

Wolf River Development Company– Request for Proposals-For Design, Engineering, and Administer Construction Management Services of The Laundry Basket, LLC and attached Maintenance Garage Building Project using a Pre-Engineered Metal Building (PEMB).



**ADDENDUM #2 TO
REQUEST FOR PROPOSALS
FOR**

Design, Engineering, and Administer Construction Management Services of The Laundry Basket, LLC and attached Maintenance Garage Building Project using a Pre-Engineered Metal Building (PEMB).

PROJECT ID # 25-06

WRDC Administration Department

W2828 Go Around Road, Keshena, WI 54135

Point of contact: Renita Warrington

Phone: 920-641-5097

Fax: 715-802-4449

E-mail: renita.warrington@wolfriverdev.com

Wolf River Development Company

Addendum No. 2

Request for Proposals (RFP)

WRDC Design, Engineering, and Construction Management Services

The Laundry Basket, LLC and Attached Maintenance Garage Building Project

(Pre-Engineered Metal Building – PEMB)

Notice of Addendum

Wolf River Development Company (WRDC) hereby issues **Addendum No. 2** to the Request for Proposals (RFP) for WRDC Design, Engineering, and Construction Management Services for The Laundry Basket, LLC and attached Maintenance Garage Building Project utilizing a Pre-Engineered Metal Building (PEMB).

Responses and Clarification to Questions asked:

- 1) **Do you have any information on the Dryers:** Additional Dryer Information attached to this addendum (Attachments #1, #2, #3, #4 and #5)
- 2) **Hardmount Washer-Extractor Information:** (Attachment #6)
- 3) **Would Maintenance Garage need to be heated and cooled:** Yes, the Maintenance Garage will need to be heated and cooled.
- 4) **Will vehicles be worked on & stored in Maintenance Garage:** Maintenance equipment, vehicles will be stored and worked on in the garage. The area will also have an office desk.
- 5) **There are sidewalks all the way around the new building. Typically, on a building this size-a Make-up Air unit would be located on grade.** Sidewalks can be adjusted accordingly, provide what will be best for this building.
- 6) **The laundromat will have LP gas.**
- 7) **Do the utilities need to be kept separated between Laundry half & Maintenance Garage half?** No, utilities do not need to be kept separated.
- 8) **Is tribal utilities connecting water and sewer or is that on us?** Per MITW Utilities, the connections would be completed by the contractor.
- 9) **Per code there would need to be an accessible bathroom to the public:** Not going to be accessible to the public, they will be using the restroom located in Standing Cedars.
- 10) **Is the tribe IT taking care of all low voltage work? (data, security, fire alarm, and any other low voltage/IT work that would be required).** WRDC does not go through tribe IT, WRDC has their own IT Department. No, the General contractor will need to work with WRDC IT and Protection Asset Manager on

low voltage that would be needed for data, security, fire alarm, and any other low voltage/IT work that would be required.

- 11) **Is there any height requirement for the maintenance garage? Will 8' high overhead doors work?** Maintenance Supervisor requests a 9' high overhead door and height requirement 12'.
- 12) **Are the washers, dryers, and furnishing being installed and supplied by other? What about the water heating system?** We have chosen a commercial laundry equipment company to purchase the washers, dryers and furnishing. The washers and dryers are Speed Queen. The commercial laundry equipment company will be supplying the bulkhead like the one in the attached picture from Highmark (Attachment #7). It comes with the electric and water lines already installed. The commercial laundry equipment company will make those connections onto the washers. The drain will be a trough the plumber and concrete company will make, and we will install drain hoses into it. The plumber will need to bring the main water lines over to the bulkhead and connect to the pipes inside it. The electrician will need to supply power to the sub-panel in the bulkhead. As to the dryers, the commercial laundry equipment company will set them in place, then the local trades make the connections, so we don't violate their permits. Water heater information is attached (Attachment #8), so one can spec out a similar unit.
- 13) **What is desired for exterior signage:** We are currently working on a design for a sign.
- 14) **The proposal form lists exterior lighting, what is desired for this? Are wall packs on the building sufficient or do we need to figure pole lighting as well?** Figure in both wall packs and figure pole lighting.

Additional Request

- 1) Please provide a detailed price comparison outlining the cost difference between a Pre-Engineered Metal Building (PEMB) and a stick-built structure. The comparison should clearly identify which option is the most cost-effective overall.

Acknowledgment of Addendum No. 2

I hereby acknowledge receipt of **Addendum No. 2** to the RFP for Wolf River Development Company's Design, Engineering, and Construction Management Services of *The Laundry Basket, LLC* and attached Maintenance Garage Building Project using a Pre-Engineered Metal Building (PEMB).

Bidder's Signature: _____

Date: _____

A signed copy of this acknowledgment must be submitted with your completed Proposal Form to be considered.



SPEED QUEEN® MULTI-HOUSING LAUNDRY SOLUTIONS

Single Tumble Dryer

ST075

75 lb (34 kg)

Built for Reliable Performance

Our single pocket tumble dryers are designed with fewer moving parts, so that you'll face fewer maintenance problems and less wear and tear.

- Feature an axial airflow process that ensures heated air comes in contact with load at the optimum time in tumble process
- High-performance burners ignite instantly, providing the desired temperature quickly and distributing heat evenly and efficiently

- Extra-large stainless steel doors and heavy-duty hinges ensure these machines will stand up to repeated use of high-traffic laundry rooms
- Feature an all-belt drive system, which means they're less noisy and less expensive to maintain
- Fine mesh lint screen is self-cleaning, depositing lint into a large storage area for easy, once-per-day removal



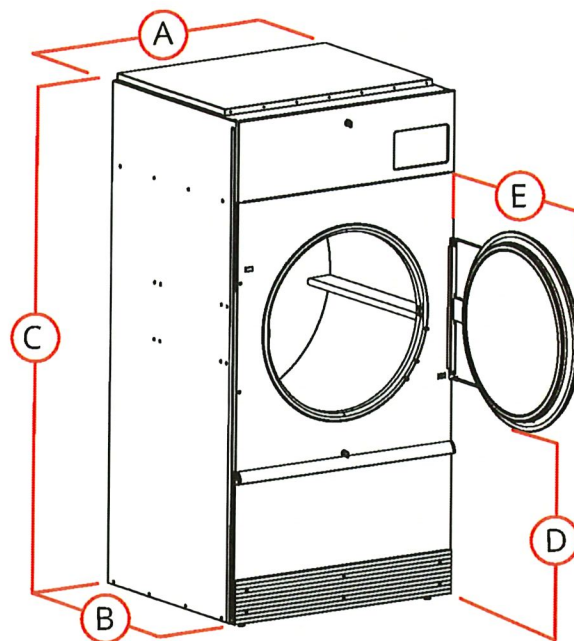
Quantum® Gold Control

Cutting edge Quantum® control system from Speed Queen® gives you the freedom to manage laundry your way and the power to achieve unmatched levels of revenue. This revolutionary technology provides users with more cycle choices than ever, offers unprecedented options to help lower operating costs and incorporates tools and options to increase revenue.

Single Tumble Dryer

Specifications

ST075			
Control Option			Quantum Gold
Capacity - lb (kg)			75 (34)
Overall Width - in (mm)			38.5 (980)
Overall Depth - in (mm)			53.0 (1350)
Overall Height - in (mm)			77.3 (1960)
Cylinder Diameter - in (mm)			37.0 (940)
Cylinder Depth - in (mm)			36.0 (914)
Cylinder Volume - cu. ft (liters)			22.4 (634)
Door Opening Size - in (mm)			26.9 (683)
Reversing Cylinder			Standard
Heat Input Power			165,000 Btu/hr
Gas Connections* - in (npt)			0.5
Air Outlet - in (mm)			8 (200)
Motor - HP		Fan	0.5
		Cylinder	0.5
Airflow - cfm			800 (380)
Electrical Specs - amps	B	100-120V/50/60/1	12
	X	200-240V/50/60/1/3	7
Shipping Dimensions Approx.- in (mm)		Width	41.5 (1054)
		Depth	56.0 (1420)
		Height	81.0 (2060)
Net Weight - lb (kg)			715 (324)
Shipping Weight - lb (kg)			760 (345)
Agency Approvals			CSA



A.	Overall Width - in (mm)	38.5 (980)
B.	Overall Depth - in (mm)	53.0 (1350)
C.	Overall Height - in (mm)	77.3 (1960)
D.	Door Bottom to Floor - in (mm)	29.2 (740)
E.	Door Swing - in (mm)	33.9 (860)

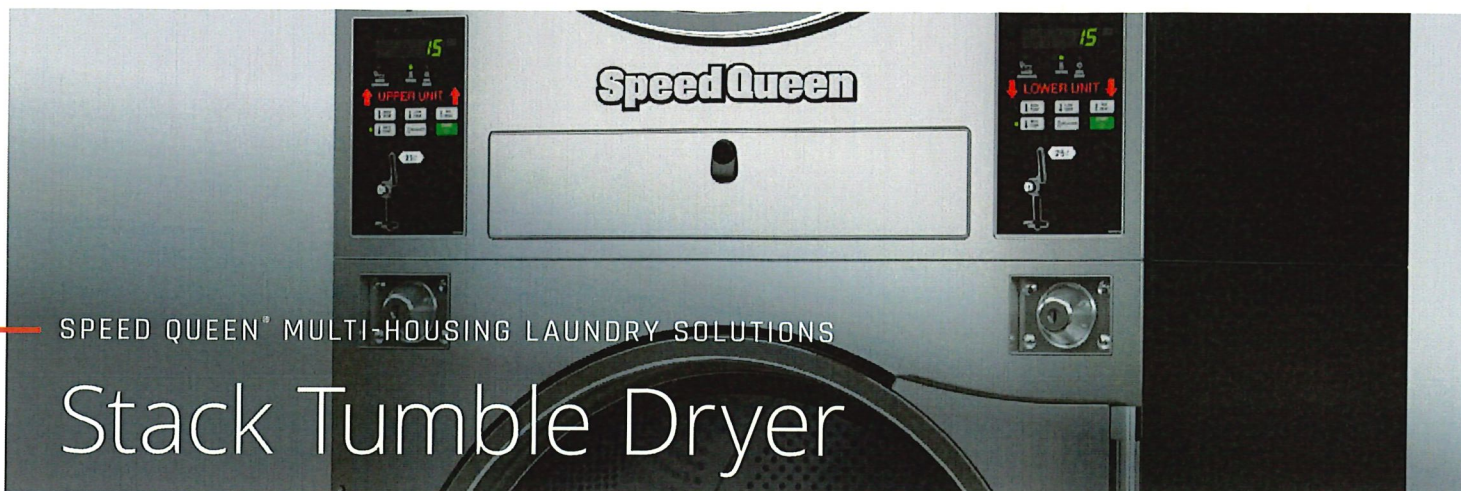
Authorized Distributor



1475 Commerce Drive, Mendota Heights, MN
 (414) 837-8217
 bdoerner@rjkool.com
 rjkool.com

* LP gas available for 75 lb capacity only. Field conversion kits available for other capacities.

