

X-VENTS®

Executing Quality and Performance in Ventilation

A HOUSE SHOULD BREATHE THROUGH ITS LUNGS, NOT ITS SKIN

People say a house needs to breathe, and it does. The question is how.

Older homes breathed through their skin: air leaked in and out through cracks in the walls, gaps around windows, and through the attic. Homes built to today's energy codes are sealed tight to save energy, so most of that leakage is gone. The air a house needs now has to come through planned paths: ventilation, makeup air, and combustion air. Those are the building's "lungs."

Every mechanical ventilation system works one of three ways, and each one changes the pressure inside the house. Pressure decides whether a chimney drafts up or pulls back down into the envelope.

EXHAUST VENTILATION (FIG. 1)
Fans pull air out, and replacement air finds its way back in through passive inlets and leaks. Bath fans and range hoods work this way. The house runs negative, which works against every chimney and flue in it.

SUPPLY VENTILATION (FIG. 2)
A fan pushes outdoor air in, and indoor air leaves through relief vents and leaks. The house runs slightly positive.

BALANCED VENTILATION (FIG. 3)
Supply and exhaust move matched airflow, so the house stays near neutral. An ERV or HRV does this for its own airflow, but it can't respond when a range hood, dryer, or fireplace starts pulling air. True balance for the whole house means replacing what leaves, as much as needed, only when it's needed.

FIG. 1 EXHAUST VENTILATION

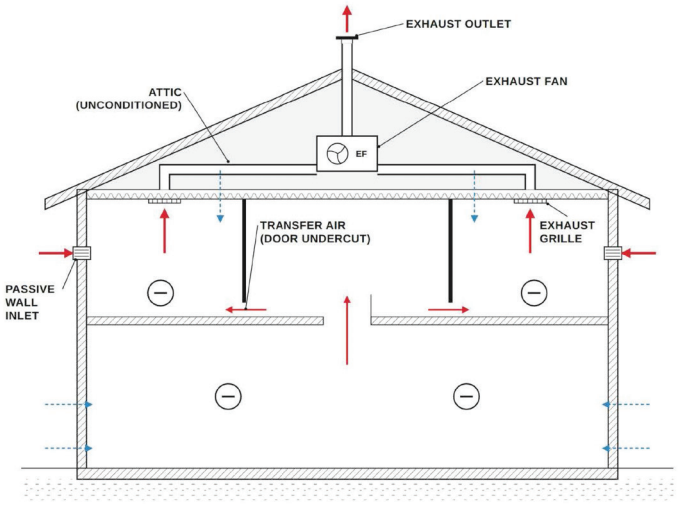


FIG. 2 SUPPLY VENTILATION

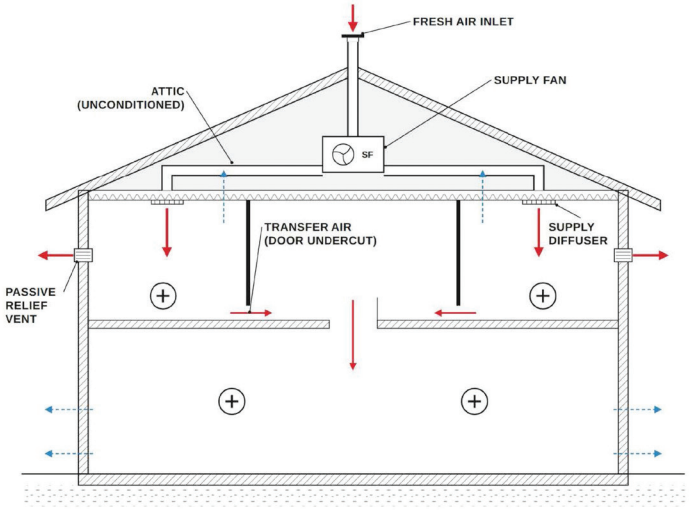
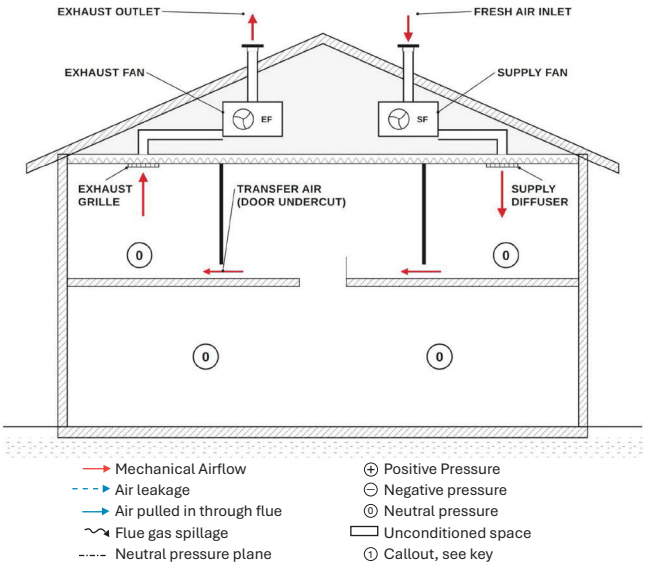
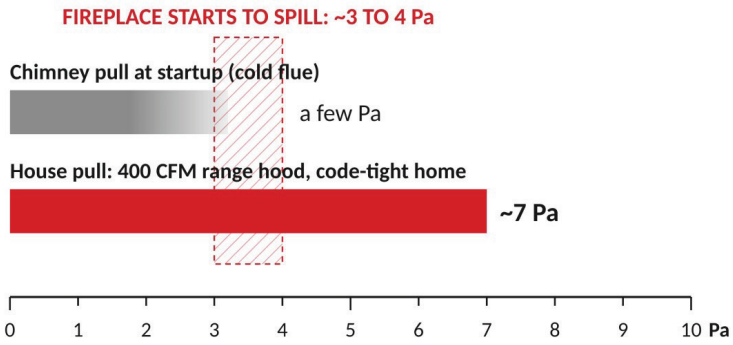


