



## CORR/GUARD SINGLE WALL INSTALLATION INSTRUCTIONS

CGSW AL29-4C Stainless Steel - Pressure Rated Venting System  
CGVSW 444 Stainless Steel - Pressure Rated Venting System

**IMPORTANT:** DO NOT INSTALL WITHOUT FIRST READING THESE INSTRUCTIONS VERY CAREFULLY.

Corr/Guard, manufactured by Metal-Fab, Inc. is a special stainless steel venting system for gas-fired appliances listed as Cat. II, III & IV or in Canada, Type BH Gas Venting Systems per ULC-636, with rated operating temperature of 550° F (287° C), and rated for positive pressure of 15" w.c. Metal-Fab, Inc. recommends the system be inspected once a year by a qualified service technician.

**Examine all components for possible shipping damage before installation. Proper joint assembly is essential for a safe installation. Follow these instructions exactly as written. Check severe stress of joints upon completion of assembly. This venting system must be free to expand and contract. Check for unrestricted movement through walls, ceilings and roof penetrations. Different manufacturers have different joint systems and adhesives. Do not mix pipe, fittings or joining methods from different manufacturers.**

Venting system design may be limited by appliance performance. Consult appliance installation instructions to determine proper sizing and limitations such as maximum horizontal length and height, maximum number of elbows or offsets, connecting two or more appliances to a common venting system, and other limitations that may affect design and installation. **It is the responsibility of the installer to contact local building and fire officials concerning any installation restrictions and/or inspection requirements that may apply.** Permits may be required before starting an installation. Installation is to be in accordance with local building code requirements and National Codes: USA – NFPA 54 ANSI-Z223.1 or NFPA 211. In Canada – CAN/CGA-B149.1 or CAN/CGA-B149.2 Propane Installation Code as applicable.

### GENERAL

Corr/Guard is to be installed in accordance with these installation instructions and those of the appliance manufacturer. For conditions and applicable restrictions not specifically mentioned herein, contact building or fire officials having jurisdiction in your area. The following is a guide to assist a professional installer.

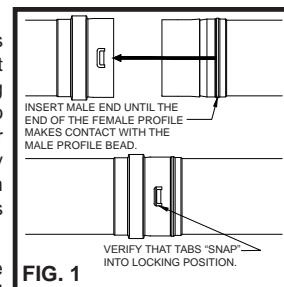
- Proper operation of the venting system and appliance is dependant on the use of all parts specified by Metal-Fab for use in the particular installation. System performance may be affected if the proper assembly of all required parts is not accomplished.
- Refer to appliance's instructions to determine proper sizing and connection of the venting system to the appliance.
- Tee sections should only be used in conjunction with a drain on appliances tested for use with a drain, or if allowed by the appliance manufacturer for multiple appliance connections.
- If required by the appliance manufacturer, a drain fitting must be located as close as possible to the appliance flue outlet. Unless a drain fitting is supplied with the appliance, install only a Corr/Guard Drain Fitting.
- More than one Category II, III or IV appliance may not be connected into the same vent system, unless the appliance manufacturer specifically approved such a system and the appliances are designed for multiple venting. Cat. II, III or IV appliances MAY NOT share any part of their vent system with a natural draft appliance.
- Check the joints and seams for gas tightness when using the venting system with a Cat. III or Cat. IV appliance.
- Except for installation in one and two family dwellings, a venting system that extends through any zone above that on which the connected appliance is located shall be provided with an enclosure having a fire resistance rating equal to or greater than that of the floor or roof assemblies through which it passes. **For 5" diameter Corr/Guard (CGSW or CGVSW) HORIZONTAL installation, any enclosures must be NON-COMBUSTIBLE MATERIALS!**
- Corr/Guard shall not be routed into, through, or within any other vent, such as an existing masonry or factory-built chimney flue that is connected to another appliance.
- **WARNING! Do not place or install insulation in any required clearance spaces surrounding the venting system.**
- Enclosure of exterior mounted venting systems below the roofline is recommended to limit condensation and protect from mechanical damage.

