TORONTO DUCTWORK

Make-Up Air Systems

Make-up air unit installation required when exhaust capacity exceeds Ontario Building Code thresholds, including tempering and interlocking controls

17 Expert Answers from Duct IQ

torontoductwork.com/construction-brain

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Q1

Where does combustion air come from in Toronto?

In Toronto homes with gas-fired equipment, combustion air comes from one of two sources: the surrounding indoor air (for older, naturally aspirating appliances) or directly from outside (for modern sealed-combustion or direct-vent equipment). Understanding which type your home has is critical — getting this wrong creates a carbon monoxide risk.

Older Atmospherically Vented Appliances

Most pre-2000 Toronto homes have furnaces, water heaters, or boilers that draw combustion air from the mechanical room or basement. These appliances are called **atmospherically vented** or **natural draft** — they rely on the buoyancy of hot flue gases to pull air through the burner and up the flue. The combustion air comes from the house itself, which in turn draws replacement air through gaps in the building envelope — around windows, doors, rim joists, and penetrations.

This worked reasonably well in older, leaky Toronto housing stock. The problem arises when homeowners seal and insulate their homes aggressively (spray foam rim joists, new windows, weather stripping) without addressing combustion air. A tight home can **depressurize** relative to the outdoors, causing the furnace or water heater flue to backdraft — pulling combustion gases back into the living space instead of exhausting them. This is a serious carbon monoxide hazard and is more common in Toronto than most homeowners realize, particularly in post-war bungalows in Scarborough, North York, and Etobicoke that have been partially upgraded.

The Ontario Building Code and TSSA require that atmospherically vented appliances have adequate combustion air supply. For a typical GTA mechanical room, this means either a **direct outdoor air duct** (minimum 1 square inch of free area per 1,000 BTU/hr of appliance input) or sufficient volume in the mechanical room to sustain combustion without depressurization. A TSSA-registered contractor must assess and design this — it is not a DIY calculation.

Modern Sealed-Combustion Equipment

High-efficiency furnaces (95%+ AFUE) and most modern water heaters are **sealed-combustion** or **direct-vent** appliances. They draw combustion air through a dedicated PVC pipe from outside the building and exhaust through a second pipe — completely isolated from indoor air. These appliances are essentially indifferent to indoor air pressure and are far safer in tight homes.

If your Toronto home has a high-efficiency furnace with two PVC pipes penetrating an exterior wall (typically through the rim joist or foundation), you have sealed combustion. These pipes must be kept clear of snow and ice

— a GTA winter concern. Blocked combustion air pipes cause the furnace to shut down on a safety lockout, which is exactly what the safety system is designed to do.

The Ductwork Connection

Combustion air interacts directly with your duct system when **large exhaust fans** are running. A powerful kitchen range hood (400+ CFM) or multiple bathroom fans running simultaneously can depressurize a home enough to interfere with atmospherically vented appliances. This is precisely why the Ontario Building Code requires a **make-up air system** when total exhaust capacity exceeds 75 litres per second (approximately 159 CFM). Make-up air must be interlocked with the exhaust system and tempered in winter — bringing -20°C outdoor air directly into a mechanical room is not acceptable.

Any time you are adding a high-CFM range hood, sealing your home's envelope, or modifying exhaust ventilation, a TSSA-registered contractor must assess combustion air adequacy. This is not optional — it is Ontario law and a life-safety issue. Toronto Ductwork can connect you with local ventilation and ductwork professionals who work alongside TSSA-registered contractors to ensure your exhaust and make-up air systems are properly designed and integrated.

Q2

What is the best location to install a make-up air intake on a Toronto home exterior wall?

The best location for a make-up air intake on a Toronto home is on an exterior wall facing away from prevailing winds, at least 600mm (24 inches) above grade, well away from exhaust outlets, gas meters, and any combustion appliances — typically on the north or east wall of most GTA homes.

Placement is one of the most consequential decisions in a make-up air installation, and it directly affects system performance, combustion safety, and long-term durability in Toronto's climate. Getting it wrong means pulling contaminated air into your home, freezing the intake in winter, or creating backdrafting conditions that allow carbon monoxide to enter the living space.

Separation from Contamination Sources

Ontario Building Code Part 6 requires make-up air intakes to be separated from exhaust outlets, gas meters, dryer vents, and any combustion appliance venting by a minimum of **1,800mm (6 feet) horizontally and 600mm (24 inches) vertically**. In practice, experienced contractors push this further — aim for 3 metres (10 feet) or more from

any exhaust point. This matters enormously in Toronto because homes are often close together and exhaust from a neighbour's dryer vent or gas furnace flue can easily reach your intake if placement is careless. Never locate the intake near a garage — vehicle exhaust and carbon monoxide are a serious risk.

The intake must also be positioned away from areas where snow drifts accumulate. Toronto's freeze-thaw cycles and heavy snowfall events can bury a low-mounted intake, blocking airflow entirely and potentially damaging the tempering coil or motorized damper. A north-facing wall in a sheltered corner of the home is particularly vulnerable to drifting — factor in your home's specific snow accumulation patterns before finalizing placement.

Wind Direction and Pressure Dynamics

Toronto's prevailing winds come predominantly from the southwest, especially in winter when cold air masses push in from Lake Huron and Georgian Bay. Locating the intake on the **north or east wall** keeps it in a lower-pressure zone, which reduces the risk of wind-driven rain and snow entering the duct and reduces the static pressure the system must overcome. An intake on the southwest wall faces direct wind loading in winter, which can overwhelm the motorized damper and force cold air into the home even when the system is off — a serious comfort and energy problem.

Homes near Lake Ontario (Beaches, Mimico, Port Credit, Lakeshore communities) face additional wind considerations from lake-effect weather patterns. In these neighbourhoods, a sheltered north-facing location is almost always the best choice.

Height, Termination Cap, and Insulation

The intake termination cap should be **at least 600mm above finished grade** — higher if you're in an area with significant snowfall accumulation or if the wall faces a driveway where snow is ploughed and piled. Use a **hooded intake cap with a bird screen** (minimum 6mm mesh, maximum 13mm to prevent bird nesting). The duct penetrating the wall must be **insulated with minimum R-8 duct wrap** from the exterior wall to the point where it connects to the air handler or tempering unit. In Toronto winters, an uninsulated make-up air duct running through a cold basement wall cavity will sweat with condensation every time the system runs, causing water damage and mould inside the wall.

The motorized damper — which closes when the system is off to prevent cold air infiltration — must be installed on the warm side of the insulation, not in the cold zone near the exterior wall. This is a common installation error that causes the damper actuator to fail prematurely in GTA winters.

This Is Professional Work

Make-up air system installation requires a **TSSA-registered contractor** when the system is interlocked with gas appliances, and an **ESA-Licensed Electrical Contractor** for the control wiring and interlock connections. Improper make-up air installation is one of the leading causes of combustion appliance backdrafting — a carbon monoxide hazard. This is not a DIY project.

If you're installing a high-CFM range hood (400+ CFM) that triggers the OBC's 75 L/s make-up air requirement, get a contractor who will do a proper combustion safety test after installation to confirm no backdrafting is occurring.

Need help finding a qualified ductwork and ventilation contractor for your make-up air project? Toronto Ductwork can match you with local professionals through the Toronto Construction Network — browse contractors at torontoconstructionnetwork.com/directory?trade=hvac.

Q3

How does a negative pressure test determine if my Toronto home needs a make-up air system?

A negative pressure test measures how much depressurization your home experiences when exhaust systems run — if the house goes more than 5 Pascals negative relative to outdoors, you likely have a make-up air problem that Ontario Building Code may already require you to address.

Here's what's actually happening: every exhaust fan, range hood, dryer vent, and combustion appliance in your home moves air from inside to outside. That air has to be replaced from somewhere. In a leaky older home, replacement air infiltrates through cracks, gaps, and unsealed penetrations without much resistance. In a tighter modern home — or any home with a powerful range hood — the building can't pull in enough replacement air fast enough, and the interior goes negative relative to outdoor air pressure.

What the Test Actually Measures

A technician uses a **digital manometer** (a pressure gauge accurate to fractions of a Pascal) with a hose run through a window or door to measure the pressure difference between inside and outside. They run your exhaust systems one at a time — bathroom fans, range hood, dryer, HRV or ERV exhaust — and record the depressurization reading at each step. A well-balanced home stays within **2-3 Pascals negative** under normal operation. Readings of **5 Pascals or more** indicate a make-up air deficiency. Readings above **10-15 Pascals** are a serious combustion safety concern.

The combustion safety piece is what makes this test critical in Toronto homes. When your house goes significantly negative, it creates a pressure gradient that can **backdraft your gas furnace, water heater, or fireplace** — pulling combustion gases including carbon monoxide back down the flue and into the living space instead of exhausting them outside. TSSA takes this seriously, and it's why Ontario Building Code Part 6 requires make-up air when total exhaust capacity exceeds **75 litres per second (approximately 159 CFM)**. Many GTA homeowners installing 600-1,200 CFM range hoods for kitchen renovations trigger this threshold without realizing it.

GTA-Specific Context

Toronto's housing stock makes this test particularly relevant. **Post-war homes in Scarborough, North York, and Etobicoke** were built loosely enough that natural infiltration handled make-up air passively for decades. But as homeowners add spray foam insulation, new windows, and weatherstripping, those same homes become tight enough that a powerful range hood creates dangerous depressurization. **Newer homes in Vaughan, Markham, and Brampton** built to higher airtightness standards are even more vulnerable — they're designed to be tight, which is great for energy efficiency but means make-up air must be mechanically supplied.

The test is also valuable before and after major renovations. If you're planning a kitchen renovation with a high-CFM range hood, a pre-renovation pressure test establishes your baseline. If you're adding an HRV or ERV (which both exhaust and supply air), the test confirms whether the unit is properly balanced.

Practical Tips

A **blower door test** (used for energy audits) measures overall airtightness but is different from a combustion safety depressurization test — make sure you're getting the right test for your concern. Ask specifically for a **worst-case depressurization test** following TSSA guidelines, which involves closing all windows, running all exhaust fans simultaneously, and measuring the result.

If your home fails, the solution is a **make-up air system** — a dedicated fresh air intake duct, typically with a motorized damper that opens when exhaust runs, and a heating element or connection to the furnace plenum to temper incoming winter air so you're not blasting -20°C air into the house. Installed cost in the GTA runs **$2,000-$5,000** depending on complexity, and the system must be interlocked with your exhaust equipment under OBC requirements.

This work requires a TSSA-registered contractor for any gas connections involved in tempering the incoming air, and an ESA-licensed electrician for the interlock controls and damper wiring.

Toronto Ductwork can match you with a local ventilation contractor who can perform the depressurization test and design a make-up air system if needed — find professionals through the Toronto Construction Network at **torontoconstructionnetwork.com**.

Q4

How does a balanced make-up air system differ from a passive one in a Toronto home?

A balanced make-up air system actively controls and conditions incoming air through a dedicated fan and ductwork, while a passive system relies on natural air infiltration through cracks, gaps, and intentional openings to replace exhausted air. In Toronto's extreme climate, balanced systems provide far superior comfort, energy efficiency, and moisture control.

Balanced Make-Up Air Systems use a dedicated fan to bring in fresh outdoor air at a controlled rate, typically through a 6-8 inch insulated duct connected to the return plenum or directly to the furnace. The incoming air is tempered (heated or cooled) by mixing with conditioned indoor air or through a dedicated heating coil. The system is interlocked with exhaust equipment — when your 600 CFM range hood turns on, the make-up air fan automatically delivers 600 CFM of replacement air. This maintains neutral air pressure in the home, preventing backdrafting of gas appliances and ensuring consistent operation of exhaust systems.

Passive Make-Up Air Systems rely on natural air leakage to replace exhausted air. When exhaust fans create negative pressure, outdoor air infiltrates through whatever openings exist — window frames, electrical outlets, foundation cracks, or intentional passive vents. This uncontrolled infiltration brings in unconditioned air at random locations throughout the home. In Toronto's -20°C winters, this means frigid air entering through basement cracks or wall cavities. In humid summers, it means hot, moisture-laden air infiltrating wherever it can find gaps.

Why Toronto's Climate Demands Balanced Systems: Toronto's 55-degree temperature swing from winter lows to summer highs makes uncontrolled air infiltration extremely problematic. Passive make-up air in January brings -15°C air directly into your living space, creating cold drafts and forcing your furnace to work overtime heating this infiltrating air. The random entry points mean cold air might enter through basement rim joists, creating ice-cold floors, or through wall cavities, causing condensation inside walls. In summer, passive infiltration brings in 35°C air at 80% humidity, adding massive cooling and dehumidification loads.

