

# Model SW

# Installation Instructions

## Universal Kit

### PLEASE READ AND UNDERSTAND THE REQUIREMENTS BEFORE PROCEEDING

These instructions apply to the installation of the 3SUK1 (3" diameter) and 4SUK1 (4" diameter) Model SW Universal Kits.

#### CERTIFICATIONS/CODE COMPLIANCE

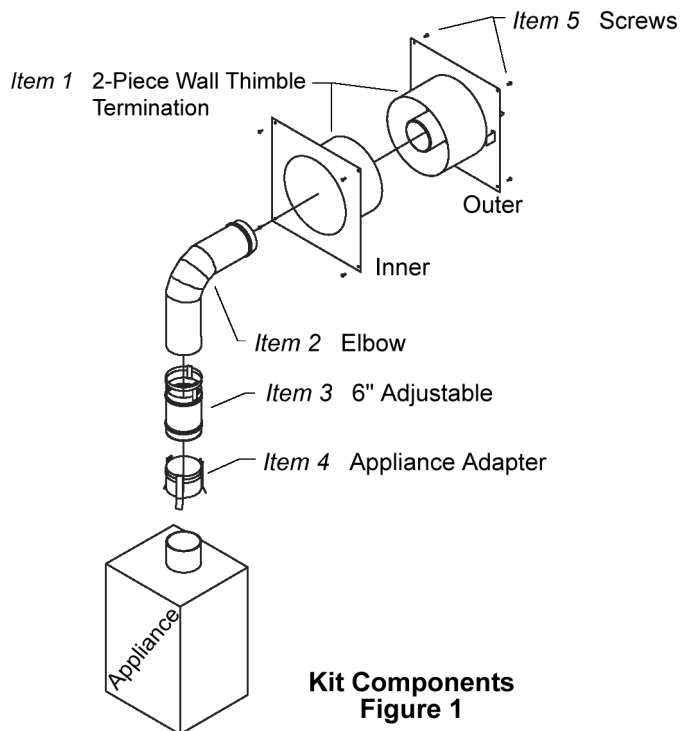
These vent kits are designed for sidewall venting of instantaneous (tankless) water heaters and wall hung boilers. These systems are UL-listed for use with gas-burning appliances that require vents listed for Category III and IV (or Type BH in Canada) applications with a maximum continuous flue gas temperature of 480°F (245°C) and maximum positive pressure of 8" W.C. These kits contains five easy-to-install parts that provide the ability to vent through combustible walls. The vent kits are compatible with standard Model SW products.

Be sure to read these instructions and the appliance manufacturer's instructions completely before proceeding with the installation of the kit. Additional information regarding the use and installation of Model SW products can be found on our web site at [www.hartandcooley.com](http://www.hartandcooley.com). Local codes and regulations should be followed.

#### KIT COMPONENTS

The following items are included in the box for this kit. See Figure 1.

- Item 1 Wall Thimble Termination 3SUK1 or 4SUK1 (2-part, inner and outer)
- Item 2 90-degree elbow 93QK1H-E or 94QK1H-E
- Item 3 6-inch adjustable 93QK1H-S or 94QK1H-S
- Item 4 4-inch length adapter 3SBSH or 94QK1H-A
- Item 5 Hardware kit (8 screws)  
3 packets of di-electric grease (for gaskets)



Kit Components  
Figure 1

#### KEY POINTS TO CONSIDER BEFORE BEGINNING THE INSTALLATION



1. Proper operation of the vent system and appliance depends on the use and correct assembly of all parts specified by Hart & Cooley, Inc. for this kit installation.
2. Do not substitute parts. Different manufacturers have different joint systems and adhesives. **DO NOT MIX PIPE, FITTINGS, OR JOINING METHODS FROM DIFFERENT MANUFACTURERS.**
3. The UL listing for this product is void if components other than those supplied as listed components by Hart & Cooley, Inc. are used. All warranties, stated or implied, are void if this product and the appliance to which it is connected are not installed in accordance with their respective instructions and applicable code requirements.
4. Examine all components for possible shipping damage prior to installation.
5. **CAUTION: RISK OF FIRE OR CARBON MONOXIDE POISONING.** Proper joint assembly is essential for safe installation. Follow all instructions. Failure to follow these instructions and good installation practices can lead to risk of improper venting, fire and carbon monoxide poisoning.
6. All joints must be sealed with the factory-installed gasket included in the vent sections.
7. Proper minimum airspace clearance to combustibles must be maintained over the entire length of the system.
8. Do not enclose (except for the wall thimble termination). No parts of the system may be completely enclosed at minimum clearances in combustible construction.
9. The termination should be located to direct flue gases away from trees, shrubs, or decorative items, since flue gases could cause damage and/or risk of fire.
10. If using only the components provided in this kit, the following distances can be achieved. The vertical distance from center of wall thimble to top of water heater outlet must be between 13½" and 16½". Wall thickness must be 5" to 9". Horizontal distance from exterior wall to centerline of heater outlet must be between 9" and 13½". See Figure 2.

