

VALLEY
Comfort
SINCE 1953



VC 120
HIGH EFFICIENCY
WOOD FURNACE

WOOD ONLY OR ADD-ON TO
GAS, ELECTRIC OR OIL

VALLEY Comfort VC 120

HIGH EFFICIENCY

As a leader in the wood-burning furnace industry in Canada we are proud to present our VC 120. The VC 120 brings the latest available technology right into your home. Wood heat has always been a comfortable, reliable source of home heat. Our main objective in developing the VC 120 was to advance the state of the art, keeping in step with new technology.

Environmental concerns are now shared by most people on a global scale. You can address those concerns on a personal level by assuring maximum efficiency in your wood-burning system and methods. Energy efficiency goes hand in hand with environmental protection. To that end, the VC 120 was developed to answer these modern day concerns while providing old-fashioned comfort, reliability and economy.

The VC 120 is a high output wood furnace designed for large homes and small commercial installations. Your Valley Comfort dealer will assist you in choosing the correct size furnace for your needs. This furnace has been approved to the latest code requirements and can be used as an add-on to electric, gas or oil furnaces; or as an independent wood furnace with a suitable blower system. When used in combination with an alternate fuel furnace, you get the security and convenience of a back-up system. A unique "power out" capability has been built into the VC 120. This means you have a source of heat even if the house power should fail. Under power-out conditions, the furnace output is limited because there is no distribution fan, but using gravity flow, you will be assured of emergency warmth all the time.

Economical installation costs have also been considered. The 7" top vent flue size reduces overall costs, as does the close clearance approvals for the plenum and duct system. At Valley Comfort, we feel that economy is a long-term consideration. We refuse to cut corners that would compromise our overall product quality. Long-term economy is assured by this commitment to quality. Valley Comfort has been built on this commitment and that is one reason we have been leaders in the industry since 1953.

HIGH OUTPUT

Finned heat exchanger for efficient transfer

Heavy duty 3/16" steel firebox reinforced with 1/4" plate where required.

High temperature refractory in secondary burn area.

Heavy-duty door latch system.

Insulated cool front firedoor.

Enclosed air intake system to allow outside combustion air connection.

CSA approved electric controls.

Power outage manual draft.

Refractory baffle system with turbulence fins near flue pipe outlet.

7" top flue collar.

Late stage secondary air introduced just before the heat exchange area to assure complete combustion.

Preheated primary and secondary air.

Valley Comfort's distributed draft system.

Large firebox takes 25" wood.

Refractory firebricks to promote high combustion temperatures.

Add-on interconnect duct can be installed to either side.

COMBUSTION

Converting wood from a stored energy source (your wood pile) to a useful, controllable heat source is a complex series of events called combustion. In today's world of environmental and energy conservation concerns, proper control of this process becomes vital. In designing the VC120, we have gone to great detail to assure maximum efficiency in the combustion chamber. We have carefully brought together the proper mix of preheated primary air and secondary air in a turbulent high temperature firebox to assure a clean-burning, high-output furnace.

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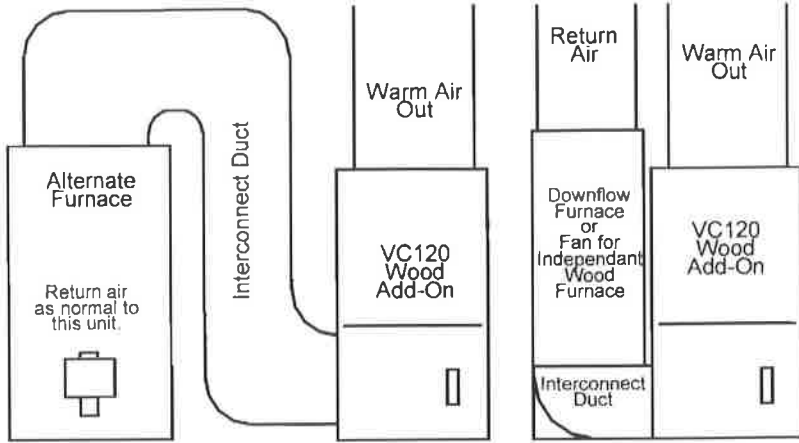
PRIMARY AIR

This is the fresh air supplied to the main combustion area. The VC 120 primary air is preheated and fed to the firebox through six size-graduated ports. To assure proper turbulence, the air is introduced above the firebricks down into the main burn area.

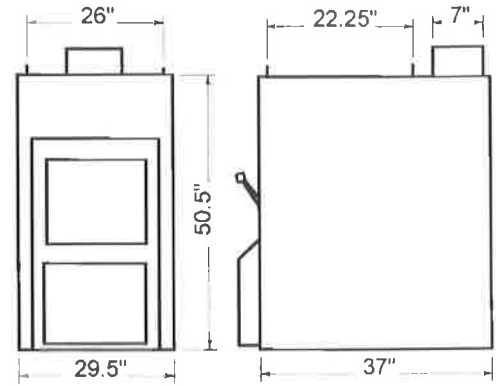
SECONDARY AIR

During the normal wood-burning cycle, combustible gases are emitted (boiled off) from the wood. Careful engineering design is needed to ensure combustion of these gases. Preheated secondary air in a carefully controlled ratio is added late in the combustion flow to ensure maximum secondary burn. This process is enhanced by high temperatures present in the baffle area. Brick baffles used in the VC 120 contribute to this temperature stabilization.

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TYPICAL INSTALLATIONS



DIMENSIONS

SPECIFICATIONS & DIMENSIONS

MODEL VC 120

Approvals WH - CSA B366.1M87

Report # 6024

For use with the following installations:

Minimum fan capacity all types 900 cfm

1. Independent wood furnace
2. Add-on to electric 15 kw. to 30 kw.
3. Add-on to gas 80,000 to 140,000 btu.
4. Add-on to oil .81 to 1.25 USGPH

Rating	120,000 BTU nominal
Height	50.5"
Width	29.5"
Length	37"
Flue Collar	7" diameter
Weight	900 lbs (shipping)
Flue pipe centre to rear	5.5"
Hot air plenum opening	22.25"Lx26"W
Fire door opening	15"x13"
Firebox:	
Length	27"
Width	17"
Height	32"
Capacity	8.5 cu. ft
Fuel length	25"
Recommended draft	.04 water column
Controls:	All included, CSA approved

Clearance to combustibles:

Plenum	2"
First 6' of duct	2"
One side	8"
Opposite side	18"
Front	48"
Flue	18"



Construction:

- 3/16" Firebox
- Cast Iron Side Plates
- 3/16" Heat Exchanger
- 20 Gauge Cabinet
- Brick Baffles & Firebox Liners

Firebox design:

1. Distributed primary preheated air.
2. Post burn secondary preheated air.
3. Brick baffle system.

Limited Warranty:

- 5 years on combustion chamber
- 1 year on electrical parts

AUTHORIZED DEALER: