Installation and operating instructions for the CADDY ADVANCED WOOD SERIES ADD-ON (PF01020)

Certified according to CSA B415.1-10, CSA B366.1

Allowed only in Canada

Read these instructions carefully **before installing and operating your furnace.**

CONGRATULATIONS!

You have purchased one of the finest wood furnace available on the market. We are confident that your furnace will provide years of comfort and safe operation.

Please keep this document!

Verified and tested for Canada by an accredited laboratory.

Eco-energy at the hearth of your home

Caddy
250, de Copenhague,
St-Augustin-de-Desmaures
(Quebec)
CANADA G3A 2H3

Printed in Canada

45246A
19-08-2021

TABLE OF CONTENT

IMPORTANT NOTE:

This furnace and its hot air duct system must be sold and installed by a professional. In the absence of a professional installer, the manufacturer reserves the right not to apply its warranty or to refuse any technical support.

REGISTER YOU WARRANTY ONLINE

To receive full warranty coverage, you will need to show evidence of the date you purchased your furnace. Keep your sales invoice. We also recommend that you register your warranty online at: https://www.caddyfurnaces.com/en/warranty/warranty-registration

Registering your warranty online will help us track rapidly the information we need on your furnace.

1 INTRODUCTION

This furnace uses the *Dual Fire©* technology with a two-stage electronic combustion control. Find peace of mind with a self-regulated combustion that allows easy ignition. Its automated air supply and self regulated systems synchronize with your thermostat to offer additional safety, optimize comfort and reduce emissions with minimal maintenance. This model meets the emissions limits of CSA B415.1-10 Standard and EPA 40CFR Part 60, subpart QQQQ (2020 limit).

To optimize the efficiency of your furnace, here is some advice that you should follow when installing or operating your Caddy Advanced.

- Respect the local codes (when in doubt, consult your local dealer).
- Make sure your furnace is installed according to the instructions on the certification label.
- All controls and adjustments must be performed by a qualified technician. The blower speed must conform to the recommendations of local codes and should respect the static pressure ranges in the warm air plenum of the furnace.

We recommend that our wood burning hearth products be installed and serviced by professionals who are certified in the United States by NFI (National Fireplace Institute®) or in Canada by WETT (Wood Energy Technical Training) or in Quebec by APC (Association des Professionnels du Chauffage).

This furnace has been developed and built for residential heat source. Commercial and industrial use is prohibited and will void the warranty.

2 FURNACE PERFORMANCE[1]

Fuel type	Dry cordwood	
Recommended heating area[*]	1,000 to 2,500 ft² (93 à 232 m²)	
Firebox volume	3.6 ft³ (0.102 m³)	
Maximum burn time[*]	10 h	
Maximum input capacity (dry cordwood)[2]	310,000 BTU	
Overall heat output rate (min. to max.)[3]	19,354 BTU/h to 47,052 BTU/h (5.6 kW to 13.8 kW)	
Average overall efficiency[8]	76.6% (HHV)[5]	82.0% (LHV)[6]
Delivered heat output rate (min. to max.)[7]	13,297 BTU/h to 42,234 BTU/h (3.9 kW to 12.4 kW)	
Average delivered efficiency[4]	60.7% (HHV)[5]	65.0% (LHV)[6]
Optimum overall efficiency[9]	83.2%	
Optimum heat transfer efficiency [14]	81%	
Average particulate emissions rate[10][11]	0.095 lb/mmBTU (0.041 g/MJ)	
Average CO[12]	8.78 lb/mmBTU (3.78 g/MJ)	
Average electrical power consumption[13]	30 W	

[*] Recommended heating area and maximum burn time may vary subject to location in home, chimney draft, heat loss factors, climate, fuel type and other variables. The recommended heating area for a given appliance is defined by the manufacturer as its capacity to maintain a minimum acceptable temperature considering that the space configuration and the presence of heat distribution systems have a significant impact in making heat circulation optimum.

(1) Values are as measured per CSA B415.1-10, except for the recommended heating area, firebox volume, maximum burn time and maximum input capacity. Performances based on a fuel load prescribed by the standard at 10 lb/ft³ and with moisture content between 18% and 28%.

(2) Input value at 10lb/ft³ fuel loading density and dry energy value of 8,600BTU/lb.

(3) Overall: Radiated and delivered heat together at10lb/ft³ fuel loading density over one total burn cycle.

(4) Efficiency based on delivered heat when allowing cycling from high to low burn to simulate thermostat demand.

(5) Higher Heating Value of the fuel.

(6) Lower Heating Value of the fuel.

(7) Delivered: Remotely provided to other rooms through ducting at 10 lb/ft³ fuel loading density over one total burn cycle.

(8) Efficiency based on radiated and delivered heat when allowing cycling from high to low burn to simulate thermostat demand.

(9) Optimum overall efficiency at a specific burn rate (LHV).

(10) Based on delivered heat output.

(11) This appliance is officially tested and certified by an independent agency.

(12) Carbon Monoxide. Based on overall heat output at 10lb/ft³ fuel loading density.

(13) Unless stated otherwise, measures were taken directly at the main power source and include all electrical components present in the appliance.

(14) The optimum heat transfer efficiency is for the low burn rate and represents the appliance's ability to convert the energy contained in the wood logs into energy transferred to the room in the form of heat and does not take into account the chemical losses during combustion.

3 GENERAL FEATURES

Maximum log length	21 in (533 mm) / north-south**
Diameter of the flue collar	6 in (152 mm)
Recommended connector pipe diameter	6 in (152 mm)
Recommended chimney diameter	6 in (152 mm)
Required type of chimney	CAN/ULC S629 (2100 °F)
Baffle material	C-Cast or equivalent
Alcove installation	Not approved
Mobile home installation‡	Not approved
Appliance weight (without option)	635 (288 kg)
Shipping weight (without option)	705 lb (320 kg)
Filter - dimensions (Width x Depth x Height) (included with optional blower assembly)	14 in x 25 in x 1 in (356 mm x 635 mm x 25 mm)
Filter - quantity	1
Particulate emission standard	CSA B415.1-10
Canadian standard (safety)	CSA B366.1

