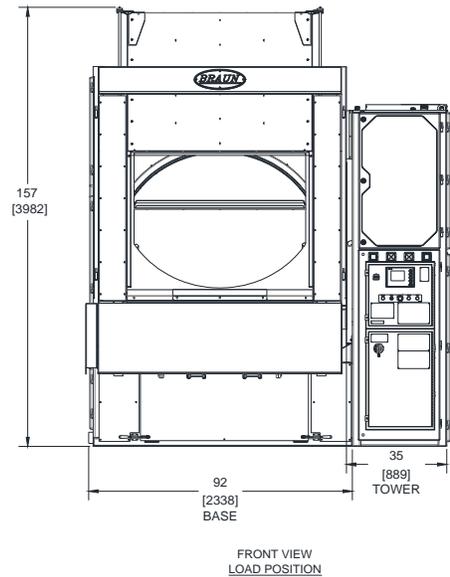
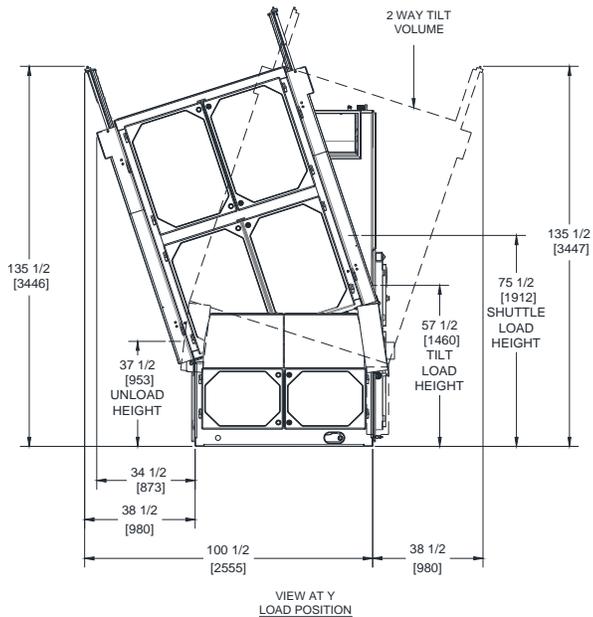
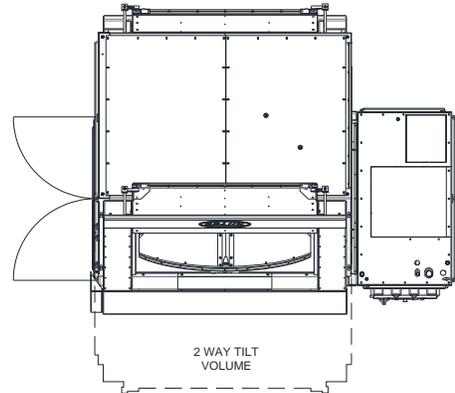
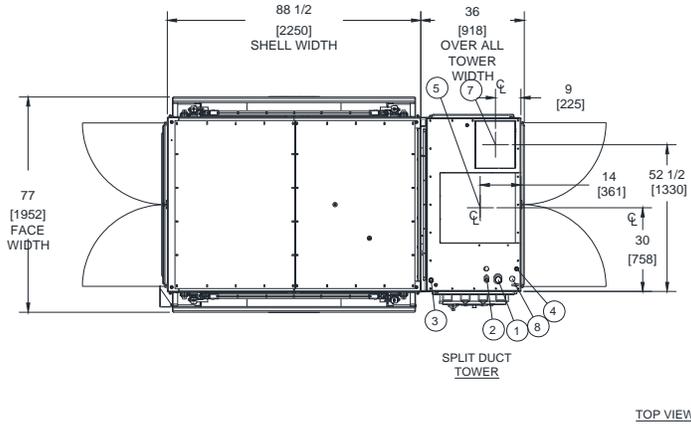
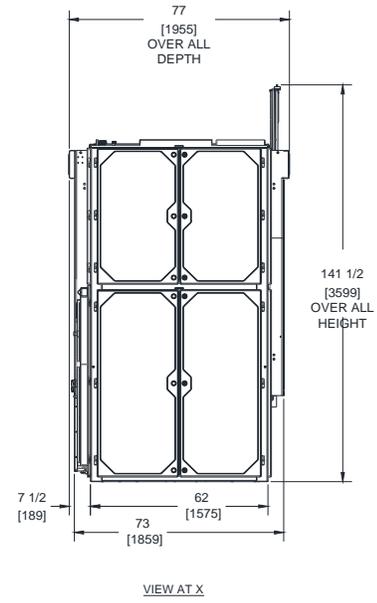
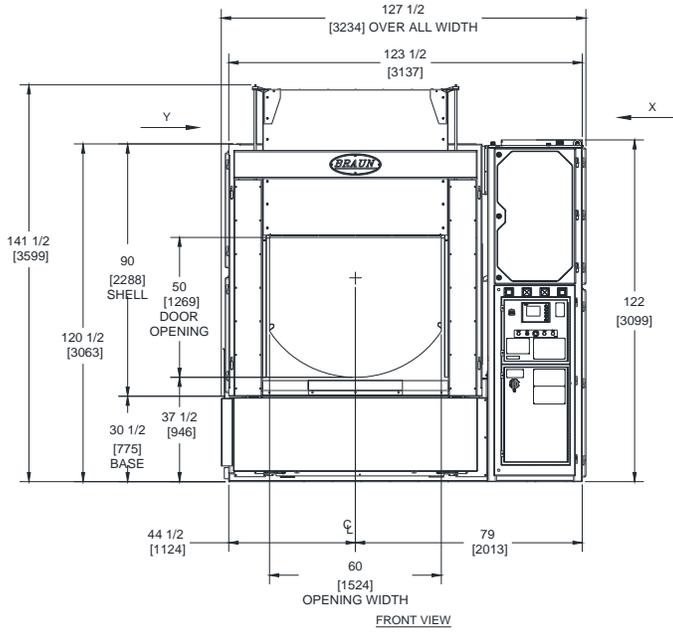




