

Classic Radiator

Models:

- CR330CFS (3 Section Complete)
- CR530CFS (5 Section Complete)
- CR730CFS (7 Section Complete)
- CR930CFS (9 Section Complete)
- CR530AFS (5 Section Intermediate)

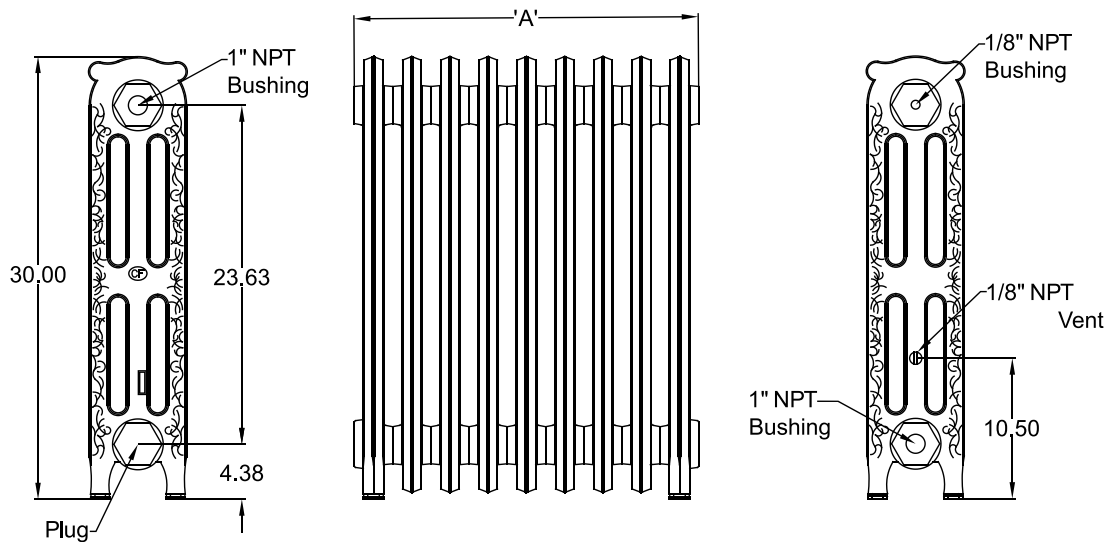
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U.S. Boiler Company ships packaged Classic Radiators in 3, 5, 7 & 9 section assemblies.



1 Product Specification/Rating

| Number of Sections | Steam | | | Water | | Water Volume (Gal) | Length (inches) (A) | Shipping Weight (lbs.) |
|--------------------|-----------------|----------------|--------------------------|-------------------------|--------------------|--------------------|---------------------|------------------------|
| | Square Feet EDR | Ratings BTU/hr | Max Steam Pressure (psi) | Ratings BTU/hr at 180°F | Max Pressure (psi) | | | |
| 1 | 4 | 850 | 12 | 532 | 50 | 0.51 | 3.04 | |
| 3 | 11 | 2550 | | 1597 | | 1.54 | 9.13 | 93 |
| 5 | 18 | 4250 | | 2662 | | 2.57 | 15.21 | 151 |
| 7 | 25 | 5950 | | 3727 | | 3.60 | 21.29 | 208 |
| 9 | 32 | 7650 | | 4792 | | 4.63 | 27.38 | 265 |



Notes:

1. Thread connections on Radiator are 1-1/4 BSP.
2. Bushings convert from BSP to NPT.

2 Installation/Piping

A. Pre-Installation Guidelines

1. Positioning Pipes

Never install final pipe work for cast iron radiators without confirmed measurements.

Measure radiator length, add 3 in. for each hydronic valve from end of bushings.

B. Hydronic

1. Valves

Install balancing valve on the inlet side. Install isolation valves on the return side.

2. Balancing Radiators

Balancing radiators is an essential part of installation that should never be overlooked. It ensures that your radiators heat evenly without being too hot or too cold.