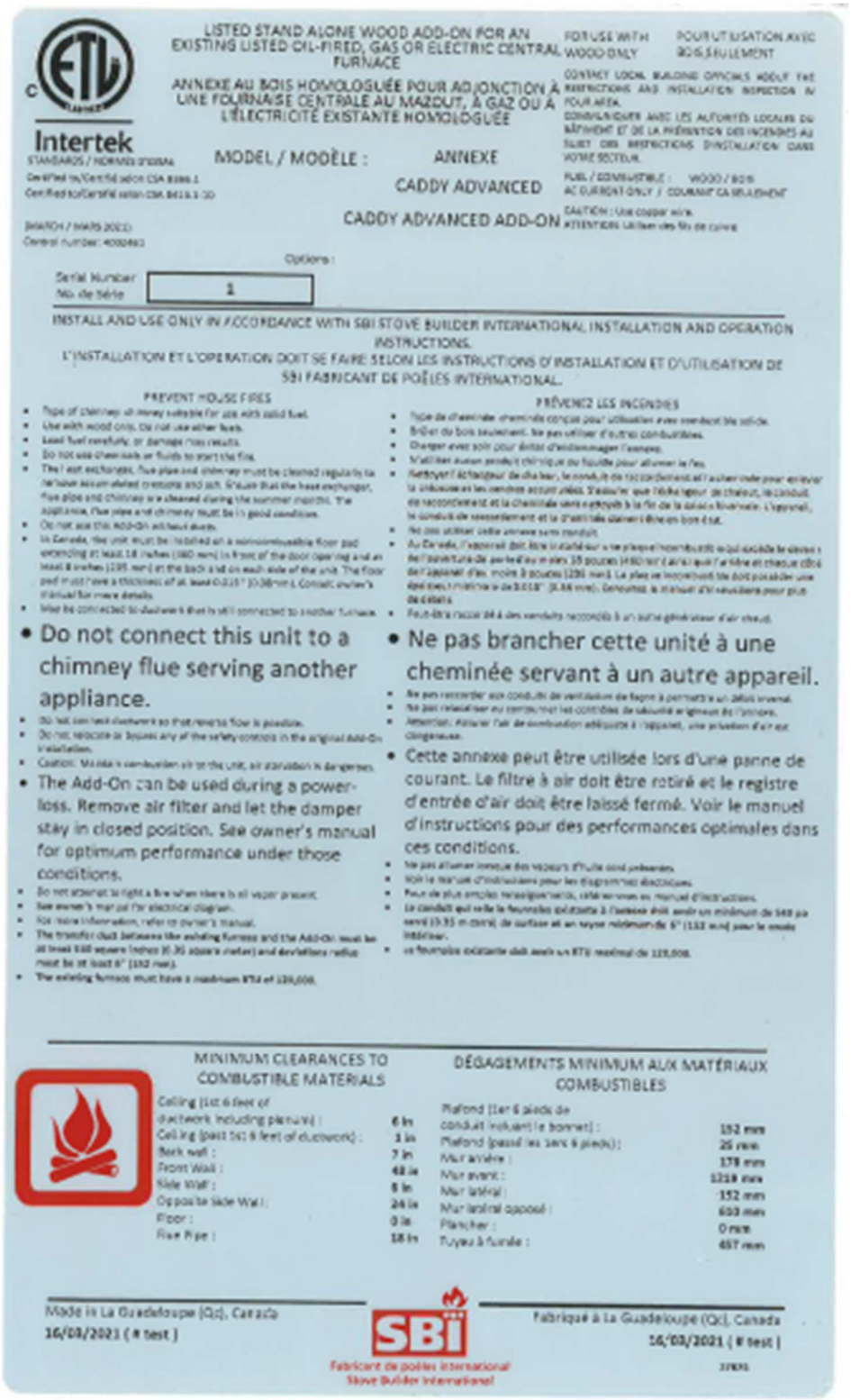
*** East-west: through the door you see the longitudinal sides of the logs; north-south: through the door you see the tips of the logs.*

‡ *Mobile home (Canada): In Canada, a mobile home is a dwelling for which the manufacture and assembly of each component is completed or substantially completed prior to being moved to a site for installation on a foundation and connection to service facilities and which conforms to the CAN/CSA-Z240 MH standard.*

4 SPECIFICATIONS

Color	Grey and black
Thermostatic control	Yes
Door type	Single, glass with cast iron frame
Glass type	Ceramic glass
Air return plenum - dimensions (Depth or Height)	15 3/4 in
Air return plenum - dimension (Width)	24 3/4 in
Hot air plenum - dimensions (Depth or Height)	28 5/8 in
Hot air plenum - dimension (Width)	24 1/2 in
Ash pan - dimensions (Width x Depth x Height)	13 5/8 in x 20 1/2 in x 4 in
Clearance - front	48 in
Clearance - back wall	24 in from the control board housing recommended service clearance
Clearance - side wall	6 in
Clearance - side wall	24 in recommended service clearance
Clearances - ducts	6 in for the first 6 feet and 1 in after
Clearance - recommended for maintenance on left side	24 in
Top cold air plenum option - material	Galvanized steel
Top cold air plenum option - dimensions (Width x Depth x Height)	24 7/8 in x 15 7/8 in x 10 3/4 in
Top cold air plenum option - smoke pipe diameter	6 in
Fresh air intake adapter option	5 in
Fresh air intake adapter - connection location	Left or right
Tested and listed as per applicable standards	By an accredited laboratory (CAN)
Warranty	Limited lifetime

5 LABELS



LISTED STAND ALONE WOOD ADD-ON FOR AN EXISTING LISTED OIL-FIRED, GAS OR ELECTRIC CENTRAL FURNACE

ANNEXE AU BOIS HOMOLOGUÉE POUR ADJONCTION À UNE FOURNAISE CENTRALE AU MAZOUT, À GAZ OU À L'ÉLECTRICITÉ EXISTANTE HOMOLOGUÉE

FOR USE WITH WOOD ONLY

POUR UTILISATION AVEC BOIS SEULEMENT

CONTACT LOCAL BUILDING OFFICIALS ABOUT THE RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

CONSULTEZ LES AUTORITÉS LOCALES DU BÂTIMENT ET DE LA PRÉVENTION DES INCENDIES AU SUJET DES RESTRICTIONS D'INSTALLATION DANS VOTRE SECTEUR.

Intertek

STANDARDS / NORMES D'ESSAI

Certified to/Certifié selon CSA B366.1

Certified to/Certifié selon CSA B415.1-10

MODEL / MODÈLE : ANNEXE

CADDY ADVANCED

CADDY ADVANCED ADD-ON

FUEL / COMBUSTIBLE : WOOD / BOIS

AC CURRENT ONLY / COURANT CA SEULEMENT

CAUTION / Use copper wire.

ATTENTION Utiliser des fils de cuivre

(MARCH / MARS 2021)

Options :

Serial Number / No. de série : 1

INSTALL AND USE ONLY IN ACCORDANCE WITH SBI STOVE BUILDER INTERNATIONAL INSTALLATION AND OPERATION INSTRUCTIONS.

L'INSTALLATION ET L'OPÉRATION DOIT SE FAIRE SELON LES INSTRUCTIONS D'INSTALLATION ET D'UTILISATION DE SBI FABRICANT DE POÊLES INTERNATIONAL.

PREVENT HOUSE FIRES

- Type of chimney or liner suitable for use with solid fuel.
- Use with wood only. Do not use other fuels.
- Load fuel carefully, or damage may result.
- Do not use chemicals or fluids to start the fire.
- The heat exchanger, flue pipe and chimney must be cleaned regularly to remove excess unburned creosote and ash. Ensure that the heat exchanger, flue pipe and chimney are cleaned during the summer months. The appliance, flue pipe and chimney must be in good condition.
- Do not use this ADD-ON with heat shields.
- In Canada, the unit must be installed on a noncombustible floor pad extending at least 18 inches (460 mm) in front of the door opening and at least 8 inches (205 mm) at the back and on each side of the unit. The floor pad must have a thickness of at least 0.213" (5.38 mm). Consult owner's manual for more details.
- Must be connected to duct work that is still connected to another furnace.

