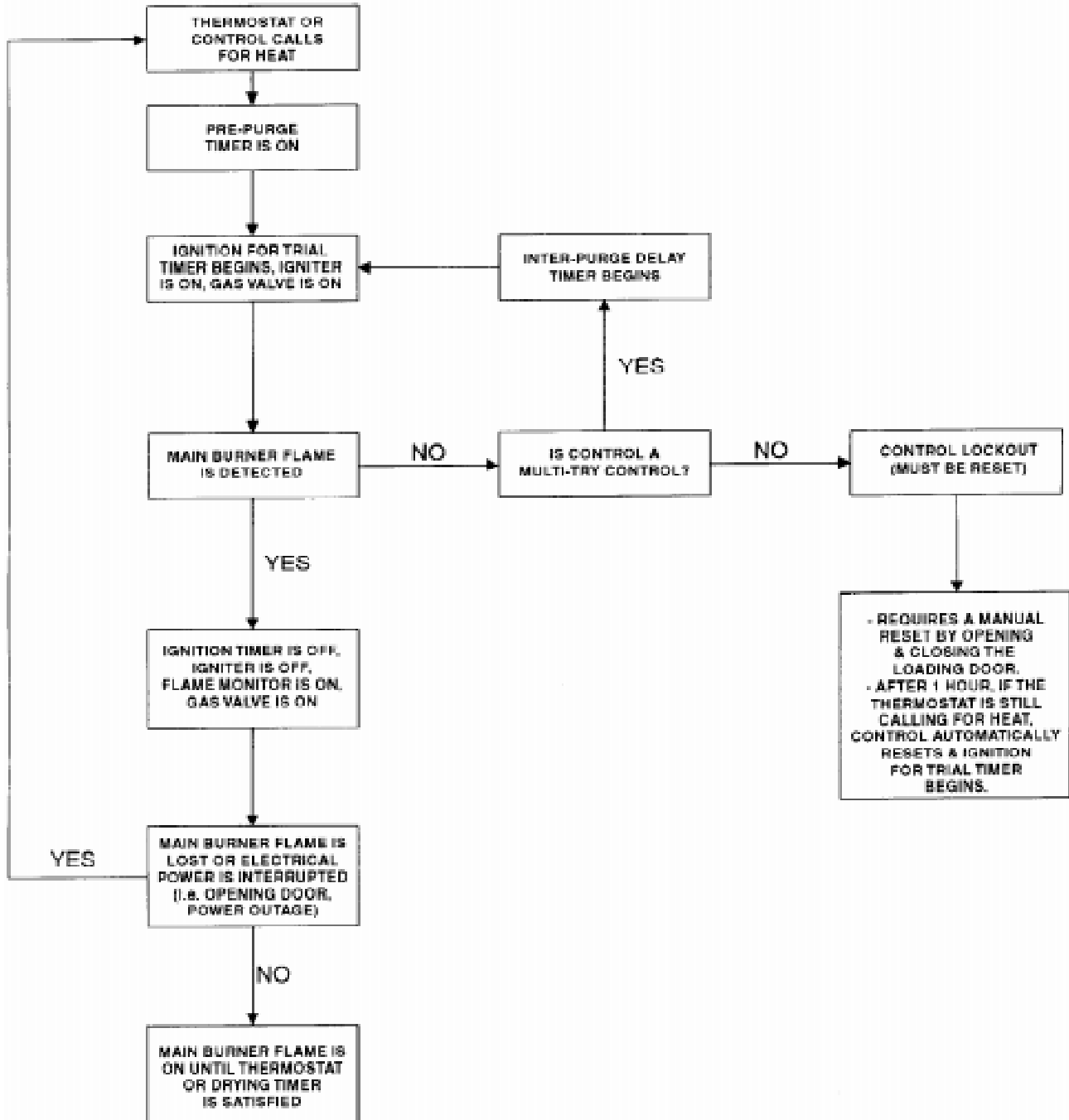
Direct-Spark Ignition Operation

DIRECT SPARK IGNITION OPERATION

NOTE: Some models are equipped with a dual ignition system. The dual ignition system contains two direct spark ignition modules in parallel. Each module has its own flame sense circuit and acts independently of the other. If either bonnet limit thermostat opens because of high heat or flame impingement, the entire ignition system will shut down.

1. When a call for heat is received from the control supplying 24VAC to the ignition control module, the pre-purge delay timer begins. This delay time allows any air/sediment to be ejected prior to burner ignition. Following the pre-purge delay period, the gas valve is energized and the spark ignitor sparks for the trial ignition period.
2. When a flame is detected during the trial for ignition period, the spark ignitor shuts off and the gas valve remains energized.
3. If no flame is detected by the flame sense circuit, the ignition control module will go into safety lockout. The valve will be turned off immediately. If the module has multiple retries and no flame is detected, the gas valve is de-energized and the module goes into an interpurge delay. After this delay, the module will attempt another trial for the ignition period. This will continue until the number of retries has been used up. At the time, the module will go into safety lockout.
4. Recovery from safety lockout requires one of the following:
 - a. A manual reset by opening and closing the loading door.
 - b. After one hour if the control thermostat is still calling for heat, the module will automatically reset and the trial for ignition period will start over.
5. Opening the loading door will cause the flame to extinguish. Closing the door and starting the dryer will restart the trial for ignition period.
6. Once the control thermostat has been satisfied and/or the drying timer has been timed out, the ignition control module(s) will be de-energized, the gas valve(s) will be de-energized and the flames will extinguish.
7. The machine will continue to run in a cooldown mode without heat. This process will cool the load to the touch and help to eliminate wrinkling.

**DIRECT SPARK
IGNITION OPERATION
FLOW CHART**



General Maintenance

GENERAL MAINTENANCE

1. **Clean lint trap daily.** Remove lint before or after each day of operation. A clean lint trap will increase the efficiency of the dryer and the moisture-laden air will be exhausted outside more quickly.
2. **Keep basket and sweep sheets clean.** Clean as often as needed. The basket and sweep sheets are accessible by removing the front panel of the dryer.
3. **Gas burners, steam coils, electric coils.** Check and clean often.
4. **Pulleys and belts.** Keep clean as oil and dirt will shorten the life of a belt. Check periodically for alignment. Pulley shafts must be parallel and the grooves must be aligned. Check belt tension periodically. Adjust tension by movement of idler bracket. Lubricate idler pulley once every two months using six grams of high temperature grease. Do not over-grease.
5. **Electric motor.** Keep motor clean and dry. Motors are packed with sufficient grease for 10 years normal service. After that, bearings and housing should be cleaned and repacked one third full with Chevron grease No. SR1-2. See label on motor for further information.

If motor overheats, check voltage and wiring. Low voltage, inadequate wiring and loose connections are the main cause of motor failures.

6. **Adjustable leveling bolts.** One at each corner permits accurate alignment of dryer.
To adjust: Block one corner of dryer up off the floor, loosen hex nut. With wrench, turn bolt clockwise to raise dryer, opposite to lower. Rear bolts are outside of dryer and front bolts are inside lint trap compartment.

General Maintenance

GENERAL MAINTENANCE

7. Periodically clean and examine exhaust system.
8. Keep dryer area clean and free of gasoline, combustible materials and other flammable liquids or vapors.
9. Do not obstruct the flow of combustion (make-up) air and ventilating air.
10. Check gas pressure periodically.
11. Gas burners air inlet shutters can be adjusted for proper flame by following instructions outlined on separate page of this manual.
12. **Main Basket Bearings.** Lubricate once every six months using six grams of high temperature grease. Do not over-grease.
13. **Steam Heating Units.** Keep steam coils clean. Check periodically and clean as often as required. Remove lint and dirt accumulation from coil fins to avoid decreasing their efficiency.
14. **Clean Out Panel (Energy Saver Gas Models Only).** Remove this panel located on the energy saver heating unit and clean the inside area of lint and dirt on a regular basis.

Burner Air Inlet Shutter Adjustment

BURNER AIR INLET SHUTTER ADJUSTMENT

Burner air inlet shutters are correctly adjusted when the flame is primarily blue.

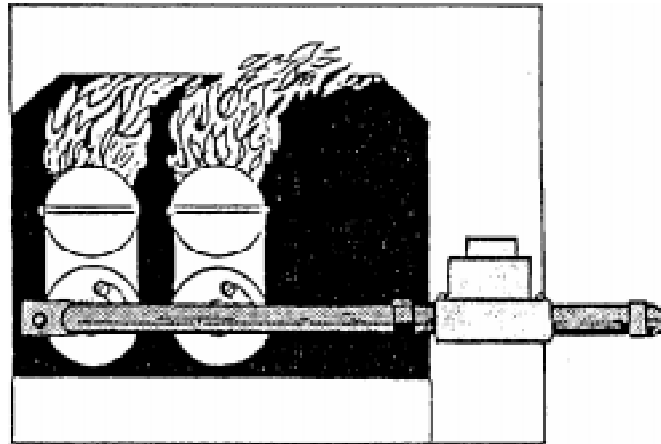
| TYPE OF GAS | BURNER AIR INLET SHUTTER ADJUSTMENT |
|------------------|-------------------------------------|
| Natural gas | 1/2 Open |
| Liquid petroleum | 1/4 Open |
| Manufactured gas | 1/16 Open |

AIR SHUTTER ADJUSTMENT

AIR SHUTTER ADJUSTMENT:

Proper Method

Close air shutters to *yellow tip*, then open air shutters to *blue flame tip*. *Orange tips* are impurities in the air such as lint, dust, etc.

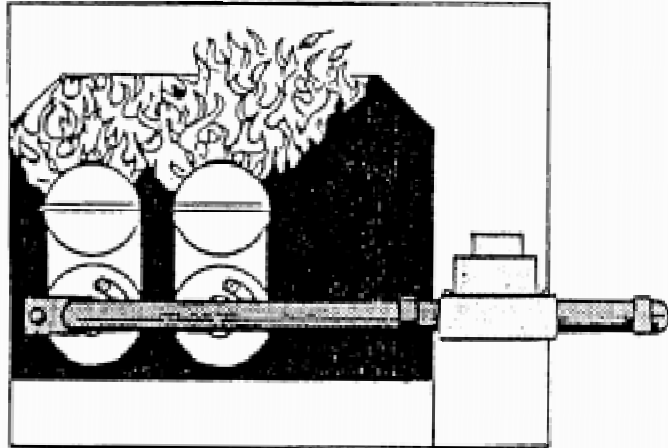


CORRECT

Burner Air Inlet Shutter Adjustment

BURNER AIR INLET SHUTTER ADJUSTMENT

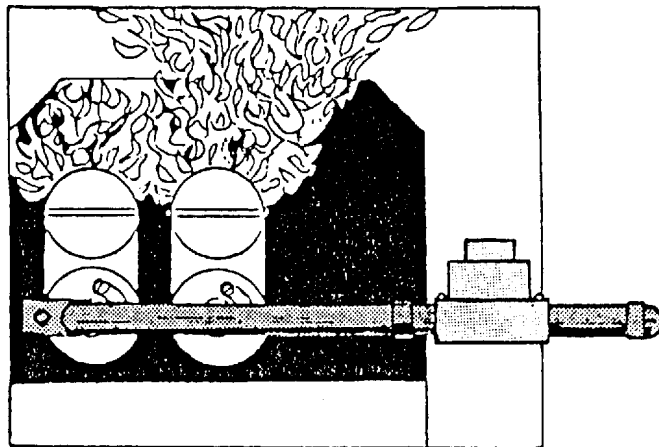
Burner air inlet shutters are adjusted closed. Insufficient air is admitted through the burner. Flame pattern is straight up and flame is yellow.