FIG. 3 BALANCED VENTILATION



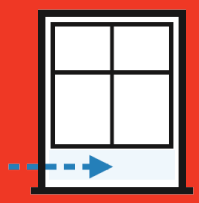
x-ventiso.com

AN ENERGY-EFFICIENT HOME AND A HEARTH WORK WELL WHEN THEY'RE DESIGNED TOGETHER. PROBLEMS START WHEN THEY AREN'T .

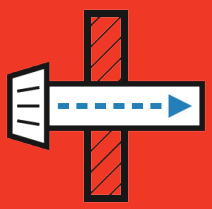


Pressure in Pascals (Pa). About 250 Pa equals one inch of water column.
Fireplace spillage limits per CMHC chimney safety guidance: −3 Pa (unlined chimney on an exterior wall), −4 Pa (lined, insulated, or interior chimney).

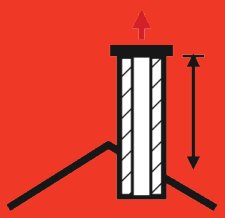
FIXES THAT ARE NOT SUSTAINABLE SOLUTIONS



Opening Window
Can only help when it is open. Generally closed in cold weather, the primary time of use for hearth appliances.



Outside Air Kit
Passive opening. Can limit negative pressure, but can't prevent when exhaust appliances start pulling on building envelope



Taller Chimney
Stronger pull when fire is hot. At startup, a cold flue gets little benefit from the extra height.

PRESSURE DECIDES DRAFT

A chimney drafts because hot flue gas is lighter than the air around it, and that difference pulls the gas up. Once the fire is going and the flue heats up, the pull strengthens allowing it to continue unhampered. At startup, before the flue warms, and again as the fire dies down, that pull can drop to just a few Pascals.

House pressure works on the same scale. In a home built to today's energy code, a 400 CFM range hood can pull the house negative by roughly 7 Pascals. Combustion-safety guidance puts the point where an open fireplace starts pulling flue gas back into the room at around 3 to 4 Pascals.

When the house pulls harder than the chimney lifts, the chimney loses.

PASSIVE OR MECHANICAL?

A passive opening only lets air in once the house is already negative, because the pressure difference is what pulls the air through. Passive openings can limit negative pressure, but they can't prevent it.

A fan delivers air before the pressure drops.

THREE KINDS OF AIR - THREE DIFFERENT JOBS

VENTILATION AIR

Dilutes indoor pollutants for the occupants of the home.