#### GENERAL REQUIREMENTS

**WARNING:** Failure to conform to any of these requirements may violate local, state, or national codes and create conditions that may cause property damage or personal injury.

- Do not penetrate or puncture any part of the system with fasteners unless instructed to do so.
- Additional Model SW lengths may be installed for extended runs. The overall equivalent length of the system shall not exceed the specifications of the appliance manufacturer's instructions.
- On systems incorporating more than 3' of horizontal length, the vent must slope upward toward the termination at least ¼" per foot, and be installed so that all condensate runs back toward the appliance and is not retained in any part of the venting system.
- **EXCEPTION:** If the system has no provision for draining condensation and/or rainwater, then the vent must pitch downward toward the termination.
- More than one appliance may **NOT** be connected into the same vent kit termination.
- Proper clearance to combustibles must be maintained over the entire length of the system.

**CAUTION:** The appliance must be mounted far enough from the wall to maintain a minimum clearance of 1-inch airspace between the vertical vent and combustibles. It must also be located so that when the kit is installed, proper minimum clearances to walls, ceilings and/or joists are maintained for all kit components. See Figures 2, 4 and 5.

# Installation Instructions

# Model SW Universal Kit

## GENERAL TERMINATION GUIDELINES

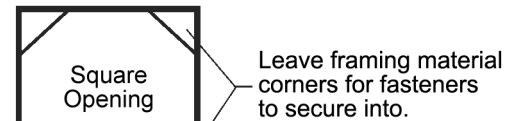
**NOTICE:** The following is to be used as a guideline only. Check with your Code Enforcement Office in your area for specific termination requirements.

- A mechanical draft vent system, excluding direct vent appliances, shall terminate at least 4 feet below, 4 feet horizontally from, or 1 foot above any door, window, or gravity air inlet into any building.
- The bottom of the vent terminal shall be located at least 12 inches above grade. In geographical areas where snow accumulates, terminate the system at least 12 inches above the anticipated snow line. The termination must be kept clear of snow and ice at all times.
- Do not terminate over public walkways or over an area where condensate or vapor could create a nuisance or hazard, or could be detrimental to the operation of regulators, relief valves, or other equipment.

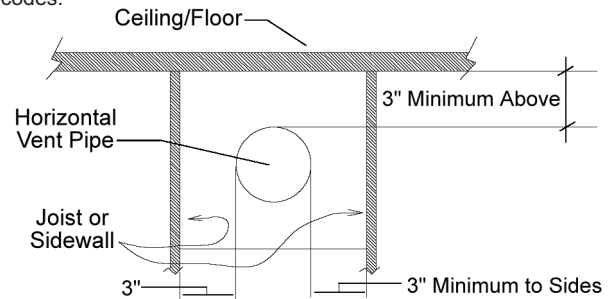
## INSTALLATION INSTRUCTIONS

1. Determine location for installing the wall thimble termination (*Item 1*). Consider notes 7, 8, 9 and 10 from page 1 when selecting a location for the installation of the appliance and the pipe kit.
2. Prepare wall for wall thimble termination (*Item 1*). An 8" diameter round opening or an 8" x 8" square opening is required for the 3" diameter pipe kit (3SUK1), and a 9" diameter round opening or a 9" x 9" square opening is required for the 4" diameter pipe kit (4SUK1). **Note:** When cutting square opening, it is recommended to radius or chamfer the corners, leaving adequate material for the fasteners to secure into. See Figure 3.
3. From the outside, slide the outer half of the wall thimble termination into the wall opening so that the angled hood is on the outside and is facing down. Apply a bead of silicone between the structure and the mounting plate, then secure outer assembly to the building using the 4 screws (*Item 5*) provided with the kit. See Figure 5.
4. From the inside, slide the inner half for the wall thimble termination assembly into the wall opening so that it engages with the outer half of the thimble and seats flush against the inside wall. Fasten inner half to inner wall using 4 screws (*Item 5*) provided. See Figure 5.
5. Prepare pipe segments by lubricating the red gaskets with the dielectric grease provided.
6. Slide the gasket end of the 90-degree elbow (*Item 2*) over the inner pipe within the wall thimble termination until segments are completely engaged. See Figure 5.