BRAUN PASS THRU DRYER
500 PT – Vertical Slide Door- Low NOx - NGF/PGF
 G.A. BRAUN, INC., 79 GENERAL IRWIN BLVD. NORTH SYRACUSE, NY. 13212, 315-475-3123





BRAUN PASS THRU DRYER 500 PT – Vertical Slide Door- Low NOx - NGF/PGF

G.A. BRAUN, INC., 79 GENERAL IRWIN BLVD. NORTH SYRACUSE, NY. 13212, 315-475-3123

RECOMMENDED CAPACITY

Terry: 250 – 600 lbs clean dry weight [113 - 272 kg]
 Blended Fabric: 250 – 600 lbs clean dry weight [113 - 272 kg]
 Barrier Fabrics: 150 – 500 lbs clean dry weight [113 - 227 kg]
 (ISO Gowns, non-breathable material, etc.)
 Industrial Mats: 250-600 lbs clean dry weight [113 - 272 kg]
 *Running under 300 lbs [136 kg] clean dry weight with any product may result in reduced dryer performance and efficiency
 **Running over recommended capacities may result in poor dryer performance and reduced efficiency

OPENING REQUIREMENTS TO RECEIVE UNIT

Height: 130" [3,302mm] Width: 80" [2,032mm] (include 3" rolls & 3" skids)
 Refer to rigging instructions in O&M manual

SPECIFICATIONS

Gas Models NGF/PGF

- ① Gas supply connection _____ 2" NPT
- Natural gas supply pressure _____ 27" w.c. [686mm wc]
- ② Gas vent connection (CSA)(IRI) _____ 1" NPT
- Burner firing range, NGF (BTU/HR x 1000) _____ 100 to 2800
- Nominal firing range, NGF (BTU/HR x 1000) _____ 800
- Combustion Blower _____ 560cfm [15.9m³/min]
- Ignition type _____ Direct spark