WRONG—NEED TO ADJUST SHUTTER

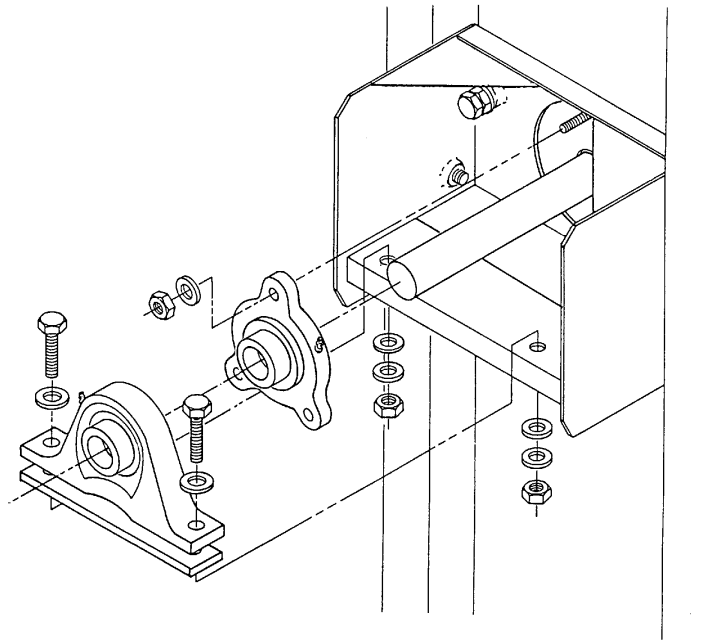
BURNER AIR INLET SHUTTER ADJUSTMENT

This flame pattern indicates the burner air inlet shutters are correctly adjusted, but air through the dryer is insufficient. This condition indicates excessive lint in the lint compartment, lack of make-up air in the room, restricted exhaust duct, or a vacuum in the room caused by an exhaust fan.



**WRONG—NEED TO PROVIDE CORRECT AIRFLOW
THROUGH THE DRYER**

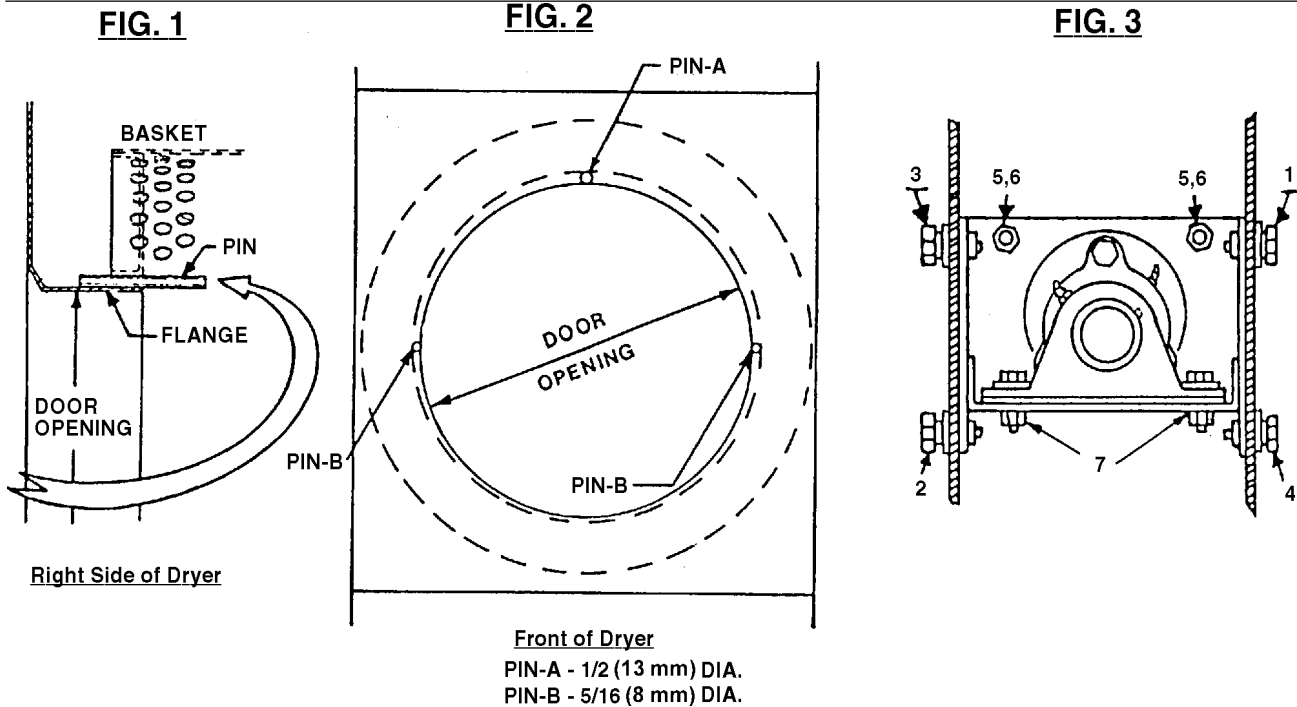
Bearing Replacement Instructions



BEARING REPLACEMENT INSTRUCTIONS

- Step 1** Remove belt guard, V-belt, spacer and basket sheave.
- Step 2** Loosen set screws on the flange bearing and on the pillow block bearing.
- Step 3** Remove the bolts holding the pillow block bearing and take it off the shaft.
- Step 4** Remove the nuts and washers holding the flange basket bearing and take it off the dryer.
- Step 5** Inspect the bearings for damage and replace as necessary, in reverse order of removing them. Before tightening securely, align basket per instructions on separate instruction sheet.
- Step 6** Lubrication guide---Bearings never need lubrication. They have been permanently lubricated by the supplier with a high temperature grease.

Basket Alignment Instructions



BASKET ALIGNMENT INSTRUCTIONS

- Step 1** Loosen the set screws on the flange and pillow block bearings.
- Step 2** Loosen the 4 side bolts, "1, 2, 3, 4" on the basket bearing bracket. (see figure 3) Loosen the two adjusting bolts and locknuts "5, 6" inside the bracket. Loosen the bolts "7" on the pillow block bearing.
- Step 3** Place one "A" and two "B" diameter pins inside the drying compartment between the rim of the basket opening and the rim of the door opening in the positions shown in figures 1 and 2. Check the two "B" pins for equal clearance.



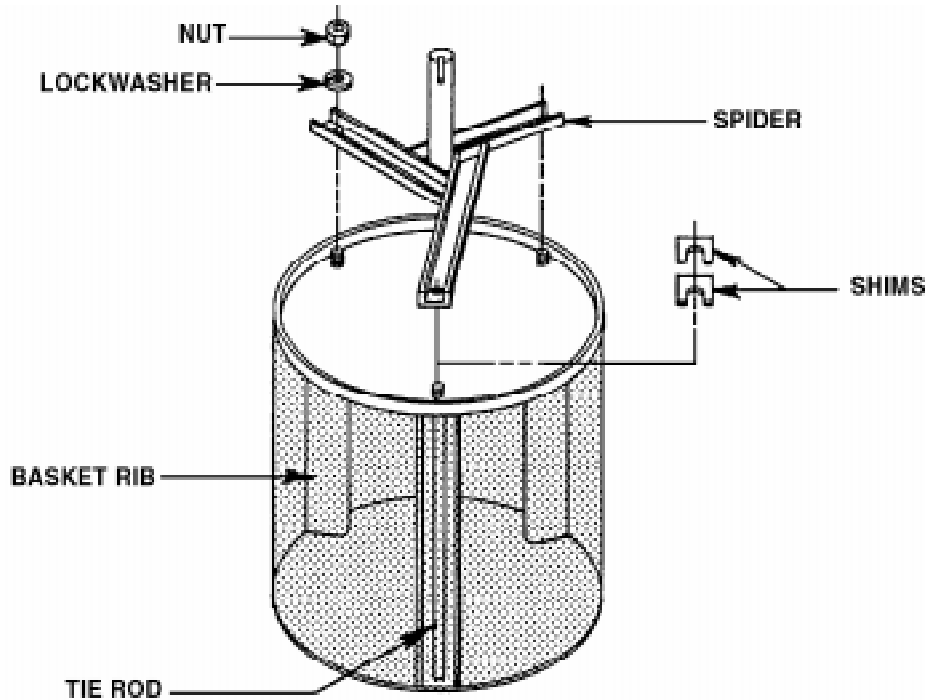
NOTE
Push the basket toward the rear

- Step 4** With the pins in position, tighten the set screws on the bearing races.
- Step 5** Tighten the side bolts "1, 2, 3, 4" in numerical order. Tighten the bolts "7" on the pillow block bearing. And tighten the bolts "5" and locknuts "6."
- Step 6** Remove the aligning pins.



CAUTION
Check to see that the set screws are wrench tight on the bearings.

Basket Shimming Instructions



BASKET SHIMMING INSTRUCTIONS

This procedure is normally necessary when replacing either the basket or the spider assembly on any dryer. Proper shimming is crucial to obtain a true running basket.

- A. Align the basket as per instructions in the manual.
- B. Rotate the basket to determine where the most out-of-round point is (where the basket scrapes or comes closest to scraping the sweep sheet).
- C. Mark this position and the nearest rib to this position.
- D. Remove the basket (do not loosen the alignment bolts).
- E. With the basket on the floor (spider up), place one or two shims between the spider leg and the back of the basket at the marked rib position. (See drawing.)
- F. Re-insert spider and basket assembly and re-check cylinder.
- G. If at this point, basket is still out-of-round, procedure must be repeated starting with *Step "B"*.
- H. Upon completion of shimming process, realignment of basket is necessary.

NOTE

If the point mentioned in *Step "B"* is between two ribs, both ribs might have to be shimmed.

