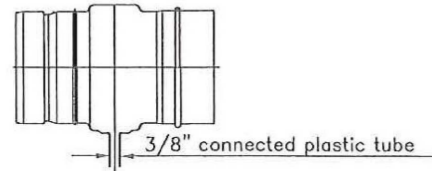


3-7. Condensate Drains

- If instructions or local regulations call for a condensate drain, use a Bosch Vent Drain Fitting, and 3/8" (OD) plastic tube of appropriate length to connect the Tee into the sanitary sewer drain.
- Follow all local and national codes for draining acidic condensate. Do not use copper as a drain as it may corrode.

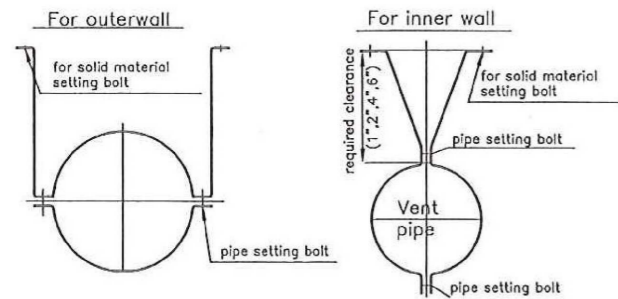
Fig.3-6 Condensate Drain



3-8. Support

- Support must be installed at intervals of no more than 6 feet (Max.)
- A Vent Pipe is inserted in the Cylinder part of the support and lightly fixed with a screw. The supports must be secured to solid material using screws, and then fasten the loose screw.
- Use supports that maintain proper clearances to combustible materials.
- Install according to required clearances, four type of supports for inner wall and one type for outer wall available.

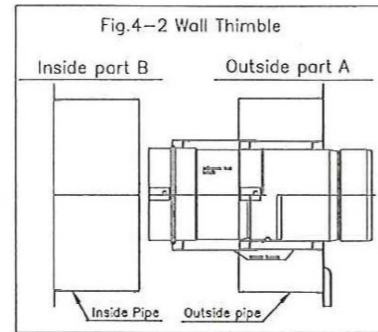
Fig.3-7 Support



4. HORIZONTAL THROUGH THE WALL INSTALLATION

4-1. Wall Thimble

- The wall thimble consists of two parts (A and B) and an Integral Spacer. The Adjustable Vent, Integral Spacer and Adjustable Vent are being installed on the part A.

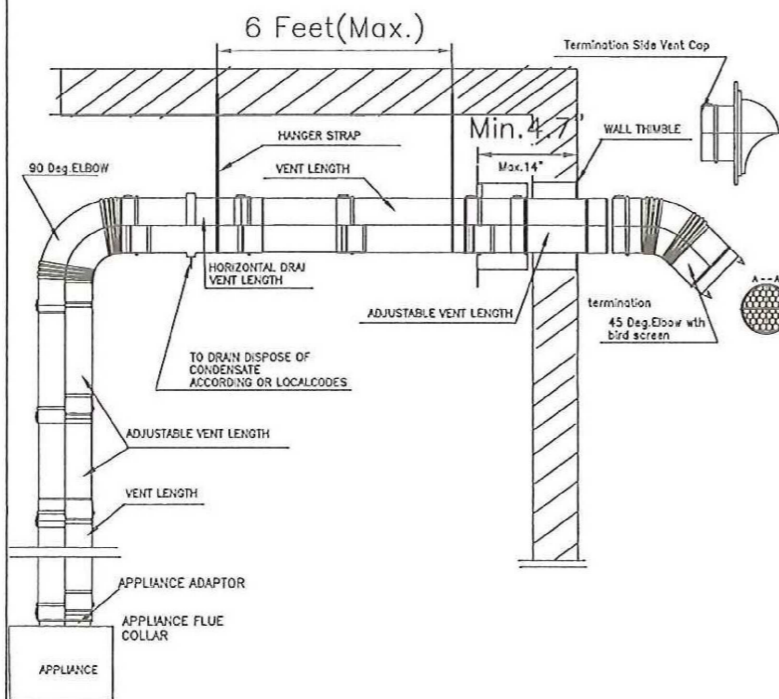


- The Integral Spacer is used to prevent radiant heat transmission to combustibles.
- The spacer is installed on vent, and it works with the adjustable vent together and slides.

