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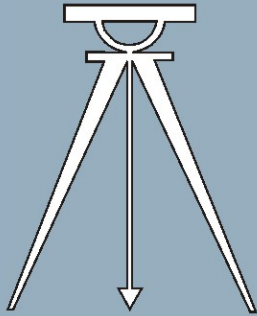
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Installation

6450

TG1L/R (AH)



**Read the
separate
safety
manual
before
installing,
operating,
or servicing**



PELLERIN MILNOR CORPORATION POST OFFICE BOX 400, KENNER, LOUISIANA 70063-0400, U.S.A.

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PELLERIN MILNOR CORPORATION

LIMITED STANDARD WARRANTY

We warrant to the original purchaser that MILNOR machines including electronic hardware/software (hereafter referred to as "equipment"), will be free from defects in material and workmanship for a period of one year from the date of shipment (unless the time period is specifically extended for certain parts pursuant to a specific MILNOR published extended warranty) from our factory with no operating hour limitation. This warranty is contingent upon the equipment being installed, operated and serviced as specified in the operating manual supplied with the equipment, and operated under normal conditions by competent operators.

Providing we receive written notification of a warranted defect within 30 days of its discovery, we will—at our option—repair or replace the defective part or parts, EX Factory (labor and freight specifically NOT included). We retain the right to require inspection of the parts claimed defective in our factory prior to repairing or replacing same. We will not be responsible, or in any way liable, for unauthorized repairs or service to our equipment, and this warranty shall be void if the equipment is tampered with, modified, or abused, used for purposes not intended in the design and construction of the machine, or is repaired or altered in any way without MILNOR's written consent.

Parts damaged by exposure to weather, to aggressive water, or to chemical attack are not covered by this warranty. For parts which require routine replacement due to normal wear—such as gaskets, contact points, brake and clutch linings, belts, hoses, and similar parts—the warranty time period is 90 days.

We reserve the right to make changes in the design and/or construction of our equipment (including purchased components) without obligation to change any equipment previously supplied.

ANY SALE OR FURNISHING OF ANY EQUIPMENT BY MILNOR IS MADE ONLY UPON THE EXPRESS UNDERSTANDING THAT MILNOR MAKES NO EXPRESSED OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE OR PURPOSE OR ANY OTHER WARRANTY IMPLIED BY LAW INCLUDING BUT NOT LIMITED TO REDHIBITION. MILNOR WILL NOT BE RESPONSIBLE FOR ANY COSTS OR DAMAGES ACTUALLY INCURRED OR REQUIRED AS A RESULT OF: THE FAILURE OF ANY OTHER PERSON OR ENTITY TO PERFORM ITS RESPONSIBILITIES, FIRE OR OTHER HAZARD, ACCIDENT, IMPROPER STORAGE, MIS-USE, NEGLIGENCE, POWER OR ENVIRONMENTAL CONTROL MALFUNCTIONS, DAMAGE FROM LIQUIDS, OR ANY OTHER CAUSE BEYOND THE NORMAL RANGE OF USE. REGARDLESS OF HOW CAUSED, IN NO EVENT SHALL MILNOR BE LIABLE FOR SPECIAL, INDIRECT, PUNITIVE, LIQUIDATED, OR CONSEQUENTIAL COSTS OR DAMAGES, OR ANY COSTS OR DAMAGES WHATSOEVER WHICH EXCEED THE PRICE PAID TO MILNOR FOR THE EQUIPMENT IT SELLS OR FURNISHES.

THE PROVISIONS ON THIS PAGE REPRESENT THE ONLY WARRANTY FROM MILNOR AND NO OTHER WARRANTY OR CONDITIONS, STATUTORY OR OTHERWISE, SHALL BE IMPLIED.

WE NEITHER ASSUME, NOR AUTHORIZE ANY EMPLOYEE OR OTHER PERSON TO ASSUME FOR US, ANY OTHER RESPONSIBILITY AND/OR LIABILITY IN CONNECTION WITH THE SALE OR FURNISHING OF OUR EQUIPMENT TO ANY BUYER.

BMP720097/19036

How to Get the Necessary Repair Components



This document uses Simplified Technical English.
Learn more at <http://www.asd-ste100.org>.

You can get components to repair your machine from the approved supplier where you got this machine. Your supplier will usually have the necessary components in stock. You can also get components from the Milnor® factory.

Tell the supplier the machine model and serial number and this data for each necessary component:

- The component number from this manual
- The component name if known
- The necessary quantity
- The necessary transportation requirements
- If the component is an electrical component, give the schematic number if known.
- If the component is a motor or an electrical control, give the nameplate data from the used component.

To write to the Milnor factory:

Pellerin Milnor Corporation
Post Office Box 400
Kenner, LA 70063-0400
UNITED STATES

Telephone: 504-467-2787
Fax: 504-469-9777
Email: parts@milnor.com

— End of BIUUUD19 —

Trademarks

BNUUUU02.R01 0000158093 F.2 E.2 3/3/21, 9:47 AM Released

These words are trademarks of Pellerin Milnor® Corporation and other entities:

Table 1. Trademarks

AutoSpot™	GreenFlex™	MilMetrix®	PulseFlow®
CBW®	GearTrace™	MilTouch™	RAM Command™
Drynet™	GreenTurn™	MilTouch-EX™	RecircONE®
E-P Express®	Hydro-cushion™	MilRAIL®	RinSave®
E-P OneTouch®	Mentor®	Miltrac™	SmoothCoil™
E-P Plus®	Mildata®	MilVision™	Staph Guard®
Gear Guardian®	Milnor®	PBW™	

End of document: BNUUUU02

Safety

1

Safety—Dryers, Conditioners, and Shakers

1. General Safety Requirements—Vital Information for Management Personnel [Document BIUUUS04]

Incorrect installation, neglected preventive maintenance, abuse, and/or improper repairs, or changes to the machine can cause unsafe operation and personal injuries, such as multiple fractures, amputations, or death. The owner or his selected representative (owner/user) is responsible for understanding and ensuring the proper operation and maintenance of the machine. The owner/user must familiarize himself with the contents of all machine instruction manuals. The owner/user should direct any questions about these instructions to a Milnor® dealer or the Milnor® Service department.

Most regulatory authorities (including OSHA in the USA and CE in Europe) hold the owner/user ultimately responsible for maintaining a safe working environment. Therefore, the owner/user must do or ensure the following:

- recognize all foreseeable safety hazards within his facility and take actions to protect his personnel, equipment, and facility;
- work equipment is suitable, properly adapted, can be used without risks to health or safety, and is adequately maintained;
- where specific hazards are likely to be involved, access to the equipment is restricted to those employees given the task of using it;
- only specifically designated workers carry out repairs, modifications, maintenance, or servicing;
- information, instruction, and training is provided;
- workers and/or their representatives are consulted.

Work equipment must comply with the requirements listed below. The owner/user must verify that installation and maintenance of equipment is performed in such a way as to support these requirements:

- control devices must be visible, identifiable, and marked; be located outside dangerous zones; and not give rise to a hazard due to unintentional operation;
- control systems must be safe and breakdown/damage must not result in danger;
- work equipment is to be stabilized;
- protection against rupture or disintegration of work equipment;
- guarding, to prevent access to danger zones or to stop movements of dangerous parts before the danger zones are reached. Guards to be robust; not give rise to any additional hazards; not be easily removed or rendered inoperative; situated at a sufficient distance from the danger zone; not restrict view of operating cycle; allow fitting, replacing, or maintenance by restricting access to relevant area and without removal of guard/protection device;
- suitable lighting for working and maintenance areas;
- maintenance to be possible when work equipment is shut down. If not possible, then protection measures to be carried out outside danger zones;
- work equipment must be appropriate for preventing the risk of fire or overheating; discharges of gas, dust, liquid, vapor, other substances; explosion of the equipment or substances in it.

- 1.1. **Laundry Facility**—Provide a supporting floor that is strong and rigid enough to support—with a reasonable safety factor and without undue or objectionable deflection—the weight of the fully loaded machine and the forces transmitted by it during operation. Provide sufficient clearance for machine movement. Provide any safety guards, fences, restraints, devices, and verbal and/or posted restrictions necessary to prevent personnel, machines, or other moving machinery from accessing the machine or its path. Provide adequate ventilation to carry away heat and vapors. Ensure service connections to installed machines meet local and national safety standards, especially regarding the electrical disconnect (see the National Electric Code). Prominently post safety information, including signs showing the source of electrical disconnect.
- 1.2. **Personnel**—Inform personnel about hazard avoidance and the importance of care and common sense. Provide personnel with the safety and operating instructions that apply to them. Verify that personnel use proper safety and operating procedures. Verify that personnel understand and abide by the warnings on the machine and precautions in the instruction manuals.
- 1.3. **Safety Devices**—Ensure that no one eliminates or disables any safety device on the machine or in the facility. Do not allow machine to be used with any missing guard, cover, panel or door. Service any failing or malfunctioning device before operating the machine.
- 1.4. **Hazard Information**—Important information on hazards is provided on the machine safety placards, in the Safety Guide, and throughout the other machine manuals. **Placards must be kept clean so that the information is not obscured. They must be replaced immediately if lost or damaged. The Safety Guide and other machine manuals must be available at all times to the appropriate personnel.** See the machine service manual for safety placard part numbers. Contact the Milnor Parts department for replacement placards or manuals.
- 1.5. **Maintenance**—Ensure the machine is inspected and serviced in accordance with the norms of good practice and with the preventive maintenance schedule. Replace belts, pulleys, brake shoes/disks, clutch plates/tires, rollers, seals, alignment guides, etc. before they are severely worn. Immediately investigate any evidence of impending failure and make needed repairs (e.g., cylinder, shell, or frame cracks; drive components such as motors, gear boxes, bearings, etc., whining, grinding, smoking, or becoming abnormally hot; bending or cracking of cylinder, shell, frame, etc.; leaking seals, hoses, valves, etc.) Do not permit service or maintenance by unqualified personnel.

2. Safety Alert Messages—Internal Electrical and Mechanical Hazards [Document BIUUUS11]

The following are instructions about hazards inside the machine and in electrical enclosures.



WARNING 1: Electrocution and Electrical Burn Hazards—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not unlock or open electric box doors.
- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.
- Keep yourself and others off of machine.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.



WARNING 2: Entangle and Crush Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.
- Keep yourself and others off of machine.
- Know the location of all emergency stop switches, pull cords, and/or kick plates and use them in an emergency to stop machine motion.



CAUTION 3: Burn Hazards—Contact with hot goods or machine components can burn you.

- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.

3. Safety Alert Messages—External Mechanical Hazards [Document BIUUUS12]

The following are instructions about hazards around the front, sides, rear or top of the machine.

4. Safety Alert Messages—Cylinder and Processing Hazards [Document BIUUUS13]

The following are instructions about hazards related to the cylinder and laundering process.



DANGER 4: Entangle and Sever Hazards—Contact with goods being processed can cause the goods to wrap around your body or limbs and dismember you.

- Do not attempt to open the door or reach into the cylinder until the cylinder is stopped.
- Do not touch goods inside or hanging partially outside the turning cylinder.
- Know the location of all emergency stop switches, pull cords, and/or kick plates and use them in an emergency to stop machine motion.
- Know the location of the main machine disconnect and use it in an emergency to remove all electric power from the machine.



WARNING 5: Crush Hazards—Contact with the turning cylinder can crush your limbs. The cylinder will repel any object you try to stop it with, possibly causing the object to strike or stab you.

- Do not attempt to open the door or reach into the cylinder until the cylinder is stopped.
- Do not place any object in the turning cylinder.



WARNING 6: Confined Space Hazards—Confinement in the cylinder can kill or injure you. Hazards include but are not limited to panic, burns, poisoning, suffocation, heat prostration, biological contamination, electrocution, and crushing.

- Do not attempt unauthorized servicing, repairs, or modification.



WARNING 7: Explosion and Fire Hazards—Petroleum and latex materials are flammable. They can produce explosive fumes when heated.

- Do not use flammable solvents in processing.
- Do not load machine with goods containing dry cleaning materials.
- Do not use the machine in the presence of solvent fumes.



WARNING 8: Poison and Corrosion Hazards—Synthetic solvents such as perchloroethylene are toxic. They can produce poisonous phosgene gas (mustard gas) and/or corrosive hydrochloric acid when heated.

- Do not load machine with goods containing dry cleaning materials.
- Do not use the machine in the presence of solvent fumes.



WARNING 9: Fire Hazards—Overheated goods can catch fire spontaneously in the machine or after discharge.

- Verify the overheat control system and plant fire extinguishers are functioning before operating the machine. Be sure to turn water supply on after testing.
- In the event of a fire, thoroughly wet all goods.
- Test or inspect the system after every automatic actuation, or monthly.



CAUTION 10: Burn Hazards—Contact with hot goods or machine components can burn you.

- Do not remove guards, covers, or panels.
- Do not reach into the machine housing or frame.
- Use care when handling recently-processed goods.

5. Safety Alert Messages—Unsafe Conditions [Document BIUUUS14]

5.1. Damage and Malfunction Hazards

5.1.1. Hazards Resulting from Inoperative Safety Devices



WARNING 11: Multiple Hazards—Operating the machine with an inoperative safety device can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.



WARNING 12: Electrocution and Electrical Burn Hazards—Electric box doors—Operating the machine with any electric box door unlocked can expose high voltage conductors inside the box.

- Do not unlock or open electric box doors.



WARNING 13: Entangle and Crush Hazards—Guards, covers, and panels—Operating the machine with any guard, cover, or panel removed exposes moving components.

- Do not remove guards, covers, or panels.



WARNING 14: Fire Hazards—Sprinkler and overheat control—Failure to supply water to the sprinkler or to open the manual valve, or failure of the overheat control, eliminates the machine's internal fire protection. Normally the machine stops and water is sprayed into the cylinder if outlet temperature reaches 240 degrees Fahrenheit (116 degrees Celsius).

- Verify the overheat control system and plant fire extinguishers are functioning before operating the machine. Be sure to turn water supply on after testing.
- Keep the manual shut-off test valve open except when testing.
- Test or inspect the system after every automatic actuation, or monthly.



WARNING [15]: Explosion and Fire Hazards—Gas train—Operating the machine with damaged or malfunctioning gas valves, safeties, controls, or piping can permit gas to escape into the fire box, cylinder, or laundry room. The enclosure will explode if gas comes in contact with any spark or flame.

- Do not operate the machine with any evidence of damage or malfunction.
- Stop the machine immediately and alert authorities if you smell gas.

5.1.2. Hazards Resulting from Damaged Mechanical Devices



WARNING [16]: Multiple Hazards—Operating a damaged machine can kill or injure personnel, further damage or destroy the machine, damage property, and/or void the warranty.

- Do not operate a damaged or malfunctioning machine. Request authorized service.

5.2. Careless Use Hazards

5.2.1. Careless Operation Hazards—Vital Information for Operator Personnel (see also operator hazards throughout manual)



WARNING [17]: Multiple Hazards—Careless operator actions can kill or injure personnel, damage or destroy the machine, damage property, and/or void the warranty.

- Do not tamper with or disable any safety device or operate the machine with a malfunctioning safety device. Request authorized service.
- Do not operate a damaged or malfunctioning machine. Request authorized service.
- Do not attempt unauthorized servicing, repairs, or modification.
- Do not use the machine in any manner contrary to the factory instructions.
- Use the machine only for its customary and intended purpose.
- Understand the consequences of operating manually.



CAUTION [18]: Goods Damage and Wasted Resources—Entering incorrect cake data causes improper processing, routing, and accounting of batches.

- Understand the consequences of entering cake data.

5.2.2. Careless Servicing Hazards—Vital Information for Service Personnel (see also service hazards throughout manuals)



WARNING [19]: Electrocution and Electrical Burn Hazards—Contact with electric power can kill or seriously injure you. Electric power is present inside the cabinetry unless the main machine power disconnect is off.

- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.
- Abide by the current OSHA lockout/tagout standard when lockout/tagout is called for in the service instructions. Outside the USA, abide by the OSHA standard in the absence of any other overriding standard.



WARNING [20]: Entangle and Crush Hazards—Contact with moving components normally isolated by guards, covers, and panels, can entangle and crush your limbs. These components move automatically.

- Do not service the machine unless qualified and authorized. You must clearly understand the hazards and how to avoid them.

- Abide by the current OSHA lockout/tagout standard when lockout/tagout is called for in the service instructions. Outside the USA, abide by the OSHA standard in the absence of any other overriding standard.



WARNING [21]: Confined Space Hazards—Confinement in the cylinder can kill or injure you. Hazards include but are not limited to panic, burns, poisoning, suffocation, heat prostration, biological contamination, electrocution, and crushing.

- Do not enter the cylinder until it has been thoroughly purged, flushed, drained, cooled, and immobilized.

— End of BIUUUS27 —

BIUUUI02PG (Published)Book specs- Dates: 20180426 / 20180426 / 20180426 Lang: ENG01 Applic: PDG

Tag Guidelines for the Models Listed Below

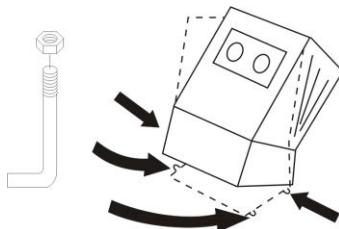
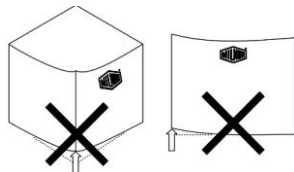
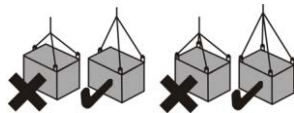
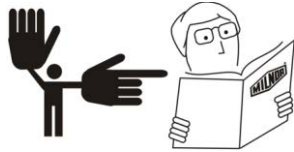
5050TG1L 5050TG1R 6450TG1L 6450TG1R 6458TG1L 6458TG1R 6464TG1L
 6464TG1R 7676TG1L 7676TG1R 8282TG1L 8282TG1R

Notice 1: This information may apply to models in addition to those listed above. It applies to paper tags. It does not apply to the vinyl or metal safety placards, which must remain permanently affixed to the machine and replaced if no longer readable.

Paper tags on the machine provide installation guidelines and precautions. The tags can be tie-on or adhesive. You can remove tie-on tags and white, adhesive tags after installation. Yellow adhesive tags must remain on the machine.

The following entries explain the installation tags. Each entry includes: 1) the tag illustration, 2) the tag part number displayed at the bottom of the tag, and 3) the meaning of the tag.

Display or Action



Explanation

Read the manuals before proceeding. This symbol appears on most tags. The machine ships with safety, operator, and routine maintenance guides for customer use. Milnor dealer manuals for installing, servicing, and commissioning this machine are also available from the Milnor Parts department.

B2TAG88005: This carefully built product was tested and inspected to meet Milnor® performance and quality standards by (identification mark of tester).

B2TAG94078: Do not forklift here; do not jack here; do not step here—whichever applies.

B2TAG94079: Rig for crane lifting (either 3-point or 4-point, depending on the number of lifting eyes provided) using a steep angle on the chains (closer to vertical than horizontal).

B2TAG94081: Motor must rotate in this direction. On single motor washer-extractors and centrifugal extractors, the drive motor must turn in this direction during draining and extraction. This tag is usually wrapped around a motor housing. If the motor turns in the opposite direction when the machine is first tested, the electrical hookup is incorrect and must be reversed as explained in the schematic manual.

B2TAG94084: Do not lift from one corner of the machine, as this can cause the frame to rack, damaging it.

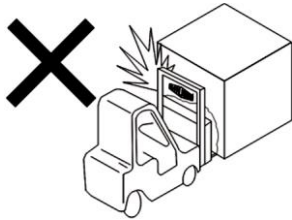
B2TAG94101: The dryer has a rearward center of gravity and must be firmly anchored to the floor at all four corners.

Display or Action

Explanation



B2TAG94102 shown—others similar: Match up the components with this number. These tags are used to pair up electrical or hose connections between major components of a machine shipped dis-assembled.



B2TAG94118: Do not strike shipping container during fork-lifting. Fragile components inside.



B2T2001017: Foam seal must be installed here before dryers are bolted together.



B2T2002013: Do not start the machine until shipping restraints are removed. This tag will appear on the outside of the machine to alert you to the presence of internal shipping restraints. A tag will also appear on the restraint to help identify it. Most, but not all shipping restraints display the color red. Some shipping restraints are also safety stands. Do not discard these.



B2T2007003: Install the shuttle rail in accordance with this instruction and the installation manual.

This Control Box is mounted here for shipping purposes only.

B2T2014022: This control box is mounted here for shipping purposes only. (Only used on 64" and 76" gas and steam dryers with a blower inverter.)

— End of BIUUUI02 —

Installation

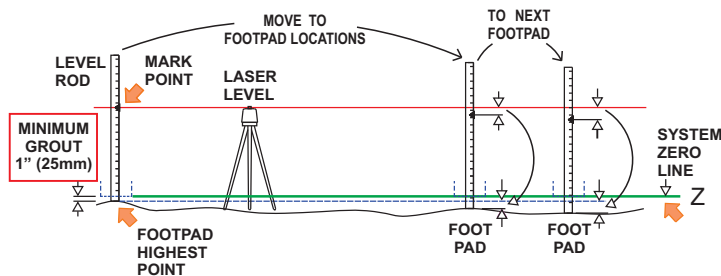
2

ATTENTION INSTALLERS!



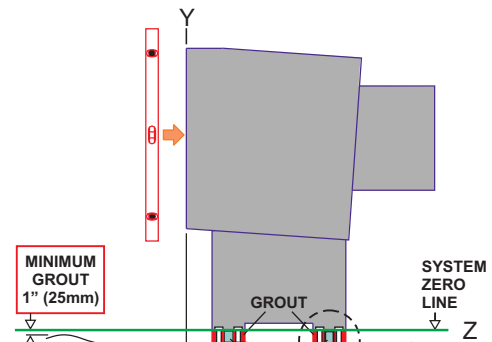
FLOOR IS UNEVEN

- Establish System Zero Line or Z.
- Find highest point in factory floor where footpads will be located.
- System Zero Line or Z is 1" above highest point.



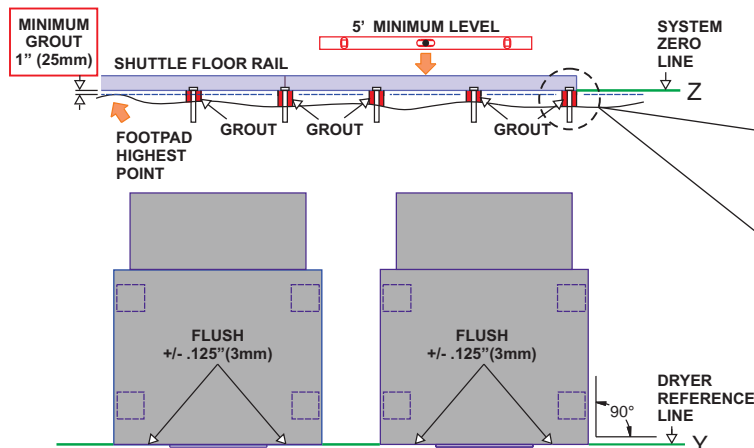
DRYER FEET MUST BE GROUTED

- Shim & level to System Zero Line or Z.
- Grout & anchor all brackets.



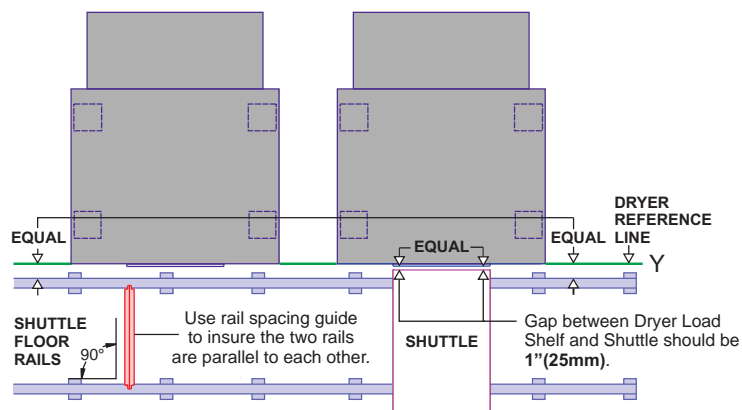
SHUTTLE RAIL BRACKETS MUST BE GROUTED TO Z

- Shim & level to System Zero Line or Z.
- Grout & anchor all brackets.

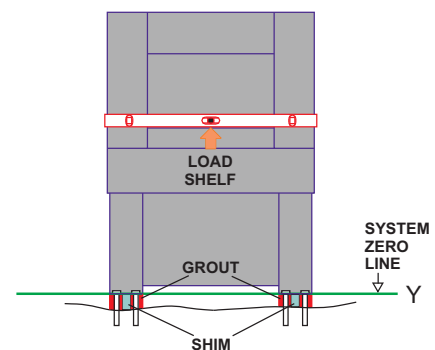


RAIL LEVELING PLATES ARE ALSO PROVIDED FOR FINE ADJUSTMENT OF RAIL.

DRYER FACES MUST BE FLUSH



DRYER MUST BE LEVEL



SHUTTLE RAILS MUST BE PERFECTLY PARALLEL TO DRYER FACES

- Floor rails must be parallel, level, and square along entire length of rail.

Dryer Assembly and Setting

This document gives general instructions for shippers and installers. Several other documents in the installation manual provide more detailed instructions on specific tasks related to installation. Review all of the installation-related documents before proceeding.

1. Handling Precautions

The machine is disassembled at the Milnor factory in two or more assemblies: the main dryer housing, the pedestal base, and if necessary, one or more other assemblies. The machine is shipped from the Milnor factory in three or more containers. Major assemblies are palletized or skidded and there are one or more boxes containing loose parts such as connecting brackets.

1. Remove the protective coverings (leaving the machine on its shipping skids) and examine the components carefully for possible shipping damage. If the machine is damaged, notify the transportation company immediately.

Note 1: Once the machine is given to the carrier for delivery, it is the sole responsibility of the **carrier** to ensure that no damage occurs during transit. In addition to readily apparent damage, carriers are liable for concealed damage. **Do not hesitate to file a claim with the carrier if the machine has been damaged in any way during shipment.** Milnor® will be glad to assist you in filing your claim, but is not responsible for shipping damage to the machine once it has been delivered to the carrier in good condition.

2. Lifting brackets are provided on the top of the house and are tagged as such. Spreader bars are mounted between the lifting brackets. The lifting brackets must be used if lifting by crane.
3. Use the skids for fork lifting and, if possible, leave the machine on its shipping skids until it is about to be assembled and placed in its final position. Once the skids are removed, take care in placing forks under the machine. **Do not allow the forks to come in contact with valves, piping, etc., located on the machine.**
4. Never push, pull, or exert pressure on any components that protrude from the machine frame.
5. Consult the Milnor factory if components such as the blower housing must be removed to fit machine through openings.

Some dryers are paired for installation immediately adjacent to each other. When installing these machines, the spreader bar mounting bolts ([Figure 3](#)) are inaccessible once the machines are mounted side by side. Remove the spreader bar immediately after installing the legs, before setting or anchoring dryer. Do not remove the lift plates as they are used to tie machines together.

Figure 1: Front Lifting Bracket

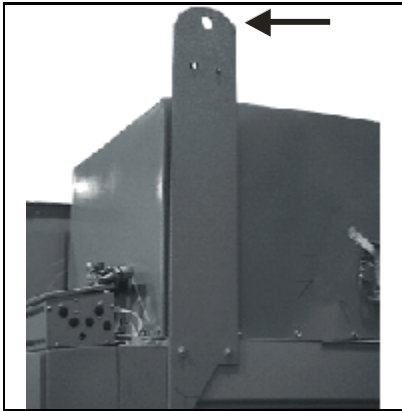


Figure 2: Rear Lifting Bracket

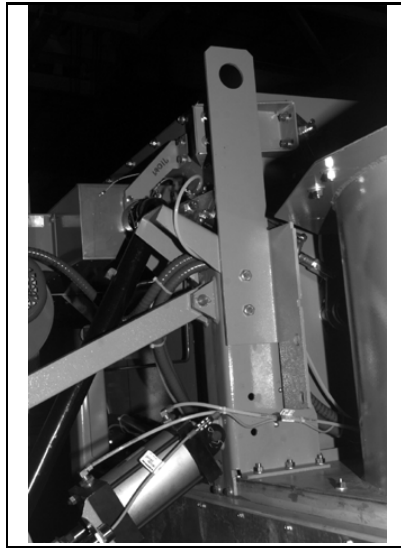


Figure 3: Spreader Bar Between Front Lifting Plates

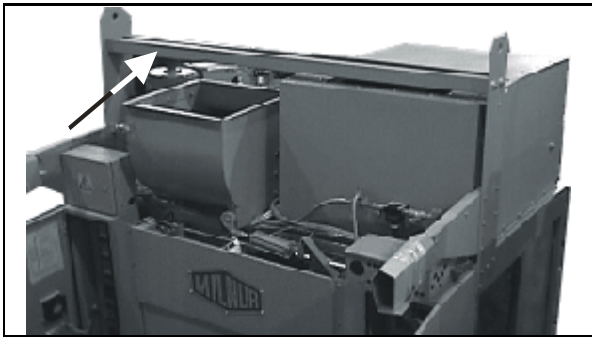
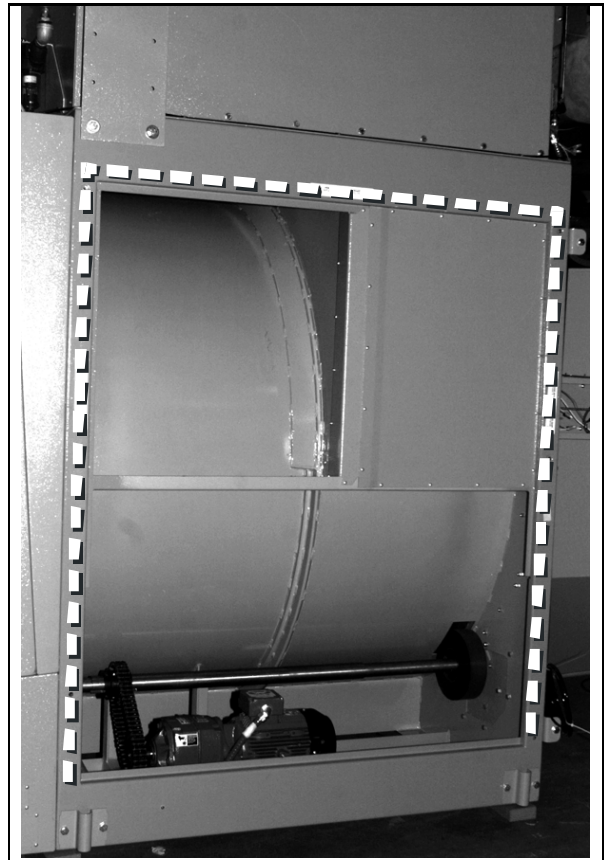


Figure 4: Apply sealing foam to left house before setting into position



2. Site Requirements

2.1. Dryer Environment—The dryer must not be installed or stored in an area where it will be exposed to water and/or weather.

2.2. Clearances—Observe the following:

- Sufficient clearances must exist to move the machine into the laundry. All openings and corridors through which equipment must pass must be of sufficient size to accommodate the sizes of the skidded assemblies (see the dimensional drawing). It is occasionally possible to reduce the overall dimensions by removing piping and by other special modifications. Consult the Milnor factory for more information.
- Provide sufficient clearance around machine for normal operation and maintenance procedures.
- Ensure sufficient clearance between hot surfaces, such as the dryer exhaust vent, and any combustible building materials.
- Ensure sufficient ventilation exists for the heat and vapors of normal operation to dissipate.
- Provide adequate airflow for optimum machine performance. Normally, this means connecting the machine to an outside air source.

2.3. Foundation—The machine must be anchored in accordance with the installation instructions. The floor and/or all other support components must have sufficient strength (and rigidity with due consideration for the natural or resonant frequency thereof) to withstand the fully loaded weight of the machine including the wet goods and any repeated sinusoidal (rotating) forces generated during its operation. Determining the suitability of floors, foundations, and other supporting structures normally requires analysis by a qualified structural engineer.

3. Assembly

3.1. Installing the Legs on the House—It is usually easiest to install the legs on the house then use a fork lift to set the machine in place.

1. Read all related tags prior to assembly.
2. Verify that the doors are closed and secured.
3. Unfasten house from the shipping skid. Once skids are removed, take care in placing forks under the machine. **Do not allow forks to come in contact with valves, piping, motors, etc., located under the machine.**
4. Install the provided foam seal along the path indicated by decals on the machine. This seal is only installed on the left side machine of a left and right pair ([Figure 4](#)).
5. Raise the house using the three designated lifting plates located on the top of the machine.
6. Install the legs and filler plates on the house.
7. Remove the spreader bar ([Figure 3](#)).
8. Carefully move the machine into place.
9. Repeat the assembly process as required for the adjacent machine (if paired).

3.2. Anchoring



WARNING 1: **Crush and Machine Damage Hazards**—This machine has a rearward center of mass.

- Install anchor bolts as soon as machine is in position and before making service connections. Install anchor bolts in accordance with the dimensional drawing.
- Keep bystanders clear of machine during installation.

Machines must be securely anchored to an adequate foundation. Anchor bolt locations and foundation specifications are provided on the dimensional drawing. However, do not install anchor bolts until the machine is on site so that the machine itself may be used to determine precise anchor bolt locations. Consult Milnor if any obstruction prevents the installation of any anchor bolts. **Anchor bolts cannot be indiscriminately omitted.**

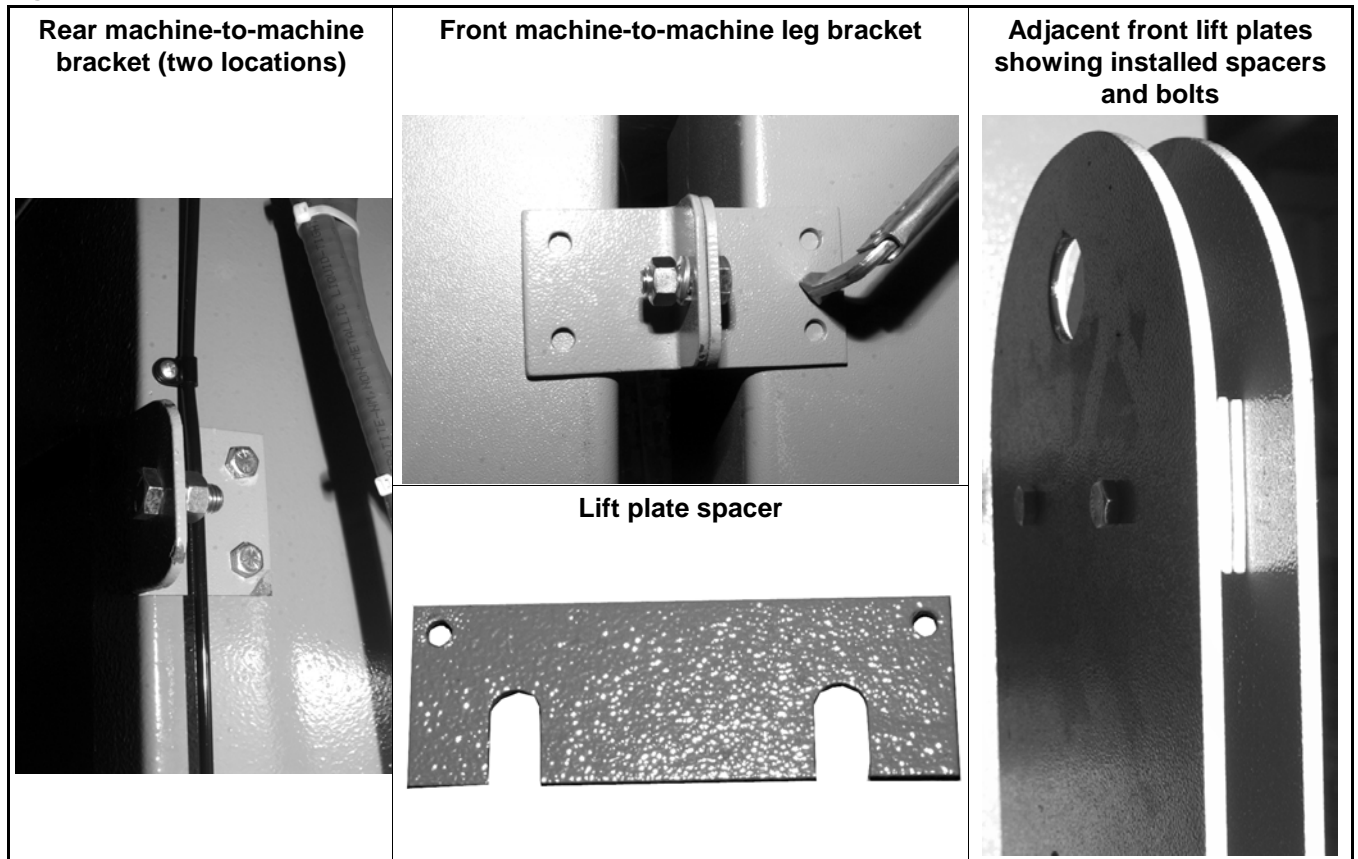
3.3. Leveling Procedures

1. Establish System Zero Line or Z. Find the highest point in the factory floor where footpads will be located. The system Zero Line or Z is 1"(25MM) above the highest point.
2. Install the anchor bolts.
3. Level with leveling bolts until the bottom of the pedestal feet are on System Zero Line or Z. Level **both left to right and front to back**.
4. Use a carpenter's level to verify that the machine is level.
5. Dryer feet must be grouted. Grout all footpads.
6. Tighten all foundation bolts until they contact the top of the base plates.
7. Tighten all the bolts evenly, **one-quarter of a turn each time on every bolt** until all bolts are uniformly tight. After tightening, check each fastener separately at least twice.

3.4. Machine-to-Machine Brackets—Machine to machine brackets hold paired dryers in place after each machine is anchored and leveled. Install these brackets as follows:

- Install the rear brackets (Figure 5).
- Assemble front machine-to-machine leg bracket. Mark and drill mounting holes and install the leg bracket (Figure 5).
- Install bolts between the front lift plates of adjacent machine pairs. Do not tighten bolts at this time.
- Slide the lift plate spacers in between the front lift plates (Figure 5). Tighten bolts when done.

Figure 5: Machine-to-Machine Brackets and Spacers



3.5. Check Cylinder Interior—Check the interior of the perforated cylinder for smoothness before placing the machine in service. Milnor cannot accept claims for damage to the cylinder's smooth finish after the machine has been placed in service.