Balanced systems address these issues by controlling where, when, and how replacement air enters. The incoming air mixes with return air before reaching living spaces, moderating temperature extremes. Many balanced systems include basic filtration to remove outdoor pollutants. Advanced systems integrate with ERVs (Energy Recovery Ventilators) to pre-condition incoming air using the energy from outgoing exhaust air — in winter, the ERV captures heat from warm exhaust air to warm incoming cold air, and in summer, it pre-cools incoming hot air.

Ontario Building Code Requirements: When total exhaust exceeds 75 litres per second (approximately 159 CFM), the OBC requires a make-up air system. This threshold is easily exceeded by a 400+ CFM range hood alone. The code doesn't specify balanced versus passive, but TSSA (Technical Standards and Safety Authority)

requires adequate combustion air for gas appliances. In a tightly sealed modern home with a large range hood, passive infiltration may be insufficient to prevent backdrafting of your furnace, water heater, or fireplace — a potentially deadly carbon monoxide hazard.

Installation costs reflect the complexity difference. A passive system might involve installing a motorized damper in an exterior wall ($300-$800), while a balanced system with tempering and controls typically costs $2,000-$5,000 installed. However, the energy savings from controlled, conditioned make-up air often justify the investment within 5-7 years in Toronto's climate. Balanced systems also eliminate the cold drafts and hot spots that passive systems create, dramatically improving comfort throughout the home.

For homes with high-performance range hoods (600+ CFM) or multiple exhaust systems, balanced make-up air isn't just about code compliance — it's essential for maintaining indoor air quality, preventing combustion safety issues, and avoiding the energy waste of heating or cooling massive amounts of uncontrolled infiltrating air in Toronto's extreme seasonal conditions.

Q5

Can a make-up air unit be tied into my Toronto home ERV system to reduce heating costs?

No, a make-up air unit should not be tied directly into your ERV system, as they serve different purposes and operate under different control strategies. However, there are ways to coordinate these systems to reduce heating costs while maintaining proper ventilation and combustion safety.

Make-up air units are designed to provide large volumes of replacement air (typically 300-600 CFM) when high-capacity exhaust systems like range hoods operate. In Toronto's climate, this incoming air must be heated to prevent uncomfortable cold drafts and condensation. Make-up air units are controlled by pressure switches or interlocks that activate them only when the exhaust system runs.

ERV systems provide continuous or scheduled fresh air exchange at much lower volumes (typically 50-150 CFM for residential applications), recovering heat and moisture from outgoing stale air. ERVs run on programmed schedules or humidity/air quality sensors, operating independently of kitchen exhaust.

Why Direct Integration Doesn't Work

Connecting make-up air to your ERV would overwhelm the ERV's capacity and bypass its heat recovery function. When your 400+ CFM range hood operates, it needs immediate replacement air at high volume. Your ERV's 100 CFM capacity cannot provide this, and forcing large volumes through the ERV would damage its heat exchanger

and motors. Additionally, make-up air units often temper incoming air with electric or gas heating elements, while ERVs rely on heat exchange with outgoing air.

Better Coordination Strategies for Toronto Homes

The most effective approach is **intelligent controls** that coordinate both systems. When the range hood operates, the ERV can temporarily shut down to avoid competing air pressures, while the make-up air unit provides the required replacement air. Some advanced systems use **demand-controlled ventilation** that adjusts ERV operation based on indoor air quality, reducing unnecessary operation during shoulder seasons when natural infiltration provides adequate fresh air.

GTA Climate Considerations

Toronto's extreme temperature swings make proper make-up air heating essential. Unheated make-up air entering at -20°C creates severe comfort problems and can cause condensation on windows and cold surfaces. Make-up air units with **modulating gas burners** or **electric heating elements** are most common in the GTA, often integrated with the home's existing gas line or electrical panel.

For homes near Lake Ontario (Beaches, Mimico, Port Credit), higher humidity levels may benefit from **ERV systems over HRV systems**, as ERVs transfer both heat and moisture, helping manage indoor humidity while the make-up air system handles high-volume exhaust replacement.

Cost-Effective Installation Tips

Installing both systems during the same project reduces labour costs, as ductwork routing and electrical connections can be coordinated. Make-up air units typically cost **$2,000-$5,000 installed** in the GTA, while ERV systems run **$3,000-$6,000**. The combined installation often saves $500-$1,000 compared to separate projects.

When Professional Design Is Essential

Both systems require **Manual D ductwork calculations** and **Ontario Building Code compliance**. Make-up air exceeding 75 L/s (approximately 159 CFM) triggers OBC requirements, and any gas connections require a **TSSA-registered contractor**. ERV installation involves balancing fresh air and exhaust flows, requiring proper commissioning for optimal performance.

Need help finding an HVAC contractor experienced with coordinated ventilation systems? Browse qualified professionals through the Toronto Construction Network directory at torontoconstructionnetwork.com/directory?trade=hvac.

Q6

What happens to my Toronto home smoke detectors and CO alarms if make-up air is not installed properly?

Improperly installed make-up air systems can cause backdrafting of gas appliances, which may trigger carbon monoxide alarms and create life-threatening conditions in your Toronto home. When make-up air is undersized, poorly controlled, or not interlocked with exhaust systems, it can depressurize your home and reverse the flow of combustion gases from furnaces, water heaters, and fireplaces.

Understanding the Backdrafting Risk

When you run a powerful range hood (400+ CFM) without adequate make-up air, your home becomes depressurized. This negative pressure can overcome the natural draft of gas appliances, pulling combustion gases back down the chimney or vent pipe and into your living space instead of safely outside. Carbon monoxide detectors will alarm when CO levels reach 30-70 parts per million over time, but even lower levels cause headaches, fatigue, and cognitive impairment.

The Ontario Building Code requires make-up air when total exhaust exceeds 75 litres per second (approximately 159 CFM) specifically to prevent this dangerous scenario. A properly designed make-up air system provides fresh outdoor air to replace what's being exhausted, maintaining neutral pressure in your home. The make-up air must be interlocked with the exhaust system — when the range hood runs, the make-up air automatically activates.

GTA Climate Considerations

Toronto's extreme temperature swings create additional challenges for make-up air systems. In January, bringing in -15°C outdoor air without tempering it creates comfort problems and can shock occupants near the make-up air inlet. Properly designed systems include a tempering unit that pre-heats incoming air using gas, electric heat, or heat recovery from the exhaust stream. Undersized tempering capacity is a common installation error that makes homeowners reluctant to use their range hood, defeating the purpose of the system.