MAKEUP AIR

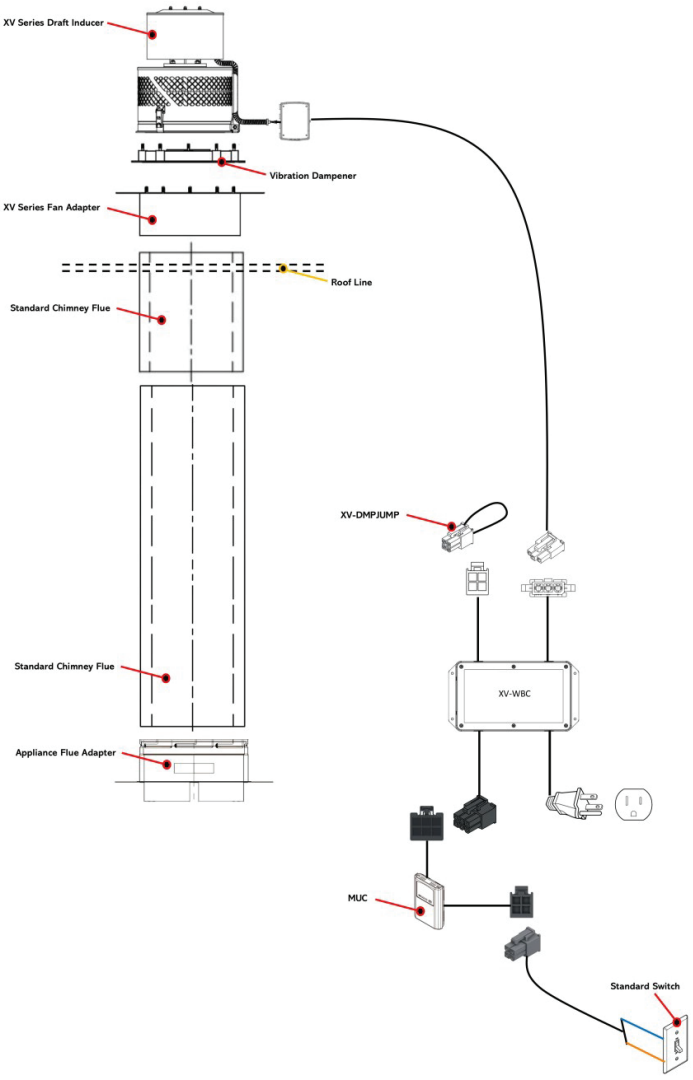
Replaces what exhaust appliances remove.

COMBUSTION AIR

Feeds fuel-burning appliances

X-VENTISO®

by earthcore®



COMPLETE MECHANICAL DRAFT SYSTEMS

X-VENTISO® designs complete mechanical draft systems for fireplaces and appliances that need help venting: draft inducers, controllers, dampers, and flue silencers, designed to work together and connected with Molex quick connections.

Three inducer sizes cover solid fuel, gas, and grease. Every controller comes with everything the draft system needs for a code-compliant installation: proven draft plus the safety interlocks or alarms each fuel type requires, in one package.

SYSTEMS, NOT PARTS. CODE COMPLIANT, EVERY TIME [1]



MECHANICAL DRAFT, DESIGNED AROUND SOUND AND SIMPLICITY

Built to remove the trade-offs of traditional mechanical venting, X-VENTISO® lets you design the installation your way. Every component is chosen to keep it quiet and intuitive.

Quiet: Curved blades that move air smoothly, with exhaust thrown up and away from the home, not across the roof.

Simple to install: Controllers plug into a standard 120V outlet, and Molex connections link every component. No wiring diagrams.

Supported: A free online chimney flue calculator, application guides, and direct access to people who size these systems every day.

[1] When installed per X-VENTISO® installation instructions and the appliance manufacturer's instructions.

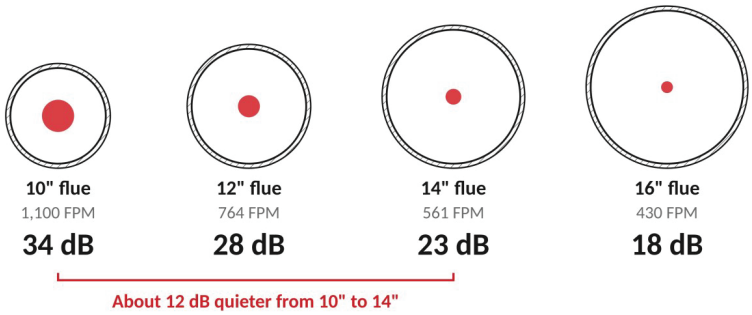
EVERY DECISION STARTS WITH SOUND

TWO TYPES OF NOISE. TWO DIFFERENT SOLUTIONS.

AIR NOISE: SIZE IT RIGHT

Air noise comes from speed. Push the same air through a bigger flue and it moves slower and quieter. Going from a 10” flue to a 14” drops flow noise by about 12 dB. Our free chimney flue calculator sizes every job, and our team will review any project with you.

Same 600 CFM. Bigger flue. Slower air. Less noise.



Flow noise shown as sound power (Lw), straight flue. Flues drawn to scale; red dot size reflects air velocity.