- Determine the path for the vent system and install the Wall Thimble so that a continuous slope no less than 1/4 inch per foot (upwards, or downwards if Drain Tee is used) is maintained in the horizontal section of the vent system.
- Cut the opening for the Wall Thimble with a diameter of 6.2" (158mm) for a 3" piece, 7.1" (180mm) for a 4" piece, or 10.7" (272mm) for a 5" piece. The wall thimble thickness is between 4.7" (120mm) and 14" (356mm).
- Insert part A from outside and part B from inside. Slide the outside pipe of part A into the inside pipe of part B until outer and inner plates of the Wall Thimble are flush against the wall.
- Fasten respectively parts A and B to wall with the four included screws.
- Seal between Wall Thimble and wall, or Wall Thimble and Vent Termination as required.

- Install the vent system from the Wall Thimble to the appliance.
- Use a termination Hood, Louver, Straight or 45Deg.Elbow to finish the system's exterior. Refer to "GENERAL" in these installation instructions for proper procedure.

Fig.4-1 Horizontal installation



5. VERTICAL INSTALLATION

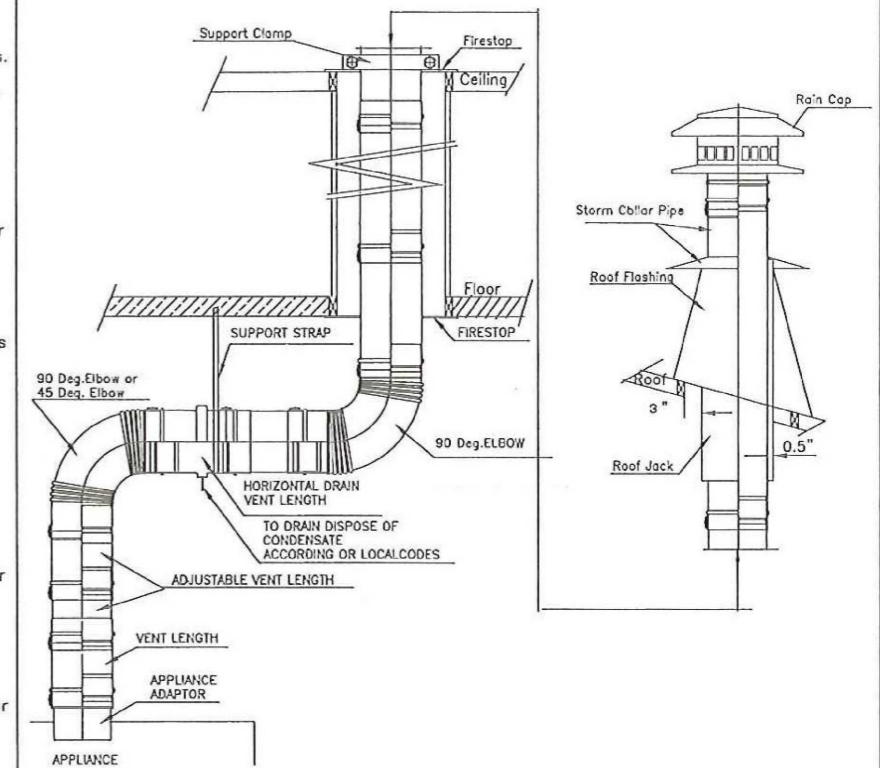
5-1. Vertical Installation

- The total horizontal Vent Length from the appliance flue collar to the outside termination shall not be greater than specified in the appliance manufacturer's instructions.
- Terminate the system 6 feet (1.8m) from the combustion air intake on any appliance.
- Terminate the system at least 2 feet (0.61m) above the roofline and any wall or vertical structure closer than 8 feet (2.4m)
- Terminate the system at least 3 feet (0.9m) from any other building opening, gas utility meter service regulator or the like.