Many GTA homes built before 2000 have natural draft gas appliances (older furnaces, water heaters) that are particularly susceptible to backdrafting. These rely on buoyancy to carry combustion gases up the chimney — any negative pressure in the home can disrupt this process. Modern sealed-combustion appliances with powered venting are less vulnerable but can still be affected by extreme depressurization.

Smoke Detector Considerations

While smoke detectors aren't directly affected by make-up air installation, backdrafting can create unusual combustion patterns in gas appliances that may produce more particulates or incomplete combustion byproducts. Additionally, make-up air systems that bring in unfiltered outdoor air can increase dust levels, potentially affecting

photoelectric smoke detectors over time. However, the primary concern remains carbon monoxide from backdrafting gas appliances.

Warning Signs of Backdrafting

Watch for these indicators that your make-up air system isn't working properly: CO alarms sounding when running the range hood, condensation on windows when the exhaust runs (indicating excessive depressurization), difficulty lighting gas appliances, yellow or orange flames on gas burners (should be blue), soot around gas appliances, or unusual odors when running exhaust fans. Any of these symptoms requires immediate attention from a TSSA-registered gas contractor.

Professional Installation Requirements

Make-up air system installation requires coordination between HVAC, gas, and electrical trades. The system must be properly sized (CFM calculations), interlocked with exhaust controls, and include adequate tempering for GTA winters. TSSA registration is required for any gas-fired tempering units, and ESA licensing is required for electrical interlocking controls. Building permits are typically required for make-up air installations.

When to Hire a Professional

Any work involving combustion safety, gas appliances, or make-up air systems requires professional installation. This isn't a DIY project — improper installation can literally be deadly. A qualified contractor will perform combustion safety testing, verify proper appliance venting, and ensure the make-up air system maintains safe pressure relationships in your home.

Need help finding a qualified HVAC contractor experienced with make-up air systems? Toronto Ductwork can match you with professionals who understand both the technical requirements and Ontario safety codes for these critical systems.

Q7

Does my Toronto home need make-up air if I have a bathroom exhaust fan over 150 CFM?

No, a single 150 CFM bathroom exhaust fan does not trigger Ontario's make-up air requirement. The Ontario Building Code requires make-up air systems only when total exhaust capacity exceeds 75 litres per second, which equals approximately 159 CFM.

However, you're very close to that threshold, and there are important considerations beyond just meeting code minimums. The 75 L/s rule applies to the **total exhaust capacity** of all mechanical exhaust in your home combined — not just one fan. If you have multiple bathroom fans, a kitchen range hood, and other exhaust systems, those CFM ratings add up quickly.

Why the make-up air requirement exists is crucial to understand, especially in Toronto's climate. When you exhaust 150+ CFM of air from your home without replacing it, you create negative pressure that pulls replacement air through every crack, gap, and opening in your building envelope. In a typical GTA home, this replacement air comes from uncontrolled sources — through basement foundation cracks, around windows, through wall penetrations, and worst of all, down your chimney or furnace flue.

The combustion safety risk is the primary concern. Negative pressure can cause backdrafting of gas appliances — your furnace, water heater, or fireplace exhaust gets pulled back into your home instead of venting safely outside. This brings carbon monoxide into your living space, which is potentially deadly. Toronto's older housing stock, with gas furnaces and water heaters often located in basements, makes this risk particularly serious.

Even below the code threshold, a 150 CFM bathroom fan can create noticeable pressure imbalances, especially in tighter homes or during winter when windows stay closed. You might notice doors slamming shut, difficulty opening exterior doors, or cold drafts as outside air gets sucked in through unintended openings. In winter, this incoming air is -20°C and hasn't been filtered or conditioned.

Consider your total exhaust picture when evaluating make-up air needs. Add up all your exhaust: bathroom fans (typically 50-110 CFM each), kitchen range hood (often 200-600 CFM), dryer vent (around 100-200 CFM when running), and any other mechanical exhaust. If you're planning a kitchen renovation with a higher-capacity range hood, you'll likely cross the make-up air threshold.

Make-up air systems cost $2,000-$5,000 installed and include a motorized damper that opens when exhaust systems operate, an intake duct to bring in outside air, and often a tempering system to pre-heat incoming winter air. The system must be interlocked with your exhaust equipment — when the bathroom fan runs, the make-up air damper opens automatically.

For a 150 CFM bathroom fan specifically, focus on proper installation fundamentals: duct it directly to the exterior (never into the attic or soffit), use rigid ductwork where possible, minimize bends, and install a good exterior wall cap with a backdraft damper. Ensure your home has adequate return air pathways so the HVAC system can operate efficiently even when the exhaust fan creates slight negative pressure.

If you're planning any kitchen or additional bathroom renovations, factor make-up air requirements into your planning early — it's much easier to install during construction than retrofit later.

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Q8

Do I need make-up air if I install a powerful range hood in my Toronto home?

Yes — if your range hood is rated above approximately 400 CFM, the Ontario Building Code requires a make-up air system to replace the air being exhausted, and this is not optional. The specific threshold in the OBC is 75 litres per second of total exhaust capacity, which works out to roughly 159 CFM. In practice, because the OBC looks at the rated capacity of all exhaust equipment combined — not just the range hood — a powerful range hood in a home with bathroom fans and a dryer vent can trigger the make-up air requirement even below the 400 CFM mark. But as a practical rule, any range hood rated at 400 CFM or higher will almost certainly require make-up air in a Toronto home.

The reason make-up air is required goes beyond code compliance — it is a combustion safety issue. A powerful range hood exhausting 600 or 1,000 CFM pulls an enormous volume of air out of your home. That air must come from somewhere. In a tightly sealed modern Toronto home, the hood creates strong negative pressure that pulls air through every gap and crack in the building envelope — and critically, it can reverse the draft in your furnace flue, water heater vent, or fireplace chimney. This is called backdrafting, and when it happens with gas-fired

appliances, it pulls combustion gases — including carbon monoxide — into your living space instead of sending them up the chimney. This is a potentially fatal hazard, and it is the primary reason the OBC mandates make-up air.

Even in older, leakier GTA homes where natural infiltration might seem like it provides enough replacement air, a high-CFM range hood overwhelms that leakage. The signs of inadequate make-up air are immediate and obvious: doors become hard to open or slam shut on their own, you hear whistling from windows and doors, the range hood itself underperforms because it cannot pull enough air to reach its rated CFM, and a cold draft sweeps across the floor as air rushes in through gaps at the bottom of exterior doors.