Tumble dryer models are made to suit a variety of electrical service characteristics. See your Speed Queen route operator for specifications. For further details on installation, refer to Installation, Operation and Maintenance instructions supplied with the tumble dryer. Amperage ratings available in Installation Manual. For the most accurate information, the installation guide should be used for all design and construction purposes. Due to continuous product improvements, design and specifications subject to change without notice. The quality management systems at Alliance Laundry Systems are registered to ISO 9001.



SPEED QUEEN® MULTI-HOUSING LAUNDRY SOLUTIONS

Stack Tumble Dryer

STT30

30 lb (14 kg)

Built for Reliable Performance

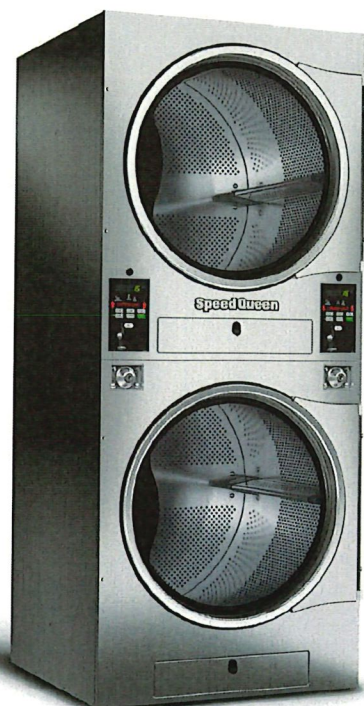
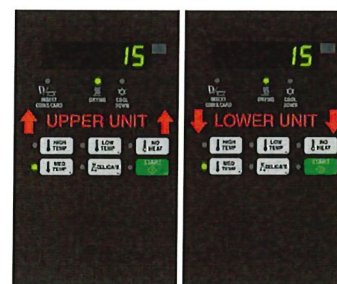
Our line of stack tumble dryers provides double the capacity of Speed Queen® single pocket tumble dryers while using only half the floor space.

- Large easy-to-clean lint compartment
- Fewer moving parts mean fewer maintenance problems and less wear
- High performance heater box increases energy efficiency, reduces drying times and provides a more comfortable operating environment

- Axial airflow pattern with the sealed cylinder rims delivers the fastest and most efficient drying results
- Two drying pockets in the space of one unit helps increase drying capacity
- Single gas, electric and exhaust hookups simplify installation and are less expensive than installing twice the number of single units

Quantum® Gold Control

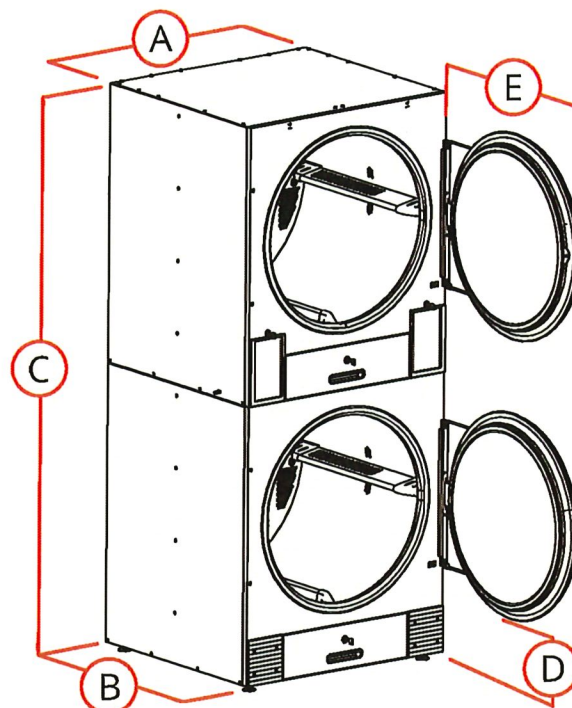
Cutting edge Quantum® control system from Speed Queen® gives you the freedom to manage laundry your way and the power to achieve unmatched levels of revenue. This revolutionary technology provides users with more cycle choices than ever, offers unprecedented options to help lower operating costs and incorporates tools and options to increase revenue.



Stack Tumble Dryer

Specifications

STT30			
Control Option			Quantum Gold
Capacity - lb (kg)			30 (14) x 2
Overall Width - in (mm)			31.5 (800)
Overall Depth - in (mm)			42.8 (1090)
Overall Height - in (mm)			76.3 (1940)
Cylinder Diameter - in (mm)			30.0 (762)
Cylinder Depth - in (mm)			26.0 (660)
Cylinder Volume - cu. ft (liters)			10.6 (300)
Reversing Cylinder			Standard
Door Opening Size - in (mm)			22.6 (574)
Heat Input Power			73,000 x 2 Btu/hr
Gas Connections* - in (npt)			0.5
Air Outlet - in (mm)			1 x 8 (200) Oval
Motor - HP		Fan	0.5
		Cylinder	0.3
Airflow - cfm			2 x 400
Electrical Specs - amps	B	100-120V/50/60/1	16
	X	200-240V/50/60/1/3	9
Shipping Dimensions Approx.- in (mm)		Width	32.5 (826)
		Depth	47.0 (1194)
		Height	79.9 (2029)
Net Weight - lb (kg)			570 (260)
Shipping Weight - lb (kg)			600 (270)
Agency Approvals			CSA



A.	Overall Width - in (mm)	31.5 (800)
B.	Overall Depth - in (mm)	42.8 (1090)
C.	Overall Height - in (mm)	76.3 (1940)
D.	Door Bottom to Floor - in (mm)	10.7 (272)
E.	Door Swing - in (mm)	28 (711)

Authorized Distributor



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 rjkool.com

* LP gas available for 75 lb capacity only. Field conversion kits available for other capacities.

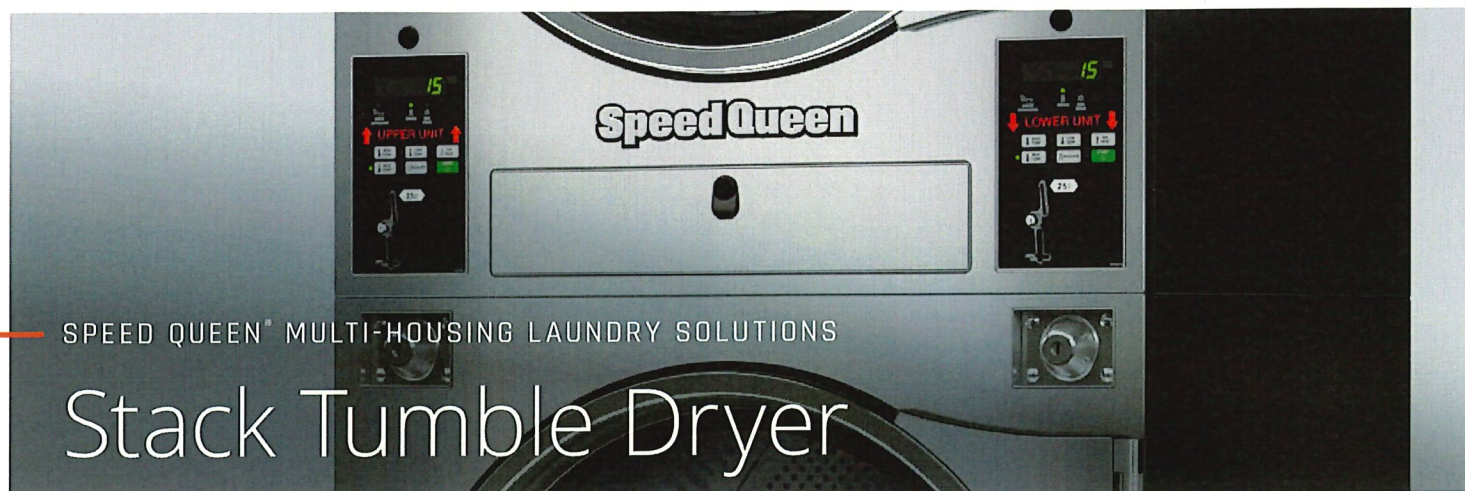
Tumble dryer models are made to suit a variety of electrical service characteristics. See your Speed Queen route operator for specifications.

For further details on installation, refer to Installation, Operation and Maintenance instructions supplied with the tumble dryer. Amperage ratings available in Installation Manual.

For the most accurate information, the installation guide should be used for all design and construction purposes. Due to continuous product improvements, design and specifications subject to change without notice. The quality management systems at Alliance Laundry Systems are registered to ISO 9001.



The Proven Performer in Laundry



SPEED QUEEN® MULTI-HOUSING LAUNDRY SOLUTIONS

Stack Tumble Dryer

STT45

45 lb (20 kg)

Built for Reliable Performance

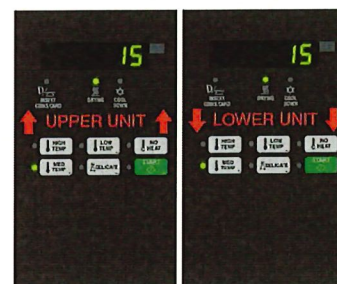
Our line of stack tumble dryers provides double the capacity of Speed Queen® single pocket tumble dryers while using only half the floor space.