MECHANICAL NOISE: BUILD IT AND CONTROL IT CORRECTLY

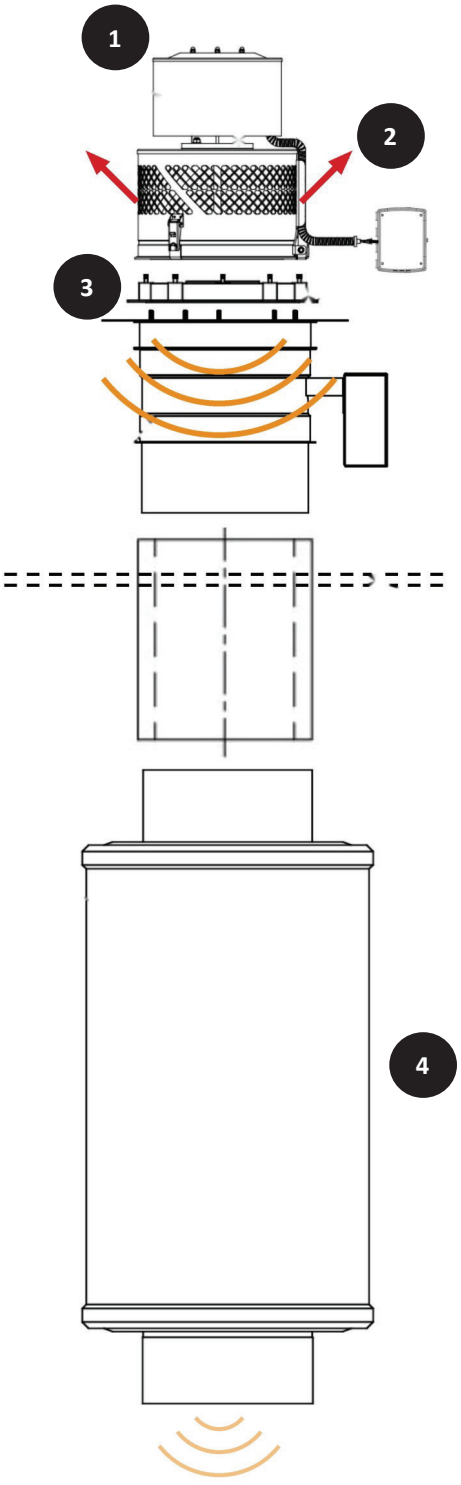
Mechanical noise starts at the motor and travels down the chimney into the building envelope. X-VENTISO® designs systems to stop sound at every stage.

1. **DRAFT INDUCER:** Smooth speed control keeps it quiet at partial speed, with no hum. Curved blades move air smoothly.
2. **45° UPWARD DISCHARGE:** Exhaust and sound go up and away from the building, not across the roof.
3. **VIBRATION DAMPENER:** Isolates the draft inducer from the chimney, so vibration stays at the top.
4. **WSPRDraft FLUE SILENCER:** Tested to ISO 7235. Absorbs mechanical noise before it reaches the room.

THE QUIETEST DRAFT INDUCER IS THE ONE THAT ISN’T WORKING HARDER THAN IT HAS TO.

X-VENTISO® Systems run every setup with only as much pull as the chimney requires. No matter the system design, we give you exactly what you need, when you need it.

VISIT OUR FREE CHIMNEY FLUE CALCULATOR AT X-VENTISO.COM



Mechanical noise: Strongest at draft inducer, reduced below WSPRDraft flue silencer.

MORE PULL... NOT JUST MORE AIR

A fireplace should exhale on purpose. XV Series draft inducers give the chimney a steady, controlled exhale. Three sizes cover gas, solid fuel, and grease.

ONE LINE, EVERY FUEL TYPE

The same draft inducer is listed for gas, solid fuel, and grease, from fireplaces to wood-fired ovens and commercial kitchen exhaust. It's rated to 1,000°F continuous and 1,400°F intermittent, with no loss of performance at temperature. Size it properly, and you are done.

BUILT FOR RESISTANCE

Moving air through open space is easy. Chimneys create real-world resistance: every elbow and return, every horizontal run, even the wind. XV Series draft inducers are built for pressure, so they keep moving air when the chimney fights back.

BUILT TO LAST

- 316L stainless housing and impeller resist acidic condensate
- Motor kept out of the flue gas stream
- Tool-less clamp and hinge for cleaning and maintenance
- Spark arrestor cut into the fan body

QUIET BY DESIGN

Curved axial vane blades move air smoothly, creating a 45° upward discharge, sending exhaust and sound up and away from the building.



