

So You're Designing a Laundry Room?

This is meant to assist in basic requirements when designing an OPL laundry room.

Always consult the manufacturer of the equipment and up to date installation manuals for your specific model(s)

Always follow local code and regulations

OPL (On Premise Laundry) Hardmount/Softmount Washer Extractors

Mounting/Placement Requirements

1. A **Hardmount** washer extractor requires a monolithic concrete foundation to be mounted to.

2. A **Softmount** washer extractor does not require any special foundation and can be installed over basements, crawlspaces, and on any floor of a building. This is possible due to the machine having built in shocks and springs that absorb up to 80% of the normal dynamic forces that would normally be transferred into the floor.

3. When placing hardmount washer extractors on elevated concrete pads, make sure the concrete pad is poured at the same time as the floor (monolithic)! This is crucial to the longevity of the machine and the structure of the building. Hardmount washer extractors have positive and negative dynamic forces during extraction that are transferred into the floor.

If a concrete pad is poured on top of an existing floor separate from the main floor or as an afterthought, the washer's extraction G-Force will cause that pad to separate from the floor. When this happens, the washer(s) will excessively vibrate. This causes floors and walls to crack! Hardmount washer extractors should never be placed over a crawlspace or basement. We strongly recommend leaving at least 24 inches behind the washer for serviceability. (Serviceability space may change depending on size of equipment)

4. Front load washers should be mounted either on an elevated concrete pad that has been poured correctly or a metal base. This will allow a laundry cart to easily fit under the door and will greatly assist the machine operator in the loading and unloading of the washer. An elevated concrete pad and metal base can be used in conjunction, but keep in mind the height of the controls that a user has to be able to easily reach in order to operate the washer.

Utility Requirements

OPL (On Premise Laundry) Hardmount/Softmount Washer Extractors

1. Power: Most commercial washers today have Variable Frequency Drives commonly called inverter drives. This typically allows a machine to be wired for single or three phase. If you're able, run the highest voltage that the washer is available in. Higher voltage means less amp draw, resulting in lower operating costs. The washer should have a non-fusible electrical disconnect located in plain sight of the operator and be easily accessible in case of emergencies. Also please advise the installer of the machine of any high legs going to the washer. In some cases, the high leg may need to be connected at a certain terminal in the washer. (Also known as wild leg, stinger leg, or red leg.)

2. Water: Size of water supply lines will vary depending on the machine size. We recommend 2 hots and 2 colds for each washer. Washers can have inlets for 2 hots, some for 2 colds, and even separate inlets for hard and soft water. Try to keep water supply lines at a height so when the washer has the inlet hoses connected, they do not interfere with the accessibility to the rear of the machine. Having 2 fill hoses of each temperature assures that you will be set up for most of the washers in today's market and the chemical company will have a water supply for their manifold flush system.

Commercial washers are often hooked up to automatic chemical injection systems that pump detergent, bleach, softener, and other chemicals into the machine. The chemical company will need their own water supply due to the chemicals being delivered through a flush manifold prior to entering the machine. The temperature of the hot water is extremely important in getting linen clean and will vary depending what business application the laundry is being used for.

Typical hospitality environments prefer 140°F water. Healthcare facilities are very particular about their hot water because they are dealing with biohazardous clothing and linen. The C.D.C. recommends 160°F water be maintained during wash phases of the cycle for healthcare facilities. Steam heat is also common in healthcare facilities. With steam, you do not need 160°F water.

3. Drain: Draining requirements will vary depending on machine size. There are multiple ways to drain a washer, but the most important thing to remember is that commercial washers are gravity drain! They do not pump into a stand pipe like a domestic washer.

- **Option 1:** A drain trough built into the concrete floor. When using this method it is important to design the concrete trough with a "lip" as to allow a metal grate to be placed on top so a person can easily walk over the pit. Concrete troughs should be sealed with a commercial grade sealant to protect against any chemicals exiting the washer. We recommend a dome screen be placed over the drain pipe in the trough to prevent any debris from clogging the drain. The trough should be sized accordingly so it may handle 2-3 "discharges" from each washer(s) in the event of a clogged/slow drain trough.

- **Option 2:** A poly-trough. This option is similar to the built in concrete trough. A poly-trough can be customized to handle your washer(s) and can be easily connected by a plumber or the installer of the equipment once set in place. Poly troughs sit above ground in most cases.