Air Switch Adjustment (Illustration)

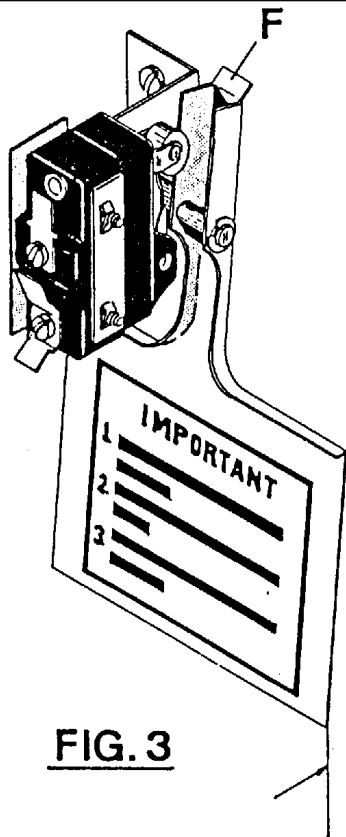


FIG. 3

$\frac{3}{4}$ " (19 mm)

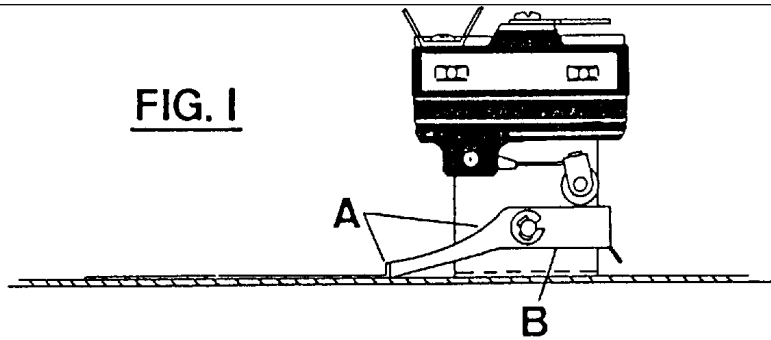


FIG. 1

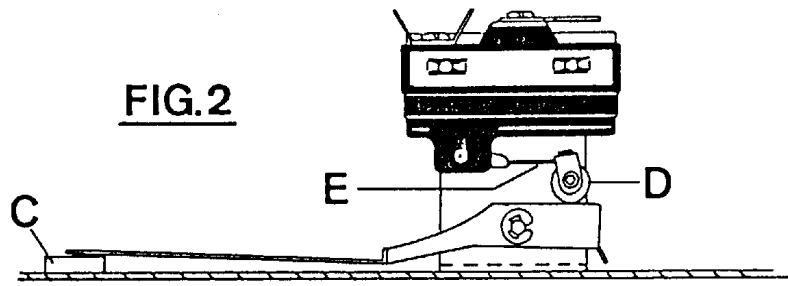
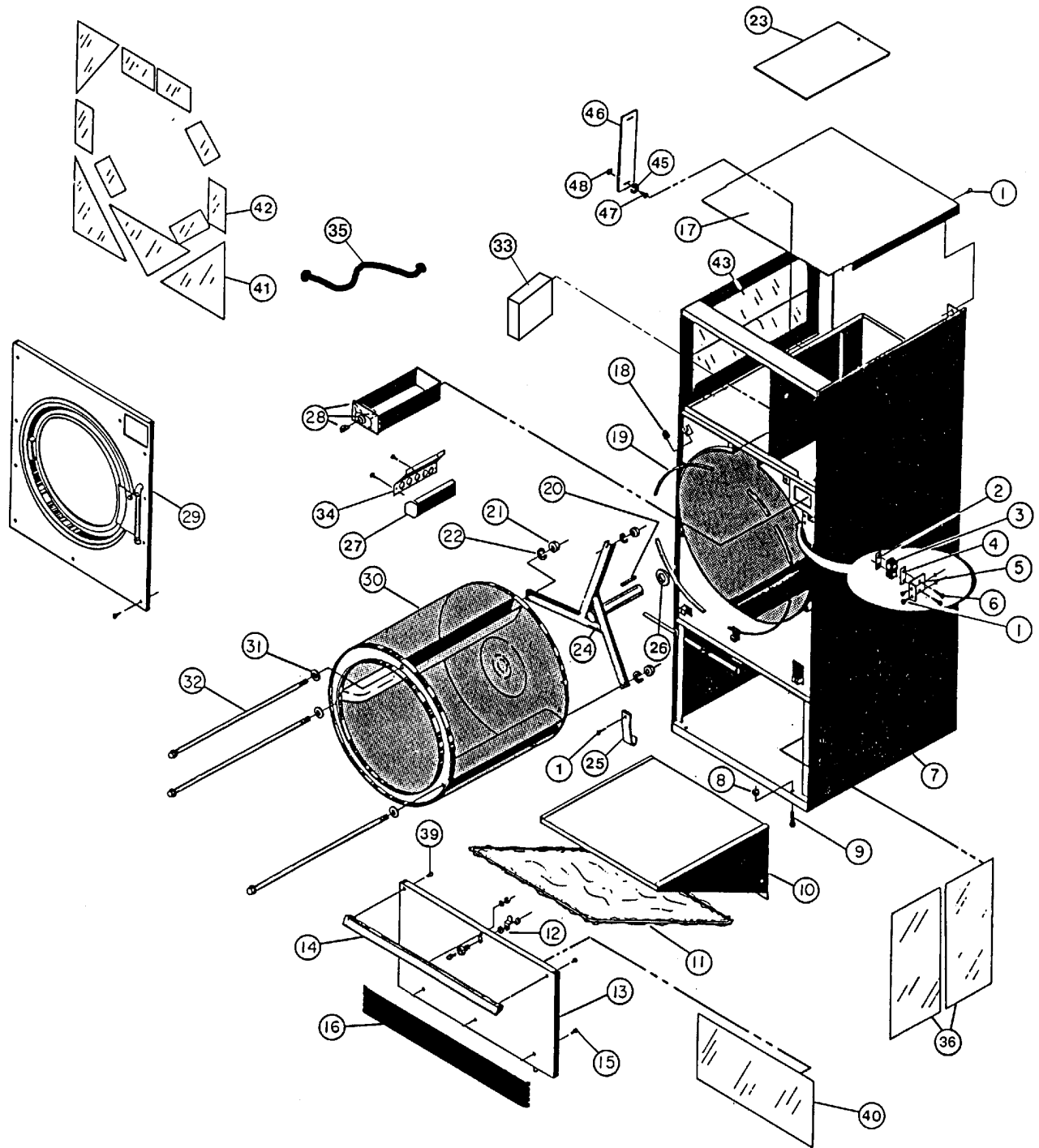


FIG. 2

AIR SWITCH ADJUSTMENT

1. Shut off current; disconnect leads and remove air switch.
2. Lay air switch assembly on flat surface. Adjust air blade at "A" (FIGURE 1) so that air blade lays flat and surface "B" is parallel to the flat surface.
3. Place $\frac{3}{8}$ " (10 mm) x $\frac{5}{8}$ " (16 mm) spacer bar or equivalent "C" (FIGURE 2) under air blade in position shown; hold switch mounting bracket firmly and adjust switch actuator "D" with needle nose pliers at "E" by twisting actuator right or left whichever is needed so that switch closes when end of air blade engages bar "C".
4. Maximum opening of air switch must be no greater than $\frac{3}{4}$ " (FIGURE 3). Bend tab "F" in or out to maintain this dimension.
5. Re-install air switch assembly on rear of dryer.
6. Re-check operation of air blade. Switch must close before air blade engages face of opening and re-open before stop "F" engages.

30 lb. Dryer—Front View (Illustration)

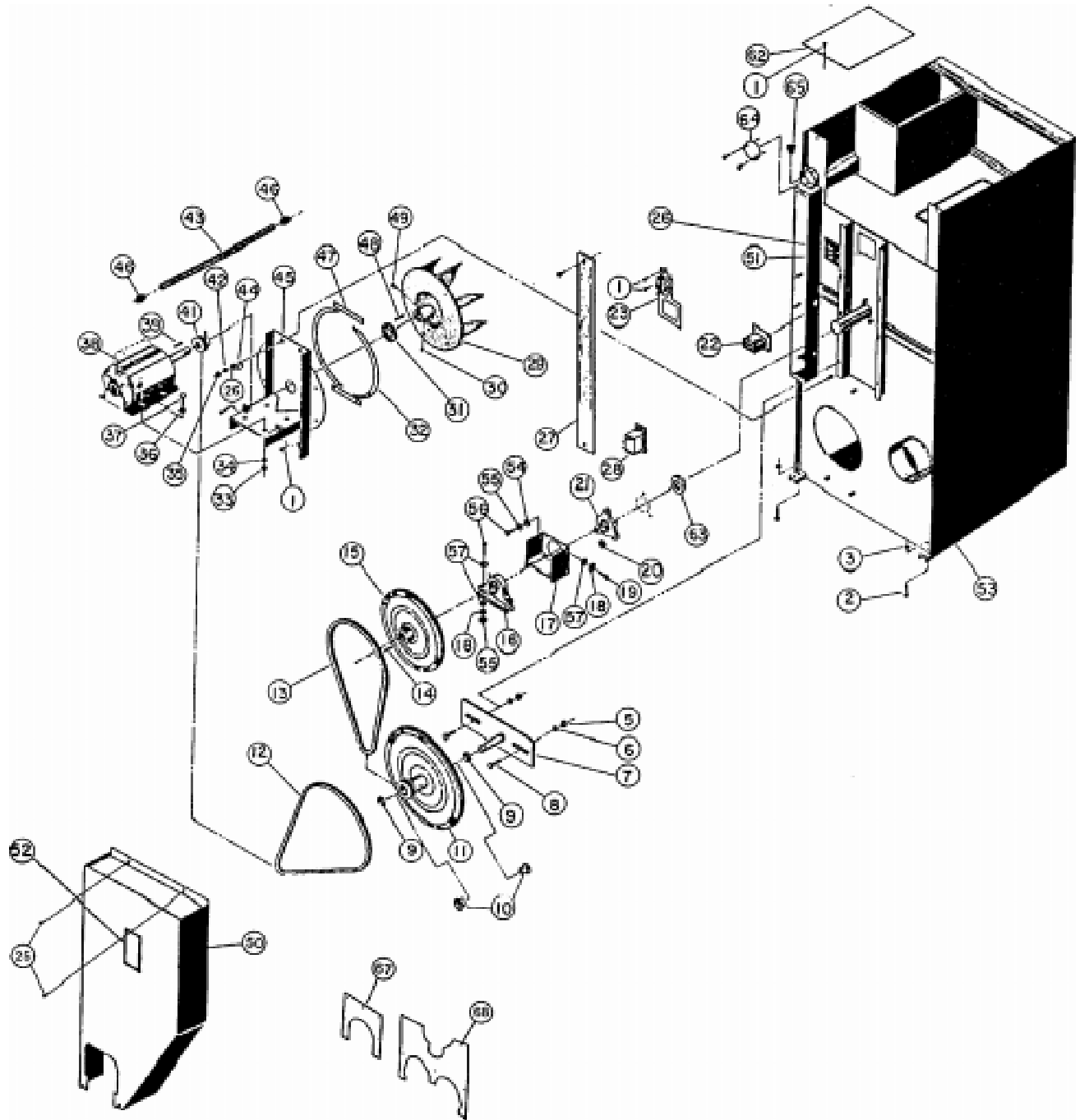


Parts—30 lb. Dryer (Front of Dryer)