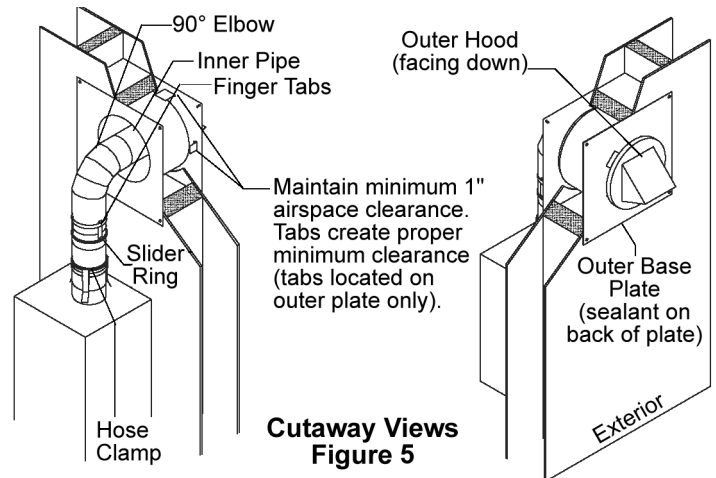
7. Loosen the hose clamp on the 6" adjustable (*Item 3*), then slide hose clamp and adjustable over the elbow, until the segments are completely engaged. **Note:** Do not tighten hose clamp at this time.
8. Slide the 3 finger tabs of the appliance adapter (*Item 4*) under the slide ring of the 6" adjustable length, and engage pipe segments.
9. Slide the inlet of the appliance adapter down over the outlet of the appliance. **Note:** For the 4" system, the hose clamp will have to be loosened before installing over the appliance outlet.
10. Adjust the 3-part assembly (*Items 2, 3, and 4*) vertically and horizontally to achieve the proper clearances. Once everything is properly engaged and aligned, secure the system parts by tightening all hose clamps, and bending the finger tabs of the appliance adapter over the slide ring of the adjustable length.
11. Prior to initial start-up, physically check each part by applying pressure to them to ensure they are secure.
12. The installation must also conform to the requirements of the appliance manufacturer's instructions and applicable local, state or national codes.



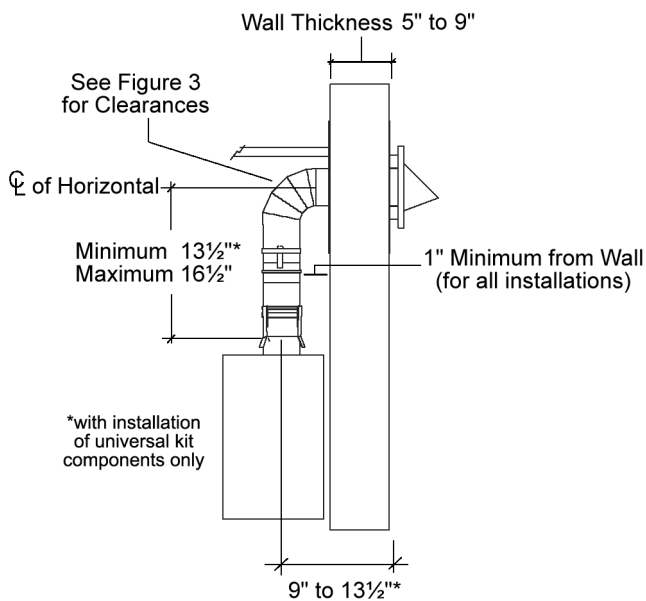
**Figure 3**



**Interior View  
Minimum Clearance to Combustibles  
Do Not Enclose  
Figure 4**



**Cutaway Views  
Figure 5**



**Side View Installation Dimensions  
Figure 2**



Hart & Cooley, Inc. 616.656.8200 p  
5030 Corporate Exchange Blvd. SE 616.656.6399 f  
Grand Rapids, MI 49512  
info@hartcool.com  
www.hartandcooley.com