- **Option 3:** An individual drain pipe for the washer can be easily done. A vent pipe so the drain has an air intake can be used but may not be necessary if the washer has a built in vacuum breaker. To make it easy on the customer, build in an easily accessible clean-out so clogs can be removed.

OPL (On Premise Laundry) Tumbler Dryers

Mounting/Placement Requirements

1. Dryers do not require any special floor or foundation.
2. Refer to the installation manual for clearance requirements for your make and model.
 - Front Clearance:** Compensate for the arch of the dryer door plus 5ft for other traffic.
 - Rear Clearance:** Allow at least 24" from the rear of the dryer to the back wall.
 - Side Clearance:** Most dryers have a 0" tolerance on the sides.
 - Top Clearance:** At least 48' from the top of the dryer to the ceiling.

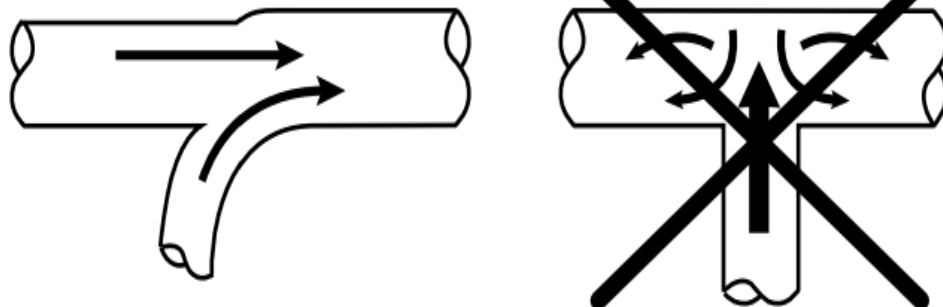
Utility Requirements

*Consult installation manual for your machine's utility requirements!

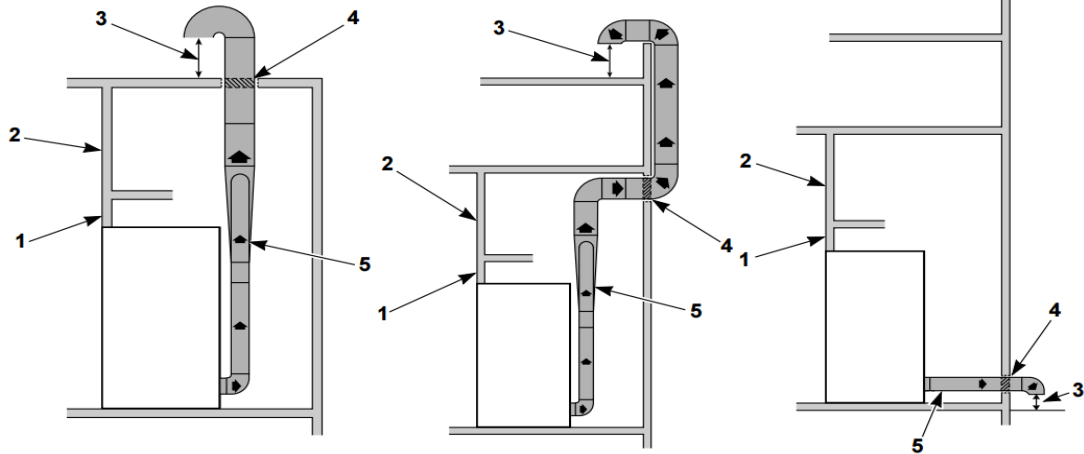
1. **Power:** Please consult Commercial Laundry Equipment Inc. @ [317-856-1234](tel:317-856-1234) for electrical recommendations. Dryers can come in many voltages and electrical utilities can be ran many different ways.

2. **Ventilation Sizing:** This is where most of the mistakes happen. Dryer vents that are too long, have too many turns, undersized, or a combination of all 3 are the number one cause of dryer fires! The general rule of thumb is you **MUST** increase the diameter of the vent by 1 inch for every 14 feet or two 90 degree turns.

For example: If your dryer has an 8" vent, your total vent run is 60 feet and you have two 90 degree turns, the diameter of the vent should be roughly 13 inches when it exits the building. We recommend an HVAC contractor use a ductulator to accurately size the vent. Check the dryer's max vent static pressure specification.

