Installing AQ3ES Wall Thimble to Uneven Masonry Surfaces

Introduction

Bosch Thermotechnology recommends the following method to properly install the AQ3ES wall thimble flange (Figure 1) to exterior uneven masonry surfaces (i.e. stucco). These instructions may not apply to other types of horizontal wall thimbles.

Note: It is not required to use the AQ3ES wall thimble if the wall being penetrated is made of solid masonry (i.e. brick, cinder block, or poured concrete).

Tools needed:

- Drill
- 5” Masonry hole saw
- Sealant - RTV Silicone (non-paintable) or Lexel brand (paintable)
- Caulk gun
- Small metal punch
- Four (4) small masonry screws and mollies
- Masking tape
- 2-4” Small paint roller
- Putty knife
- Tape measure
- Permanent marker
- Rag
- Mineral spirits (or other solvent for cleaning up silicone)

Installation

1. Using a masonry hole saw, bore a 5” hole for AQ3ES exterior thimble flange. Ensure that thimble easily enters hole and allows for proper vent pitch. Also verify that interior thimble flange component properly engages and meets the exterior thimble flange component.

2. Once a proper dry fit of the thimble is verified, use a permanent marker to identify screw locations in four respective corners of the flange. It is recommended to locate flange mounting screws about ½” from the edge of the exterior thimble flange. Use metal punch or small drill bit to make the holes in the flange corners for the four mounting screws. With exterior thimble flange still in position, use permanent marker through new screw holes to mark molly hole locations on the masonry wall surface. Keeping the exterior flange in position, install a border of masking tape around the flange edge. It is recommended to have the masking tape border about ¹/₁₆” off the flange edge. This area between the flange and tape may be filled with sealant upon final steps. (Figure 2)
3. Remove thimble from hole. Drill and insert mollies using marker points for reference. Apply generous amounts of sealant to both underside of exterior flange and masonry wall surface. **Be sure to keep sealant back 1½” from thimble flange edge and 2” back from masking tape border on wall surface.** Using putty knife smooth sealant both on wall surface and underside of thimble flange. Suggested thickness of sealant on both wall and underside of thimble flange combined should be about ¼”.

4. Install exterior wall thimble flange into opening (**do not apply pressure**). Gently mate the thimble flange to the wall surface. It will be held nominally by the sealant now. Install four mounting screws in corners of flange (**do not tighten screws fully**). Gently and equally tighten the four perimeter flange screws so that the thimble flange is no closer than ¹⁄₁₆” to the exterior wall surface.

**Note:** If the flange is tightened snuggly to the wall surface, sealant will be squeezed out and water tight seal may be compromised.

5. Using the paint roller, gently apply even pressure on the front side of thimble flange. Wipe any sealant off the front of the thimble flange. Remove masking tape boarder. If performed properly, the thimble flange should have an even and continuous rim of sealant around the perimeter of the thimble flange. It may be necessary in some situations to make the corner screws a little tighter (**do not tighten so the flange and wall surface meet**). Allow sealant to dry fully.

6. Apply a ¼” bead of RTV high temperature silicone to the gap between the vent termination piece and the outside circumference of the thimble opening. (Figure 3)

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**Painting the vent termination**

1. If the vent termination is to be painted, it shall be painted without the Bosch water heater installed. High temperature enamel used to paint the vent termination should be capable of withstanding sustained temperatures in excess of 500°F. RTV type silicone must be used around the vent termination piece and typically will not hold paint.

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**Rain damage**

1. It is imperative that the qualified installer of the gas exhaust vent system such that rain enters neither through the wall penetration nor the exhaust pipe itself. Damage to the appliance or residence resulting from rain is the installer’s responsibility to prevent. **Rain damage to the heater is not covered under the manufacturer's warranty.** Please verify the installation of all gas exhaust vent systems comply fully with local codes.

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**Termination clearances**

1. All required clearances to the exhaust termination outlined in the water heater's installation manual and the vent manufacturer's installation manual must be observed.