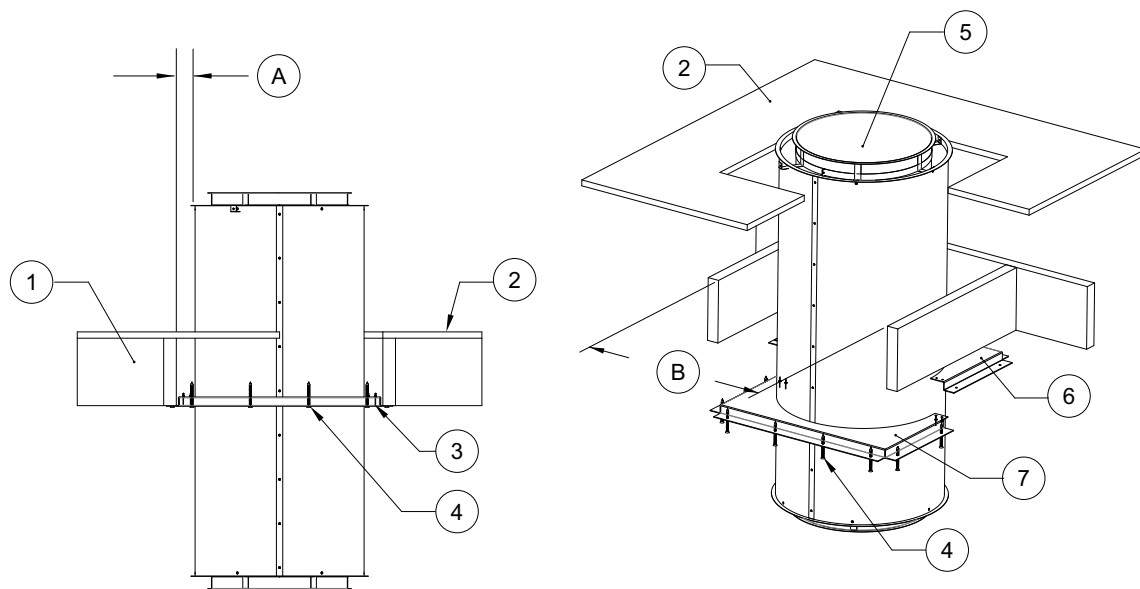


Single Wall Annular Distance -V Type Clearance

Vent clearance plates are used to maintain clearance to combustibles for -V Type listed vents. These clearance plates are not a hanging substitute for through penetration and fire stop plates. Vent clearance plates are designed to center the vent in the recommend opening and maintain clearance to combustibles as shown in **Figure 16 on page 25**. Vent clearance plates consist of two half plates; the plates are designed so they are inserted into the opening. The plates are installed on the bottom side of the floor or on both sides of a wall. Frame or cut the opening in the floor/wall, refer to **Table 10 on page 24**. Insert the vent into the opening, then insert one half of the clearance plate. Secure the half plate using appropriate hardware for substrate construction, refer to **Table 11**. Insert the second half plate and secure. Once both plates are secure, the vent will be centered in the opening with a clearance to combustibles. **All through floor and wall penetrations will contain an insulated section of double wall -2V vent that allows for a reduced clearance.**

WARNING: Clearance (air space) to combustibles must be free from any type of insulation.

Figure 19 - Vent Clearance Plates (Floor Installation Shown)



1. Joist
2. Floor
3. Clearance Plates - Shown installed
4. Clearance Plate Hardware
5. Vent

6. Clearance Plate 1
7. Clearance Plate 2
- A. Clearance to Combustibles (Shell to Joist), refer to **Table 10**
- B. Floor Opening, refer to **Table 10**

Table 11 - Substrate Hardware Table

Decking Material	Hardware	Edge Distance
Wood - Min G.42	3/8" x 2-1/2" Zinc Plated Steel Hex Head Lag Screw with 3/8" Zinc Plated Steel Washer	1-1/2" Minimum
Concrete - 2500 Min PSI	3/8" Diameter - Expansion Anchor Hilti Kwik Bolt TZ with 3/8" Zinc Plated Steel Washer	3" Minimum
Steel - Roof Truss 12 Gauge or 1/8" Thick	1/4"-14 Min. 1/2" Through Drill-Flex Self-Drilling Screws with 1/4" Zinc Plated Steel Washer	3/8" Minimum

