OTTAWA HVAC PRO

Furnaces & Heating

Furnace installation, repair, and maintenance

22 Expert Answers from Construction Brain

ottawahvacpro.ca/construction-brain

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Q1

What is a furnace draft inducer motor?

A **furnace draft inducer motor** is a small electric motor with a fan that creates negative pressure to safely vent combustion gases out of your furnace through the flue pipe. This motor starts up before your furnace ignites, pulling air through the heat exchanger and ensuring proper ventilation of dangerous gases like carbon monoxide.

The draft inducer motor is a critical safety component that's required on all modern gas furnaces in Ontario. When your thermostat calls for heat, the draft inducer starts first to establish proper airflow. Only after the motor creates adequate draft does the furnace's control board allow the gas valve to open and ignition to occur. This sequence prevents dangerous gas buildup and ensures combustion gases are properly vented outside your home.

Common signs of a failing draft inducer motor include unusual noises (grinding, squealing, or rattling), the furnace starting then shutting down after a few seconds, or error codes on your thermostat. In Ottawa's climate, these motors typically last 10-15 years but can fail sooner due to constant use during our long heating season. The motor housing can also crack from age, causing air leaks that affect proper venting.

If your draft inducer motor fails, your furnace will not operate - this is an important safety feature. **Never attempt to bypass or repair this component yourself**, as improper installation can lead to carbon monoxide poisoning. TSSA regulations require that only licensed G2 or G3 technicians work on gas furnace components. Draft inducer motor replacement typically costs $400-700 in the Ottawa market, including parts and labor.

If you're hearing unusual noises from your furnace or experiencing intermittent heating issues, it's worth having the draft inducer motor inspected during your annual maintenance. For professional diagnosis and repair of furnace components, Ottawa HVAC Pro's licensed technicians can safely assess and replace draft inducer motors to keep your home heating safely.

Q2

What is a condensing furnace?

A **condensing furnace** is a high-efficiency gas furnace that captures and uses heat from water vapor in the exhaust gases, achieving efficiency ratings of 90% or higher. Unlike conventional furnaces that vent hot exhaust gases directly outside, condensing furnaces have a second heat exchanger that extracts additional heat by cooling the exhaust gases until water vapor condenses back into liquid.

This condensation process is what makes these furnaces so efficient. The **primary heat exchanger** works like a traditional furnace, while the **secondary heat exchanger** captures heat that would otherwise be wasted up the chimney. As the exhaust gases cool and water vapor condenses, this releases additional heat energy that gets transferred to your home's air. The condensed water (condensate) is drained away through a small plastic pipe, usually to a floor drain or condensate pump.

In Ottawa's climate, condensing furnaces are particularly valuable because they can achieve Annual Fuel Utilization Efficiency (AFUE) ratings of 90-98%, compared to older furnaces that typically operate at 60-80% efficiency. This means more of your natural gas dollar goes toward heating your home rather than being lost through the exhaust. You'll recognize a condensing furnace by its white PVC exhaust pipe rather than a traditional metal chimney - the exhaust is cool enough that it doesn't require a heat-resistant vent.

Installation considerations in Ottawa include proper condensate drainage (important during our cold winters to prevent freezing) and ensuring adequate combustion air supply. TSSA permits are required for installation, and the work must be performed by licensed G2 technicians. The upfront cost is higher than conventional furnaces, but the energy savings typically pay for the difference within 5-7 years.

For homeowners considering an upgrade from an older furnace, a condensing furnace represents excellent value in Ottawa's heating climate. Want to discuss whether a high-efficiency condensing furnace makes sense for your home? We offer free consultations to assess your current system and heating needs.

Q3

Is a 96% AFUE furnace overkill for Ottawa?

A 96% AFUE furnace is not overkill for Ottawa - it's actually a smart investment given our harsh winters and rising energy costs. With Ottawa's heating season running roughly 7 months per year and natural gas prices continuing to climb, the efficiency gains pay dividends over the furnace's 15-20 year lifespan.

High-efficiency furnaces make particular sense in Ottawa's climate because we use our heating systems so extensively. A 96% AFUE unit wastes only 4% of the fuel it burns, compared to 20% waste from a standard 80% efficiency furnace. Over a typical Ottawa winter where you might spend $1,200-1,800 on heating, that efficiency difference translates to $200-300+ in annual savings.

The payback period in Ottawa is typically 5-8 years when upgrading from an older, less efficient furnace. Factor in available rebates - Enbridge often offers rebates for high-efficiency furnace installations, and you may qualify for federal greener homes programs - and the economics become even more compelling. The condensing technology

in 96% furnaces also provides more consistent, comfortable heating during our coldest months.