- Large easy-to-clean lint compartment
- Fewer moving parts mean fewer maintenance problems and less wear
- High performance heater box increases energy efficiency, reduces drying times and provides a more comfortable operating environment

- Axial airflow pattern with the sealed cylinder rims delivers the fastest and most efficient drying results
- Two drying pockets in the space of one unit helps increase drying capacity
- Single gas, electric and exhaust hookups simplify installation and are less expensive than installing twice the number of single units

Quantum® Gold Control

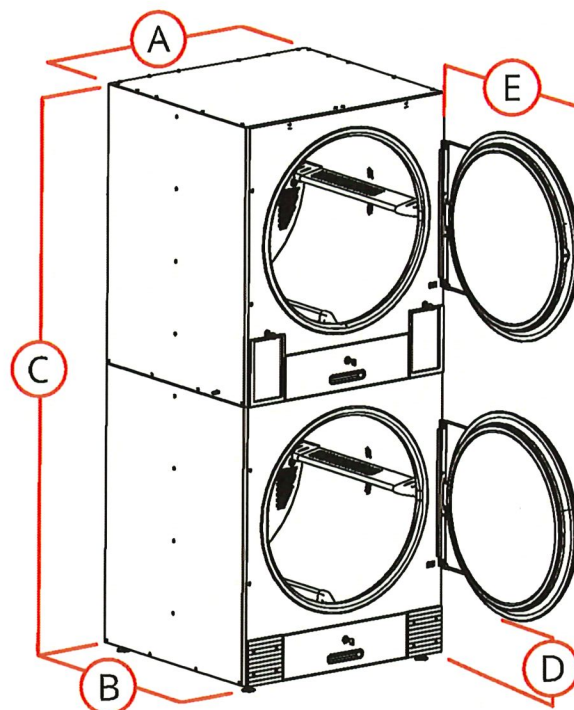
Cutting edge Quantum® control system from Speed Queen® gives you the freedom to manage laundry your way and the power to achieve unmatched levels of revenue. This revolutionary technology provides users with more cycle choices than ever, offers unprecedented options to help lower operating costs and incorporates tools and options to increase revenue.



Stack Tumble Dryer

Specifications

STT45			
Control Option		Quantum Gold	
Capacity - lb (kg)		45 (20) x 2	
Overall Width - in (mm)		34.5 (875)	
Overall Depth - in (mm)		49.5 (1260)	
Overall Height - in (mm)		81.3 (2065)	
Cylinder Diameter - in (mm)		33.0 (838)	
Cylinder Depth - in (mm)		30.0 (762)	
Cylinder Volume - cu. ft (liters)		14.8 (420)	
Reversing Cylinder		Standard	
Door Opening Size - in (mm)		26.9 (683)	
Heat Input Power		95,000 x 2 Btu/hr	
Gas Connections* - in (npt)		0.5	
Air Outlet - in (mm)		1 x 10 (250) Oval	
Motor - HP		Fan	2 x 0.5
		Cylinder	2 x 0.5
Airflow - cfm		2 x 600 (285)	
Electrical Specs - amps	X	200-240V/50/60/1/3	12
Shipping Dimensions Approx.- in (mm)		Width	35.5 (900)
		Depth	54.0 (1370)
		Height	84.9 (2160)
Net Weight - lb (kg)		690 (315)	
Shipping Weight - lb (kg)		735 (335)	
Agency Approvals		CSA	



A.	Overall Width - in (mm)	34.5 (875)
B.	Overall Depth - in (mm)	49.5 (1260)
C.	Overall Height - in (mm)	81.3 (2065)
D.	Door Bottom to Floor - in (mm)	9.3 (235)
E.	Door Swing - in (mm)	31.9 (810)

Authorized Distributor



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Tumble dryer models are made to suit a variety of electrical service characteristics. See your Speed Queen route operator for specifications.

For further details on installation, refer to Installation, Operation and Maintenance instructions supplied with the tumble dryer. Amperage ratings available in Installation Manual.

For the most accurate information, the installation guide should be used for all design and construction purposes. Due to continuous product improvements, design and specifications subject to change without notice. The quality management systems at Alliance Laundry Systems are registered to ISO 9001.

Exhaust Requirements

Exhaust Requirements

	CAUTION
Risk of fire. A clothes dryer produces combustible lint. Exhaust outdoors. Consult technical instructions for detailed exhaust specifications.	
W933	

	WARNING
To reduce the risk of fire, DO NOT use plastic or thin foil ducting to exhaust the tumble dryer.	
W773R1	

	WARNING
To reduce the risk of fire and accumulation of combustible gases, DO NOT exhaust tumble dryer air into a window well, gas vent, chimney or enclosed, un-ventilated area such as an attic wall, ceiling, crawl space under a building, or concealed space of a building.	
W059R1	

Layout

Whenever possible, install tumble dryers along an outside wall where duct length can be kept to a minimum, and make-up air can be easily accessed. Construction must not block the airflow at the rear of the tumble dryer. Doing so would prevent adequate air supply to the tumble dryer combustion chamber.

Make-Up Air

A tumble dryer is forced air exhausted and requires provisions for make-up air to replace air exhausted by tumble dryer.

IMPORTANT: Do not obstruct flow of combustion and ventilation air.

Required Make-Up Air Opening (to the outside) for Each Tumble Dryer, in. ² [cm ²]	
Model	Opening
Standard 025/030 Series	110 [710]
Eco 025 Series	65 [420]
Standard 035/055 Series	144 [930]
Eco 035 Series	120 [775]
Standard T30 Series	220 [1,420]
Eco T30 Series	180 [1,160]
T45 Series	288 [1,860]

Make-up air openings with louvers will restrict airflow. The opening must be increased to compensate for area taken up and restrictions created by louvers. Contact the louver manufacturer for the exact specifications.

Make-up air openings in rooms containing tumble dryer(s) and/or gas fired hot water heater or other gravity vented appliances must be increased sufficiently to prevent downdrafts in any of the vents when all tumble dryers are in operation. Do not locate gravity vented appliances between tumble dryer(s) and make-up air openings. If it is necessary to duct make-up air to tumble dryer(s), increase area of duct work by 25% to compensate for restrictions in air movement.

Venting

	WARNING
To reduce the risk of fire due to increased static pressure, we do not recommend installation of in-line secondary lint filters or lint collectors. If secondary systems are mandated, frequently clean the system to assure safe operation.	
W749	

IMPORTANT: Installing in-line filters or lint collectors will cause increased static pressure. Failure to maintain the secondary lint system will decrease tumble dryer efficiency and may void machine warranty.

For maximum efficiency and minimum lint accumulation, tumble dryer air must be exhausted to the outdoors by the shortest possible route.

Proper sized exhaust ducts are essential for proper operation. All elbows should be sweep type. Exhaust ducts must be assembled so the interior surfaces are smooth, so the joints do not permit the accumulation of lint. DO NOT use plastic, thin foil or Type B flexible ducts - rigid metal ducts are recommended. Use exhaust ducts made of sheet metal or other noncombustible material. DO NOT use sheet metal screws or fasteners on exhaust pipe joints which extend into the duct and catch lint. Use of duct tape or pop-rivets on all seams and joints is recommended, if allowed by local codes.

Verify that old ducts are thoroughly cleaned out before installing new tumble dryer(s).



WARNING

Improperly sized or assembled ductwork causes excess back pressure which results in slow drying, lint collecting in the duct, lint blowing back into the room, and increased fire hazard.

W355

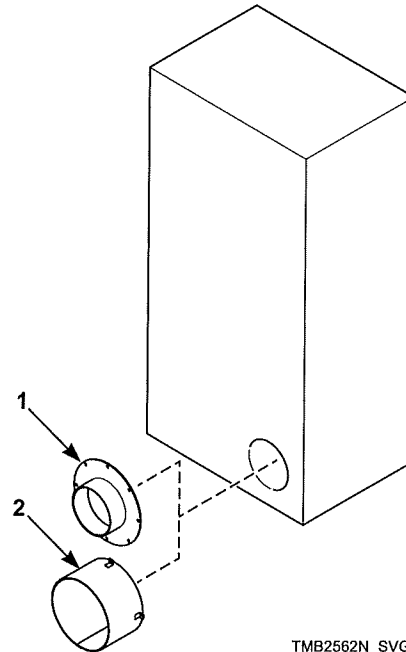
NOTE: Exhaust ducts must be constructed of sheet metal or other noncombustible material. Such ducts must be equivalent in strength and corrosion resistance to ducts made of galvanized sheet steel not less than 0.02 inches [0.50 mm] thick.

Where the exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes. The space around the duct may be sealed with noncombustible material. Refer to *Figure 10*.

IMPORTANT: For best performance provide an individual exhaust duct for each tumble dryer. Do not install a gas water heater in a room containing tumble dryers. It is better to have the water heater in a separate room with a separate air inlet.

NOTE: Proper venting will ensure that any condensate is subsequently re-evaporated and discharged.

NOTE: On IEC approved tumble dryers where it may be required, an exhaust adapter is available to convert to female outlet. Contact local distributor or manufacturer.



1. 25, 30, 35, 55 Models
2. Not Applicable

Figure 9

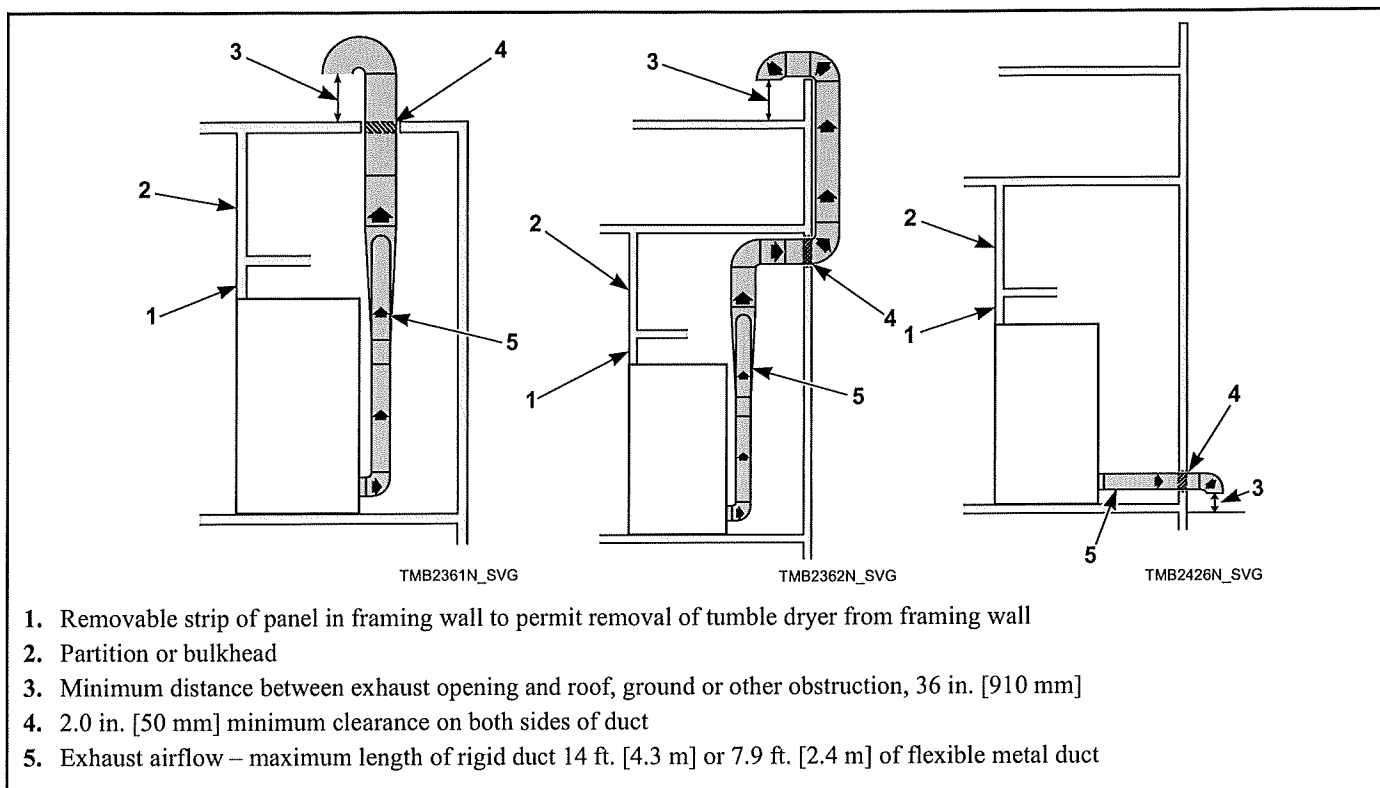


Figure 10

NOTE: Do not install wire mesh or screen in exhaust duct opening to avoid lint build-up or impacting proper discharge of air from tumble dryers.