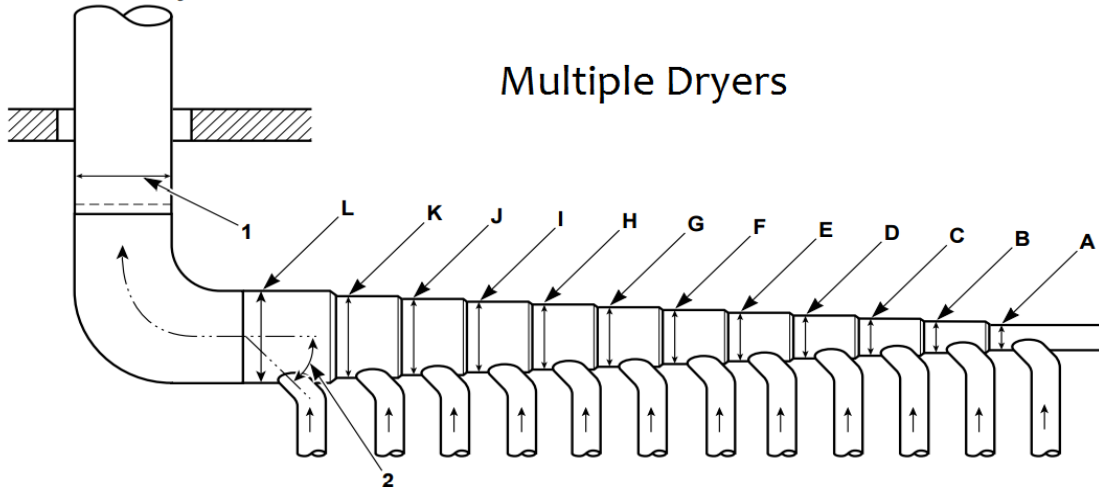


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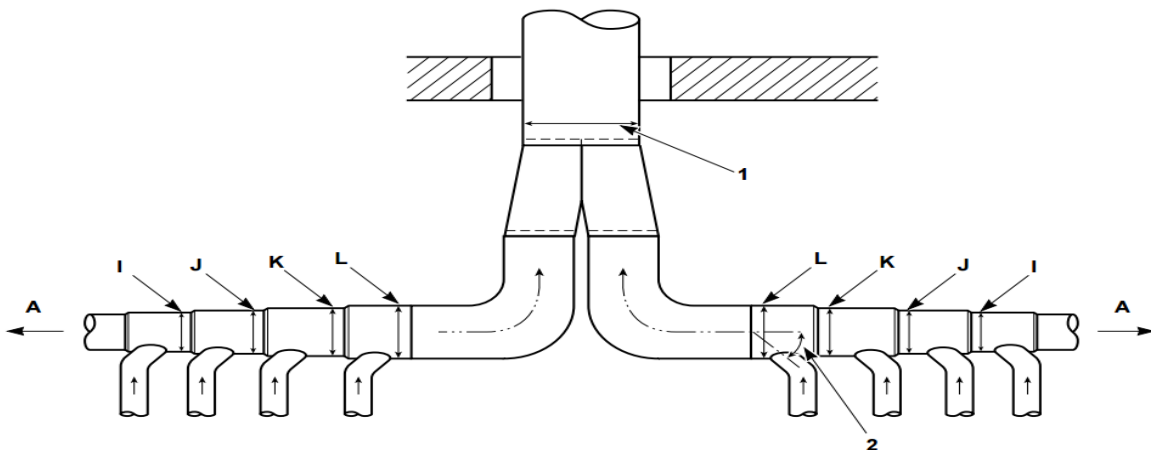
1. Removable strip of panel in framing wall to permit removal of tumble dryer from framing wall
2. Partition or bulkhead
3. Minimum distance between exhaust opening and roof, ground or other obstruction: 36 in. [914 mm]
4. 2 in. [51 mm] minimum clearance on both sides of duct
5. Exhaust airflow – maximum length of rigid duct 14 ft. [4.3 m] or 7.87 ft. [2.4 m] of flexible metal duct