— End of BIPD6I02 —

Lifting Brackets

5040, 5050, 6450, 6458, 6464, 7272, 7676, 8282, Dryers

Figure 1: All Dryers (7676 Shown)

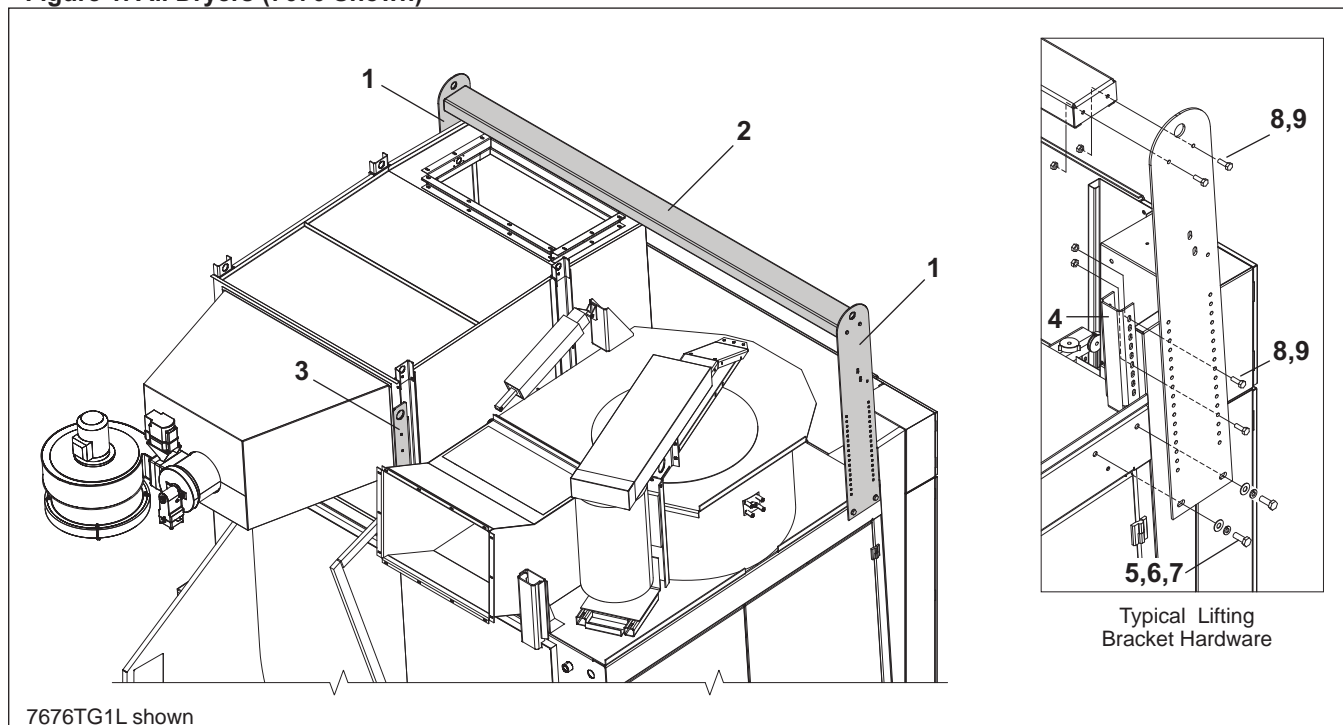
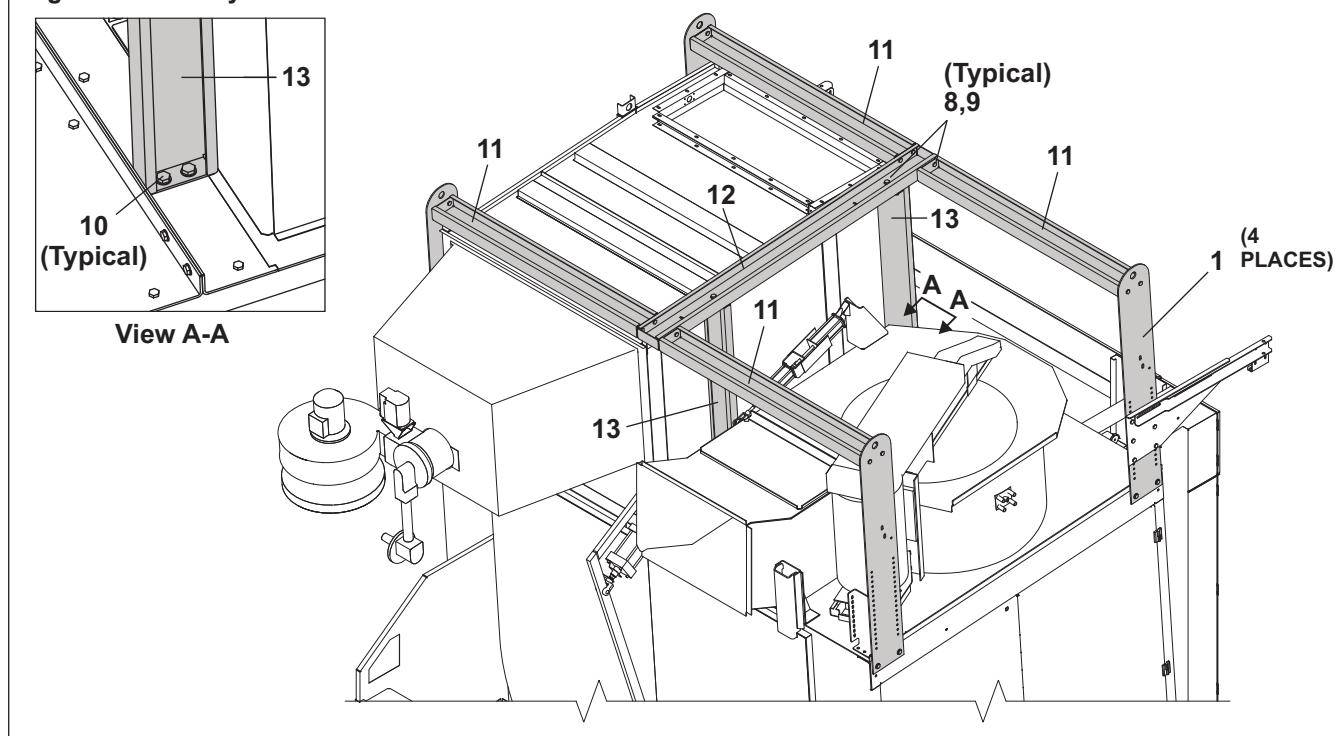


Figure 2: 8282 Dryers



Lifting Brackets

5040, 5050, 6450, 6458, 6464, 7272, 7676, 8282, Dryers

Parts List—Lifting Brackets

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

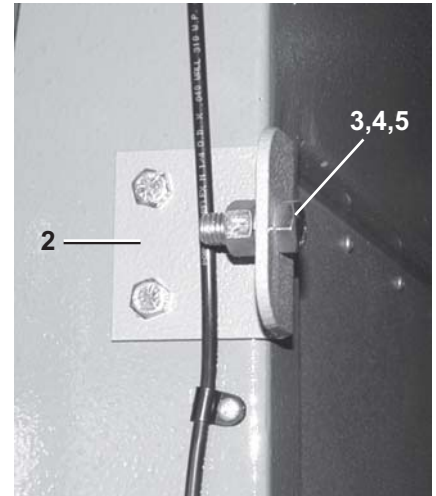
Used In	Item	Part Number	Description	Comments
-----REFERENCE ASSEMBLIES-----				
A			5040 DRYERS	
B			5050 DRYERS	
C			6450 DRYERS	
D			6458 DRYERS	
E			6464 DRYERS	
F			7272 DRYERS	
G			7676 DRYERS	
H			8282 DRYERS	
-----COMPONENTS-----				
ABDE	1	07 71315	DRYER LIFT BRKT STANDARD=41.50	
C	1	07 71315B	6450 DRYER LIFT BRKT=44.50	
FG	1	07 85315A	DRYER LIFT BRKT TALL=51.50	
H	1	07 88092	8282 DRYER LIFT BRKT	
AB	2	07 44075	5040 LIFT BRKT LONG SPREADER	
C	2	07 71316	6458 LIFT BRKT LONG SPREADER	
DE	2	07 81316	7272 LIFT BRKT LONG SPREADER	
H	2	07 88093	8282 SPREADER BAR CENTER STIFF	
AB	3	07 44076	5040 REAR LIFTING BRACKET	
CDEF	3	07 71183A	6458A REAR LIFTING BRACKET	
FG	3	07 71183B	DRYER REAR CHANNEL LIFTING BRACKET	
H	3	07 88096	8282 VT LIFTING BRKT	
A-F	4	07 71439	6458 RAILSUPP CORNER BRKT	
all	5	15K173A	HXCAPSCR 1/2-13UNC2AX1.75 GR5	
all	6	15U280	FL+WASHER(USS STD)1/2 ZNC PL+D	
all	7	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	8	15K105	HXCAPSCR 3/8-16UNC2A1.25 GR5 P	
all	9	15G198	HXFLGNUT 3/8-16 ZINC	

Dryer to Dryer Mounting Parts

5040, 5050, 6450, 6458, 6464, 7272, 7676, 8282 Dryers



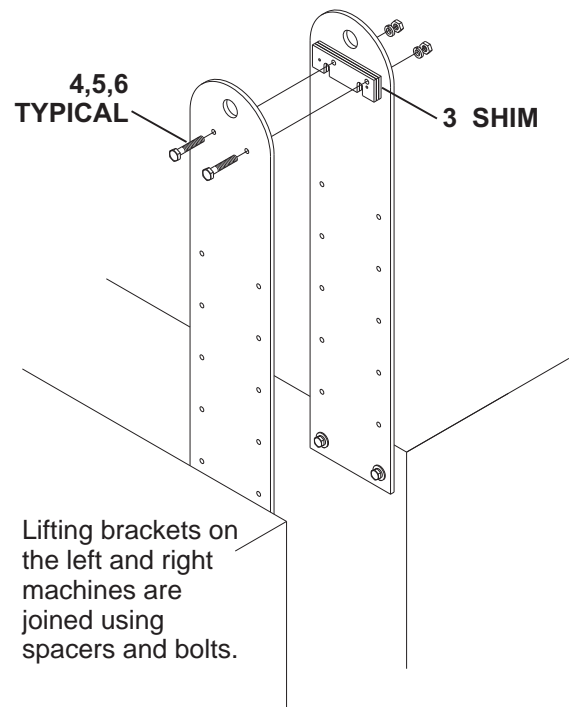
Sealing foam is applied to the right side of the left machine of the pair only. The dashed line shows where to apply the foam. ("right machine" shown in photo)



Mounting brackets are used to join left and right machines on the rear of the house and to join the pedestal legs.



Covers for nameplate and emergency stop replacement.



Lifting brackets on the left and right machines are joined using spacers and bolts.

See Instruction, "Dryer Installation" BIPD6I02.

Dryer to Dryer Mounting Parts

5040, 5050, 6450, 6458, 6464, 7272, 7676, 8282 Dryers

Parts List—Dryer to Dryer Mounting Parts

Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.

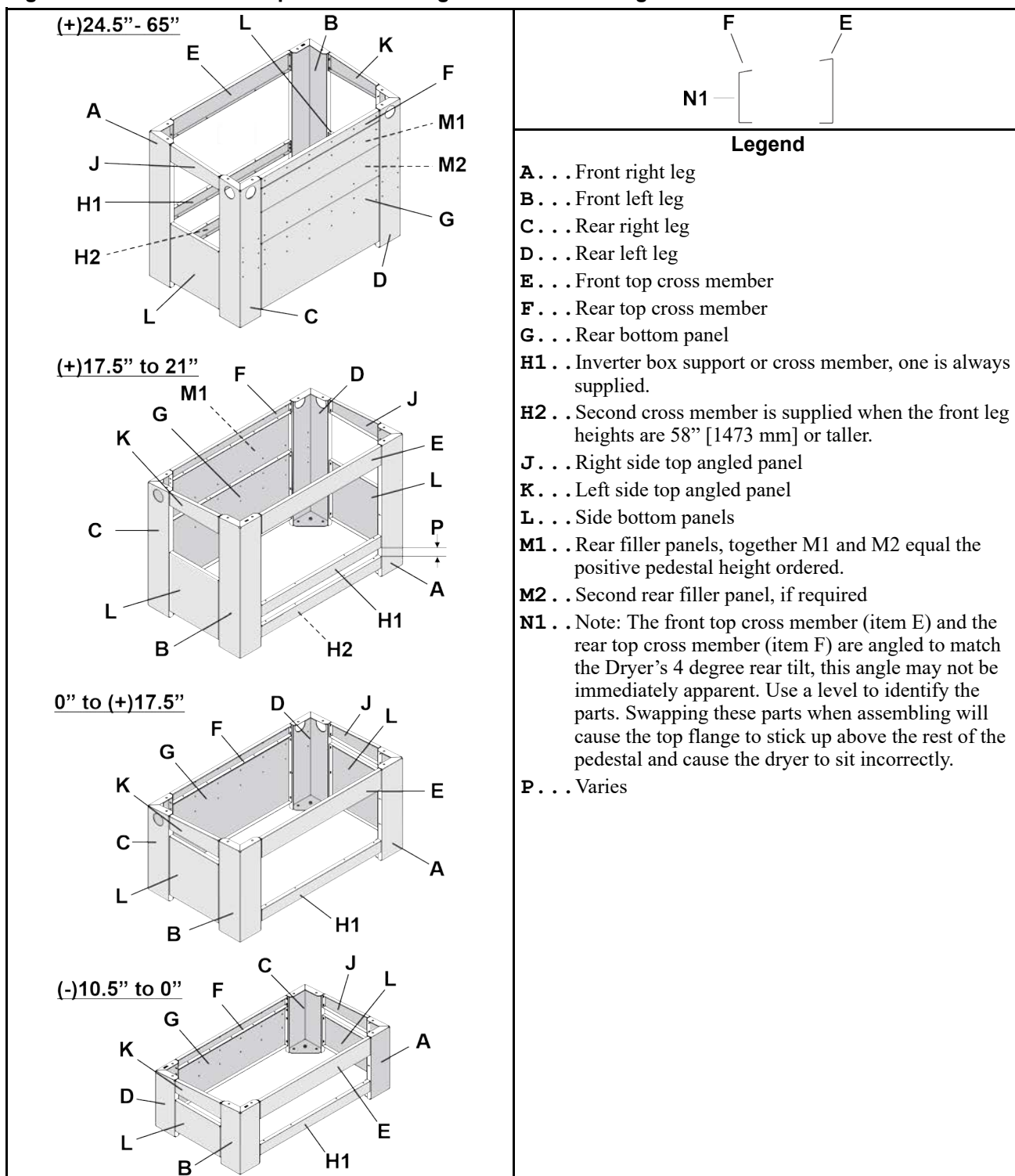
Used In	Item	Part Number	Description	Comments
.			-----COMPONENTS-----	
All	1	60A008A	1" X 1" NEO SPONGE/ADH.	
all	2	07 71309	6458 DRYER TO DRYER MNT BKT	
all	3	15K105	HXCAPSCR 3/8-16UNC2A1.25 GR5 P	
all	4	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	
all	5	15G205	HXNUT 3/8-16UNC2B ZINC GR2	
all	6	15K125	HEXCAPSCR 3/8-16UNC2AX2.5 GR5-	
all	7	07 71310	6458 DRYER TO DRYER MNT SHIM	
all	8	03 CC2X2	COVER PLT:DRYER NPLT REPLCMNT	
all	9	03 CC3X4	COVER PLT:DRYER E-STOP RPLCMNT	

Pedestal Base Installation

1 of 4

5050, 6450, 6458, 6464, 7676, & 8282 Dryers

Figure 1. Placement of Components with Regard to Pedestal Height

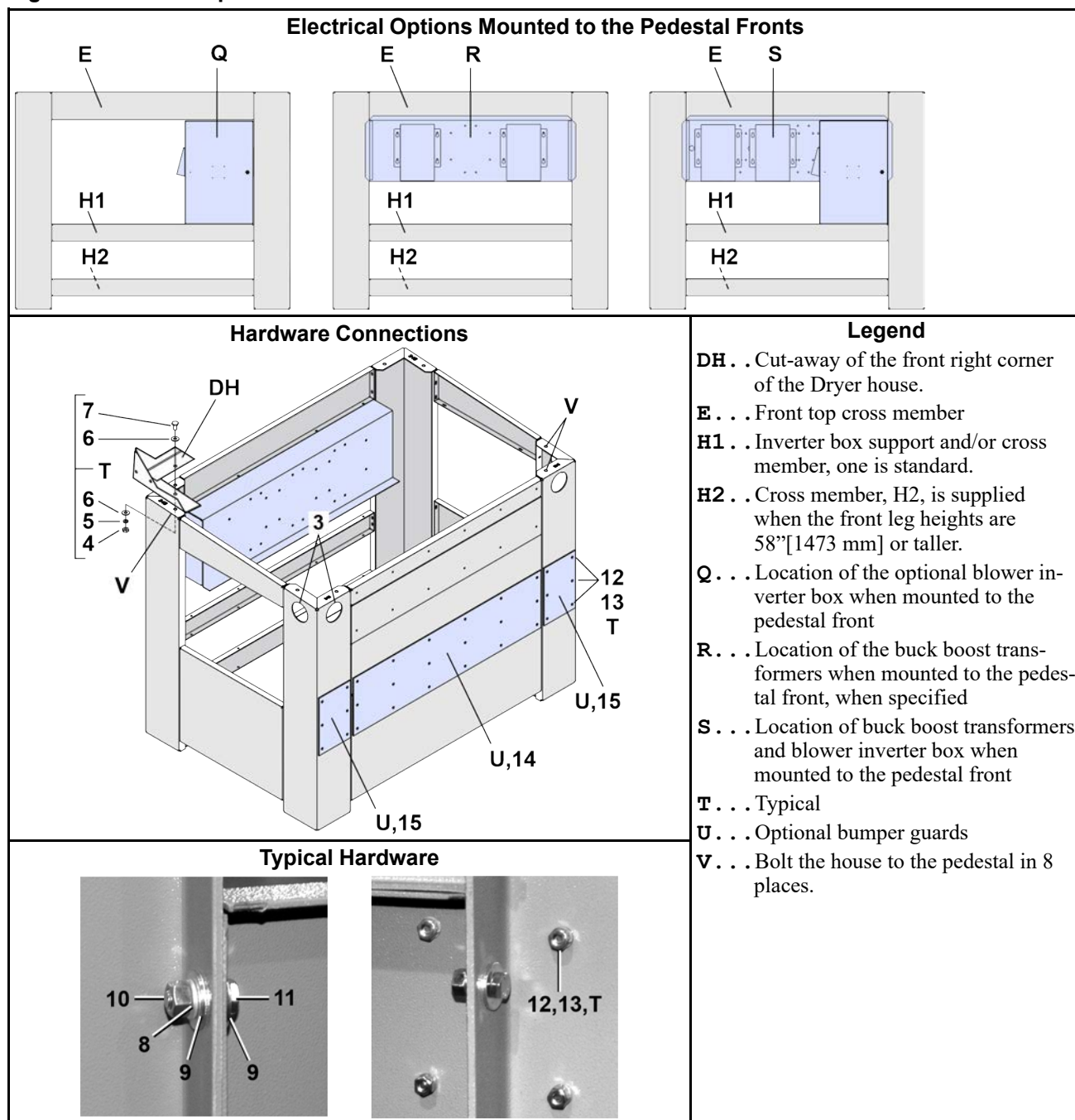


Pedestal Base Installation

5050, 6450, 6458, 6464, 7676, & 8282 Dryers

2 of 4

Figure 2. Pedestal Options and Hardware Connections



Pedestal Base Installation

5050, 6450, 6458, 6464, 7676, & 8282 Dryers

3 of 4

Figure 3. Anchoring

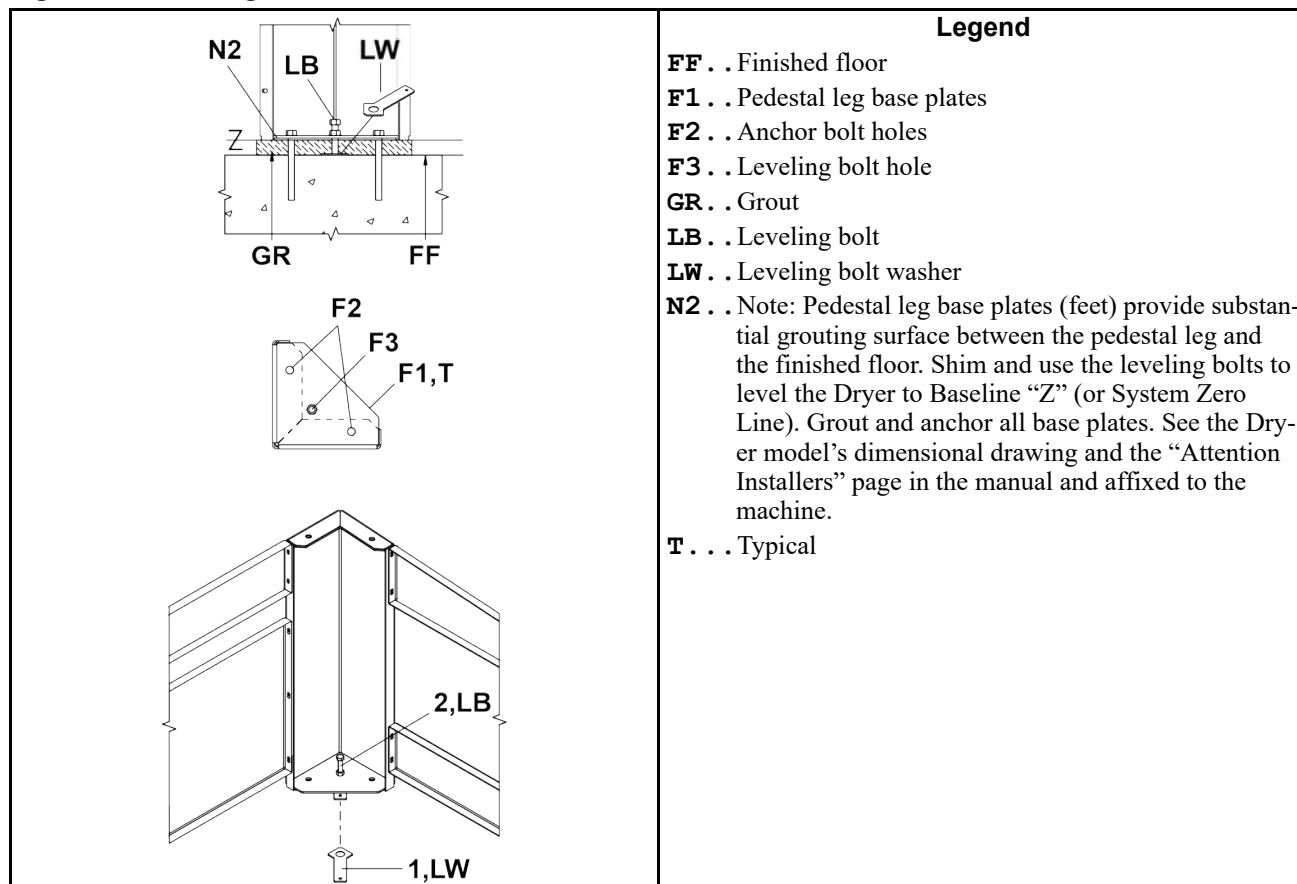


Table 1. Parts List—Pedestal Base Installation

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	Item	Part Number	Description/Nomenclature	Comments
Reference Assemblies				
	A	G77PD030	DRYER PEDESTAL STANDARD HARDWARE	
Components				
all	1	07 71579	DRYER JACKING BOLT WASHER	
all	2	15K226	HXTAPSCR 5/8-11UNC2AX3 GR5 ZIN	
all	3	12P14KSB	SNAPBUSH 5.0" X 4.75" X .75	
all	4	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	5	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	6	15U490	FLTWASH 1+1/2X17/32X1/4 ZINC	
all	7	15K191	HXCAPSCR 1/2-13UNC2AX2.5 GR5 Z	
all	8	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	

Pedestal Base Installation

4 of 4

5050, 6450, 6458, 6464, 7676, & 8282 Dryers

Parts List—Pedestal Base Installation (cont'd.)

Find the assembly for your machine and the letter shown in the "Item" column. The components for your machine will show this letter or the word "all" in the "Used In" column. The numbers shown in the "Item" column are those shown in the illustrations.				
Used In	Item	Part Number	Description/Nomenclature	Comments
all	9	15U240	FLATWASHER(USS STD) 3/8" ZNC P	
all	10	15G205	HXNUT 3/8-16UNC2B ZINC GR2	
all	11	15K095	HXCPSCR 3/8-16UNC2AX1 GR5 ZINC	
all	12	15N176	FLATMACSCR 1/4-20NCX3/4SS18-8	
all	13	15G164NE	HEXLOKNUT NYL 1/4-20 UNC2A SS.	
	14	07 71403	6458 BUMPER PAD-16"WX60"LG	5050, 6450, 6458, 6464 Dryers
	14	07 81403	7272 BUMPER PAD	7676 Dryers
all	15	07 71404	6458 BUMPER PAD-16"WX10"LG	

Pedestal Base

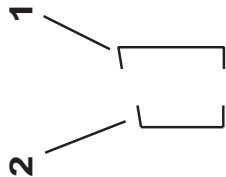
6458TG1L/R ,TS1L/R 64**64**TG1L/R ,TS1L/R

BMP090005/2012114B
(Sheet 1 of 3)



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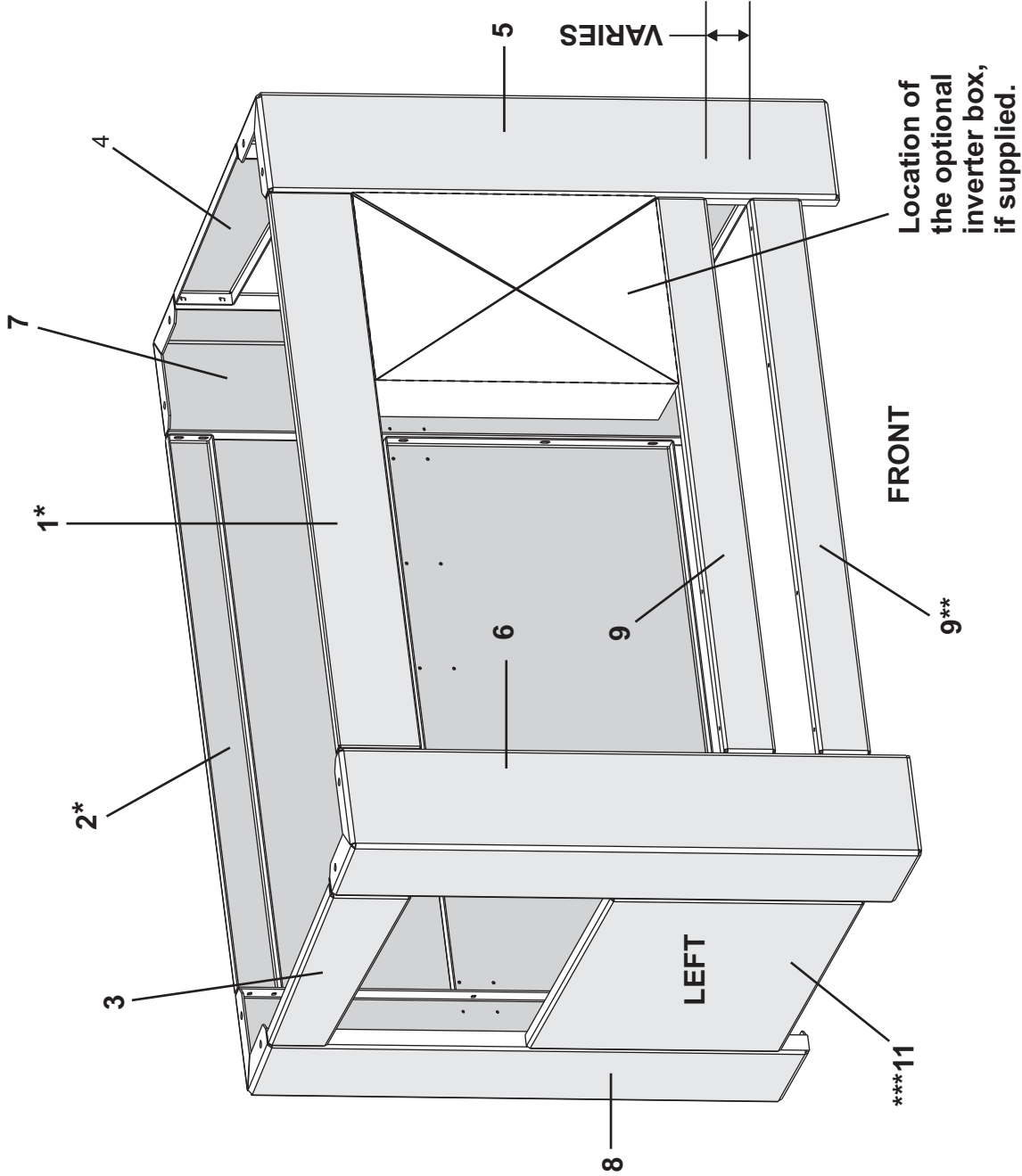
Litho in U.S.A.



REAR / FRONT
CROSS BRACE

Note*:

The upper front and upper rear cross braces are angled to match the angle of the pedestal legs. This angle may not be immediately apparent, you may need to use a level to identify the parts. Swapping these parts when assembling will cause the top flange to stick up above the rest of the pedestal and cause the dryer to sit incorrectly.



FOR MACHINES BUILT BEFORE 05/23/08, THE FRONT PANELS WERE 26" [660MM] TALL. SEE BMP030058.

Note**
Two Item 9** are used only in pedestals where the front leg heights are 58" [1473MM] or taller.

Note***
Item 11 is only supplied with pedestals where the front leg heights are 46-1/4" [1174MM] or taller.

Pedestal Base

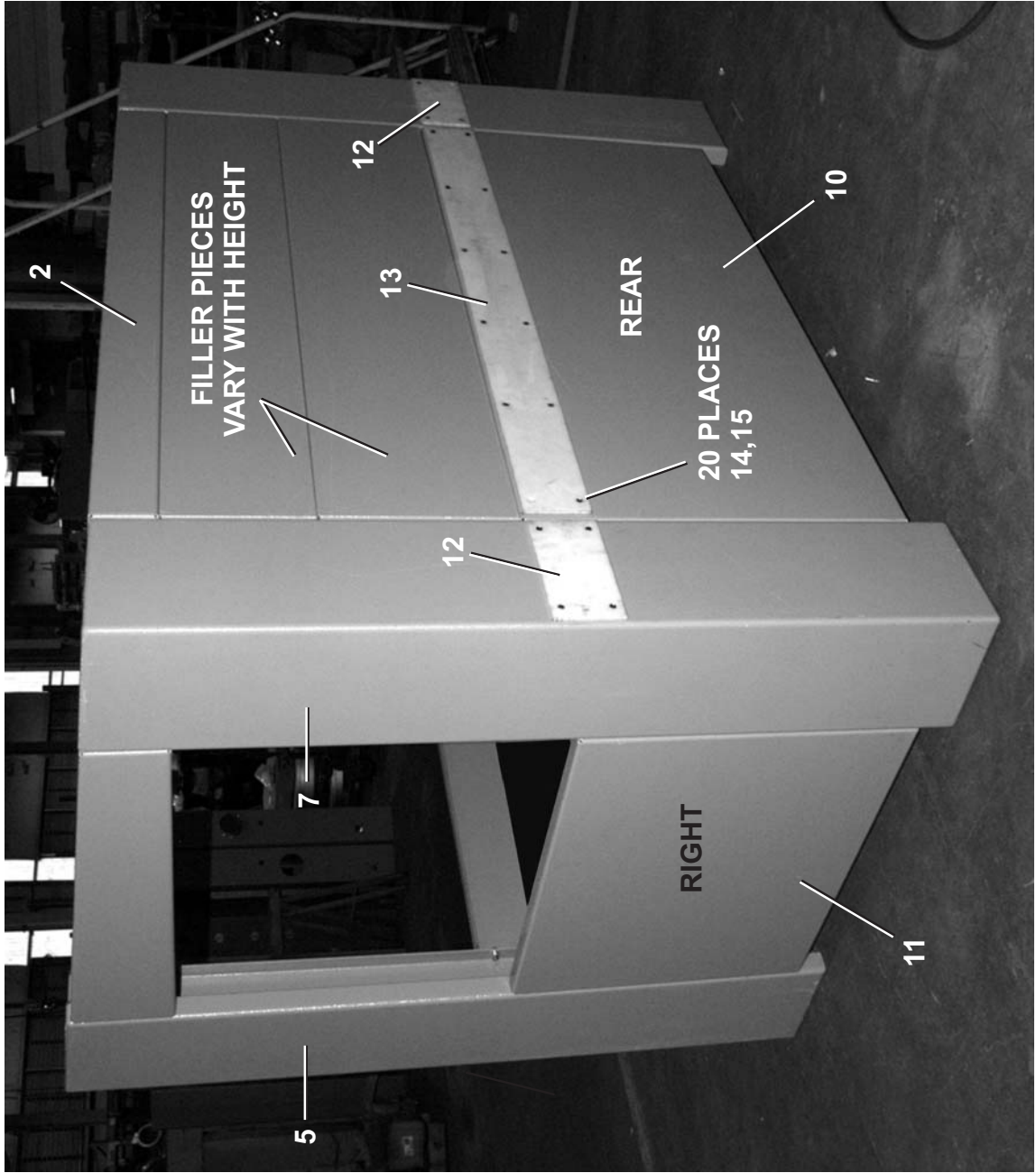
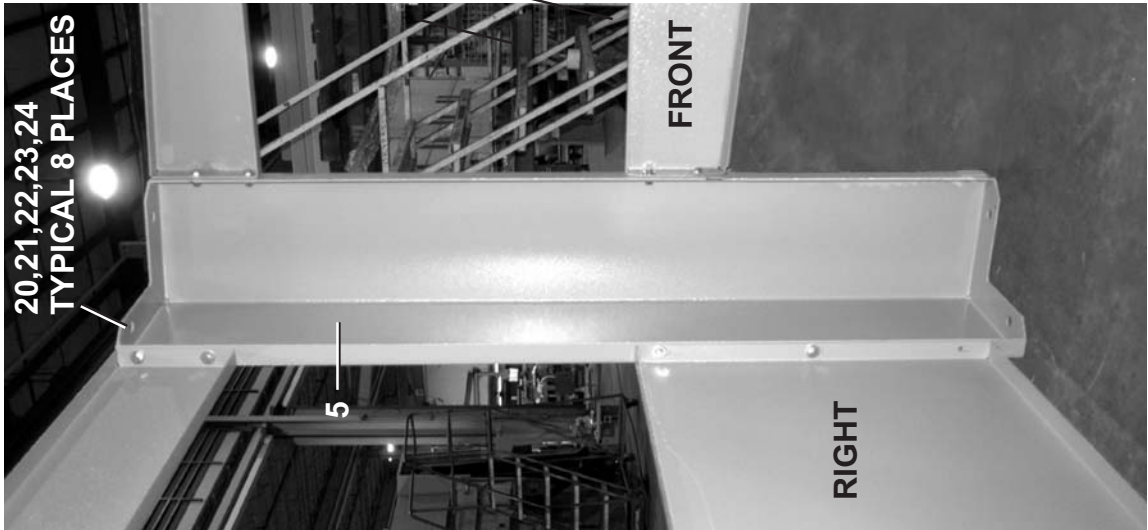
6458TG1L/R ,TS1L/R 64**64**TG1L/R ,TS1L/R



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(Sheet 2 of 3)

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FRONT LEGS:

ITEM 5	PART NUMBER	07-71320	07-71322	07-71324	07-71326	07-71328	07-71330	07-71332	07-71334	07-71336	07-71338	07-71340	07-71342	07-71344	07-71346	07-71348	07-71350	07-71352	07-71354	07-71356	07-71358	07-71360	07-71362	07-71300
ITEM 6	PART NUMBER	07-71320A	07-71322A	07-71324A	07-71326A	07-71328A	07-71330A	07-71332A	07-71334A	07-71336A	07-71338A	07-71340A	07-71342A	07-71344A	07-71346A	07-71348A	07-71350A	07-71352A	07-71354A	07-71356A	07-71358A	07-71360A	07-71362A	07-71300A
PEDESTAL ORDER HEIGHT (IN.)		0.0	1.75	3.5	5.25	7.0	8.75	10.5	12.25	14.0	15.75	17.5	19.25	21.0	22.75	24.5	26.25	28.0	29.75	33.25	35.00	36.75	38.50	31.50
LEG LENGTH (ITEMS 5&6) (IN.)		40.988	42.718	44.488	46.218	47.988	49.718	51.488	53.218	54.988	56.718	58.488	60.218	61.988	63.718	65.488	67.218	68.988	70.718	74.218	75.988	77.718	79.488	72.488

REAR LEGS:

ITEM 7	PART NUMBER	07-71321	07-71323	07-71325	07-71327	07-71329	07-71331	07-71333	07-71335	07-71337	07-71339	07-71341	07-71343	07-71345	07-71347	07-71349	07-71351	07-71353	07-71355	07-71357	07-71359	07-71361	07-71363	07-71301
ITEM 8	PART NUMBER	07-71321A	07-71323A	07-71325A	07-71327A	07-71329A	07-71331A	07-71333A	07-71335A	07-71337A	07-71339A	07-71341A	07-71343A	07-71345A	07-71347A	07-71349A	07-71351A	07-71353A	07-71355A	07-71357A	07-71359A	07-71361A	07-71363A	07-71301A
PEDESTAL ORDER HEIGHT (IN.)		0.0	1.75	3.5	5.25	7.0	8.75	10.5	12.25	14.0	15.75	17.5	19.25	21.0	22.75	24.5	26.25	28.0	29.75	33.25	35.00	36.75	38.50	31.50
LEG LENGTH (ITEMS 7&8) (IN.)		37.8	39.55	41.3	43.05	44.8	46.55	48.3	50.05	51.8	53.55	55.3	57.05	58.8	60.55	62.3	64.05	65.8	67.55	71.05	72.80	74.55	76.30	69.300