NOTE: Where exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes.

NOTE: Inside of duct must be smooth. Do not use sheet metal screws to join sections.

NOTE: Locate exhaust far enough away from make-up air location to prevent re-introduction.

Consult your local building code for regulations which may also apply.

Individual Venting

For maximum efficiency and performance, it is preferred to exhaust tumble dryer(s) individually to the outdoors.

IMPORTANT: At no point may the cross sectional area of installed venting be less than the cross sectional area of the exhaust outlet of the tumble dryer.

The exhaust duct must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified in the Specifications and Dimensions Table or on the installation sticker on the rear of the tumble dryer.

NOTE: Static back pressure must be measured with the tumble dryer running.

The maximum allowable length venting is 14 feet [4.3 m] and two 90° elbows or equivalent. If the equivalent length of a duct required for an installation exceeds the maximum allowable equivalent length, the diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross section area of a rectangular duct must be increased by 20% for each additional 20 feet [6.1 m]. Refer to *Table 13* to determine equivalent venting.

Duct Diameter	Equivalent Length of Rigid Straight Duct
8 in. [203 mm]	One 90° elbow = 9.3 ft. [2.8 m]
10 in. [254 mm]	One 90° elbow = 11.6 ft. [3.5 m]
12 in. [305 mm]	One 90° elbow = 14 ft. [4.3 m]
14 in. [356 mm]	One 90° elbow = 16 ft. [4.9 m]

Table 13 continues...

Duct Diameter	Equivalent Length of Rigid Straight Duct
16 in. [406 mm]	One 90° elbow = 18.7 ft. [5.7 m]
18 in. [457 mm]	One 90° elbow = 21 ft. [6.4 m]
Equivalent Length (meter) = 1.17 x Duct Diameter (mm)	

Table 13

Example: A 12 inch [305 mm] diameter duct's equivalent length of 14 feet [4.3 m] of duct and two 90° elbows is:

Equivalent Length

= 14 ft. [4.3 m] + (2) 90° elbows

= 14 ft. [4.3 m] + 14 ft. [4.3 m] + 14 ft. [4.3 m]

= 42 ft. [12.8 m]

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

NOTE: The maximum length of a flexible metal duct must not exceed 7.9 ft. [2.4 m] as required to meet UL2158, clause 7.3.2A.

Manifold Venting

IMPORTANT: Do not exhaust tumble dryers into a flue used by other appliances.

While it is preferable to exhaust tumble dryers individually to the outdoors, a main collector duct may be used if it is sized according to *Figure 12* and *Figure 13*. This illustration indicates mini-

um diameters, and should be increased if the collector length exceeds 14 feet [4.3 m] and two 90° elbows. The diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross sectional area of a rectangular or square duct must be increased 20% for each additional 20 feet [6.1 m]. Refer to *Table 14* to determine equivalent ducting sizing. The collector duct may be rectangular or square in cross section, as long as the area is not reduced. Provisions **MUST** be made for lint removal and cleaning of the collector duct.

The vent collector system must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified in the Specifications and Dimensions Table or on the installation sticker on the rear of tumble dryer. Static back pressure must be measured with all tumble dryers vented into the collector operating.

NOTE: Never connect a tumble dryer duct at a 90° angle to the collector duct. Refer to *Figure 11*. Doing so will cause excessive back pressure, resulting in poor performance. Never connect two tumble dryer exhaust ducts directly across from each other at the point of entry to the collector duct.

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

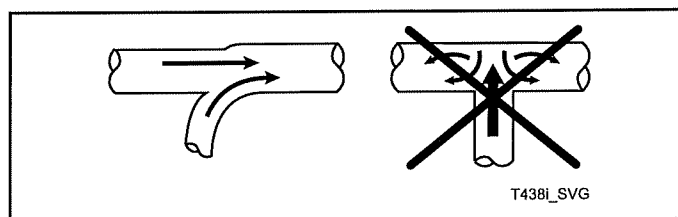


Figure 11

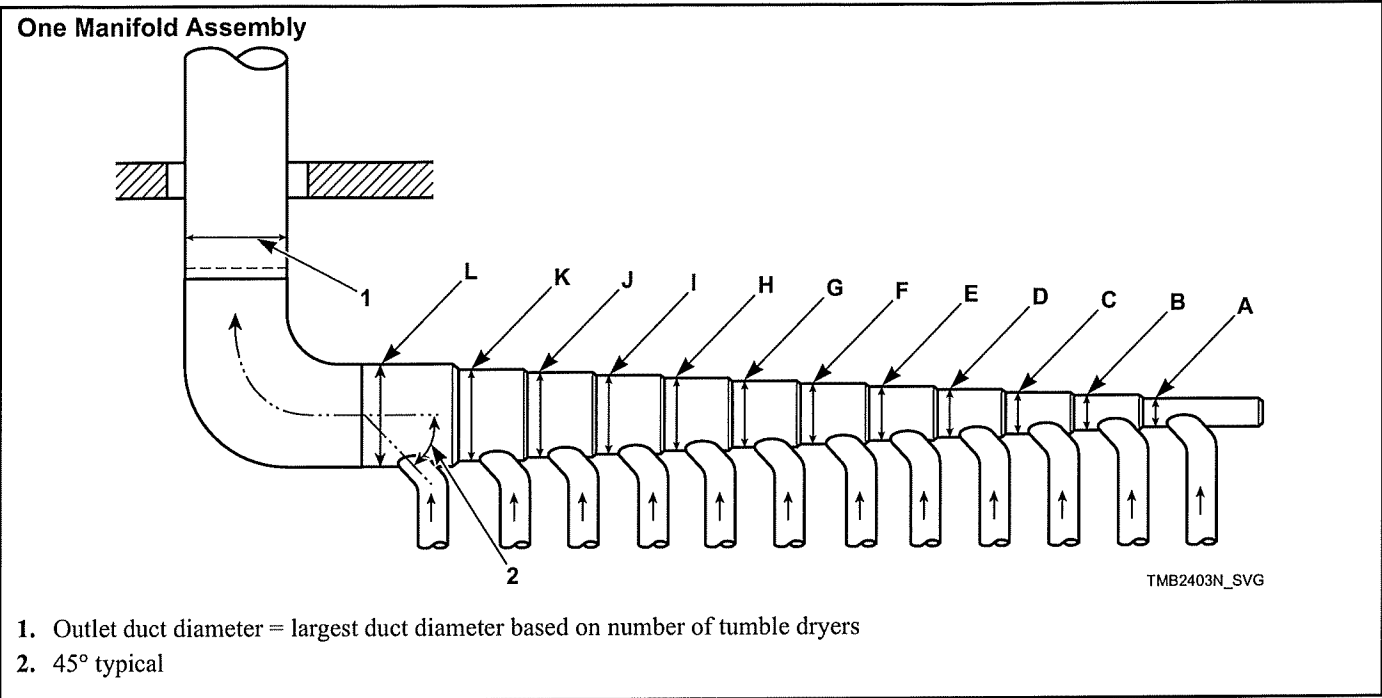


Figure 12

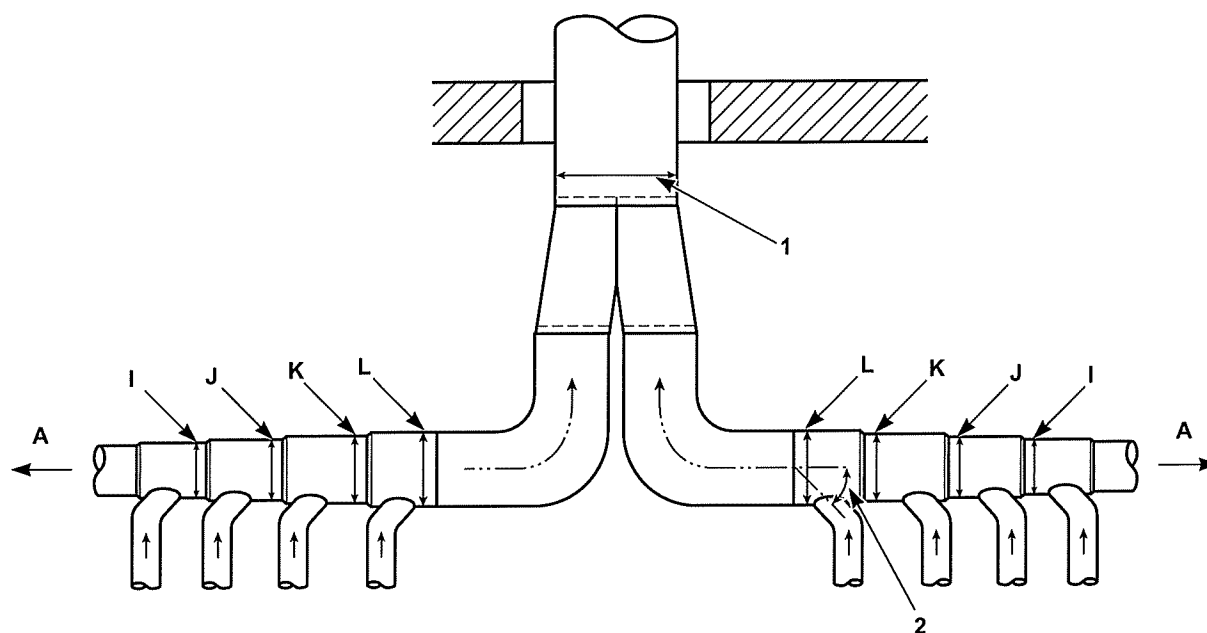
Duct Station	Eco Line 025	Standard Line 025, Eco T30 and all 030 Series	035, 055 and Standard T30 Series	T45 Series
A	4 in. [102 mm]	6 in. [152 mm]	8 in. [203 mm]	10 in. [254 mm]
B	6 in. [152 mm]	10 in. [254 mm]	12 in. [305 mm]	15 in. [381 mm]
C	8 in. [203 mm]	12 in. [305 mm]	15 in. [381 mm]	18 in. [457 mm]
D	10 in. [254 mm]	14 in. [356 mm]	17 in. [432 mm]	21 in. [533 mm]
E	12 in. [305 mm]	16 in. [406 mm]	19 in. [483 mm]	24 in. [610 mm]
F	12 in. [305 mm]	18 in. [457 mm]	21 in. [533 mm]	26 in. [660 mm]
G	14 in. [356 mm]	19 in. [483 mm]	23 in. [584 mm]	28 in. [711 mm]
H	14 in. [356 mm]	20 in. [508 mm]	24 in. [610 mm]	30 in. [762 mm]
I	15 in. [381 mm]	22 in. [559 mm]	26 in. [660 mm]	32 in. [813 mm]
J	16 in. [406 mm]	23 in. [584 mm]	27 in. [686 mm]	33 in. [838 mm]
K	17 in. [432 mm]	24 in. [610 mm]	28 in. [711 mm]	35 in. [889 mm]
L	18 in. [457 mm]	25 in. [635 mm]	30 in. [762 mm]	36 in. [914 mm]