A make-up air system consists of a duct from the exterior that brings fresh outdoor air into the home, interlocked with the range hood so it only operates when the hood is running. In Toronto's climate, the incoming air must be tempered — you cannot dump -20 degree air directly into your kitchen in January. Most make-up air units include an electric or gas-fired heater that warms the incoming air to a comfortable temperature before it enters the living space. The system is interlocked with the range hood through a pressure switch or wired relay so that the make-up air damper opens and the heater activates automatically whenever the hood turns on.

Budget $2,000-$5,000 for a professionally installed make-up air system in the GTA, depending on the complexity of the duct routing and whether electric or gas tempering is used. This is in addition to the range hood and its exhaust ductwork. The installation requires a building permit from the City of Toronto, and the gas connection for a gas-tempered unit must be done by a TSSA-registered contractor. Many homeowners are caught off guard by this cost when they purchase a high-end range hood — a $2,000 hood can easily require $3,000-$4,000 in make-up air infrastructure to install legally and safely. Factor this into your kitchen renovation budget from the beginning.

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Q9

What is the Ontario Building Code requirement for make-up air with range hoods?

The Ontario Building Code (OBC) requires a make-up air system when the total exhaust capacity of all equipment in a dwelling exceeds 75 litres per second, which is approximately 159 CFM. This threshold is found in OBC Part 6 (Mechanical) and applies to all residential construction and major renovations in Ontario, including every municipality across the GTA. The requirement is designed to prevent dangerous negative pressure conditions that can cause backdrafting of combustion appliances — a potentially fatal carbon monoxide hazard.

The key word in the OBC requirement is **total exhaust capacity**. The code does not look at the range hood in isolation — it considers the combined rated capacity of every exhaust device in the home, including bathroom exhaust fans, the dryer vent, and any other exhaust equipment. However, in practical terms, it is the range hood that typically pushes a home over the threshold. A standard bathroom fan at 80 CFM and a dryer at 150 CFM together total 230 CFM — already over the threshold on their own, though the code accounts for simultaneous operation factors. When you add a range hood rated at 400, 600, or 1,200 CFM, you are well past any threshold regardless of how the calculation is applied.

The make-up air system must meet specific OBC requirements. It must be interlocked with the exhaust equipment — meaning the make-up air supply activates automatically when the range hood turns on and shuts off when the hood turns off. The system cannot rely on the homeowner remembering to open a window or flip a separate switch. This interlocking is typically achieved through a pressure switch, current-sensing relay, or hardwired connection between the range hood and the make-up air damper. The make-up air must be delivered at a rate that offsets the exhaust volume, preventing the home from going into significant negative pressure.

In Toronto's climate, tempering the incoming make-up air is essential. The OBC does not explicitly mandate heating the make-up air in all cases, but bringing -20 degree outdoor air directly into a kitchen in January is impractical and creates its own comfort and condensation problems. Most make-up air installations in the GTA use a tempered system — either an electric resistance heater or a gas-fired inline heater that warms the incoming air before it enters the living space. Electric tempering is simpler to install but costs more to operate. Gas-fired tempering is more economical for high-volume systems but requires a gas line and TSSA-registered installation.

Practical implications for GTA homeowners planning a kitchen renovation are significant. If you are selecting a range hood for a new kitchen, understand that anything above approximately 400 CFM will trigger the make-up air requirement. The installation cost for a complete make-up air system runs $2,000-$5,000 in the GTA market, including the make-up air unit, ductwork to the exterior, tempering heater, interlocking controls, and the required building permit. The permit itself runs $200-$500 through the City of Toronto, and an inspection is required

before the system is considered code-compliant. Some homeowners deliberately choose a range hood rated at 300-390 CFM to stay below the make-up air threshold while still getting effective kitchen ventilation — a pragmatic approach that saves thousands on the installation. If you do go with a high-CFM hood, get quotes for the make-up air system at the same time as the hood installation so you understand the true total project cost before committing.

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Q10

At what CFM rating does a range hood require make-up air in an Ontario home?

Under the Ontario Building Code, a make-up air system is required when total exhaust capacity exceeds 75 litres per second, which works out to approximately 159 CFM. In practical terms, this means any range hood rated above roughly 400 CFM will almost certainly trigger the make-up air requirement, because kitchen exhaust is rarely the only exhaust in the home — bathroom fans, dryer vents, and other exhaust sources all contribute to that total. Most standard range hoods in the 200-300 CFM range will not trigger the requirement on their own, but the moment you step up to a professional-style hood at 600, 900, or 1,200 CFM, make-up air becomes mandatory.

The reason this rule exists is straightforward and safety-critical. When a powerful range hood pulls large volumes of air out of your home, it creates negative pressure inside the building envelope. In a well-sealed GTA home — and modern homes built to Ontario's increasingly strict energy codes are very well sealed — that negative pressure has nowhere to draw replacement air from except through the path of least resistance. That path is often the chimney flue of a gas furnace, gas water heater, or gas fireplace. When exhaust gases are pulled back down the flue and into the living space instead of venting safely outside, it is called backdrafting, and it introduces carbon monoxide into your home. This is not a theoretical risk — it is a well-documented cause of carbon monoxide poisoning in tightly sealed houses across the GTA.

The make-up air system solves this by providing a controlled pathway for outdoor air to enter the home, replacing the air being exhausted by the range hood. The system must be interlocked with the range hood so it activates automatically whenever the hood runs. In Toronto's climate, where winter temperatures drop to -20 degrees Celsius or colder, the incoming make-up air also needs to be tempered — meaning it passes through a heater before entering the living space, so you are not blasting freezing outdoor air into your kitchen every time you cook. A typical make-up air unit for a GTA home costs between $2,000 and $5,000 installed, including the tempering coil and dedicated ductwork.

Before purchasing a high-CFM range hood, confirm with your contractor that the make-up air system is included in the project scope and budget. Many homeowners renovating kitchens in older Toronto neighbourhoods like the Annex, Leslieville, or High Park install beautiful commercial-style range hoods without realizing the make-up air requirement adds significant cost and ductwork. Your contractor should also confirm that all gas appliances in the home have adequate combustion air supply after the make-up air system is installed. This work requires a building permit from the City of Toronto, and any gas connections must be performed by a TSSA-registered contractor. If you are planning a kitchen renovation that includes a powerful range hood, get matched with a ductwork contractor through the Toronto Construction Network to ensure the make-up air system is properly designed from the start.