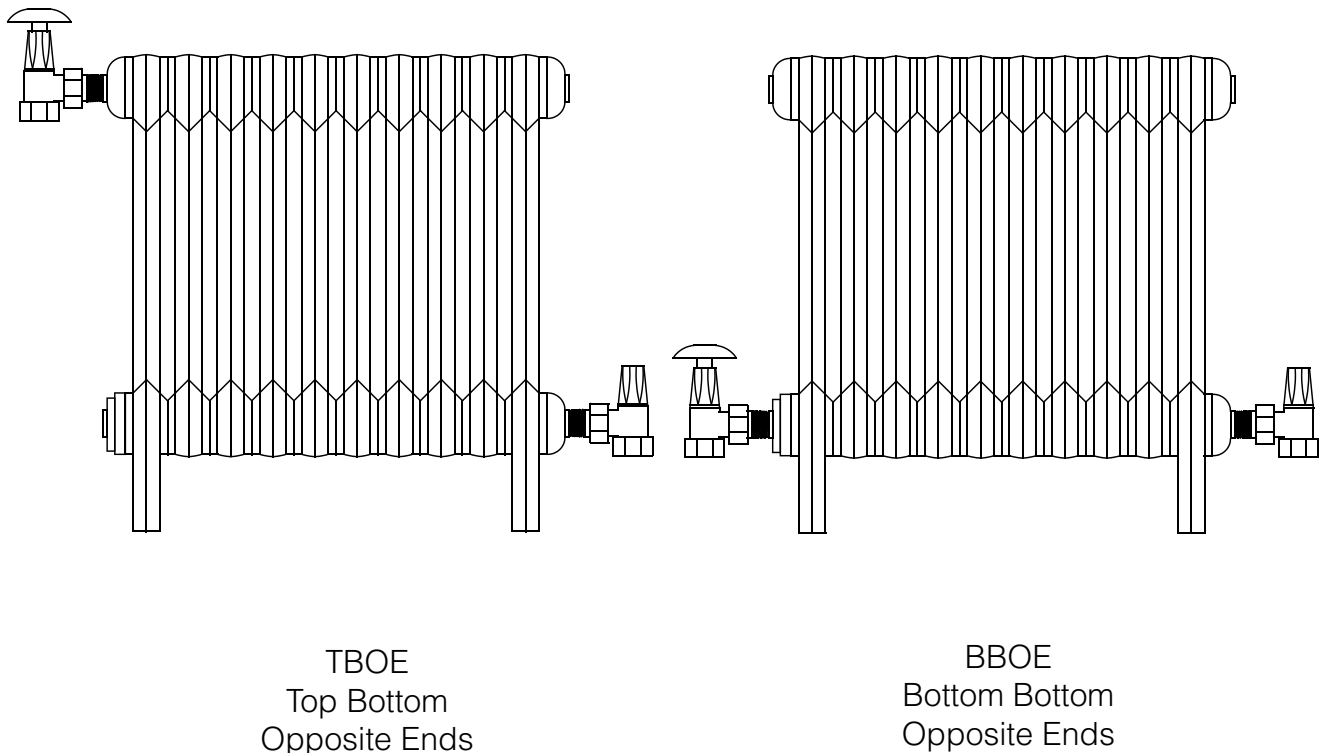


Figure 2-1

2 Installation/Piping *(continued)*

C. Steam

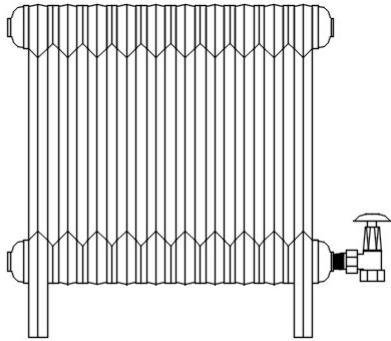


Figure 2-2: One Pipe

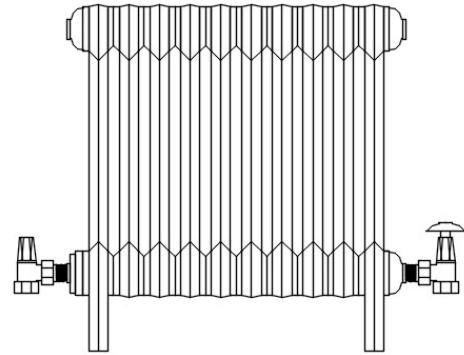


Figure 2-3: Two Pipe

1. Site Preparation

Don't install a cast iron radiator on unsound flooring.

There is likely to be some residual water inside the radiator from the manufacturing process. This will stain floors, so be sure to protect the area in which you're working.

Cast iron radiators are very heavy. Always protect the floor from scratches.

2. Pitch

The radiator should lean very slightly towards the inlet valve. A rule of thumb is approximately 1/16 in. for every eight sections of radiator.