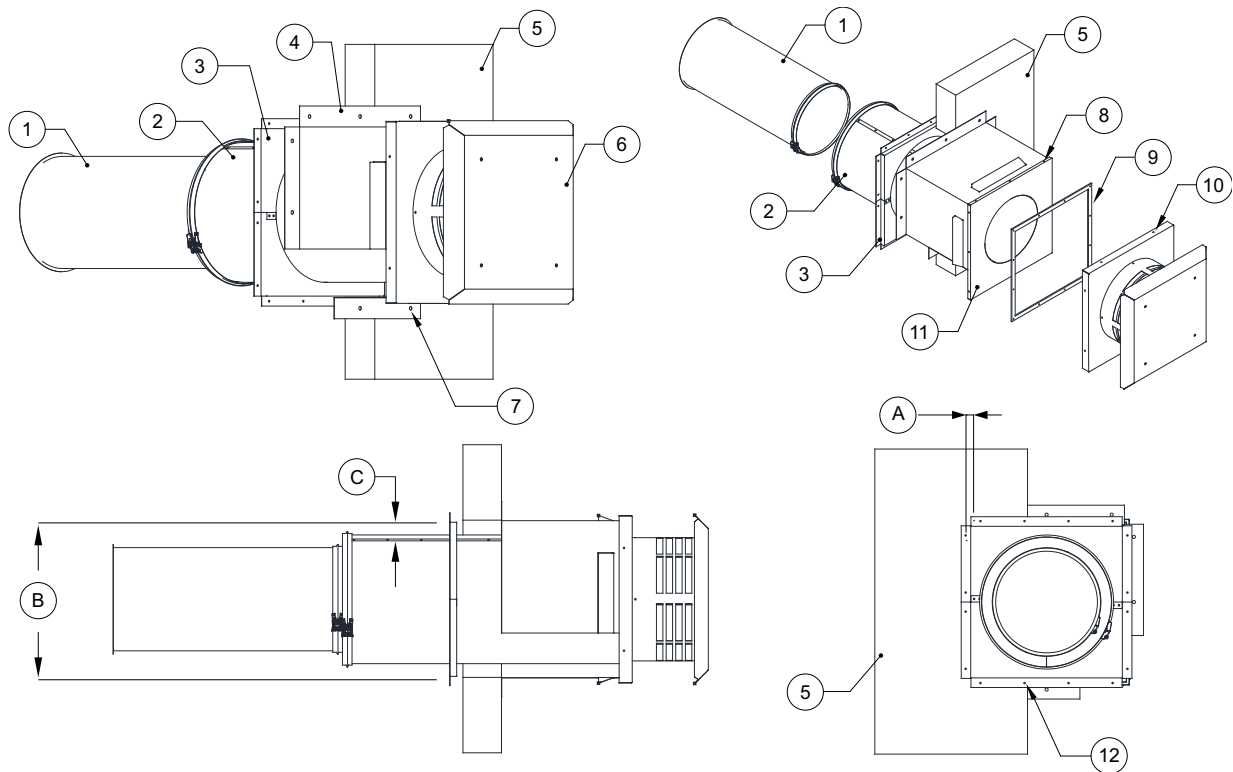
Single Wall Horizontal Cap Thimble Assembly Installation

Refer to **Table 10 on page 24** for clearance to combustibles and wall opening dimensions. Once the opening has been cut, install the vented curb on the outside of the wall. Center the vented curb in the opening and secure using the appropriate type and size fastener, refer to **Table 11 on page 27**. Push the insulated vent section through the top of the vented curb until the transition plate hits the top of the curb.

Install the transition plate. Secure the transition plate to the curb using 1/4"-20 x 1-1/2" zinc plated self-drilling screws where the pre-punched holes are located. Install the clearance plates on the opposite side of the wall opening. Install the bottom half of the plate first using the appropriate type and size fastener, then install the top section of the clearance plate. Fasten the two plates together using #8 x 1/2" self-drilling screws.

Verify clearance to combustibles for the insulated vent section coming through the wall, refer to **Table 10 on page 24**. Apply high temp gasket to the outside edge of the transition plate. Install the vent cap using 1/4"-20 x 2" zinc plated self-drilling screws. Inspect the thimble assembly to make sure all hardware is secure and clearance to combustibles is correct.