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Q11

What happens if I do not have make-up air for my large range hood in Toronto?

Operating a high-CFM range hood without make-up air in a Toronto home creates a dangerous negative pressure situation that can backdraft gas appliances and pull carbon monoxide into your living space. This is the single most serious risk, and it is not hypothetical — it is a well-documented hazard in tightly sealed GTA homes, particularly newer construction built to modern energy codes and older homes that have been retrofitted with improved air sealing and insulation.

When a 600 or 900 CFM range hood runs at full speed, it is pulling that volume of air out of your home every minute. In a well-sealed house, the air has to come from somewhere. Without a dedicated make-up air system providing a controlled path for replacement air, the negative pressure pulls air through any available opening — and the easiest path is often down the flue of your gas furnace, gas water heater, or gas fireplace. This reversal of flue gas flow is called backdrafting, and it brings combustion byproducts including carbon monoxide directly into your home. Carbon monoxide is odourless and colourless, so you will not know it is happening until symptoms appear or a CO detector alarms. Even if your home does not have gas appliances, running a large range hood without make-up air pulls unconditioned air through gaps in the building envelope — around windows, through electrical outlets on exterior walls, under doors, and through plumbing and wiring penetrations — bringing dust, allergens, humidity, and cold winter air with it in unpredictable ways.

Beyond the safety risk, there are practical performance problems. **Without adequate replacement air, the range hood itself cannot perform properly.** A 600 CFM hood in a tightly sealed home may only achieve 300-400 CFM of actual airflow because there simply is not enough air available to exhaust. You will notice the hood struggling — it sounds strained, cooking odours linger, and grease accumulates on kitchen surfaces despite the hood running.

Doors may become difficult to open or may slam shut on their own due to the pressure differential. You may hear whistling around windows or feel cold drafts near exterior walls in winter as air is forced through tiny gaps in the building envelope.

There is also a code compliance issue. The Ontario Building Code requires make-up air when total exhaust exceeds 75 litres per second (approximately 159 CFM). If your range hood alone exceeds this threshold and you do not have make-up air, the installation is not code-compliant. This can create problems when selling your home, during insurance claims, or if a home inspection reveals the violation. The City of Toronto requires building permits for make-up air installations, and inspectors will verify that the system is properly interlocked with the range hood.

The fix is to install a proper make-up air system, which typically costs $2,000 to $5,000 in the GTA including tempering for winter operation and dedicated ductwork. This is not optional — it is a safety requirement. If you already have a large range hood without make-up air, have a qualified HVAC or ductwork contractor assess your situation. Toronto Ductwork can match you with a local professional through the Toronto Construction Network for a free estimate.

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Q12

Can a make-up air unit cause drafts or cold spots in my Toronto home during winter?

A properly installed and tempered make-up air unit should not cause uncomfortable drafts or cold spots in your Toronto home, but a poorly designed or improperly installed system absolutely can. The key difference is whether the incoming outdoor air is tempered — heated before it enters the living space — and whether the make-up air is delivered to the right location with appropriate diffusion.

During a Toronto winter, outdoor air temperatures regularly drop to -10 to -20 degrees Celsius. A make-up air system that dumps untreated outdoor air directly into your kitchen or living space at those temperatures will create an obvious and miserable cold draft. This is why the Ontario Building Code and good engineering practice require tempering — the make-up air passes through an electric or gas-fired heater before entering the home, warming it to a comfortable temperature. A well-designed tempered make-up air unit heats incoming air to approximately 15 to 18 degrees Celsius before delivery, which is cool enough that you might notice a slight temperature difference near the discharge point but not cold enough to create discomfort. The tempering coil adds to the installation cost, but in Toronto's climate it is absolutely non-negotiable.

The location and method of air delivery matter enormously. **Make-up air should ideally be delivered near the range hood or into the kitchen area**, since that is where the air is being exhausted from. Some installations deliver make-up air into the return air plenum of the furnace, allowing the furnace blower to mix and distribute it throughout the home. This approach works well because the furnace further tempers the air and distributes it evenly, but it requires the furnace fan to be running whenever the range hood operates. Other installations use a dedicated ceiling or wall diffuser in the kitchen, which should be positioned to avoid blowing directly on cooking or seating areas. A ceiling diffuser that spreads air across a wide area is far better than a small wall grille that creates a concentrated jet of air.

If you are experiencing cold drafts from an existing make-up air system, the most common causes are a failed or undersized tempering element, a thermostat or control issue that is not activating the heater, or a diffuser that is too small and creates a high-velocity air stream. A qualified contractor can diagnose and correct these issues — it may be as simple as replacing a heating element or adjusting the interlocking controls.

One important consideration for older GTA homes — many pre-war and post-war houses in neighbourhoods like the Danforth, East York, and Etobicoke are inherently leaky, with enough natural air infiltration that a make-up air system may introduce less noticeable drafts simply because the home already has significant air exchange. Conversely, modern airtight homes in newer Vaughan, Markham, or Mississauga subdivisions are where make-up air system design is most critical, because these homes have very little natural air leakage to supplement the system. If you need a make-up air system installed or adjusted, Toronto Ductwork can connect you with a local ductwork professional for a free assessment.

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Q13

What are the different types of make-up air systems available for Toronto homes?

There are four main types of make-up air systems used in GTA residential applications: passive air inlets, motorized damper systems, powered make-up air units with tempering, and integrated ERV or HRV solutions. Each has different capabilities, costs, and suitability depending on your home's construction, the size of your exhaust system, and how well sealed your building envelope is.

Passive air inlets are the simplest and least expensive option. These are essentially controlled openings in the exterior wall — a weather-resistant hood on the outside, a damper or grille on the inside, and sometimes a filter. They rely on the negative pressure created by the range hood to draw air in naturally. Passive inlets cost $100 to $400 installed and require no electricity or ductwork. The major drawback in Toronto is obvious — in January, a passive inlet brings in untreated -15 degree air directly into your home. There is no tempering whatsoever. For small exhaust loads (under 200 CFM), a passive inlet in a mild location may be acceptable, but for large range hoods in Toronto's climate, passive inlets create brutal cold drafts and are generally inadequate.

Motorized damper systems add a step of control. An electrically operated damper is interlocked with the range hood, opening automatically when the hood turns on and closing when it shuts off. This prevents air from entering when the hood is not running, but the incoming air is still untempered. These systems cost $300 to $800 installed. They are a step up from passive inlets but still have the cold air problem in winter. Some installations add a short section of insulated duct to slow the air velocity and reduce the perceived draft, but this does not actually warm the air.