Table 14

NOTE: *Table 14* represents tumble dryers with the same vent size. If multiple vent sizes are used, consult a local HVAC specialist.

NOTE: Duct clean-out recommended every 6 feet [0.18 m].

Two Manifold Assemblies



TMB2018N_SVG

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

Figure 13

Refer to *Table 14* for measurements for each manifold.

Exhaust Requirements

Exhaust Requirements

	CAUTION
Risk of fire. A clothes dryer produces combustible lint. Exhaust outdoors. Consult technical instructions for detailed exhaust specifications.	
W933	

	WARNING
To reduce the risk of fire, DO NOT use plastic or thin foil ducting to exhaust the tumble dryer.	
W773R1	

	WARNING
To reduce the risk of fire and accumulation of combustible gases, DO NOT exhaust tumble dryer air into a window well, gas vent, chimney or enclosed, un-ventilated area such as an attic wall, ceiling, crawl space under a building, or concealed space of a building.	
W059R1	

Layout

Whenever possible, install tumble dryers along an outside wall where duct length can be kept to a minimum, and make-up air can be easily accessed. Construction must not block the airflow at the rear of the tumble dryer. Doing so would prevent adequate air supply to the tumble dryer combustion chamber.

Make-Up Air

A tumble dryer is forced air exhausted and requires provisions for make-up air to replace air exhausted by tumble dryer.

IMPORTANT: Do not obstruct flow of combustion and ventilation air.

Required Make-Up Air Opening (to the outside) for Each Tumble Dryer	
Model	Opening, in. ² [cm ²]
050 Series	144 [930]
Standard 075 Series	195 [1,260]
Eco 075 Series	170 [1,095]
F75 Series	250 [1,610]

Make-up air openings with louvers will restrict airflow. The opening must be increased to compensate for area taken up and restrictions created by louvers. Contact the louver manufacturer for the exact specifications.

Make-up air openings in rooms containing tumble dryer(s) and/or gas fired hot water heater or other gravity vented appliances must be increased sufficiently to prevent downdrafts in any of the vents when all tumble dryers are in operation. Do not locate gravity vented appliances between tumble dryer(s) and make-up air openings. If it is necessary to duct make-up air to tumble dryer(s), increase area of duct work by 25% to compensate for restrictions in air movement.

Venting

	WARNING
To reduce the risk of fire due to increased static pressure, we do not recommend installation of in-line secondary lint filters or lint collectors. If secondary systems are mandated, frequently clean the system to assure safe operation.	
W749	

IMPORTANT: Installing in-line filters or lint collectors will cause increased static pressure. Failure to maintain the secondary lint system will decrease tumble dryer efficiency and may void machine warranty.

For maximum efficiency and minimum lint accumulation, tumble dryer air must be exhausted to the outdoors by the shortest possible route.

Exhaust Requirements

Proper sized exhaust ducts are essential for proper operation. All elbows should be sweep type. Exhaust ducts must be assembled so the interior surfaces are smooth, so the joints do not permit the accumulation of lint. **DO NOT** use plastic, thin foil or Type B flexible ducts - rigid metal ducts are recommended. Use exhaust ducts made of sheet metal or other noncombustible material. **DO NOT** use sheet metal screws or fasteners on exhaust pipe joints which extend into the duct and catch lint. Use of duct tape or pop-rivets on all seams and joints is recommended, if allowed by local codes.

Verify that old ducts are thoroughly cleaned out before installing new tumble dryer(s).



WARNING

Improperly sized or assembled ductwork causes excess back pressure which results in slow drying, lint collecting in the duct, lint blowing back into the room, and increased fire hazard.

W355

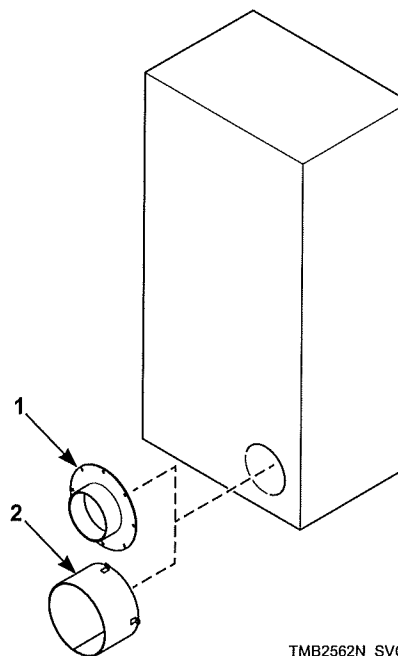
NOTE: Exhaust ducts must be constructed of sheet metal or other noncombustible material. Such ducts must be equivalent in strength and corrosion resistance to ducts made of galvanized sheet steel not less than 0.02 inches [0.50 mm] thick.

Where the exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes. The space around the duct may be sealed with noncombustible material. Refer to *Figure 12*.

IMPORTANT: For best performance provide an individual exhaust duct for each tumble dryer. Do not install a gas water heater in a room containing tumble dryers. It is better to have the water heater in a separate room with a separate air inlet.

NOTE: Proper venting will ensure that any condensate is subsequently re-evaporated and discharged.

NOTE: On IEC approved tumble dryers where it may be required, an exhaust adapter is available to convert to female outlet. Contact local distributor or manufacturer.



1. Not Applicable
2. 50, 75, F75 Models

Figure 11

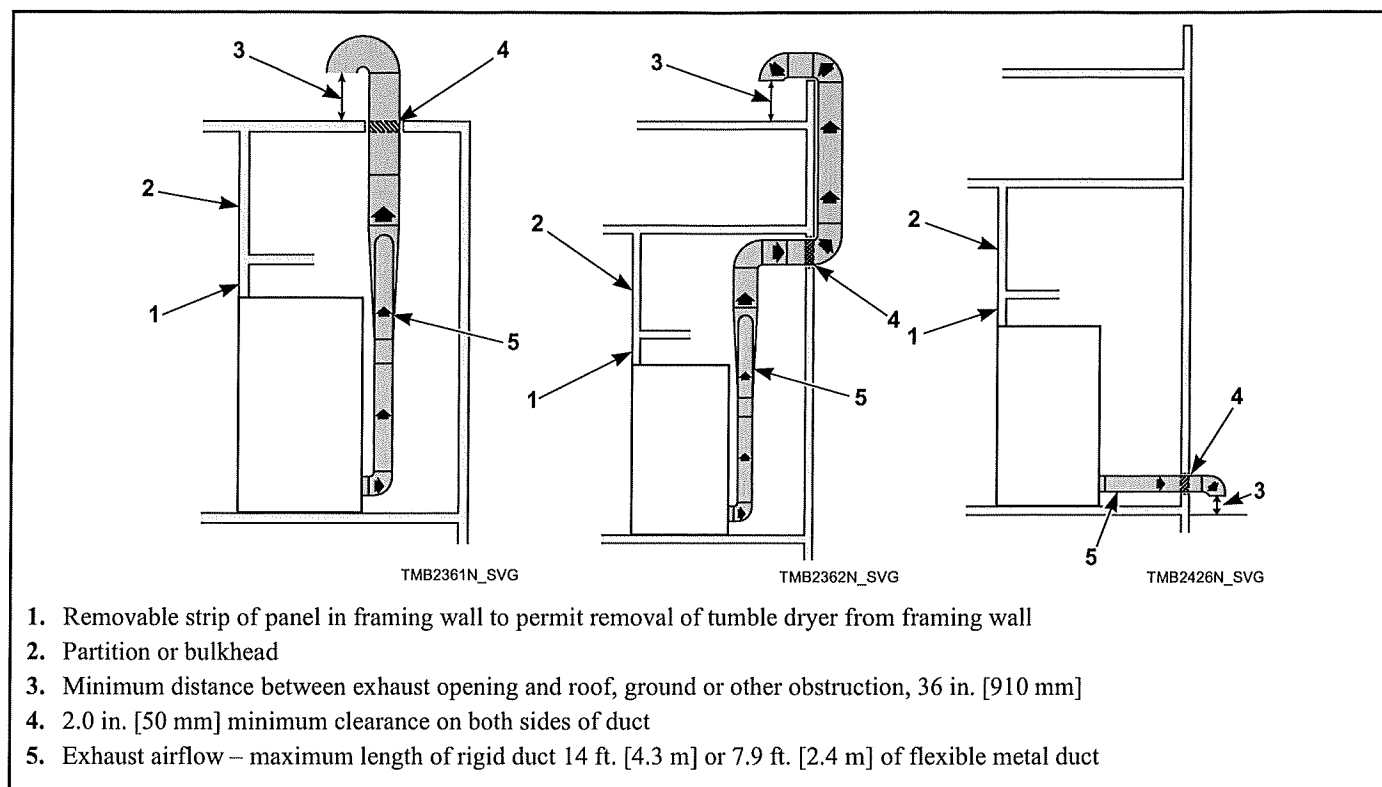


Figure 12

NOTE: Do not install wire mesh or screen in exhaust duct opening to avoid lint build-up or impacting proper discharge of air from tumble dryers.