From a safety and reliability standpoint, modern high-efficiency furnaces include advanced diagnostics and safety features that older units lack. They're also designed to handle Ottawa's temperature extremes more effectively. The only consideration is ensuring proper installation and annual maintenance, as condensing furnaces require specific venting and drainage that must meet TSSA requirements.

For most Ottawa homeowners, 96% AFUE represents the sweet spot between efficiency gains and upfront cost. Want to discuss whether high-efficiency makes sense for your specific home and heating bills? We offer free consultations to help you calculate the potential savings.

Q4

How much does a new furnace cost installed in Ottawa?

A new furnace installation in Ottawa typically costs between $3,500 and $6,500, depending on the efficiency rating and complexity of the installation.

The price range breaks down into two main categories. **Mid-efficiency furnaces** (80-85% AFUE) generally cost $3,500 to $5,000 installed, while **high-efficiency models** (90-98% AFUE) range from $4,500 to $6,500. The higher upfront cost of efficient units is often offset by lower monthly gas bills and potential rebates.

Several factors influence the final price in the Ottawa market. **Installation complexity** plays a major role - straightforward replacements cost less than installations requiring new venting, electrical work, or ductwork modifications. The **size of your home** determines the furnace capacity needed (measured in BTUs), with larger units costing more. **Brand selection** also affects pricing, with premium manufacturers like Carrier, Lennox, and Trane typically commanding higher prices than mid-tier options.

Ottawa-specific considerations include our harsh winters, which make high-efficiency furnaces particularly valuable for long-term savings. TSSA permits are required for all furnace installations in Ontario, and only licensed G2 or G3 technicians can perform the work legally. Many Ottawa homeowners also take advantage of federal and provincial rebates for high-efficiency equipment, which can reduce the net cost by $300-$1,000.

Safety is paramount when replacing a furnace - improper installation can lead to carbon monoxide leaks or other hazards. Always ensure your contractor is TSSA licensed and carries proper insurance. The installation should include a carbon monoxide detector if you don't already have one.

For an accurate quote on your specific situation, it's best to have a licensed technician assess your home's heating needs, existing ductwork, and venting requirements. **Want to discuss your furnace replacement? We offer free consultations to help Ottawa homeowners choose the right system for their needs.**

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Q5

What is the most efficient furnace for Canadian winters?

High-efficiency condensing furnaces with 95-98% AFUE ratings are the most efficient choice for Canadian winters, offering significant energy savings and reliable performance in our harsh climate.

Condensing furnaces are the gold standard for efficiency because they capture and reuse heat from exhaust gases that traditional furnaces waste. These units feature a second heat exchanger that extracts additional heat from combustion gases, achieving Annual Fuel Utilization Efficiency (AFUE) ratings of 95% or higher. This means 95-98% of the fuel you pay for actually heats your home, compared to 80-85% with standard efficiency models.

Variable-speed blower motors are another crucial efficiency feature. These motors adjust their speed based on heating demand, running at lower speeds most of the time to maintain consistent temperatures while using less electricity. They also improve air circulation and filtration throughout your home. **Modulating gas valves** work similarly, adjusting flame size to match heating needs rather than simply turning on and off, which reduces energy waste and temperature swings.

In Ottawa's climate, where we see temperatures well below -20°C, these high-efficiency furnaces maintain their performance better than older models. **Two-stage or modulating burners** are particularly valuable here because they can ramp up during extreme cold snaps while operating efficiently during milder winter days. The upfront investment of $4,500-$6,500 for a high-efficiency furnace typically pays for itself within 5-7 years through reduced natural gas bills.

TSSA permits are required for furnace installation in Ontario, and only licensed G2 technicians should handle the work. Proper sizing and installation are critical for achieving maximum efficiency - an oversized furnace will cycle on and off frequently, wasting energy and reducing comfort.

For a professional assessment of the most efficient furnace for your specific home and heating needs, request a quote from Ottawa HVAC Pro. We'll calculate proper sizing and recommend models that deliver the best long-term value for Ottawa homeowners.

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Q6

What size furnace do I need for a 2000 sq ft home?

For a 2000 square foot home in Ottawa, you'll typically need a furnace with **80,000 to 120,000 BTU capacity**, but the exact size depends on several critical factors beyond just square footage.

Heat loss calculation is essential for proper furnace sizing. Your home's insulation quality, window efficiency, ceiling height, and air leakage all dramatically affect heating requirements. A well-insulated newer home might only need 80,000 BTU, while an older home with poor insulation could require 120,000 BTU or more. Ottawa's cold winters (design temperature around -23°C) mean we can't rely on rules of thumb used in warmer climates.

Oversizing causes major problems including short cycling, uneven temperatures, higher energy bills, and reduced equipment lifespan. An oversized furnace heats your home too quickly, shuts off before completing a full heating cycle, then repeats this inefficient pattern. Undersizing is equally problematic - your furnace will struggle to maintain comfort during Ottawa's coldest days and run constantly, leading to premature failure.