XV250

XV350

3 SIZES
Solid fuel, Gas, and Grease

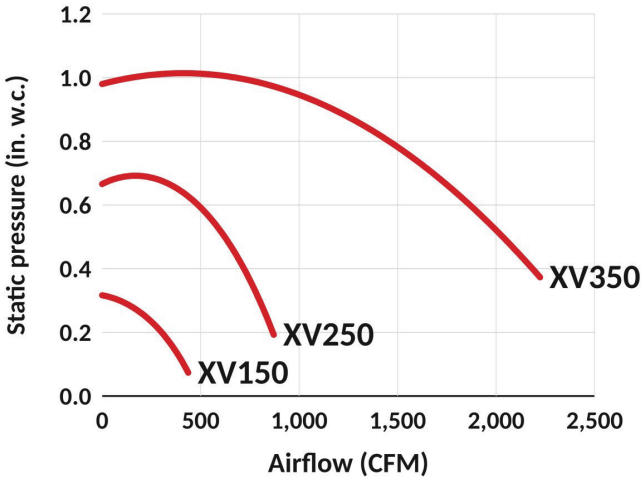
1,000°F
Continuous rating, 1400°F intermittent

316L
Stainless housing and axial vane

45° Angle
Upward discharge, away from roofline

Model	Capacity	W x H (in)	Weight	Amps
XV150	450 CFM	12.75 x 16	28 lb	1.0 A
XV250	900 CFM	12.75 x 16	30 lb	1.6 A
XV350	2,100 CFM	16.75 x 18	54 lb	3.7 A

All models plug into a standard 120V outlet through the controller. Listed: UL 378 · UL 705 · UL 705 Supplement SC · CSA B255 · CSA C22.2



EVERY PIECE PLUGS IN

A draft inducer is one part. X-VENTISO® system accessories finish the job: quieter, sealed when idle, and connected to the controller with the same Molex plug.



NEW

AUTOMATIC. SOLID FUEL. FINALLY.

Solid fuel fireplaces have always depended on someone manually opening a damper. An automatic damper for solid fuel was long considered impossible, but not anymore.

Built for wood from the start: no seal, and a deliberate gap to tolerate creosote buildup. Pairs with XV Controlled Power WBC, WBC DUO, and SFDC solid fuel controls. Tested and listed to UL 378, with an audible and visual alarm to meet NFPA 211.



WSPRDraft FLUE GAS SILENCERS
Motor noise travels down a flue like a voice down a pipe, and WSPRDraft absorbs it on the way. Tested to ISO 7235. Constructed with mineral wool behind 316L stainless mesh and body. Quick-release panels for cleaning and a condensate drain on every unit. Available in sizes from 8” to 16”.



TOP MOUNT / INLINE GAS DAMPERS
For gas applications. Available in top-mount and inline configurations. Closes the flue when the system is off, utilizing a silicone rubber sealed design to ensure minimal air leakage when closed. Connects to XV Controlled Power and Meridian Series controls with the same 4-pin Molex, regardless of size.



VIBRATION DAMPENERS
Isolates the draft inducer from the chimney, so vibration stays at the top instead of traveling down the structure. Urethane motor mounts and sized C-springs mount directly to XV Series draft inducers between the flue adapters, providing true mechanical isolation, not a mat.

Every X-VENTISO® damper uses the same 4-pin Molex. Choose the damper by fuel, not by controller.

DRAWINGS AND SPEC SHEETS AVAILABLE ONLINE

Visit X-VENTISO.COM for a full offering of DWG files and product dimension spec sheets

Install per X-VENTISO® installation instructions and the appliance manufacturer’s instructions.

SYSTEMS, NOT PARTS

Every X-VENTISO® controller ships with everything a code-compliant installation requires. Plug it in, connect the Molex, commission it once.

A FAN SPEED CONTROL IS NOT A DRAFT CONTROL.

A speed control sets how fast a fan spins. It can't tell whether the chimney is actually drafting, and it can't stop the appliance when it isn't. Code requires both and every X-VENTISO® controller purposefully does both.

XV CONTROLLED POWER SERIES

Set once, right for the application specific chimney. The installer dials in the draft inducer speed at commissioning, so it runs only as hard as that chimney needs. The end user gets simple on and off from a wall switch, remote, or a home automation contact.



SOLID FUEL
WBC
Proves draft, with audible and visible alarm.

GAS
GBC
Proves draft before burner can fire.

TWO FLUES
DUO
GBC or WBC running two draft inducers from one controller.

STAND ALONE DAMPER CONTROLS

For applications without a draft inducer.