NOTE: Where exhaust duct pierces a combustible wall or ceiling, the opening must be sized per local codes.

NOTE: Inside of duct must be smooth. Do not use sheet metal screws to join sections.

NOTE: Locate exhaust far enough away from make-up air location to prevent re-introduction.

Consult your local building code for regulations which may also apply.

Individual Venting

For maximum efficiency and performance, it is preferred to exhaust tumble dryer(s) individually to the outdoors.

IMPORTANT: At no point may the cross sectional area of installed venting be less than the cross sectional area of the exhaust outlet of the tumble dryer.

The exhaust duct must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified in the Specifications and Dimensions Table or on the installation sticker on the rear of the tumble dryer.

NOTE: Static back pressure must be measured with the tumble dryer running.

The maximum allowable length venting is 14 feet [4.3 m] and two 90° elbows or equivalent. If the equivalent length of a duct required for an installation exceeds the maximum allowable equivalent length, the diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross section area of a rectangular duct must be increased by 20% for each additional 20 feet [6.1 m]. Refer to *Table 7* to determine equivalent venting.

Duct Diameter	Equivalent Length of Rigid Straight Duct
8 in. [203 mm]	One 90° elbow = 9.3 ft. [2.8 m]
10 in. [254 mm]	One 90° elbow = 11.6 ft. [3.5 m]
12 in. [305 mm]	One 90° elbow = 14 ft. [4.3 m]
14 in. [356 mm]	One 90° elbow = 16 ft. [4.9 m]

Table 7 continues...

Duct Diameter	Equivalent Length of Rigid Straight Duct
16 in. [406 mm]	One 90° elbow = 18.7 ft. [5.7 m]
18 in. [457 mm]	One 90° elbow = 21 ft. [6.4 m]
Equivalent Length (meter) = 1.17 x Duct Diameter (mm)	

Table 7

Example: A 12 inch [305 mm] diameter duct's equivalent length of 14 feet [4.3 m] of duct and two 90° elbows is:

Equivalent Length

= 14 ft. [4.3 m] + (2) 90° elbows

= 14 ft. [4.3 m] + 14 ft. [4.3 m] + 14 ft. [4.3 m]

= 42 ft. [12.8 m]

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

NOTE: The maximum length of a flexible metal duct must not exceed 7.9 ft. [2.4 m] as required to meet UL2158, clause 7.3.2A.

Manifold Venting

IMPORTANT: Do not exhaust tumble dryers into a flue used by other appliances.

While it is preferable to exhaust tumble dryers individually to the outdoors, a main collector duct may be used if it is sized according to *Figure 14* and *Figure 15*. This illustration indicates mini-

num diameters, and should be increased if the collector length exceeds 14 feet [4.3 m] and two 90° elbows. The diameter of a round duct must be increased by 10% for each additional 20 feet [6.1 m]. Cross sectional area of a rectangular or square duct must be increased 20% for each additional 20 feet [6.1 m]. Refer to *Table 8* to determine equivalent ducting sizing. The collector duct may be rectangular or square in cross section, as long as the area is not reduced. Provisions **MUST** be made for lint removal and cleaning of the collector duct.

The vent collector system must be designed so the static back pressure measured 12 inches [305 mm] from the exhaust outlet does not exceed the maximum allowable pressure specified in the Specifications and Dimensions Table or on the installation sticker on the rear of tumble dryer. Static back pressure must be measured with all tumble dryers vented into the collector operating.

NOTE: Never connect a tumble dryer duct at a 90° angle to the collector duct. Refer to *Figure 13*. Doing so will cause excessive back pressure, resulting in poor performance. Never connect two tumble dryer exhaust ducts directly across from each other at the point of entry to the collector duct.

With the tumble dryer in operation, airflow at any point in the duct should be at least 1200 feet/min. [366 m/min.] to ensure that lint remains airborne. If 1200 feet/min. [366 m/min.] cannot be maintained, schedule monthly inspections and cleaning of the ductwork.

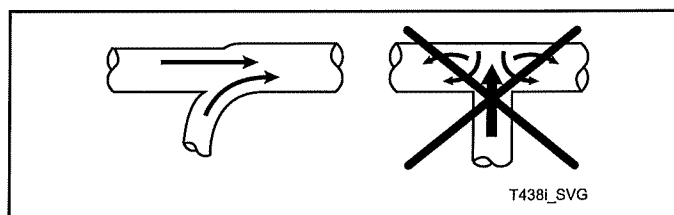


Figure 13

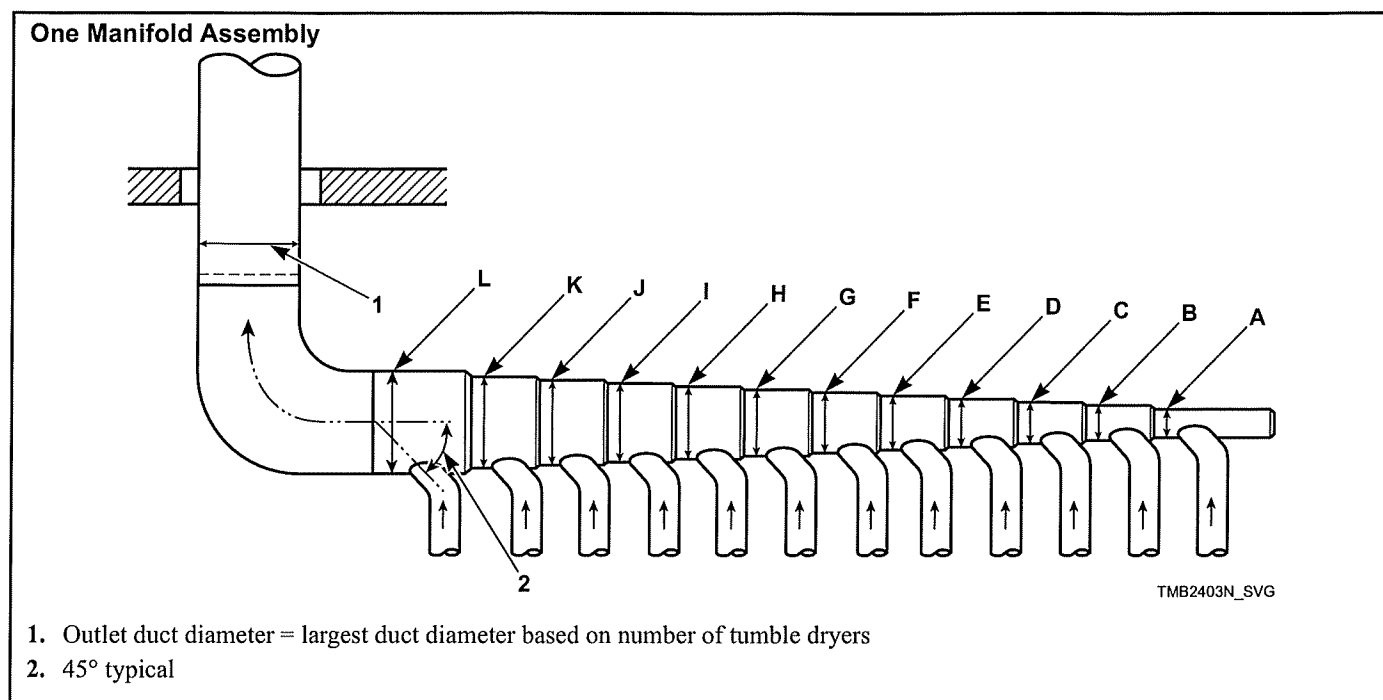


Figure 14

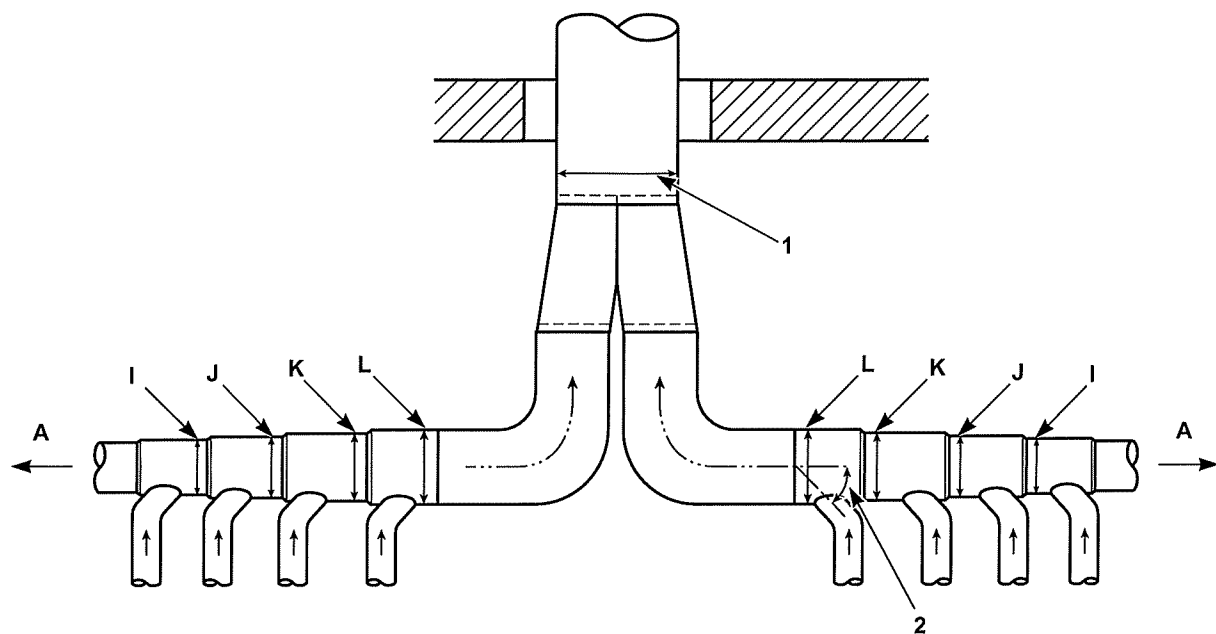
Duct Station	050/075	F75
A	8 in. [203 mm]	10 in. [254 mm]
B	12 in. [305 mm]	15 in. [381 mm]
C	15 in. [381 mm]	18 in. [457 mm]
D	17 in. [432 mm]	21 in. [533 mm]
E	19 in. [483 mm]	24 in. [610 mm]
F	21 in. [533 mm]	26 in. [660 mm]
G	23 in. [584 mm]	28 in. [711 mm]
H	25 in. [635 mm]	30 in. [762 mm]
I	26 in. [660 mm]	32 in. [813 mm]
J	27 in. [686 mm]	33 in. [838 mm]
K	29 in. [737 mm]	35 in. [889 mm]
L	30 in. [762 mm]	36 in. [914 mm]

Table 8

NOTE: Table 8 represents tumble dryers with the same vent size. If multiple vent sizes are used, consult a local HVAC specialist.