500 PT Models

- Basket volume (78" dia. x 60" deep) _____ 165 ft³ [4.67 m³]
- Door opening _____ 60" w x 50" h
[1524mm x 1270mm]
- Loading height – One way tilt _____ 57 1/2" [1,461mm]
- Unload height _____ 37 1/2" [953mm]
- Minimum dryer spacing, center to center _____ 153 1/2" [3,899mm]
- Min dryer spacing if placing lint vacuum between dryers _____ 159 1/2" [4,051mm]
- Maximum machine depth _____ 139" [3,531mm]
- ③ Compressed air connection _____ 1" NPT

SHIPPING WEIGHTS/SIZES

- Optional 3 piece disassembly (not including skids)
- Shell dimensions _____ 90"H x 88 1/2"W x 77"D
[2286mm x 2248mm x 1956mm]
 - Shell weight _____ 4600 lbs [2,087 kg]
 - Base dimensions _____ 39 1/2"H x 92"W x 69"D
[1003mm x 2338mm x 1753mm]
 - Base weight _____ 2520 lbs [694 kg]
 - Tower dimensions (laying down) _____ 36 1/2"H x 70"W x 122"D
[927mm x 1778mm x 3099mm]
 - Tower weight _____ 2,020 lbs [916 kg]
- Additional break down is available on the shell if necessary. Contact sales.

Please consult Braun Inside Sales for all LOW NOx emissions requirements

⑧ ELECTRICAL SPECS

3-PHASE SUPPLY VOLTAGE/FREQUENCY	208/3/60	240/3/60	480/3/60	600/3/60
Conduit Connection	1 1/4"	1 1/4"	1 1/4"	1 1/4"
Machine Disconnect (Internally Mounted Circuit Breaker) (Amps)	125	125	60	N/A
Machine Full Load Amps (FLA)	99	92	48	N/A
MAIN BLOWER 25HP (FLA)	66	62	32	N/A
BASKET MOTOR 7.5HP (FLA)	22	21	10	N/A
COMBUSTION BLOWER 3HP (FLA)	4.1	3.6	1.8	N/A

- **Grounding:** Ground machine to an earth ground (zero potential) per National Electric Code (NEC) section 250 and any applicable local codes. Use a ground wire sized in accordance with NEC Table 250.122. Do not rely on conduit, machine anchorage, etc. Connect the ground wire between the ground lug on the incoming power junction box on the machine and the external disconnect box or other location as required to assure a reliable earth ground.
- **Branch Circuit Protection:** Size external fuses or circuit breakers per the recommended minimum branch circuit requirements listed above. Installation of this branch circuit must be in accordance with the National Electric Code (NEC) and any applicable local codes.
 - Use only Dual Element (Time-Delay) fuses FRN (up to 250V), FRS (250 to 600V).
 - If an inverse time circuit breaker is to be used instead of fuses, it should have the same characteristics as FRN/FRS type fuses.
- **Wire Sizing:** Wire shall be sized in accordance with the National Electric Code and any applicable local codes. The required wire size will vary with the length of the wire run as well as any specific local codes. The use of THHN type copper supply conductors with a minimum of 90 deg C insulation is strongly recommended.

SPECIFICATIONS CONTINUED

- Minimum air pressure required, filtered and dry _____ 90-100psi [620kpa]
- Air consumption including lint blow down* _____ 60cfm [1.7m³/min]
- ④ Water supply (Fire suppression system) (40psi minimum) _____ 3/4" NPT
- ⑤ Air intake duct connection (SPLIT duct) _____ 28 1/2" x 25 1/4"
[718mm x 641mm]
- ⑥ Air intake duct connection (COAXIAL duct) _____ NOT AVAILABLE
- Air intake duct size _____ **SEE PAGE 3**
- ⑦ Exhaust duct opening (1 1/2" flanged perimeter) _____ 17" x 14"
[432mm x 355mm]
- Exhaust duct volume _____ 10,000cfm
[283m³/min]
- Exhaust duct size _____ **SEE PAGE 3**
- Maximum external duct total static pressure allowed _____ 1/2" wc. [13mm wc]

*- Consumption based on lint blow down cycle at 32 (programmable) seconds consuming approx 60 ft.³ [1.7m³/min] Programmed collection times can be increased depending on lint type, causing an increase in air consumption.