Figure 20 - Horizontal Cap Thimble Details



- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Single Wall Vent Section 2. -2V Vent Section 3. Clearance Plates 4. Vented Curb 5. Substrate - Wood, Concrete or Steel 6. Vent Cap 7. Substrate Hardware, refer to Table 11 on page 27 8. 1/4"-20 x 1-1/2" Zinc Plated Self-Drilling Screws | <ol style="list-style-type: none"> 9. High-Temperature Gasket 10. 1/4"-20 x 2" Zinc Plated Self-Drilling Screws 11. Transition Plate - Welded to inner vent 12. Clearance Plate Mounting Screws - Secures clearance plates to combustible surface. <p>A. Edge Distance, refer to Table 11 on page 27
 B. Wall Opening, refer to Table 10 on page 24
 C. Clearance to Combustibles (Shell to Joist), refer to Table 10 on page 24</p> |
|--|---|

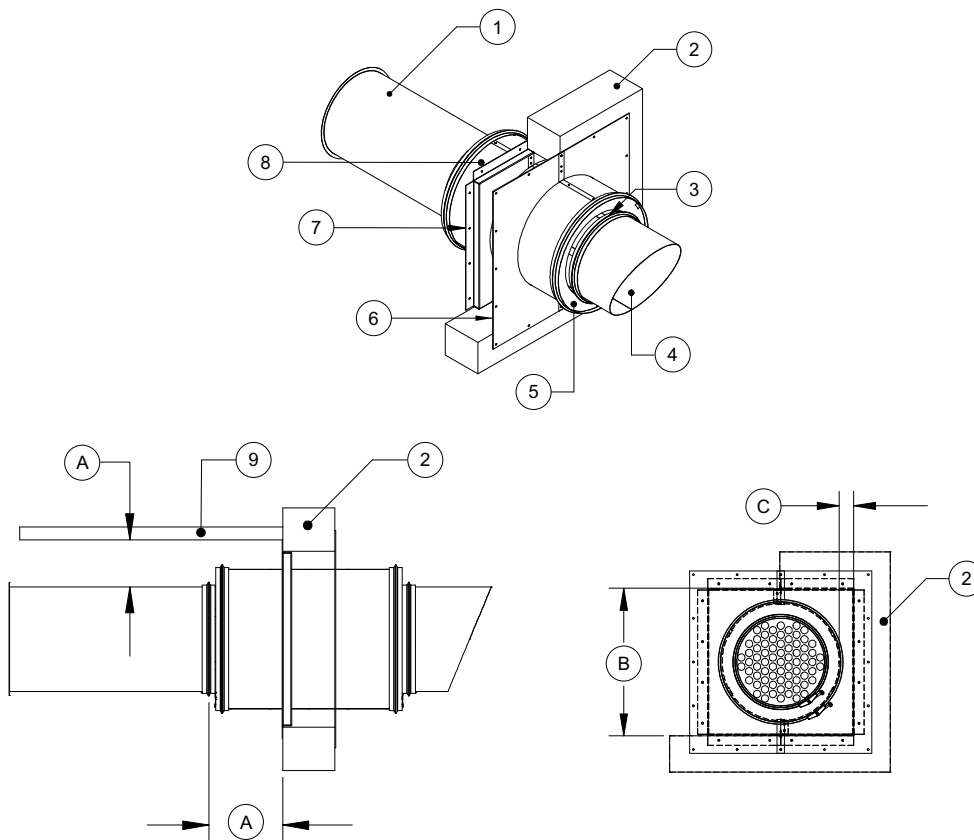
Single Wall Horizontal Vent Cap

Refer to **Table 10 on page 24** for clearance to combustibles and wall opening dimensions. Once the opening has been cut, install the -2V section. Center the clearance plate on the inside of the wall and the outer cover on the outside of the wall. Secure using the provided hardware kit.

Install the single wall vent section to the -2V vent section. Secure sections and double wall end cap with V-bands. Install the discharge section to the double wall vent section. Secure sections and double wall end cap with V-bands.

Verify clearance to combustibles for the insulated vent section coming through the wall, refer to **Table 10 on page 24**. Inspect the thimble assembly to make sure all hardware is secure and clearance to combustibles is correct.

Figure 21 - Single Wall Vent Cap Assembly Details



1. -V Single Wall Vent Section (5"-36")
 2. Wall
 3. Single Wall V-band*
 4. Discharge Vent Section*
 5. Single Wall V-band/Double Wall End Cap*
 6. Outer Cover*
 7. Clearance Plates*
 8. -2V Vent Section (5"-36")*
 9. Ceiling
- * Components included with Vent Cap Assembly

- A. Clearance to Combustibles (Vent to Ceiling/Wall), refer to **Table 10 on page 24**
- B. Wall Opening, refer to **Table 10 on page 24**
- C. Clearance to Combustibles (Shell to Joist), refer to **Table 10 on page 24**