Professional heat loss calculation using Manual J methodology considers your home's construction details, insulation levels, window specifications, and local climate data. This calculation typically costs $200-300 but ensures proper sizing and can save thousands in energy costs over the furnace's 15-20 year lifespan. TSSA-licensed technicians can perform this calculation and recommend appropriately sized high-efficiency models.

Modern high-efficiency furnaces (90%+ AFUE) are often smaller than older models while providing better comfort. Two-stage or modulating furnaces can handle varying heating loads more efficiently than single-stage units, making them excellent choices for Ottawa homes.

For an accurate furnace sizing assessment for your specific 2000 sq ft home, request a quote from Ottawa HVAC Pro for a professional heat loss calculation and equipment recommendations.

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Q7

Is a two stage furnace worth it?

Yes, a two-stage furnace is typically worth the investment for most Ottawa homeowners, especially considering our long heating season and variable winter temperatures. The energy savings and improved comfort usually justify the additional upfront cost within 5-7 years.

Two-stage furnaces operate at two heat output levels - typically around 65% capacity for milder weather and 100% capacity for the coldest days. This means during Ottawa's shoulder seasons (fall and early winter), your furnace runs longer cycles at lower capacity rather than constantly turning on and off. The result is more even temperatures throughout your home, better humidity control, and improved air filtration since air circulates more consistently.

The energy savings in Ottawa's climate are significant. During the majority of our heating season when outdoor temperatures are above -15°C, the furnace operates in low stage, using less gas while maintaining comfort. You'll typically see 10-15% lower heating bills compared to a single-stage furnace of similar efficiency. With natural gas prices in Ontario, this translates to $200-400 annual savings for an average Ottawa home.

From a comfort perspective, two-stage furnaces eliminate the temperature swings common with single-stage units. Instead of your home cycling between 18°C and 22°C, you'll maintain much steadier temperatures. The longer, gentler heating cycles also reduce drafts and cold spots, particularly important in Ottawa's older homes with varying insulation levels.

The additional cost is typically $500-800 over a comparable single-stage furnace when you're already replacing your system. Given the energy savings and improved comfort, most homeowners find this worthwhile. However, if you're in a very small, well-insulated home or planning to move within a few years, a high-efficiency single-stage furnace might be more cost-effective.

For a detailed analysis of whether a two-stage furnace makes sense for your specific Ottawa home and usage patterns, consider getting a free consultation from a licensed HVAC contractor who can assess your current system and heating costs.

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Q8

What is a modulating furnace and is it worth it

A **modulating furnace** is a high-efficiency heating system that can adjust its heat output anywhere from about 40% to 100% capacity, rather than just turning on and off like a traditional single-stage furnace. Think of it like a dimmer switch for your home's heating - it provides exactly the amount of heat needed at any given moment.

How modulating furnaces work: These systems use advanced controls and variable-speed components to continuously monitor your home's temperature and adjust the flame size accordingly. When it's mildly cold outside, the furnace might run at 50% capacity. On the coldest Ottawa winter days, it ramps up to full power. This constant, gentle heating maintains more consistent temperatures throughout your home.

The main benefits include exceptional comfort with minimal temperature swings (usually within 1-2 degrees), significantly quieter operation since the system rarely runs at full blast, and improved energy efficiency - typically 96-98% AFUE ratings. You'll also get better air filtration since the system runs longer cycles at lower speeds, moving air through your filter more consistently.

In Ottawa's climate, modulating furnaces perform exceptionally well because they can handle our wide temperature swings efficiently. During shoulder seasons (fall/spring), they run at low capacity for consistent comfort. During our harsh winters with temperatures dropping to -30°C, they have the full power needed while still maintaining efficiency.

The investment consideration: Modulating furnaces typically cost $1,000-2,000 more than standard high-efficiency models, with installed prices ranging from $5,500-7,500 in the Ottawa market. However, the energy savings, improved comfort, and longer equipment life often justify the higher upfront cost, especially in larger homes or homes with comfort issues.

Carbon monoxide safety is crucial with any gas furnace - ensure you have working CO detectors and schedule annual professional maintenance to keep your system safe and efficient.

For a detailed assessment of whether a modulating furnace makes sense for your specific Ottawa home, request a free consultation from Ottawa HVAC Pro to discuss your heating needs and comfort goals.

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Q9

What is the best furnace brand for Ottawa winters

For Ottawa's harsh winters, the most reliable furnace brands are Lennox, Carrier, and Trane, all offering proven performance in extreme cold conditions down to -30°C and below. These manufacturers have strong dealer networks in Ottawa and parts availability when you need service.