CHART CONTINUED >

Pedestal Base

6458TG1L/R ,TS1L/R 64**64**TG1L/R ,TS1L/R

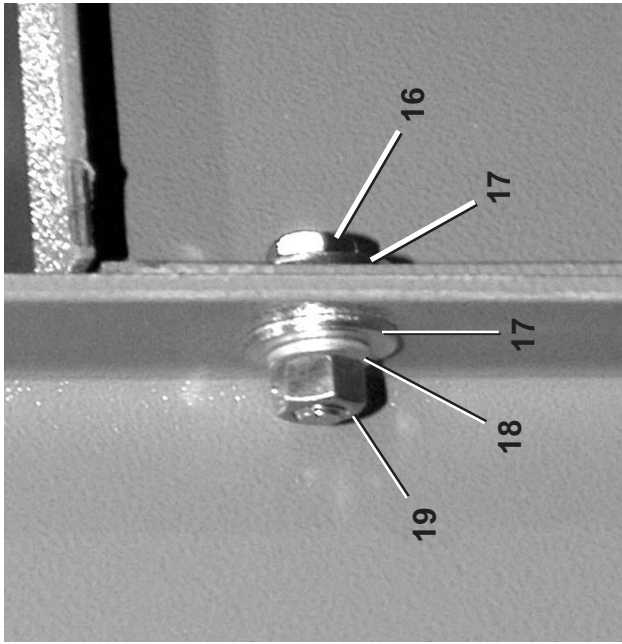
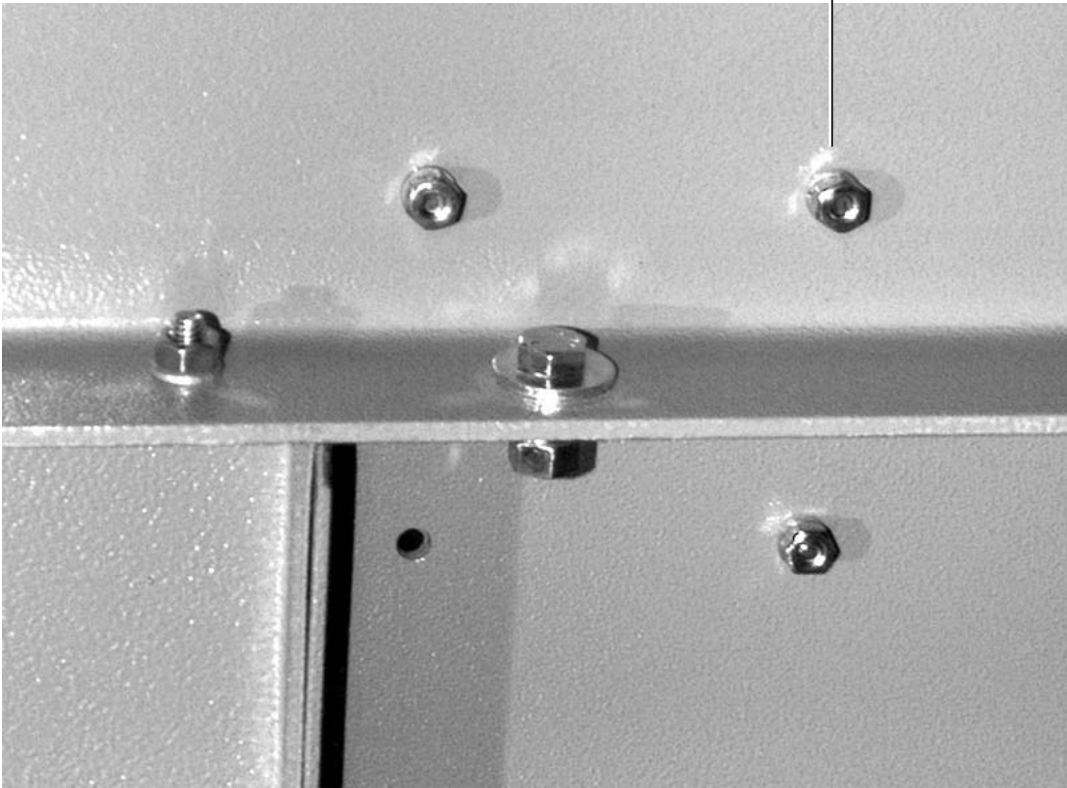


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BMP090005/2012114B
(Sheet 3 of 3)

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Parts List—Pedestal Base Assembly				
Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.				
Used In	Item	Part Number	Description	Comments
			ASSEMBLIES	
			none	
			COMPONENTS	
all	1	07 71391	6458 DRYER BASE FILLER TOP FT	6458 DRYERS 6464 DRYERS 6458 DRYERS 6464 DRYERS
all	2	07 71392	6458 DRYER BASE FILLER TOP RR	
all	3	07 71395	6458 DRYER BASE FILL DRV RITE	
all	3	07 72041	6464 DRYER BASE FILL DRV RIGHT	
all	4	07 71395A	6458 DRYER BASE FILL DRV LEFT	6458 DRYERS 6464 DRYERS 6458 DRYERS 6464 DRYERS
all	4	07 72041A	6464 DRYER BASE FILL DRV LEFT	
all	5	07 71300	6458 = 31.5" PED FRONT RIGHT	
all	6	07 71300A	6458=31.5" PED FRONT LEFT	
all	7	07 71301	6458=31.5" PED REAR RIGHT	(2) USED FOR 17.5" PEDESTALS & HIGHER 6458 DRYERS 6464 DRYERS
all	8	07 71301A	6458=31.5" PED REAR LEFT	
all	9	07 71418	6458 DRYER FILLER INVERTER BOX	
all	10	07 71402	6458 DRYER BASE FILLER-REAR	
all	11	07 71396	6458 DRYER BASE FILL DRV LOW	6458 DRYERS 6464 DRYERS
all	11	07 72042	6464 DRYER BASE FILL DRV LOW	
all	12	07 71404	6458 BUMPER PAD-5"WX10"LG	
all	13	07 71403	6458 BUMPER PAD-5"WX60"LG	
all	14	15G164NE	HEXLOKNUT NYL 1/4-20 UNC2A SS.	
all	15	15N176	FLATMACSCR 1/4-20NCX3/4SS18-8	
all	16	15K095	HXCPSCR 3/8-16UNC2AX1 GR5 ZINC	
all	17	15U240	FLATWASHER(USS STD) 3/8" ZNC P	
all	18	15U255	LOCKWASHER MEDIUM 3/8 ZINCPL	
all	19	15G205	HXNUT 3/8-16UNC2B ZINC GR2	
all	20	15K162	HXCAPSCR 1/2-13UNC2AX1.5 GR5 P	
all	21	15U490	FLAWASH 1+1/2X17/32X1/4ZINC	
all	22	15U300	LOKWASHER REGULAR 1/2 ZINC PLT	
all	23	15G230	HXNUT 1/2-13UNC2B SAE ZINC GR2	
all	24	15U280	FL+WASHER(USS STD)1/2 ZNC PL+D	



TYPICAL 3/8” BOLTS

ADDITIONAL PEDESTAL HEIGHTS

FRONT LEGS:

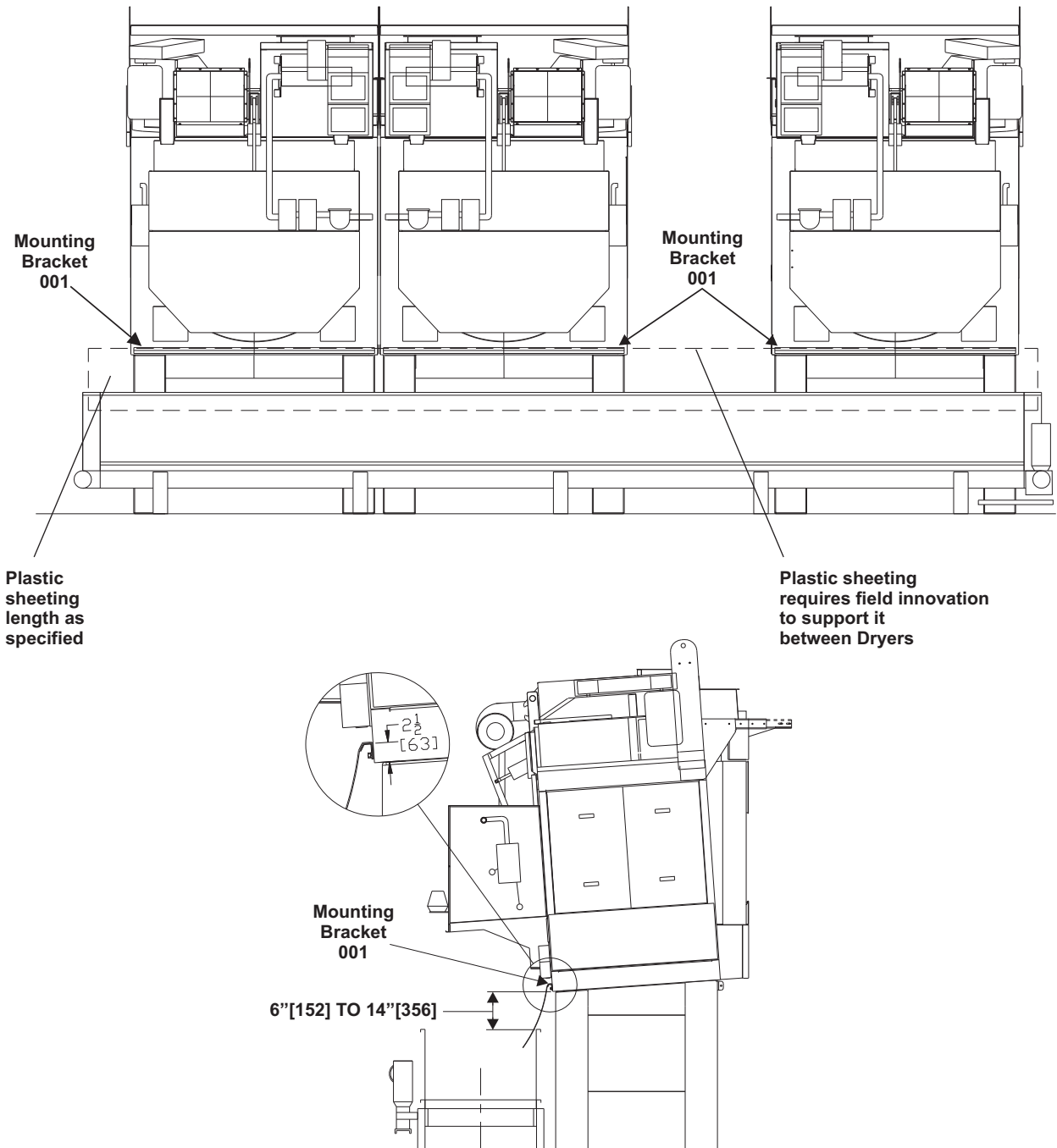
ITEM 5	PART NUMBER	07 71389B	07 71389
ITEM 6	PART NUMBER	07 71389C	07 71389A
PEDESTAL ORDER HEIGHT (IN.)		-3.5	-7
LEG LENGTH (ITEMS 5&6) (IN.)		34	30.5

REAR LEGS:

ITEM 7	PART NUMBER	07 71390B	07 71390
ITEM 8	PART NUMBER	07 71390C	07 71390A
PEDESTAL ORDER HEIGHT (IN.)		-3.5	-7
LEG LENGTH (ITEMS 7&8) (IN.)		30.8	27.3

Unload Bridge Installation

5040, 5050, 6450, 6458, 6464, 7272, 7676, & 8282 Dryers



Unload Bridge Installation

5040, 5050, 6450, 6458, 6464, 7272, 7676, & 8282 Dryers

Parts List—Unload Bridge Installation Find the correct assembly first, then find the needed components. The item letters (A, B, C, etc.) assigned to assemblies are referred to in the "Used In" column to identify which components belong to an assembly. The item numbers (1, 2, 3, etc.) assigned to components relate the parts list to the illustration.				
Used In	Item	Part Number	Description	Comments
-----REFERENCE-----				
	A			5040 DRYERS
	B			5050 DRYERS
	C			6450, 6458 DRYERS
	D			6464 DRYERS
	E			7272 DRYERS
	F			7676 DRYERS
	G			8282 DRYERS
-----COMPONENTS-----				
AB	1	07 44230	5040 UNLOAD BRIDGE TO CONV	
CD	1	07 71568	6458 UNLOAD BRIDGE TO CONV	
EF	1	07 71569	7272 UNLOAD BRIDGE TO CONV	
G	1	07 88094	8282 UNLOAD BRIDGE TO CONV	

Air and Duct Requirements for Milnor® Pass-through Dryers

BNDDUI01.C01 0000086779 A.10 A.11 Released



NOTICE: This document, along with the document BNDDUI01 “Utility Requirements for Gas, Steam, and Thermal Oil Dryers” gives air and duct requirements for Milnor® pass-through dryers. It also provides limited guidance for the layout of ducts. Pellerin Milnor Corporation accepts no responsibility for duct design or liability for damage or injury caused by ducts.

1. Air Requirements

BNDDUI01.C02 0000086790 A.10 Released



CAUTION: Insufficient air will cause dryers to malfunction and/or greatly reduce drying efficiency. Excessive back-pressure will cause dryers to malfunction.

1.1. Air Flow

BNDDUI01.C03 0000086789 A.10 A.11 Released

All Milnor pass-through dryers move air, called main air, through the goods. The quantity of main air specified in document BNDDUI01 “Utility Requirements for Gas, Steam, and Thermal Oil Dryers” (in standard cubic feet per minute or scfm) must be available at the dryer main air inlet.

In addition, gas dryers use laundry room air for combustion. The quantity of combustion air specified in document BNDDUI01 “Utility Requirements for Gas, Steam, and Thermal Oil Dryers” (in standard cubic feet per minute or scfm) must be available at the dryer combustion air inlet.

1.2. Back Pressure

BNDDUI01.C04 0000086788 A.10 Released

The total pressure drop imposed by all external components that the main air must pass through (examples: ducts, lint filters, rooftop ventilators) must be between 0 (zero) and 0.5 inch water column (125 Pascals).

For gas dryers, it is necessary to supply a sufficient quantity of air to the room where the dryers are located to replenish the combustion air taken in by the dryers and to prevent a low pressure condition in the room.



NOTE: The internal pressure drop between the dryer main air inlet and exhaust outlet fluctuates during operation and can greatly exceed the allowable external pressure drop.

2. Duct Requirements

BNDDUI01.C05 0000086787 A.10 Released

You can connect a duct between the dryer main air inlet and outside air. You must connect a duct between the dryer air exhaust outlet and the exterior of the building.

2.1. Is an Inlet Duct Necessary?

BNDDUI01.C06 0000086786 A.10 A.11 Released

Use an inlet duct to avoid negative air or if hazardous or corrosive fumes are present that could be drawn in to the dryers. Otherwise, consider the facility layout, operational procedures, and climatic conditions. It may be possible to take main air from the room in which the dryers are located, especially if this room is dedicated to the dryers and physically separated from other laundry activities. If conditions permit this arrangement, the facility can use barometric dampers to admit the quantity of outside air necessary to replenish the air taken in by the dryers. The air in the dryer room must be sufficient to meet the air requirements explained in [Section 1.1 , page 1](#) at all times that the dryers operate.



CAUTION: **Negative air pressure** — will draw heat from a dryer into the room it is in. Nearby objects such as roof beams can become very hot.



- ▶ Provide an inlet duct when negative air would otherwise occur.

If main air cannot be supplied from inside the room the dryers are in, use inlet ducts to connect the dryers to outside air. For gas dryers, use powered ventilation in the facility to replenish the combustion air taken in by the dryers.

2.2. Duct Durability

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CAUTION: **Fluctuations in main air pressure** — will cause thin-gauge steel ducts to quickly fail from metal fatigue. Ducts with a rectangular cross-section can be damaged by these forces even when heavy gauge material is used. A rectangular duct on the exhaust side of the dryer is likely to fail.



- ▶ Consult a duct design professional before you use rectangular duct.

The ducts must be able to withstand the large flexing forces imposed on it by the internal air pressure changes that occur during dryer operation. At minimum, straight sections fabricated from galvanized sheet steel must have the following material thickness:

- Round duct - 20 gauge
- Rectangular duct - 16 gauge

It can be necessary to increase material thickness and use stiffeners for long duct lengths, large duct sizes, transitions, and elbows. Duct material must be able to withstand any corrosive forces imposed by the laundry environment. Galvanized sheet steel is usually sufficient, but special conditions can occur.

2.3. Duct Functionality

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WARNING: **Incorrect duct design** — can promote the buildup of flammable lint or cause flammable materials near a hot duct to ignite. It can also cause dryers to malfunction and greatly reduce productivity.



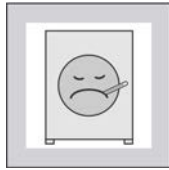
- ▶ Do not use any internal components in ducts (example: turning vanes).
- ▶ Obey codes that govern the clearances between hot ducts and flammable construction materials (example: roof sheathing).
- ▶ Do not connect ducts from different dryers together if you can avoid it. See [Section 2.3.1 : Multiple Dryers and Lint Collection, page 3](#).
- ▶ Do not use abrupt transitions or elbows with less than three segments. See [Section 2.3.2 : Transitions and Elbows, page 3](#)
- ▶ Provide inspection covers as necessary to keep all ducts clean.

2.3.1. Multiple Dryers and Lint Collection

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CAUTION: **Common (shared) ducts** — can cause dryers to malfunction due to the fluctuation in pressure drop felt by each dryer as a result of the other dryers. This can occur even if the common duct is large enough to accommodate the combined output of all connected dryers.



- ▶ Consult a duct design professional if you must use a common duct.

If space limitations or other factors make the use of common ducts unavoidable, it will be necessary to provide a system to maintain back pressure within the range specified in [Section 1.2 : Back Pressure, page 1](#) automatically. A system of this type could include pressure-sensing devices, a variable-speed booster fan, and a controller.

Today, facility designers generally prefer internal lint screens (a Milnor® option) or close-coupled lint collection systems installed on each dryer. However, if the facility uses a common, powered lint collection system, you can connect the air exhaust from two or more dryers to this system if you run separate ducts from each dryer. The system must be designed to:

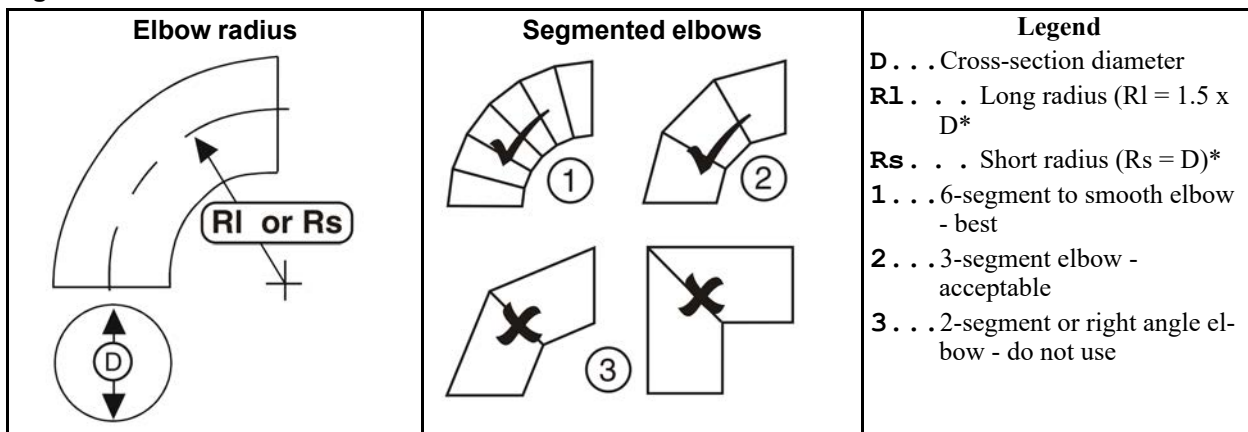
- accommodate the maximum combined flow from all dryers connected to it.
- maintain a constant back pressure in the range given in [Section 1.2 : Back Pressure, page 1](#).

2.3.2. Transitions and Elbows

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Use smooth, gradual transitions. For calculations, consider any transition with a taper less than 7.5 degrees as straight duct. Consider a gradual transition that connects the main air inlet or exhaust outlet on the dryer to a larger size duct as the larger duct size.

See the figure below. For round duct, prefer elbows with radius R_1 . Do not use a smaller radius than R_s . Prefer elbows with six or more segments. Do not use elbows with less than three segments.

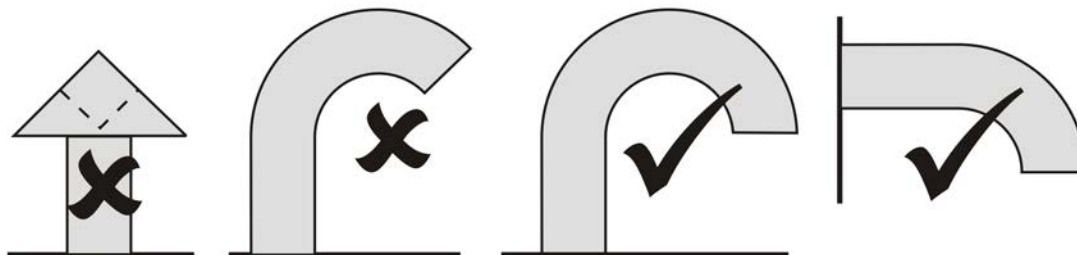
Figure 1. Round duct elbow fabrication

2.3.3. Vents

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Wind loads can contribute significantly to variations in the external pressure drop felt by dryers. Only the vent designs identified with a check mark in the figure below adequately counteract the effect of wind load.

Do not use a screen in the vent for the main air inlet.

Figure 2. Vent Designs

3. Duct Layout and Pressure Drop Calculations

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3.1. Units of Measure Used in the Calculations

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Table 1. Units of Measure

Type of Measurement	English Unit		Metric Unit	
	Abbreviated	Term	Abbreviated	Term
Short length	in	inches	(mm)	millimeters
Long length	ft	feet	(M)	meters
Air flow	scfm	standard cubic feet per minute	(nlpm)	normal liters per minute

Units of Measure (cont'd.)

Air velocity	fpm	feet per minute	(npm)	meters per minute
Pressure drop	iwc	inches water column	(Pa)	Pascals

3.2. Duct Components and Their Pressure Drops

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The table that follows, gives selected round and rectangular duct sizes for each dryer model, in straight lengths and 90 degree elbows. If it is necessary to use components not given in the table (examples: other duct cross-sections, elbows with other than 90 degree angles), it will be necessary to refer to other texts or consult a duct design professional.

Table 2. Duct Sizes and Pressure Drops for Dryer Models

Air Specifications			Duct components, sizes, and pressure drops										
Dryer Model Prefix	Air flow - scfm (nlpm)	Velocity* for given cross-section - fpm (mpm)	Equivalent** cross-sections			Pressure drop - iwc (Pa)							
			Round	Rectangular***		Straight	90 Degree Elbows						
			Diame-ter-in (mm)	Height-in (mm)	Width-in (mm)	iwc per 100 feet (or Pa per 100 meters)	Smooth round		3-segment round		Rectangular		
							Rs Short radius	RI Long radius	Rs Short radius	RI Long radius	Radius -in (mm)	iwc (Pa)	
50040 5040 5050 58040	3600 (101941)	2034 (620)	18 (457)	14 (356)	20 (508)	0.31 (253)	0.1 (25)	0.07 (17)	0.13 (32)	0.11 (27)	15 (381)	0.09 (22)	
				15 (381)	19 (483)						14.25 (362)		
				16 (406)	17 (432)						12.75 (324)		
				17 (432)	16 (406)						12 (305)		
				19 (483)	15 (381)						11.25 (286)		
				20 (508)	14 (356)						10.5 (267)		
58058	5200 (147248)	2384 (727)	20 (508)	16 (406)	22 (559)	0.37 (302)	0.13 (32)	0.09 (22)	0.17 (42)	0.14 (35)	16.5 (419)	0.12 (30)	
				17 (432)	20 (508)						15 (381)		
				18 (457)	19 (483)						14.25 (362)		
				19 (483)	18 (457)						13.5 (343)		
				20 (508)	17 (432)						12.75 (324)		
				22 (559)	16 (406)						12 (305)		
58080	Contact factory												
6450	6000 (169901)	2400 (732)	22 (559)	20 (508)	19 (483)	0.30 (245)	0.09 (22)	0.06 (15)	0.18 (45)	0.14 (35)	14.25 (362)	0.12 (30)	
6458 6464	8500 (240693)	2400 (732)	26 (660)	24 (610)	23 (584)	0.30 (245)	0.09 (22)	0.06 (15)	0.18 (45)	0.14 (35)	23 (584)	0.08 (20)	

Duct Sizes and Pressure Drops for Dryer Models (cont'd.)

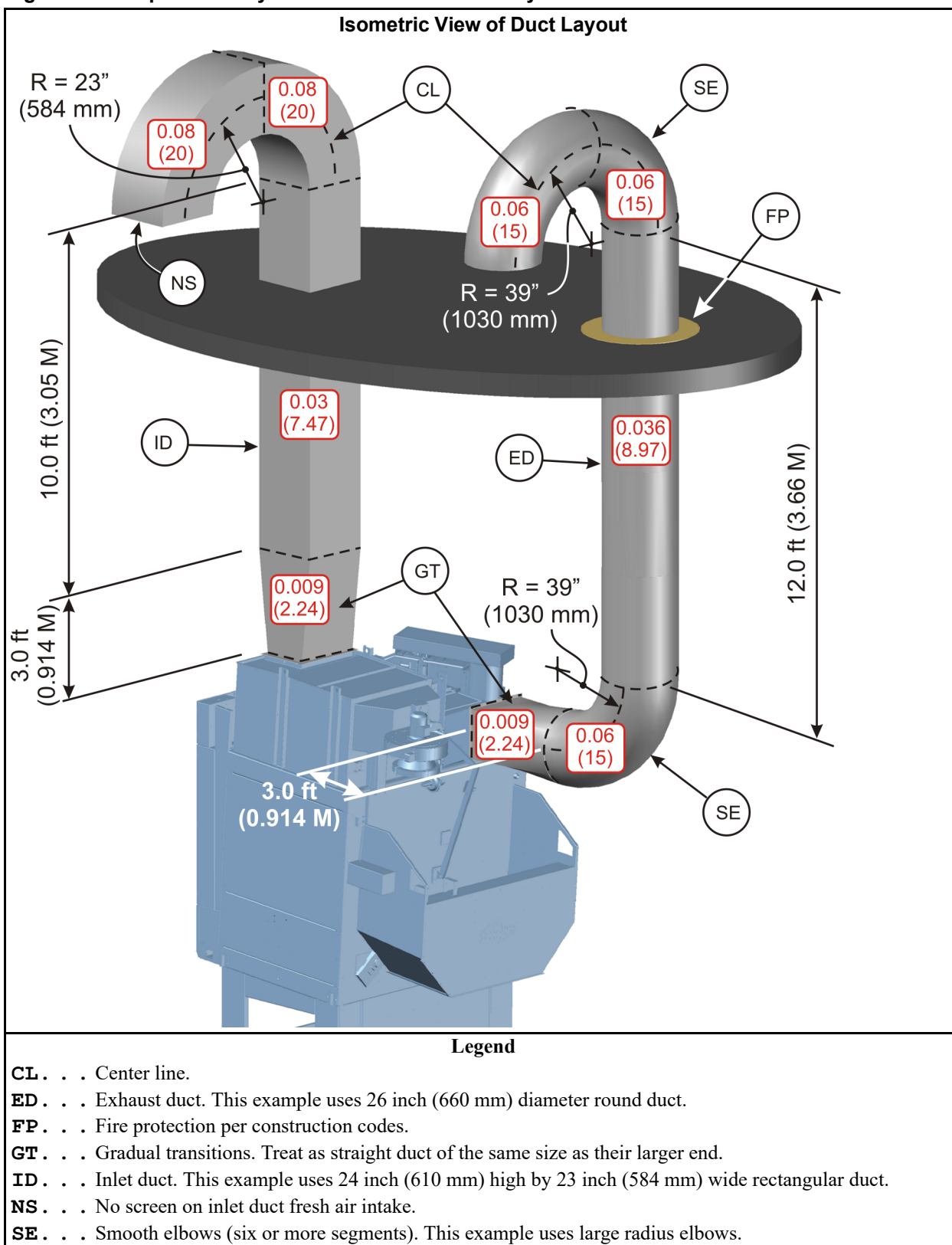
Air Specifications			Duct components, sizes, and pressure drops									
Dryer Model Prefix	Air flow - scfm (nlpm)	Velocity* for given cross-section - fpm (mpm)	Equivalent** cross-sections			Pressure drop - iwc (Pa)						
			Round	Rectangular***		Straight	90 Degree Elbows					
			Diame-ter-in (mm)	Height-in (mm)	Width-in (mm)	iwc per 100 feet (or Pa per 100 meters)	Smooth round		3-segment round		Rectangular	
							Rs Short radius	RI Long radius	Rs Short radius	RI Long radius	Radius -in (mm)	iwc (Pa)
72072 (with tower)	10000 (283168)	2100 (640)	30 (762)	23 (584)	33 (838)	0.15 (123)	0.21 (52)	0.17 (42)	0.28 (70)	0.24 (60)	31 (787)	0.14 (35)
				24 (610)	31 (787)						30 (762)	
				25 (635)	30 (762)						28.75 (730)	
				26 (660)	28 (711)						28 (711)	
				27 (686)	27 (686)						27.25 (692)	
				28 (711)	26 (660)						26.75 (679)	
				30 (762)	25 (635)						24.5 (622)	
				31 (787)	24 (610)						23.75 (603)	
				33 (838)	23 (584)						22.75 (578)	
7272 7676 8282	14000 (396436)	2600 (792)	32 (813)	27 (686)	29 (737)	0.28 (229)	0.11 (27)	0.08 (20)	0.21 (52)	0.13 (32)	27 (686)	0.13 (32)
* A velocity of at least 2000 fpm (610 mpm) helps keep lint particles in suspension. ** Equivalent means that the rectangular cross sections have the same pressure drop as the round cross-section. *** Field data determines the number of rectangular cross-sections shown for each dryer model.												

3.3. Example Layout

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To provide a more comprehensive example, the figure below shows both rectangular and round duct. However, avoid using rectangular duct if possible, especially for the exhaust duct.

The figure below shows the pressure drop values taken from [Section 3.2 : Duct Components and Their Pressure Drops, page 5](#) and used in the example equations in [Section 3.4 : Pressure Drop Equations and Examples, page 8](#) superimposed on each piece of duct.

Figure 3. Example Duct Layout for Model 6464TG1L Dryer

3.4. Pressure Drop Equations and Examples

Calculate the pressure drop for each straight length of duct as follows:

$$PD_s = PD_{100} \times L / 100$$

Where:

PD_s = Pressure drop for a straight length

PD_{100} = Pressure drop per 100 feet (or 100 meters) as given in table

L = Length of straight section in feet (or meters)

The following examples calculate the pressure drop for the 10 ft (3.05 M) length of rectangular duct in Figure 3.

English example:

$$0.3 \times 10 / 100 = 0.03 \text{ iwc}$$

Metric example:

$$243 \times 3.05 / 100 = 7.47 \text{ Pa}$$

Calculate the total pressure drop as follows:

$$PD_T = PD_1 + PD_2 + PD_3 + \dots + PD_n + PD_F$$

Where:

PD_T = Total external pressure drop

PD_1 = Pressure drop for the most upstream (inlet-end) component

PD_2, PD_3, \dots = Pressure drop for each next duct component in sequence

PD_n = Pressure drop for the most downstream (exhaust-end) component

PD_F = Pressure drop contributed by the external lint collection system, if any.

The following examples calculate the total pressure drop for the layout shown in [Figure 3, page 7](#) after the pressure drops for all straight sections have been calculated. The dryer in the example layout uses internal lint screens. The installation does not have a separate, external lint collection system.

English example:

$$0.08 + 0.08 + 0.03 + 0.009 + 0.009 + 0.06 + 0.036 + 0.06 + 0.06 = 0.424 \text{ iwc}$$

Metric example:

$$20 + 20 + 7.47 + 2.24 + 2.24 + 15 + 8.97 + 15 + 15 = 105.92 \text{ Pa}$$

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Utility Requirements For Gas, Steam and Thermal Oil Dryers

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This document applies to all Milnor® pass-through dryer models. It specifies heating fuel and air intake requirements and gives general information on all utility connections. Additional information about utility connections is located in the following documents:

dimensional drawing for your machine gives pipe sizes, connection types, and connection locations

laundry layout drawings for your system gives the control connections, which are system-dependent

document BNDGUI01 “Air and Ductwork Requirements for Milnor® Pass-through Dryers” gives design criteria for customer-supplied inlet and outlet ductwork

external fuse and wire document for your machine gives customer-supplied fuse, circuit breaker, and wire sizes for the available machine voltages

machine nameplate gives the voltage for your machine

The connections which may be required depending on machine model and options are:

1. Piped inlets and outlets: heating fuel (natural gas, propane, steam, or thermal oil), sprinkler (cold) water, compressed air, gas line vent, gas test tap, steam condensate return, vacuum breaker drain.
2. Ducted inlets and outlets: main air intake, main air exhaust
3. Electric power connections and removal of related shipping restraint
4. Control connections
5. Bumper guard attachment

1. Plumbing and Other Mechanical Connections

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1.1. Hazards and Precautions

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1.1.1. All Models

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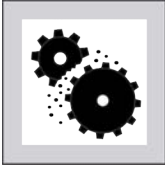


WARNING: Fire Hazards — Sprinkler and overheat control—Failure to supply water to the sprinkler or to open the manual valve, or failure of the overheat control, eliminates the machine's internal fire protection. Normally the machine stops and water is sprayed into the cylinder if outlet temperature reaches 240 degrees Fahrenheit (116 degrees Celsius).





CAUTION: Machine Damage Hazards — Valve bodies have fragile components.



- ▶ Do not distort valve bodies. Hold tension against these valves with a wrench on the side of the valve onto which the pipe is being connected to prevent twist distorting the valve.
- ▶ Always install unions and shut off valves at the water and steam connection points to permit removal of the machine components for servicing.

1.1.2. Gas and Propane Models

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WARNING: Explosion and Fire Hazards — Improperly installed gas-fired devices can release gas.



- ▶ Conform with local codes or, in their absence, with the **National Fuel Gas Code, ANSI Z223.1/NFPA 54** or the **Natural Gas and Propane Installation Code, CSA B149.1** or a superseding directive.
- ▶ Electrically ground the machine in accordance with local codes or, in their absence, with the **National Electric Code, ANSI/NFPA 70** or the **Canadian Electrical Code, CSA C22.1** or a superseding directive.
- ▶ Install a minimum 1/2 inch NPT plugged tap, accessible for test gauge connection, immediately upstream of the gas supply connections to the dryer.
- ▶ Install vent lines on any regulator vents and vent this gas to the outdoors.



WARNING: Explosion, Fire, and Machine Damage Hazards — Excessive gas pressure can damage gas train components, possibly resulting in the release of gas.



- ▶ Make sure that the pressure of gas entering the dryer is regulated to the maximum specified in this document.
- ▶ Isolate the dryer from the gas supply for any pressure testing of the incoming gas supply line.

1.1.3. Steam and Thermal Oil Models

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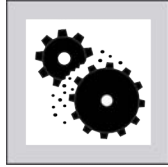
CAUTION: Machine Malfunction Hazard — Steam traps rated at 85 to 180 psi (586 to 1241 kPa) will not operate properly below 60 psi (414 kPa). Steam traps rated at 160 to 225 psi (1103 to 1551 kPa) will not operate properly below 115 psi (793 kPa).



- ▶ Conform to the rated pressure of the steam coil as stated on the machine nameplate.
- ▶ Choose a steam trap with a pressure rating corresponding to the actual pressure supplied.



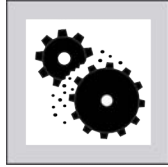
CAUTION: Machine Damage Hazards — Allow steam coil to preheat and purge condensate before operating dryer or conditioner.



- Verify that the facility boiler has operated at least 15 minutes before the dryer receives the first load each day.



CAUTION: Machine Damage Hazards — Steam coil antifreeze is drained at the factory but some residue may remain.



- Route the steam condensate return line to the sewer for the first hour of operation to prevent residual antifreeze from entering the boiler system.

1.2. Heating Fuel and Air Intake Requirements

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These requirements are given in the following two tables. The first table covers models in production on or after January 1, 2016. The second table covers models that were no longer in production as of January 1, 2016.

The nameplate designations for certain newer dryer models (the first table) changed from a 5-digit numeric prefix to a 4-digit numeric prefix, but the specifications remain the same. If you have one of these models, your nameplate may show 5050_ or 50050_, 6450_ or 64050_, 6458_ or 64058_, 6464_ or 64064_.

Newer gas dryer models (the first table) include the 5050_ (or 50050_) models which are only available with the air heat burner design, the 6450_ (or 64050_), 7676_, and 8282_ models, which are only available with the ratio air burner design, and the 6458_ (or 64058_) and 6464_ (or 64064_) models, which are available with either burner design. Older dryer models (the second table) were only available with air heat or older burner design.

Table 1. Gas, Steam, and Air Intake - Newer Dryer Models

Model number prefix	5050_ 50050_	6450_ 64050_	6458_ 64058_	6464_ 64064_	7676_	8282_
Capacity basis - lb (kg)	150 (68)	220 (100)	250 (113)	300 (136)	500 (227)	630 (2860)
Gas inlet with air heat burner (natural gas and propane models)						
Maximum Btu/hr (kcal/hr) at x" (mm) water column	950,000 (240,000) @ 13.5" (343)	1,500,000 (378,246) @ 13.5" (343)	1,800,000 (453,000) @ 13.5" (343)	1,800,000 (453,000) @ 13.5" (343)	n.a.	n.a.
Average Btu/hr (kcal/hr) at x" (mm) water column	495,000 (124,738) @ 13.5" (343)	725,000 (182,819) @ 13.5" (343)	825,000 (207,900) @ 13.5" (343)	990,000 (249,480) @ 13.5" (343)	n.a.	n.a.
Gas inlet with ratio air burner (natural gas and propane models)						
Maximum Btu/hr (kcal/hr) at x" (mm) water column	n.a.	1,300,000 (327,800)	1,800,000 (453,000)	1,800,000 (453,000)	3,000,000 (756,000)	pending

Gas, Steam, and Air Intake - Newer Dryer Models (cont'd.)