- **Do not connect this unit to a chimney flue serving another appliance.**
- Do not connect duct work so that reverse flow is possible.
- Do not relocate or bypass any of the safety controls in the original Add-On installation.
- Caution: Maintain combustion air to the unit, air starvation is dangerous.
- **The Add-On can be used during a power-loss. Remove air filter and let the damper stay in closed position. See owner's manual for optimum performance under those conditions.**
- Do not attempt to light a fire when there is oil vapor present.
- See owner's manual for electrical diagram.
- For more information, refer to owner's manual.
- The transfer duct between the existing furnace and the Add-On must be at least 648 square inches (0.35 square meter) and the elbows / reflux must be at least 6" (152 mm).
- The existing furnace must have a maximum BTU of 120,000.

PRÉVENEZ LES INCENDIES

- Type de cheminée ou conduit approprié pour utilisation avec combustible solide.
- Brûler du bois seulement. Ne pas utiliser d'autres combustibles.
- Charger avec soin pour éviter d'endommager l'appareil.
- N'utilisez aucun produit chimique ou liquide pour allumer le feu.
- Nettoyer régulièrement de cela leur, le conduit de raccordement et la cheminée pour enlever la créosote et les cendres excessif. S'assurer que l'échangeur de chaleur, le conduit de raccordement et la cheminée sont nettoyés à la fin de la saison hivernale. L'appareil, le conduit de raccordement et la cheminée doivent être en bon état.
- Ne pas utiliser cette annexe sans conduit.
- Au Canada, l'appareil doit être installé sur une plaque incombustible ayant au moins 18 pouces (460 mm) d'ainsi que l'arrière et chaque côté de l'appareil d'au moins 8 pouces (205 mm). La plaque incombustible doit posséder une épaisseur minimale de 0.213" (5.38 mm). Consultez le manuel d'instructions pour plus de détails.
- Peut être raccordé à des conduits raccordés à un autre générateur d'air chaud.

- **Ne pas brancher cette unité à une cheminée servant à un autre appareil.**
- Ne pas raccorder aux conduits de ventilation de façon à permettre un débit inverse.
- Ne pas relocaliser ou contourner les contrôles de sécurité originaux de l'annexe.
- Attention : Assurer l'air de combustion adéquate à l'appareil, une privation d'air est dangereuse.
- **Cette annexe peut être utilisée lors d'une panne de courant. Le filtre à air doit être retiré et le registre d'entrée d'air doit être laissé fermé. Voir le manuel d'instructions pour des performances optimales dans ces conditions.**
- Ne pas allumer lorsque des vapeurs d'huile sont présentes.
- Voir le manuel d'instructions pour les diagrammes électriques.
- Pour de plus amples renseignements, référez-vous au manuel d'instructions.
- Le conduit qui relie la fournaise existante à l'annexe doit avoir un minimum de 648 po carré (0.35 m carré) de surface et un rayon minimum de 6" (152 mm) pour le coude intérieur.
- La fournaise existante doit avoir un BTU maximal de 120,000.

MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS

Ceiling (1st 6 feet of ductwork including plenum) :	6 in
Ceiling (past 1st 6 feet of ductwork) :	1 in
Back wall :	7 in
Front Wall :	48 in
Side Wall :	8 in
Opposite Side Wall :	24 in
Floor :	0 in
Flue Pipe :	18 in

DÉGAGEMENTS MINIMUM AUX MATÉRIAUX COMBUSTIBLES

Plafond (1er 6 pieds de conduit incluant le bonnet) :	152 mm
Plafond (passé les 1ers 6 pieds) :	25 mm
Mur arrière :	178 mm
Mur avant :	1219 mm
Mur latéral :	152 mm
Mur latéral opposé :	610 mm
Plancher :	0 mm
Tuyau à fumée :	457 mm

Made in La Guadeloupe (Qc), Canada

16/03/2021 (# test)

SBI

Fabricant de poêles international

Stove Builder International

Fabriqué à La Guadeloupe (Qc), Canada

16/03/2021 (# test)

Intertek

PERFORMANCE TESTING OF SOLID-FUEL BURNING HEATING APPLIANCE

RENDEMENT D'APPAREIL DE CHAUFFAGE À COMBUSTION SOLIDE

MODEL / MODÈLE :

ANNEXE

CADDY ADVANCED

CADDY ADVANCED ADD-ON

PERFORMANCE TECHNICAL DATA FROM CSA B-415.1-10 / DONNÉES TECHNIQUES DE PERFORMANCE RELATIVE À LA NORME CSA B-415.1-10

- The stated efficiency is based on the higher heating value of the fuel.
- The minimum and maximum delivered heat output rate are based on the tests performed in determining the average emissions rates.
- The average efficiency is based on the amount of delivered heat.

- Le rendement annoncé est basé sur le pouvoir calorifique supérieur du combustible.
- Les puissances thermiques minimales et maximales sont basées sur les essais réalisés pour la détermination du taux moyen d'émission de particules.
- Le rendement moyen est basé sur la quantité de chaleur transportée.

AVERAGE PARTICULATE EMISSION RATE / TAUX MOYEN D'ÉMISSION DE PARTICULE:	0.095 lb/mmBTU 0.041 g/MJ	MINIMUM DELIVERED HEAT OUTPUT RATE / PUISSANCE THERMIQUE MINIMALE:	13 297 kJ/h
AVERAGE EFFICIENCY / RENDEMENT MOYEN:	80.7%	MAXIMUM DELIVERED HEAT OUTPUT RATE / PUISSANCE THERMIQUE MAXIMALE:	42 234 kJ/h
AVERAGE OVERALL EFFICIENCY / RENDEMENT MOYEN GLOBAL:	76.9%	MINIMUM OVERALL HEAT OUTPUT RATE / PUISSANCE THERMIQUE GLOBALE MINIMALE:	29 354 kJ/h
AVERAGE ELECTRICAL POWER CONSUMPTION / CONSOMMATION D'ÉLECTRICITÉ MOYENNE:	330 W	MAXIMUM OVERALL HEAT OUTPUT RATE / PUISSANCE THERMIQUE GLOBALE MAXIMALE:	47 052 kJ/h

U.S. ENVIRONMENTAL PROTECTION AGENCY certified to comply with the 2020 particulate emission standards using wood./AGENCE DE PROTECTION DE L'ENVIRONNEMENT DES É.U. (EPA). Conforme aux normes d'émission de particules de 2020 avec bûches de bois.
This appliance needs periodic inspection and repair for proper operation. Consult the owner's manual for further information./Cet appareil requiert des inspections et réparations périodiques. Consulter le manuel de l'utilisateur pour plus d'information.
It is against US Federal regulations to operate this appliance in a manner inconsistent with the operating instructions in the owner's manual./Opérer cet appareil de chauffage de façon incompatible par rapport au manuel de l'utilisateur constitue une violation de la loi fédérale (USA).

DANGER: Risk of fire or explosion
- Do not burn garbage, gasoline, drain oil or other flammable liquids.

WARNING: Risk of fire
- Do not operate with flue draft exceeding 0.06" W.C. (15Pa).
- Do not operate with fuel loading or ash removal doors open.
- Do not store fuel or other combustible material within marked installation clearances.
- Inspect and clean flues and chimney regularly.

CAUTION: Hot surfaces
- Keep children away.
- Do not touch during operation.