### VENT LENGTH

For installations that require non-standard vent lengths, CGSW or CGVSW Variable Length vent sections may be used. The vent section consists of a telescoping assembly that is adjusted from 5" to 20" additional finished length to the venting system. Once proper length is set, secure the vent section by tightening the integral compression band. **WARNING: Variable Length vent sections are not to be subjected to vertical force loads. Use appropriate supports.**

### JOINT CONNECTIONS

Each Corr/Guard vent component contains a seal gasket on the female end of the vent joint and locking tabs. Mechanical fastening of the joint is automatic and requires no tools. Visually check the gasket for proper location within the pipe bead during assembly or flue gases could leak, resulting in carbon monoxide poisoning. Assembly of joints is shown on **FIG. 1**:

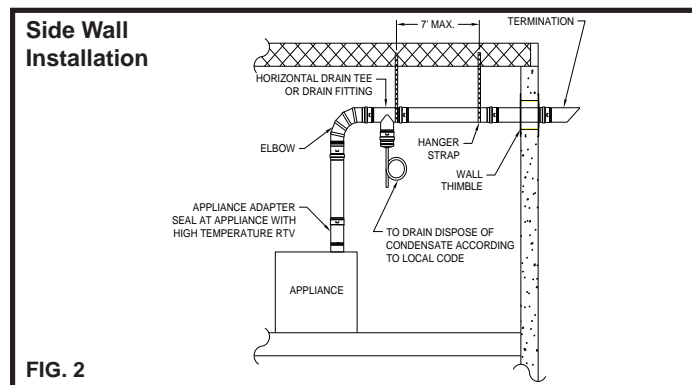


**NOTE:** When assembling Corr/Guard single wall vent, always install the female flue end elevated above the male flue end. The "UP" arrow will point to the elevated female flue end. Change of directions are made by using a male to male or female to female adapter depending on the flow of the condensate.

1. Insert the male end of the vent pipe into the adjoining female vent section until the bead of the male joint stops at the edge of the female joint.
2. When properly inserted to the fullest extent, the integral locking tabs will snap into place, securing the joint. **Before Proceeding, verify that all locking tabs are engaged for each joint assembly.**

### APPLIANCE CONNECTION

If an appliance does not supply a condensate drain and one is required per the appliance manufacturer's instructions or local codes, install a drain fitting in the horizontal portion of the vent, as close as possible to appliance outlet. If the appliance flue collar is not designed to accept the Corr/Guard joint profile, an adapter may be available from Metal-Fab. (See **FIG. 2**)



### CONDENSATE DRAINS

Corr/Guard drain fittings contain a 1/2" (13 mm) dia. steel tube that should be located at the bottom of the vent when properly installed. A plastic drain hose must be attached to the tube and a trap loop formed into the drain hose (trap loop should be 4 times the appliance maximum pressure – in. w.c.). Vents using a drain hose must be inspected periodically to assure that water is in the trap loop. **If trap loop is not maintained, exhaust from the connected appliances may accumulate inside the building area.**

### HORIZONTAL VENTING AND WALL PENETRATION

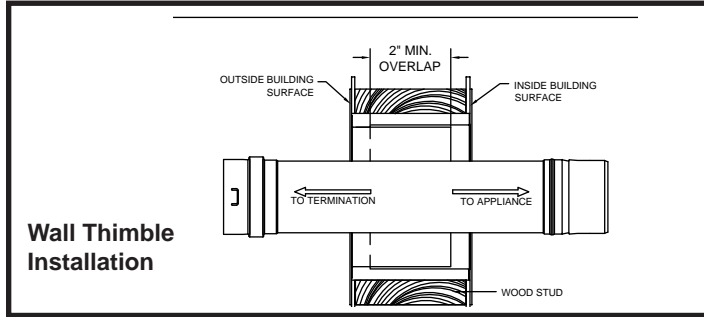
A venting system that exits through a side wall shall:

- Terminate not less than 12 inches (305 mm) above the ground.
  - Be located above the snow line in geographical areas where snow accumulates.
  - Not be located in traffic areas such as walkways unless the venting system is at least 7 feet (2.1 m) above the ground.
- When an appliance incorporates a combustion air inlet system, the venting system shall terminate:
- 6 feet (1.8m) or more from the combustion air intake of any appliance.
  - More than 3 feet (0.9m) from any other building opening, gas utility meter, or service regulator.
  - Less distance is permitted if specified in the appliance's installation instructions.