LINT COLLECTION

On-board-

Single screen with #62 stainless steel screen mesh, single stage with automatic screen blow down/lint removal _____ 2639 in.² [1.53m²]

FLOOR LOADING

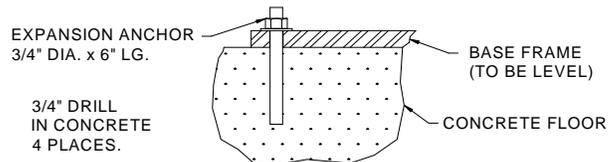
- Weight of dryer assembly * _____ 9,220 lbs [4,182 kg]
- Weight of operational loaded dryer (at rated capacity and 60% moisture retention) _____ 10,120 lbs [3,983 kg]
- Lagging _____ 3/4" x 6" lg (4 req'd)

*- Does not include weight of ducting or utility connections. See notes on ductwork.

FOUNDATION

Floor must be able to support machine, suggested minimum 6", 2500psi concrete. This is necessary to maintain floor integrity and prevent pull out of lagging anchors.

Customer is responsible to meet all Local, State, and Federal Code requirements, to include obtaining any applicable permits to install or operate this equipment.





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EQUIPMENT SPECIFICATION

BRAUN 500PT-NGF/PGF DRYER

General-

Basket size	78" dia. x 60" deep [1,1981mm x 1,524 mm]
Cylinder volume (Gross)	165 ft ³ [4.67 m ³]
Nominal capacity	500 Lbs [136 kg]
Cylinder opening (Usable)	60" [1524mm] Wide x 50" [1270mm] High
Basket rotation speed (fixed)	28rpm
Basket motor size	7.5hp [5.6kW]
Main blower motor size	25hp [18.6kW]
Combustion blower motor size	3hp [2.2kW]
Overall dimensions (dryer not tilted & doors closed)	Refer to page 1
Overall dimensions (dryer tilted & doors open)	Refer to page 1

Basket Drive-

Single drive shaft	1 15/16" dia. [49mm]
Drive shaft bearings (2)	Roller type
Drive wheels (2)	10" x 3" [254mm x 76mm]
Drive belt (single cog type)	Gates PowerGrip
Idler wheels (2) (Maintenance free)	10" x 3" [254mm x 76mm]

Shell-

Construction	7ga Carbon steel cabinet type
Swing out face plates for easy, no-rigging required, access to basket and seals	
Drive and idler wheels removable through shell	
On board lint collector	
Removable blower housing contains blower motor and wheel.	
Burner accessible through tower	

Shell Continued-

Large, swinging lift off removable, access doors for access to basket drive, gas train, and lint collector
 Lightweight plastic door panels allow for easy liftoff and removal for access to dryer components.
 Sealed basket drying chamber minimizes outside air infiltration

Basket-

Type t-304 Stainless steel perforated panels
 Type t-304 Stainless steel ribs
 Removable perforation panels
 Removable ribs
 Heavy steel running ring and cross-member welded cage construction
 Over running stainless basket gap rings protect garments from damaging pinch points

Electrical/Controls-

SG4 touch screen PLC control
 Central located controls electrical and pneumatic
 Plug and play harnesses for electrical
 Plug and play pneumatic
 Ambient, inlet, and exhaust temperature probes
 Over temperature safety

Fire Suppression-

Automatic water valve activation
 Manual water valve override
 Standard on all Braun Dryers