DANGER: Risque d'incendies ou d'explosion
- Ne pas brûler d'ordures, d'essence, d'huile moteur ou tout autre liquides inflammable.

AVERTISSEMENT: Risque d'incendies
- Ne pas utiliser si le tirage excède 0.06" C.E. (15Pa).
- Ne pas utiliser avec les portes d'accès et/ou de chargement ouverte.
- Ne pas entreposer de combustible ou matériaux combustibles à l'intérieur des dégagements prescrits.

- Inspecter et nettoyer le conduit de raccordement ainsi que la cheminée fréquemment.

TECHNICAL DATA / DONNÉES TECHNIQUES

Max. Output T°/	196 °F
T° max Sortie	91 °C
Est. Stack Pressure/	0.2" - 0.5" W.C.
Pression Statique Est.	0.2" - 0.5" C.E.
Electrical Rating / Alimentation Électrique	120V, 2.8 AMPS, 60Hz

PROCEDURE TO FOLLOW IN CASE OF RUN-AWAY FIRE
1) Turn down thermostat
2) Keep fuel door closed
3) Close all combustion air controls

EN CAS D'INCENDIE DE CHEMINÉE
1) Baisser le thermostat
2) Maintenir la porte de chargement fermée
3) Fermer tous les dispositifs d'admission d'air

Made in La Guadeloupe (Qc), Canada
16/09/2021 (# test)

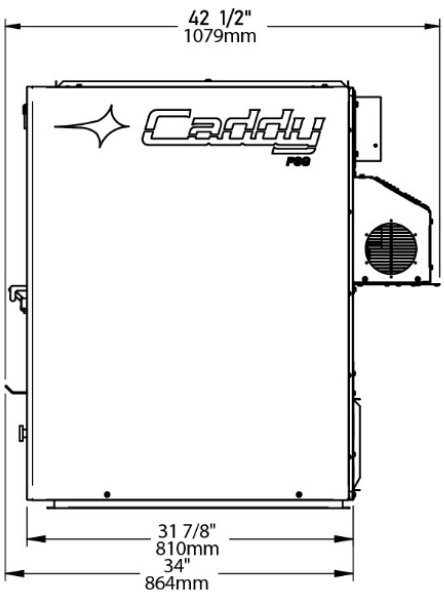
SBI
Fabricant de poêles international
Stove Builder International

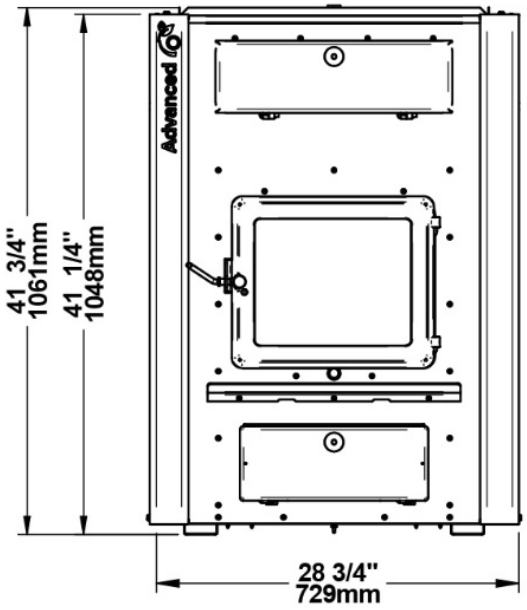
Fabriqué à La Guadeloupe (Qc), Canada
16/09/2021 (# test)
27875

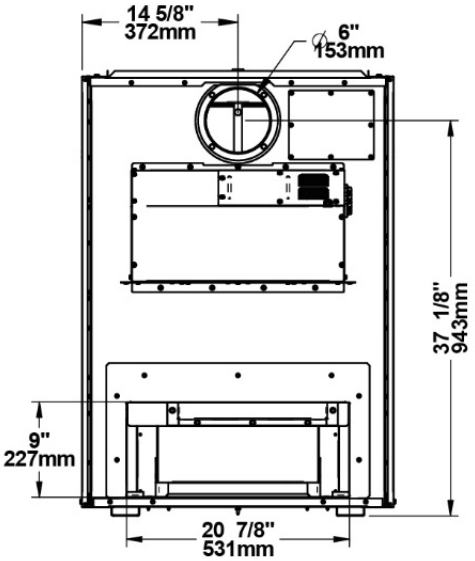
6 TECHNICAL DATA OF THE CADDY ADVANCED ADD-ON SERIE

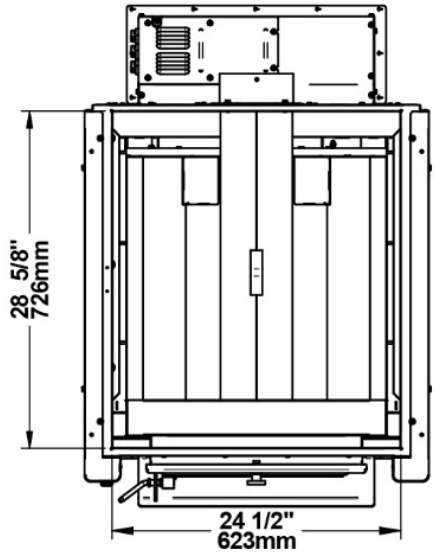
MODEL	VARIABLE TEMPERATURE	STATIC PRESSURE	
CADDY ADVANCED ADD-ON (SERIAL INSTALLATION)	(°F)	MIN.	MAX.
		H2O	
	55	0,2	0,5

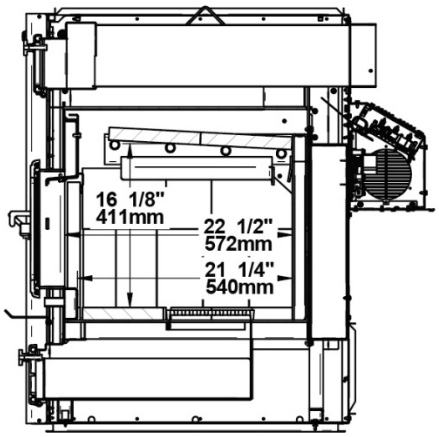
7 CADDY ADVANCED ADD-ON DIMENSIONS

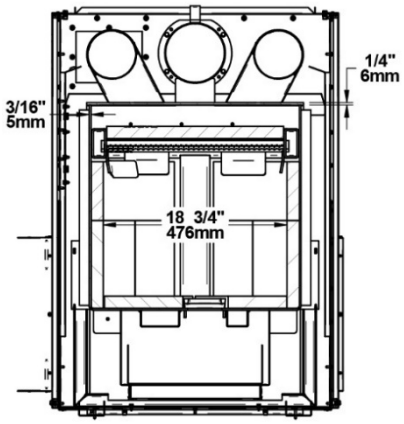


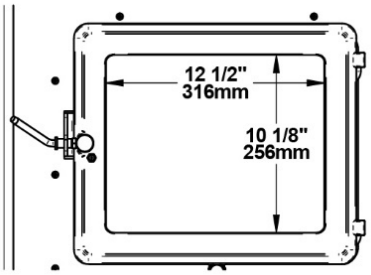


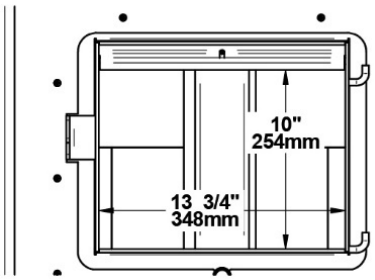












8 CHIMNEY AND DRAFT

This furnace must be connected to a chimney certified for use with wood burning heating appliances, a 6-inch diameter chimney is recommended.