Model number prefix	5050_ 50050_	6450_ 64050_	6458_ 64058_	6464_ 64064_	7676_	8282_
		@ 25" (635)	@ 25" (635)	@ 25" (635)	@ 40" (1016)	
Average Btu/hr (kcal/hr) at x" (mm) water column	n.a.	726,000 (182,952) @ 25" (635)	825,000 (207,900) @ 25" (635)	990,000 (249,480) @ 25" (635)	1,650,000 (415,793) @ 40" (1016)	2,079,000 (523,899) @ 40" (1016)
Steam inlet (steam models)						
Maximum Lb/Hr (kg/hr)	820 (372)	pending	1,990 (903)	1,990 (903)	3,223 (1462)	pending
Average Lb/Hr (kg/hr)	382 (173)	561 (254)	638 (289)	765 (347)	1,275 (578)	1,606 (728)
Maximum boiler horse-power (kw)	23.8 (10.8)	pending	57.7 (26.2)	57.7 (26.2)	93.4 (42.4)	pending
Average boiler horse-power (kw)	11.1 (8.3)	16.3 (12.1)	18.5 (13.8)	22.2 (16.5)	37.0 (27.6)	46.6 (34.7)
Thermal oil inlet (thermal oil models) - Consult Milnor® factory						
Main air intake						
Maximum scfm (cu m/min)	3,600 (102)	6,000 (170)	8,500 (241)	8,500 (241)	14,000 (396)	14,000 (396)
Maximum allowable back pressure	0.5" water column					
Combustion (non-ducted, ambient) air intake with air heat burner (natural gas and propane models)						
Maximum scfm (cu m/min) to blower	250 (7)	715 (20)	715 (20)	715 (20)	n.a.	n.a.
Maximum scfm (cu m/min) to fire box	400 (11)	500 (14)	500 (14)	500 (14)	n.a.	n.a.
Total	650 (18)	1,215 (34)	1215 (34)	1215 (34)	n.a.	n.a.
Combustion (non-ducted, ambient) air intake with ratio air burner (natural gas and propane models)						
Maximum scfm (cu m/min) to blower	n.a.	400 (11)	400 (11)	400 (11)	600 (17)	pending

Table 2. Gas, Steam, and Air Intake - Older Dryer Models

Model number prefix	5040_ 50040_	58040_	58058_	58080_	72072_ with tower	72072_ no tower
Capacity basis - lb (kg)	110 (50)	150 (68)	220 (100)	300 (136)	425 (193)	425 (193)
Gas inlet (natural gas and propane models)						
Maximum Btu/hr (kcal/hr) at x" (mm) water column	950,000 (240,000) @ 13.5" (343)	950,000 (240,000) @ 13.5" (343)	1,400,000 (350,000) @ 13.5" (343)	1,800,000 (453,000) @ 13.5" (343)	2,700,000 (680,000) @ 18" (457)	2,700,000 (680,000) @ 18" (457)
Average Btu/hr (kcal/hr) at x" (mm) water column	363,000 (91,476) @ 13.5" (343)	495,000 (124,738)	726,000 (182,952)	990,000 (249,480)	1,402,500 (353,430)	1,402,500 (353,430)

Gas, Steam, and Air Intake - Older Dryer Models (cont'd.)

Model number prefix	5040_ 50040_	58040_	58058_	58080_	72072_ with tower	72072_ no tower
		@ 13.5" (343)	@ 13.5" (343)	@ 13.5" (343)	@ 18" (457)	@ 18" (457)
Steam inlet (steam models)						
Maximum lb/hr (kg/hr)	600 (272)	600 (272)	950 (431)	1300 (590)	n.a.	n.a.
Average lb/hr (kg/hr)	127 (280)	173 (382)	561 (254)	765 (347)	n.a.	n.a.
Maximum boiler horse- power (kw)	17.4 (7.9)	17.4 (7.9)	27.5 (12.5)	37.7 (17.1)	n.a.	n.a.
Average boiler horse- power (kw)	8.1 (3.7)	11.1 (5.0)	16.3 (7.4)	22.2 (10.1)	n.a.	n.a.
Thermal oil inlet (thermal oil models) - Consult Milnor® factory						
Main air intake						
Maximum scfm (cu m/ min)	3,600 (102)	3,600 (102)	5,000 (142)	6,800 (193)	10,000 (283)	14,000 (396)
Maximum allowable back pressure	0.5" (water column)					
Combustion (non-ducted, ambient) air intake (natural gas and propane models)						
Maximum scfm (cu m/ min) to blower	250 (7)	250 (7)	400 (11)	500 (14)	715 (20)	715 (20)
Maximum scfm (cu m/ min) to fire box	400 (11)	n.a.	n.a.	n.a.	900 (25)	900 (25)

1.3. Other Mechanical Requirements

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Main air intake and exhaust ducting Per document BNDGUI01 “Air and Ductwork Requirements for Milnor® Pass-through Dryers.”

Sprinkler water inlet Minimum 35 PSI (2.4 ATU). Must reliably provide 60 USg (227 liters) per minute for fire safety.

Compressed air inlet Clean and dry 85 PSI (5.8 ATU) to 110 PSI (7.5 ATU)

Compressed air inlet for optional internal lint filter 85 PSI (5.8 ATU) to 110 PSI (7.5 ATU). Air usage estimate: 110 scf (3.1 cubic meter) in 15 seconds when activated.

Customer-supplied connector between the gas inlet and the gas supply piping a listed connector in compliance with ANSI Z21.24 CSA 6.10 “Standard for Connectors for Gas Appliances”

Customer-supplied tap (gas/propane models) 1/2" NPT plugged tap, accessible for test gauge connection. Install immediately upstream of the gas supply connections to the dryer.

Gas line vent (gas/propane models) 1/4" stainless steel. Must be vented from the regulator vent to the exterior of the building.

Steam condensate outlet (steam models) Per plumbing code. Return condensate to boiler through a steam trap of the correct size. Two steam traps are available from Milnor®: One for 85 - 180 PSI (6 - 12 ATU) and one for 160 - 225 PSI (11 - 15 ATU).

Vacuum breaker (steam models) Vent the tube to the sewer.

2. Electrical Connections

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2.1. Hazards and Precautions

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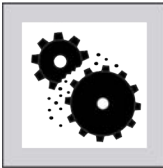


WARNING: Severe injury and machine damage hazards — Electric power can shock or electrocute you. Incorrect electrical connections can damage machine components.

- ▶ Do not attempt electric power connections unless qualified and authorized.
- ▶ Prior to making power connections, read the instructions on all related tags.
- ▶ Connect the “stinger leg” if any, only to terminal L3, never to terminals L1 or L2.
- ▶ Verify all motor rotation. If the cylinder turns in the wrong direction, interchange the wires connected to L1 and L2. Never move L3.



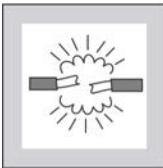
CAUTION: Machine Damage Hazards — The blower motor or other drive components can be destroyed if the blower bearing shipping restraint is incorrectly handled.



- ▶ Perform the steps given in [2.2: Remove Blower Shipping Bracket and Reconnect Motor Contactor Coil, page 6](#).



CAUTION: Risk of malfunction and damage — Wiring errors can cause damage and incorrect operation.



- ▶ Label all wires if you must disconnect them to service the control.

2.2. Remove Blower Shipping Bracket and Reconnect Motor Contactor Coil

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The machine was shipped with a blower shipping restraint ([Figure 1: Blower Shipping Restraint, page 7](#)). This bracket immobilizes the blower bearing, preventing bearing damage during shipping. Connections to one side of the blower motor contactor coil ([Figure 2: Reconnect Blower Contactor Coil Wires, page 7](#)), are removed after testing, to prevent blower operation with bracket in place. When the machine is in its final position, remove the restraint and reconnect the contactor coil as follows:

1. Unbolt and remove red restraint.
2. Install the belt guard.
3. Locate the blower contactor inside the high voltage electric box.
4. Match the tagged coil wire with the tagged contactor coil terminal and reconnect.

Figure 1. Blower Shipping Restraint

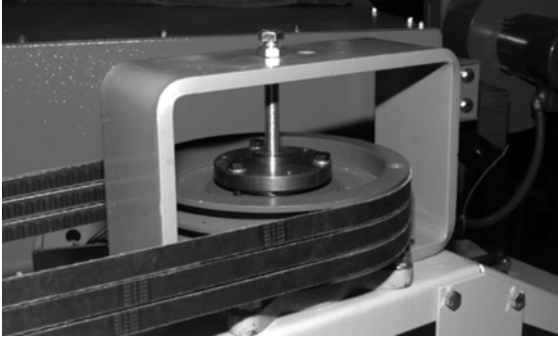


Figure 2. Reconnect Blower Contactor Coil Wires



2.3. Electric Power Connection Capacities

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The customer must furnish a remotely mounted disconnect switch with lag type fuses or circuit breakers, and wiring between this box and the fuse box on the machine. Refer to the machine nameplate and the external fuse and wire document for your machine to determine the sizes of these fuses or circuit breakers, and wires.

2.4. Control Connections

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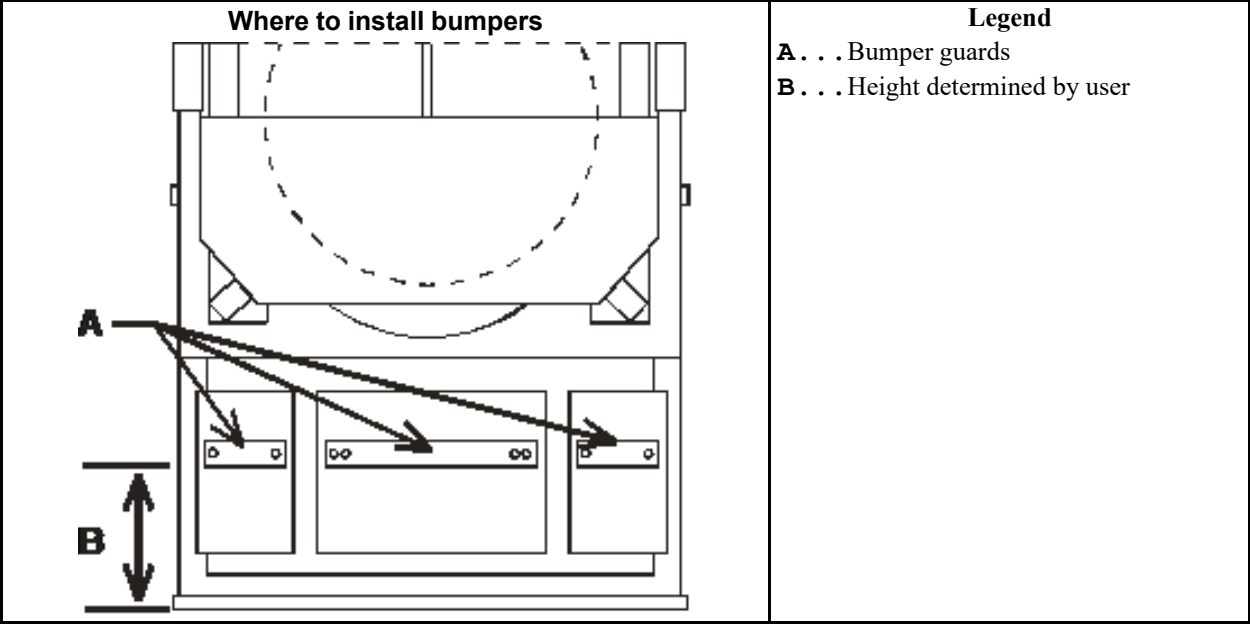
Refer to the layout drawings for your laundering system.

3. Bumper Guard Installation

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The machine is supplied with bumper guards which must be installed on the rear of the machine when the machine is on site. The guards protect the machine from the constant impact of laundry carts placed under the discharge door. Hence the height at which the guards are installed must match the height of the carts used. See [Figure 3](#).

Figure 3. Bumper Guard Installation



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Set the Heating System—Air Heat Dryer

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This document applies to gas dryers with an *air heat* burner. See document BNDGUM02 for gas dryers with a *ratio air* burner.

1. About the Procedure

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The differences between an *air heat* burner and a *ratio air* burner are important with regard to replacement parts and the procedure you use to set or confirm the correct gas and air flows.

Table 1. Current Dryer Models and Burner Types

Burner Type / Dryer Model	5050TG1_	6450TG1_	6458TG1_	6464TG1_	7676TG1_	8282TG1_
Air Heat	only	optional	standard	standard		
Ratio Air		standard	optional	optional	only	only

It can be necessary to set the heating system when the dryer is installed and when components of the gas train are replaced. You must be a technician trained to do work on gas trains and familiar with gas train components.

Necessary test equipment includes:

- A manometer such as Dwyer model 3T294.
- Tubes and fittings to connect to the taps (test ports) shown herein.
- In some cases, a fitting with a valve to control the gas released from the tap.

When you set the heating system, you will do a sequence of steps. In most steps you will make the necessary adjustments to change a measured pressure to match a specified value. Some terms used in this instruction are:


gas train the group of valves and related components that controls the flow of natural gas or propane into the dryer


flame control an electronic module that monitors and maintains a safe flame. Milnor® system dryers use two brands of flame control: **Fireye** (primarily for the USA and Canada) and **Landis + Gyr** (primarily for Europe).

setup mode a method of performing adjustments that activates the appropriate components for a given adjustment step. If your machine has the Fireye flame control, you must use the setup mode to make adjustments.

manual method a method of performing adjustments that runs a dry code manually and permits you to specify certain conditions for a given adjustment step. If your machine has the Landis + Gyr flame control, you must use the manual method to make adjustments.

manometer an instrument to measure fluid pressure

Reset button symbolized  in this procedure, refers to both the physical push button used to cancel a blinking light on the dryer status light panel and to the reset button on the flame control (Fireye or Landis + Gyr). In this procedure, use whichever reset component applies to the task.

Signal Cancel button symbolized  in this procedure, refers to the button on the dryer controller screen used to cancel the operator alarm.

Several types of **Dungs** gas train and the two types of flame control stated above are available to meet different local codes. Applicable models will use one of the types of gas train, corresponding flame control, and corresponding setup method listed in the following table. This instruction describes one general procedure, but indicates where you will do something one way or the other, depending on which of the two setup methods you use (which type of flame control you have).

Table 2. Gas Train and Flame Control Options

Type of Gas Train	Brand of Flame Control	Setup method
Natural Gas, CSA	Fireye	Setup Mode
Propane, CSA	Fireye	Setup Mode
Natural Gas, IRI	Fireye	Setup Mode
Natural Gas, Europe	Landis + Gyr	Manual (dry code) method
Propane, Europe	Landis + Gyr	Manual (dry code) method
Natural Gas, Australia	Landis + Gyr	Manual (dry code) method
Propane, Australia	Landis + Gyr	Manual (dry code) method
Natural Gas, Holland	Landis + Gyr	Manual (dry code) method

2. Summary of Steps and Required Values (Air Heat)

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Table 3. Applicable Models

Step		Gauge Points ¹	5050TG_		6450TG_		6458TG_ , 6464TG_		7272TG_	
			Fireye	L+G	Fireye	L+G	Fireye	L+G	Fireye	L+G
1	Static (incoming) gas pressure ²	GGG	13.5 (33.6)	13.5 (33.6)	13.5 (33.6)	13.5 (33.6)	13.5 (33.6)	13.5 (33.6)	13.5 (33.6)	13.5 (33.6)
2	Combustion air pressure	GAC and GRC	0.4 (1)	0.14 (.35)	0.6 (1.5)	0.6 (1.5)	0.6 (1.5)	0.6 (1.5)	0.6 (1.5)	0.6 (1.5)
	Combustion air damper		full open	full open	0.9 (.22)	0.9 (.22)	0.9 (.22)	0.9 (.22)	0.9 (.22)	0.9 (.22)
3	Main air pressure test		—	—	1.6 (4)	1.6 (4)	1.6 (4)	1.6 (4)	1.6 (4)	1.6 (4)
	Main air pressure final	GAM	0.7 (1.7)	0.7 (1.7)	2.4 (6)	2.4 (6)	2.4 (6)	2.4 (6)	2.4 (6)	2.4 (6)
4	Pilot gas regulator	GGP	1.3 (3.2)	1.3 (3.2)	1.6 (4)	1.3 (3.2)	1.6 (4)	1.3 (3.2)	1.6 (4)	1.3 (3.2)
	Pilot flame – natu- ral gas		1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)	1 (2.5)
	Pilot flame – propane	n.a.	—	—	Turn adjusting screw one full turn.				—	—
	Outlet pressure spring – propane only	n. a.	—	—	1.3				—	—
5	Gas regulator	GGR	4.5 (11.2)	4.5 (11.2)	6.5 (16.2)	6.5 (16.2)	6.5 (16.2)	6.5 (16.2)	5.5 (13.7)	5.5 (13.7)
6	Minimum fire tem- perature ABOVE AMBIENT	n. a.	Natural gas: 70° F (21° C) to 80° F (27° C) (view on display)							
		n. a.	—	—	Propane: Set minimum fire (min Y) on the mod- ulating gas valve to 17				—	—
	Damper setting	n. a.	2							
7	High gas pressure	GGH	5.6 (14)	5.6 (14)	8.13 (20.3)	8.13 (20.3)	8.13 (20.3)	8.13 (20.3)	6.87" (17.1)	6.87" (17.1)

Applicable Models (cont'd.)

Step		Gauge Points ¹	5050TG_		6450TG_		6458TG_, 6464TG_		7272TG_	
			Fireye	L+G	Fireye	L+G	Fireye	L+G	Fireye	L+G
8	Low gas pressure	GGL	2.25 (5.6)	2.25 (5.6)	3.25 (8)	3.25 (8)	3.25 (8)	3.25 (8)	2.75 (6.8)	2.75 (6.8)
9	Burner box pressure	GAB	0.06 (0.15)	0.04 (1)	0.06 (0.15)	0.06 (0.15)	0.06 (0.15)	0.06 (0.15)	0.06 (0.15)	0.06 (0.15)
10	Back pressure	n. a.	0.8 (2)	0.8 (2)	0.8 (2)	0.8 (2)	0.8 (2)	0.8 (2)	0.8 (2)	0.8 (2)
1. The reference point is atmosphere unless two values are shown for the gauge point. 2. Must not exceed. A pressure that exceeds the maximum can damage the regulator.										

3. Component Locations

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Figure 1. Gas Adjustment Components (5040TG2_ shown. Other models are similar.)

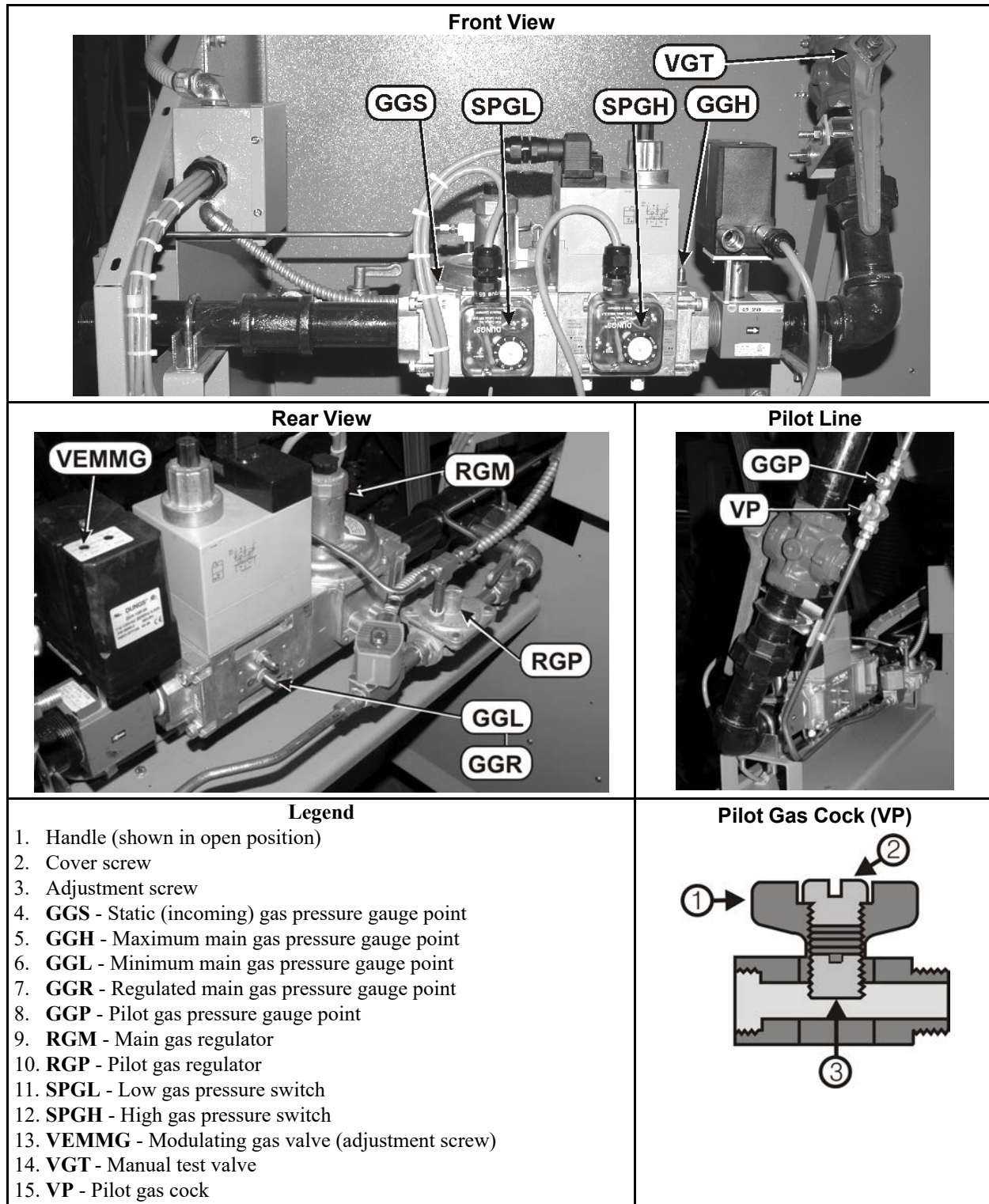
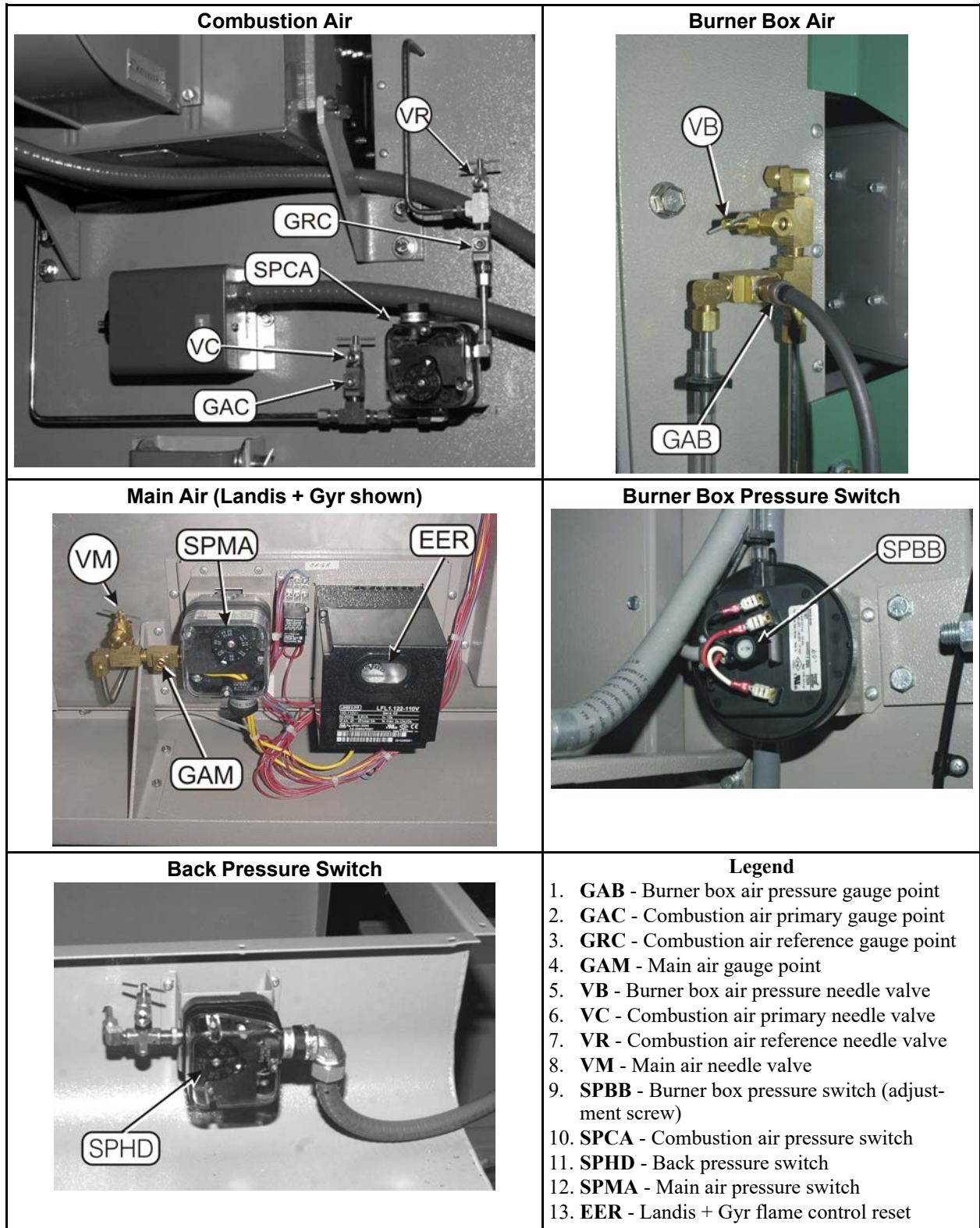


Figure 2. Air Adjustment Components (5040TG2_ shown. Other models are similar.)



4. Setup Methods—Fireye or Landis + Gyr Flame Control

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Do Step 1 (see [Section 5 : Adjustment Steps, page 8](#)) before you perform one of the setup methods described in this section. Perform the appropriate setup method before you start Step 2. If your machine has a Fireye flame control, use the **Setup mode** (see [Section 4.1 : Setup Mode \(Fireye flame control\), page 6](#)). If your machine has a Landis + Gyr flame control, use the **Manual method** (see [Section 4.2 : Manual method \(Landis + Gyr flame control\), page 7](#)).



WARNING: Explosion hazard — Improper gas train maintenance procedures can cause the rapid release of gas.



- ▶ You must be an approved technician.
- ▶ Make sure you can quickly shut off gas at an external valve.



WARNING: Entangle and Crush Hazard — Moving components can entangle and crush body parts.



- ▶ Leave electrical power disconnected from the machine while you work on it, except where stated otherwise in this document.
- ▶ Use extreme caution when you work around moving components.

4.1. Setup Mode (Fireye flame control)

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Display or Action

WAITING FOR LOAD

Explanation

The display after the power up sequence

MANUAL

Accesses **manual mode** menu (press **CANCEL** to return to automatic).

RETURN TO AUTOMATIC
00

Shows the display in **manual mode**

1 **2**

Selects the **setup procedure**

SETUP PROCEDURE
12

ENTER

Accesses **setup mode A** (or the next mode in sequence)

Whenever the next setup mode is required, press **ENTER** and resulting display will be shown.

For a **quick return to run** mode from **setup procedure**

ENTER, **ENTER**, etc.

Advances through each of the six setup modes. Note, however, that the control requires waiting eight seconds in **mode C** and five seconds in **mode D**.

SETUP PROCEDURE
12

Resulting display



Selects “RETURN TO AUTOMATIC”
Returns to the run mode

4.2. Manual method (Landis + Gyr flame control)

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If your machine has a Landis + Gyr flame control, run a dry code manually and set the damper position to 2, as explained below.

Display or Action	Explanation
<div>WAITING FOR LOAD</div> <div>*****</div>	The display after the power up sequence.
<div>MANUAL</div>	Accesses the manual load menu
<div>SELECT DRY CODE</div> <div>00 REDRY</div>	
<div>ENTER</div>	Accepts the default dry code 00 and prompts for load size
<div>ENTER LOAD SIZE</div> <div>0 FULL LOAD</div>	
<div>ENTER</div>	Accepts the default load size (full load).
<div>LOAD DRYER WITH REDRY</div>	Ignore this prompt.
<div>ENTER</div>	Starts the cycle.
<div>LOADING</div>	This display appears.
<div>00F TIC TOC 000 VP</div> <div>xx xxxAxxx xxx xxx</div>	This display appears. The VP value alternates with an air value.

Wait for the burner to ignite.

<div>MANUAL</div>	Stops the timer and accesses the manual control panel for temperature, damper and basket rotation.
<div>TICHTOC LDA MVP BSPD</div> <div>xxx+xxx x0x 0x xxxx</div>	
<div>DAMPER +</div> <div>↑</div>	Sets the damper position. Hold the keys until the damper position (D) = 2.
<div>TICHTOC LDA MVP BSPD</div> <div>xxx+xxx x2x xxx 000</div>	
<div>MOD VALVE POSITION +</div> <div>↓</div>	Closes the modulating gas valve (position). Hold the keys until MVP = 000.
<div>TICHTOC LDA MVP BSPD</div> <div>xxx+xxx x2x 000 xxxx</div>	

The burner will remain on at minimum fire (MVP=000) until commanded to return to automatic. Start Step 2 here. Upon completion of the steps,



Returns to automatic

5. Adjustment Steps

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Refer to [Section 2 : Summary of Steps and Required Values \(Air Heat\)](#), page 2 while you do these procedures. In these steps, mount the manometer vertically and use the high pressure scale, except where stated otherwise.



WARNING: Explosion hazard — Improper maintenance procedures can cause the rapid release of gas.



- ▶ You must be an approved technician.
- ▶ Make sure you can quickly shut off gas at the external valve.



WARNING: Crush and entangle hazard — Moving components can crush and entangle body parts.



- ▶ Work with electrical power removed from the machine, except where stated otherwise in this document.
- ▶ Use extreme caution when you work near moving components.

5.1. Step 1: Static (incoming) gas pressure



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1. Remove electrical power and gas from the machine.
2. Look at [Figure 1](#), page 4. Attach one side of the manometer to gauge point **GGs** (the higher pressure). Leave the other side open to the atmosphere.
3. Supply gas to the machine.
4. Adjust the incoming gas (upstream from dryer) as close as possible to the maximum static gas pressure listed in [Section 2](#), page 2. This pressure is necessary for further adjustments. Pressures higher than specified can damage the regulator.

5.2. Step 2: Combustion air pressure


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Fireye Start the Setup procedure and select SETUP MODE A ([Section 4.1](#), page 6). The combustion air motor runs. The main air pressure switch, modulating gas valve and the two main gas valves are disabled.



Landis + Gyr Start the Manual method ([Section 4.2](#), page 7). If the flame control trips during this procedure, press  and  to reset it.

In this step, you will measure a small differential pressure. It is necessary to mount the manometer near horizontal and use the low pressure scale.

1. Look at [Figure 2](#), page 5. Turn the dial on **SPCA** counterclockwise to the lowest value.

2. Attach one end of the manometer to the gauge point **GAC** (the higher pressure). Attach the other side to the gauge point **GRC** (the lower pressure).
3. Adjust **VR** until the manometer displays the value shown in [Section 2 , page 2](#). If you cannot get the required value with **VR** wide open, slowly open **VC** until you get the required value.
4. Look at the burner box pressure light () on the status light panel. Slowly turn the dial **SPCA** clockwise:

Fireye Stop when the light illuminates.

Landis + Gyr Stop when **SPCA** trips and the burner extinguishes. The light should illuminate momentarily, but this may be too quick to see. Press  and  to reset the flame control.


5. Close **VR** and **VC** fully.

5.3. Step 3: Main air pressure



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Fireye machines Select SETUP MODE B (see [Section 4.1 , page 6](#)). The damper will fully open.

Landis + Gyr machines Set the damper fully open (D=0). See [Section 4.2 , page 7](#).

1. Look at [Figure 1, page 4](#). Turn the dial on **SPMA** counterclockwise, to the lowest value
2. Attach one side of the manometer to **GAM** (the lower pressure). Leave the other side open to the atmosphere (the higher pressure).
3. Adjust **VM** until the manometer displays the test value shown in [Section 2 , page 2](#).
4. Look at the burner box pressure light () on the status light panel. Very slowly turn the dial on **SPMA** clockwise:

Fireye machines Stop when the light illuminates.

Landis + Gyr machines Stop when **SPMA** trips and the burner extinguishes. The light should illuminate momentarily, but this may be too quick to see. Press  and  to reset the flame control.

5. Close **VM** fully. The manometer should display the final value shown in [Section 2 , page 2](#).

5.4. Step 4A: Regulated pilot gas pressure

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Fireye machines Select SETUP MODE C (see [Section 4.1 , page 6](#)). This turns on the **pilot gas valve**. After about eight seconds, the pilot flame should ignite.

Landis + Gyr machines No action is necessary. The pilot flame should be lit.

Explosion and Fire Hazard — Improper procedures can release gas.



- Follow instructions carefully.

1. Look at [Figure 1, page 4](#). Attach one side of the manometer to **GGP** (the higher pressure). Leave the other side open to the atmosphere.
2. Remove the cover screw (2) from **VP**.

3. Turn the set screw (3) counterclockwise until the top of the screw is about 1/8 inch (3 mm) below the top of the valve handle. **Do not allow the set screw to come out of the valve. Gas will escape.**
4. Adjust **RGP** until the manometer displays the value specified [Section 2 , page 2](#).

5.5. Step 4B: Pilot flame gas pressure



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If the flame control trips during this step, press  and  to reset it.

1. Look at [Figure 1, page 4](#). Leave the manometer connected to **GGP** and to the atmosphere.
2. Close **VGT**.
3. Turn the adjustment screw (3) on **VP** clockwise, until the manometer shows the value specified in [Section 2 , page 2](#).
4. Replace the cover screw (2) in **VP**.
5. Open **VGT**.

5.6. Step 5: Regulated main gas pressure

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Make adjustment quickly. The machine will reach the maximum permitted temperature quickly and shut-off the burner. If a switch trips during this step, press  and .

Fireye Select SETUP MODE D (see [Section 4.1 , page 6](#)). This turns on the **two main gas valves**. The **modulating gas valve** opens and modulates to position 100.

Landis + Gyr Set the modulating gas valve to position 100 (MVP=100). See [Section 4.2 , page 7](#).

1. Make sure **VGT** is open fully
2. Look at [Figure 1, page 4](#). Attach one side of the manometer to **GGR** (the higher pressure). Leave the other side open to the atmosphere.
3. Turn the dial on **SPGL** counterclockwise to the lowest value. Turn the dial on **SPGH** clockwise to the highest value.
4. Adjust **RGM** until the manometer displays the value specified in [Section 2 , page 2](#).

If you are performing the entire adjustment procedure, you will set **SPGH** and **SPGL** in steps 7 and 8 respectively. If you performed this step as part of a component replacement, do steps 7 and 8 as well.

5.7. Step 6: Low fire temperature

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Fireye machines Select SETUP MODE E (see [Section 4.1 , page 6](#)). This sets the modulating gas valve to 000 and displays the inlet temperature.

Landis + Gyr machines Set the modulating gas valve to position 000 (MVP=000). See [Section 4.2 , page 7](#).

1. Look at [Figure 1, page 4](#). Turn the adjustment screw on **VEMMG** (arrow points to this screw) fully counterclockwise.


2. **In small increments** turn the screw clockwise until the control panel display shows a temperature in the range specified in [Section 2 , page 2](#). It is necessary to wait for the display to settle after each adjustment. This task can take several minutes due to the lag time between when you make the adjustment and when the change in temperature appears on the display.



5.8. Step 7: High gas pressure

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Fireye machines Select SETUP MODE E (see [Section 4.1 , page 6](#)). This sets the modulating gas valve to 000 and displays the inlet temperature.

Landis + Gyr machines Set the modulating gas valve to position 000 (MVP=000). See [Section 4.2 , page 7](#).

1. Look at [Figure 1, page 4](#). Turn the dial on **SPGH** clockwise to the highest value.
2. Attach one side of the manometer to **GGH** (the higher pressure). Leave the other side open to the atmosphere.
3. Start with **VGT** open. Slowly close **VGT** until the manometer displays the value specified in [Section 2 , page 2](#).
4. Look at the gas pressure high light () on the status panel. Slowly turn the dial on **SPGH** counterclockwise (lower). Stop when the switch trips and the burner extinguishes.

Fireye machines The status light illuminates briefly, then blinks. Open the manual test valve again. The burner will ignite as soon as pressure is restored. Press  and  to extinguish the status light.

Landis + Gyr machines The status light should illuminate momentarily, but this may be too quick to see. The flame control automatically resets and attempts to ignite the burner.


5. Verify the proper adjustment: Open **VGT** fully. Watch the manometer. Slowly close **VGT**. **SPGH** should trip when the set value is reached.
6. Open **VGT** fully.



5.9. Step 8: Low gas pressure

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Fireye machines Select SETUP MODE E (see [Section 4.1 , page 6](#)). This sets the modulating gas valve to 000 and displays the inlet temperature.

Landis + Gyr machines Set the modulating gas valve to position 000 (MVP=000). see [Section 4.2 , page 7](#).

1. Look at [Figure 1, page 4](#). Turn the dial on **SPGL** counterclockwise to the lowest value.
2. Attach one side of the manometer to **GGL** (the higher pressure). Leave the other side open to the atmosphere.
3. Start with the **external gas shut-off valve** open. Slowly close this valve until the manometer displays the value specified in [Section 2 , page 2](#).
4. Look at the gas pressure low light () on the status light panel. Slowly turn the dial on **SPGL** clockwise (higher). Stop when **SPGL** trips and the burner extinguishes.
5. Open **external gas shut-off valve** fully.

Fireye machines The status light illuminates briefly, then blinks. The burner should ignite as soon as pressure is restored. Press  and  to extinguish the status light.


Landis + Gyr machines The status light should illuminate momentarily, but this may be too quick to see. The flame control automatically resets and attempts to ignite the burner.

5.10. Step 9: Minimum burner box air pressure

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Fireye machines Select SETUP MODE E (see [Section 4.1 , page 6](#)). This sets the modulating gas valve to 000 and displays the inlet temperature.

Landis + Gyr machines Set the modulating gas valve to position 000 (MVP=000). See [Section 4.2 , page 7](#).