Powered make-up air units with tempering are the proper solution for most GTA homes with high-CFM range hoods. These are self-contained units that include a fan, a filter, insulated duct connections, and an electric or gas-fired heating element that warms incoming air before it enters the living space. The unit is interlocked with the range hood and sized to match its CFM rating. In Toronto, electric tempering coils are most common for residential applications because they do not require a gas line to the unit. These systems cost $2,000 to $5,000 installed, including the tempering element and dedicated ductwork. This is the type of system that most contractors will recommend and most building inspectors expect to see for range hoods over 400 CFM.

ERV or HRV integration is sometimes proposed as a make-up air solution, and it can work in limited circumstances. An HRV (Heat Recovery Ventilator) or ERV (Energy Recovery Ventilator) exchanges stale indoor air for fresh outdoor air while recovering 70 to 80 percent of the heat from the outgoing air. However, most residential ERV and HRV units are rated at 100 to 200 CFM — far below the exhaust capacity of a 600 or 900 CFM range hood. An ERV or HRV can supplement a make-up air system or serve as the sole solution for modest

exhaust loads, but it typically cannot keep up with a large range hood on its own. ERV/HRV units cost $2,500 to $6,000 installed with dedicated ductwork.

For most Toronto homeowners installing a serious kitchen range hood, a powered tempered make-up air unit is the right choice. Get quotes from qualified ductwork contractors through the Toronto Construction Network to find the right system for your home.

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Q14

Does a make-up air unit need its own ductwork or can it tie into existing ducts in Toronto?

A make-up air unit can be connected to your existing duct system in some configurations, but many installations work better with dedicated ductwork — and which approach is right depends on your home's layout, furnace capacity, and the volume of make-up air required. There is no single correct answer, but understanding the options will help you have a productive conversation with your contractor.

The most common approach in GTA homes is to **connect the make-up air unit to the return air plenum of the existing furnace.** The return plenum is the large sheet metal box on the intake side of your furnace, where air from your home is drawn back to be filtered, heated or cooled, and redistributed through the supply ducts. When the make-up air unit introduces tempered outdoor air into this plenum, the furnace blower mixes it with recirculated air and distributes it evenly throughout the home via the existing supply ducts. This approach works well because it uses your existing ductwork for distribution, avoids dumping a concentrated stream of outdoor air into one room, and allows the furnace to further condition the air if needed. However, it requires the furnace blower to be running whenever the range hood operates, and the furnace system must have enough capacity to handle the additional air

volume without exceeding its static pressure limits.

The alternative is **dedicated ductwork from the make-up air unit to a discharge point**, typically a ceiling or wall diffuser in or near the kitchen. This approach is more common in custom homes or major kitchen renovations where the make-up air volume is large (matching a 600 to 1,200 CFM range hood) and the furnace system cannot handle the additional load. Dedicated ductwork gives the installer more control over where the air enters the home and avoids any impact on the existing HVAC system's airflow balance. The downside is additional ductwork cost — running a new insulated duct from the make-up air unit to the kitchen can add $500 to $1,500 to the project depending on the route and length.

In many older Toronto homes — particularly post-war bungalows and two-storey houses in Scarborough, North York, and Etobicoke — the existing duct system is already undersized for modern heating and cooling loads. Adding make-up air volume to an already strained system can push static pressure too high, reduce airflow to bedrooms, and cause the furnace blower to work harder than it should. In these situations, a contractor may recommend dedicated ductwork or suggest upgrading the return air capacity before tying make-up air into the existing system.

Regardless of which approach is used, the make-up air duct must be insulated where it passes through unconditioned spaces to prevent condensation in Toronto's humid summers and heat loss in winter. The connection to the exterior must include a weatherproof hood, insect screen, and backdraft damper. All duct joints must be sealed with mastic or UL 181-rated foil tape. A building permit is required for make-up air installations in Toronto, and any gas connections for gas-fired tempering must be done by a TSSA-registered contractor. Toronto Ductwork can match you with a qualified contractor through the Toronto Construction Network to evaluate the best ductwork approach for your specific home.

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Q15

How does make-up air affect my heating bill in a Toronto home during the winter?

Make-up air will increase your heating costs because you are bringing cold outdoor air into your home and heating it, but the increase is manageable with a properly tempered system and is the unavoidable cost of safely operating a high-CFM range hood in Toronto's winter climate. The real question is how much it adds and what you can do to minimize the impact.

The energy cost depends on three factors: how much air the system brings in (CFM), how cold it is outside, and how long the range hood runs. A 600 CFM range hood running for one hour on a -15 degree Celsius Toronto evening requires roughly 30,000 to 40,000 BTUs to temper that volume of outdoor air to room temperature. For context, a typical Toronto home furnace produces 60,000 to 100,000 BTUs per hour, so running the range hood at full blast for an extended period creates a meaningful heating load. If you use your range hood for 30 to 60 minutes per day during cooking, and your make-up air system uses an electric tempering coil, expect to see an increase of roughly $30 to $80 per month on your electricity bill during the coldest winter months (December through February). Gas-fired tempering units are somewhat cheaper to operate because natural gas costs less per BTU than electricity in Ontario, but they require a gas line run to the unit and TSSA-registered installation.

The energy impact is heavily influenced by your cooking habits. Most homeowners do not run their range hood at full speed continuously. If you typically cook for 30 minutes and run the hood on medium (perhaps 300 CFM instead of 600), the make-up air volume and heating cost are cut roughly in half. Multi-speed range hoods paired with make-up air systems that modulate their airflow based on the hood's speed setting are the most energy-efficient configuration. Some modern make-up air units include variable-speed fans and modulating tempering controls that match airflow to the hood's demand — these cost more upfront ($3,000 to $5,000 versus $2,000 to $3,500 for a basic unit) but reduce operating costs significantly over time.

There are several practical steps to minimize the heating cost impact. **First, use your range hood at the lowest effective speed** — most daily cooking does not require full blast. Second, ensure your make-up air duct is well-insulated (R-8 minimum) where it passes through unconditioned spaces, so you are not losing heat before the air reaches your home. Third, consider a make-up air unit with heat recovery capabilities, or pair your system with an ERV that recovers heat from exhausted air. Fourth, keep the run between the exterior wall penetration and the discharge point as short as possible to minimize heat loss through the duct itself.

