STREAM

OR



Better Drying with Better Venting Clothes Dryer Exhaust



Can Your Clothes Dryers Breathe? Create the Ultimate Design - Feel the Difference Forever...

A Better Climate for Clothes Dryers

Clothes dryers will make or break a laundry facility. If the user thinks the clothes have been in the dryer long enough and they are still not dry, the clothes dryer will get the blame.

Extensive drying times are typically caused by bad exhaust design, reduced duct sizes and insufficient make-up air. You are probably concerned about duct runs that cause your dryers to experience too much back-pressure and violate building codes - only then to install a booster fan that does not live up to your standards?

The MDVS Mechanical Dryer Venting System™ is the benchmark for dryer venting. The fully modulating MDVS system maintains the proper flow in ducts serving multiple Type 1 and Type 2 clothes dryers.

Advantages

The MDVS provides a wealth of advantages. Ducts can be configured the most efficient and cost-effective way and still meet code requirements. Aesthetics can be enhanced as the MDVS reduces the number of required ducts and roof or wall openings.

Even the make-up air can be provided with the assistance of the MDVS system, which can also operate and control a make-up air fan. Insufficient make-up air is the biggest problem faced by the laundry industry today.

If dryers are not vented properly, lint will accumulate in the dryers and the ductwork. This is not only dangerous, but will also affect drying ability.

Proper Airflow Saves Money & Energy

The improved flow control maximizes the clothes dryer's operating efficiency and improves drying times. The modulating flow control system reduces energy consumption dramatically compared to a constant speed flow control system with a single speed fan. The savings can be dramatic:

20 Dryer Multistory Apartment										
	ME	ovs	Single Sp	Savings						
Fan Power	41 kW/yr	\$4/yr	4,368 kW/yr	\$437/yr	\$433/yr					
Loss of Heated Air	1,454 kBtu/yr	\$15/yr	155,520 kBtu/yr	\$1,555/yr	\$1,540/yr					
Loss of Cooled Air (sensible only)	824 (kBtu/yr)	\$5/yr	88,128 kBtu/yr	\$557/yr	\$552/yr					
Total Annual Savings = \$2,525										

Location = Atlanta/GA (3000DD, 1700DD,) Power = \$0.10/kW, Heating = \$1.00 per therm, A/C = 0.75 kW/ton x \$0.10 per kW/h

When dryers don't get the air they need or the proper exhaust, the dryers short-cycle and can't achieve a proper burn pattern. It takes longer to dry, which affects the bottom line. Improved drying time translates into additional energy savings. An inefficient dryer will make a user add drying time or a complete cycle. Operating savings of 20-30% are realistic.

Installation is also less expensive. There are virtually no duct length limitations and a common duct can be used for venting in lieu of multiple ducts that also require multiple roof or wall penetrations.







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Enhance Flow for Efficient Operation

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Reduce Energy Cost

Code Compliance & Design

The MDVS system is listed and approved for removal of lint-laden air and our designs comply with NFPA and ICC Building and Fuel Gas Codes. We have decades of experience in the field of mechanical dryer venting and have exhausted dryers from ADC to Whirlpool and almost every manufacturer in between.

EXHAUSTO assists with design and layout of dryer venting systems. We have many years of experience dealing with fire-rated shafts, diversity factors, lint issues, velocities and acceptable pressure differentials.

EXHAUSTO wrote the book on mechanical dryer venting!

EXHAUSTO MDVS Mechanical Dryer Venting System™

EXHAUSTO'S MDVS systems for multistory and multifamily dwellings and central laundry facilities, or coin-laundries used with the recommended EXHAUSTO products, always provide modern, efficient and energy-saving dryer venting. We guarantee that our products are made to work together effectively and that our systems comply with and are listed with all relevant codes and listing standards.

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Detailed descriptions of our systems are provided on the following pages.



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MDVS - Multistory Venting Systems with "on-demand" Control

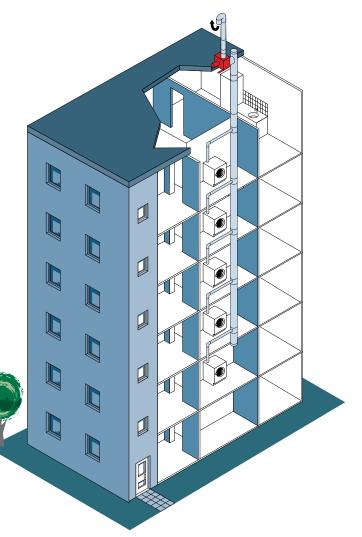


The MDVS, Mechanical Dryer Venting System[™] is used to extract lint-laden air from Type 1 clothes dryers in multistory residential dwellings. It features "on-demand" control that maintains a precise exhaust condition for the dryers by constantly adjusting the exhaust rate to meet current needs.