5-2. Vertical Installation Procedure

- 1) Locate the path for the vent system so that a continuous slope no less than 1/4 inch per foot (downwards when using Drain Tee) is maintained in the horizontal portion of the vent system.
- 2) Cut and frame openings in floors, ceilings, and roof to accommodate Fire Stop and Roof Jack with the required clearances to combustibles.
- 3) Use screws to fasten Fire Stop to opening on floors & ceilings. Fasten Roof Flashing to roof with screws.
- 4) Install a Roof Jack into the Roof Flashing to ensure proper ventilation.
- 5) Slide the Storm Collar Pipe over the Roof Jack.
- 6) Attach the Rain Cap. The distance between the Rain Cap and roof should be no more than 6 feet (1.8m). Add the additional lengths between Rain Cap and the Storm Collar Pipe as needed.
- 7) Install the vent system from the storm Collar Pipe to the appliance. Refer to "GENERAL" in the installation instructions for proper procedure.
- 8) Once the vent system reaches the floor or ceiling, slide the pipe through the Fire Stop. Then fasten Support Clamp to pipe with screws.

Fig.5-1 Vertical Vent Assembly



6. IMPORTANT NOTICE

IMPORTANT NOTICE

- * 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.
- The warranty for this product is void if components other than those supplied as Listed Components by JPS are used.
- * After the installation, check the entire system to make sure all joints are secure and sealed correctly.

VENT SYSTEM INSTALLATION AND MAINTENANCE INSTRUCTION (1/2)

warning

- Failure to follow the installation instructions could cause RISK OF BREAKAGE, RISK OF FIRE, RISK OF CARBON MONOXIDE POISONING, or DEATH.

caution

- This is a special stainless steel vent system for Gas fired appliances listed as Category II, III and IV or in Canada, Type BH Gas Venting systems as noted in ULC-S636, and this is for use only with special appliances.
- Failure to follow the installation instructions could cause not only the lower performance of appliance but also property damage or personal injury.
- Always wear gloves and appropriate eye, foot, and other protection when handling these products.
- Different Manufacturers Have Different Joint Systems and Adhesives. Do Not Mix Pipe, Fittings, or Joining Methods from Different Manufacturers.
- Examine all components for possible shipping damage prior to installation.
- Proper joint assembly is essential for a safe installation. Follow these instruction exactly as written: Check quality of joints upon completion of assembly.
- The venting system must be free to expand and contract and must be supported in accordance with these instructions. (Check for unrestricted vent movement through walls, ceilings, and roof penetrations)
- Check for unrestricted vent movement through wall, ceiling, and roof penetrations.

- 2) Maintain clearances to openings as follows.
- Terminate the system 6 feet (1.8m) from the combustion air intake of any appliance.
 - Terminate the system at least 3 feet (0.9m) from any other building opening, gas utility meter, service regulator or the like.

3. INSTALLATION

- 3-1. General**
- Vent fittings from the list shown below are used for this vent system. The diameters of pipe are 3"(76.2mm), 4"(100.8mm), 5"(127mm). Select in accordance with the appliance.

TABLE 3-1 Vent System Fittings List
Refer to attached document the Vent System Parts Lists.

			Part Number		
			3"	4"	5"
Adapter	Vertical	Appliance			
		Straight (12")			
Vent Length	Length	Straight (24")			
		Straight (36")			
		Adjustable (7" - 9.4")			
		Adjustable (9" - 13.4")			
		Adjustable (13" - 21.4")			
		18" Flexible			
		Elbow	45°		
90°					
Condensation Drain	Horizontal	Drainage Vent Length(Tee)			
Support	Straps	1" Clearance			
		2" Clearance			
		4" Clearance			
		6" Clearance			
		8" Clearance			
Wall Members	Vertical	Clamp			
	Horizontal	Wall Thimble			
Vent termination	Horizontal	Straight			
		45 Degree			
		Louver			
		Hood			
		Rain Cap			
Roof Members	Vertical	Flat Roof Flashing			
		Angled Roof Flashing			
		Roof Jack			
		Storm Collar Pipe			

3-2. Vent Size and Length

- Refer to the appliance manufacturer's installation instructions for proper size and vent configuration.
- Follow manufacturer's recommendations for horizontal/vertical length and height limitations, minimum clearance (air space) to combustibles or specification for use of Elbow or Drain Tees.