NOTE: Duct clean-out recommended every 6 feet [0.18 m].

Two Manifold Assemblies



TMB2018N_SVG

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

Figure 15

Refer to *Table 8* for measurements for each manifold.

SPEED QUEEN® LAUNDROMAT SOLUTIONS

Hardmount Washer-Extractors

			SCT020	SCT030	SCT040
Control Option			Quantum Touch/Gold	Quantum Touch/Gold	Quantum Touch/Gold
Capacity - lb (kg)			20 (9)	30 (13.6)	40 (18)
Overall Width - in (mm)			26 (660)	29 (737)	30.6 (777)
*Overall Depth - in (mm)			30.9 (785)	35.3 (897)	42.3 (1074)
Overall Height - in (mm)			43 (1092)	45 (1143)	47.2 (1199)
Cylinder Diameter - in (mm)			21 (533)	24 (610)	26.3 (668)
Cylinder Depth - in (mm)			13.8 (351)	16 (406)	20.3 (516)
Cylinder Volume - cu. ft (liters)			2.8 (79)	4.2 (119)	6.3 (178)
Door Opening Size - in (mm)			11.6 (295)	14.3 (363)	16.3 (414)
Door Bottom to Floor - in (mm)			14.4 (366)	14 (356)	14.6 (371)
Water Inlet Connection - in (mm)			2 x 0.75 (19)	2 x 0.75 (19)	2 x 0.75 (19)
Drain Diameter - in (mm)			1 x 3 (76)	1 x 3 (76)	1 x 3 (76)
Drain Height to Floor - in (mm)			3.9 (99)	4.3 (109)	4.5 (114)
Motor Power Consumption - HP (kW)			1 (0.75)	1 (0.75)	2 (1.5)
Total # of Speeds			9	9	9
Cylinder Speeds - RPM (G-Force)	Gentle		37 (0.4)	34 (0.4)	33 (0.4)
	Wash		51 (0.8)	48 (0.8)	46 (0.8)
	Distribution		92 (2.5)	86 (2.5)	82 (2.5)
	Very Low		301 (27)	282 (27)	269 (27)
	Low		518 (80)	485 (80)	464 (80)
	Medium		579 (100)	542 (100)	518 (100)
	High		648 (125)	606 (125)	579 (125)
	Very High		710 (150)	664 (150)	635 (150)
	Ultra High		819 (200)	766 (200)	733 (200)
** Voltage/Circuit Breaker - FLA	B	120/60/1	15-9	15-12	20-15
	X	200-240/50-60/1/3	15-4 (1 Ph) 15-3 (3 Ph)	15-7 (1 Ph) 15-4 (3 Ph)	15-7 (1 Ph) 15-4 (3 Ph)
Shipping Dimensions Approx.- in (mm)	Width		28 (711)	31.5 (800)	32.5 (826)
	Depth		33.8 (859)	38.3 (973)	43.5 (1105)
	Height		49.4 (1255)	51.3 (1303)	53.6 (1361)
Net Weight - lb (kg)			340 (154)	440 (200)	540 (245)
Shipping Weight - lb (kg)			380 (172)	480 (218)	580 (263)
Slat Crate Shipping Weight - lb (kg)			460 (209)	580 (263)	680 (308)
***Agency Approvals			cUL _{us}	cUL _{us}	cUL _{us}

Hardmount Washer-Extractors

			SCT060	SCT080	SCT100
Control Option			Quantum Touch/Gold	Quantum Touch/Gold	Quantum Touch/Gold
Capacity - lb (kg)			60 (27)	80 (36)	100 (45)
Overall Width - in (mm)			34.1 (866)	41.5 (1054)	41.5 (1054)
*Overall Depth - in (mm)			44.7 (1135)	47.1 (1196)	51.1 (1298)
Overall Height - in (mm)			49.9 (1267)	57.2 (1453)	57.2 (1453)
Cylinder Diameter - in (mm)			30 (762)	36 (914)	36 (914)
Cylinder Depth - in (mm)			22 (559)	21.9 (556)	25.9 (658)
Cylinder Volume - cu. ft (liters)			9.0 (255)	12.9 (365)	15.2 (430)
Door Opening Size - in (mm)			16.3 (414)	18.5 (470)	18.5 (470)
Door Bottom to Floor - in (mm)			14.9 (378)	17.9 (455)	17.9 (455)
Water Inlet Connection - in (mm)			4 x 0.75 (19)	4 x 0.75 (19)	4 x 0.75 (19)
Drain Diameter - in (mm)			1 x 3 (76)	1 x 3 (76)	1 x 3 (76)
Drain Height to Floor - in (mm)			4.9 (124)	5.1 (130)	5.1 (130)
Motor Power Consumption - HP (kW)			3 (2.2)	5 (3.7)	5 (3.7)
Total # of Speeds			9	9	9
Cylinder Speeds - RPM (G-Force)	Gentle		31 (0.4)	28 (0.4)	28 (0.4)
	Wash		43 (0.8)	39 (0.8)	39 (0.8)
	Distribution		77 (2.5)	70 (2.5)	70 (2.5)
	Very Low		252 (27)	230 (27)	230 (27)
	Low		434 (80)	396 (80)	396 (80)
	Medium		485 (100)	443 (100)	443 (100)
	High		542 (125)	495 (125)	495 (125)
	Very High		594 (150)	542 (150)	542 (150)
	Ultra High		686 (200)	626 (200)	568 (165)
** Voltage/Circuit Breaker - FLA	B	120/60/1	-	-	-
	X	200-240/50-60/1/3	15-11 (1 Ph) 15-7 (3 Ph)	20-15 (1 Ph) 15-9 (3 Ph)	20-16 (1 Ph) 15-10 (3 Ph)
Shipping Dimensions Approx.- in (mm)	Width		37.5 (953)	44 (1118)	44 (1118)
	Depth		46.9 (1191)	54.5 (1384)	58.5 (1486)
	Height		56.3 (1430)	59.6 (1514)	59.6 (1514)
Net Weight - lb (kg)			680 (308)	1250 (567)	1280 (581)
Shipping Weight - lb (kg)			720 (327)	1300 (590)	1330 (603)
Slat Crate Shipping Weight - lb (kg)			840 (381)	1430 (649)	1460 (662)
***Agency Approvals			cUL _{us}	cUL _{us}	cUL _{us}

*Overall depth includes vacuum breaker to door handle.

**Circuit breaker and amp draw data shown are for models without electric heat. Consult factory for other configurations. Manufacturer strongly recommends using a circuit breaker instead of fuses. Use 3-pole circuit breakers for 3-phase machines.

*** Agency approvals may vary depending on configuration. Consult factory for details. Steam connection requires 1/2" N.P.P.

For the most accurate information, the installation guide should be used for all design and construction purposes.

Due to continuous product improvements, design and specifications subject to change without notice. The quality management systems at Alliance Laundry Systems are registered to ISO 9001.





Advanced Heating
& Hot Water Systems

Phoenix

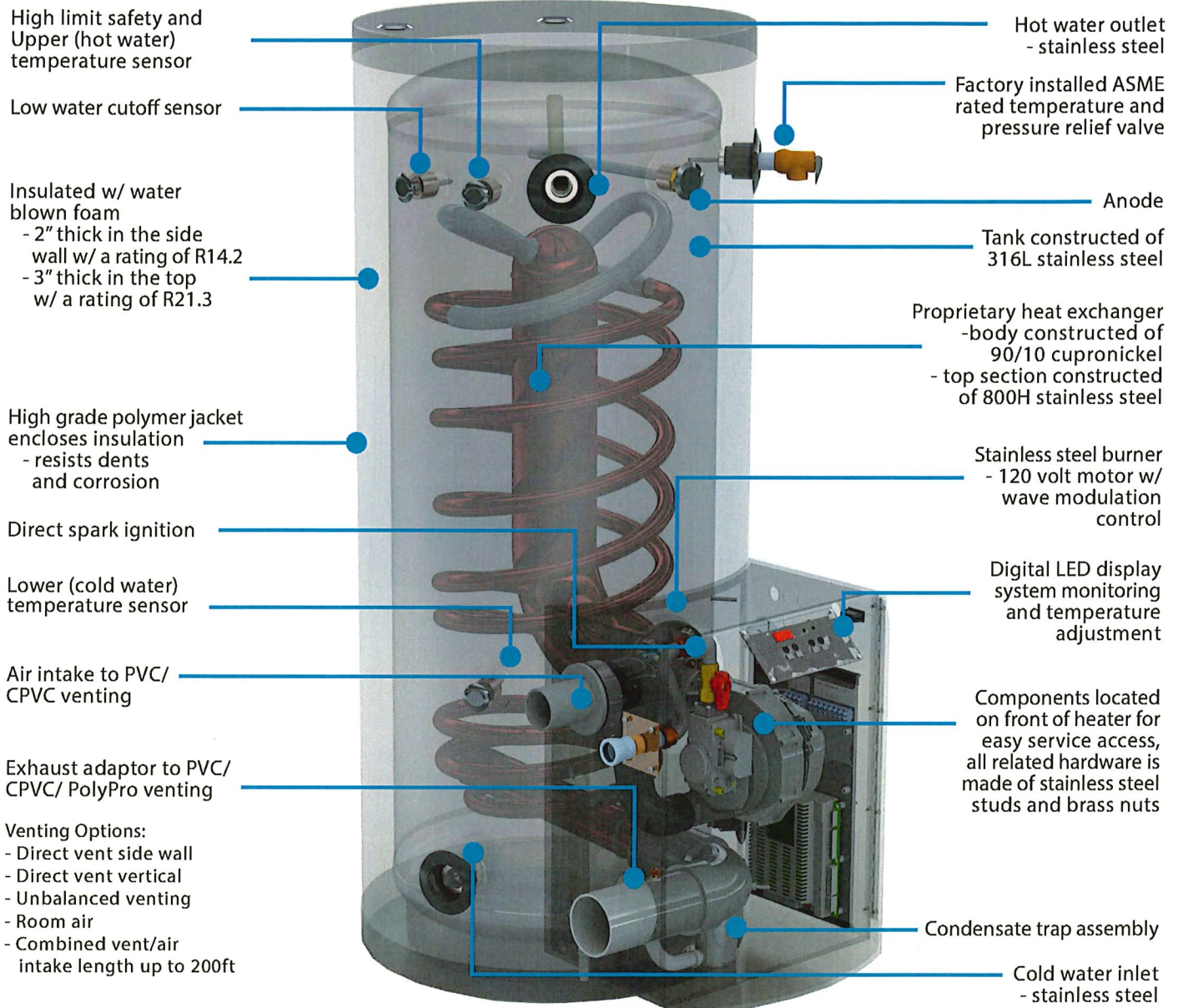
316L Stainless Steel Gas Fired Water Heater