INSTALLATION NOTES

- All dimensions shown are inches. Millimeters are shown in brackets [].
- These specifications are subject to change without notice. Please contact G.A. Braun for verification of, or to obtain the latest release.
- Mechanical contractor shall install the main gas pressure reducing regulator and CSA approved gas shut off valve included with each dryer, for each dryer installed. Failure to do so may result in unsatisfactory dryer performance.
- An external compressed air tank reservoir with trim is provided for the dryer. This provides a volume of air to power the lint collection system. Stand alone dryers will have an individual tank. Multiple dryers may share a tank reservoir. Mechanical contractor is responsible to mount and plumb tank(s). Contact G.A. Braun for details.
- (This section pertains only to central lint collection vacuum systems) The external central lint collection vacuum unit shall be installed with separate main circuit breaker. It is not powered by the individual dryers. See interconnect wiring diagram provided with the System Installation Book for complete details. The vacuum unit is provided with a control box with interconnect terminations for each dryer, power on/off, power on indication light, and a manual vacuum unit test button.

DUCTWORK- Reference Appendix A in the O&M Manual for specific ductwork requirements.

- Ductwork sizing is critical. A qualified mechanical contractor or engineer should size the ductwork. Failure to follow good duct design practices will result in improper and poorly functioning equipment.
- The duct connections on the equipment do not indicate final duct sizes. The ducts must be sized to provide adequate air flow to and from the dryer.
- Air volume in an industrial dryer is much higher than a conventional HVAC system. Industrial dryers may move as much as 14,000CFM of turbulent air. Check the technical specifications for the correct dryer airflow and static pressure requirements.
- Careful consideration must be given to the ductwork design. Airflow through the dryer is not smooth or uniform. The tumbling process inside the dryer will cause the air flow to surge. There will be periods of full air volume flow followed by sudden nearly full blocked air flow. The interval between periods of full and zero flow is just a few seconds. The volume of the air the dryer is moving is significant. Suddenly stopping an air volume this size causes the air to compress and will put significant pressure on the ductwork. The same is true when the air is released. The compressed air behind the blockage and the power in the main blower suddenly release an excess air amount into the ductwork. The closest analogy to this is when you kink a garden hose, you can feel the hose expand behind the kink, and the water coming out of the hose stops. When the kink is released, the sudden surge from the hose is greater than the original flow because the hose has to return to its original size. In this analogy, the kink is the goods tumbling in the dryer and the hose is the ductwork going to and from the dryer. The duct design must resist and withstand the pressure the turbulent air puts on it.