GAS
GFDC
Proves the damper open before the gas control can ignite

SOLID FUEL
SFDC
Opens damper from a wall switch, and alarms if it doesn't prove open

WHATS IN THE BOX

CODE REQUIREMENT	GBC	WBC	MERIDIAN	GFDC	SFDC
Plugs into standard 120V outlet	✓	✓	✓	✓	✓
Molex connections, no field wiring	✓	✓	✓	✓	✓
Proves draft / damper open	✓	✓	✓	✓	✓
Gas interlock	✓		✓	✓	
Audible and Visible alarm		✓			✓
Service Disconnect at draft inducer	✓	✓	✓		
Smoke Alarm (solid fuel)		By Building			By Building

DUO versions carry the same features as their base controller.

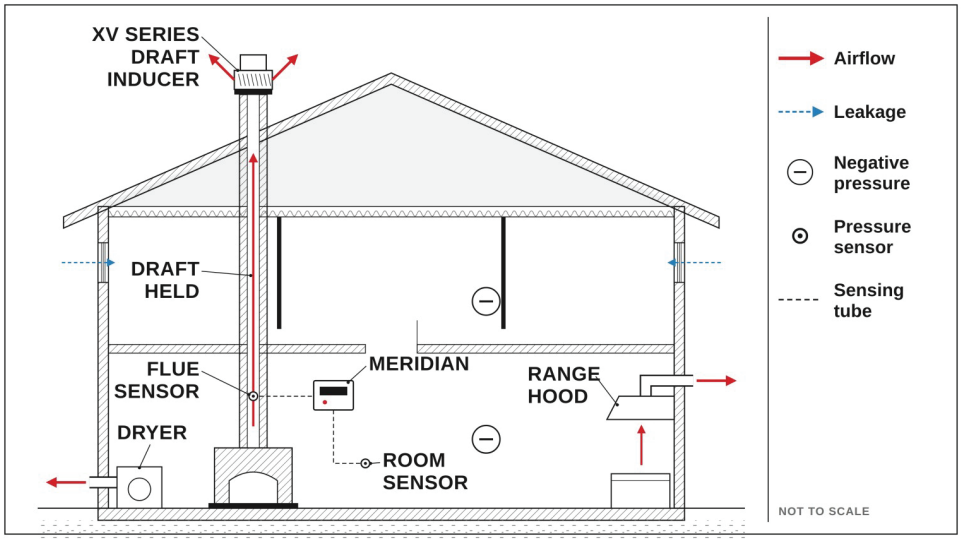
CODE COMPLIANT. EVERY TIME.[1]

[1] *When installed per X-VENTISO® installation instructions and the appliance manufacturer's instructions.*

ALWAYS READ THE ROOM

Meridian measures the flue and the room it serves. XV-FLUX, our modulation algorithm, uses that pressure differential to continuously adjust the draft inducer and provide only the draft the appliance needs. Fully automatic, nothing to dial in.





1. TWO REFERENCES
One pressure reading in the flue, one in the room. The differential is the draft.

2. A MOVING TARGET
XV-FLUX moves the setpoint with the room. A fixed stack setpoint can't see a range hood turn on, or a patio door open.

3. ONLY AS HARD AS NEEDED
Continuous modulation means the draft inducer is never working harder, or louder, than it has to.

WHEN THE ENVELOPE GOES NEGATIVE

A range hood, a dryer, a bath fan: each one pulls air out of a tight building envelope, and the chimney is the easiest way back in. Meridian sees the room go negative and modulates draft inducer speed to hold draft in the flue stack, so the appliance keeps venting the way it should.



NEW

TWO FLUES. TWO MEASUREMENTS. ONE CONTROLLER

Meridian DUO runs two draft inducers on two separate flues, with a dedicated pressure transducer for each. Each flue is measured and modulated on its own, so each one gets exactly the draft it needs, even when the two behave nothing alike. And like every Meridian Controller, each flue is referenced to the room, so both pull only as much as needed, when it's needed.

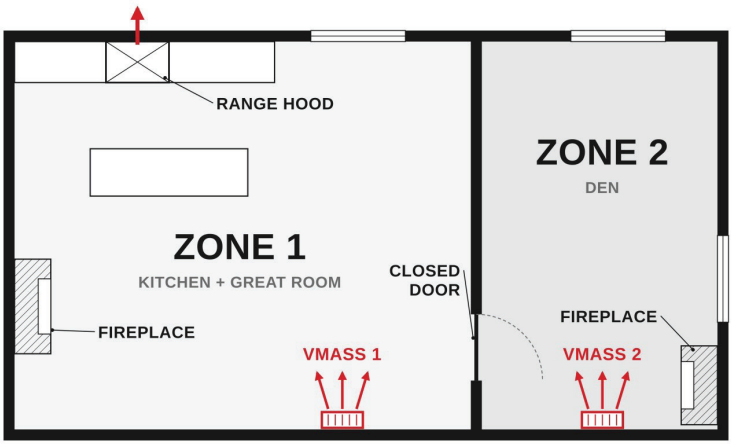
MERIDIAN DRIVES THE EXHALE. VMASS MANAGES THE INHALE