3 Adding Section/Resizing

A. Double Threaded Nipples

Figure 3-1 shows how to recognize the two thread directions of a double threaded nipple used to join cast iron radiators.

If the thread is pointing upwards and to the right, it is right-handed or normal thread and will screw in clockwise.

If the thread is pointing upwards and to the left, it is left-hand or reverse thread and will screw in counter-clockwise.

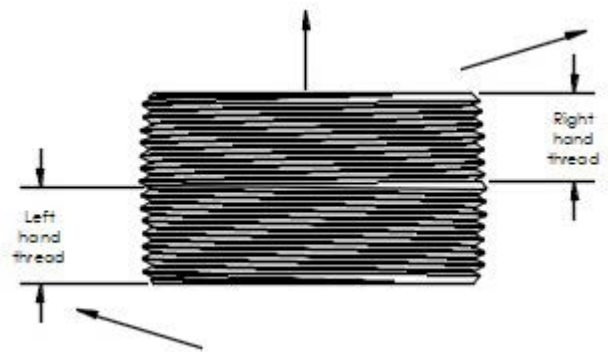


Figure 3-1

B. Gaskets

1. Check that the gaskets have not become damaged or split since leaving the factory.

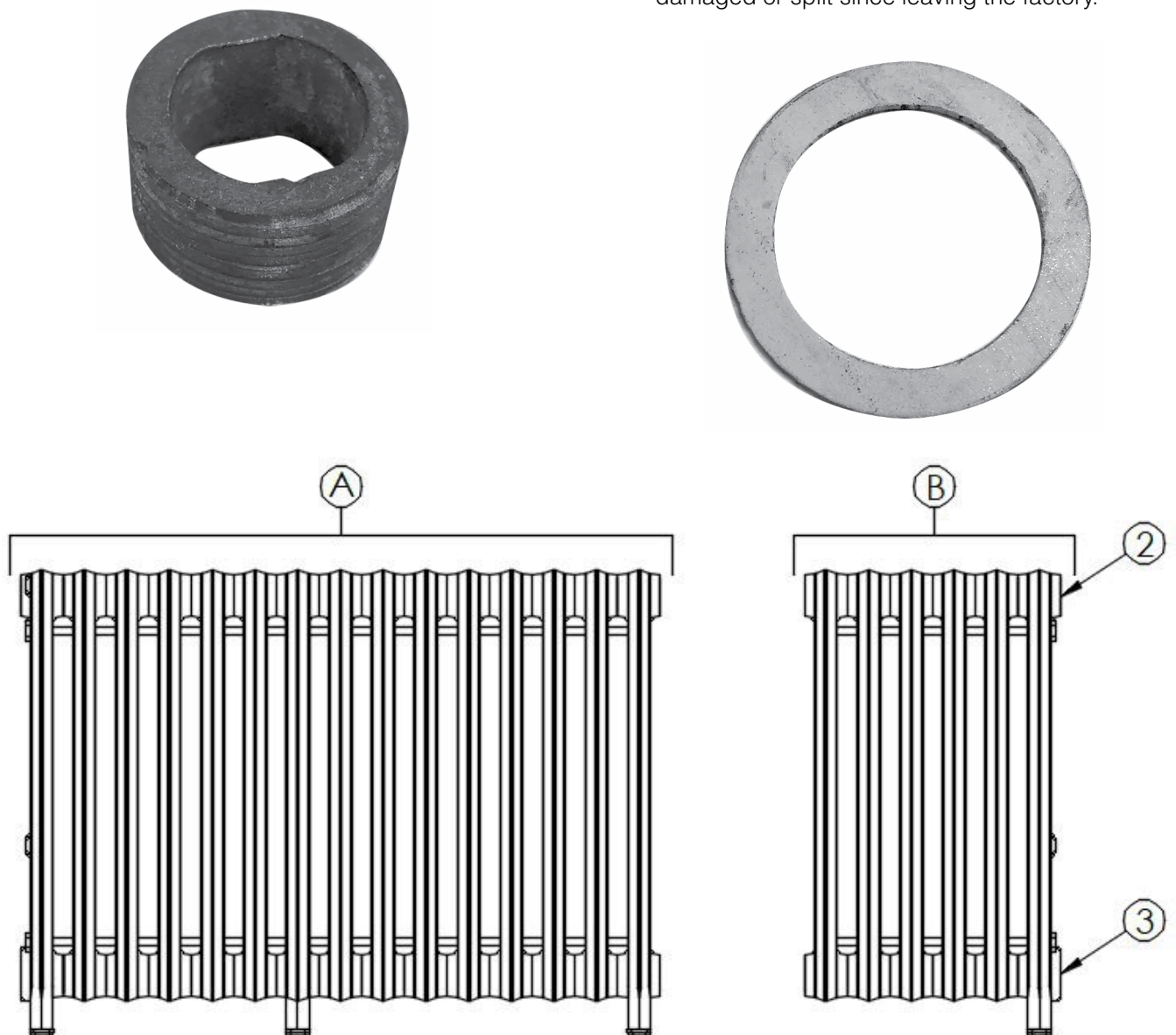


Figure 3-2

3 Adding Section/Resizing *(continued)*

C. Radiator Assembly

1. Positioning the Radiator and removing the bushings
 - a. Check you have all pieces of the radiator (refer to the Assembly Diagram) and place them as close as possible to the final installation location.
 - b. Remove the end bushings [2] & [3] as required for assembly of your radiator.
2. Inserting the threaded nipples
 - a. Check that all joining faces are clean and free of paint, rust or remnants of previous gaskets. Use a sharp blade to clean them back to bare metal if necessary.
 - b. Insert a nipple by just a quarter turn into the top and bottom female threads on one side of the first joint.