BRAUN PASS THRU DRYER 500 PT – Vertical Slide Door- Low NO_x - NGF/PGF

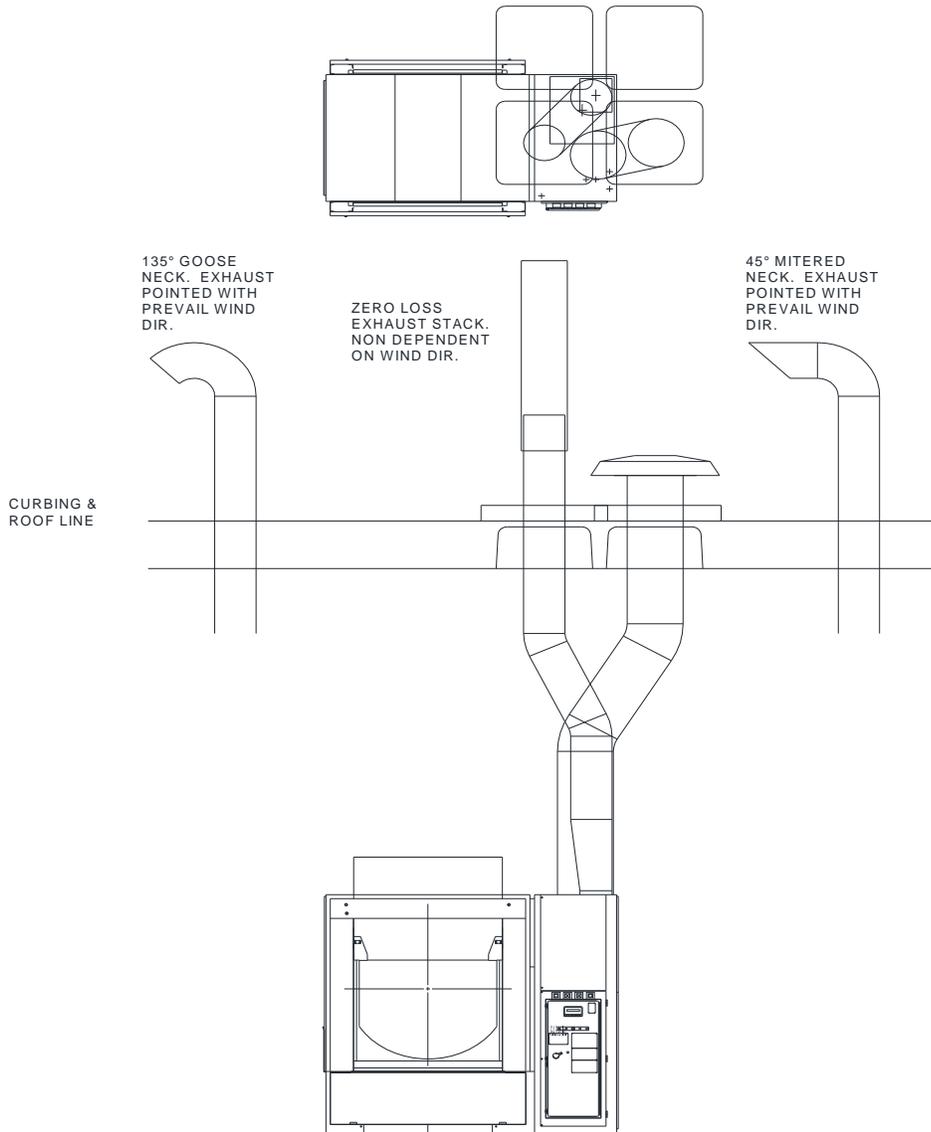
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In addition to ductwork, restricted ducting puts stress on the lint collection system. The restriction can make the air flow even more turbulent. The internal lint collection system is a single pass system. That means the exhaust air only passes through the lint collection screen once, before exiting the dryer to atmosphere. The screen collects approximately 85% of the lint in the exhaust air stream. As more lint accumulates on the lint collection screen, the amount of lint bypassing the screen gradually decreases. At the end of the dry cycle, the lint screen is collecting almost all of the lint expelled by the tumbling goods. Turbulent airflow causes the collected lint to be constantly being lifted from the screen and re-deposited, effectively beating it against the collection screen. The more turbulent the air flow the greater the frequency and intensity of the beating. The beating action will release even more lint into the exhaust air stream exiting the dryer and expelled to atmosphere.