1. Look at [Figure 2, page 5](#). Attach one side of the manometer to **GAB** (the lower pressure) and leave the other side open to the atmosphere.
2. Remove the cover from **SPBB**. Carefully turn the center adjustment screw (white potentiometer that the arrow points to) counterclockwise until the top of the screw is level with the collar. **Do not allow the adjustment screw to come out of the switch. The screw is spring loaded.**
3. Adjust **VB** until the manometer shows the value specified in [Section 2 , page 2](#).
4. Look at the burner box pressure light () on the status light panel. Slowly turn the adjustment screw on **SPBB** clockwise until the status light illuminates and the burner extinguishes.
5. Close **VB** fully.

5.11. Step 10: Maximum back (air) pressure

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The dial on **SPHD** (see [Figure 2, page 5](#)) is set at the factory to the value specified in [Section 2 , page 2](#). If the maximum back pressure is exceeded, this switch trips. This causes the message "Back pressure high" or "Clean the lint screen" to appear on the controller display to indicate that a lint screen may be blocked. It does not stop dryer operation. It may be necessary to adjust this switch slightly once the machine is connected to the laundry ductwork. Air pressure in the plenum for this dryer may be affected by the ductwork configuration and by adjacent dryers.

It is difficult to adjust **SPHD** with a manometer. Initially, this switch was set with the dial alone (the marks on the dial show the specified value). If the message appears too frequently, turn the dial to a higher value. If the message does not appear when it should (when a lint screen is blocked) turn the dial to a lower value.

End of document: BNDGUM01

ABOUT THE STEAM AND HOT OIL CONTROL SYSTEMS FOR MILNOR DRYERS

MILNOR steam dryers are available with an optional Y-type ON/OFF steam valve. MILNOR hot oil dryers use a modulating oil inlet/bypass valve.

How To Protect Steam Coils From Water Hammer Damage

Steam coils can be damaged when steam pressure is suddenly applied to a water (condensate) filled coil, or when the steam is “wet” with a high water content. The damage occurs because the condensate is forced through the coils with great speed causing a water hammer condition which can be likened to many jack hammers inside the coil. The result will be damaged coils, especially at the ends where the water must turn quickly.

▲ CAUTION ▲

Steam coils that have been damaged by water hammer are not warrantied. Any steam coil making a popping sound or cracking sound is in grave danger of serious water hammer damage.

1. Maintain the bypass piping (machines with optional ON/OFF valve, FIGURE 1) in good working order, to prevent cracking and popping sounds when steam is turned on. Do not operate Dryer unless bypass piping is in good working order.
2. If a steam trap must be replaced, be sure the pressure rating of the replacement trap is suitable for the steam pressure in your plant and that the replacement trap's capacity is equivalent to the original equipment.

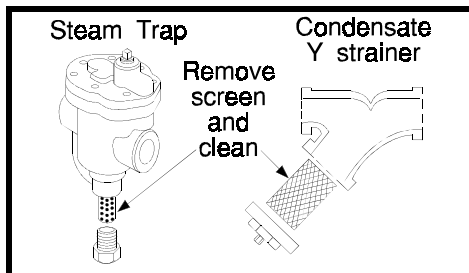
▲ CAUTION ▲

DRYERS WITH STEAM TRAPS RATED 85-180 PSI (6-12 ATU) WILL NOT OPERATE PROPERLY BELOW 60 PSI (4 ATU). STEAM TRAPS RATED 160-225 PSI (11-15 ATU) WILL NOT OPERATE PROPERLY BELOW 115 PSI (8 ATU). These pressure ranges refer only to the range of pressures through which the trap may be reasonably expected to operate properly. They are not necessarily an indication of the safe operating pressure for the steam coil. Always refer to the nameplate for the specific dryer to determine the maximum permissible pressures.

About the Standard Steam Control System

1. Each Dryer has a strainer and steam trap (FIGURE 1), to handle steam that condenses in the coil as it heats the passing air which dries the goods.

⚠ CAUTION ⚠



Clean and “blow down” steam trap and strainer screens after 40 hours of operation and periodically thereafter. Clogged strainer screens will cause longer drying times.

About the Optional On-Off Steam Control System with Y-type, Air Operated Valve

In addition to the steam trap and strainer, dryers equipped with the optional Main Steam Inlet ON/OFF valve are fitted with:

- a. A steam inlet valve which is open whenever the Dryer is drying (whenever the Cooldown Bypass Damper is closed). This normally closed (air-to-open) valve shuts off the flow of steam to the Dryer during Cooldown, if the Dryer Master Switch is OFF, and whenever the Dryer is not being used.
- b. Bypass piping to keep coils warm and condensate minimized while the Main Steam Inlet valve is OFF, but machine is in standby, with steam provided to the machine.

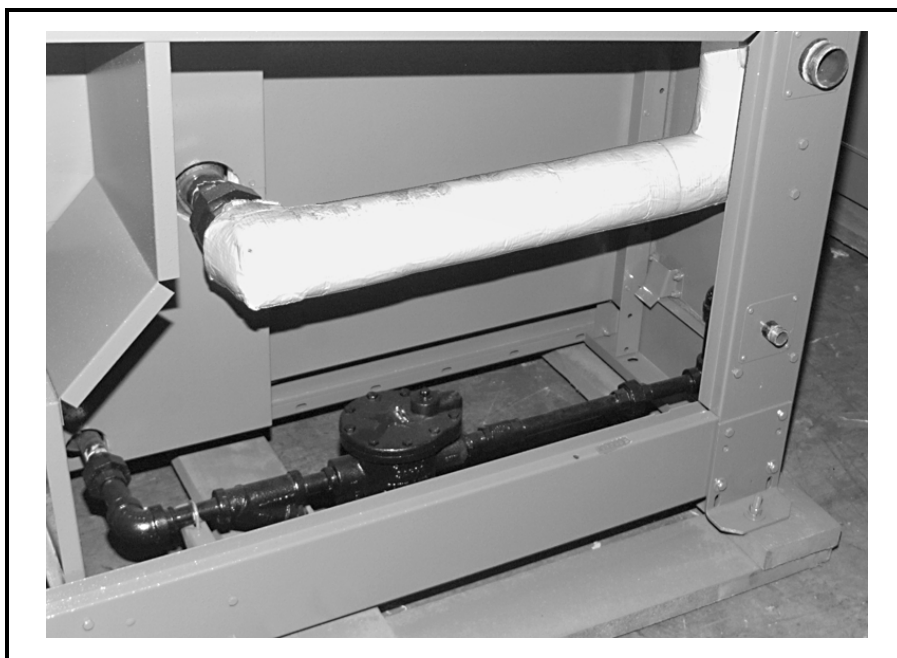


FIGURE 1 (MSSM0102BE)
Standard Steam Piping

About the Modulating Hot Oil Valve

How Modulated Hot Oil Works—Hot air inlet and outlet temperatures are monitored by the dryer control. When the dryer control detects actual temperatures that are either under or over the desired value it signals the hot oil positioner and valve to change the percent of pressurized hot oil sent to the dryer heating coil, verses the percent that bypasses the heating coil. All oil is returned to the oil heater.

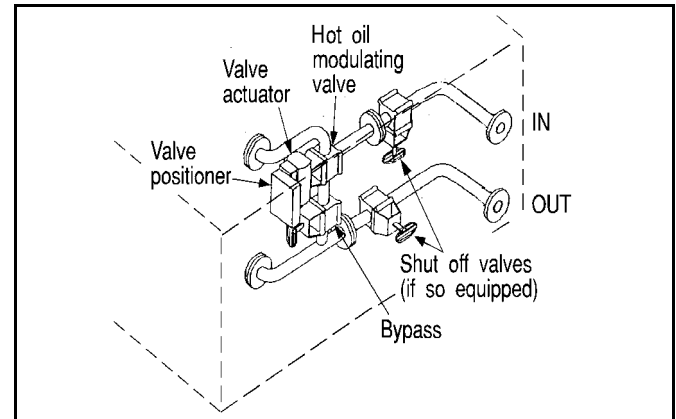


FIGURE 2 (MSSM0102BE)
Hot Oil Piping

How to Manually Command a Modulating Valve Position—This procedure applies to hot oil machines.

1. Shut off oil to dryer.
2. Turn dryer on.

After the power-up sequences, the display shows

WAITING FOR LOAD



Accesses Manual Load menu

SELECT DRYCODE
00 REDRY

For Quick Return to Automatic from Manual Load menu

CANCEL
ESCAPE, **CANCEL**
ESCAPE, etc.

returns to automatic

WAITING FOR LOAD
*



Accepts the default drycode 00 and prompts for load size.

ENTER LOAD SIZE
0 FULL LOAD



Accepts the default load size (full load) and prompts the operator to load dryer. Ignore this prompt.

LOAD DRYER WITH
REDRY



Starts the cycle. When loading sequence ends, display appears as shown below.

LOADING

00F TIF TOF 000 VP
XXX XXXAXXX XXX XXX

Alternates with

00F TIF TOF 0021 AIR
XXX XXXDXXX XXX XXX



Stops the timer and accesses the manual control panel for temperature, damper, and basket rotation.

TIFHTOF LDA MVP BSPD
XXX+XXX XXX XXX XXXX

hold **MOD VALVE POSITION** +

Closes modulating valve position. Hold keys until MVP=000.

TIFHTOF LDA MVP BSPD
XXX+XXX XXX 000 XXXX

Dryer will continue at minimum valve position until commanded to return to automatic.

**CANCEL
ESCAPE**

Returns to automatic.

Follow the step-by-step procedure to set the system components.

When Recalibration is Required—The hot oil positioner and valve are calibrated prior to shipping, replacing either component necessitates re-calibration. To recalibrate:

⚠ DANGER ⚠



SHOCK HAZARD—Electrical power can cause death or severe injury. Lock OFF and tag out power to the Dryer main bus at the wall disconnect before servicing.

1. Turn machine off, lock OFF and tag out.

⚠ WARNING ⚠



BURN HAZARD—Hot surfaces will cause severe burns. Shut off and tag out hot oil flow to dryer at external shut-off valve and allow piping to cool before servicing.

2. Shut off the hot oil to the dryer, tag out external valve.
3. Remove the valve positioner covers and the position indicator dial.
4. Verify that the lower arm bearing rests on the portion of the cam labeled 0-100%. See FIGURE 4.
5. Check that two gain suppression springs are mounted in positions 1 and 4 (as shown in FIGURE 3).

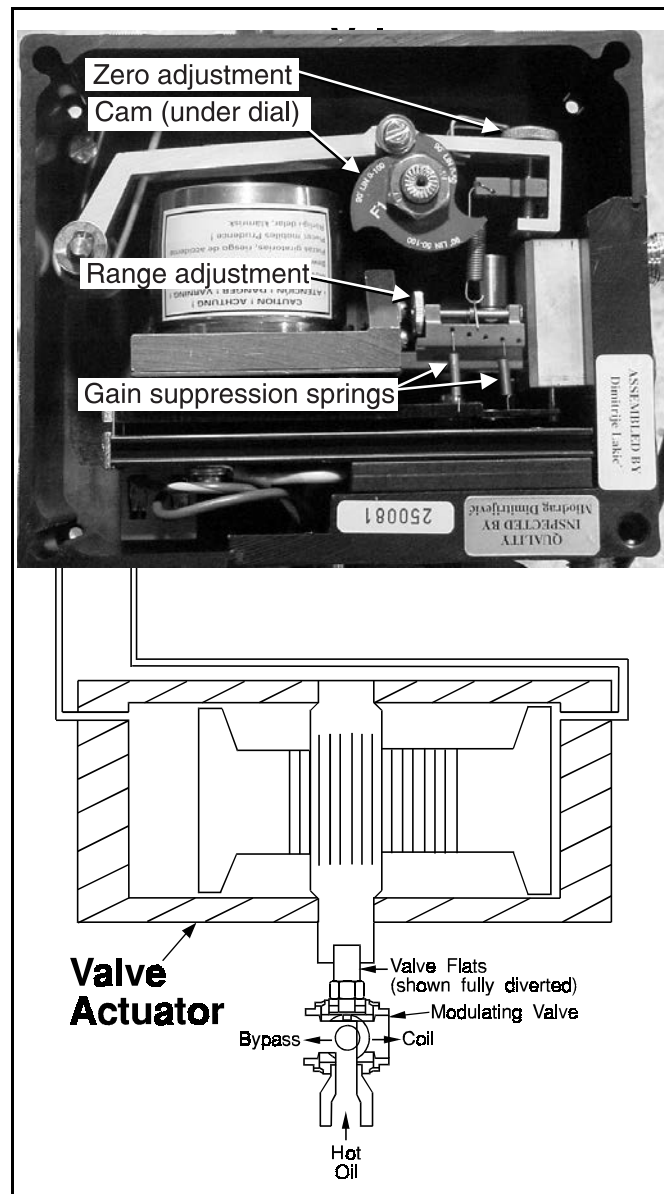


FIGURE 3 (MSSM0102BE)
Hot Oil Modulating Valve and Positioner

Calibrating the Hot Oil Positioner/Valve

The positioner cam must be adjusted so that the valve travels from fully diverted to fully open as the modulating valve position varies from 000 to 255. Refer to “How to Manually Command a Modulating Valve Position” elsewhere in this section then follow the step by step procedures below.

⚠ WARNING ⚠



ELECTRIC SHOCK HAZARD—Machine power is on and positioner covers removed for the following procedures. Exposed terminals are energized at 120VAC or higher. You can be killed or severely injured by contact with these terminals. Do not touch any wire terminals when calibrating or verifying settings.

Calibrating the Positioner/Valve for Minimum Temperature

hold +

Closes modulating valve.
Hold keys until MVP=000.

TIFHTOF LDA MVP BSPD
XXX+XXX XXX 000 XXXX

1. Check that the lower arm ball bearing rests near the deepest part of the cam curve as shown on FIGURE 4. If not, move the zero adjustment thumbwheel (FIGURE 3) until the ball bearing is in this position. If this can not be achieved, loosen the cam retaining nut, move the cam, then use the zero adjustment thumbwheel for adjustment (the cam may rotate slightly with the nut as it is tightened, be sure to allow for this).
2. After setting, check that the modulating valve flats are aligned at a 90 degree angle to the modulating valve (FIGURE 3 and 6). This ensures no hot oil reaches the dryer heating coil. All of the hot oil is returned to the heater.

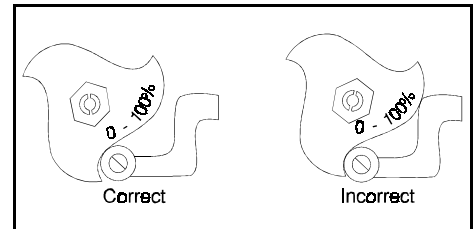


FIGURE 4 (MSSM0102BE)
Cam Setting at Modulating Valve Position 000

hold +

Opens modulating valve.
Hold keys until MVP=255.

TIFHTOF LDA MVP BSPD
XXX+XXX XXX 255 XXXX

NOTE: Due to mechanical considerations, settings past 200 have a very minor effect on the valve.

Calibrating the Positioner/Valve for Maximum Temperature

1. Check that the lower arm ball bearing rests on the highest part of the cam curve (FIGURE 5). If the ball bearing is not at the tip, turn the range adjustment (FIGURE 3).
2. After setting, check that the diverter valve flats are aligned exactly parallel to the diverter valve, permitting full flow to the dryer heating coil.

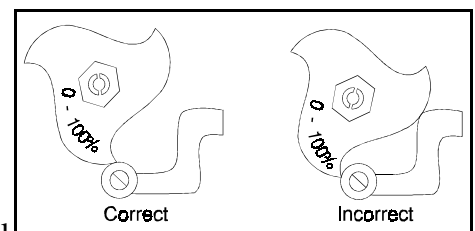


FIGURE 5 (MSSM0102BE)
Cam Setting at Modulating Valve Position 255

Verifying Positioner/Valve Settings

hold  + 

Closes modulating valve. Hold until MVP=200, verify settings then repeat for 150, 100, 050, and 000.

TIFHTOF	LDA	MVP	BSPD
XXX+XXX	XXX	200	XXX

Since the zero and range adjustments affect each other, verify that for each of the five MVP's commanded, the valve moves approximately 1/5 of the way from fully open to fully diverted, and:

- The ball bearing follows the cam slope evenly.
- The cam zero and range settings are correct for fully open and fully diverted positions.

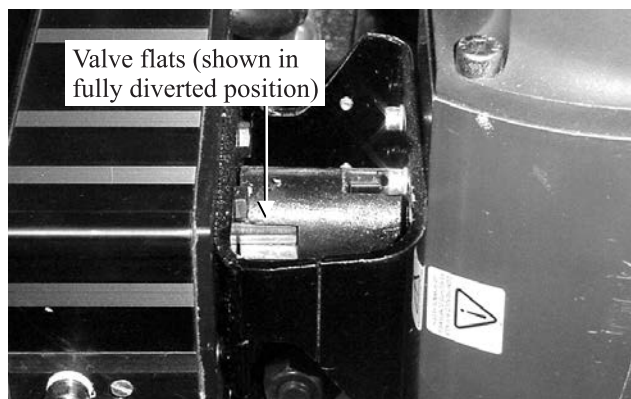
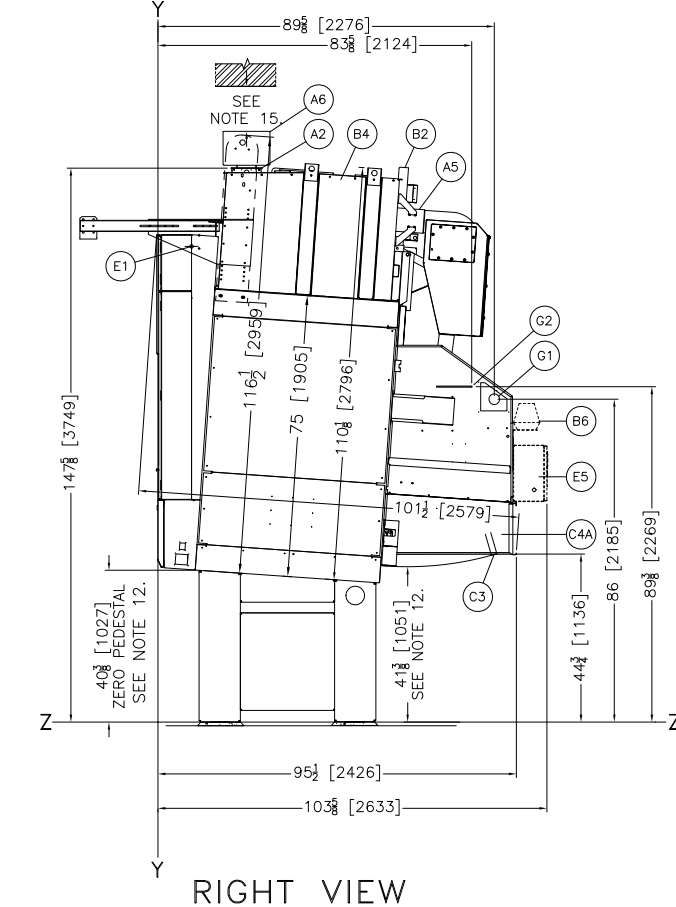
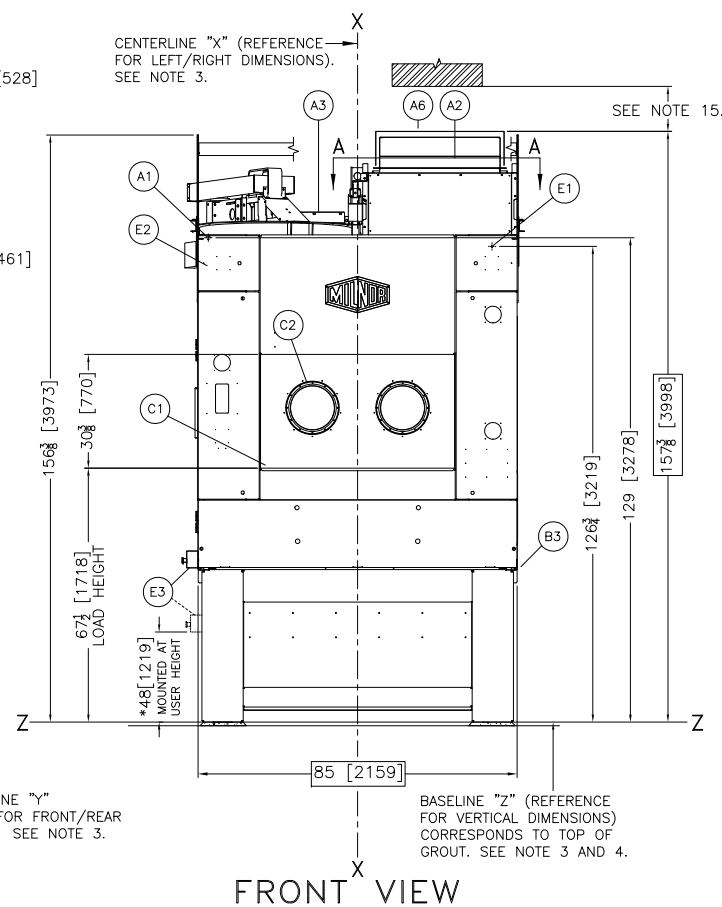
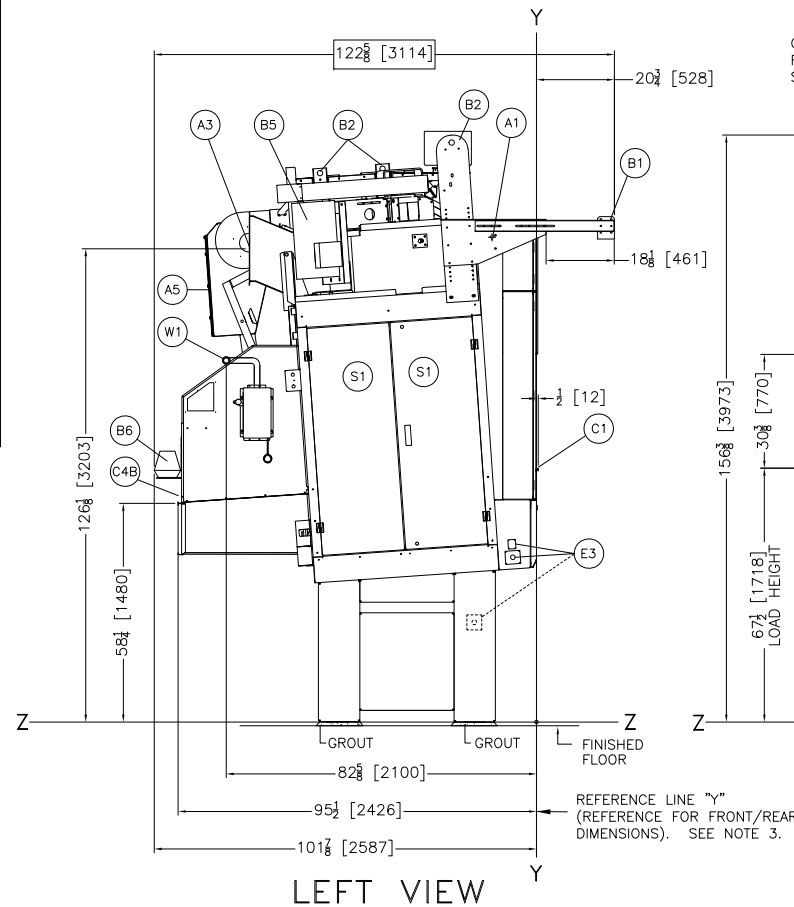
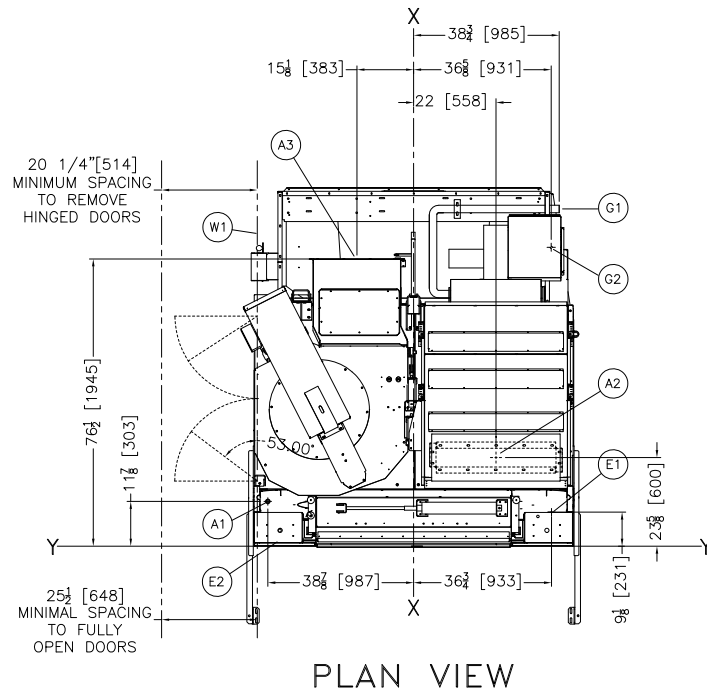
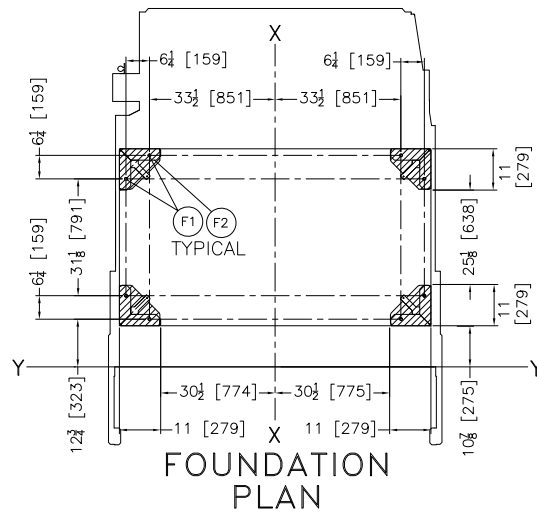
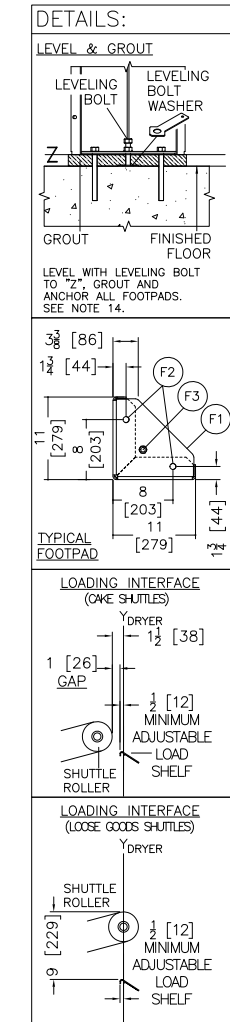
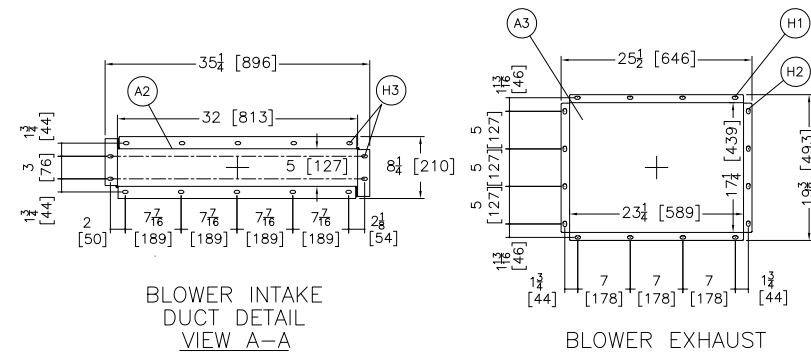


FIGURE 6 (MSSM0102BE)
Modulating Valve Flats

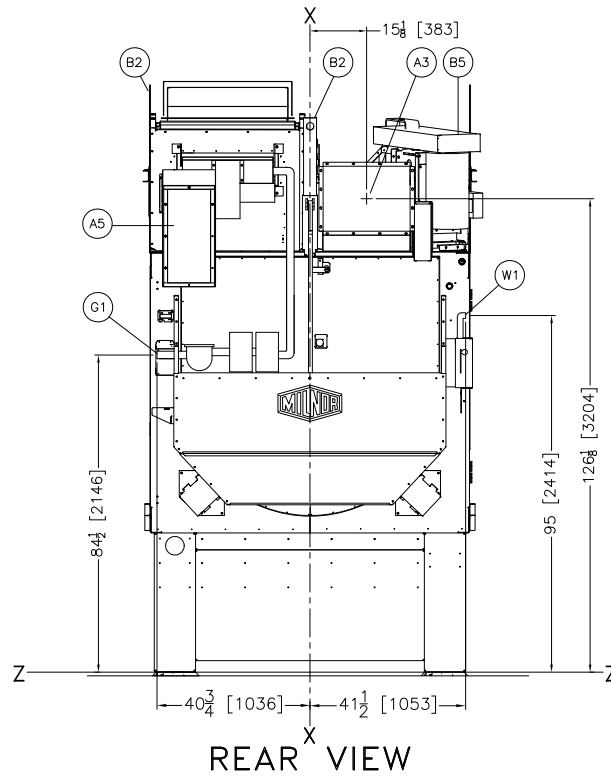
Installation Drawings

3



G2	GAS LINE VENT, 1/4" STAINLESS STEEL TUBING
W1	SPRINKLER WATER INLET, 1-1/4" NPT
S1	REMOVABLE ACCESS DOORS
H3	.406" [10] DIA. X 3/4" [19] SLOTS, 14 PLACES
H2	.31" [8] DIA. X 1/2" [13] SLOTS, 8 PLACES
H1	.31" [8] DIA. X 3/4" [19] SLOTS, 8 PLACES

ZERO PEDESTAL SHOWN
ADJUST ALL VERTICAL DIMENSIONS
TO THE PEDESTAL SPECIFIED.



G1	GAS INLET, 1.5" NPT CONNECTION
F3	LEVELING BOLT (5/8"-11 X 3") SUPPLIED.
F2	DRYER FOOT SUPPORT PLATES, SEE NOTE 14.
F1	ANCHOR BOLT HOLES, 13/16" [21] DIA, 8 PLACES
E5	COMBUSTION BURNER BOX, IF SPECIFIED
E3	EMERGENCY STOP & DOOR OPEN CONTROLS
E2	MICROPROCESSOR BOX
E1	MAIN ELECTRICAL CONNECTION
C4B	OPTIONAL SHORT SHROUD
C4A	STANDARD DISCHARGE SHROUD
C3	DISCHARGE DOOR
C2	LOAD DOOR, 52" WIDE
C1	LOAD HEIGHT, ADJUSTABLE LOAD SHELF
B6	OPTIONAL BEACON
B5	BLOWER MOTOR
B4	BURNER
B3	DRYER TO DRYER MOUNTING BRACKET
B2	SHIPPING BRACKET ONLY
B1	DRYER MOUNT FESTOON RAIL SUPPORT
A6	BLOWER AIR INTAKE TEE, REMOVE ONLY WHEN DUCTING THE INTAKE
A5	COMBUSTION AIR INTAKE BOX WITH FILTERS
A3	BLOWER EXHAUST TO REAR, STANDARD, SEE DETAIL.
A2	BLOWER INTAKE, SEE DETAIL
A1	COMPRESSED AIR, 1"NPT

ITEM LEGEND

NOTES
16 FOR UTILITY REQUIREMENTS FOR GAS, STEAM, THERMAL OIL, AIR INTAKE, AND WATER SUPPLY, SEE DOCUMENT BIPDU01/20160505 OR LATER.
15 IF THE BLOWER INTAKE IS NOT DUCTED THERE MUST BE 8 FEET [2438] OF UNOBSTRUCTED VERTICAL CLEARANCE BETWEEN THE INLET AND ANY OBJECT ABOVE IT.
14 DRYER FOOT SUPPORT PLATES ARE WELDED TO THE BOTTOM OF PEDESTAL LEGS TO ALLOW A GREATER GROUTING SURFACE BETWEEN PEDESTAL LEGS AND FINISHED FLOOR. USE LEVELING BOLTS TO LEVEL THE DRYER TO BASELINE "Z" (COINCIDES WITH BOTTOM OF LEGS.) DRYER FEET MUST BE GROUTED & ANCHORED TO FLOOR.
13 EXHAUST DUCTING: DRYER OPERATES UP TO 7000 SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
12 THIS DRAWING SHOWS THE 6450TG1L DRYER WITH A 41-3/8 [1051] DISCHARGE HEIGHT. WE CALL THE PEDESTAL BASE TO DO THIS A "ZERO PEDESTAL". "ZERO PEDESTAL" IS STANDARD HEIGHT FOR CONVEYOR DISCHARGE. DRYERS MAY BE ORDERED WITH A PEDESTAL TO INCREASE OR DECREASE THE MACHINE HEIGHT IN (4") (101.6) INCREMENTS. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL. FOR ANYTHING UNDER A ZERO PEDESTAL, RIGHT AND LEFT DRYERS CANNOT BE CONNECTED, AND YOU MUST ALLOW A MINIMUM 18" [458] FOR SERVICING BETWEEN DRYERS, SEE NOTE 10.
11 DO NOT USE ANY TYPE OF TURNING VANE IN THE DRYER EXHAUST DUCTING AS THESE WILL IMMEDIATELY PLUG WITH LINT.
10 A MINIMUM CLEARANCE OF 20 1/4" [514] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 60 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 25 1/2" [648] OF CLEARANCE.
9 DRYER IS DISASSEMBLED INTO TWO MAJOR COMPONENTS FOR SHIPPING, THE BASE AND THE FRAME. CONSULT MILNOR FACTORY IF COMPONENTS SUCH AS BLOWER HOUSING MUST BE REMOVED TO FIT MACHINE THROUGH OPENING.
8 DO NOT RUN PIPING OR CONDUIT OVER BLOWER HOUSING, SO THAT THE BLOWER MAY BE REMOVED FOR SERVICING, IF NEEDED.
7 CONTROL PANEL FOR DRYER MAY BE INSTALLED IN ANY CONVENIENT LOCATION. CONTROL CABLE FROM DRYER TO PANEL IS SUPPLIED BY MILNOR AND PRICED SEPARATELY.
6 AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS: 36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL. 42 [1067] IF OBJECT IS A GROUNDED WALL (i.e. BARE CONCRETE, BRICK, ETC.). 48 [1219] IF OBJECT IS ANY LIVE PART. CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.
5 CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.
4 BASELINE "Z" IS THE REFERENCE FOR ALL VERTICAL DIMENSIONS. ON MACHINES WITH FIXED BASE PADS, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE BASE PAD. ON MACHINES WITH ADJUSTABLE FEET, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE FEET WHEN ADJUSTED SO THAT THE MACHINE IS AT ITS MINIMUM ACCEPTABLE HEIGHT. ON TRAVELING SHUTTLES, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE RAIL. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR WILL VARY AS REQUIRED TO ENSURE BASELINE "Z" IS HORIZONTAL AND ANY INTERFACING MACHINES REQUIRING GROUT ARE SET ON A MINIMUM 1" [25] THICK GROUT BED.
3 USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.
2 NUMBERS IN BRACKETS [] DENOTE DIMENSIONS IN MILLIMETERS.
1 ALL DIMENSIONS SHOWN ARE APPROXIMATE, SUBJECT TO NORMAL MANUFACTURING TOLERANCES, AND TO OCCASIONAL CHANGES WITHOUT NOTICE THROUGH REDESIGN AND/OR RELOCATION OF COMPONENTS, ETC. DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED, AND IN NO EVENT PRE-PIPE CLOSER THAN FIVE FEET FROM MACHINE. FACTORY MUST BE CONSULTED FOR DIMENSIONS IF MACHINE IS TO BE MOVED THROUGH NARROW OR LOW CORRIDORS OR OPENINGS.

ATTENTION

MOST REGULATORY AUTHORITIES (INCLUDING OSHA IN THE USA) HOLD THE OWNER/USER ULTIMATELY RESPONSIBLE TO MAINTAIN A SAFE WORKING ENVIRONMENT. ACCORDINGLY, THE OWNER/USER MUST RECOGNIZE ALL FORESEEABLE SAFETY HAZARDS, FURNISH SAFETY INSTRUCTIONS AND GUIDANCE TO ALL PERSONNEL WHO MAY COME IN CONTACT WITH THE INSTALLATION, AND PROVIDE ALL NECESSARY ADDITIONAL SAFETY GUARDS, FENCES, RESTRAINTS, DEVICES, ETC., NOT FURNISHED BY THE EQUIPMENT MANUFACTURER OR VENDOR.

ATTENTION

THE FLOOR AND/OR OTHER SUPPORT COMPONENTS MUST HAVE SUFFICIENT STRENGTH (AND RIGIDITY WITH DUE CONSIDERATION FOR NATURAL OR RESONANT FREQUENCY THEREOF) TO WITHSTAND THE FULLY LOADED WEIGHT OF THE MACHINE INCLUDING THE GOODS, THE WATER, AND ANY REPEATED SINUSOIDAL (ROTATING) FORCES GENERATED DURING ITS OPERATION. WRITE THE FACTORY FOR ADDITIONAL MACHINE DATA FOR USE BY A COMPETENT SOIL AND/OR STRUCTURAL ENGINEER.

