

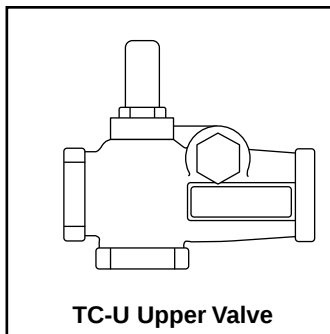


Model TC-4 Test-N-Check® Valves For Hot Water Boilers

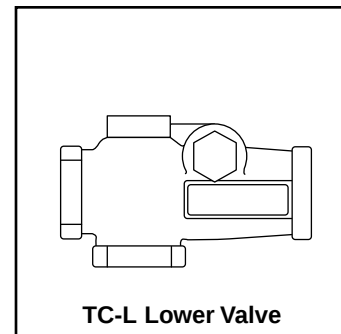
Does in minutes what used to
take hours.

Applications:

For isolation of equalizing lines during low
water cut-off testing.



TC-U Upper Valve



TC-L Lower Valve

OPERATION

Maximum Operating Pressure: 160 psi (11 kg/cm²)

Maximum Operating Temperature: 250°F (121°C)

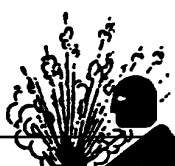
WARNING



- Before using this product read and understand instructions.
- Save these instructions for future reference.



- All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of plumbing, steam, and electrical equipment and/or systems in accordance with all applicable codes and ordinances.



- To prevent serious burns, the boiler must be cooled to 80°F (27°C) and the pressure must be 0 psi (0 bar) before servicing.
- To prevent serious personal injury from steam blow-down, connect a drain pipe to the control opening to avoid exposure to steam discharge.

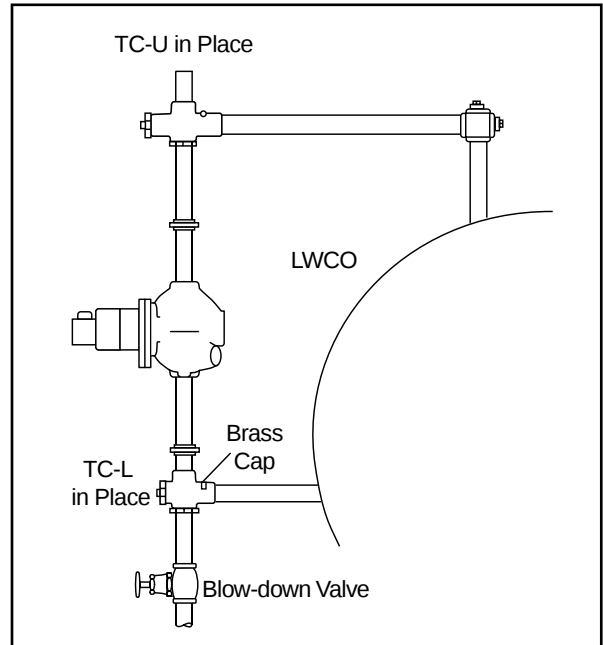
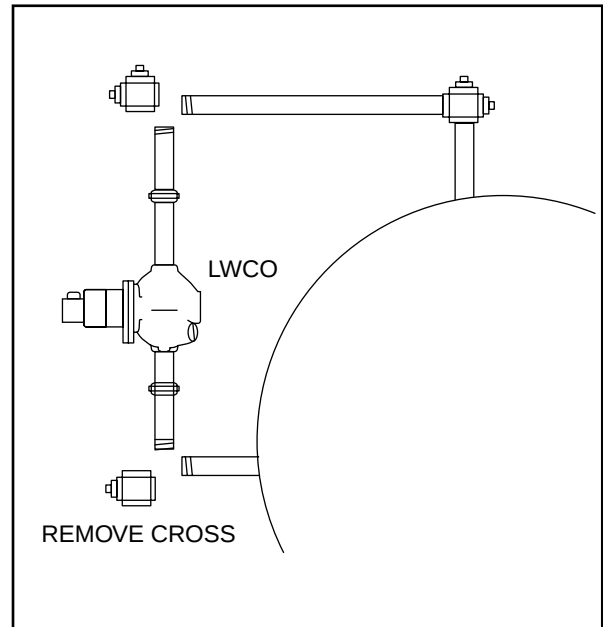
Failure to follow this warning could cause property damage, personal injury or death.