5. **Do not exceed a total duct system static pressure of .5 in. w.c.** This is the combined static pressure of the exhaust and inlet duct. (TOTAL INLET DUCT SP^{W.C.})+(TOTAL EXHAUST DUCT SP^{W.C.})= TOTAL SYSTEM SP. Duct static pressure in excess of the rated amount will cause operational issues, including but not limited to, ignition failures, frequent inlet and/or exhaust over temperature alarms, unsatisfactory or increased dry time, increased utility consumption, possible damage to external ductwork, and significantly reduce equipment life.
6. In some cases, by preference or necessity, the dryer inlet air will not be ducted. Instead, the air may come directly from inside the building. Makeup air will have to be ducted into the building to account for the air that is pumped out by the equipment exhaust. Refer to the equipment specifications to determine the amount of building makeup air required as indicated by the EXHAUST DUCT VOLUME. The total number of machines drawing from inside air will determine the total makeup air volume required. Do not overlook the significance of providing proper makeup air. Inadequate makeup air will produce some of the same results as static pressure above the rated amount. It can also result in possible direct or indirect injury to employees, reduce performance of building heating and cooling systems or make them inoperable, degrade building working environment, and reverse the venting of dangerous exhaust gases on other gas fired equipment, or process equipment in the building. If the lack of makeup air is significant enough it could possibly reduce the structural integrity of the building.
7. Do not install any type of screen over the ends of the exhaust or inlet ducts.
8. Roof penetration and flashing/curb is by owner. The type and style of roof penetration weather protection for the dryer ducting is best determined by the roof manufacturer, and/or mechanical contractor.
9. Minimum duct material shall be galvanized 18ga construction, for top inlet and exhaust models. Duct material shall be 16ga for rear exhaust models on the first 20ft of exhaust duct connection from the blower discharge. The 16ga material gives some protection against impact, either internal or external. After 20ft, 18ga ducting is okay. If using square duct to transition to an external lint collector, a heavier gauge material may be needed to include bracing support on the square ductwork. G.A. Braun discourages the use of square ductwork, but if used, it must be adequately supported to withstand the normal surging tendencies of the industrial dryer. Stainless steel ducting is not required. SMACNA rules for high pressure duct construction SHALL apply.
10. **Round (spiral) duct is recommended over square or rectangular ducting.** Square and rectangular ducts tend to "oil-can" and produce excess noise. The seams will become brittle and break over time if the oil-canning is excessive. These ducts tend to build lint internally, more so than round duct. **If square ducting is used, responsibility for structurally bracing this ductwork to prevent breakage is the sole responsibility of the contractor installing said ductwork. G.A. Braun will assume no responsibility for square ductwork breakage at any point during its life span.**
11. Support ductwork independently of the dryer duct connections. This will help prevent sound transmission from the equipment to the duct work. Also, the dryer is not designed to bear the weight of the duct work.
12. Use of a zero or no loss stack above the roof is recommended, unless ducting to a second stage lint collection device located above the roof line. A no loss stack can be used on both the inlet and exhaust ducts. Maintain at least 5ft. of separation between the ends of the stacks.
13. A goose neck on the exhaust and a weather cap on the inlet are acceptable. Size the ductwork accordingly to account for the restrictions these will add to the duct system.
14. For dryers that are directly exhausted to atmosphere the exhaust duct should be sized so the air velocity does not fall below **2,400 ft./min.** This will help keep any lint collector bypass material from settling out in the ductwork. Exhaust air duct velocity **MUST not exceed 3,500 ft./min.** Failure to keep airflow within these specified limits will void any warranty support of said dryer.
15. For dryers that are connected to an external lint collector the exhaust duct should be sized so the air velocity does not exceed **1,800 ft./min.** in the ductwork leading up to the lint collector. After the lint collector, the exhaust air duct velocity **MUST not exceed 3,500 ft./min.** Failure to keep airflow within these specified limits will void any warranty support of said dryer. Pay attention to the internal static pressure of the lint collector. This is part of the duct design total system static pressure calculation.
16. The prevailing wind direction in your area can affect the discharge direction of the free exhaust air. Goose neck and mitered elbow exhaust ducts require special attention. They should not face into the prevailing wind. Be careful not to exhaust one dryer directly toward the inlet of another dryer, or other equipment fresh air intakes. No loss exhaust stacks are not affected by wind direction.
17. Exhaust discharge can be harmful or dangerous. Pay attention to the proximity of other equipment to the dryer exhaust discharge (This should apply to any equipment with high exhaust discharge temperature). This includes but is not limited to roof top air handling equipment, roof vents, and roof access hatches. Avoid discharging into or near these. A barrier may be required to isolate and protect those items that may be damaged by, or create a danger to, if the exhaust discharge is allowed to blow towards/into them.
18. All elbows shall be long radius and designed with a center line bend radius of at least 2x's.
19. On models with coaxial ductwork, the exhaust duct is inside the inlet duct. Size the exhaust duct first, and then the inlet duct. Do not forget to subtract the area of the exhaust duct from the area of the inlet duct. Do not forget to add the static pressure to the inlet duct from the exhaust duct (Friction from the incoming air on the internal exhaust duct). Failure to do so will cause the inlet duct to be undersized. Undersized ductwork will result in unsatisfactory operation of the dryer.
20. The pictures and drawings below give an example of ductwork installations specific to Braun Dryers. This is an example only, and does not represent your specific installation.



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PT Dryer with split ducting