| | | | | | |
|----|------------|--|----|------------|--|
| 1 | TU7733 | #8X1/2" Self Drill Screw | 34 | *TU9111 | Thermostat Assembly (Coin Meter Model Only) |
| 2 | TU1771 | #6 Twin Nut | 35 | GA-00803-0 | Cable, Hi-Voltage DSI |
| 3 | TU1979 | Door Switch | 36 | TU7690 | Insulation |
| 4 | TU1770 | Insulator | 39 | SB-00836-0 | Screw, Phillips, Pancake Head |
| 5 | TU2373 | Switch Bracket | 40 | TU8152 | Insulation—US Model Only |
| 6 | TU3219 | #6 x 1" S.M.S. | 41 | TU7735 | Insulation—US Model Only |
| 7 | TU10010 | Jacket Welded Assembly | 42 | TU8108 | Insulation—US Model Only |
| 8 | TU4937 | 3/8"-16 Jam Nut | 43 | TU7736 | Insulation—US Model Only |
| 9 | TU3211 | 3/8"-16 x 2 1/2" Leveling Bolt | 45 | P104 | 1/4" Washer (Pkg of 6) |
| 10 | TU10290 | Lint Screen Housing | 46 | TU9384 | Adjustment Strip |
| 11 | TU10362 | Lint Screen Only | 47 | TU3479 | #10-32 x 7/16" Truss Head Screw |
| | TU5225 | Frame Only | 48 | TU2842 | Hex Nut |
| 12 | TU9035 | Lock JWC2 | 50 | TU2878 | #10 x 5/8" Screw |
| | TU2844 | Key JWC2 | 51 | CA-00841-0 | Label - Clean Lint Trap |
| | TUB1867 | Lock & Key JWC2 | 52 | CA-00655-0 | Trim - Rubber Insert |
| | TU8928 | Cam | 53 | TU2853 | Gasket - Lint Door |
| 13 | TU14559WHT | Lint Door (Specify Color) | | | |
| 14 | TU14555 | Lint Door Handle | | | |
| 15 | SB-00949-0 | Fastener, Plastic | | | |
| 16 | TU14557 | Kickplate | | | |
| 17 | TU2620 | Solid Top (Gas Model) | | | |
| | TU6129 | Solid Top (Electric Model) | | | |
| 18 | TU2877 | #10 Speed Nut | | | |
| 19 | TU2483 | Sweep Sheet Gaskets | | | |
| 20 | TU5887 | Key | | | |
| 21 | TU2882 | 1/2"-20 Hex Nut | | | |
| 22 | TU2831 | 1/2" Split Lockwasher | | | |
| 23 | TU10651 | Cover Plate (Steam) | | | |
| 24 | K20 | Spider Replacement Kit | | | |
| 25 | TU10284 | Lint Trap Front Support | | | |
| 26 | TU10177 | Spacer | | | |
| 27 | TU8457 | Thermostat Cover | | | |
| 28 | TU9225 | Coin Vault, Lock and Key | | | |
| 29 | TU14602 | Front Panel and Door Assembly (Specify Color) | | | |
| 30 | TU2083 | Basket Welded Assembly | | | |
| | TU7188 | Basket/Spider Assembly | | | |
| 31 | TU2883 | 1/2" Cut Washer | | | |
| 32 | TU2313 | Tie Rod | | | |
| 33 | GA-00765-0 | Direct Spark Igniter | | | |
| | TU14176 | "CE" Direct Spark Igniter | | | |
| | TU14675 | Australian Direct Spark Igniter | | | |

* See separate page for exploded view.
(51- 53 Not Shown)

30 lb. Dryer—Rear View (Illustration)



Parts—30 lb. Dryer (Rear of Dryer)

| | | | | | |
|----|---------|--------------------------------|-----|---------|--|
| 1 | TU7733 | #8 x 1/2" Self Drill Screw | 37 | TU5439 | 5/16"-18 x 3/4" Hex Head Screw |
| 2 | TU3211 | 3/8-16 x 2-1/2" Leveling Bolts | 38- | - | Motor (Specify Motor No., Voltage, Cycle and Horsepower) |
| 3 | TU4937 | 3/8-16 Jam Nut | 39 | TU4684 | Key |
| 5 | TU4787 | 3/8-16 Hex Nut | 41 | TU6559 | Motor Sheave—60 Hz. |
| 6 | VSB134 | 3/8" Split Lockwasher | | TU7603 | Motor Sheave—50 Hz. |
| 7 | TU12803 | Idler Bracket | 42 | VSB134 | 3/8" Lockwasher |
| 8 | TU12576 | 3/8-16 x 1" Carriage Bolt | 43 | CFB3000 | Cable—1/2" x 30" Lg. |
| 9 | TU3247 | Retaining Ring | 44 | PT196 | Cable Strap |
| 10 | TU7184 | Sleeve Bearings (2 required) | 45 | TU5850 | Motor Mount—50/60 Hz. |
| 11 | TU5217 | 14" Idler Sheave (50/60 Cy.) | 46 | TU4790 | Straight Connector (2 Req'd) |
| 12 | TU3395 | V-Belt (4L580) 50 Hz. | 47 | TU2474 | Gasket (2 Required) |
| | TU7021 | V-Belt (4L570) 60 Hz. | 48 | TU4684 | Key |
| 13 | TU3395 | V-Belt (4L580) 50/60 Hz. | 49 | TU13408 | 5/16"-18 x 1/2" Set Screw Nylok |
| 14 | TU5887 | Key | 50 | TU11708 | Rear Guard—"UR" Models |
| 15 | TU7016 | 15" Basket Sheave (50/60 Cy.) | | TU10134 | Rear Guard—"US" Models |
| 16 | TU10676 | Pillow Block Bearing** | | TU10131 | Right Rear Cover—"US" Models |
| 17 | TU13147 | Bearing Support Bracket | 51 | TU10433 | Locking Collar Label |
| 18 | TU2831 | 1/2" Split Lockwasher | 52 | TU10418 | Lubrication Label |
| 19 | RC347 | 1/2"-13 x 1-1/2" Cap Screw | 53 | TU10010 | Jacket Welded Assembly |
| 20 | TU13372 | 3/8"-16 Jam Nut w/Nylon Insert | 54 | OP251 | 1/2" Int. Tooth Lockwasher |
| 21 | TU10002 | Flange Basket Bearing** | 55 | OP233 | 1/2" Hex Nut |
| 22 | TU13480 | Transformer - 240V/24V | 56 | TU2195 | 1/2"-13 x 1-3/4" Cap Screw |
| | TU13515 | Transformer - 120V/24V | 57 | TU2883 | 1/2" Flat Washer |
| | TU13514 | Transformer - 460V/24V | 62 | TU10651 | Mechanism Box Cover (Steam Dryer Only) |
| | TU13642 | Transformer - 575V/24V | 63 | TU10177 | Spacer (Mounted Inside Jacket) |
| | TU13643 | Transformer - 380-415V/24V | 64 | SB170 | Junction Box Cover |
| 23 | TU8206* | Air Switch Assembly | 65 | TU2372 | Snap Bushing |
| 25 | TU6263 | Hex Hd. Screw | 67 | TU10359 | Motor Adapter—3 Ph. Only |
| 26 | IB140 | 3/8" Washer | 68 | TU13044 | Motor Adapter—1 Ph. Only |
| 27 | TU5890 | Control Box Cover | | | |
| 28 | TU13463 | Relay - 9A, 3 Pole w/Aux. | | | |
| | TU13516 | Relay - 12A, 3 Pole w/Aux. | | | |
| 29 | TU8746 | Fan, 60 Hz. W/Set Screws | | | |
| | TU5874 | Fan, 50 Hz. W/Set Screws | | | |
| 30 | TU9272 | 5/16" Nylon Patch Set Screw | | | |
| 31 | TU2476 | Felt Seal | | | |
| 32 | TU2473 | Side Gasket (2 Required) | | | |
| 33 | C249 | 5/16"-18 Hex Nut | | | |
| 34 | TU2814 | 5/16" Split Lockwasher | | | |
| 35 | TU4787 | 3/8"-16 Hex Nut | | | |
| 36 | VSB130 | 5/16" Cut Washer | | | |

* See separate page for exploded view.

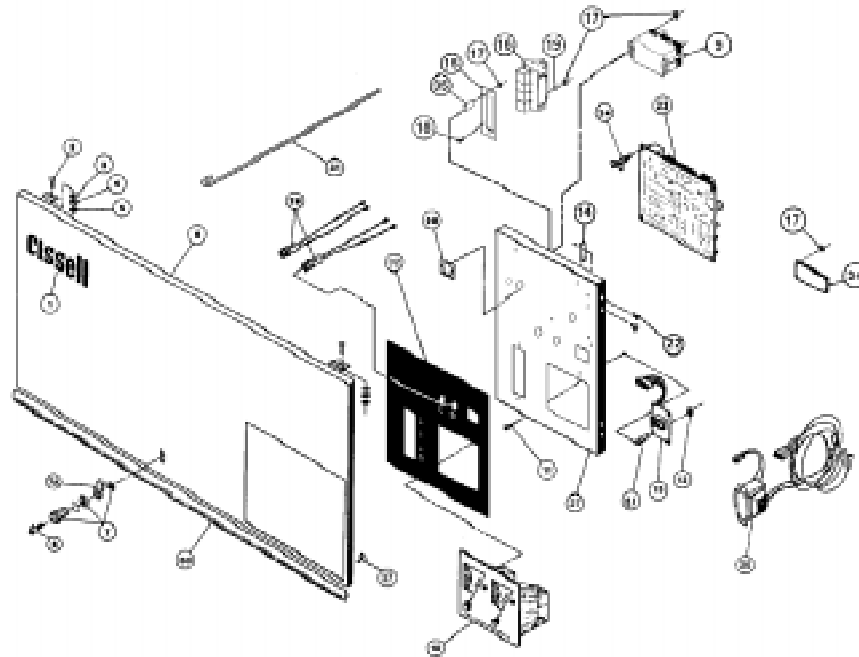
** Eccentric Locking Collar W/Set Screws
Included