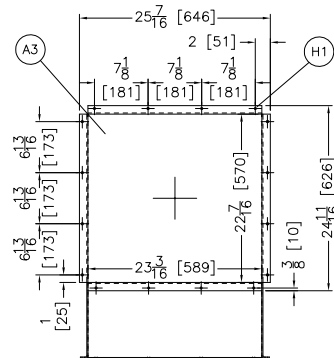
6450TG1L AH

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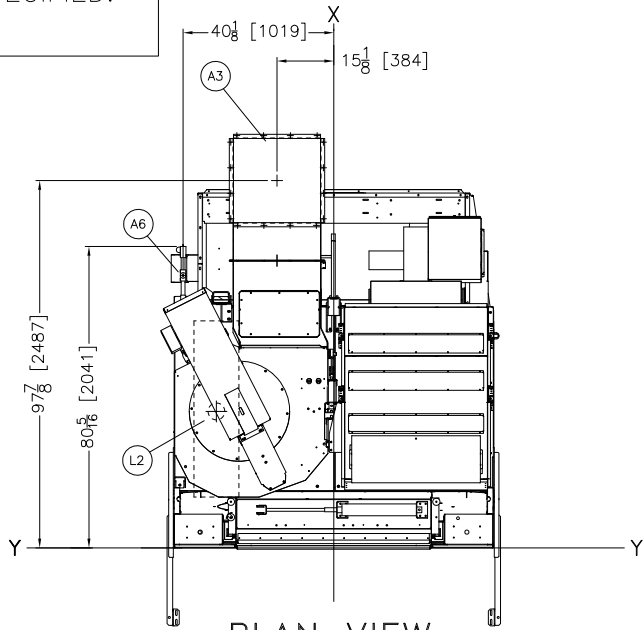
MILNOR PELLERIN MILNOR CORPORATION

P.O. Box 400 Kerner, LA 70063, USA, Phone 504/467-9591, FAX 504/468-3094, Email: milnorinfo@milnor.com

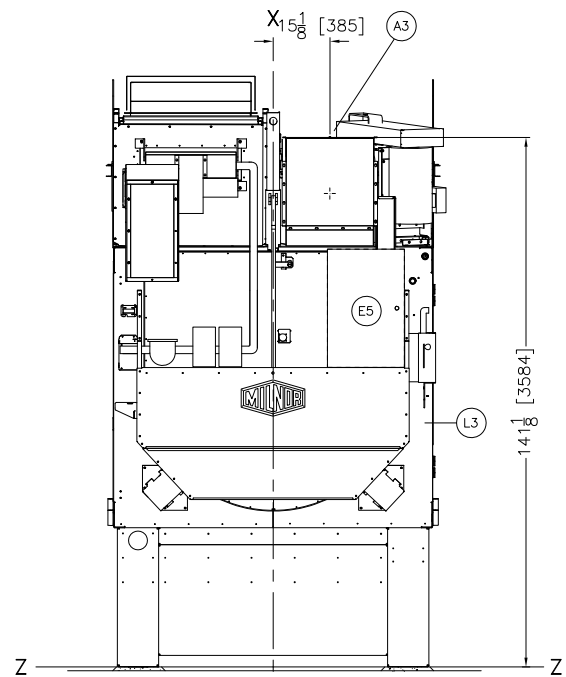
ZERO PEDESTAL SHOWN
ADJUST ALL VERTICAL DIMENSIONS
TO THE PEDESTAL SPECIFIED.
SEE NOTE 7.



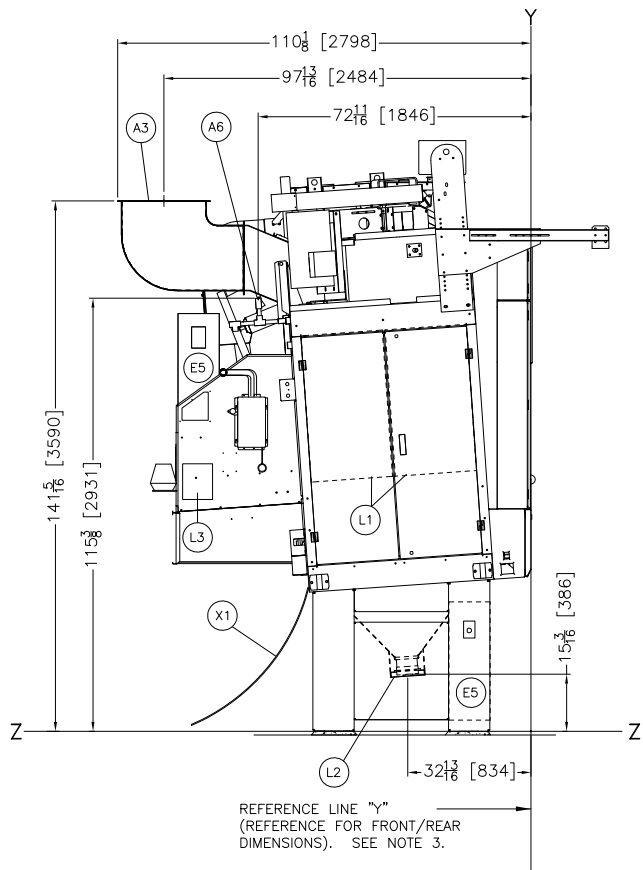
BLOWER EXHAUST
DUCT UP OPTION



PLAN VIEW

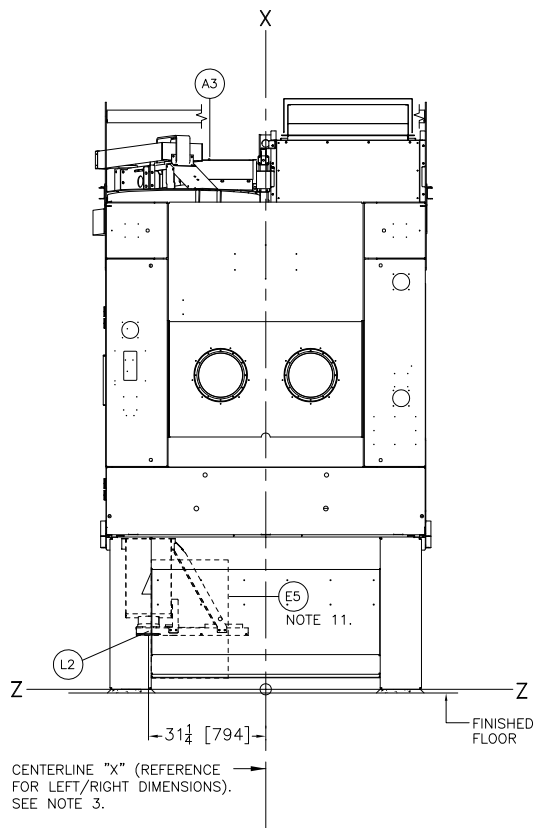


REAR VIEW



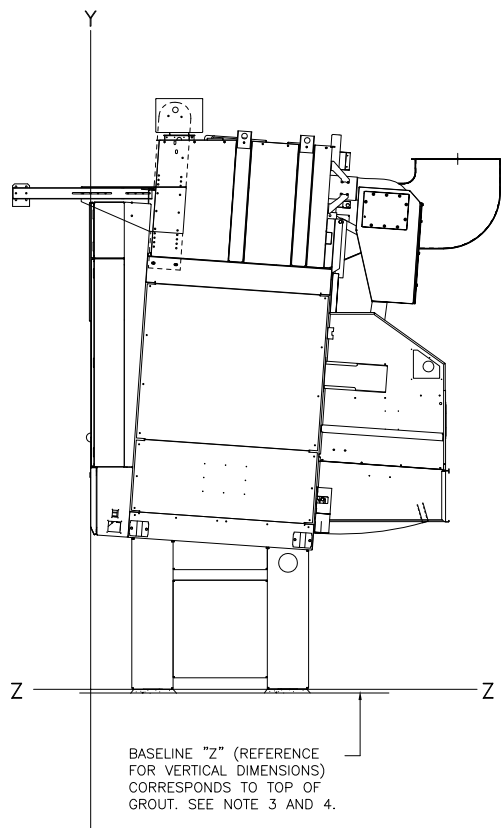
REFERENCE LINE "Y"
(REFERENCE FOR FRONT/REAR
DIMENSIONS). SEE NOTE 3.

LEFT VIEW



CENTERLINE "X" (REFERENCE
FOR LEFT/RIGHT DIMENSIONS).
SEE NOTE 3.

FRONT VIEW



BASELINE "Z" (REFERENCE
FOR VERTICAL DIMENSIONS)
CORRESPONDS TO TOP OF
GROUT. SEE NOTE 3 AND 4.

RIGHT VIEW

X1	OPTIONAL UNLOAD BRIDGE, 48" PLASTIC SHEETING
L3	INTERNAL LINT SCREENS AIR VALVE BOX.
L2	LINT OUTLET (6" FLEX HOSE CONNECTION) FOR OPTIONAL INTERNAL LINT SCREEN. PIPES TO DRYVAC01, DRYVAC02 OR LINT COLLECTOR BY OTHERS. SEE NOTES 9 & 10 AND DRAWING BD6458DLCPE FOR RECOMMENDED PIPING.
L1	OPTIONAL INTERNAL LINT SCREENS, BEHIND PANELS
H1	BOLT SLOTS, 5/16"[7] DIA.
E5	OPTIONAL INVERTER BOX IS LOCATED AS SPECIFIED ON THE DISCHARGE SHROUD, PEDESTAL FRONT, OR FOR REMOTE MOUNTING.
A6	1" NPT AIR CONNECTION/OPTIONAL INTERNAL LINT SCREENS
A3	BLOWER EXHAUST DUCTING UP OPTION, SEE DETAIL.

ITEM	LEGEND
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NOTES	
13	FOR UTILITY REQUIREMENTS FOR GAS, STEAM, THERMAL OIL, AIR INTAKE, AND WATER SUPPLY, SEE DOCUMENT BIPDU01/20160505 OR LATER.
12	A WATER SEPARATOR (NOT SUPPLIED BY PMC) IS REQUIRED FOR THE INCOMING AIR TO THE INTERNAL LINT SYSTEM.
11	OPTIONAL INVERTER BOX MAY BE SPECIFIED FOR PEDESTAL MOUNT ON 48"[1219] (ZERO PEDESTAL PLUS 7"[178]) AND TALLER PEDESTALS ONLY.
10	OPTIONAL INTERNAL LINT SCREENS IS AVAILABLE FOR DRYERS WITH 41"[1041] AND TALLER PEDESTALS ONLY.
9	FOR OPTIONAL INTERNAL LINT FILTERS, IT IS RECOMMENDED TO HAVE A 60 GALLON COMPRESSED AIR BOOSTER TANK FOR EVERY 5 DRYERS.
8	EXHAUST DUCTING: DRYER OPERATES UP TO 8500SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
7	THIS DRAWING SHOWS THE 6450TG1 DRYER USING A 41"[1041] PEDESTAL BASE. WHICH IS EQUAL TO ZERO PEDESTAL. STANDARD HEIGHT FOR CONVEYOR DISCHARGE. PEDESTALS MAY BE ORDERED TO INCREASE OR DECREASE THE MACHINE HEIGHT. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL.
6	AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS: 36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL. 42 [1067] IF OBJECT IS A GROUNDED WALL (ie. BARE CONCRETE, BRICK, ETC.). 48 [1219] IF OBJECT IS ANY LIVE PART. CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.
5	CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.
4	BASELINE "Z" IS THE SAME FOR ALL MILNOR MACHINES AND IS SHOWN ON ALL DIMENSIONAL DRAWINGS. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR MAY VARY (WITH CHANGES IN FLOOR HEIGHT) AS REQUIRED TO INSURE THAT BASELINE "Z" IS HORIZONTAL AND ALL COMPONENTS REQUIRING GROUT ARE SET ON A MINIMUM 1" [25] THICK GROUT BED.
3	USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.
2	NUMBERS IN BRACKETS [] DENOTE DIMENSIONS IN MILLIMETERS.
1	ALL DIMENSIONS SHOWN ARE APPROXIMATE, SUBJECT TO NORMAL MANUFACTURING TOLERANCES, AND TO OCCASIONAL CHANGES WITHOUT NOTICE THROUGH REDESIGN AND/OR RELOCATION OF COMPONENTS, ETC. DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED, AND IN NO EVENT PRE-PIPE CLOSER THAN FIVE FEET FROM MACHINE. FACTORY MUST BE CONSULTED FOR DIMENSIONS IF MACHINE IS TO BE MOVED THROUGH NARROW OR LOW CORRIDORS OR OPENINGS.

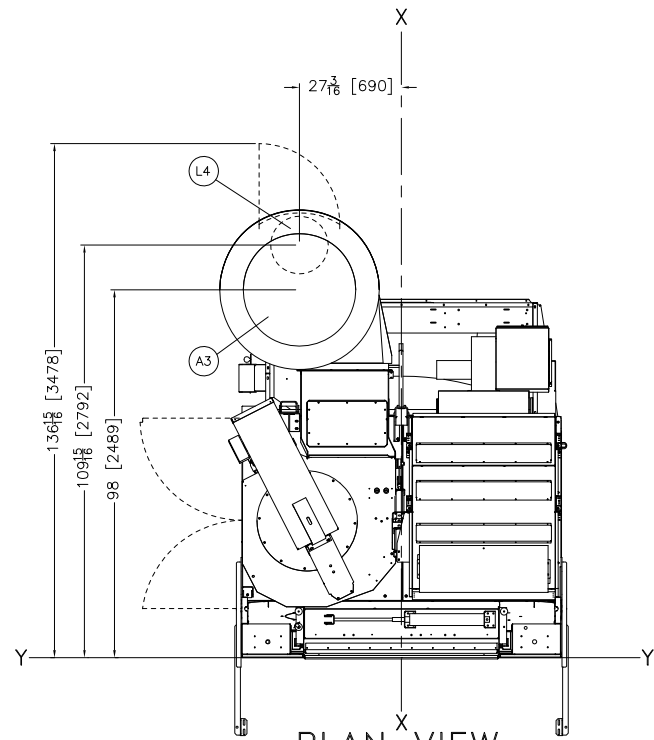
ATTENTION
MOST REGULATORY AUTHORITIES (INCLUDING OSHA IN THE USA) HOLD THE OWNER/USER ULTIMATELY RESPONSIBLE TO MAINTAIN A SAFE WORKING ENVIRONMENT. ACCORDINGLY, THE OWNER/USER MUST RECOGNIZE ALL FORESEEABLE SAFETY HAZARDS, FURNISH SAFETY INSTRUCTIONS AND GUIDANCE TO ALL PERSONNEL WHO MAY COME IN CONTACT WITH THE INSTALLATION, AND PROVIDE ALL NECESSARY ADDITIONAL SAFETY GUARDS, FENCES, RESTRAINTS, DEVICES, ETC., NOT FURNISHED BY THE EQUIPMENT MANUFACTURER OR VENDOR.

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THE FLOOR AND/OR OTHER SUPPORT COMPONENTS MUST HAVE SUFFICIENT STRENGTH (AND RIGIDITY WITH DUE CONSIDERATION FOR NATURAL OR RESONANT FREQUENCY THEREOF) TO WITHSTAND THE FULLY LOADED WEIGHT OF THE MACHINE INCLUDING THE GOODS, THE WATER, AND ANY REPEATED SINUSOIDAL (ROTATING) FORCES GENERATED DURING ITS OPERATION. WRITE THE FACTORY FOR ADDITIONAL MACHINE DATA FOR USE BY A COMPETENT SOIL AND/OR STRUCTURAL ENGINEER.

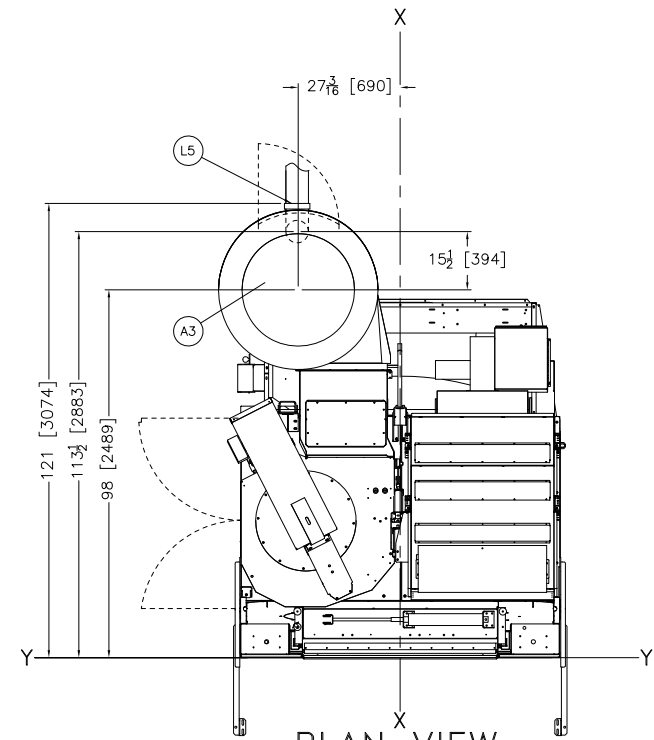
6450TG1L AH OPTIONS

DWG#	BD6450TG1LA1AB
2017396D	

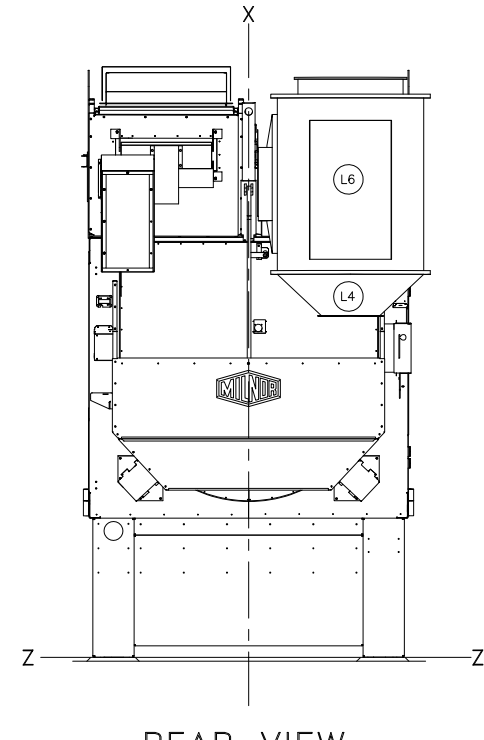
MILNOR PELLERIN MILNOR CORPORATION
P.O. Box 400 Kenner, LA 70063, USA, Phone 504/467-9591,
FAX 504/468-3094, Email: milnorinfo@milnor.com



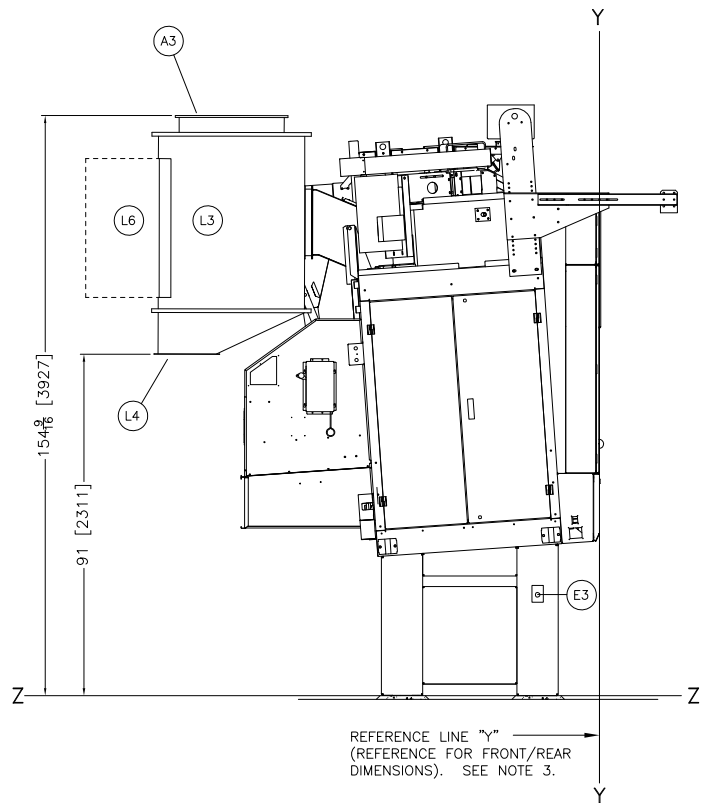
PLAN VIEW
LINT OUTLET TO BAG COLLECTOR



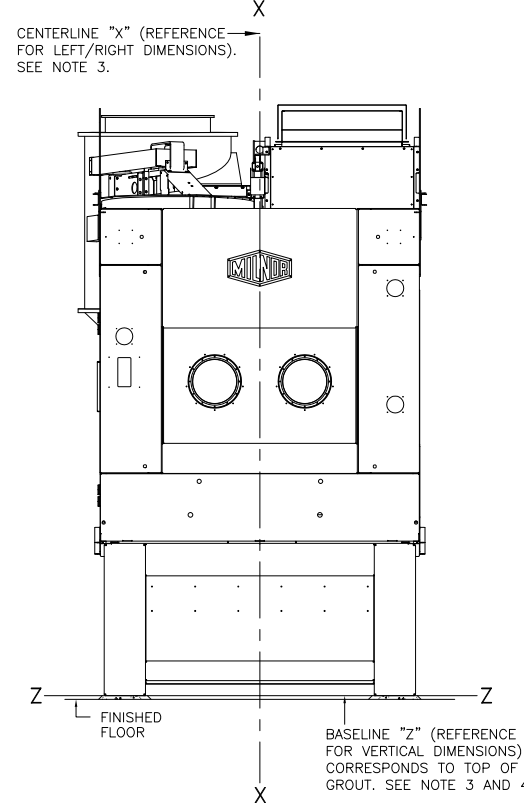
PLAN VIEW
LINT OUTLET TO VACUUM COLLECTOR



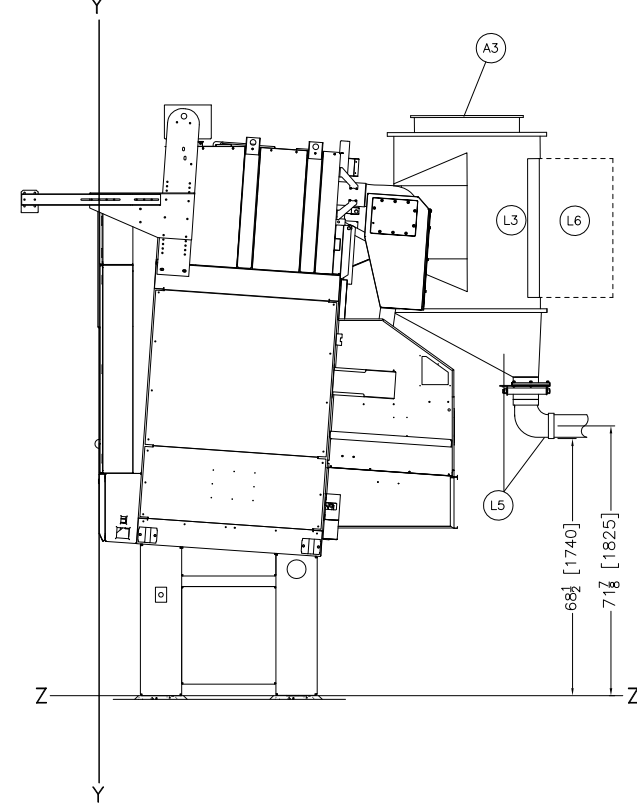
REAR VIEW
LINT OUTLET TO BAG COLLECTOR



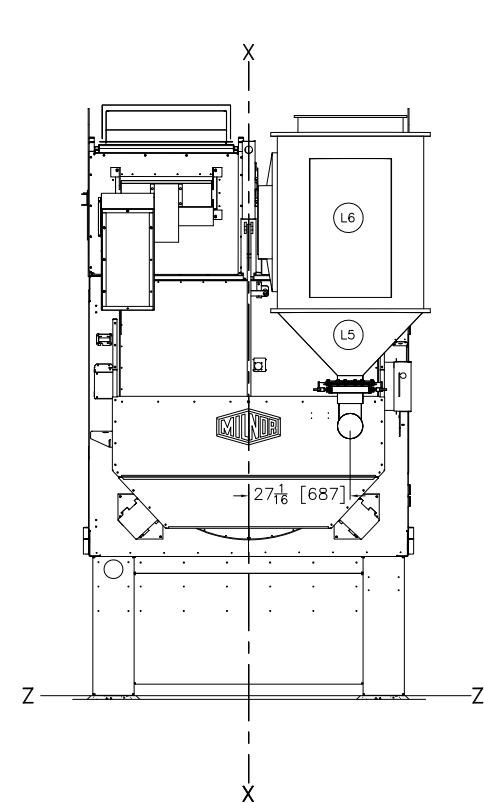
LEFT VIEW
REFERENCE LINE "Y"
(REFERENCE FOR FRONT/REAR
DIMENSIONS). SEE NOTE 3.



FRONT VIEW



RIGHT VIEW



REAR VIEW
LINT OUTLET TO VACUUM COLLECTOR

L6	HINGED ACCESS DOOR
L5	CONE, LINT COLLECTION OUTLET TO VACUUM COLLECTOR
	DISCHARGE, 6" PIPE CONNECTION
L4	CONE, LINT COLLECTION OUTLET TO BAG, DISCHARGE
	15-1/2" ID FLANGED OUTLET
L3	MLF1010 LINT FILTER (LINT FILTER SUPPORTED BY OTHERS)
A3	EXHAUST DUCT, 28" [711] DIAMETER
ITEM	LEGEND

- NOTES**
- EXHAUST DUCTING: DRYER OPERATES UP TO 7000 SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING. THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND/OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
 - THIS DRAWING SHOWS THE DRYER WITH A 41-3/8" [1051] DISCHARGE HEIGHT. WE CALL THE PEDESTAL BASE TO DO THIS A "ZERO PEDESTAL". "ZERO PEDESTAL" IS STANDARD HEIGHT FOR CONVEYOR DISCHARGE. DRYERS MAY BE ORDERED WITH A PEDESTAL TO INCREASE OR DECREASE THE MACHINE HEIGHT IN (1/4") [1.75] INCREMENTS. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL. FOR ANYTHING UNDER A ZERO PEDESTAL, RIGHT AND LEFT DRYERS CANNOT BE CONNECTED, AND YOU MUST ALLOW A MINIMUM 18" [458] FOR SERVICING BETWEEN DRYERS, SEE NOTE 10.
 - DO NOT USE ANY TYPE OF TURNING VANE IN THE DRYER EXHAUST DUCTING AS THESE WILL IMMEDIATELY PLUG WITH LINT.
 - A MINIMUM CLEARANCE OF 20 1/4" [514] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 60 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 25 1/2" [648] OF CLEARANCE.
 - DRYER IS DISASSEMBLED INTO TWO MAJOR COMPONENTS FOR SHIPPING, THE BASE AND THE FRAME. CONSULT MILNOR FACTORY IF COMPONENTS SUCH AS BLOWER HOUSING MUST BE REMOVED TO FIT MACHINE THROUGH OPENING.
 - DO NOT RUN PIPING OR CONDUIT OVER BLOWER HOUSING, SO THAT THE BLOWER MAY BE REMOVED FOR SERVICING, IF NEEDED.
 - CONTROL PANEL FOR DRYER MAY BE INSTALLED IN ANY CONVENIENT LOCATION. CONTROL CABLE FROM DRYER TO PANEL IS SUPPLIED BY MILNOR AND PRICED SEPARATELY.
 - AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS:
36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL.
42 [1067] IF OBJECT IS A GROUNDED WALL (ie. BARE CONCRETE, BRICK, ETC.)
48 [1219] IF OBJECT IS ANY LIVE PART.
CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.
 - CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.
 - BASELINE "Z" IS THE REFERENCE FOR ALL VERTICAL DIMENSIONS. ON MACHINES WITH FIXED BASE PADS, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE BASE PAD. ON MACHINES WITH ADJUSTABLE FEET, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE FEET WHEN ADJUSTED SO THAT THE MACHINE IS AT ITS MINIMUM ACCEPTABLE HEIGHT. ON TRAVELING SHUTTLES, BASELINE "Z" CORRESPONDS TO THE BOTTOM RAIL. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR WILL VARY AS REQUIRED TO ENSURE BASELINE "Z" IS HORIZONTAL AND ANY INTERFACING MACHINES REQUIRING GROUT ARE SET ON A MINIMUM 1" [25] THICK GROUT BED.
 - USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.
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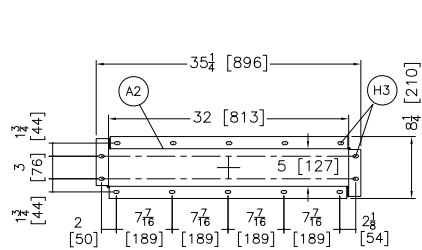
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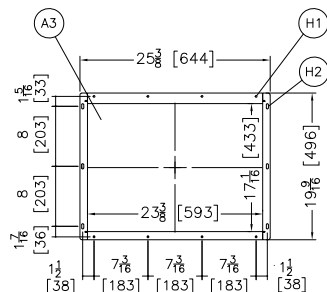
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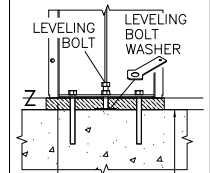
BLOWER INTAKE
DUCT DETAIL
VIEW A-A



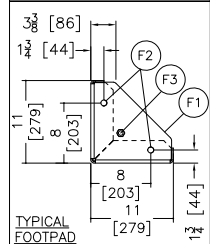
BLOWER VERTICAL FRONT
EXHAUST DUCT DETAIL

DETAILS:

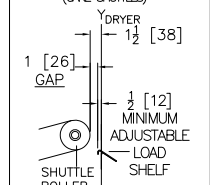
LEVEL & GROUT



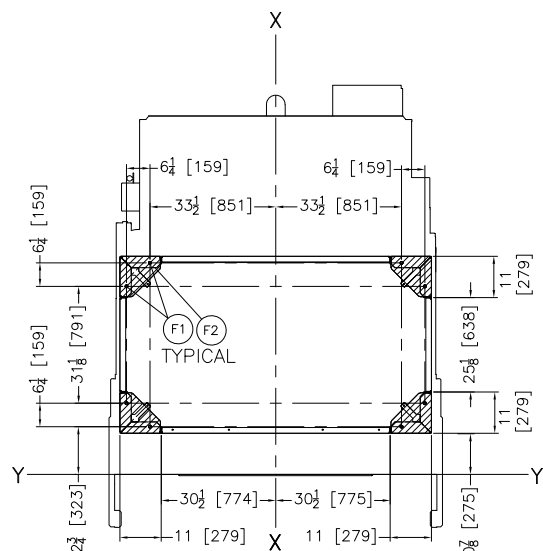
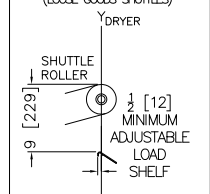
LEVEL WITH LEVELING BOLT TO "Z", GROUT AND ANCHOR ALL FOOTPADS. SEE NOTE 14.



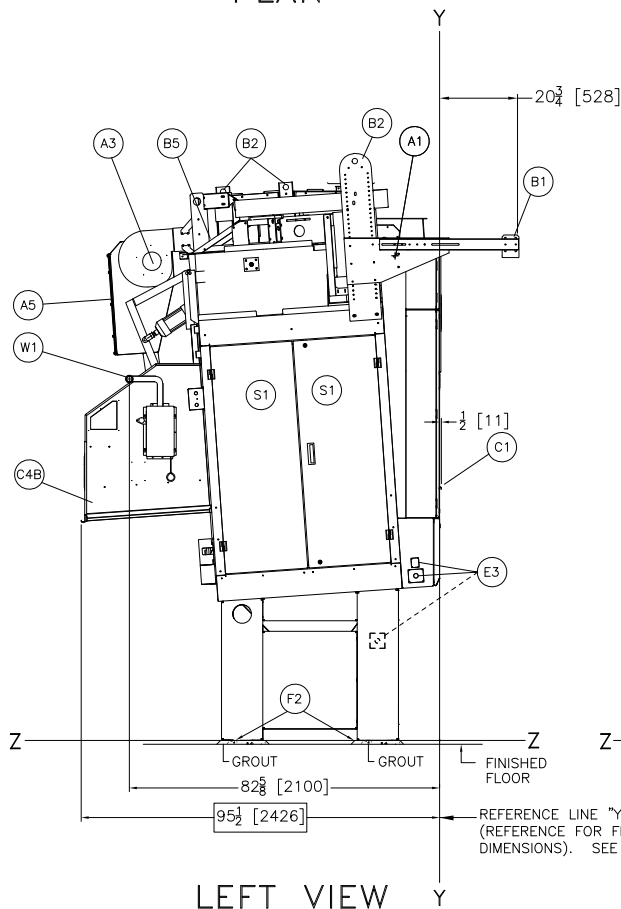
LOADING INTERFACE (ONE SHUTTLES)



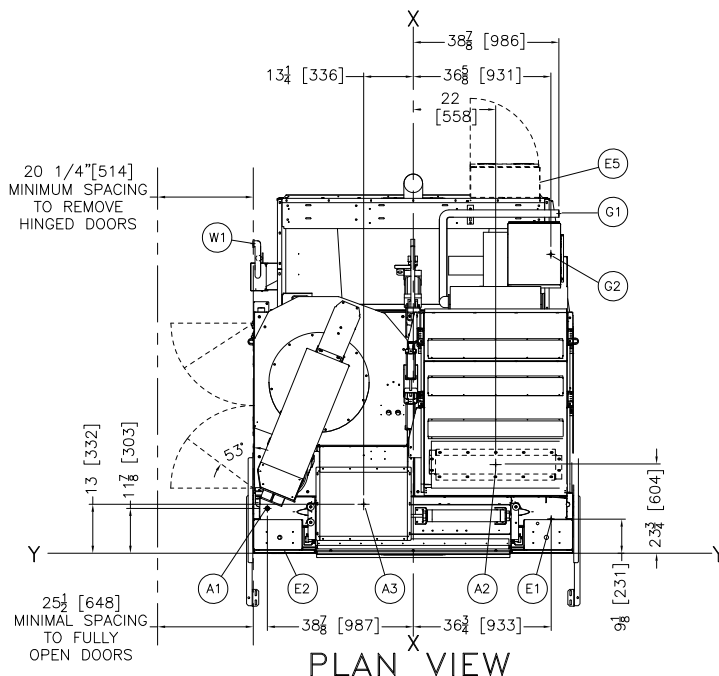
LOADING INTERFACE (LOOSE GOODS SHUTTLES)



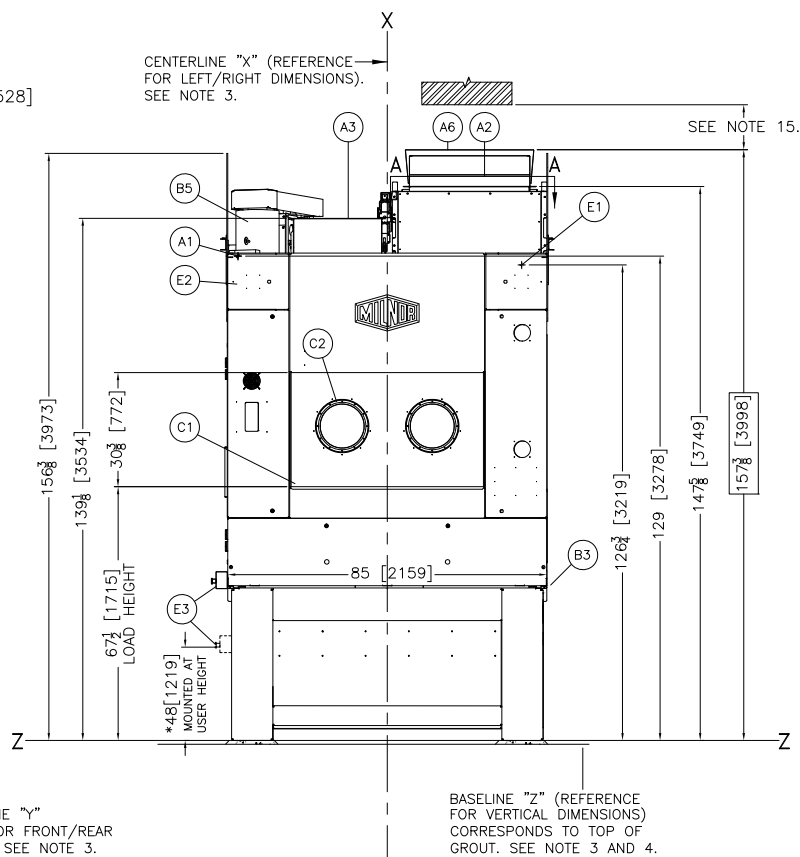
FOUNDATION
PLAN



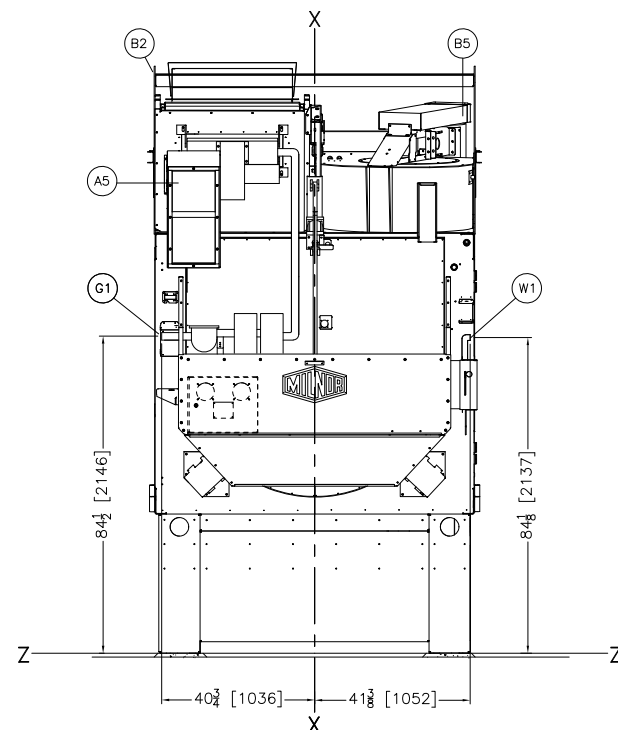
LEFT VIEW



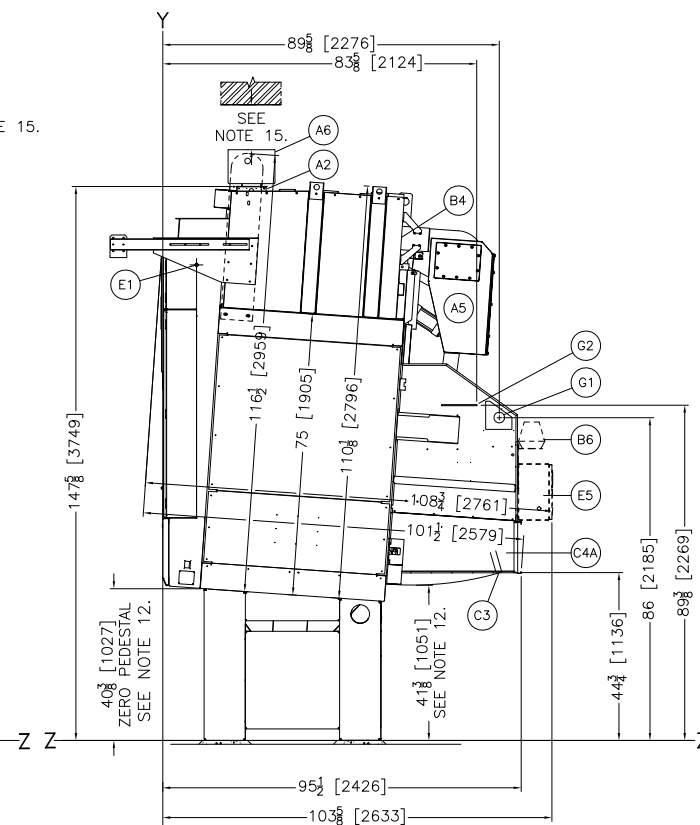
PLAN VIEW



FRONT VIEW



REAR VIEW



RIGHT VIEW

ZERO PEDESTAL SHOWN
ADJUST ALL VERTICAL DIMENSIONS
TO THE PEDESTAL SPECIFIED.