The concept assures that dryers are never over- or underdrafted and optimal dryer times are achieved at the lowest possible use of energy. It assures optimal performance and control.

- Full modulation and 100% pressure control
- Bearing Cycle Activation.
- Easy programming of essential functions 80 parameters are programmable for customized solutions.
- Spark-resistant construction with TEF-motor with direct drive and true variable speed (inverter duty).
- System and control are listed to UL705 Standard for Power Ventilators with special consideration to exhausting lint-laden air from clothes dryers.

Exhaust Unit:	Option 1: BESB Box Ventilator					
	Option 2: RSV Fan					
Control System:	EBC 12 – integrated control with constant pressure modulation.					
Speed Control:	For 1-phase fans the speed control is provided directly by the EBC control. For 3-phase fans the speed control is provided by the EBC control via a VFD.					







MDVS - Laundry Room Venting Systems with "on-demand" Control



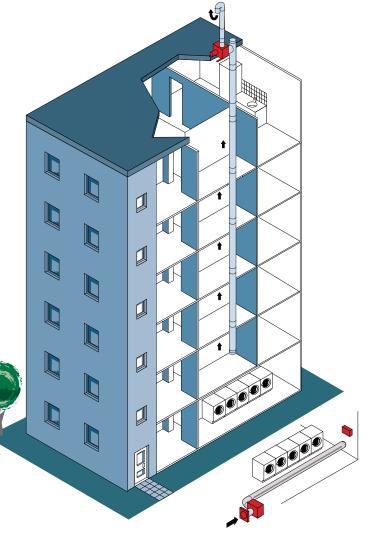
The MDVS, Mechanical Dryer Venting System[™] is used to extract lint-laden air from Type 1 or 2 clothes dryers in residential or commercial laundry facilities and coin-laundries. It features "on-demand" control that maintains a precise exhaust condition for the dryers by constantly adjusting the exhaust rate to meet current needs.

The concept assures that dryers are never over- or underdrafted and optimal dryer times are achieved at the lowest possible use of energy. It assures optimal performance and control.

An optional make-up air solution is available as the control can monitor and control the supply of make-up air via a fan. It eliminates the need for louvers to provide air for the dryers.

- Full modulation and 100% pressure control
- Bearing Cycle Activation.
- Easy programming of essential functions 80 parameters are programmable for customized solutions.
- Spark-resistant construction with TEF-motor with direct drive and true variable speed (inverter duty).
- System and control are listed to UL705 Standard for Power Ventilators with special consideration to exhausting lint-laden air from clothes dryers.

		1. 18 300
Exhaust Unit:	Option 1: BESB Box Ventilator	
	Option 2: RSV Fan	
Control System:	Option 1: EBC 12 – integrated control with constant pressure modulation.	
	Option 2: EBC 30 - integrated control with constant pressure regulation of both exhaust and supply air.	
Speed Control:	For 1-phase fans the speed control is provided directly by the EBC control. For 3-phase fans the speed control is provided by the EBC control via a VFD.	с





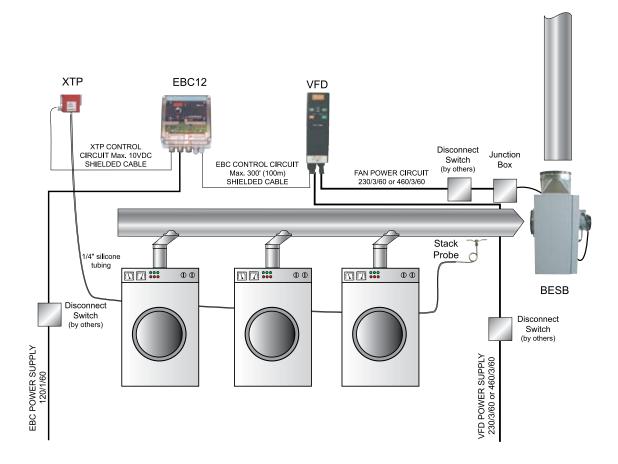
Choose the Right Components!