High-efficiency condensing furnaces (96%+ AFUE) are ideal for Ottawa's long heating season, typically running from October through April. Lennox's SLP98V and Carrier's Infinity series are particularly well-suited for our climate, featuring variable-speed blowers that provide consistent comfort and excellent energy efficiency. Trane's XV95 series also performs exceptionally well in cold weather applications.

In Ottawa's market, expect to invest $4,500 - $6,500 for a quality high-efficiency furnace installation, including TSSA permits and professional installation by licensed G2 technicians. The higher upfront cost pays dividends through lower Enbridge gas bills - a 96% efficient furnace can save $300-500 annually compared to an older 80% efficient unit.

Two-stage or modulating gas valves are crucial features for Ottawa winters, as they allow the furnace to adjust output based on outdoor temperature. This prevents the short cycling that's common with single-stage units during milder winter days, while providing full heating capacity during those brutal -25°C cold snaps we experience.

Safety features like hot surface ignition and proven heat exchangers are non-negotiable in our climate where furnaces run 6+ months per year. Always ensure your installation includes proper combustion air supply and carbon monoxide detection - TSSA requirements that protect your family.

For a professional assessment of which furnace model best fits your home's heating load and your budget, Ottawa HVAC Pro offers free consultations with our licensed technicians who understand Ottawa's unique heating challenges.

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Q10

What is a good AFUE rating for a furnace in Ottawa

For Ottawa's climate, look for a furnace with an AFUE rating of 90% or higher, with 95-98% being ideal for maximum efficiency and comfort.

AFUE (Annual Fuel Utilization Efficiency) measures how much of your fuel gets converted to heat versus what goes up the chimney. In Ottawa's harsh winters where your furnace runs heavily from November through March, every percentage point of efficiency translates to real savings on your heating bills.

Mid-efficiency furnaces (80-85% AFUE) are the minimum standard in Canada, but they're becoming less popular as homeowners realize the long-term costs. **High-efficiency furnaces** (90%+ AFUE) use condensing technology to capture heat that would otherwise be wasted, making them much more suitable for our climate where heating costs can represent 50-60% of your annual energy bill.

In the Ottawa market, most homeowners are choosing furnaces in the 95-98% AFUE range. These models typically cost $1,000-2,000 more upfront than mid-efficiency units, but the energy savings usually pay for the difference within 5-7 years. With natural gas prices and Ottawa's long heating season, a 96% AFUE furnace can save a typical home $300-500 annually compared to an 80% unit.

Important safety note: High-efficiency furnaces require proper installation and venting by TSSA-licensed technicians. The condensing process creates acidic condensate that needs proper drainage, and the venting requirements are different from conventional furnaces.

For Ottawa homes, I'd recommend focusing on furnaces with 95-98% AFUE ratings from reputable manufacturers. The sweet spot for most homeowners is around 96% AFUE - excellent efficiency without paying premium prices for that last 1-2% of efficiency.

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Q11

How much does furnace repair cost in Ottawa

Furnace repair costs in Ottawa typically range from $200 to $600, depending on the specific issue and parts needed. Simple fixes like thermostat problems or clogged filters are on the lower end, while component replacements like blower motors or heat exchangers fall on the higher end.

Common repair costs include diagnostic fees ($100-150), ignitor replacements ($200-300), blower motor repairs ($300-500), and gas valve issues ($400-600). Most HVAC companies charge a service call fee of $150-250, which often gets applied toward repair costs if you proceed with the work.

Emergency service calls outside regular business hours typically cost 25-50% more than standard rates. In Ottawa's harsh winters, emergency repairs are sometimes necessary, especially for older furnaces that haven't received regular maintenance.

Several factors affect repair costs in the Ottawa market. Older furnaces often require more expensive parts that may need special ordering. High-efficiency furnaces have more complex components that can cost more to repair. The time of year also matters - peak heating season (December through February) often sees higher demand and potentially higher rates.

Safety is paramount with furnace repairs. If you smell gas, hear unusual noises, or your carbon monoxide detector sounds, turn off your furnace immediately and call for emergency service. Never attempt DIY repairs on gas furnaces - only TSSA-licensed technicians should work on fuel-burning equipment in Ontario.

Before calling for service, check your thermostat settings, replace your air filter if it's dirty, and ensure your circuit breaker hasn't tripped. However, if these simple steps don't resolve the issue, it's time to call a professional.

For a proper diagnosis of your furnace issue and accurate repair estimate, Ottawa HVAC Pro offers transparent pricing and experienced TSSA-licensed technicians who can safely restore your home's comfort.

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Q12

Two-stage vs single-stage furnace - which is better

Two-stage furnaces are generally better for most Ottawa homes because they provide more consistent heating, better comfort, and improved energy efficiency compared to single-stage units.