NOTICE: If the nipple doesn't seem to engage well in the thread, try flipping it over and inserting the other end. The nipple should stay in the radiator if you tug it gently. Check the thread is correctly engaged by screwing it fully in and then bringing it back to its original position.

3. Adding the gaskets

Place gasket over each nipple.

WARNING

Failure to add a gasket will result in a leaking radiator. Don't forget this essential component.

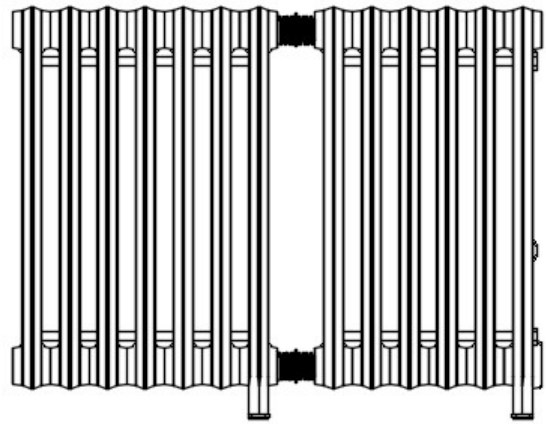
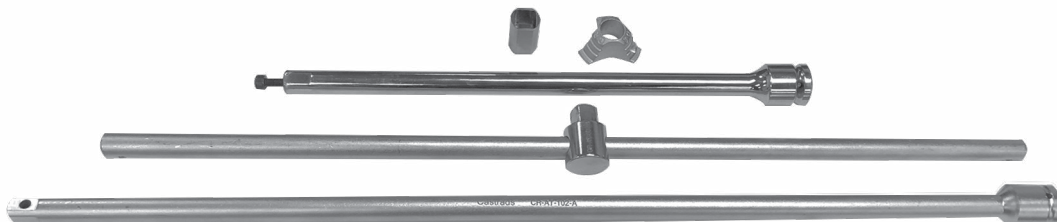


Figure 3-3

4. Hand tightening the joints
 - a. With the assembly tool, set the depth stop to the correct position. The distance from the depth stop to end of the assembly tool should be about 0.75 inches to 1.25 inches longer than the piece of the radiator you are attaching.
 - b. Insert the assembly bar through the top joining hole until it engages with the correct nipple as indicated by the depth stop.
 - c. Tighten the top joint about two turns. Pull slightly on the radiator to ensure the two pieces are connected.
 - d. Repeat at the bottom joint, tightening only a couple of turns.
 - e. Repeat steps c and d, tightening each joint a little at a time, until both are closed and hand tight.