TABLE 3-2. Max. Straight Vent Length for Number of Elbows.

No. of Elbows	straight of vent length	
	3" & 4"	5"
3	15feet (4.5m)	15feet (4.5m)
2	27feet (8.1m)	30feet (9.0m)
1	39feet (11.7m)	45feet (13.5m)

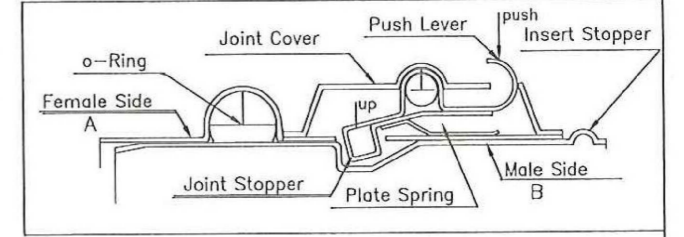
3-3. JOINT CONNECTION

- The female end of each Bosch Vent component incorporates a sealing O-Ring and a mechanical locking joint. Examine O-Ring prior to installation.

1) Joint Structure (Patented Application)

- A Joint is composed of a Push Lever, Pin, Plate Spring and of Joint Stopper as shown in Fig. 3-1

Fig. 3-1 JPS Joint Structure



2) Joint Connection and detachment

- All Vent lengths, Elbows, Appliance adapters, Rain Caps, Storm Collar Pipe, Drain Tees, Termination Vent. They are connected and detached by the following method (Connection)

- Discern Female /Male end of the Vent Length. Female end has O-ring and JPS Joint.

1. GENERAL PRECAUTION

- This installation instruction is for the Bosch Vent system of gas burning appliances. Refer to the appliance manufacturer's instructions for its installation.
- Vent system must be installed by an experienced professional familiar with the operation and maintenance of heating appliances & venting systems. These instructions are a guide to assist a professional installer.
- Before commencing installation, please read all installation instructions.
- The maximum flue gas temperature is 480 Degrees F (249 Degrees C), and the maximum positive pressure is 15" water column (100Pa) for the vent system.
- Refer to the appliance manufacturer's instructions to determine requirements & limitations for venting system with respect to installation and use, such as maximum horizontal length from the appliance, maximum height or the required installation clearances.
- Contact Local Building or Fire Officials About Restrictions and installation Inspections in Your Area.

2. GENERAL INSTALLATION REQUIREMENTS

2-1. General Installation Requirements

- Proper operation of the venting system and appliance is dependent on the use of all parts specified by the manufacturer for use in the particular installation, and that proper performance of the system may be affected if the proper assembly of all required parts is not accomplished.
- 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.
- The venting system shall not be routed into, through, or within any other vent, such as an existing masonry or factory-built chimney flue.
- Do not install insulation in any required clearance space around this venting system.
- Exterior mounted venting systems must be enclosed below the roof line to limit condensation and protect against mechanical damage.
- Exterior mounted venting systems must be enclosed below the roof line to limit condensation and protect against mechanical damage.
- Any horizontally installed portion of a venting system shall have a slope (upwards for Category II, III, or IV appliances or downwards for Category III or IV appliances) not less than 1/4 inch (6.4mm) per 12 inches (305mm) to prevent collection of condensate at any location in the assembly.

- Due to ice build-up and blockage, it is required that the proper sloping be employed when the vent is installed in a horizontal installation. Refer to the appliance manufacturer's installation instructions for further details regarding the installation of the condensate drain fittings.

- The total horizontal & vertical vent length and the number of the Elbows from the appliance flue collar to the outside termination shall not be greater than which is specified in the appliance manufacturer's instructions.

- If the instruction of appliance manufacturer or local regulation call for a condensate drain, locate the Drain Tee as close as possible to the appliance exhaust outlet. Follow appliance manufacturer's instruction, or all local and national codes for draining the condensate. Do not use copper as a drain as it may corrode.