For horizontal venting:

- Means shall be provided for draining condensate. Due to ice build up and blockage, it is required that proper sloping be employed when the vent is installed horizontally. A male to male or female to female adapter can be used to allow condensate to drain properly.
- Any portion of a horizontally installed vent shall have a slope (upwards for Cat. II, III or IV appliances or downwards for Cat. III or IV appliances) not less than 1/4 inch (6.4 mm) every 12 inches (305 mm) to prevent collection of condensate at any location in the assembly.
- Use non-combustible hanger straps a minimum of every 7 feet (1.8 m) to support the vent system from ceiling joints or other solid structures. **WARNING! Do not puncture vent system!**
- Vent must not sag or dip providing areas for condensate to collect. Install venting system maintaining clearances as indicated in these instructions and the labeled product.

1. Prior to installation, determine proper location of wall thimble so that a minimum slope of 1/4" per foot is maintained in the horizontal section of vent to ensure proper flow of condensation.
2. Prepare the wall by cutting a square opening 5" larger than size of the vent diameter. (Opening size adequate to insert Wall Thimble components)



### Wall Thimble Installation

3. Install the Wall Thimble by inserting the larger of the two parts on the appliance (interior) side.
4. Next, apply a bead of sealant around the edges of the exterior (smaller of the two parts) Wall Thimble component. Then install this part of the Wall Thimble by inserting the smaller collar into the other component from the previous step.

**NOTE: The two horizontal cylinders of the Thimble must engage a minimum of two inches.**

5. Fasten both sides of the Wall Thimble using screws or nails.
6. Once the Thimble is installed, Corr/Guard vent pipe can be inserted into the Thimble by inserting the male end first. (See figure above).
7. Assemble Corr/Guard vent from the Wall Thimble section back to the appliance.
8. Install a horizontal termination to complete the assembly.
9. Once assembly is completed, apply a bead of high-temp sealant around the pipe and the exterior plate of the Thimble to protect against weather.

**WARNING! Appliance outlet temperature shall not exceed 480°F (249°C) for venting systems that penetrate walls constructed of combustible materials.**

### VERTICAL VENTING

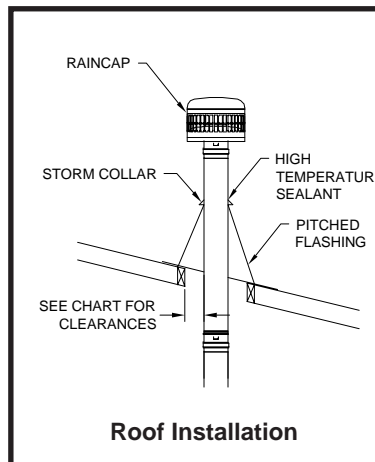
- Enclose residential exterior vent systems below the roof line or use double wall Corr/Guard (CG or CGV) to limit condensation due to cool down of flue gases.
- Unless installed in a fire rated shaft, a fire stop / vertical support is required when penetrating floors and ceilings.
- Vertical supports are to be used after each transition to vertical. The maximum distance between vertical support plates is 30 feet (9.1 m).
- When assembling Corr/Guard vent, always align "UP" arrow away from the appliance.
- The total equivalent length from the appliance outlet to the termination shall not exceed that length specified by the appliance manufacturer's installation instructions.
- Vertical terminations must terminate no less than 2' (0.61 m) above the roof or any wall or vertical structure closer than 8' (2.4 m). A vent cap or other equivalent termination is required to keep rain or debris out of the vent.