Parts—Access Door and Control Panel—Computerized Coin Meter

Access Door Assembly

Ref. Nos. 1, 6-8, 30-31, 37-38

TU14567



Control Panel Assembly

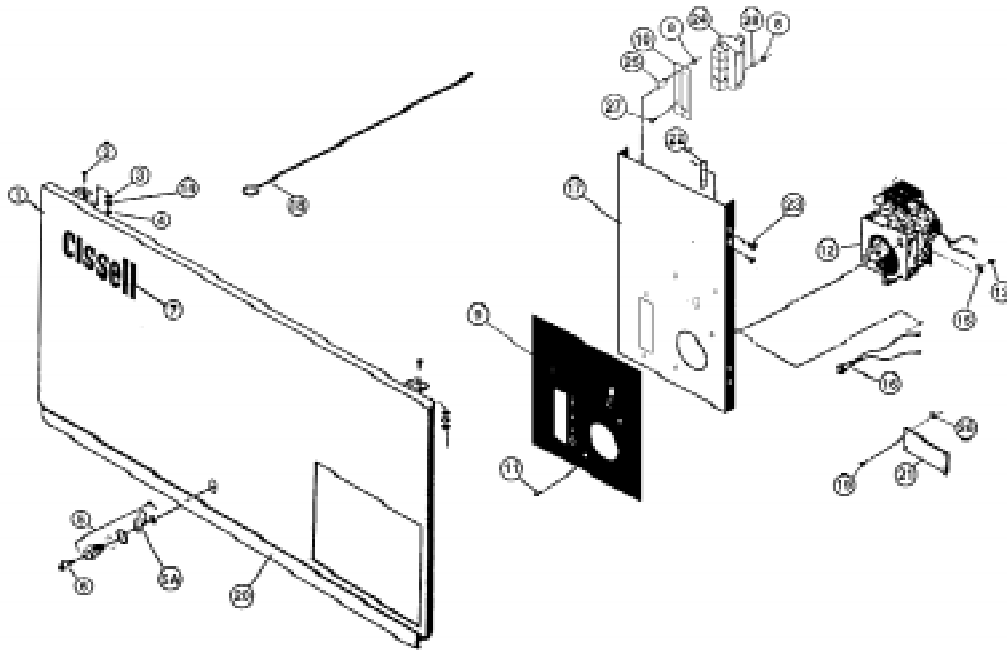
TU13724 - 24V 50/60 Hz. Gas

| | | | | | |
|----|------------|---|----|------------|---|
| 1 | TU14662 | Logo Decal | 16 | TU11510 | Push Button Switch |
| 2 | TU3479 | #10-32 x 7/16" Truss Head Screw | 17 | TU3400 | Nut |
| 3 | P104 | 1/4" Cut Washer | 18 | SV136 | #6-32 x 15/16" Truss Head Screw |
| 4 | FB187 | #10 Lockwasher | 19 | M271 | #8 - Int. Tooth Lockwasher |
| 5 | TU2842 | #10-32 Hex Nut | 21 | TU11668 | Standoff |
| 6 | TU14568WHT | Access Door W/A (Specify Color) | 22 | TU9524 | #6 x 5/16" Screw |
| 7 | TU9386 | Lock JWC3 | 23 | TU13412 | C/M Control (24V) F/1-Slot |
| 7A | TU8995 | Cam | | TU9329 | C/M Control (12V) F/2-Slot |
| 8 | TU9387 | Key JWC3 | 24 | TU9347 | P.C. Board Support |
| 9 | F1300 | Motor Relay | 27 | TU13857 | Control Panel Plate Asm. |
| 10 | - - - | Coin Rejector (Specify Coin Number and Denomination) | 28 | TU9514 | Reset Label |
| | TU9006 | Rejector Single Chute (25 cents) | 29 | TUT316 | Indicator Lamps 24V |
| | TU9008 | Rejector Dual Chute (25/10 cents) | 30 | TU14553 | Trim Access Door |
| | TU9897 | 10 cents Coin Switch Replacement | 31 | TU5739 | Door Support Arm |
| | TU9898 | 25 cents Coin Switch Replacement | 32 | TU13842 | Control Panel Nameplate |
| 11 | TU9426 | 4-40 x 5/8" Machine Screw | 34 | TU8629 | Terminal Board |
| 12 | TU9427 | 4-40 Hex Nut | 35 | TU13942 | Spacer |
| 13 | TU13469 | Digital Display Assembly | 36 | TU9898 | Transformer 24V/12V (Used with TU9329 C/M Control) |
| 14 | TU1771 | Twin Clip (Pkg. 12) | 37 | SB-00951-0 | Screw #8 x 7/16 Phillips |
| 15 | TUT191A | Push Button Switch Plate | 38 | CA-13098-0 | Gasket Access Door (Not Shown) |

Parts—Access Door and Control Panel—Electro-Mechanical Coin Meter

Access Door Assembly

Ref. Nos. 1, 5-7, 18, 20, 29-30
TU14567



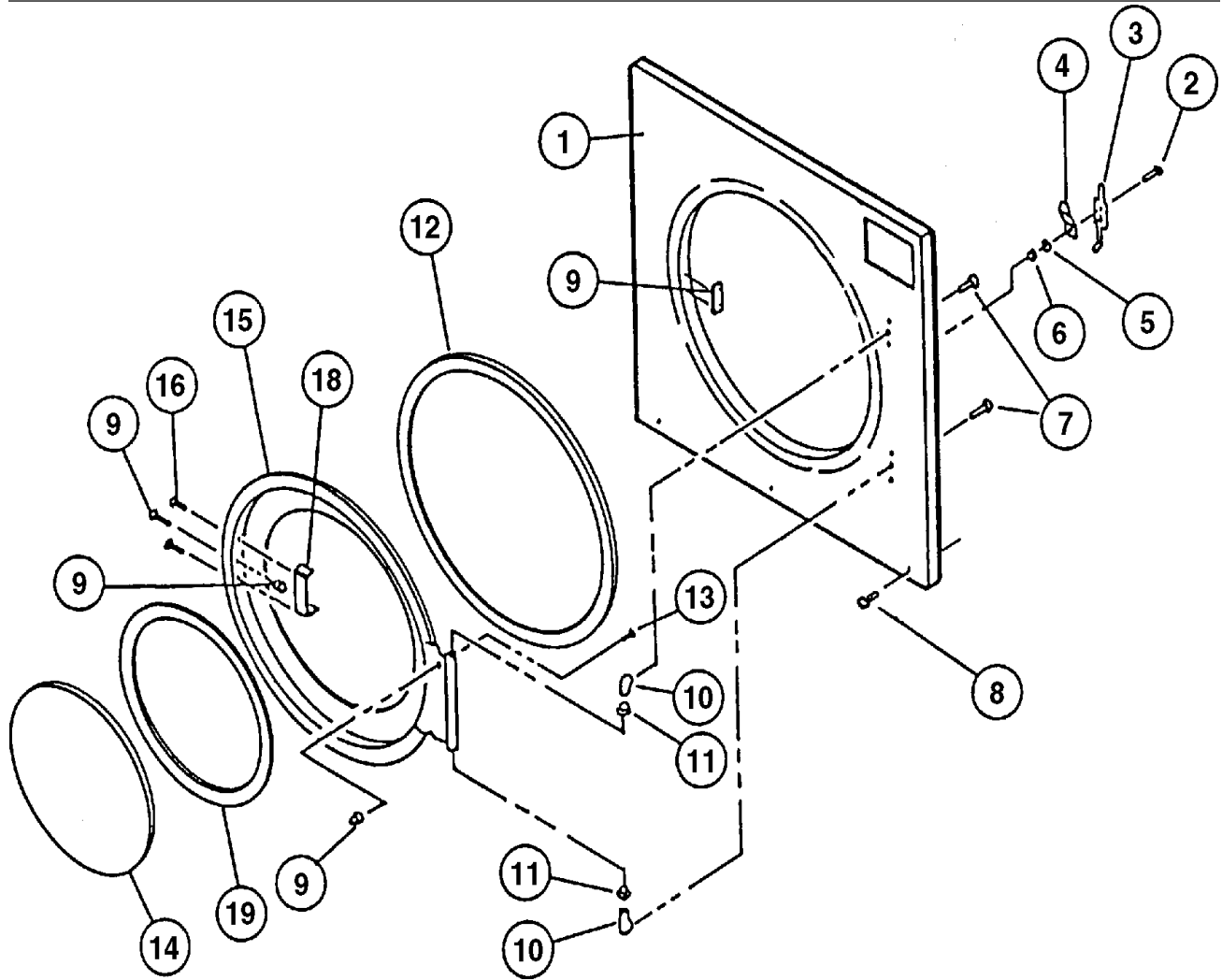
Control Panel Assembly

TU13721 - 24V 50/60 Hz. Gas
TU13847 - 24V 50/60 Hz. S/E

| | | | | | |
|-----|------------|--------------------------------------|----|------------|--------------------------------|
| 1 | TU14568WHT | Access Door Weldment (Specify Color) | 14 | FB187 | #10 Lockwasher |
| 2 | TU3479 | #10-32 x 7/16" Truss Head Screw | 15 | P104 | 1/4" Cut Washer |
| 3 | P104 | 1/4" Cut Washer | 16 | TUT316 | Indicator Lamp—24V |
| 4 | TU2842 | #10-32 Hex Nut | 17 | TU13858 | Control Panel Plate Asm. |
| 5 | TU9386 | Lock-JWC3 | 18 | TU5739 | Support Rod |
| 5A | TU8995 | Cam | 19 | M262 | Screw |
| 6 | TU9387 | Key - JWC3 | 20 | TU14553 | Trim Access Door |
| 7 | TU14662 | Logo Decal | 21 | TU8629 | Terminal Board |
| 8 | TU3400 | Nut | 22 | TU1771 | Twin Clip |
| 9 | TU13843 | Control Panel Nameplate | 23 | TU9524 | #6 x 5/16" Screw |
| 10 | TUT191A | Push Button Switch Plate | 24 | TU11510 | Push Button Switch |
| 11 | TU4958 | #8-32 x 3/8" Machine Screw | 25 | TU14701 | Spacer |
| *12 | CM7364 | 25¢/15 Min. - 24V | 26 | TU3266 | Nut |
| | CM7365 | 25¢/12 Min. - 24V | 27 | SV136 | #6-32 x 15/16" Truss Head Scr. |
| | CM7366 | 25¢/10 Min. - 24V | 28 | M271 | #8 Int. Tooth Lockwasher |
| | CM7368 | 25¢/7-1/2 Min. - 24V | 29 | SB-00951-0 | Screw #8 x 7/16 Phillips |
| | CM7370 | 25¢/6 Min. - 24V | 30 | CA-13098-0 | Gasket Access Door (Not Shown) |
| | CM7372 | 25¢/5 Min. - 24V | | | |
| 13 | TU3266 | #8-32 x 11/32" Hex Nut | | | |

* Call factory for Coin Meter part number for 50 Cy.