One perspective that helps frame the cost: without make-up air, your home still draws in the same volume of cold outdoor air — it just comes in through uncontrolled leakage points around windows, doors, and penetrations, plus potentially through gas appliance flues (creating a carbon monoxide risk). A tempered make-up air system

brings in the same air volume in a controlled, heated, filtered manner. You are not paying to heat extra air — you are paying to heat the same air safely and comfortably. For help sizing and installing an energy-efficient make-up air system, get matched with a local ductwork contractor through the Toronto Construction Network.

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Q16

Can I use an ERV or HRV as my make-up air solution in a Toronto home?

An ERV or HRV can serve as a make-up air solution in limited circumstances, but most residential units do not have enough capacity to match a high-CFM range hood, so they typically work as a supplement rather than a complete replacement for a dedicated make-up air system. Understanding the limitations is critical before relying on an ERV or HRV for this purpose.

An HRV (Heat Recovery Ventilator) exchanges stale indoor air for fresh outdoor air while recovering 70 to 80 percent of the heat from the outgoing airstream, making it far more energy-efficient than a simple make-up air unit that heats cold outdoor air from scratch. An ERV (Energy Recovery Ventilator) does the same thing but also transfers moisture between the airstreams, which is beneficial in Toronto — it helps retain indoor humidity in winter and reduces incoming humidity in summer. Both are excellent ventilation appliances that improve indoor air quality year-round. The problem is capacity. Most residential ERV and HRV units are rated between 100 and 200 CFM. A typical large range hood is 600 CFM, and professional-style hoods go up to 1,200 CFM. Even the largest residential ERV or HRV running at full speed cannot replace the volume of air being exhausted by a 600 CFM range hood, leaving your home in significant negative pressure.

There are scenarios where an ERV or HRV can work as your primary make-up air solution. If your range hood is rated at 200 to 300 CFM — which covers most standard residential hoods — a properly sized HRV or ERV can provide enough replacement air to keep your home balanced. Some manufacturers offer higher-capacity residential units in the 200 to 350 CFM range that can match mid-range hoods. In these cases, the ERV or HRV must be interlocked with the range hood so it activates and runs at the appropriate speed whenever the hood is on. This approach is energy-efficient because you recover most of the heat instead of heating raw outdoor air, and it provides filtered, tempered air year-round.

For range hoods over 400 CFM, the practical approach in most GTA homes is a **combination system**: a dedicated tempered make-up air unit sized to handle the range hood's full exhaust capacity, plus an ERV or HRV running independently for continuous whole-house ventilation. The ERV or HRV handles your home's general ventilation needs (fresh air exchange, humidity management, stale air removal) at a steady low rate, while the make-up air unit kicks in only when the range hood operates. This dual approach is increasingly common in well-built Toronto homes and satisfies both the Ontario Building Code's make-up air requirement and the growing emphasis on continuous ventilation for indoor air quality.

Installation considerations matter in Toronto's climate. ERV and HRV units require their own dedicated ductwork — separate from your furnace supply and return ducts — with balanced intake and exhaust runs to the exterior. Duct runs through unconditioned attic spaces must be heavily insulated (R-12 minimum recommended for

ERV/HRV ducts in GTA attics) and vapour-sealed to prevent condensation. The condensate drain from the unit must be routed to a drain and protected from freezing. HRV installation runs $2,500 to $5,000 and ERV installation $3,000 to $6,000 in the GTA. A qualified contractor can assess whether an ERV or HRV alone can meet your make-up air needs or whether you need a dedicated unit as well. Browse HVAC and ductwork contractors in the Toronto Construction Network directory to find a professional for your project.

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Q17

What is the difference between a passive air inlet and a powered make-up air unit in Toronto?

A passive air inlet is a simple wall opening that relies on negative pressure to draw outdoor air in, while a powered make-up air unit uses a fan and typically includes a heating element to actively deliver tempered air into your home. The difference in Toronto's climate is enormous — one leaves you with freezing drafts in winter, and the other provides controlled, comfortable air replacement.

A **passive air inlet** is essentially a hole in your exterior wall with a weather hood on the outside and a grille or manually operated damper on the inside. When your range hood creates negative pressure inside the home, outdoor air is drawn in through this opening by the pressure differential alone. There is no fan, no heater, no filter (or just a basic screen), and no automatic controls. The advantage is simplicity and cost — a passive inlet runs $100 to $400 installed and has no moving parts to maintain. The disadvantage in Toronto is severe. When it is -15 degrees outside and your 600 CFM range hood is running, that passive inlet is pulling a stream of frigid, unfiltered outdoor air directly into your home. In the summer, it brings in hot, humid air that adds to your cooling load. You have no control over the temperature, and the draft near the inlet can be genuinely uncomfortable. Passive inlets

can also allow insects, pollen, and outdoor contaminants to enter without adequate filtration.

A powered make-up air unit is a purpose-built appliance that includes a fan to actively push outdoor air into your home, a filter to clean the incoming air, and in most GTA installations, an electric or gas-fired tempering coil that heats the air before it enters the living space. The unit is interlocked with the range hood — it turns on automatically when the hood activates and shuts off when the hood stops. Better units include modulating controls that adjust airflow based on the hood's speed setting. The incoming air is delivered through insulated ductwork to the return air plenum of your furnace or to a dedicated diffuser, ensuring even distribution without concentrated cold spots. Powered units cost $2,000 to $5,000 installed in the GTA, a significant step up from passive inlets but absolutely worth it for Toronto's climate.

The practical impact is felt most during Toronto's heating season, which runs roughly from October through April. A passive inlet operating during a -20 degree cold snap introduces air that is 40 or more degrees colder than room temperature, creating a brutal draft and forcing your furnace to work harder to compensate. A tempered make-up air unit delivers air at 15 to 18 degrees — cool but comfortable — and the energy cost of tempering is predictable and manageable. Over a heating season, the difference in comfort is dramatic, and the energy penalty of heating raw -20 degree air through your furnace (because the passive inlet effectively makes your furnace do the tempering work) often approaches the operating cost of a dedicated tempering unit anyway.

For most GTA homeowners with range hoods over 400 CFM, a powered tempered make-up air unit is the right choice. Passive inlets may be acceptable for smaller exhaust loads in milder climates, but Toronto's extreme winter temperatures make them impractical for serious cooking ventilation. Get matched with a ductwork contractor through the Toronto Construction Network to find the best solution for your home.

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