1. Starting at the appliance outlet, attach the first section or appliance adaptor.
2. Continue assembly of pipe until nearing a ceiling penetration. Locate and cut hole in floor and ceilings that will be penetrated. Hole size must maintain minimum listed clearances for single wall Corr/Guard (CGSW or CGVSW).
3. Install a firestop support when penetrating the ceiling to support the vertical run of the vent system.

4. When installing a firestop in the attic, the firestop or support plate is located on top of the joist to prevent insulation from falling into the joist.

5. Continue with the vent penetrating the roof. At the roof, the opening must maintain a minimum of clearance to combustibles as specified in these instructions and on the labeled vent product.

6. Above the roof, a flashing and storm collar are required. Use high temperature sealant to seal the storm collar to the vent so that rain will not penetrate the roof opening.



### Roof Installation

### EXTERIOR INSTALLATION

1. Although it is not preferred practice, there may be installations where Corr/Guard single wall vent systems run vertically - exterior to the building and a wall support(s) is needed. A wall support is used to secure the vent system to a wall while maintaining the minimum clearance to combustible construction.

2. Wall supports must be securely fastened to a solid member of the building using appropriate fasteners for various building materials such as wood, steel siding or masonry.

3. Wall supports located exteriorly are to be vertically spaced no more than 6 feet (1.8 m) apart.

4. Wall supports are designed to be fastened to the vent by means of clamping externally to the vent. No screws are to puncture the vent wall.

**WARNING: Do not rivet or screw supports to the vent or otherwise puncture the vent wall.**

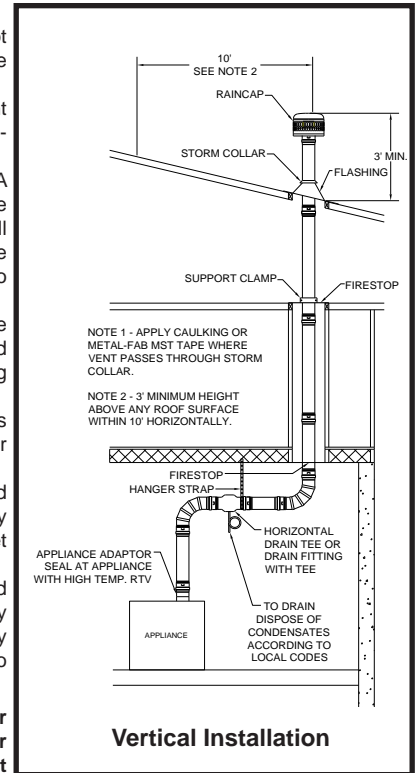
**WARNING: Do not place any type of Insulation in any required clearance spaces surrounding the vent system.**

### MAINTENANCE

The Corr/Guard vent system should be inspected at least annually for the presence of deposits or debris and any accumulation should be removed. The vent system should also be inspected at regular periods for signs of leakage of condensate or combustible products at any joint.

If the vent system incorporates a drain hose from either an inline fitting or from a drain tee, the hose must be inspected periodically to assure that water is in the trap loop. If a proper trap loop is not maintained, exhaust from the connected appliances may accumulate in the building area.

**IMPORTANT: The listing for this product is void if components other than those supplied as Listed Components by Metal-Fab, Inc. are used. All warranties, stated or implied, are void if this product and the appliances to which it is connected are not installed in accordance with their respective instructions and local code requirements.**



### Vertical Installation

Rated Operating Temperatures		Minimum Clearance Enclosed		Clearance Unenclosed	
		Hor.	Vert.	Hor.	Vert.
3" & 4" Diameter	400°F (204°C)	8" (203mm)	4" (102mm)	1" (25mm)	1" (25mm)
	480°F (249°C)	8" (203mm)	4" (102mm)	2" (51mm)	2" (51mm)
	550°F (287°C)	N/A	N/A	2" (51mm)	2" (51mm)
5" Diameter	400°F (204°C)	N/A	6" (152mm)	1" (25mm)	1" (25mm)
	480°F (249°C)	N/A	6" (152mm)	2" (51mm)	2" (51mm)
	550°F (287°C)	N/A	N/A	2" (51mm)	2" (51mm)

