

RTS-HE/28HE SERIES BOILER JACKET ASSEMBLY INSTRUCTIONS

TO STEAMFITTER

NOTE: READ THESE INSTRUCTIONS CAREFULLY. THEY
WILL SAVE YOU TIME IN ASSEMBLING BOILER PROPERLY.

THESE INSTRUCTIONS TO BE LEFT WITH THE BOILER FOR REFERENCE PURPOSES.

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RTS-HE/28HE SERIES BOILER JACKET INSTRUCTIONS

Boiler Assembly

The boiler must be completely assembled on the base angles supplied by Smith Boilers. The base angles are drilled and tapped to accommodate the lower jacket channels. Blocks of assembled sections are shipped on 6" or 8" channel iron from the factory.

Controls, Gauges and Piping Installations

Any controls or gauges to be located on the front face of boiler and the steam gauge glass **MUST BE INSTALLED IMMEDIATELY AFTER THE FRONT PANEL F1 IS IN POSITION, (FOR EASE OF ASSEMBLY)**. All other piping and control connections may be made prior to the jacket installation. Leave ample room to add and remove panels when necessary.

Burner Installation:

The burner can be installed first as long as the front panel F2 (H-1 CTN.) is installed between the front section and the burner mounting plate (See Figure 1). Apply two coats of spray adhesive (X-1 CTN.) supplied with the boiler to the rope groove on burner mounting plate. Allow time for the first coat to dry before applying the second coat. When the second coat is tacky lay the 3/8 rope (X-1 CTN.) into the rope groove and press in place. Screw the (4) 7/16-14 x 2 1/2" studs (X-1 CTN.) into the front section of the boiler. Next install the burner mounting plate insulation block (CTN. #69645) in the burner opening in the front section of the boiler. The notched observation port must be situated on the top left side of burner opening. Position the F2 front jacket panel over the four studs with the solid insulated panel on the bottom. Align the four holes in the burner mounting plate with the 7/16" studs and force the insulation block inward until the studs extends far enough through the burner mounting plate holes to mount the washers and 7/16-14 nuts (X-1 CTN.). Lightly tighten the nuts. Carefully insert the (4) 1/4-20 x 5" S.S. machine screws (X-1 CTN.) into the holes in the burner mounting plate and through the insulation block. Reach in through the burner opening to install the S.S. fender washers (X-1 CTN.) and S.S. nuts (X-1 CTN.) and lightly tighten. When completed tighten the four 7/16-14 nuts.

JACKET ASSEMBLY

Lower Channels

4 through 7 section boilers have one-piece lower channels (H-3 CTN.), 8 through 14 section boilers have two-piece lower channels (H-3 CTN.) and 15 through 18 section boilers have a three-piece lower channel per side (H-3 CTN.). The center lower channels for the 15 through 18 section boilers have slots for mounting to the base angle only. Locate the lower channels and layout along the outside of base angles so that the 5/16" hole(s) on the ends of the channels are to the front and back of the base angles. Mount the lower channels through the slots to the tapped holes in the base angle with 1/4-20 x 1/2" round head machine screws and washers. (H-1 Bag in H-1CTN. for 4 to 7 section boilers and additional hardware in H-3C Bag(s) in H-3 CNT. when shipped with 8 to 18 section boilers).

Front Panel

Position the front panel F1 (H-1CTN.) over the front section and in front of panel F2 and place over the lower channels so that the edges of the lower channels are inside the side edges of the F1 panel and in front of the retaining clip. Align holes in the F1 panel to the holes in the lower channels (see Figure 2) and F2 and fasten with (15) hex head sheet metal screws (Hardware in H-1Bag in H-1 CTN.). If the burner mounting plate is not installed at this time you can fasten F2 to F1 before mounting to the lower channels. **REMEMBERTO INSTALL ALL CONTROLS AND GAUGES TO FRONT FACE OF BOILER AT THIS TIME.** Temporally support the front panel while installing upper channels between the front and rear panels.

Rear Panel

Locate the rear panel B1 (H-1 CTN.) and place over the rear of lower channels so that the edges of the lower channels are inside the side edges of the rear panel and in front of the

retaining clip (see Figure 2). Align holes in lower channels and the rear panel and fasten with (2) hex head sheet metal screws (H-1 Bag). Temporally support the rear panel while installing the upper channels between the front and rear panels.

UPPER CHANNELS

4 through 7 section boilers

Boilers from 4 through 7 sections have one piece upper channels (H-3 CTN.). The upper channels are to be mounted between the top of the inside of the front jacket panel and the top of the inside of the rear jacket panel. Align the holes on the topside of Jacket panels with the weld nuts on the upper channels and fasten with (8) 1/4-20 x 3/4" slotted round head machine screws and washers. (H-1 Bag).