A **single-stage furnace** operates like a simple on/off switch - it runs at full capacity every time it kicks on, then shuts off completely when the temperature is reached. This creates temperature swings in your home and uses more energy because it's always running at 100% output, even on milder days when you don't need full heating power.

A **two-stage furnace** has a low-fire setting (typically 60-70% capacity) and a high-fire setting (100% capacity). During Ottawa's milder fall and spring weather, it runs mostly on the low setting, providing gentler, more consistent heating. On the coldest winter days when temperatures drop to -25°C or lower, it automatically switches to high-fire mode to maintain comfort. This results in fewer on/off cycles, more even temperatures throughout your home, and lower energy bills.

In Ottawa's climate, two-stage furnaces really shine because we experience such a wide range of temperatures - from +15°C autumn days to -30°C winter nights. The two-stage unit can match its output to the actual heating demand, rather than always blasting at full power. You'll notice fewer cold spots, less noise, and better humidity control since the system runs for longer periods at lower capacity.

Cost considerations for Ottawa homeowners: Two-stage furnaces typically cost $300-800 more than comparable single-stage units, but the energy savings often pay for this difference within 3-5 years. They also tend to last longer due to less frequent cycling and gentler operation.

Safety and installation require the same TSSA permits and licensed G2 technician installation as any gas furnace. The main difference is in the control board and gas valve complexity, which means repairs may cost slightly more if issues arise years down the road.

For most Ottawa homes, especially those over 1,500 square feet, a two-stage furnace provides noticeably better comfort and efficiency. For a free assessment of which furnace type would work best for your specific home and heating needs, request a quote from Ottawa HVAC Pro.

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Q13

Why does my furnace keep turning on and off

Short cycling is when your furnace turns on and off frequently without completing full heating cycles, and it's one of the most common HVAC issues Ottawa homeowners face during our cold winters.

The most likely culprit is a **dirty air filter**. When your filter is clogged with dust, pet hair, and debris, it restricts airflow over the heat exchanger. This causes the furnace to overheat and shut down as a safety measure, then restart once it cools down. Check your filter right away - if it's gray or brown instead of white, replace it immediately. During Ottawa's heating season, filters typically need changing every 1-3 months depending on your home and pets.

Thermostat issues can also cause short cycling. If your thermostat is located near a heat source (like a sunny window, fireplace, or heat register), it may be getting false temperature readings. The thermostat thinks the house is warm enough and shuts off the furnace, but the rest of your home is still cold. Older thermostats can also malfunction and send incorrect signals to your furnace.

More serious causes include an **oversized furnace** for your home, blocked vents restricting airflow, or internal component failures like a faulty flame sensor or heat exchanger problems. In Ottawa's climate, short cycling not only wastes energy and increases your heating bills, but it also prevents your home from reaching comfortable temperatures during those -20°C winter days.

Safety note: If your furnace is short cycling and you smell gas or notice yellow flames instead of blue, turn off your system immediately and call for emergency service. These could indicate dangerous combustion issues that require immediate attention from a licensed G2 technician.

Start by checking and replacing your air filter, then ensure all vents are open and unblocked. If the problem persists after these steps, it's time for professional diagnosis. For a thorough inspection of your furnace's performance, Ottawa HVAC Pro offers comprehensive system evaluations to identify and resolve short cycling issues.

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Q14

What size furnace do I need for my Ottawa home

Furnace sizing depends on your home's heat loss calculation, which considers square footage, insulation, windows, and Ottawa's cold climate requirements. A properly sized furnace is crucial for efficiency, comfort, and longevity.

Heat loss calculations are the only accurate way to determine furnace size. This involves measuring your home's envelope, assessing insulation levels, counting windows and doors, and factoring in Ottawa's design temperature of -23°C. A furnace that's too small won't keep you warm during our harsh winters, while an oversized unit will short-cycle, waste energy, and create uneven temperatures.

Rough sizing estimates for Ottawa homes typically range from 40-60 BTU per square foot, but this varies significantly. A well-insulated 2,000 sq ft home might need an 80,000 BTU furnace, while a poorly insulated home of the same size could require 120,000 BTU. Older Ottawa homes often need larger furnaces due to less insulation and more air leakage.

Professional sizing is essential because incorrect sizing is one of the most common HVAC mistakes. Our technicians use Manual J heat loss calculations to determine the exact size needed for your specific home. We also consider your existing ductwork capacity, as undersized ducts can limit furnace performance regardless of size.

Ottawa's climate demands reliable heating equipment that can handle extended periods below -20°C. We typically recommend high-efficiency furnaces (90%+ AFUE) that are properly sized rather than oversized, as they'll provide better comfort and lower operating costs throughout our long heating season.