TEST-N-CHECK® VALVES

Simplify Testing of Low Water Cut-offs on Hot Water Boilers

Installation of the TC-4 Test-N-Check Valve with an Existing Low Water Cut-off

1. Remove the existing low water cut-off by disconnecting the unions in the equalizing lines.
2. Remove the crosses from the upper and lower equalizing lines.
3. Assemble the TC-U (the upper Test-N-Check valve, with the vacuum breaker) into the upper equalizing line replacing the cross. **NOTE:** The vacuum breaker must be on the top and the long leg must face the boiler.
4. Assemble the TC-L (the lower Test-N-Check valve, without the vacuum breaker) into the lower equalizing line replacing the cross. **NOTE:** The brass cap must be located above the center of the lower equalizing line, and the long leg must face the boiler.
5. Assemble the blow-down valve into the bottom port of the TC-L.
6. Assemble 1" NPT pipe plugs into the remaining open port in both the TC-U and TC-L. **NOTE:** The addition of the Test-N-Check valves in place of standard crosses will extend the low water cut-off approximately 2" farther from the boiler.
7. Reassemble the low water cut-off and vertical equalizing pipe to the upper and lower Test-N-Check valves.
8. After all piping assembly has been completed, refill the system with water, turn on all electrical supply and bring system to operating conditions. After system reaches operating pressure, inspect to make sure no leaks exist at the threaded connections. Test valves by opening blow-down valve while burner is on to make sure valves operate correctly and low water cut-off shuts burner off.



CAUTION



To prevent serious personal injury from steam pipe blow down, connect a drain pipe to the control opening to avoid exposure to steam discharge. If vacuum breaker stem is accidentally depressed, hot water could be discharged causing burns. Failure to follow this caution could cause personal injury.

IMPORTANT:

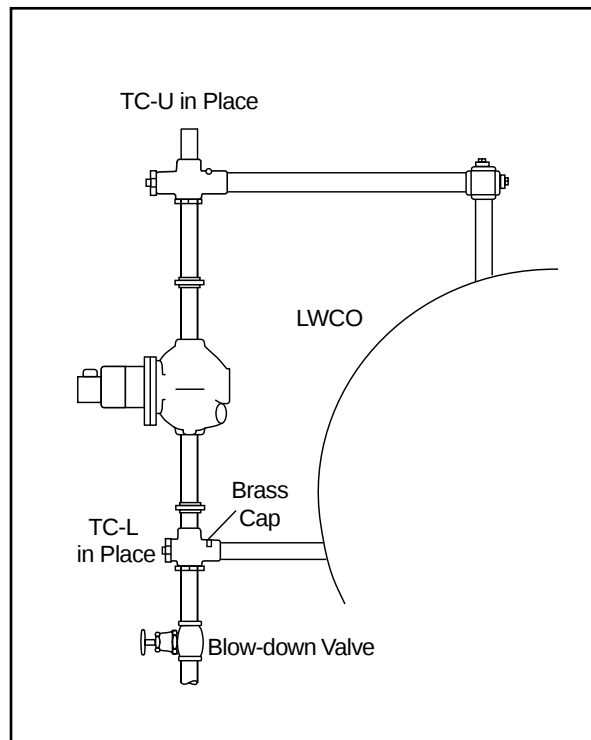
- When using tape sealant or thread joint compound on pipe or fittings with external threads follow manufacturer's instructions. Do not use tape sealant or thread joint compound on first thread.

TEST-N-CHECK® VALVES

Simplify Testing of Low Water Cut-offs on Hot Water Boilers

Installation of the TC-4 Test-N-Check Valves with a New Low Water Cut-off

1. Assemble the TC-U (the upper Test-N-Check valve, with the vacuum breaker) into the upper equalizing line in place of the cross described in the low water cut-off installation instructions.
NOTE: The vacuum breaker must be on the top and the long leg must face the boiler. **NOTE:** Make sure low water cut-off position is located in accordance with the boiler manufacturer's recommended cut-off level.
2. Assemble the TC-L (the lower Test-N-Check valve, without the vacuum breaker) into the lower equalizing line in place of the cross described in the low water cut-off installation instructions. **NOTE:** The brass cap must be located above the center of the lower equalizing line, and the long leg must face the boiler.
3. Assemble the blow-down valve into the bottom port of the TC-L.
4. Assemble 1" NPT pipe plugs into the remaining open port in both the TC-U and TC-L.
5. Complete the installation as described in the low water cut-off installation instructions.
6. After all piping assembly has been completed, refill the system with water, turn on all electrical supply and bring system to operating conditions. After system reaches operating pressure, inspect to make sure no leaks exist at the threaded connections. Test valves by opening blow-down valve while burner is on, to make sure valves operate correctly and low water cut-off shuts burner off.



CAUTION



To prevent serious personal injury from steam pipe blow down, connect a drain pipe to the control opening to avoid exposure to steam discharge. If vacuum breaker stem is accidentally depressed, hot water could be discharged causing burns. Failure to follow this caution could cause personal injury.

IMPORTANT:

- When using tape sealant or thread joint compound on pipe or fittings with external threads follow manufacturer's instructions. Do not use tape sealant or thread joint compound on first thread.

McDonnell & Miller



ITT Industries
Engineered for life

3500 N. Spaulding Avenue
Chicago, Illinois 60618
tel: 773 267-1600
fax: 773 267-0991
www.mcdonnellmiller.com

©2000 ITT Industries Inc.
Printed in U.S.A. 12-00 210088