8 through 18 section boilers

Boilers from 8 through 18 sections have two to three piece upper channels (H-3 CTN.). The channels are supported at their joints by splice angles (H-3 CTN.) and support brackets (H-3 CTN.), (see Figure 3). Align the upper channels on the floor with the 5/16" holes on the flat side of channels to face the front and back of boiler. Align the holes in the splice angle to the hole on the inside of the upper channels. Assemble the upper channels on the floor with splice angles using (8) 1/4-20 x 1/2" round head machine screws, per joint, with nuts and washers (hand tighten only). Mount the upper channel assemblies between the front jacket panel and the rear panel. Align the holes on the topside of front and rear jacket panels with the weld nuts on upper channels and fasten with (8) 1/4-20 x 3/4" slotted round head machine screws and washers. Line up the support brackets with splice angles and closest corresponding draw rods that will allow overlapping of the support bracket and the splice angle. Remove as many of the 1/4-20 machine screw as necessary from the inside edges of splice angle to fasten the support bracket. (H-1 Bag and H-3C Bag(s) in H-3 CTN.).

Important;

Loosen the nuts on draw rods to install the left and right support brackets behind the washer on draw rods. Level upper channels and re-tighten draw rod nuts immediately to 40 ft. lbs. on the left draw rods and to 125-ft. lbs. on the right draw rods. Re-install the machine screws through the support bracket splice angle and upper channels. On some size boilers the slots in the support bracket used for mounting to the upper channels and splice angles might not line up with all the holes in the upper channels and splice angles.

Side Panels

Install side panels by inserting the tops into the grooves in the top channels first and then sliding the panels down into the groove made by the lower channel. The solid LH panels (H-4-1 CTN.) go on the left-hand side. The RH panels, (H-4-1 CTN. & H-4-2 CTN.), with the knockouts go on the right-hand side in their corresponding locations (See Figure 4).

Top Panels

Lay out T top panels (H-2 CTN.), such that the knockouts and openings agree with the assembled boiler. After lay out has been checked remove the necessary knockouts and install panels. Fasten top panels to side rails using sheet metal screws (2 to 4 per panel). The top panel T3 gets fastened to the inside top of rear panel near large opening (See Figure 4). (Hardware in H-2-1 Bag in H-2 CTNS.).

Knockout Covers.

Place necessary knockout cover plates over exposed areas; fasten with sheet metal screws that are supplied. Cover plates go to F1, RH1, RH2, RH4, T1, T2, and T3 (H-4-1 CNT. & H-4-2 CTN.). The knockout cover plate, F3 (H-1 CNT.), for the front panel must be installed inside of the panel. Knockout cover plate for the RH1 and the RH2 panels also fastens to the side of the F1 panel.

This completes the jacket assembly.

Figure 1

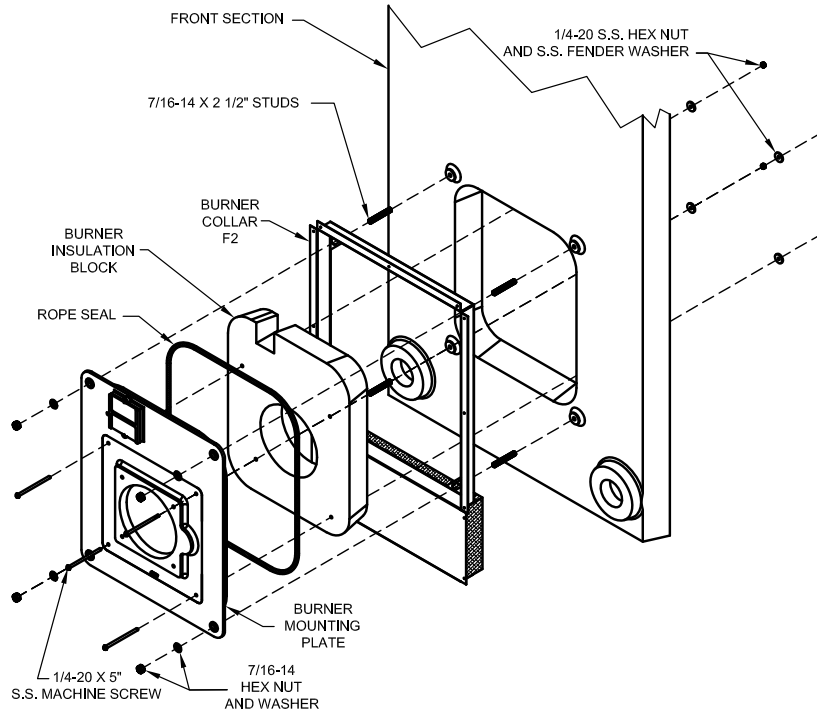


Figure 2

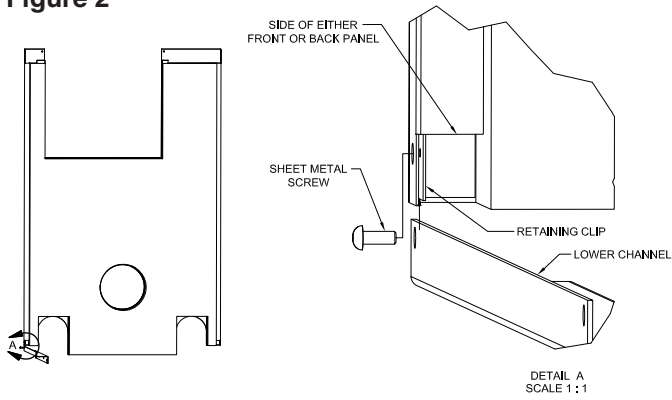


Figure 3



Figure 4