W1	SPRINKLER WATER INLET, 1-1/4" NPT
S1	REMOVABLE ACCESS DOORS
H3	.40" [10] DIA. X .75" [19] SLOTS, 8 PLACES
H2	.28" [7] DIA. X .75" [19] SLOTS, 6 PLACES
H1	.28" [7] DIA., 8 PLACES
G2	GAS LINE VENT, 1/4" STAINLESS STEEL TUBING

G1	GAS INLET, 1-1/2" NPT CONNECTION
F3	LEVELING BOLT (5/8"-11 X 3") SUPPLIED.
F2	DRYER FOOT SUPPORT PLATES, SEE NOTE 14.
F1	ANCHOR BOLT HOLES, 13/16" [21] DIA, 8 PLACES
E5	COMBUSTION BURNER BOX, IF SPECIFIED
E3	EMERGENCY STOP & DOOR OPEN CONTROLS
E2	MICROPROCESSOR BOX
E1	MAIN ELECTRICAL CONNECTION
C4B	OPTIONAL SHORT SHROUD
C4A	STANDARD DISCHARGE SHROUD
C3	DISCHARGE DOOR
C2	LOAD DOOR, 52" WIDE
C1	LOAD HEIGHT, ADJUSTABLE LOAD SHELF
B6	OPTIONAL BEACON
B5	BLOWER MOTOR
B4	BURNER (AIR HEAT)
B3	DRYER TO DRYER MOUNTING BRACKET
B2	SHIPPING BRACKET ONLY
B1	DRYER MOUNT FESTOON RAIL SUPPORT
A6	BLOWER AIR INTAKE TEE, REMOVE ONLY WHEN DUCTING THE INTAKE
A5	COMBUSTION AIR INTAKE BOX WITH FILTERS
A4	AIR VALVE BOX
A3	OPTIONAL BLOWER VERTICAL FRONT EXHAUST, SEE DETAIL.
A2	BLOWER INTAKE, SEE DETAIL AND NOTE 15.
A1	COMPRESSED AIR, 1"NPT

ITEM LEGEND

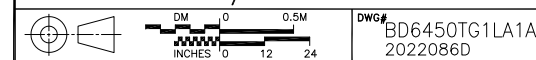
NOTES

- FOR UTILITY REQUIREMENTS FOR GAS, STEAM, THERMAL OIL, AIR INTAKE, AND WATER SUPPLY, SEE DOCUMENT BIPDU01/20160505 OR LATER.
- IF THE BLOWER INTAKE IS NOT DUCTED THERE MUST BE 8 FEET [2438] OF UNOBSTRUCTED VERTICAL CLEARANCE BETWEEN THE INLET AND ANY OBJECT ABOVE IT.
- DRYER FOOT SUPPORT PLATES ARE WELDED TO THE BOTTOM OF PEDESTAL LEGS TO ALLOW A GREATER GROUTING SURFACE BETWEEN PEDESTAL LEGS AND FINISHED FLOOR. USE LEVELING BOLTS TO LEVEL THE DRYER TO BASELINE "Z" (COINCIDES WITH BOTTOM OF LEGS.) DRYER FEET MUST BE GROUTED & ANCHORED TO FLOOR.
- EXHAUST DUCTING: DRYER OPERATES UP TO 8500 SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
- THIS DRAWING SHOWS THE 6450TG1L DRYER WITH A 41-1/2 [1055] DISCHARGE HEIGHT. WE CALL THE PEDESTAL BASE TO DO THIS A "ZERO PEDESTAL". "ZERO PEDESTAL" IS STANDARD HEIGHT FOR CONVEYOR DISCHARGE. DRYERS MAY BE ORDERED WITH A PEDESTAL TO INCREASE OR DECREASE THE MACHINE HEIGHT IN (+/-) 3.5" [89] INCREMENTS. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL. FOR ANYTHING UNDER A ZERO PEDESTAL, RIGHT AND LEFT DRYERS CANNOT BE CONNECTED, AND YOU MUST ALLOW A MINIMUM 18" [458] FOR SERVICING BETWEEN DRYERS, SEE NOTE 10.
- DO NOT USE ANY TYPE OF TURNING VANE IN THE DRYER EXHAUST DUCTING AS THESE WILL IMMEDIATELY PLUG WITH LINT.
- A MINIMUM CLEARANCE OF 26 1/2" [674] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 55 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 32 1/2" [826] OF CLEARANCE.
- DRYER IS DISASSEMBLED INTO TWO MAJOR COMPONENTS FOR SHIPPING, THE BASE AND THE FRAME. CONSULT MILNOR FACTORY IF COMPONENTS SUCH AS BLOWER HOUSING MUST BE REMOVED TO FIT MACHINE THROUGH OPENING.
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36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL.
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CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.
- CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.
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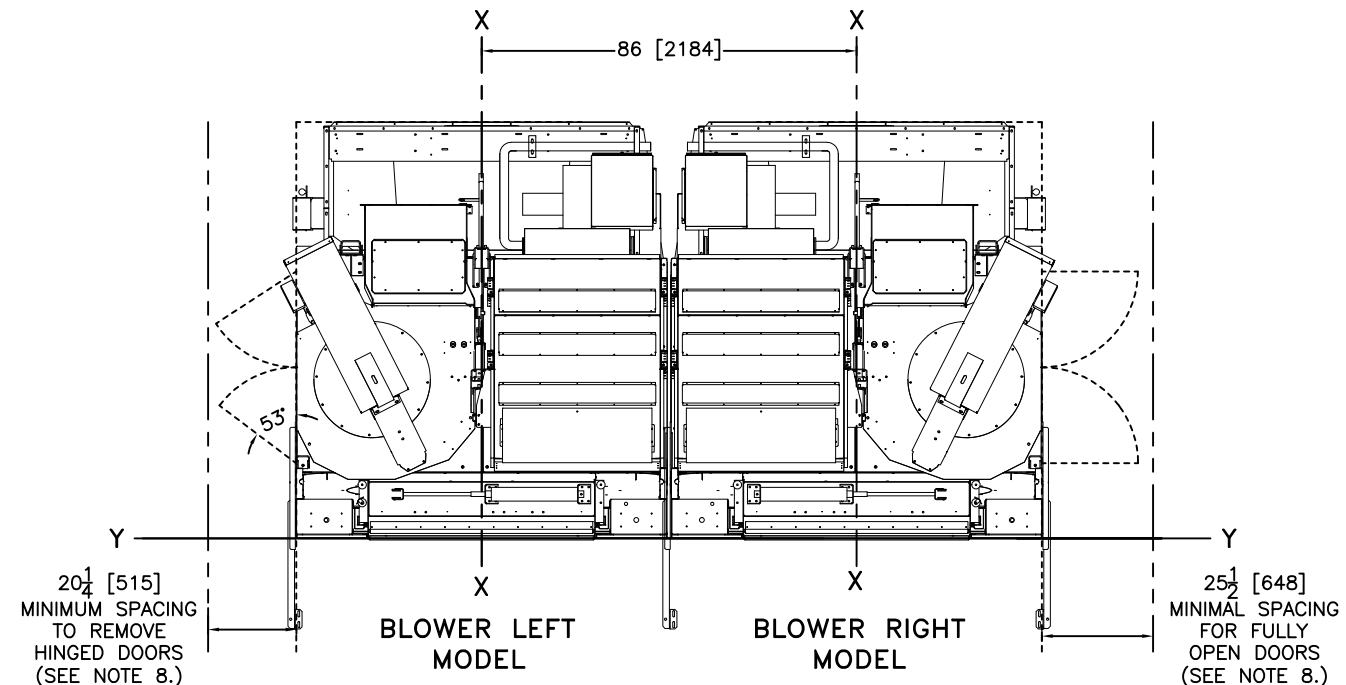
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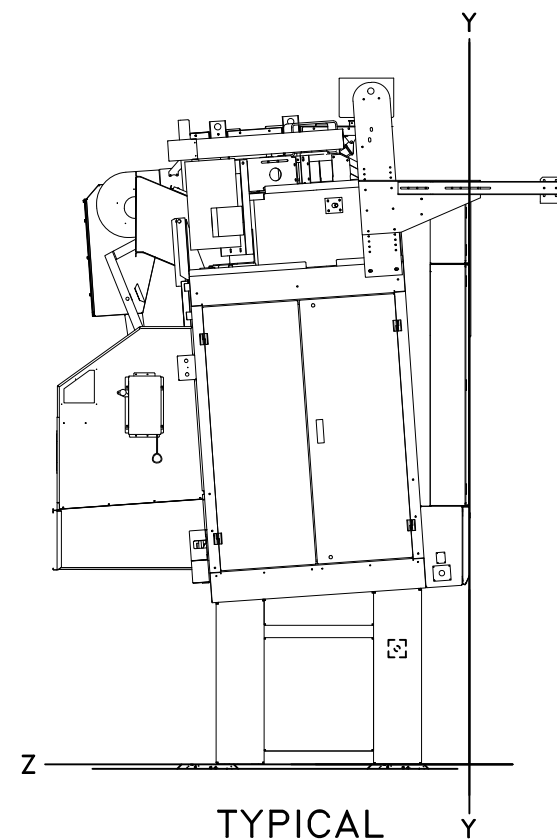
6450TG1L AH / UP FRONT EXHAUST



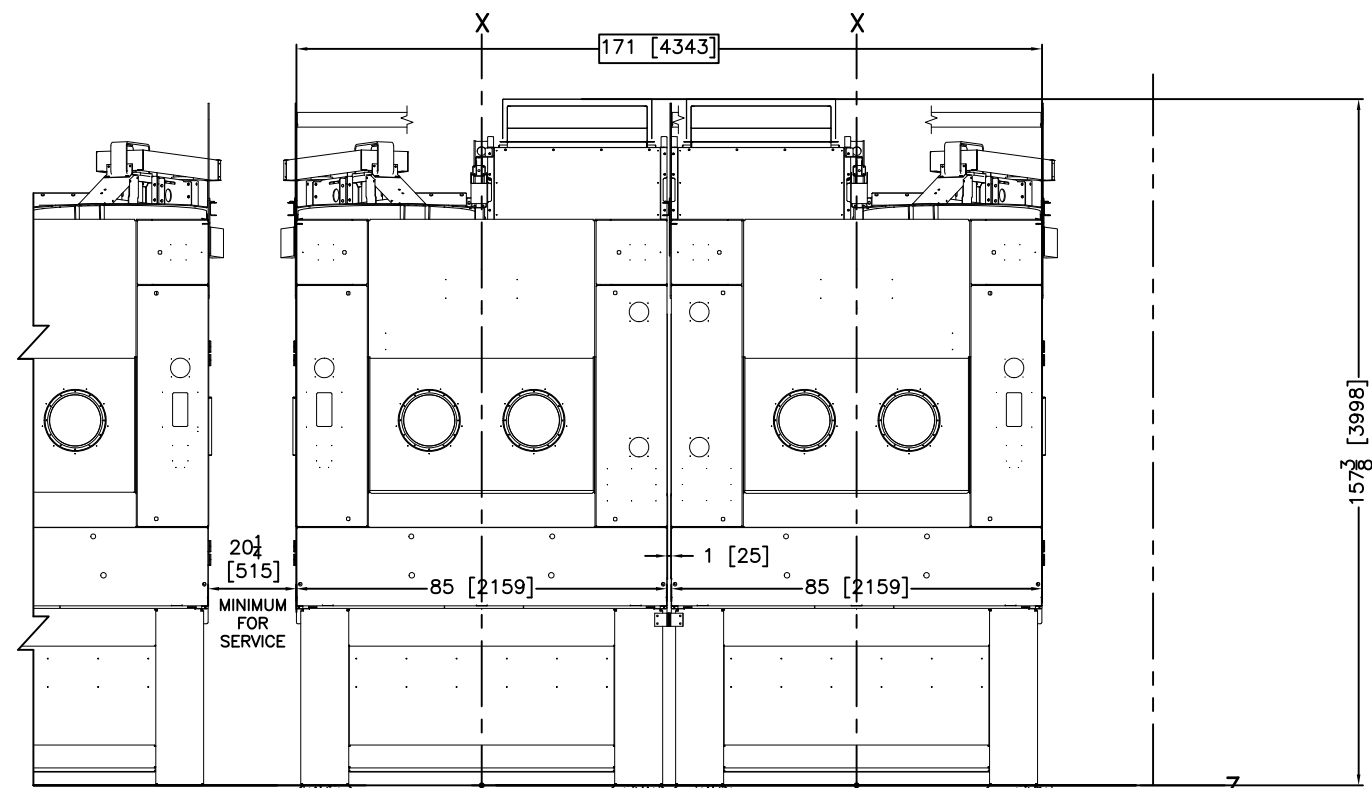
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P.O. Box 400 Kenner, LA 70063, USA, Phone 504/467-9591,
FAX 504/468-3094, Email: milnorinfo@milnor.com



PLAN VIEW



TYPICAL
SERVICE SIDE
(BLOWER LEFT
MODEL SHOWN)
LEFT VIEW



FRONT VIEW
MIRRORED INSTALLATION

NOTES

8 A MINIMUM CLEARANCE OF 20 1/4" [515] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 53 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 25 1/2" [648] OF CLEARANCE.

7 THIS DRAWING SHOWS THE 64050T61 DRYER USING A 41" [1041] PEDESTAL BASE, WHICH IS EQUAL TO ZERO PEDESTAL, STANDARD HEIGHT FOR CONVEYOR DISCHARGE. PEDESTALS MAY BE ORDERED TO INCREASE OR DECREASE THE MACHINE HEIGHT. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL.

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CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.

5. CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.

4 BASELINE "Z" IS THE SAME FOR ALL MILNOR MACHINES AND IS SHOWN ON ALL DIMENSIONAL DRAWINGS. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR MAY VARY (WITH CHANGES IN FLOOR HEIGHT) AS REQUIRED TO INSURE THAT BASELINE "Z" IS HORIZONTAL AND ALL COMPONENTS REQUIRING GROUT ARE SET ON A MINIMUM 1" [25] THICK GROUT BED.

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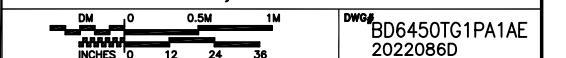
ATTENTION

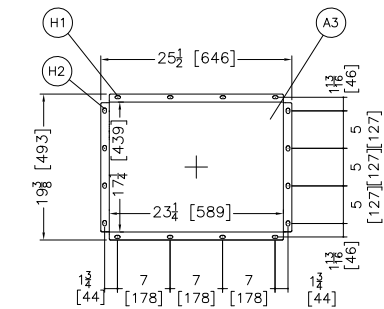
ATTENTION
MOST REGULATORY AUTHORITIES (INCLUDING OSHA IN THE USA) HOLD THE OWNER/USER ULTIMATELY RESPONSIBLE TO MAINTAIN A SAFE WORKING ENVIRONMENT. ACCORDINGLY, THE OWNER/USER MUST RECOGNIZE ALL FORESEEABLE SAFETY HAZARDS, FURNISH SAFETY INSTRUCTIONS AND GUIDANCE TO ALL PERSONNEL WHO MAY COME IN CONTACT WITH THE INSTALLATION, AND PROVIDE ALL NECESSARY ADDITIONAL SAFETY GUARDS, FENCES, RESTRAINTS, DEVICES, ETC., NOT FURNISHED BY THE EQUIPMENT MANUFACTURER OR VENDOR.

ATTENTION

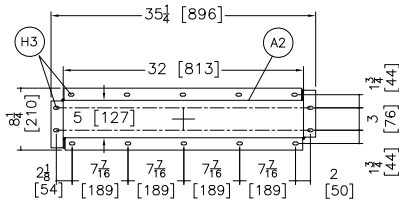
THE FLOOR AND/OR OTHER SUPPORT COMPONENTS MUST HAVE SUFFICIENT STRENGTH (AND RIGIDITY WITH DUE CONSIDERATION FOR NATURAL OR RESONANT FREQUENCY THEREOF) TO WITHSTAND THE FULLY LOADED WEIGHT OF THE MACHINE INCLUDING THE GOODS, THE WATER, AND ANY REPEATED SINUSOIDAL (ROTATING) FORCES GENERATED DURING ITS OPERATION. WRITE THE FACTORY FOR ADDITIONAL MACHINE DATA FOR USE BY A COMPETENT SOIL AND/OR STRUCTURAL ENGINEER.

64050TG1L,TG1R AH PAIRED

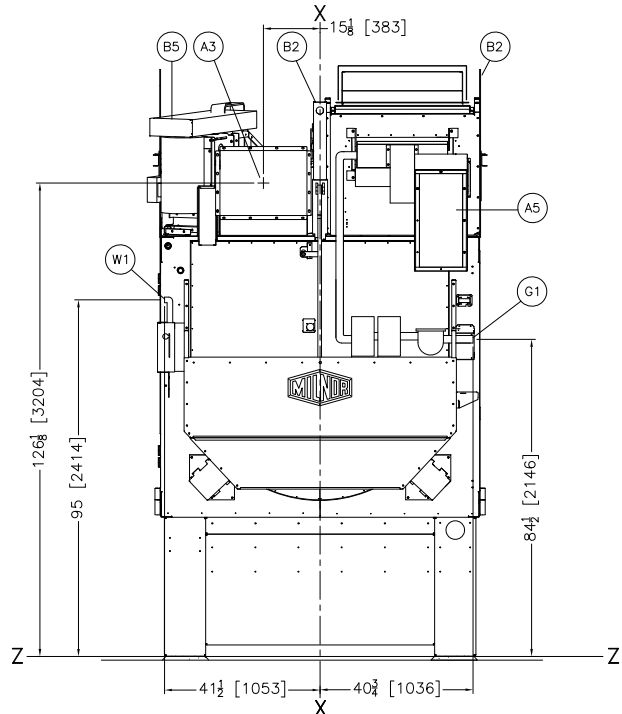
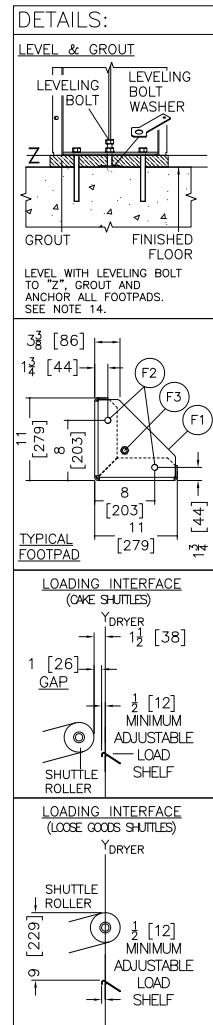

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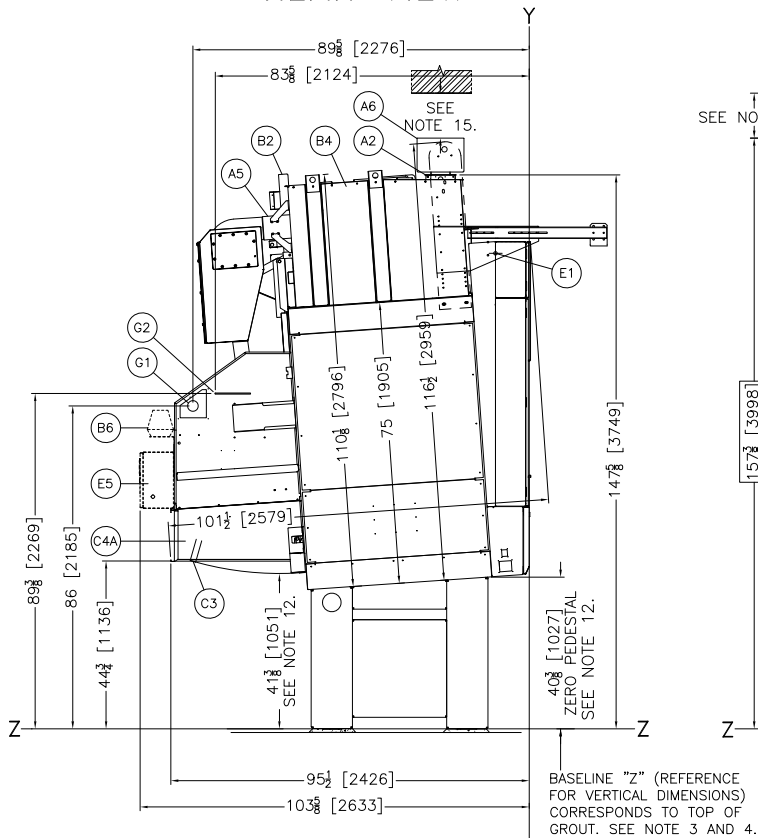
BLOWER EXHAUST



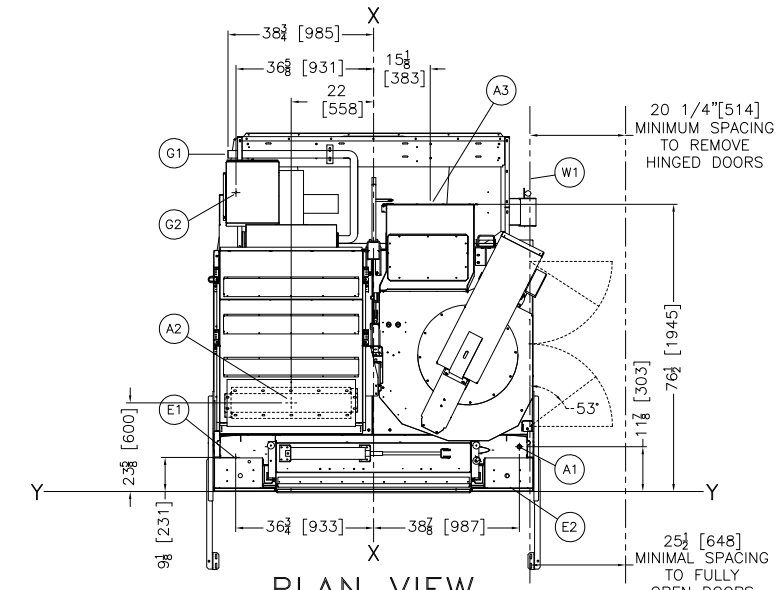
BLOWER INTAKE
DUCT DETAIL
VIEW A-A



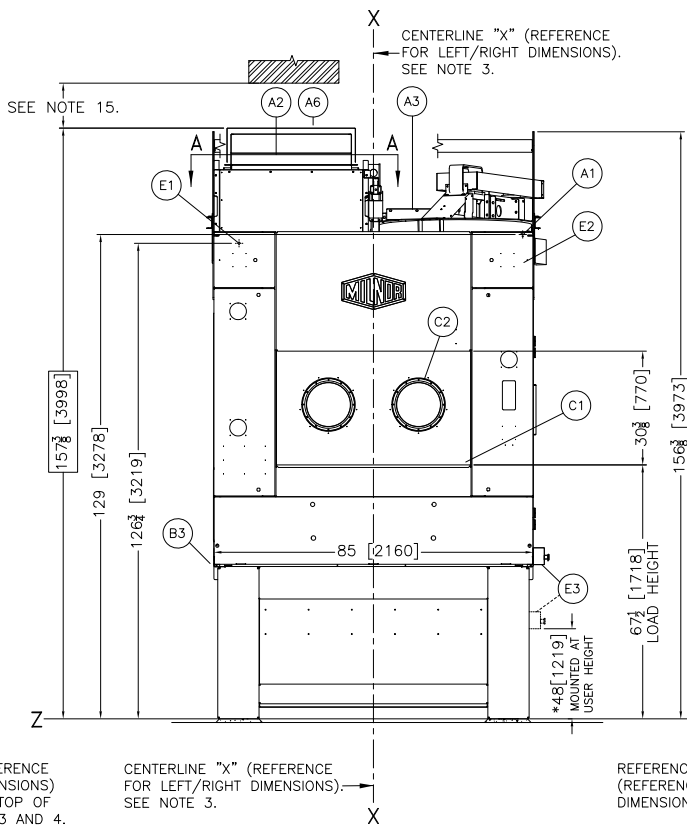
REAR VIEW



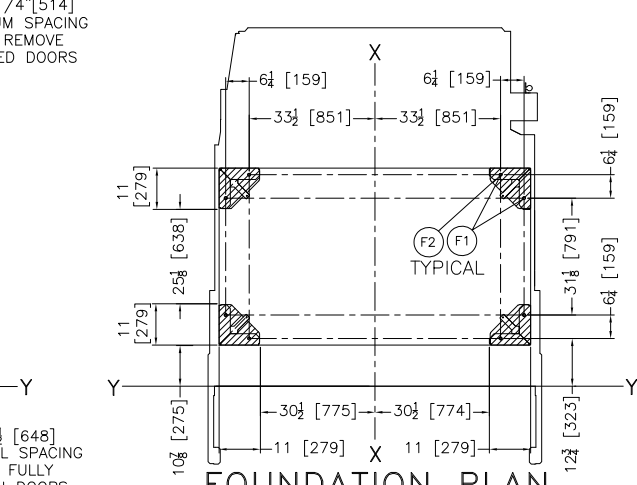
LEFT VIEW



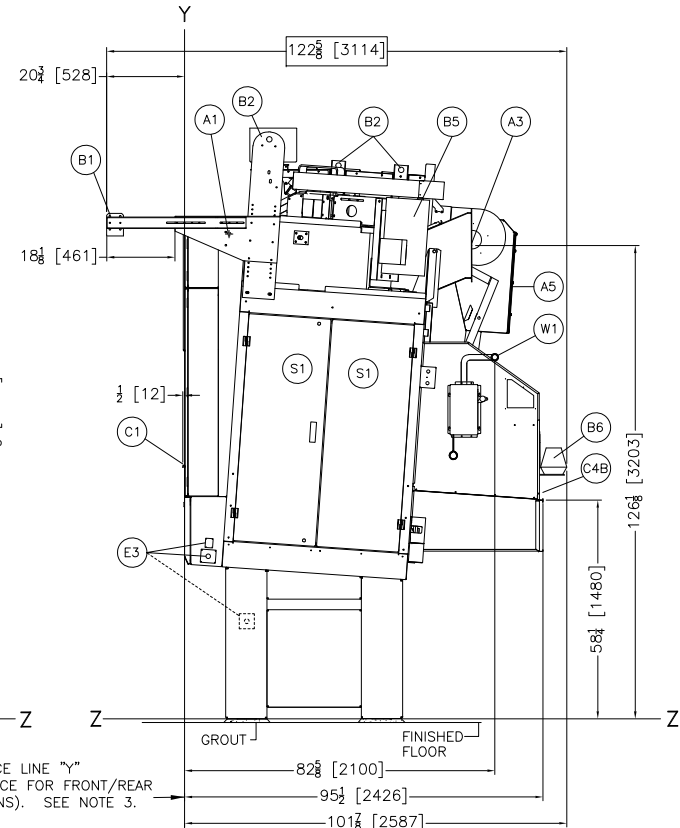
PLAN VIEW



FRONT VIEW



FOUNDATION PLAN



RIGHT VIEW

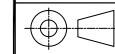
G2	GAS LINE VENT, 1/4" STAINLESS STEEL TUBING
W1	SPRINKLER WATER INLET, 1-1/4" NPT
S1	REMOVABLE ACCESS DOORS
H3	.406"[10] DIA. X 3/4"[19] SLOTS, 14 PLACES
H2	.31 "[8] DIA. X 1/2"[13] SLOTS, 8 PLACES
H1	.31 "[8] DIA. X 3/4"[19] SLOTS, 8 PLACES

ZERO PEDESTAL SHOWN
ADJUST ALL VERTICAL DIMENSIONS
TO THE PEDESTAL SPECIFIED.

G1	GAS INLET, 1.5" NPT CONNECTION
F3	LEVELING BOLT (5/8"-11 X 3") SUPPLIED.
F2	DRYER FOOT SUPPORT PLATES, SEE NOTE 14.
F1	ANCHOR BOLT HOLES, 13/16"[21] DIA, 8 PLACES
E5	COMBUSTION BURNER BOX, IF SPECIFIED
E3	EMERGENCY STOP & DOOR OPEN CONTROLS
E2	MICROPROCESSOR BOX
E1	MAIN ELECTRICAL CONNECTION
C4B	OPTIONAL SHORT SHROUD
C4A	STANDARD DISCHARGE SHROUD
C3	DISCHARGE DOOR
C2	LOAD DOOR, 52" WIDE
C1	LOAD HEIGHT, ADJUSTABLE LOAD SHELF
B6	OPTIONAL BEACON
B5	BLOWER MOTOR
B4	BURNER
B3	DRYER TO DRYER MOUNTING BRACKET
B2	SHIPPING BRACKET ONLY
B1	DRYER MOUNT FESTOON RAIL SUPPORT
A6	BLOWER AIR INTAKE TEE, REMOVE ONLY WHEN DUCTING THE INTAKE
A5	COMBUSTION AIR INTAKE BOX WITH FILTERS
A3	BLOWER EXHAUST TO REAR, STANDARD, SEE DETAIL.
A2	BLOWER INTAKE, SEE DETAIL
A1	COMPRESSED AIR, 1"NPT
ITEM	LEGEND

NOTES	
16	FOR UTILITY REQUIREMENTS FOR GAS, STEAM, THERMAL OIL, AIR INTAKE, AND WATER SUPPLY, SEE DOCUMENT BIPDU01/20160505 OR LATER.
15	IF THE BLOWER INTAKE IS NOT DUCTED THERE MUST BE 8 FEET [2438] OF UNOBSTRUCTED VERTICAL CLEARANCE BETWEEN THE INLET AND ANY OBJECT ABOVE IT.
14	DRYER FOOT SUPPORT PLATES ARE WELDED TO THE BOTTOM OF PEDESTAL LEGS TO ALLOW A GREATER GROUTING SURFACE BETWEEN PEDESTAL LEGS AND FINISHED FLOOR. USE LEVELING BOLTS TO LEVEL THE DRYER TO BASELINE "Z" (COINCIDES WITH BOTTOM OF LEGS.) DRYER FEET MUST BE GROUTED & ANCHORED TO FLOOR.
13	EXHAUST DUCTING: DRYER OPERATES UP TO 7000 SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. IF HEAVIER GAUGE AND OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
12	THIS DRAWING SHOWS THE 6450TG1L DRYER WITH A 41-3/8[1051] DISCHARGE HEIGHT. WE CALL THE PEDESTAL BASE TO DO THIS A "ZERO PEDESTAL". "ZERO PEDESTAL" IS STANDARD HEIGHT FOR CONVEYOR DISCHARGE. DRYERS MAY BE ORDERED WITH A PEDESTAL TO INCREASE OR DECREASE THE MACHINE HEIGHT. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL. FOR ANYTHING UNDER A ZERO PEDESTAL, RIGHT AND LEFT DRYERS CANNOT BE CONNECTED, AND YOU MUST ALLOW A MINIMUM 18[458] FOR SERVICING BETWEEN DRYERS, SEE NOTE 10.
11	DO NOT USE ANY TYPE OF TURNING VANE IN THE DRYER EXHAUST DUCTING AS THESE WILL IMMEDIATELY PLUG WITH LINT.
10	A MINIMUM CLEARANCE OF 20 1/4"[514] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 60 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 25 1/2[648] OF CLEARANCE.
9	DRYER IS DISASSEMBLED INTO TWO MAJOR COMPONENTS FOR SHIPPING, THE BASE AND THE FRAME. CONSULT MILNOR FACTORY IF COMPONENTS SUCH AS BLOWER HOUSING MUST BE REMOVED TO FIT MACHINE THROUGH OPENING.
8	DO NOT RUN PIPING OR CONDUIT OVER BLOWER HOUSING, SO THAT THE BLOWER MAY BE REMOVED FOR SERVICING, IF NEEDED.
7	CONTROL PANEL FOR DRYER MAY BE INSTALLED IN ANY CONVENIENT LOCATION. CONTROL CABLE FROM DRYER TO PANEL IS SUPPLIED BY MILNOR AND PRICED SEPARATELY.
6	AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS: 36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL. 42 [1067] IF OBJECT IS A GROUNDED WALL (ie. BARE CONCRETE, BRICK, ETC.). 48 [1219] IF OBJECT IS ANY LIVE PART. CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.
5	CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.
4	BASELINE "Z" IS THE REFERENCE FOR ALL VERTICAL DIMENSIONS. ON MACHINES WITH FIXED BASE PADS, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE BASE PAD. ON MACHINES WITH ADJUSTABLE FEET, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE FEET WHEN ADJUSTED SO THAT THE MACHINE IS AT ITS MINIMUM ACCEPTABLE HEIGHT. ON TRAVELING SHUTTLES, BASELINE "Z" CORRESPONDS TO THE BOTTOM OF THE RAIL. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR WILL VARY AS REQUIRED TO ENSURE BASELINE "Z" IS HORIZONTAL AND ANY INTERFACING MACHINES REQUIRING GROUT ARE SET ON A MINIMUM 1"[25] THICK GROUT BED.
3	USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.
2	NUMBERS IN BRACKETS [] DENOTE DIMENSIONS IN MILLIMETERS.
1	ALL DIMENSIONS SHOWN ARE APPROXIMATE, SUBJECT TO NORMAL MANUFACTURING TOLERANCES, AND TO OCCASIONAL CHANGES WITHOUT NOTICE THROUGH REDESIGN AND/OR RELOCATION OF COMPONENTS, ETC. DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED, AND IN NO EVENT PRE-PIPE CLOSER THAN FIVE FEET FROM MACHINE. FACTORY MUST BE CONSULTED FOR DIMENSIONS IF MACHINE IS TO BE MOVED THROUGH NARROW OR LOW CORRIDORS OR OPENINGS.
ATTENTION	
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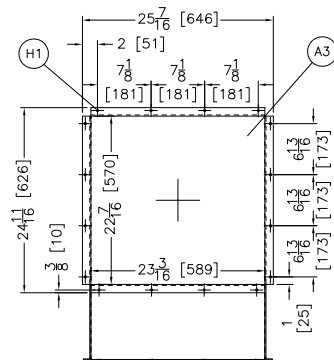
6450TG1R AH



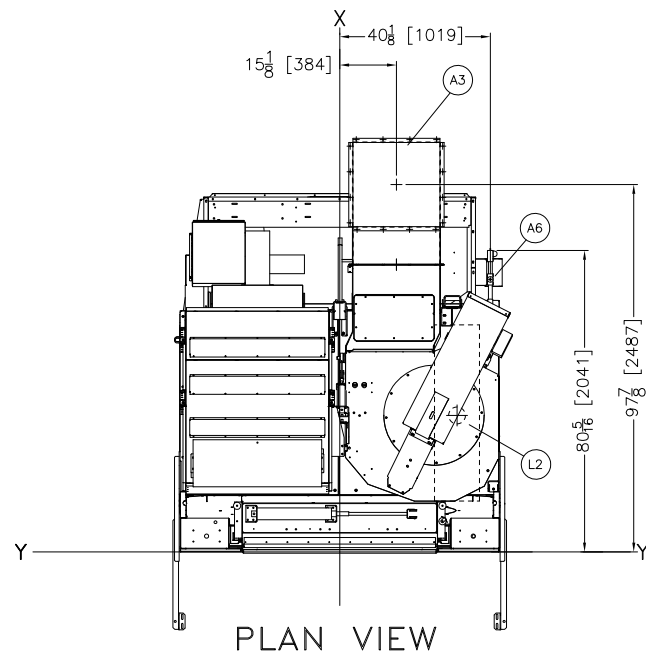
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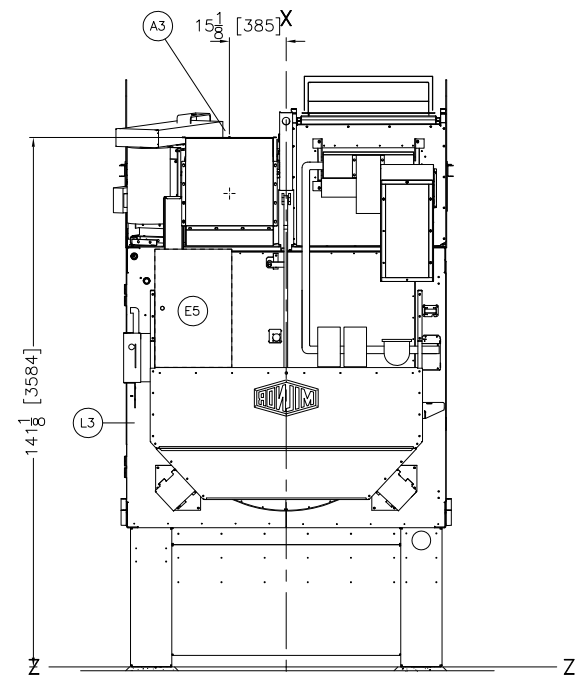
ZERO PEDESTAL SHOWN
ADJUST ALL VERTICAL DIMENSIONS
TO THE PEDESTAL SPECIFIED.
SEE NOTE 7.