For an accurate furnace sizing assessment for your Ottawa home, request a free consultation where we'll perform a proper heat loss calculation and recommend the ideal furnace size for your specific situation.

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Q15

Should I repair or replace my old furnace

The decision between repairing or replacing your furnace depends on its age, repair costs, and efficiency. As a general rule, if your furnace is over 15 years old and repair costs exceed 50% of replacement value, replacement is usually the better investment.

Age is the primary factor in this decision. Furnaces typically last 15-20 years with proper maintenance. If your unit is approaching or past this age, even a successful repair is likely a temporary fix. Older furnaces also operate at much lower efficiency levels - often 80% AFUE or less - compared to today's high-efficiency models that achieve 90-96% efficiency.

Consider the repair cost versus replacement value. In the Ottawa market, major furnace repairs like heat exchanger replacement, blower motor, or gas valve issues can cost $800-1,500. When you're looking at repairs over $1,000 on an older furnace, replacement often makes more financial sense. A new mid-efficiency furnace installation typically runs $3,500-5,000, while high-efficiency models range $4,500-6,500.

Energy savings from a new high-efficiency furnace can be substantial in Ottawa's cold climate. Upgrading from an 80% efficiency furnace to a 95% model can reduce your heating bills by 15-20%. Over the furnace's lifespan, these savings often offset much of the replacement cost. Additionally, new furnaces come with warranties and are far less likely to break down during Ottawa's harsh winters.

Safety considerations are crucial with older furnaces. Heat exchanger cracks can lead to carbon monoxide leaks, which is extremely dangerous. If your HVAC technician identifies safety concerns, replacement isn't optional - it's necessary for your family's protection.

For a professional assessment of your specific furnace and a free replacement estimate, Ottawa HVAC Pro can evaluate your system and help you make the most cost-effective decision for your home.

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Q16

How do I know if my furnace heat exchanger is cracked

A cracked heat exchanger is a serious safety issue that requires immediate professional inspection. You cannot safely diagnose this yourself, as it involves potential carbon monoxide exposure, but there are warning signs to watch for.

Common warning signs include unusual sounds like rattling or banging from the furnace, visible rust or corrosion around the furnace cabinet, and soot buildup near the unit. You might notice the furnace cycling on and off more frequently than normal, or strange odors when the system runs. However, the most dangerous sign is if your carbon monoxide detector sounds an alarm - this requires immediate evacuation and emergency response.

Visual inspection limitations are important to understand. Even HVAC professionals use specialized cameras and combustion analyzers to properly inspect heat exchangers, as cracks can be hairline thin and located in areas not visible during normal operation. The heat exchanger is located inside the furnace cabinet and requires disassembly to inspect thoroughly. What might look fine to the untrained eye could have dangerous cracks that only show up under operating conditions.

In Ottawa's climate, heat exchangers typically last 15-20 years, but can crack earlier due to frequent cycling during our cold winters. Older furnaces with cast iron heat exchangers are particularly susceptible. TSSA regulations require that any furnace with a cracked heat exchanger be immediately shut down and red-tagged until repaired or replaced, as this creates a direct pathway for combustion gases to enter your home's air supply.

Carbon monoxide safety cannot be overstated - this colorless, odorless gas can be fatal. Ensure you have working CO detectors on every level of your home, especially near sleeping areas. Symptoms of CO exposure include headaches, dizziness, nausea, and flu-like symptoms that improve when you leave the house.

If you suspect a cracked heat exchanger, turn off your furnace immediately and call a licensed HVAC technician for inspection. A professional combustion analysis and visual inspection typically costs $150-250 in Ottawa, but could save your family's life. For immediate concerns about your furnace's safety, Ottawa HVAC Pro offers emergency diagnostic services to Ottawa area homeowners.

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Q17

What are the signs my furnace needs replacement

Your furnace likely needs replacement if it's over 15-20 years old and showing multiple warning signs, or if repair costs exceed 50% of replacement value. The most critical indicators are frequent breakdowns, rising energy bills, and uneven heating throughout your home.

Age is the primary factor - furnaces typically last 15-20 years with proper maintenance. If your unit is approaching or exceeding this range, replacement becomes more cost-effective than ongoing repairs. In Ottawa's harsh winters, an aging furnace works harder and is more prone to failure when you need it most.

Performance issues signal declining efficiency and reliability. Watch for rooms that won't heat properly, the furnace cycling on and off frequently, or taking longer to reach set temperatures. Strange noises like banging, rattling, or squealing often indicate worn components that are expensive to replace. Yellow flames instead of blue flames on gas furnaces can signal dangerous combustion problems requiring immediate attention.

Rising energy costs are a clear indicator of declining efficiency. If your Enbridge bills have increased significantly without changes in usage, your furnace is likely working harder to produce the same heat. Modern high-efficiency furnaces (96%+ AFUE) can reduce heating costs by 20-40% compared to older units.