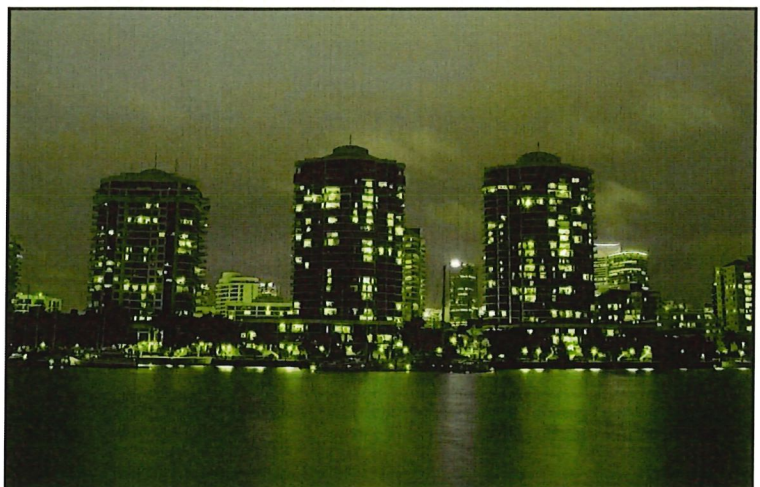
A BRAND OF  **ARISTON**
THERMO USA

Commercial Water Heater

SPECIFICATION GUIDE



MODEL	Input Modulation	100°F Rise
PH100-55	35,000-100,000	115
PH130-55	35,000-130,000	148
PH160-55	40,000- 160,000	184
PH199-55	40,000-199,000	229
PH100-80	35,000-100,000	116
PH130-80	35,000-130,000	150
PH160-80	40,000-160,000	184
PH199-80	40,000-199,000	229
PH100-119	35,000-100,000	117
PH130-119	35,000-130,000	152
PH160-119	40,000-160,000	184
PH199-119	40,000-199,000	230



SUPERIOR STAINLESS STEEL CONSTRUCTION

Why Choose A Stainless Steel Tank?



HTP has produced more stainless steel tanks in North America since 1976, than any other company in the industry.

HTP'S UNIQUE HEAT EXCHANGER

- Durable Construction
- High Performance
- Excellent Heat Transfer Capabilities
- Self Cleaning: Eliminating Scale Build-up



316L STAINLESS STEEL TANK



Our Components are Made of Durable Materials:

Dip Tubes

Port Outlets

Heat Exchanger

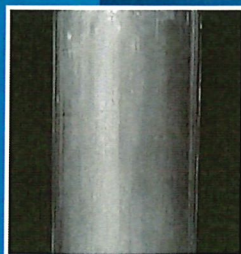
Tank Construction

Made with High Grade 316L and 800H Stainless Steel Materials.

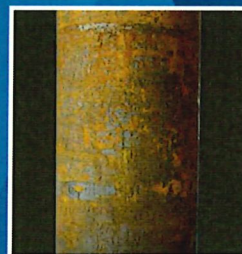


The Advantages

Stainless Steel vs. Glass-Lined



HTP's
119 GAL. Tank
405 LBS. (Ship. Weight)



Top Competitor's
119 GAL. Tank
555 LBS.

Eliminates Scale Build-up on HX
Prolongs Tank Life
Lightweight Construction

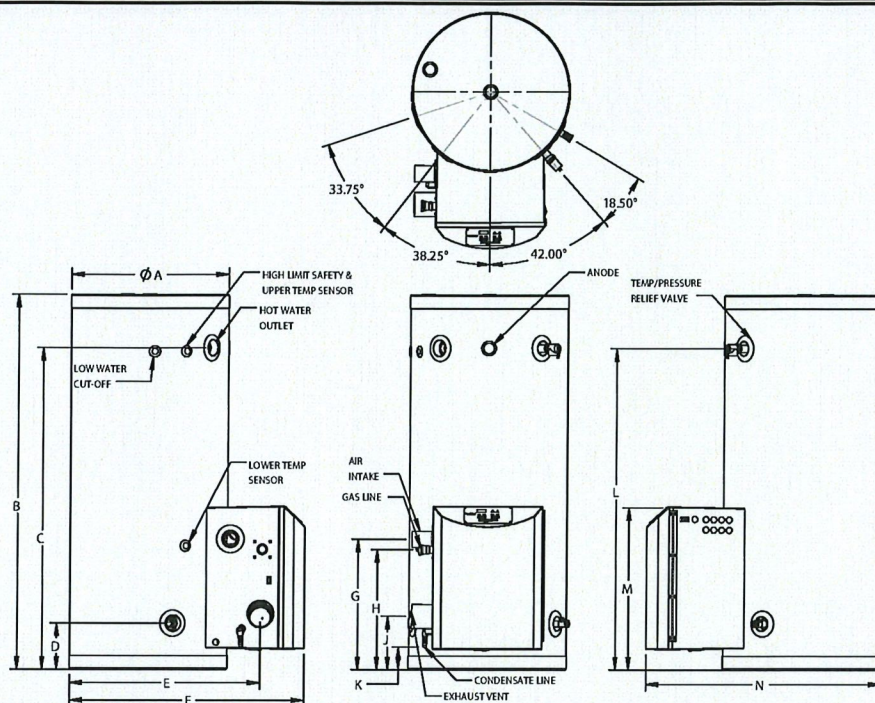
Phoenix Water Heaters

- UL/ULC listed
- exceed ASHRAE 90.1b-1992 efficiency requirements
- ANSI Z 21.10.3 certified
- comply w/ NOx emissions set forth in SCAQMD Rule 1146.2-1998
- factory assembled, test-fired, and adjusted for proper combustion parameters
- operate at altitudes up to 4,500 feet above sea level without additional parts or adjustments

Note: Due to variations by state in CSD-1 requirements, please consult with the factory for all controls required in your jurisdiction

...Because They Are Built To Last!

DIMENSIONS & SPECIFICATIONS



PHOENIX WATER HEATER AND SANITIZER BOOSTER DIMENSIONS

MODEL	GAL.	A	B	C	D	E	F	G	H	J	K	L	M	N	SYSTEM RELIEF PIPE	GAS LINE CONN.
PH100-55/PH130-55 PH160-55/PH199-55	55	23"	54-1/4"	46-1/2"	6-1/2"	23-1/4"	27-3/4"	18-1/2"	17"	7-1/2"	34-1/4"	46-1/2"	23-1/4"	34-1/4"	3/4"	3/4"
PH100-80/PH130-80 PH160-80/PH199-80	80	23"	74-1/4"	67-3/4"	7-1/4"	27-1/2"	32"	20-3/4"	19-1/4"	10"	34-1/4"	67-3/4"	27"	34-1/4"		
PH100-119/PH130-119 PH160-119/PH199-119	119	27"	74"	66-1/4"	7-1/2"	27-1/2"	32"	21-1/2"	18-3/4"	10-1/2"	38-1/2"	66-1/2"	24-3/4"	38-1/2"		
PH199-55SA	55	23"	54-1/4"	46-1/2"	6-1/2"	23-1/4"	27-3/4"	18-1/2"	17"	7-1/2"	34-1/4"	46-1/2"	23-1/4"	34-1/4"		

PHOENIX WATER HEATER AND SANITIZER BOOSTER SPECIFICATIONS

MODEL	BTU's	AIR INTAKE/ EXHAUST VENT	INLET/ OUTLET	SHIPPING WEIGHT	MAX. TEMP LIMIT	AHRI CERTIFIED [®] www.ahri.org/certified			Ratings not Certified by AHRI	
						First Hr. Rating	UEF	THERMAL EFFICIENCY	First Hr. Rating	
PH100-55	100,000	2"	1" NPT	175 LBS	160 F	187 GAL.	.89			
PH130-55	130,000	2"	1" NPT	175 LBS	160 F			94%		205 GAL.
PH160-55	160,000	3"	1" NPT	175 LBS	160 F			95%		245 GAL.
PH199-55	199,000	3"	1" NPT	175 LBS	160 F			95%		295 GAL.
PH100-80	100,000	2"	1-1/2" NPT	235 LBS	160 F	132 GAL.	.93			
PH130-80	130,000	2"	1-1/2" NPT	235 LBS	160 F			95%		227 GAL.
PH160-80	160,000	3"	1-1/2" NPT	235 LBS	160 F			96%		265 GAL.
PH199-80	199,000	3"	1-1/2" NPT	235 LBS	160 F			95%		314 GAL.
PH100-119	100,000	2"	1-1/2" NPT	405 LBS	160 F	214 GAL.	.90			
PH130-119	130,000	2"	1-1/2" NPT	405 LBS	160 F			96%		257 GAL.
PH160-119	160,000	3"	1-1/2" NPT	405 LBS	160 F			96%		295 GAL.
PH199-119	199,000	3"	1-1/2" NPT	405 LBS	160 F			96%		335 GAL.
PH199-55SA	199,000	3"	1" NPT	175 LBS	184 F			95%		295 GPH

STANDARD FEATURES

- Modulating Burner
5:1 Turndown Ratio
- Vents in PVC, CPVC, Stainless Steel, ULC S636
- Limited Warranty
7 Year Residential
3 Year (5 Year Option Available) Commercial

WHAT'S IN THE BOX

- Intake PVC Tee w/ Screens
- Exhaust PVC Coupling w/ Screens
- Installation Manual
- LP Conversion Kit (Natural Gas Models Only)

OPTIONAL EQUIPMENT

- Outdoor Sensor
- 2", 3" PVC Concentric Vent Kit
- 3", 4" Stainless Steel Outside
Termination Vent Kit
- Condensate Neutralizer
- PC Connection Cable w/ Software
- Sanitizer Booster Kit