Single Wall Vertical Cap Thimble Assembly Installation

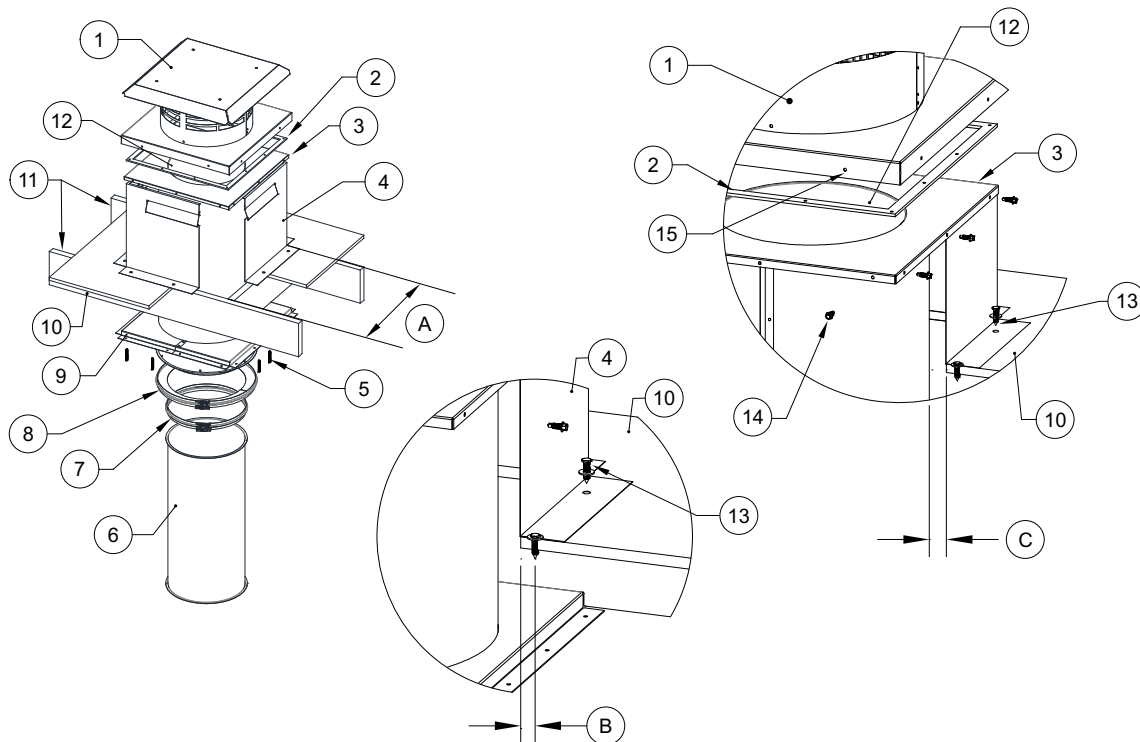
Refer to **Table 10 on page 24** for clearance to combustible and floor opening dimensions.

Once the opening has been cut, install the vented curb to the floor. Center the vented curb in the opening. Use the appropriate type and size fastener to secure curb, refer to **Table 11 on page 27**. Push the insulated vent section through the top of the vented curb until the transition plate hits the top of the curb.

Install the transition plate. Secure the transition plate to the curb using 1/4"-20 x 1-1/2" zinc plated self-drilling screws where the pre-punched holes are located. Install the clearance plates on the opposite side of the roof opening. Install the bottom half of the plate first using the appropriate type and size fastener, then install the top section of the clearance plate. Fasten the two plates together using #8 x 1/2" self-drilling screws.

Verify clearance to combustibles for the insulated vent section coming through the roof, refer to **Table 10 on page 24**. Apply high-temp gasket to the outside edge of the transition plate. Install the vent cap using 1/4"-20 x 2" zinc plated self-drilling screws. Inspect the thimble assembly to make sure all hardware is secure and clearance to combustibles are correct.

Figure 22 - Roof Termination Details using Thimble Assembly



- | | |
|---|--|
| 1. Vent Cap | 11. Joist |
| 2. High Temperature Gasket | 12. Inner Vent |
| 3. Transition Plate - Welded to inner vent | 13. Substrate Hardware, refer to Table 11 on page 27 |
| 4. Vented Curb | 14. 1/4"-20 x 1-1/2" Zinc Plated Self-Drilling Screws |
| 5. Clearance Plate Mounting Screws - Secures clearance plates to combustible surface. | 15. 1/4"-20 x 2" Zinc Plated Self-Drilling Screws |
| 6. Single Wall Vent Section | A. Through Size Opening, refer to Table 10 on page 24 |
| 7. Single Wall V-band | B. Edge Distance, refer to Table 11 on page 27 |
| 8. Single Wall V-band with Thimble End Cap | C. Clearance to Combustibles (Shell to Joist), refer to Table 10 on page 24 |
| 9. Clearance Plates | |
| 10. Substrate - Wood, Concrete or Steel | |