BESB Low Energy Fan MDVS Low energy fan in compact design High efficiency aluminum impeller guaranteeing EXstream performance Made from corrosion resistant material (indoor or outdoor installation) Insulated housing and quiet operation Variable-speed class A motor (inverter duty) Access with 180° opening angle and full duct access 4 sizes available, ETL and ETLc Listed **RSV Low Energy Fan MDVS** Vertical exhaust in small compact design High efficiency aluminum impeller guaranteeing EXstream performance Made from corrosion resistant material (indoor or outdoor installation) **Quiet Operation** Variable speed, class H motor (inverter duty) Clam shell design opens 90° for full duct access 4 sizes available, ETL and ETLc Listed **EBC 30 Fan Speed Control MDVS** Constant pressure control for fans Used where constant pressure is needed in the exhaust duct or in the laundry room for "on-demand" control Helps keep power consumption down "Plug-and-Play" design for easy operation Can control exhaust rate and make-up air supply rates. **EBC 12 Fan Speed Control MDVS** Constant pressure control for fans Used where constant pressure is needed in the exhaust duct for "on-demand" control Helps keep power consumption down Easy to operate **Danfoss VLT2800 Variable Frequency Drive MDVS** Pre-wired for easy installation with EBC 12 or EBC 30 Pre-programmed from factory - no field programming needed.



MDVS, Mechanical Dryer Venting System™ System Components and Specifications

NOTE: All wiring must be field wired.



Model	Fan	Control	Danfoss VFD				Power Supply VFD	Max. Input Amp to VFD	Input Sup Imp to Fa		Max. Input Current Fan	Max Output Fan HP	RPM t	
MDVS250	BESB250	EBC 12, incl. XTP and stack probe	No	No		Γ	NA	NA	120	1/60	5.8	0.5	1600	
MDVS315	BESB315		2807 (1HP)				220-240/1/60 200-240/3/60 380-480/3/60	16.7 8.2 3.0	230	'3/60 '3/60 '3/60	4.0 4.0 2.3	1.0 1.0 1.0	1740 1740 1740	
MDVS400	BESB400		2815 (2HP)	No			220-240/1/60 200-240/3/60 380-480/3/60	24.3 12.2 5.1	230/3/60 230/3/60 460/3/60		6.5 6.5 3.8	2.0 2.0 2.0	1740 1740 1740	
MDVS500	BESB500		2822 (3HP)				200-240/3/60 380-480/3/60	15.3 8.3		'3/60 '3/60	7.8 4.1	3.0 3.0	1740 1740	
Wiring			Wire Ra	iting	Rating Amps		No. of leads	Max Leng			lin, Gauge		ng must c and in th	
EBC POWER SUPPLY		600	600V 6.3		3	*				National Electrical				
XTP CONTROL CIRCUIT		-	-			3	300	300'		24				
FAN POWER SUPPLY		600\	600V			3	*		14					
APPLIANCE CONTROL CIRCUIT		*	*		*		*		*					
EBC & VFD CONTROL CIRCUIT		-	- <0.1			2	300'		:	24				
VFD POWER SUPPLY		600\	600V see abov		/e	5	*			14	** Job	specific -	- c	

System Components and Specifications

mply with local ir absence, the Code, NFPA 70.

600V see above 5 * 14 ** Job specific - check local code



Support Services

Project and Design Support

EXHAUSTO solutions are so much more than just products and systems. We provide pre-sale analysis, system design and implementation recommendations. During this process we use state-of-the-art design software, developed by EXHAUSTO, which enables us to design any system with great accuracy and speed. The design software, FanCalc, integrates a database of clothes dryers complete with operating data and requirements, such as exhaust requirements, exhaust temperatures, efficiency and much more – something that nobody else has. The database also includes data on ducts with k-values, resistance factors, insulationfactors, etc.

FanCalc allows EXHAUSTO's experienced engineers to design complete venting systems fast, accurate and efficiently, while providing engineers with sizing reports, code violation warnings as well as design alternatives.

EXHAUSTO has venting design capabilities that not many fan or venting manufacturer can match. In addition to creating venting system designs, FanCalc checks for code violations. It calculates and checks for proper vent type application, operating temperatures, pressure losses in each venting component, risk of condensation and provides system specific wiring diagrams.

As EXHAUSTO usually designs the entire venting system, we also take full responsibility for its operation. This is part of EXHAUSTO's "Performance Guarantee".

All calculations and system recommendations provided by EXHAUSTO are performed in accordance with approved engineering methods. They present an appropriate "Approved Method" of vent design and sizing as defined in national standards, such as the National Fuel Gas Code ANSI Z223.1, NFPA 54, IFGC and others.

Please notice that "the equivalent length method" is not an approved engineering method for vent sizing.



Engineering and Installation Support

Systems designed by EXHAUSTO come complete with AutoCAD installation instructions and wiring diagrams for the specific job. They are not generic diagrams but drawings showing where components are installed and exactly how they are wired together so potential problems in the field are resolved before they occur. A customized installation

and wiring package is part of the delivery.

EXHAUSTO offers telephone engineering and installation support. All designs are stored electronically, so our engineers and technicians know exactly what a system looks like and what it includes.



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