One Manifold Assembly



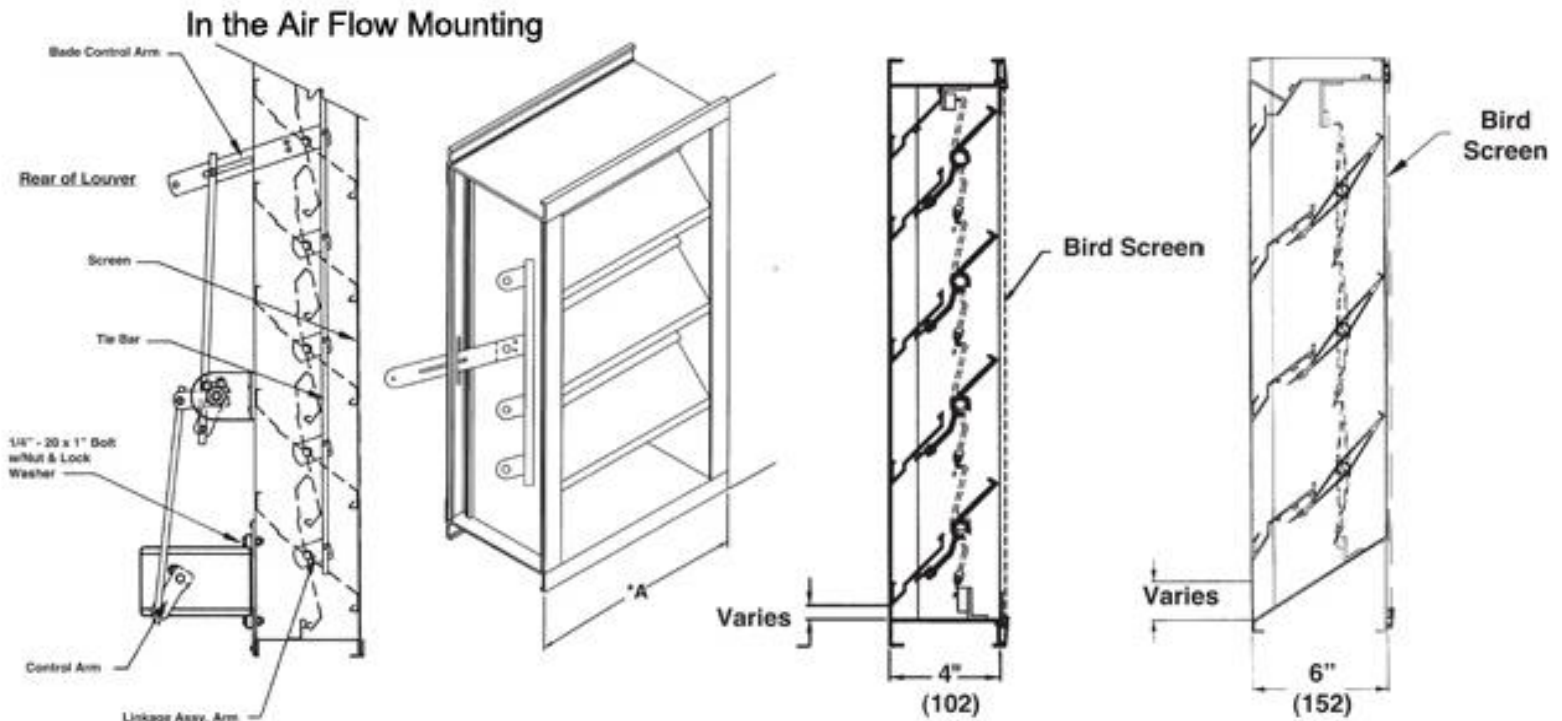
1. Outlet duct diameter = largest duct diameter based on number of units
2. 45° typical

Two Manifold Assemblies



1. Outlet duct diameter = combined largest duct diameter of both sides
2. 45° typical

3. **Free Makeup Air:** A commercial dryer has forced air exhaust and requires provisions for make-up air to replace the exhausted air. Sizing the make-up air correctly is extremely important! Consult your specific dryer installation manual for recommended size of make-up air. We recommend mechanical louvers that open whenever the dryer(s) are running. When purchasing a mechanical or fixed louver, inform the supplier of the louver how much free make-up air you need. The louver manufacturer will take into account the restriction of the louvers on the unit and purposely oversize/compensate for proper amount of free air.



Motorized Mechanical Louvers



Consulting is available upon request

Call (317) 856-1234 for details.