Safety concerns should never be ignored. Rust around the furnace, especially near the vent pipe, can indicate dangerous carbon monoxide leaks. Frequent headaches, flu-like symptoms, or your carbon monoxide detector activating are serious warning signs. Any gas odors or visible corrosion require immediate professional inspection.

In Ottawa's market, mid-efficiency furnace replacement typically runs $3,500-$5,000, while high-efficiency units cost $4,500-$6,500 installed. **TSSA permits and professional installation by licensed G2/G3 technicians are required** for all furnace replacements in Ontario.

If you're experiencing multiple warning signs or your furnace is over 15 years old, **schedule a professional assessment to evaluate repair versus replacement costs**. For a free estimate on furnace replacement, request a quote from Ottawa HVAC Pro.

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Q18

How long does a furnace last in Ottawa

Most furnaces in Ottawa last 15-20 years with proper maintenance, though this can vary significantly based on the furnace type, usage patterns, and how well it's been maintained throughout its life.

High-efficiency furnaces (90%+ AFUE) installed in the last 15 years typically have better longevity than older, less efficient models. The harsh Ottawa winters mean your furnace works harder than in milder climates, which can impact lifespan. A furnace that runs constantly during those -30°C cold snaps will naturally experience more wear than one in a warmer region.

Proper maintenance is crucial for reaching that 15-20 year lifespan. Annual tune-ups, regular filter changes, and addressing small issues before they become major problems can extend your furnace's life significantly. Conversely, neglected furnaces often fail prematurely, sometimes lasting only 10-12 years.

Signs it's time to consider replacement include frequent repairs (especially if repair costs exceed 50% of replacement cost), uneven heating, rising energy bills, or if your furnace is over 15 years old and requiring major component repairs. In Ottawa's market, a mid-efficiency furnace replacement typically runs $3,500-$5,000, while high-efficiency models range from $4,500-$6,500.

For safety reasons, older furnaces should be inspected annually by a TSSA-licensed technician, as aging heat exchangers can develop cracks that allow carbon monoxide to enter your home. If your furnace is approaching 15 years old, it's wise to start planning for replacement rather than waiting for an emergency failure during a cold Ottawa winter.

For a professional assessment of your furnace's remaining lifespan, request a consultation from Ottawa HVAC Pro - we can help you plan ahead and avoid unexpected breakdowns.

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Q19

How much does furnace installation cost in Ottawa

Furnace installation in Ottawa typically costs between $3,500 and $6,500, depending on the efficiency rating, size, and complexity of the installation. Mid-efficiency furnaces (80-85% AFUE) generally range from $3,500 to $5,000, while high-efficiency models (90-96%+ AFUE) cost $4,500 to $6,500 installed.

The total cost includes the furnace unit, installation labor, TSSA permit, gas line connections, and basic ductwork modifications. **High-efficiency furnaces cost more upfront but provide significant long-term savings** on your Enbridge gas bills - often $300-500 annually for an average Ottawa home. These units also qualify for federal and provincial rebates, which can offset $1,000-2,000 of the initial cost.

Ottawa's climate makes furnace efficiency particularly important since we rely on heating for 6-7 months annually. A properly sized furnace is crucial - oversized units cycle on and off frequently, reducing efficiency and comfort. Licensed HVAC contractors will perform a heat loss calculation considering your home's square footage, insulation, windows, and air leakage to determine the correct size.

Installation requires a TSSA permit and must be performed by a licensed G2 or G3 gas technician in Ontario. The permit ensures proper venting, gas connections, and carbon monoxide safety. Never attempt DIY installation or hire unlicensed contractors for gas appliance work - it's illegal and dangerous.

Additional costs to consider include upgrading electrical connections for high-efficiency models ($200-400), new thermostat installation ($150-350), or ductwork modifications ($500-1,500). If your existing ductwork is undersized or damaged, this can add significantly to the project cost.

For a free estimate on your specific furnace installation needs, request a quote from Ottawa HVAC Pro. We'll assess your home's requirements and explain available rebate programs to maximize your savings.

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Q20

Why is my furnace blowing cold air

Your furnace is likely blowing cold air due to a thermostat issue, dirty air filter, pilot light problem, or a malfunctioning component like the ignition system or gas valve. The most common causes are simple fixes, but some require professional attention for safety reasons.

Start with the basics first. Check that your thermostat is set to "heat" mode (not "cool" or "auto") and the temperature is set higher than the current room temperature. Make sure the fan setting is on "auto" rather than "on" - when set to "on," the fan runs continuously and will blow unheated air between heating cycles. Also verify that your circuit breaker hasn't tripped and that your furnace power switch (usually located near the unit) is in the "on" position.