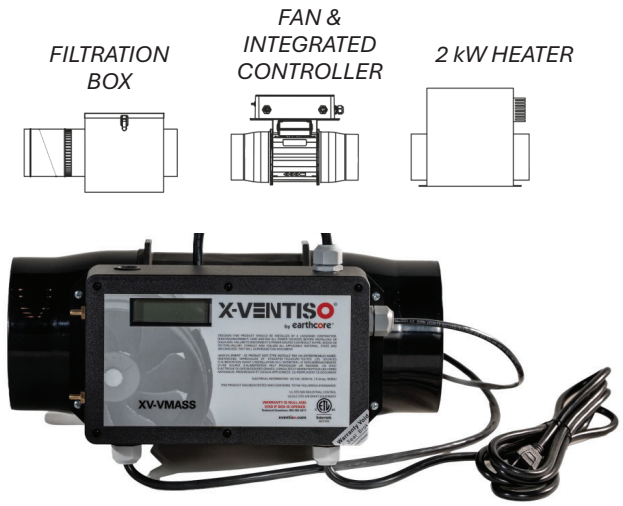
The same room-referenced XV-FLUX technology drives both.

Meridian is designed for gas applications only.

EXACTLY WHAT THE ROOM NEEDS, ONLY WHEN IT NEEDS IT

VMASS supplies tempered makeup air to replace what exhaust appliances remove. It senses its own zone and responds in real time, whatever caused the pull: a range hood, a dryer, a fireplace, or all three at once.
An ERV balances itself. VMASS balances the house.





1. SENSES
A pressure sensor reads its zone continuously. XV-FLUX holds the room within ±0.02 in. w.c. of a reference that moves with weather and elevation.

2. RESPONDS
Runs at a quiet 25 CFM baseline and ramps up to 400 CFM as the zone needs it, then settles back.

3. TEMPERS
Every unit filters (MERV 8) and heats incoming air (2.0 kW), so makeup air doesn't arrive as a cold draft.

ZONES, NOT APPLIANCES

VMASS responds to the zone it serves, not to one appliance. A zone with a hood and a fireplace can share one unit. A zone whose combined demand exceeds 400 CFM gets two, and they work together without talking to each other.

INSTALLS WHERE THERE'S ROOM

Three compact components on one 6" duct run fit a crawlspace, a joist cavity, or a vertical stack. The heater is rated for zero clearance to combustibles. Full system plugs into a dedicated 20A circuit, with nothing to program. Ready to go off the shelf.

CODE CALLS FOR IT

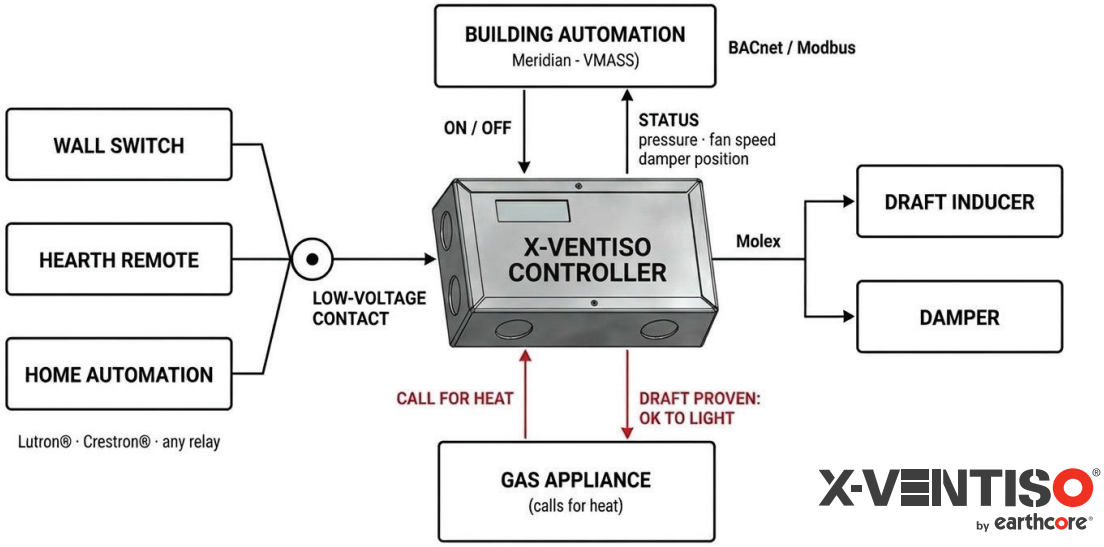
Exhaust over 400 CFM requires makeup air approximately equal to what it removes under IRC M1503.4 / IMC 505, and Canada's NBC Section 9.32 requires the same protection, as adopted provincially. VMASS delivers mechanical makeup air, which many jurisdictions also accept where outside combustion air is required. Confirm with your AHJ.