2-2. Selecting Installation Site

- A venting system that exits the structure through a sidewall shall terminate no less than 12 inches above the ground.
- A termination of the venting system be located above the snow line in geographical areas where snow accumulates.

2-3. Clearance to Combustibles and Openings

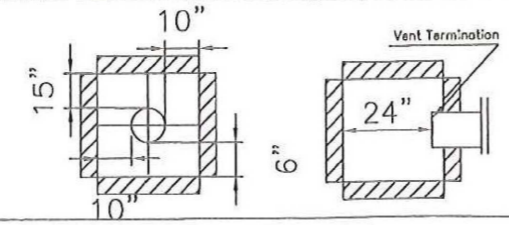
- The termination of the venting system shall not be located in traffic areas, such as walkways, unless the venting system is at least 7 feet (2.13m) above the ground.

1) Maintain clearances to combustibles as follows.

TABLE 2-1 Minimum Clearance to combustibles

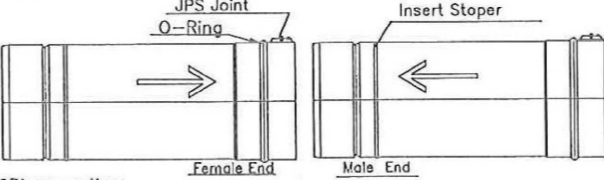
Rated Operating Temperature	Unenclosed	Clearance			
		Horizontal		Vertical	
		Horizontal	Vertical	Horizontal	Vertical
3"	480 Deg. F	3"	Top : 15" (381mm) Bottom : 6" (152mm) Side : 10" (254mm)	4" (100.2mm)	6" (152mm)
4"	249 Deg. C	76.2 mm			

Fig. 2-1 Minimum Clearance to combustibles especially for Termination



- Insert the male end fully into the Female end till it is seated against the Insert Stopper on the the Female section.

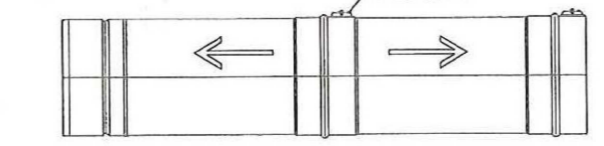
Fig. 3-2 Vent Connection



Disconnection

- Push the male end fully into the Female end. Then Pull up on the male end with Push Lever pressed On the Cover and separate Pieces.

Fig. 3-3 Vent Disconnection



3-4. APPLIANCE CONNECTION

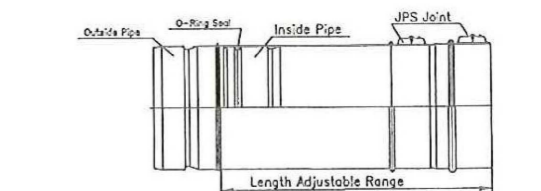
- Connect Bosch Vent to the appliance Flue collar as directed in the appliance manufacturer's instructions.
- If the appliance flue collar is not connected to accept the Bosch Vent system an adapter maybe available from Bosch Vent appliance flue collar.

3-5. Adjustable Vent Length

- Adjustable Lengths are available to allow for installation where fixed-length sections do not produce the desired dimensions.
- Adjustable Lengths may be used to compensate for linear thermal expansion between two fixed points.
- Adjustable Lengths are available according to the limits in which the effective length can expand and contract--from 6.8"~9.1", 9.5"~14.65" and from 15.4"~26.5"

- If, when a Adjustable Length doesn't slide, it is inserted in the inside pipe.

Fig. 3-4 Adjustable Length

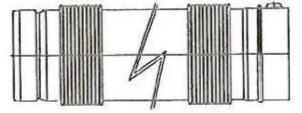


3-6. Elbow and Flexible Length

- 45 Deg., 90 DEG. Elbow and Flexible Length are available for changing the direction of the system.
- The flexible section of these can be bent by hand for adjusting to delicate angle adjustments.
- Do not bend repeatedly or extremely, because it may cause vent gas leak.

Fig. 3-5 Flexible & Elbow

Flexible Vent Length



90Deg. 45Deg. Elbow