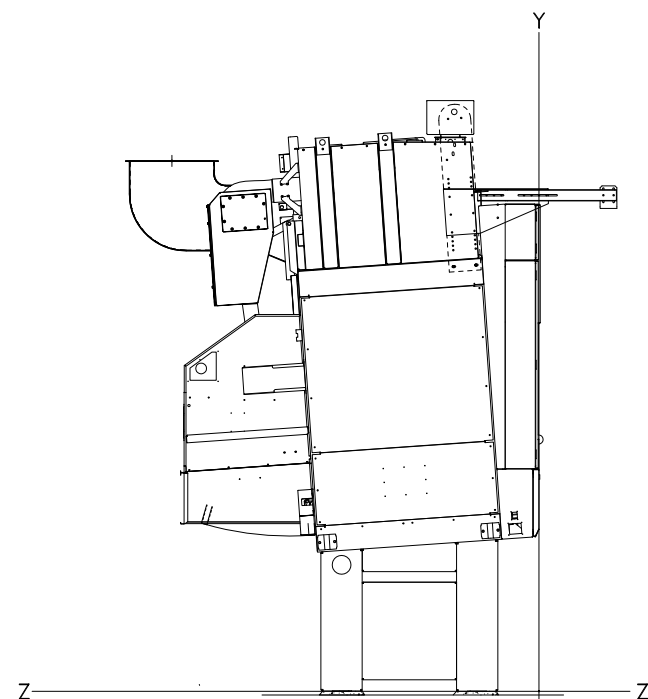
BLOWER EXHAUST
DUCT UP OPTION



PLAN VIEW

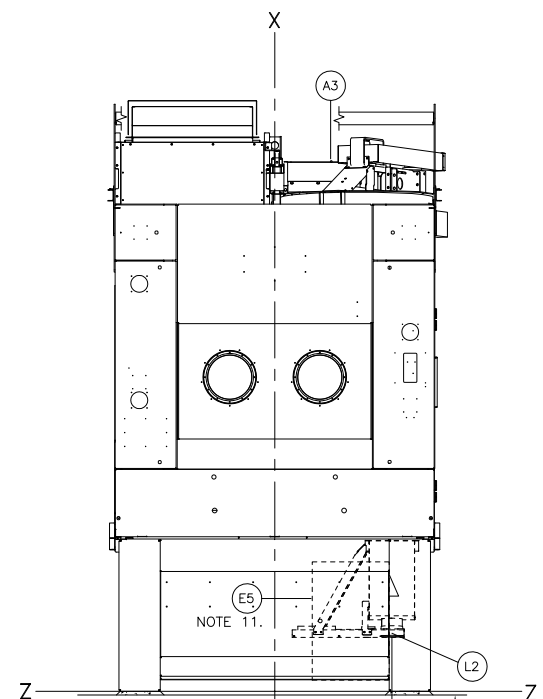


REAR VIEW



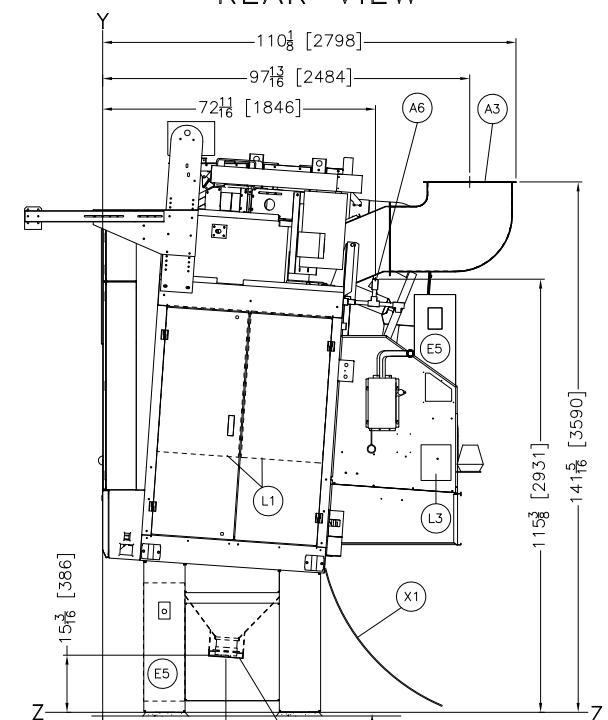
REFERENCE LINE "Y"
(REFERENCE FOR FRONT/REAR
DIMENSIONS). SEE NOTE 3.

LEFT VIEW



CENTERLINE "X" (REFERENCE
FOR LEFT/RIGHT DIMENSIONS).
SEE NOTE 3.

FRONT VIEW



BASLINE "Z" (REFERENCE
FOR VERTICAL DIMENSIONS)
CORRESPONDS TO TOP OF
GROUT. SEE NOTE 3 AND 4.

RIGHT VIEW

X1	OPTIONAL UNLOAD BRIDGE, 48" PLASTIC SHEETING
L3	INTERNAL LINT SCREENS AIR VALVE BOX.
L2	LINT OUTLET (6" FLEX HOSE CONNECTION) FOR OPTIONAL INTERNAL LINT SCREEN. PIPES TO DRYVAC01, DRYVAC02 OR LINT COLLECTOR BY OTHERS. SEE NOTES 9 & 10 AND DRAWING BD6458DLCBPBE FOR RECOMMENDED PIPING.
L1	OPTIONAL INTERNAL LINT SCREENS, BEHIND PANELS
H1	BOLT SLOTS, 5/16"[7] DIA.
E5	OPTIONAL INVERTER BOX IS LOCATED AS SPECIFIED ON THE DISCHARGE SHROUD, PEDESTAL FRONT, OR FOR REMOTE MOUNTING.
A6	1" NPT AIR CONNECTION/OPTIONAL INTERNAL LINT SCREENS
A3	BLOWER EXHAUST DUCTING UP OPTION, SEE DETAIL.

ITEM	LEGEND
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NOTES	
13	FOR UTILITY REQUIREMENTS FOR GAS, STEAM, THERMAL OIL, AIR INTAKE, AND WATER SUPPLY, SEE DOCUMENT BIPDU01/20160505 OR LATER.
12	A WATER SEPARATOR (NOT SUPPLIED BY PMC) IS REQUIRED FOR THE INCOMING AIR TO THE INTERNAL LINT SYSTEM.
11	OPTIONAL INVERTER BOX MAY BE SPECIFIED FOR PEDESTAL MOUNT ON 48"[1219] (ZERO PEDESTAL PLUS 7"[178]) AND TALLER PEDESTALS ONLY.
10	OPTIONAL INTERNAL LINT SCREENS IS AVAILABLE FOR DRYERS WITH 41"[1041] AND TALLER PEDESTALS ONLY.
9	FOR OPTIONAL INTERNAL LINT FILTERS, IT IS RECOMMENDED TO HAVE A 60 GALLON COMPRESSED AIR BOOSTER TANK FOR EVERY 5 DRYERS.
8	EXHAUST DUCTING: DRYER OPERATES UP TO 8500SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
7	THIS DRAWING SHOWS THE 6450TG1 DRYER USING A 41"[1041] PEDESTAL BASE. WHICH IS EQUAL TO ZERO PEDESTAL. STANDARD HEIGHT FOR CONVEYOR DISCHARGE. PEDESTALS MAY BE ORDERED TO INCREASE OR DECREASE THE MACHINE HEIGHT. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL.
6	AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS: 36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL. 42 [1067] IF OBJECT IS A GROUNDED WALL (ie. BARE CONCRETE, BRICK, ETC.). 48 [1219] IF OBJECT IS ANY LIVE PART. CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.
5	CUSTOMER TO SUPPLY CIRCUIT BREAKER OR FUSED BRANCH CIRCUIT DISCONNECT (SAFETY) SWITCHES WITH LAG TYPE FUSES FROM POWER SOURCE TO MACHINE. A SEPARATE GROUND WIRE MUST BE CONNECTED FROM DISCONNECT TO EQUIPMENT.
4	BASLINE "Z" IS THE SAME FOR ALL MILNOR MACHINES AND IS SHOWN ON ALL DIMENSIONAL DRAWINGS. THE DISTANCE BETWEEN BASELINE "Z" AND THE FINISHED FLOOR MAY VARY (WITH CHANGES IN FLOOR HEIGHT) AS REQUIRED TO INSURE THAT BASELINE "Z" IS HORIZONTAL AND ALL COMPONENTS REQUIRING GROUT ARE SET ON A MINIMUM 1" [25] THICK GROUT BED.
3	USE REFERENCE LINES "X", "Y", AND "Z" TO LOCATE ALL SERVICE CONNECTIONS.
2	NUMBERS IN BRACKETS [] DENOTE DIMENSIONS IN MILLIMETERS.
1	ALL DIMENSIONS SHOWN ARE APPROXIMATE, SUBJECT TO NORMAL MANUFACTURING TOLERANCES, AND TO OCCASIONAL CHANGES WITHOUT NOTICE THROUGH REDESIGN AND/OR RELOCATION OF COMPONENTS, ETC. DO NOT USE FOR CONSTRUCTION UNLESS CERTIFIED, AND IN NO EVENT PRE-PIPE CLOSER THAN FIVE FEET FROM MACHINE. FACTORY MUST BE CONSULTED FOR DIMENSIONS IF MACHINE IS TO BE MOVED THROUGH NARROW OR LOW CORRIDORS OR OPENINGS.

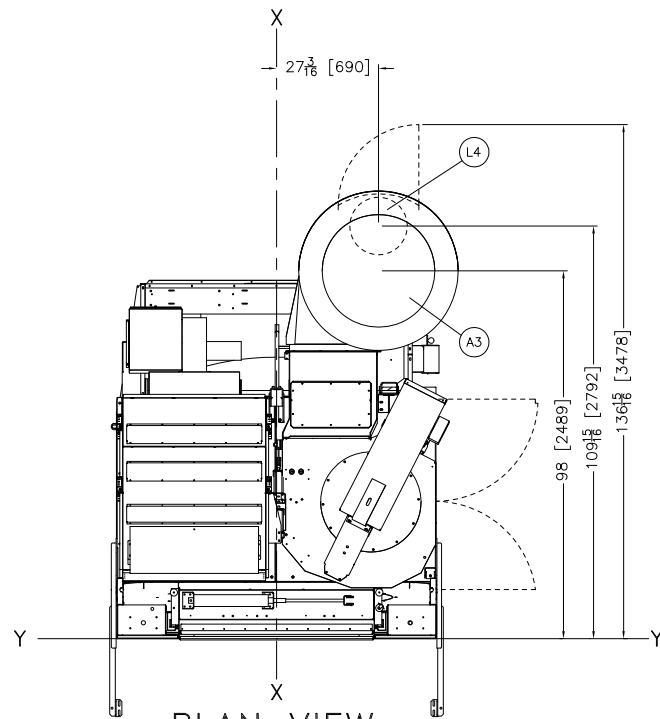
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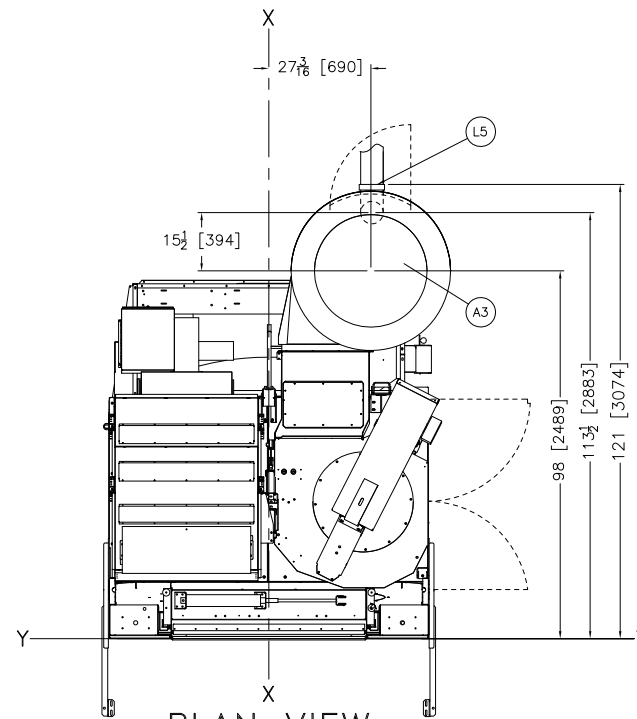
6450TG1R AH OPTIONS

DWG#	BD6450TG1RA1AB
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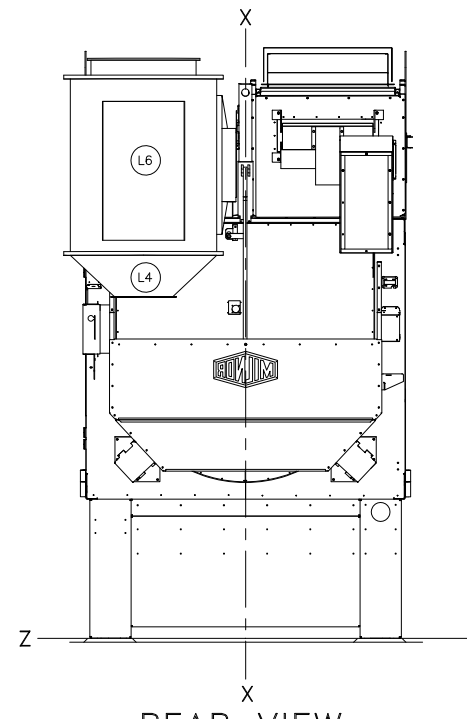
MILNOR PELLERIN MILNOR CORPORATION
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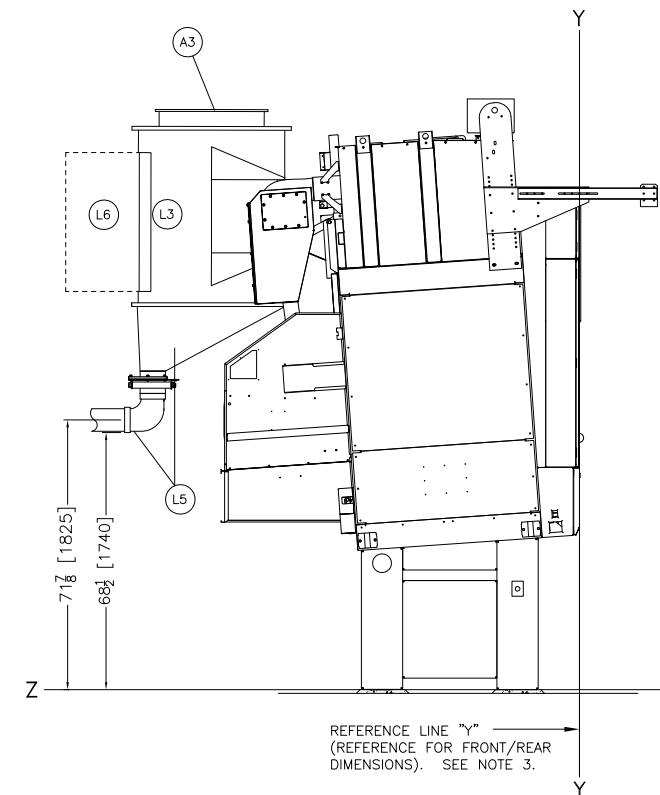
PLAN VIEW
LINT OUTLET TO BAG COLLECTOR



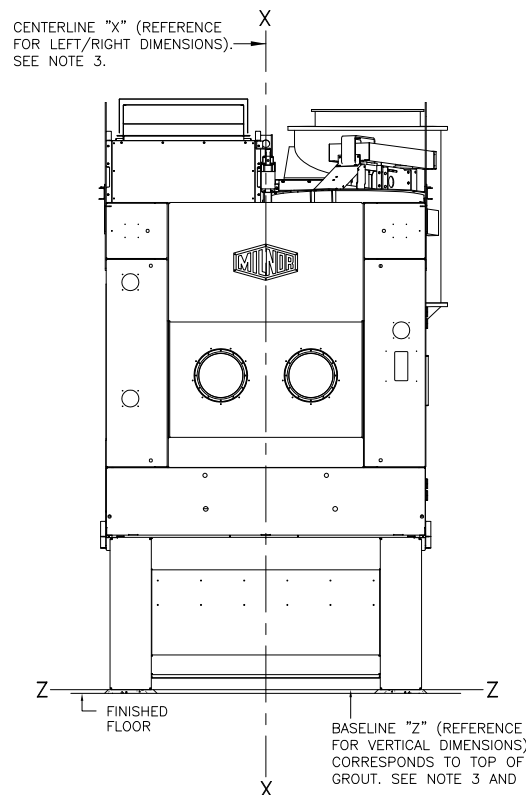
PLAN VIEW
LINT OUTLET TO VACUUM COLLECTOR



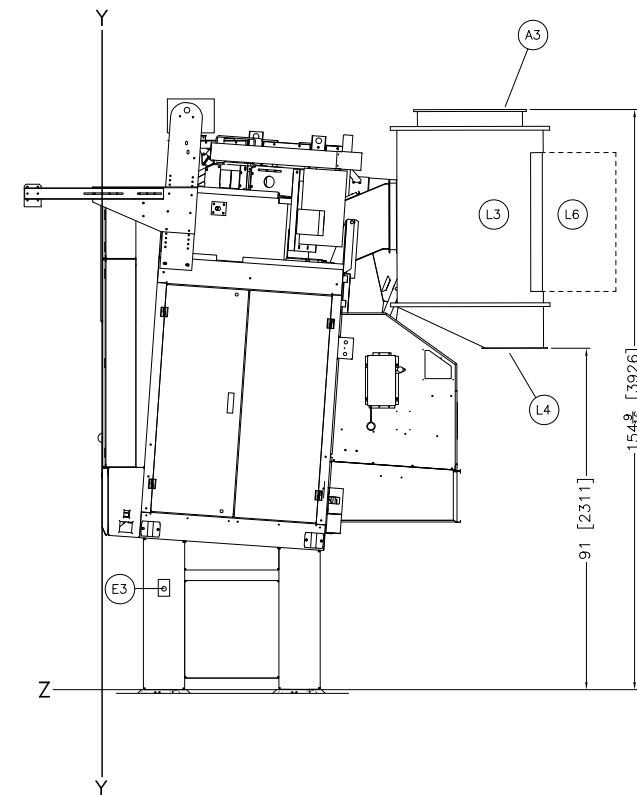
REAR VIEW
LINT OUTLET TO BAG COLLECTOR



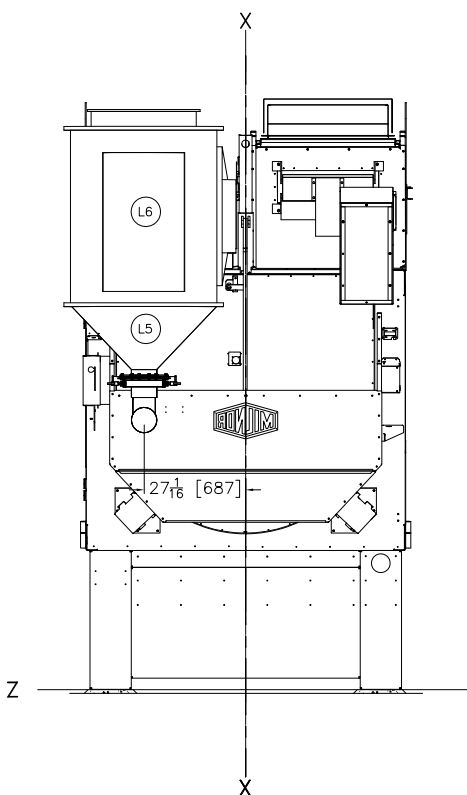
LEFT VIEW



FRONT VIEW



RIGHT VIEW



REAR VIEW
LINT OUTLET TO VACUUM COLLECTOR

L6	HINGED ACCESS DOOR
L5	CONE, LINT COLLECTION OUTLET TO VACUUM COLLECTOR
	DISCHARGE, 6" PIPE CONNECTION
L4	CONE, LINT COLLECTION OUTLET TO BAG, DISCHARGE
	15-1/2" ID FLANGED OUTLET
L3	MLF1010 LINT FILTER (LINT FILTER SUPPORTED BY OTHERS)
A3	EXHAUST DUCT, 28"[711] DIAMETER
ITEM	LEGEND

- NOTES**
- EXHAUST DUCTING: DRYER OPERATES UP TO 7000 SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING. THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND/OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.
 - THIS DRAWING SHOWS THE DRYER WITH A 41-3/8[1051] DISCHARGE HEIGHT. WE CALL THE PEDESTAL BASE TO DO THIS A "ZERO PEDESTAL". "ZERO PEDESTAL" IS STANDARD HEIGHT FOR CONVEYOR DISCHARGE. DRYERS MAY BE ORDERED WITH A PEDESTAL TO INCREASE OR DECREASE THE MACHINE HEIGHT IN (1/4") [1.25] INCREMENTS. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL. FOR ANYTHING UNDER A ZERO PEDESTAL, RIGHT AND LEFT DRYERS CANNOT BE CONNECTED, AND YOU MUST ALLOW A MINIMUM 18"[458] FOR SERVICING BETWEEN DRYERS, SEE NOTE 10.
 - DO NOT USE ANY TYPE OF TURNING VANE IN THE DRYER EXHAUST DUCTING AS THESE WILL IMMEDIATELY PLUG WITH LINT.
 - A MINIMUM CLEARANCE OF 20 1/4"[514] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 60 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 25 1/2"[648] OF CLEARANCE.
 - DRYER IS DISASSEMBLED INTO TWO MAJOR COMPONENTS FOR SHIPPING, THE BASE AND THE FRAME. CONSULT MILNOR FACTORY IF COMPONENTS SUCH AS BLOWER HOUSING MUST BE REMOVED TO FIT MACHINE THROUGH OPENING.
 - DO NOT RUN PIPING OR CONDUIT OVER BLOWER HOUSING, SO THAT THE BLOWER MAY BE REMOVED FOR SERVICING, IF NEEDED.
 - CONTROL PANEL FOR DRYER MAY BE INSTALLED IN ANY CONVENIENT LOCATION. CONTROL CABLE FROM DRYER TO PANEL IS SUPPLIED BY MILNOR AND PRICED SEPARATELY.
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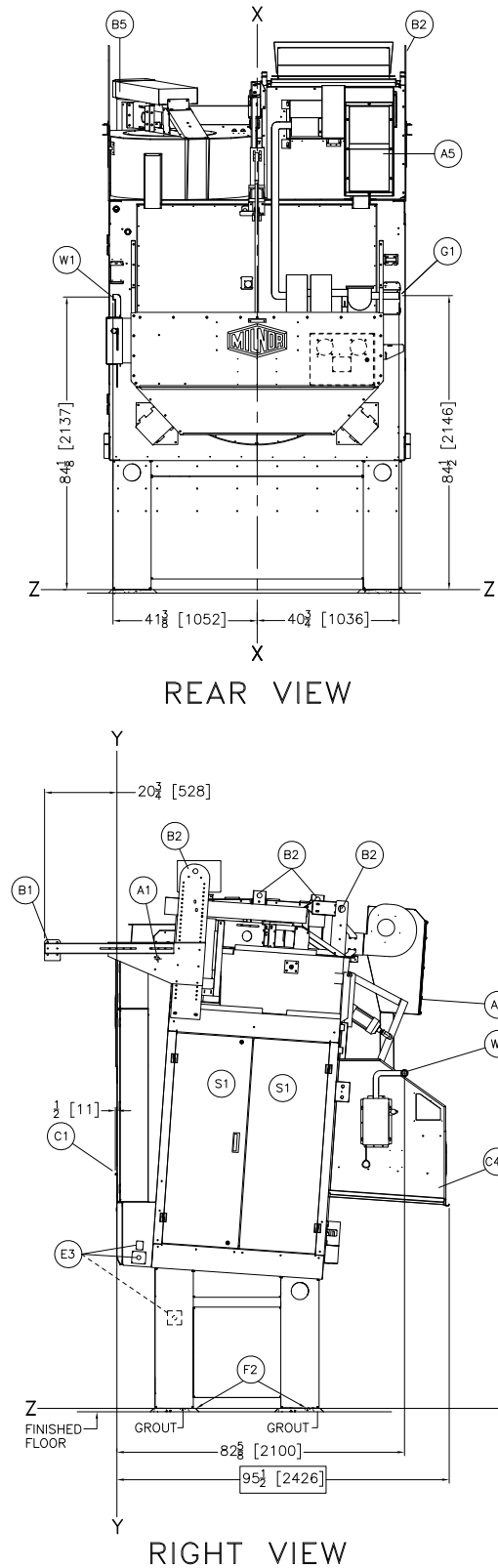
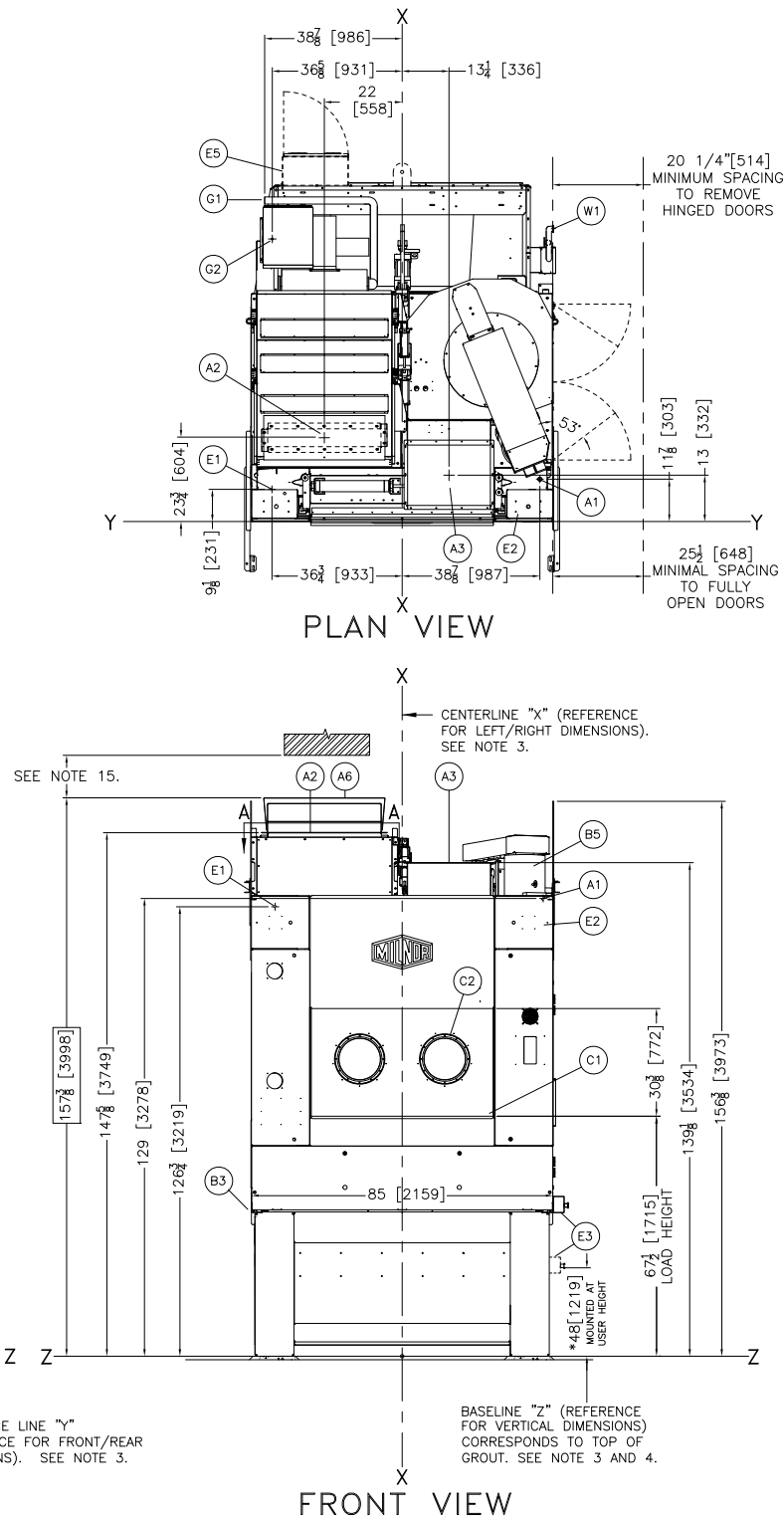
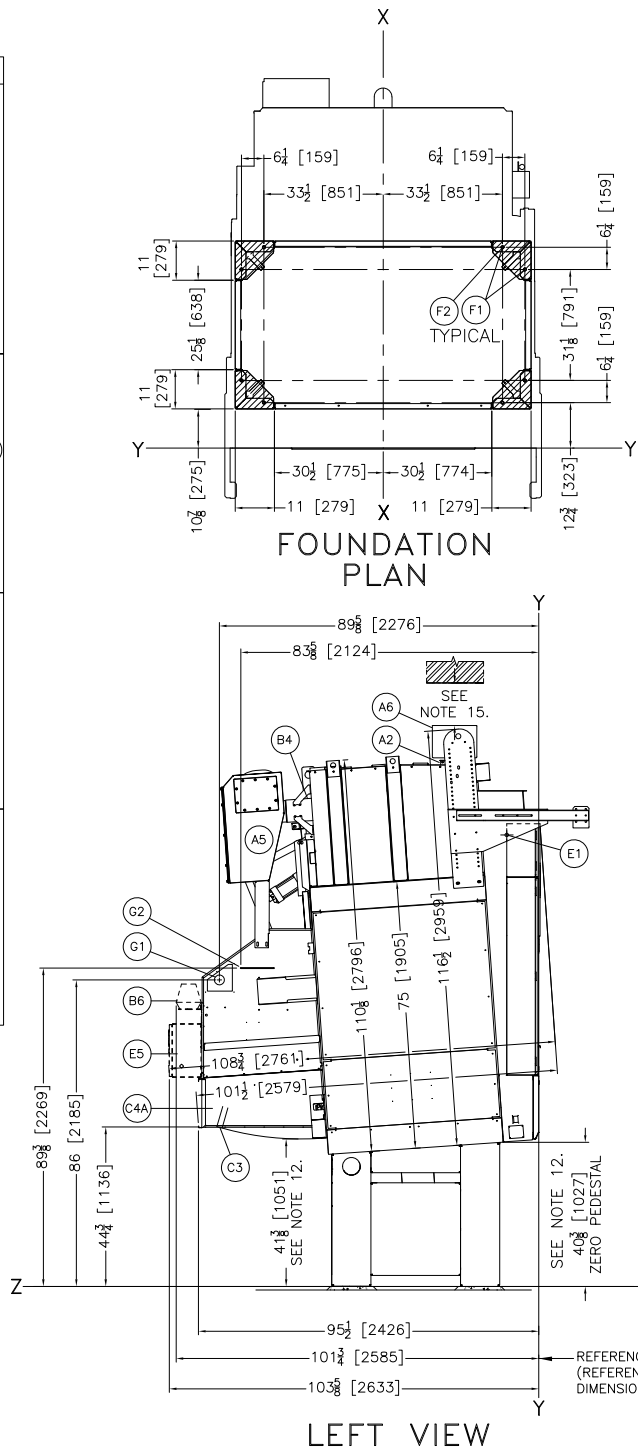
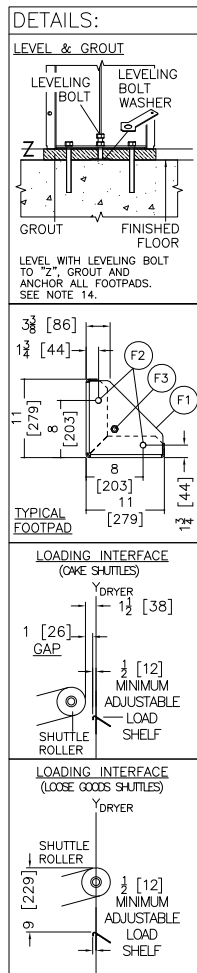
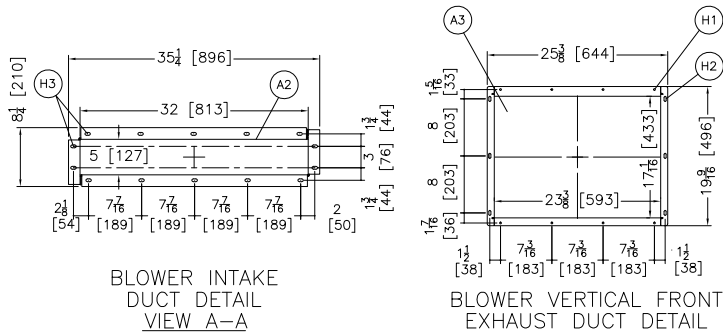
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6450TG1R AH + MLF1010

DM 0 0.5M 1M
INCHES 0 12 24 36

DWG# BD6450TG1RA1AC 2017396D

MILNOR PELLERIN MILNOR CORPORATION
P.O. Box 400 Kenner, LA 70063, USA, Phone 504/467-9591,
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W1 SPRINKLER WATER INLET, 1-1/4" NPT
S1 REMOVABLE ACCESS DOORS
H3 .40" [10] DIA. X .75" [19] SLOTS, 8 PLACES
H2 .28" [7] DIA. X .75" [19] SLOTS, 6 PLACES
H1 .28" [7] DIA., 8 PLACES
G2 GAS LINE VENT, 1/4" STAINLESS STEEL TUBING

ZERO PEDESTAL SHOWN
ADJUST ALL VERTICAL DIMENSIONS
TO THE PEDESTAL SPECIFIED.

G1	GAS INLET, 1-1/2" NPT CONNECTION
S1	REMOVABLE ACCESS DOORS
F2	DRYER FOOT SUPPORT PLATES, SEE NOTE 14.
F1	ANCHOR BOLT HOLES, 13/16" [21] DIA, 8 PLACES
E5	COMBUSTION BURNER BOX, IF SPECIFIED
E3	EMERGENCY STOP & DOOR OPEN CONTROLS
E2	MICROPROCESSOR BOX
E1	MAIN ELECTRICAL CONNECTION
C4B	OPTIONAL SHORT SHROUD
C4A	STANDARD DISCHARGE SHROUD
C3	DISCHARGE DOOR
C2	LOAD DOOR, 52" WIDE
C1	LOAD HEIGHT, ADJUSTABLE LOAD SHELF
B6	OPTIONAL BEACON
B5	BLOWER MOTOR
B4	BURNER (AIR HEAT)
B3	DRYER TO DRYER MOUNTING BRACKET
B2	SHIPPING BRACKET ONLY
B1	DRYER MOUNT FESTOON RAIL SUPPORT
A6	BLOWER AIR INTAKE TEE, REMOVE ONLY WHEN DUCTING THE INTAKE
A5	COMBUSTION AIR INTAKE BOX WITH FILTERS
A4	AIR VALVE BOX
A3	OPTIONAL BLOWER VERTICAL FRONT EXHAUST, SEE DETAIL.
A2	BLOWER INTAKE, SEE DETAIL AND NOTE 15.
A1	COMPRESSED AIR, 1"NPT
ITEM	LEGEND

NOTES

16 FOR UTILITY REQUIREMENTS FOR GAS, STEAM, THERMAL OIL, AIR INTAKE, AND WATER SUPPLY, SEE DOCUMENT BIPDU01/20160505 OR LATER.

15 IF THE BLOWER INTAKE IS NOT DUCTED THERE MUST BE 8 FEET [2438] OF UNOBSTRUCTED VERTICAL CLEARANCE BETWEEN THE INLET AND ANY OBJECT ABOVE IT.

14 DRYER FOOT SUPPORT PLATES ARE WELDED TO THE BOTTOM OF PEDESTAL LEGS TO ALLOW A GREATER GROUTING SURFACE BETWEEN PEDESTAL LEGS AND FINISHED FLOOR. USE LEVELING BOLTS TO LEVEL THE DRYER TO BASELINE "Z" (COINCIDES WITH BOTTOM OF LEGS.) DRYER FEET MUST BE GROUTED & ANCHORED TO FLOOR.

13 EXHAUST DUCTING: DRYER OPERATES UP TO 8500 SCFM WITH PRESSURE CHANGES OF UP TO 4" DURING THE CYCLE. THESE CYCLES ARE NUMEROUS AND VARYING THUS FATIGUE OF THE EXHAUST DUCTING NEEDS TO BE CONSIDERED. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 20 GAUGE GALVANIZED SHEET STEEL SPIRAL DUCT WORKS WELL. IF SQUARE DUCTING IS USED, MATERIAL THICKNESS MUST BE CONSIDERED TO PREVENT OIL CANNING AND VIBRATION. FIELD EXPERIENCE HAS SHOWN THAT A MINIMUM THICKNESS OF 16 GAUGE GALVANIZED SHEET STEEL IS REQUIRED. HEAVIER GAUGE AND OR STIFFENERS MAY BE REQUIRED GIVEN THE SIZE AND LENGTH OF THE DUCT. ELBOWS AND TRANSITIONS LIKELY WILL REQUIRE DOUBLING THE GAUGE.

12 THIS DRAWING SHOWS THE 6450TG1R DRYER WITH A 41-1/2[1055] DISCHARGE HEIGHT. WE CALL THE PEDESTAL BASE TO DO THIS A "ZERO PEDESTAL". "ZERO PEDESTAL" IS STANDARD HEIGHT FOR CONVEYOR DISCHARGE.

DRYERS MAY BE ORDERED WITH A PEDESTAL TO INCREASE OR DECREASE THE MACHINE HEIGHT IN (+/-)3.5[89] INCREMENTS. ALL VERTICAL DIMENSIONS MUST BE ADJUSTED FOR THE SPECIFIED PEDESTAL. FOR ANYTHING UNDER A ZERO PEDESTAL, RIGHT AND LEFT DRYERS CANNOT BE CONNECTED, AND YOU MUST ALLOW A MINIMUM 18" [458] FOR SERVICING BETWEEN DRYERS, SEE NOTE 10.

11 DO NOT USE ANY TYPE OF TURNING VANE IN THE DRYER EXHAUST DUCTING AS THESE WILL IMMEDIATELY PLUG WITH LINT.

10 A MINIMUM CLEARANCE OF 26 1/2" [674] IS REQUIRED FROM THE REMOVABLE ACCESS DOORS TO WALL. THIS DISTANCE IS REQUIRED TO OPEN THE DOORS 55 DEGREES TO BE LIFTED OFF THE HINGES. THE DOORS MAY BE FULLY OPENED REQUIRING 32 1/2" [826] OF CLEARANCE.

9 DRYER IS DISASSEMBLED INTO TWO MAJOR COMPONENTS FOR SHIPPING, THE BASE AND THE FRAME. CONSULT MILNOR FACTORY IF COMPONENTS SUCH AS BLOWER HOUSING MUST BE REMOVED TO FIT MACHINE THROUGH OPENING.

8 DO NOT RUN PIPING OR CONDUIT OVER BLOWER HOUSING, SO THAT THE BLOWER MAY BE REMOVED FOR SERVICING, IF NEEDED.

7 CONTROL PANEL FOR DRYER MAY BE INSTALLED IN ANY CONVENIENT LOCATION. CONTROL CABLE FROM DRYER TO PANEL IS SUPPLIED BY MILNOR AND PRICED SEPARATELY.

6 AS OF THIS WRITING, THE MINIMUM CLEARANCE REQUIRED BY U.S. NATIONAL ELECTRIC CODES, FROM ELECTRIC BOX TO ANY OBJECT IS:
36 [914] IF OBJECT IS AN UNGROUNDED (INSULATED) WALL.
42 [1067] IF OBJECT IS A GROUNDED WALL (i.e. BARE CONCRETE, BRICK, ETC.).
48 [1219] IF OBJECT IS ANY LIVE PART.
CHECK LOCAL ELECTRIC CODES FOR FURTHER RESTRICTIONS.

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6450TG1R AH / UP FRONT EXHAUST

DM 0 0.5M
INCHES 0 12 24

DWG# B06450TG1RABF
2022086D

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