25 - 400 CFM, Modulating	**6"** Round Duct	**MERV 8** Filtration	**2.0 kW** Tempering Inline Duct Heater

PAIR VMASS WITH AN ERV OR HRV.
The ERV handles ventilation air. VMASS handles makeup air, responding when exhaust and combustion appliances pull on the house.

ONE CONTACT. ANY SYSTEM.

Every X-VENTISO® controller turns on and off from a simple low-voltage contact. If it can close a contact, it can run the system: a wall switch, a hearth remote, a home automation relay, or a building automation output.



IN THE HOME

Tie the system into the home's automation, so the fireplace, the draft inducer, and the makeup air come on together from one scene or one button. X-VENTISO® systems have been installed with Lutron® and Crestron® controls, and any system that can close a low-voltage contact will work the same way.

IN THE BUILDING

Meridian and VMASS connect to the BAS through BACnet, integrated at our factory before they ship. A BAS can turn them on and off and read their status from the front end. Modbus is available by request.

AUTOMATION DECIDES WHEN. X-VENTISO® DECIDES HOW.

A building system can enable Meridian, but it never fires the appliance. The appliance's own control calls for heat, and Meridian, interlocked with it, proves draft before the burner can light. Meridian and VMASS set their own targets through XV-FLUX, and Controlled Power runs at the speed the installer set at commissioning. Nothing a switch, an app, or a building system sends can change either, so the safety logic stays exactly where the installer and the listing put it.

CONTROLLER	BACNET / MODBUS	AUTOMATION CAN	STAYS WITH THE CONTROLLER
Meridian (Meridian, Meridian DUO)	Yes	Turn the system on and off; read on/off status, pressure, fan speed, damper position	Firing the appliance. The appliance calls for heat; Meridian proves draft before it can light.
GBC	No	On and off by dry contact	Speed, set at commissioning; gas interlock. For full BAS integration on gas, specify Meridian.
VMASS	Yes	Turn on and off; read pressure, fan speed, power	Setpoints (XV-FLUX)
WBC (WBC, WBC DUO)	Custom, by request	On and off by dry contact	Speed, set at commissioning
Damper controls (GFDC, SFDC)	Dry contact	On and off by dry contact	Damper proving and alarm

SIZING AND SUPPORT

BRING US THE PROJECT

WE'LL FIND THE YES

Every system starts with sizing. Run the numbers yourself with our free chimney flue calculator, or send us your plans and talk to the people who size these systems every day.

SIZE IT

Our free chimney flue calculator sizes the draft inducer and flue for your appliance in minutes.

SPEC IT

DWG files, spec sheets, termination clearances, and install manuals available at **x-ventiso.com.**

TALK TO US

Send plans or call with the unique ones. Draft, makeup air, controls, and automation, reviewed by our team.

EMAIL: plans@x-ventiso.com
CALL: 800.642.2920

THE X-VENTISO® SYSTEM

XV SERIES DRAFT INDUCERS
XV150 · XV250 · XV350. Gas, solid fuel, and grease.

DAMPERS
Gas top-mount and inline. Automatic solid fuel. 6" to 16"

MERIDIAN
Meridian · Meridian DUO. Self-modulating with XV-FLUX.

STAND ALONE DAMPER CONTROLS
GFDC · SFDC for applications without a draft inducer.

WSPRDraft FLUE SILENCERS
Tested to ISO 7235. 8" to 16".

XV CONTROLLED POWER
WBC · WBC DUO · GBC · GBC DUO. Set once at commissioning.

VMASS
Variable makeup air, 25 to 400 CFM, sensing its own zone.

VIBRATION DAMPENERS
Compatible with XV150 · XV250 · XV350

SYSTEMS, NOT PARTS. CODE COMPLIANT, EVERY TIME.[1]

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[1] When installed per X-VENTISO® installation instructions and the appliance manufacturer's instructions.

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