The unit is not to be connected to a chimney flue serving another appliance. If the chimney draft exceeds 0.06 IN.W.C., a barometric draft control should be installed on the smoke pipe. Never install a manual damper. The barometric control must be adjusted so that the maximum draft measured at the furnace outlet does not exceed 0.06 IN.W.C. Excessive draft can overheat the appliance and reduce burn time. Conversely, a lack of draft can lead to poor combustion and smoke returns.

9 SAFETY RULES

WARNING! THE INFORMATION GIVEN ON THE CERTIFICATION LABEL AFFIXED TO THE APPLIANCE ALWAYS OVERRIDES THE INFORMATION PUBLISHED, IN ANY OTHER MEDIA (OWNER'S MANUAL, CATALOGUES, FLYERS, MAGAZINES OR WEB SITES).

9.1 GENERAL REQUIREMENTS

- **Make sure the chimney outlet and the pipes are clean and in good condition.**
- **Do not use chemical products or liquids to light the fire.**
- **Do not burn wood coated with paint, glue or chemical products.**
- **Do not burn wastes or flammable liquids such as gasoline, naphtha, motor oil, or other unsuitable matters.**
- **Do not store wood in the vicinity of the furnace. Respect the required clearances between combustible materials and the source of heat.**

WARNING! THE ASH DRAWER AND EXCHANGERS ACCESS PANEL GET VERY HOT. DO NOT MANIPULATE WITH BARE HANDS.

WARNING: This product can expose you to chemicals including carbon monoxide, which is known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov/

9.2 ODOUR FROM THE PAINT

It is normal that smoke and odours emanate from the unit when you first light it. It is recommended to burn it at high rate and ventilate the building until the odours disappear. The smoke is not toxic. **This should be done before the ducts are connected to the furnace to prevent smoke dispersion in the house.**

9.3 ASH DISPOSAL

Ashes must be placed in a metal container with a tight fitting lid. The container should be stored outdoor, well away from combustible materials. This container should not contain any other type of waste. If the ashes are meant to be buried in soil, wait until all embers have thoroughly cooled before burying.

9.4 CREOSOTE BUILD-UP AND REMOVAL

When wood is burned slowly, it produces tar and other organic vapours which, when combined with moisture, form creosote. The creosote vapours condensate in a relatively cool chimney flue. As a result, creosote residues accumulate inside the flue lining and the exchangers.

To minimize the frequency of the chimney cleaning, buy your firewood at least one year before using it. Store it in a dry place in order to obtain the minimum moisture rate and optimize the efficiency. Do not store wood or combustible materials within the installation minimum clearances or the space required to reload the appliance and remove ashes.

When ignited, creosote produces an extremely hot fire inside the chimney.

In the first year of use, inspect the chimney system at regular intervals to determine a cleaning cycle. Depending on the type of wood used and its quality, a mid-season cleaning may be required. A yearly cleaning is mandatory. **If a significant layer of creosote has accumulated, it must be removed immediately to eliminate the risk of chimney fire.**

Remember that a small, hot fire is preferable to a large smouldering one to prevent creosote build-ups within the system. Prepare an emergency procedure in case of a chimney fire. **It is recommended to clean the heat exchangers thoroughly at the end of season in order to prevent corrosion.**

9.5 SMOKE DETECTOR

We highly recommend the use of a smoke detector. It must be installed at least 15 feet (4,57 m) from the appliance in order to prevent undue triggering of the detector when reloading.

9.6 DOOR GLASS

- To maintain a clean and safe installation, do not build your fire too close to the glass or allow logs to lean on the glass.
- Do not operate your furnace at too low a setting. Keep the air inlet opened long enough during the fire start-up to prevent the fire from smouldering, which could stain the glass.
- An intense fire will help keep the glass clean. However, in the event that your glass gets stained, which should not occur under normal operating conditions, you will have to clean it using a wet cloth and a fireplace glass cleaner. Clean the glass **ONLY** when the unit has cooled down. Do not use abrasive cleaner.

WARNING! AVOID KNOCKING OR SCRATCHING THE GLASS. IT COULD CRACK OR BREAK.

Glass specifications:

- Made of 5/32" (4 mm) thick ceramic glass.
- Do not operate your wood furnace with a broken glass, as this could seriously damage your furnace.
- You can purchase a replacement glass from your Caddy dealer.

9.7 ASH DRAWER

Your furnace is equipped with an ash drawer to collect ashes produced by the combustion of wood. This drawer must not be left open during combustion as this may cause over firing and serious damages to the furnace. Moreover, the additional air created could cause the dispersion of ashes in the ventilation system. **The drawer must be cleaned weekly. Use a vacuum cleaner to remove any ashes around the drawer in order to avoid the dispersion of ashes in the ventilation system.**

It is important that the door, the heat exchanger door and the ash drawer be kept closed while the appliance is in use. Maintain all gaskets in good condition; in case of deterioration, contact your dealer for a genuine replacement gasket.

9.8 ASH GRATE

You must replace the ash grate if it is damaged and a replacement may be obtained from your dealer.

9.9 ADDITIONAL FRESH AIR SUPPLY

When the furnace and the chimney are completely cold, it may be necessary to provide fresh air by opening a door or a window for a few minutes while lighting the fire. Take note that a house constructed or renovated in order to be airtight may lack the volume of fresh air necessary for the proper combustion of a solid-fuel heating appliance.

In such a case, when starting up the fire, do not operate appliances that evacuate air outside the house, such as:

- Range hood
- Bathroom fan
- Air exchanger
- Ventilated central vacuum system
- Clothes dryer

Exhaust blowers that are in a fuel storage room should be installed so as not to create negative pressure in the room where the solid fuel appliance is located.

A fresh air supply may be necessary to prevent solid fuel units from spilling smoke into the house. The indications used to determine if an additional fresh air supply is necessary are not appropriate for all the situations. When in doubt, it is recommended to install a fresh air supply.

A fresh air supply may be needed if:

- Solid fuel units present anomalies, such as irregular draft, smoke return, bad combustion, and/or reversed draft (whether there is combustion or not).
- Existing solid fuel units such as a stove or fireplace release odours, heat badly, cause smoke returns, or reversed draft (whether there is combustion or not).
- The opening of a window, even slightly, in calm weather (windless), eliminates every problem mentioned above.
- The house is equipped with a tight vapour barrier and adjusted windows, and/or is equipped with an interior air mechanical evacuation device.
- There is excessive condensation on the windows in winter.
- The house is equipped with a ventilation system.

If, according to these symptoms or other similar ones, there is insufficient combustion air, it is necessary to ensure an additional combustion air supply. See section ***14.17 FRESH AIR SUPPLY INSTALLATION***

10 FIREWOOD

What is good firewood?
Good firewood has been cut to the correct length for the furnace, split to a range of sizes and stacked in the open until its moisture content is reduced to 15% to 20%.

10.1 TREE SPECIES

The tree species the firewood is produced from is less important than its moisture content. The main difference in firewood from various tree species is the density of the wood. Hardwoods are denser than softwoods. People who live in the coldest regions of North America usually have only spruce, birch and poplar, other low-density species to burn and yet they can heat their homes successfully.

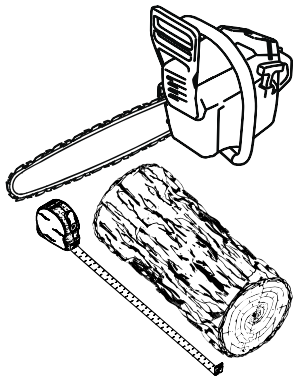
Homeowners with access to both hardwood and softwood fuel sometimes use both types for different purposes. For example, softer woods make good fuel for relatively mild weather in spring and fall because they light quickly and produce less heat Softwoods are not as dense as hardwoods, so a given volume of wood contains less energy. Using softwoods avoids overheating the house, which can be a common problem with wood heating in moderate weather. Harder woods are best for colder winter weather when more heat and longer burn cycles are desirable.

Note that hardwood trees like oak, maple, ash and beech are slower growing and longer lived than softer woods like poplar and birch. That makes hardwood trees more valuable. The advice that only hardwoods are good to burn is outdated. Old, leaky cast iron furnaces would not hold a fire overnight unless they were fed large pieces of hardwood. That is no longer true. You can successfully heat your home by using the less desirable tree species and give the forest a break at the same time.

10.2 LOG LENGTH

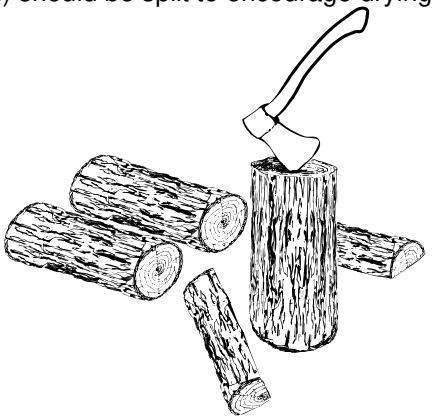
Logs should be cut about 1" (25 mm) shorter than the firebox so they fit in easily. Pieces that are too long make loading the furnace very difficult. The most common standard length of firewood is 16" (406 mm).

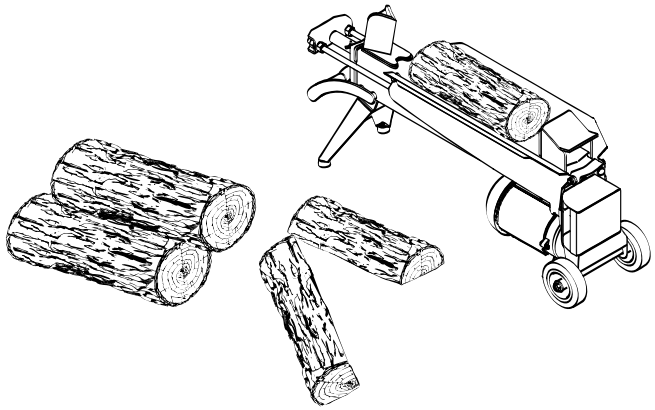
The pieces should be a consistent length, with a maximum of 1" (25 mm) variation from piece to piece.



10.3 PIECE SIZE

Firewood dries more quickly when it is split. Large unsplit rounds can take years to dry enough to burn. Even when dried, unsplit logs are difficult to ignite because they don't have the sharp edges where the flames first catch. Logs as small as 3**"** (76 mm) should be split to encourage drying.

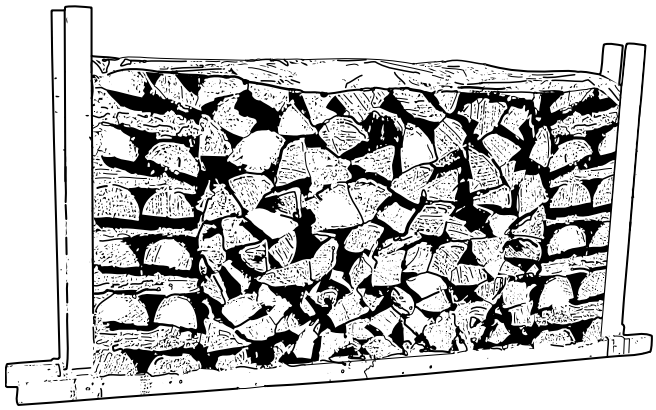




Wood should be split to a range of sizes, from about 3**"** to 6**"** (76 mm to 152 mm) in cross section. Having a range of sizes makes starting and rekindling fires much easier. Often, the firewood purchased from commercial suppliers is not split finely enough for convenient stoking. It is sometimes advisable to re-split the wood before stacking to dry.

10.4 HOW TO DRY FIREWOOD?

Firewood that is not dry enough to burn is the cause of most complaints about wood burning appliances. Continually burning green or unseasoned wood produces more creosote and involves lack of heat and dirty glass door. See section ***18 FURNACE MAINTENANCE*** for concerns about creosote.



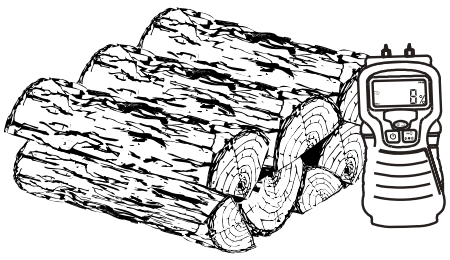
Things to consider in estimating drying time:

- Firewood takes a long time to dry.
- Firewood dries mostly from the exposed ends. Long pieces of wood should be cut to “firewood” length if expected to dry.
- Firewood bought from a dealer is rarely dry enough to burn, so it is advisable to buy the wood in spring and dry it yourself.
- Drying happens faster in dry weather than in damp, maritime climates.
- Drying happens faster in warm summer weather than in winter weather.
- Small pieces dry more quickly than large pieces.
- Split pieces dry more quickly than unsplit rounds.
- Softwoods take less time to dry than hardwoods.
- Softwoods like pine, spruce, and poplar/aspen can be dry enough to burn after being stacked in the open for only the summer months.
- Hardwoods like oak, maple and ash can take one, or even two years to dry fully, especially if the pieces are big.
- Firewood dries more quickly when stacked in the open where it is exposed to sun and wind; it takes much longer to dry when stacked in a woodshed.
- Firewood that is ready to burn has a moisture content between 15 and 20% by weight and will allow your furnace to produce its highest possible efficiency.