TU14602 - Front Panel and Door Assembly (Illustration)

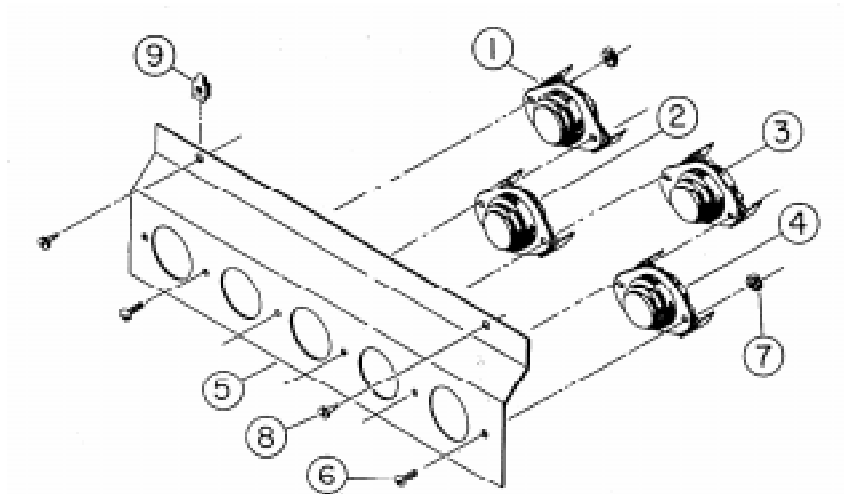


| | | | | | |
|----|---------|----------------------------------|----|---------|-----------------------------|
| 1 | TU14601 | Front Panel W/Door Catch - c/m | 12 | TU2090 | Basket Door Seal |
| 2 | M262 | #8-32 x 3/8" Truss Head Screw | 13 | TU4839 | #10-32 x 3/8" Machine Screw |
| 3 | TU2194 | Door Switch Actuator | 14 | TU7862 | Door GLass (Plain) |
| 4 | TU2105 | Door Switch Spring | | TU7862C | Door Glass (w/Logo) |
| 5 | FB187 | #8 Split Lockwasher | 15 | TU7171 | Basket Door (Specify Color) |
| 6 | TU3266 | #8-32 Hex Nut | 16 | TU3215 | #10-32 x 3/8" Taptite Screw |
| 7 | TU2836 | 5/16" - 18 x 1/2" Hex Head Screw | 18 | TU2874 | Basket Door Handle |
| 8 | TU2878 | #10 x 5/8" Sheet Metal Screw | 19 | TU7169 | Rubber Gasket |
| 9 | TU5158 | Door Catch Assembly | | | |
| 10 | TU2236 | Hinge Post | | | |
| 11 | PIF172 | Delrin Bearing (Pkg. 2) | | | |

NOTE: TU4827---Actuator Assembly Consists of Ref. No. 2, 3, 4, 5, and 6
 TU9040 ---Door Assembly Consists of Ref. No. 11-19 (Specify Color)

Parts—Thermostat Assembly (Coin Meter Models) TU9111 (w/Illustration)

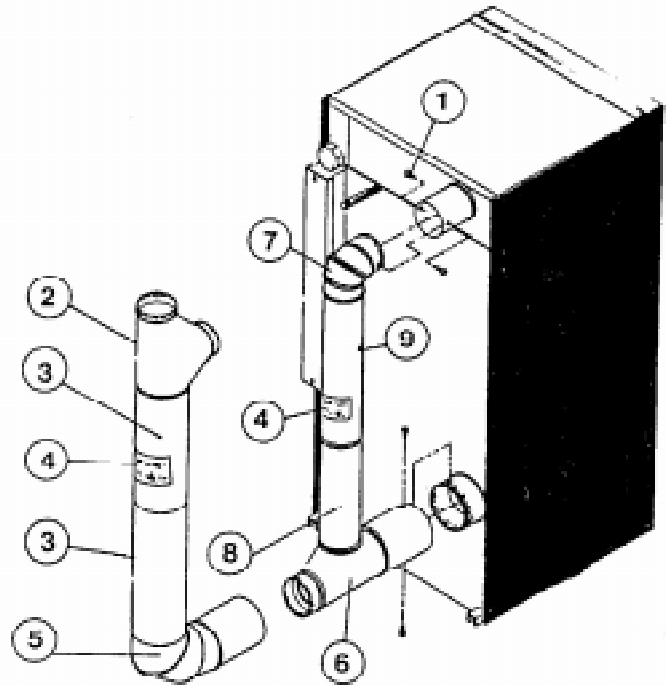
- 1 TU3240 Safety High Limit Thermostat
- 2 TU3240 185° F (85° C) Thermostat
- 3 TU5150 150° F (66° C) Thermostat
- 4 TU7244 135° F (57° C) Thermostat
- 5 TU5143 Mounting Bracket
- 6 TU3624 #6-32 x 1/4" Round Head Screw (6 each)
- 7 TU3400 #6-32 Hex Nut
- 8 TU7733 #8 x 1/2" Self Drill Screw
- 9 TU6067 #8 Speed Clip (2 each)



Parts—Exhaust Duct Assembly (Energy-Saver Model Only) (w/Illustration)

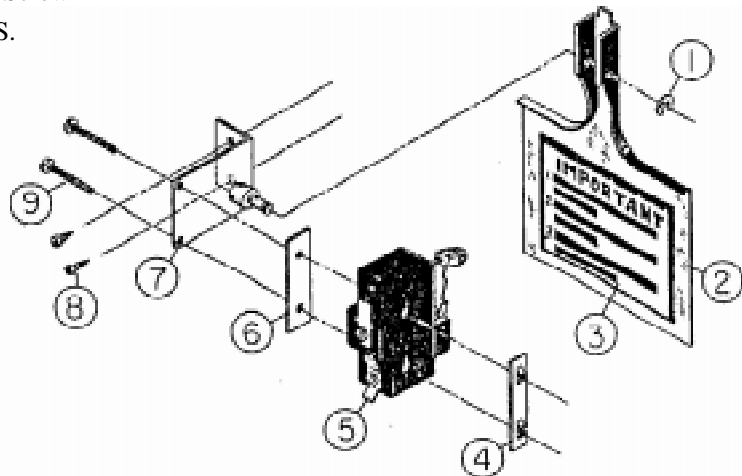
TU10269—Vertical Assembly Complete
 TU10336—Horizontal Assembly Complete

- 1 TU7733 #8 x 1/2" Self Drill Screw
- 2 TU8052 Tee - 8" x 6" x 6"
- 3 TU8176 Pipe - 8" x 17 1/2"
- 4 TU9161 Installation Label
- 5 TU10268 Elbow - 8"
- 6 TU10335 Tee—8" x 6" x 6"
- 7 TU8053 Elbow—6"
- 8 TU8054 Pipe—6" x 15 1/2"
- 9 TU8055 Pipe—6" x 23 1/2"



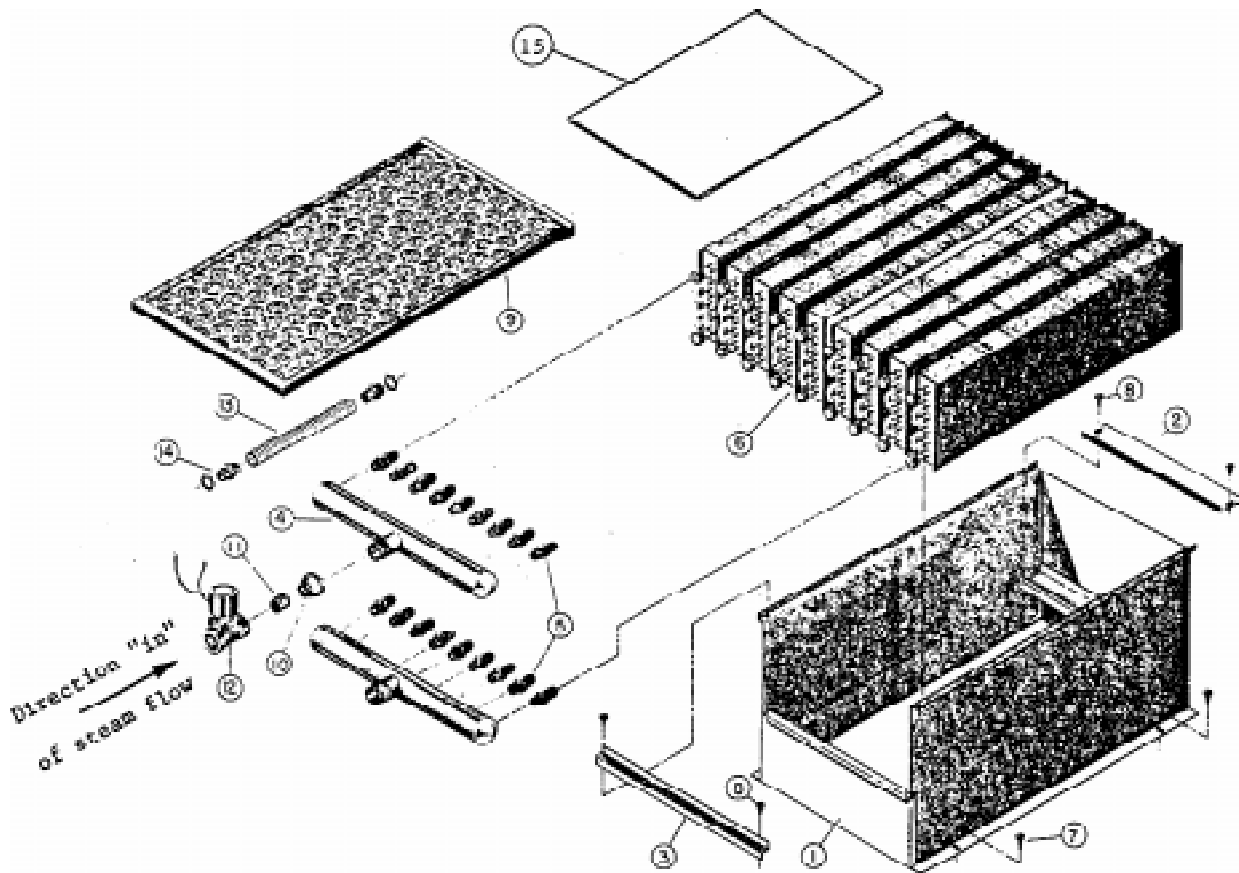
Parts—Air Switch Assembly TU8206 (w/Illustration)

- 1 F888 "E" Ring
- 2 TU2463 Actuator Arm
- 3 TU3476 Air Switch Decal
- 4 TU1771 6" Tinnerman Nut
- 5 TU8155 Air Switch
- 6 TU1770 Insulator
- 7 TU8171 Air Switch Bracket
- 8 TU7733 #8 - 18 1/2" Self Drilling Screw
- 9 TU3219 #6 x 1" Round Head S.M.S.