A dirty air filter is another frequent culprit. When your filter is clogged, it restricts airflow and can cause the furnace to overheat and shut down as a safety measure. This leaves the fan running but no heat being produced. Check your filter and replace it if it's dirty or hasn't been changed in the last 1-3 months. In Ottawa's dusty winter conditions, filters often need more frequent replacement than the manufacturer's recommendations.

For gas furnaces, pilot light or ignition issues are common causes. If you have an older furnace with a pilot light, check if it's lit (you should see a small blue flame). However, **never attempt to relight a pilot light yourself** - this requires proper safety procedures and should only be done by a TSSA-licensed technician. Modern furnaces use electronic ignition systems that can fail and prevent the burners from lighting, resulting in cold air circulation.

More serious issues include problems with the gas valve, heat exchanger, or blower motor. These components require professional diagnosis and repair. A malfunctioning gas valve won't allow gas to flow to the burners, while a cracked heat exchanger is a serious safety hazard that can leak carbon monoxide. Strange noises, unusual smells, or visible rust around your furnace are warning signs that warrant immediate professional attention.

In Ottawa's climate, a furnace blowing cold air in winter is an emergency situation. Don't let the problem persist, as it can lead to frozen pipes and other costly damage. If basic troubleshooting doesn't resolve the issue within an hour, it's time to call for professional service. Our TSSA-licensed technicians can safely diagnose and repair gas furnace issues, ensuring your family stays warm and safe.

For urgent furnace repairs in Ottawa, contact a licensed HVAC professional who can provide same-day emergency service and get your heating system running safely again.

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Q21

How often should I replace my furnace filter

Most furnace filters should be replaced every 1-3 months, but the exact timing depends on your filter type, home conditions, and usage patterns.

Standard 1-inch pleated filters typically need replacement every 30-60 days during heating season. If you have pets, allergies, or live in a dusty area, lean toward monthly replacement. **Thicker filters (4-5 inches)** can often go 3-6 months between changes since they have more surface area to capture debris.

Check your filter monthly by holding it up to light - if you can't see through it clearly, it's time to replace it. A clogged filter forces your furnace to work harder, increasing energy bills and potentially causing overheating. In Ottawa's long heating season (October through April), this becomes especially important as your system runs frequently.

During peak winter months, you may need to change filters more often due to increased runtime. Conversely, during mild fall and spring weather when the furnace cycles less, filters can last longer. Always keep spare filters on hand so you're not caught without one during a cold snap.

Never run your furnace without a filter - this allows dust and debris to coat your heat exchanger and blower motor, leading to expensive repairs. If you're unsure about your specific filter type or having trouble with frequent clogging, this could indicate ductwork issues or an improperly sized filter that should be evaluated by a professional.

For busy homeowners, consider setting phone reminders or marking your calendar to check filters monthly - it's the simplest maintenance task that can prevent costly furnace problems down the road.

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Q22

What causes a furnace to stop working in winter

Furnace failures in winter typically stem from a few common issues, with clogged air filters being the most frequent culprit. When your furnace stops working during Ottawa's harsh winters, it's usually due to restricted airflow, thermostat problems, or safety system shutdowns.

Clogged air filters are responsible for about 80% of furnace breakdowns. When filters become packed with dust, pet hair, and debris, airflow becomes restricted, causing the furnace to overheat and shut down as a safety measure. In Ottawa's dry winter air, filters can clog faster than expected, especially if you have pets or haven't changed the filter in 2-3 months.

Thermostat malfunctions are another leading cause, particularly with older thermostats that struggle in extreme cold. Dead batteries, incorrect settings, or a thermostat that's lost its programming can leave you without heat. Sometimes the issue is as simple as someone accidentally switching it to "cool" mode or the temperature being set too low.

Pilot light or ignition problems frequently occur during Ottawa's coldest snaps when temperatures drop below -20°C. Modern furnaces have electronic ignition systems that can fail, while older units may have pilot lights that get extinguished by drafts or component wear. Gas supply issues, though less common, can also prevent ignition.

Safety system shutdowns protect your family but leave you cold. High-limit switches trigger when the furnace overheats, flame sensors shut down the system if they can't detect proper combustion, and pressure switches stop operation if venting is blocked by snow or ice - common in Ottawa winters.

Never ignore a furnace shutdown - it could indicate a carbon monoxide risk or other safety hazard. While you can check the filter and thermostat settings yourself, gas appliance repairs require a TSSA-licensed technician. If your furnace won't restart after checking these basics, call for emergency service rather than repeatedly trying to restart the system.

For reliable furnace repair during Ottawa's winter emergencies, Ottawa HVAC Pro provides same-day service with TSSA-licensed technicians who understand how our harsh winters affect heating systems.

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