10.5 JUDGING FIREWOOD MOISTURE CONTENT

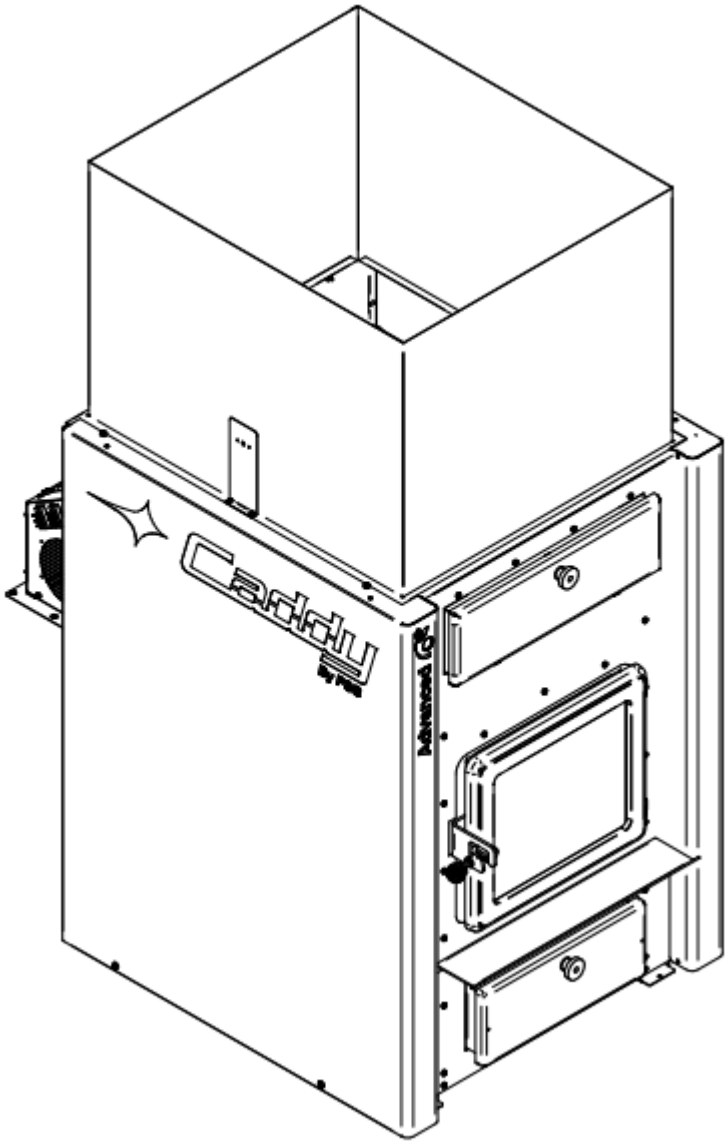
You can find out if some firewood is dry enough to burn by using these guidelines:

- Utilisez l’indicateur d’humidité pour le bois de chauffage fournit avec votre appareil afin de valider que l’humidité se situe entre 15% et 20%. Pour obtenir une valeur plus précise, tester le milieu d'un morceau de bois fraîchement fendu.
- Des fissures apparaissent à l’extrémité des bûches au fur et à mesure qu’elles sèchent.
- En séchant au soleil, le bois passe d’une coloration blanche ou crémeuse à gris ou jaune.
- Frappez deux morceaux de bois ensemble, le bois sec sonne creux et le bois humide sonne sourd.
- Le bois sec est beaucoup plus léger que le bois humide.
- Fendez un morceau de bois et si la face mise à jour semble chaude et sèche au toucher, il est assez sec pour être brûlé; s’il est humide au toucher, il n’est pas prêt.
- Brûlez un morceau de bois, le bois humide chuinte et grésille dans le feu, pas le bois sec.



INSTALLATION
AND OPERATION INSTRUCTIONS

CADDY ADVANCED SERIAL ADD-ON INSTALLATION PF01020



11 SAFETY PRECAUTION

CAUTION! THE OPERATION OF A GAS FURNACE MUST BE VERIFIED FOR ACCEPTABLE OPERATION BEFORE AND AFTER INSTALLATION OF THE CADDY ADVANCED ADD-ON APPLIANCE BY A GAS FITTER WHO IS RECOGNIZED BY THE REGULATORY AUTHORITY.

CAUTION! DO NOT CONNECT TO ANY GAS FURNACE THAT HAS NOT BEEN CERTIFIED INITIALLY AS COMPLYING WITH CGA STANDARD CAN/CGA-2.3 OR ITS PRECEDENTS.

12 INTRODUCTION

The wood burning Caddy Advanced Add-on furnace is approved for in-line connection to an existing oil furnace or any gas or electric furnace with a maximum heating capacity of 120,000 BTU/h. (35.17 kW).

Option PA08523 is required for serial add-on installation. Consult the sheet provided for this purpose.

12.1 BLOWER OF THE EXISTING FURNACE

The theoretical air flow in the hot air plenum blower of the existing furnace must be at least 875 CFM when the external static pressure is adjusted to 0,2" and to 0,5" of water column.

Some adjustment on the motor and blower of the existing furnace may be necessary. In this case, the following rules apply:

- On a belt-driven system, blower pulleys and motor pulleys may be changed to do the adjustment.
- On a direct-drive system, the motor shall not be changed; however, the speed of the motor may be increased or decreased.

CAUTION! THE BLOWER OF THE EXISTING FURNACE ITSELF SHALL NOT BE CHANGED.

WARNING! THE ELECTRICAL CURRENT FLOWING THROUGH THE BLOWER MOTOR SHALL NOT EXCEED THE NAME PLATE RATING.

13 APPLIANCE INSTALLATION

If the existing furnace must be modified, the following standards must be respected:

Wood-oil: CSA B.139: Installation code for oil-burning equipment.

Wood-gas: CAN/CGA-B149.1 & CAN/CGA-B149.2: Natural Gas & Propane Installation Code et Propane Storage & Handling Code.

13.1 MATCHING THE TRANSFER DUCT BETWEEN THE TWO HEAT GENERATORS

This furnace is certified only for installation in configuration presented in **OPTION 1, 2, 3** and **4** of this section. Configurations presented in **Examples 1 and 2** of this section are prohibited.

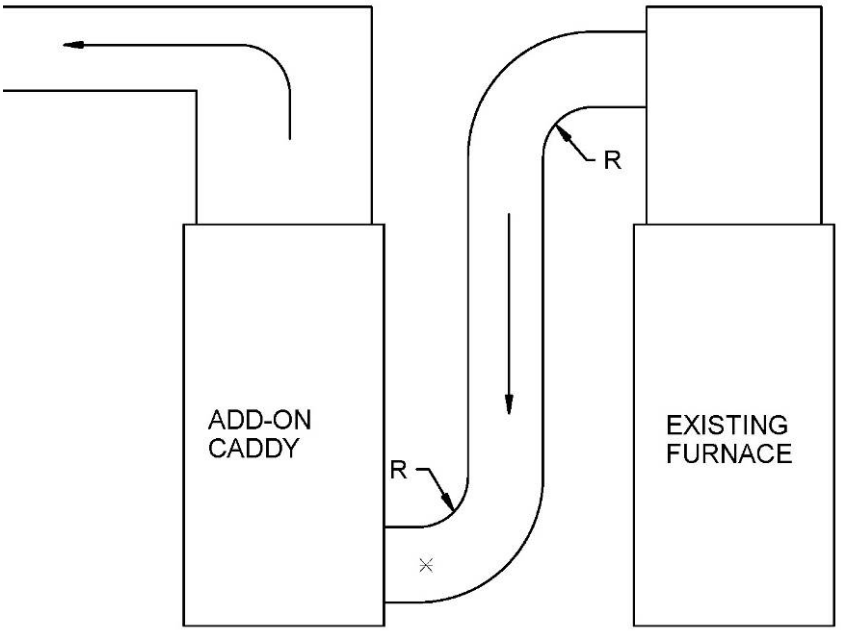
Install the plenum and heating ducts in line as in **OPTION 1** of this section. Series connection (**OPTION 2**) should be considered ONLY if in line connection (**OPTION 1)** is not possible.