Parts—Steam Heating Unit (w/Illustration)

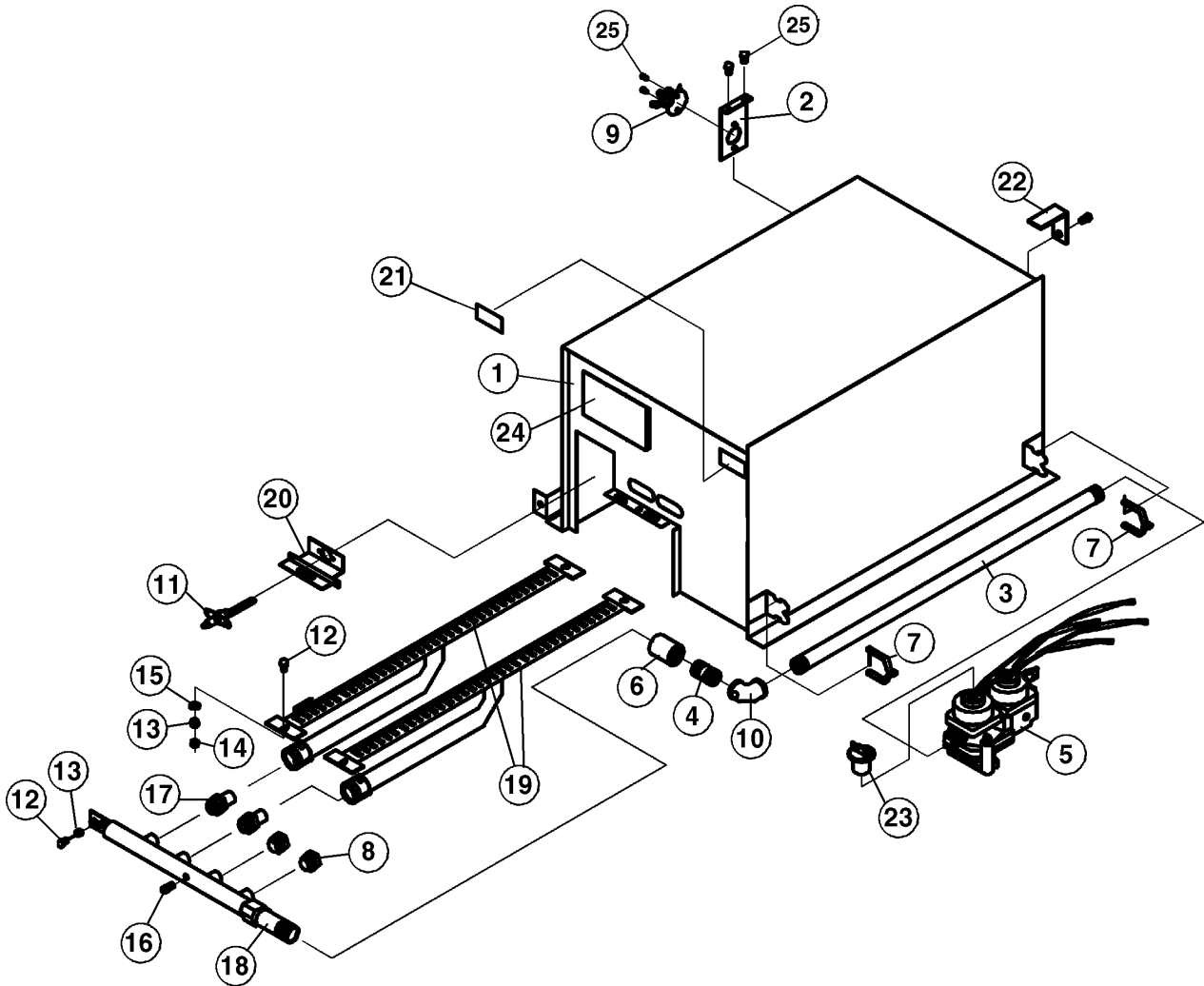
TU13689—9 Section Steam Bonnet Assembly w/Solenoid Valve 24V



- | | | |
|----|---------|---|
| 2 | TU2547 | Front Coil Retainer |
| 3 | TU2548 | Rear Coil Retainer |
| 4 | TU2413 | Steam Coil Manifold |
| 5 | TU2414 | 3/4" - 16 x 3/8" Straight Connector |
| 6 | TU2405 | Steam Coil (9 required) 7 3/4" W x 1 5/8" H x 26" L |
| 7 | CB36 | #1/4" - 20 x 1/2" Hex Head Screw (Pkg. of 6) |
| 8 | TU7733 | #8 x 1/2" S.M.S. (Pkg. of 6) |
| 9 | TU2598 | Air Filter 16" x 25" x 1" |
| 10 | TU2735 | 1" x 3/4" Reducer |
| 11 | TU4608 | 3/4" x 2" Pipe Nipple |
| 12 | TU13517 | Solenoid Valve 24V - 50/60 Hz. |
| 13 | CFB2100 | Greenfield Cable, 1/2" (Specify 21" Long) |
| 14 | TU4790 | 1/2" Straight Conn. (2 required) |
| 15 | TU10651 | Mechanism Box Cover |

Gas Heating Unit (Regular Gas Fired Model) (Illustration)

TU13673—(Natural Gas)
TU13715—(LP Gas)

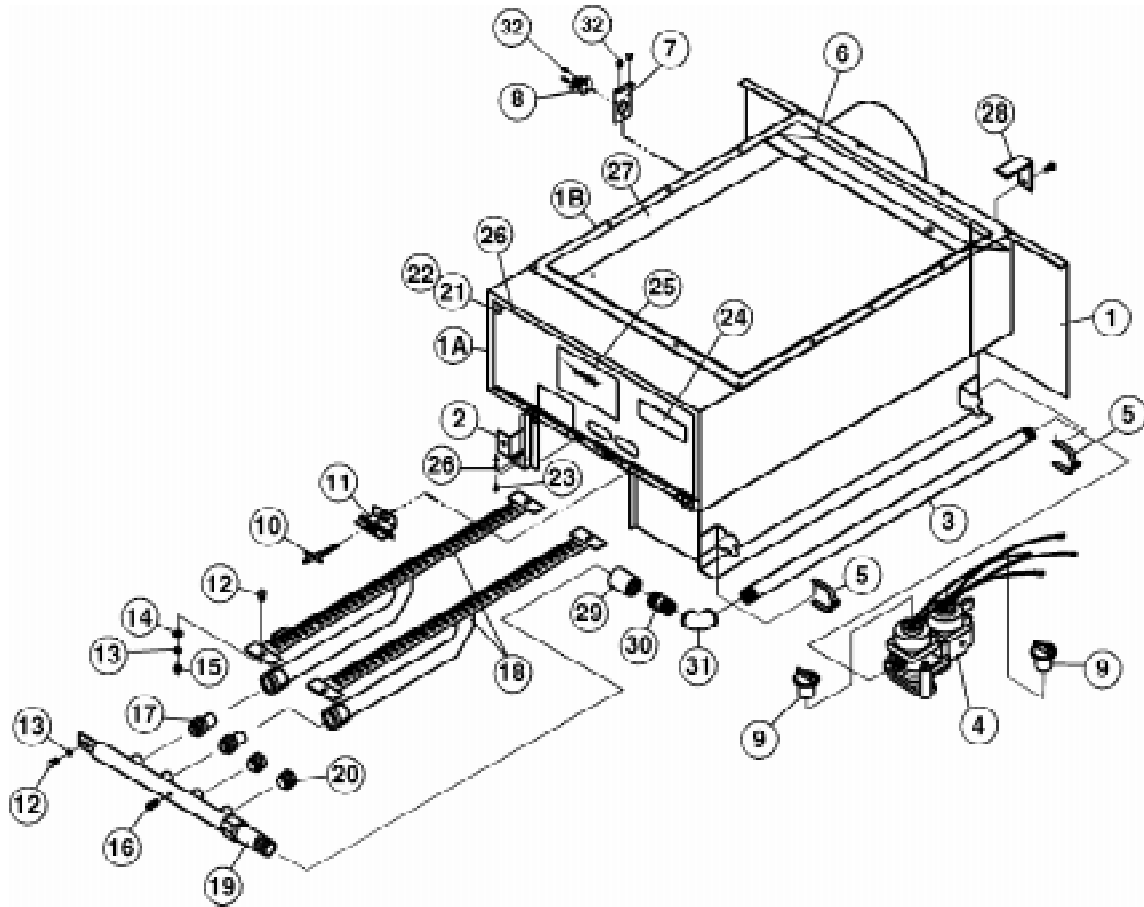


| | | | | | |
|----|------------|---|----|---------|--------------------------------------|
| 1 | TU8631 | Bonnet | 13 | TU2846 | 1/4" Split Lockwasher |
| 2 | TU13695 | Bonnet Thermostat Bracket | 14 | TU4934 | 1/4"—20 Hex Nut |
| 3 | TU13212 | 1/2" Pipe Nipple—24" | 15 | TU2847 | 1/4"—Flat Washer |
| 4 | 390401021 | 1/2" Pipe Nipple—2 1/2" | 16 | TU2224 | 1/8" Pipe Plug |
| 5 | TU13523 | 1/2" Valve Combination (Natural Gas) | 17 | TU3539 | Gas Burner Orifice (specify size) |
| | TU13513 | 1/2" Valve Combination (LP Gas) | 18 | TU8288 | Manifold Assembly |
| 6 | SC505 | Coupling | 19 | TU7840 | Burner |
| 7 | TU2226 | Mounting Bracket | 20 | TU13826 | Electrode Spark Mounting Bracket |
| 8 | TU10946 | Manifold Plug | 21 | TU8645 | Caution Label |
| 9 | TU13678 | Thermostat, Man. Reset 300° | 22 | TU11181 | Burner Locator Angle |
| 10 | 390501053 | 1/2" Elbow | 23 | C1365 | Connector T&B |
| 11 | GA-00764-0 | Electrode Spark Igniter | 24 | TU13914 | DSI Instruction |
| 12 | CB36 | 1/4"—20 x 1/2 Hex Hd. Scr. | 25 | TU7733 | #8 Self Drill Scr. (Pkg. of 6) |

Parts—Gas Heating Unit (Energy-Saver Gas Model)

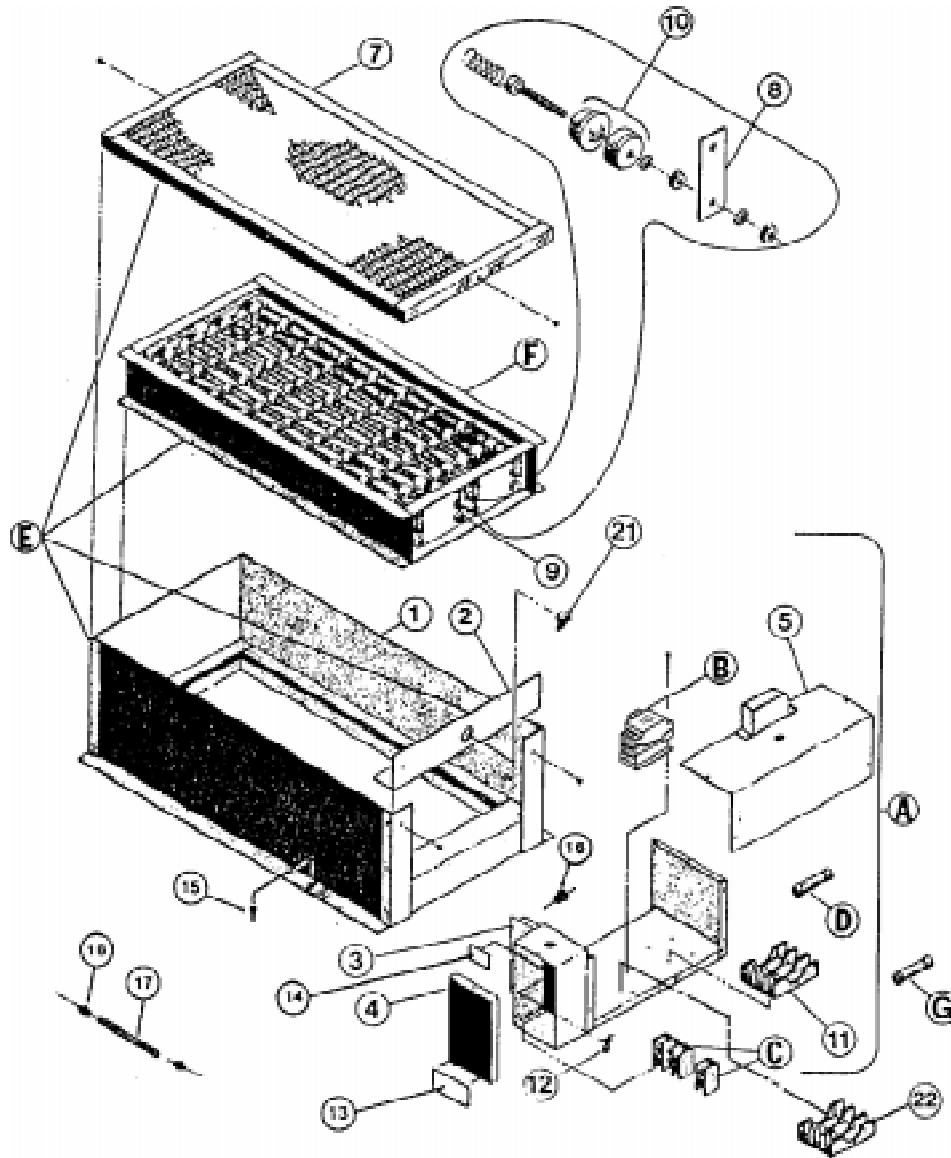
TU13786—(Natural Gas)