3 Adding Section/Resizing *(continued)*

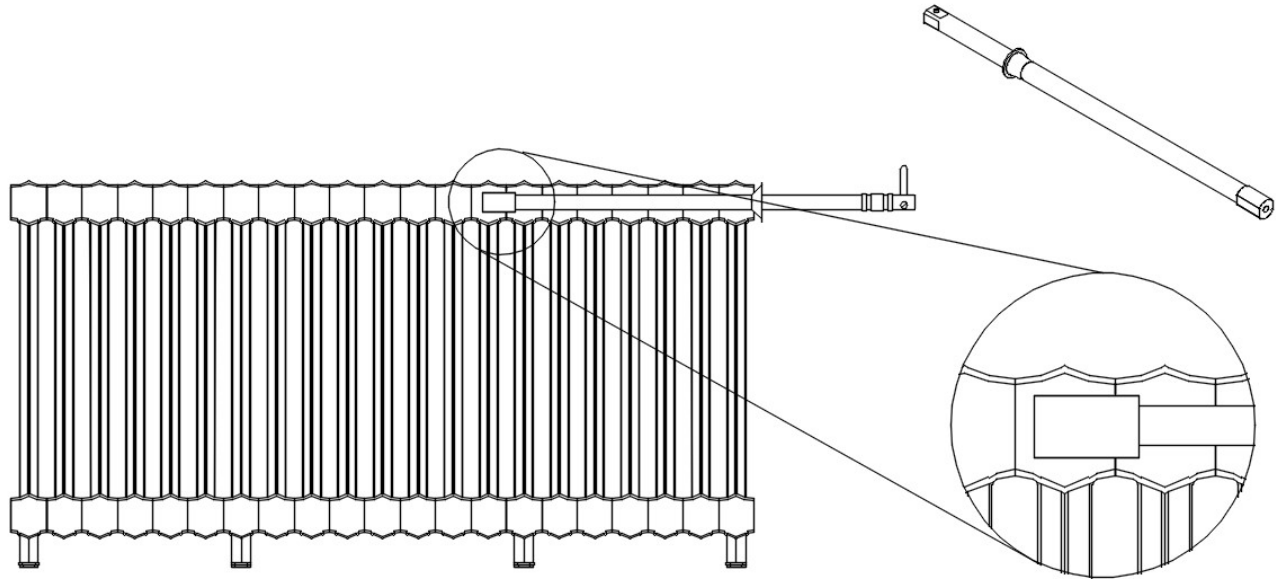


Figure 3-4

⚠ WARNING

If the nipple doesn't screw in easily it's likely that it has been inserted the wrong way. If this is the case, undo the join and check the thread orientations. It is important not to force the thread as this will damage the radiator and cause a leak.

5. Closing the joints

- a. Attach the breaker bar to the assembly bar.
- b. Fully tighten the top joint with the breaker bar.
- c. Repeat on the bottom joint.
- d. Finally, repeat steps b and c on both joints to ensure a watertight seal.

⚠ WARNING

Be careful that neither you nor the radiator become unbalanced during this process. Always have a second person holding the radiator at this point.

6. Additional joints (if applicable)

You will need to repeat steps 2 to 5 for each additional joint if your radiator has been delivered in more than two parts.

7. Inserting the bushings

- a. For each bushing, check that all joining faces are clean and free of paint, rust or remnants of previous gaskets. Use a sharp blade to clean them back to bare metal if necessary.
- b. Add a gasket to the bushing.
- c. Insert the bushing into the radiator.
- d. Tighten each bushing that has been removed.
- e. Repeat steps a to d for each bushing that has been removed.

4 Parts

| Item Number | Description |
|-------------|---|
| 107564-01 | Assembly Tool Kit |
| 107929-01 | Legged Section |
| 107643-01 | Two (2) Nipples and Two (2) Gaskets |
| 104526-01 | 1-1/4 in. RH BSP Plug and Gasket |
| 104528-01 | 1-1/4 in. RH BSP x 1 in. NPT Bushing and Gasket |
| 104527-01 | 1-1/4 in. RH BSP x 3/4 in. NPT Bushing and Gasket |
| 104529-01 | 1-1/4 in. RH BSP x 1/8 in. NPT Bushing and Gasket |
| 104530-01 | 1-1/4 in. LH BSP Plug and Gasket |
| 104532-01 | 1-1/4 in. LH BSP x 1 in. NPT Bushing and Gasket |
| 104531-01 | 1-1/4 in. LH BSP x 3/4 in. NPT Bushing and Gasket |
| 107297-01 | 1-1/4 in. LH BSP x 1/8" NPT Bushing and Gasket |
| 103322-01 | Gasket |

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