If the ducts are installed in series (**OPTION 2**) and the existing furnace's fan limit control is mounted on the plenum, the divider in the plenum must be installed at least 5" (127 mm) above the fan limit control. This divider must be air tight.

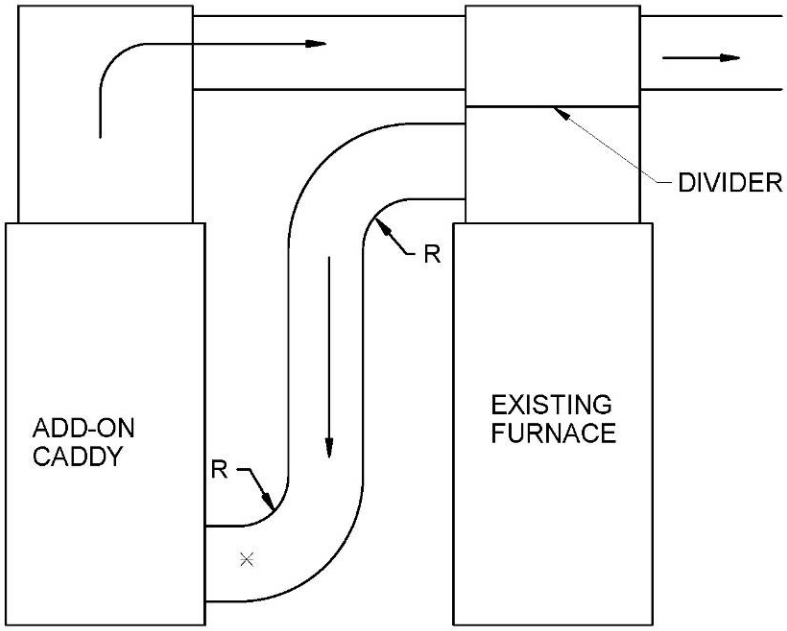
OPTION 3 & OPTION 4 are permitted when installing the Caddy Advanced furnace with an existing furnace whose hot air plenum ducts are downwards flowing. The hot air plenum of the Caddy Advanced furnace **must** be above the furnace and cannot be directed downward.

Do not install connecting ducts in a way that would allow inversion of the air flow (see **example 1 and 3**).

The transfer duct between the existing furnace and the add-on must be at least 190 square inches (0.12 m^2) and deviations radius must be at least 6" (152 mm). (See **OPTION 1 & 2**).

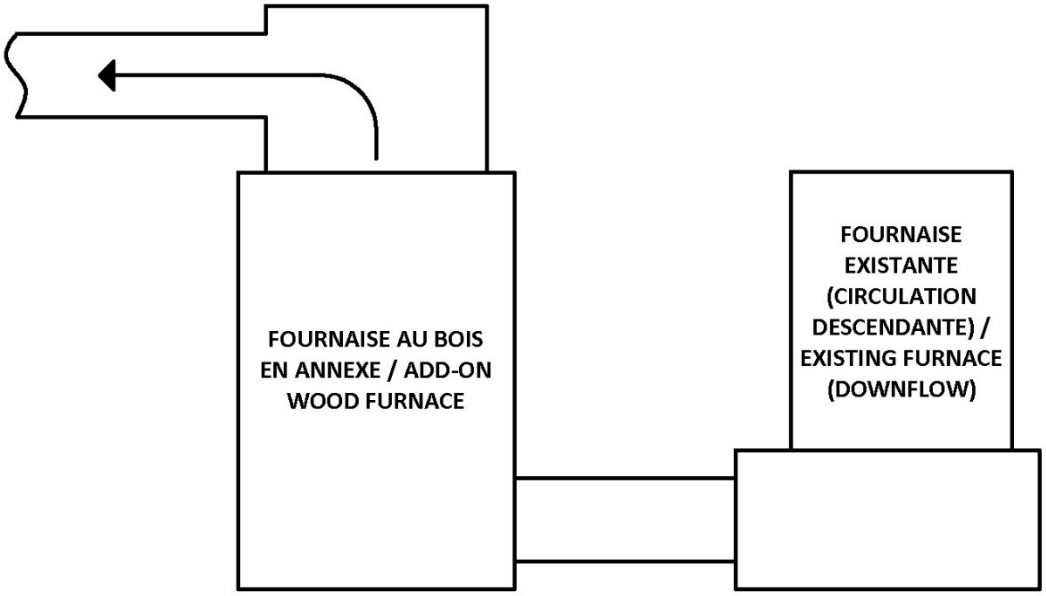


Option 1

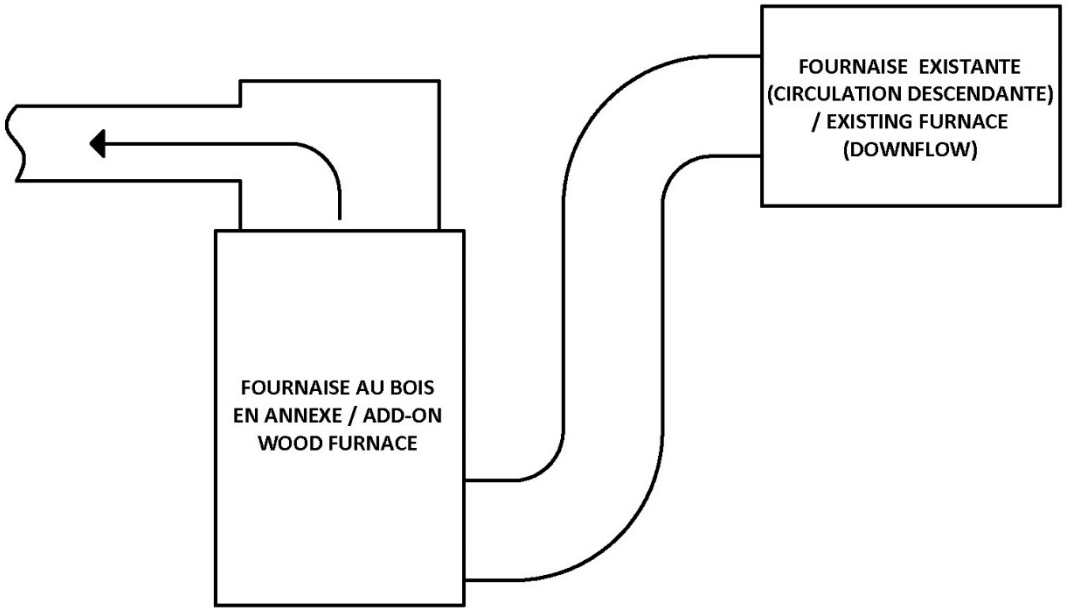


Option 2

***Minimum duct size 190 square inches (0.12 m^2)**
***R = Minimum radius 6 inches**



Option 3



Option 4