TU13785—(LP Gas)



| | | | | | |
|----|------------|--|----|-----------|--------------------------------------|
| 1 | TU9048 | Bonnet | 14 | TU2847 | 1/4" Flat Washer |
| 1A | TU8651 | Door and Hinge | 15 | TU4934 | 1/4"—20 Hex Nut |
| 1B | TU7775 | Top Panel (for TU8640 order separately) | 16 | TU2224 | 1/8" Pipe Plug |
| 2 | TU2842 | #10 - 32 Hex Nut | 17 | TU3539 | Gas Burner Orifice (specify size) |
| 3 | TU13212 | 1/2" Pipe Nipple—24" | 18 | TU7840 | Burner |
| 4 | TU13523 | 1/2" Valve Combination (Natural Gas) | 19 | TU8288 | Manifold Assembly |
| | TU13513 | 1/2" Valve Combination (LP Gas) | 20 | TU10946 | Manifold Plug |
| 5 | TU2226 | Mounting Bracket | 21 | TU2877 | #10 Tinnerman Nut |
| 6 | TU7294 | Upper Rear Air Deflector | 22 | TU2878 | #10 x 5/8" S.M.S. |
| 7 | TU13695 | Bonnet Thermostat Bracket | 23 | TU3479 | #10—32 x 7/16" Truss Head Screw |
| 8 | TU13678 | Thermostat, Man. Reset 300° | 24 | TU8645 | Caution Label |
| 9 | C1365 | Connector T&B | 25 | TU13914 | DSI Instruction |
| 10 | GA-00764-0 | Electrode Spark | 26 | P104 | 1/4" Cut Washer |
| | | Igniter | 27 | TU2853 | Gasket Material |
| 11 | TU13826 | Electrode Spark Mounting Plate | 28 | TU11181 | Burner Locator Angle |
| 12 | CB36 | 1/4"—20 x 1/2" Hex Head Screw | 29 | SC505 | Coupling |
| 13 | TU2846 | 1/4" Split Lockwasher | 30 | 390401021 | 1/2" Pipe nipple 2 1/2" |
| | | | 31 | 390501053 | 1/2" Elbow |
| | | | 32 | TU7733 | #8 Self Drill Scr. (Pkg. of 6) |

Electric Heating Unit (Illustration)



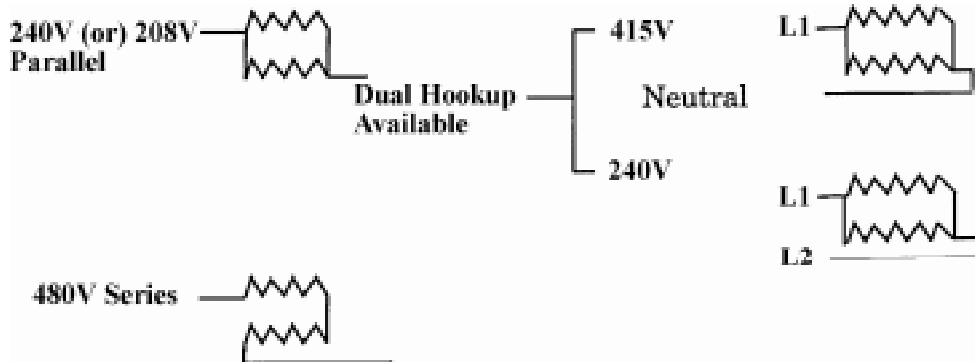
| | | | | | |
|----|---------|---|----|---------------|------------------------------------|
| 1 | TU3103 | Bonnet Weldment | 16 | TU5958 | Bushing (2 required) |
| 2 | TU3102 | Hold Down Plate | 17 | CFB0700 | Cable—1/2" x 7" Lg. |
| 3 | TU9205 | Control Box Weldment | 18 | TU4790 | Straight Connector (2 required) |
| 4 | TU9207 | Terminal Box Cover | 21 | TU7244 | Thermostat—135°F |
| 5 | TU12454 | Top Cover | 22 | TU13588 | Motor Fuse Holder |
| 7 | TU3104 | Air Inlet Cover | | | |
| 8 | TU3767 | Contact Strap (4 required) | | | |
| 9 | TU3768 | Contact Strap (1 required) | | | |
| 10 | TU3253 | Insulators | A | see next page | Control Box Less Wiring |
| 11 | TU13866 | Fuse Holder | B | " | Contactors |
| 12 | TU7738 | Grounding Lug | C | " | Terminal Block |
| 13 | TU9254 | High Voltage Label for 415V Only | D | " | Fuse |
| 14 | TU9258 | Ground Label | E | " | Bonnet with Elements |
| 15 | CB36 | 1/4"-20 x 1/2" Hex Screw (Pkg. of 6) | F | " | Heater Elements |
| | | | G | " | Motor Fuse |

30 lb. Electric Bonnet “UR” Model—21 KW Elements Only

| A | B | C | D | E | F | G | H | I |
|---|----------------------|------------------------|-------------------|---------------------------------|---------------------------------------|---|------------------|-----------------------------------|
| Control Box Less Wiring | Contactor (24V Coil) | Terminal Block | Heater Fuse Block | Heater Fuses | Bonnet with Elements | Heater Element | Motor Fuse Block | Motor Fuses |
| TU13781 208V 1PH | TU13520 30/45 AMP | TU9142 (2 required) | TU11096 | TU7224 40 AMPS 3 required | TU7590- 22.5KW 208V, 1 PH | HE11080,240V, 30KW Used for 208V, 22.5KW | TU8201 | TU819710 10 AMPS 2 required |
| TU13782 240V 1PH | TU13520 30/45 AMP | TU9142 (2 required) | TU11096 | TU7224 40 AMPS 3 required | TU7588- 21KW 240V, 1 PH | HE11540,240V, 21KW | TU8201 | TU819710 10 AMPS 2 required |
| TU13783 208V 3PH | TU13520 30/45 AMP | TU9143 | TU11096 | TU7224 40 AMPS 3 required | TU7590- 22.5KW 208V, 3 PH | HE11080,240V, 30KW Used for 208V, 22.5KW | TU8201 | TU819710 10 AMPS 3 required |
| TU13980 240V 3PH | TU13520 30/45 AMP | TU9143 | TU11096 | TU7224 40 AMPS 3 required | TU7588- 21KW 240V, 3 PH | HE11540,240V, 21KW | TU8201 | TU819710 10 AMPS 3 required |
| TU13784 480V 3PH | TU13520 30/45 AMP | TU9143 | TU9141 | TU7072 40 AMPS 3 required | TU7588- 21KW 480V, 3 PH | HE11540,240V, 21KW Used for 480V, 21KW | TU8200 | TU819908 8 AMPS 3 required |
| TU13794 240/415V 3PH | TU13520 30/45 AMP | TU9143* TU9142** | TU11096 | TU7224 40 AMPS 3 required | TU7588- 21KW 240or415V, 3 PH | HE11540,240V, 21KW | TU8200 | TU819908 8 AMPS 3 required |
| TU13884 208V 3PH w/1 PH motor | TU13520 30/45 AMP | TU9143 | TU11096 | TU7224 40 AMPS 3 required | TU7590- 22.5KW 208V, 3 PH | HE11080,240V, 30KW Used for 208V, 22.5KW | TU8201 | TU819710 10 AMPS 2 required |
| TU13884 240V 3PH w/1 PH motor | TU13520 30/45 AMP | TU9143 | TU11096 | TU7224 40 AMPS 3 required | TU7588- 21KW 240V, 3 PH | HE11540,240V, 21KW | TU8201 | TU819710 10 AMPS 2 required |
| TU13885 240/415V 3PH w/1 PH motor | TU13520 30/45 AMP | TU9143* TU9142** | TU11096 | TU7224 40 AMPS 3 required | TU7588- 21KW 240or415V, 3 PH | HE11540,240V, 21KW | TU8200 | TU819908 8 AMPS 2 required |

* 3 Pole

** 1 Pole (Neutral)



Power Supply for Electric Heating Circuit—30 lb. Dryers

| Rated Heater Input | Heater Amperes, Motor Amperes, Control Amperes, Total Amperes at Rated Voltage | Hz. | Minimum Size Supply Wire Based On 60C (140°F) Insulated Copper Conductor | Circuit Minimum Conduit Trade Size | Branch Circuit Maximum Fuse Size |
|---------------------------|---|------------|---|---|---|
| 21KW@208V/1PH | 109 AMPS | 60 | 1AWG | 1-1/2 | 110 |
| 21KW@208V/3PH* | 66 AMPS | 60 | 4AWG | 1-1/4 | 70 |
| 21KW@208V/3PH | 62 AMPS | 60 | 4AWG | 1-1/4 | 70 |
| 21KW@240V/1PH | 95 AMPS | 60 | 1AWG | 1-1/2 | 100 |
| 21KW@240V/3PH* | 59 AMPS | 60 | 4AWG | 1-1/4 | 60 |
| 21KW@240V/3PH | 55 AMPS | 60 | 4AWG | 1-1/4 | 60 |
| 21KW@480V/3PH | 28 AMPS | 60 | 10AWG | 3/4 | 30 |
| 21KW@240/414/3PH | 55 AMPS | 50 | 4AWG | 1-1/4 | 60 |
| 21KW@550V/3PH | 25 AMPS | 60 | 10AWG | 3/4 | 25 |

CAUTION: This machine has one power supply connection point. Disconnect power supply before servicing machine.

*** Single Phase Motors**

