

Instruction Manual

- T200BB



BOILER BLOW-DOWN CONTROL SYSTEM

Supplied by:

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- Note:** On-going product development at Convergent Water Controls may lead to changes in the specifications of this product.
- Warranty:** This product is guaranteed for a period of 12 months from installation date. The warranty applies to manufacturing or component defects which may cause the unit to malfunction under specified conditions. The guarantee does not cover damage due to abuse, tampering or improper installation.
- Disclaimer:** Convergent Water Controls will not be held liable for any consequential damage or loss arising resulting from product malfunction.

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1. INTRODUCTION

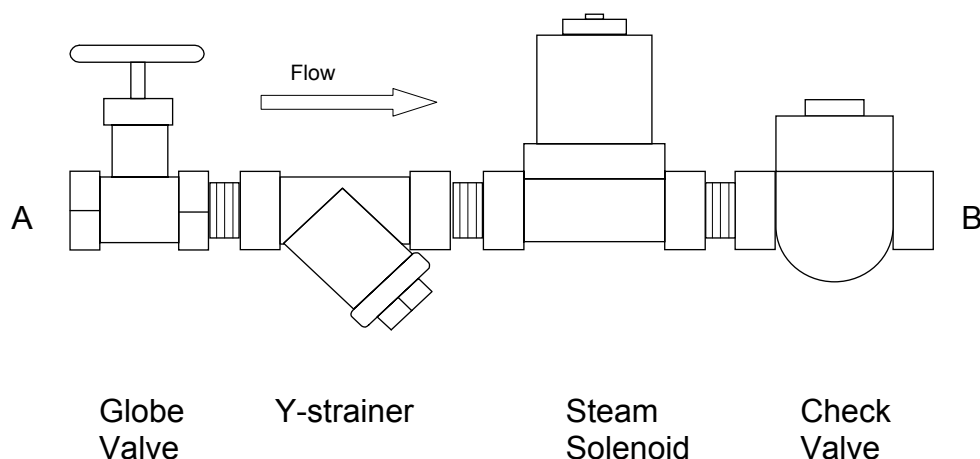
The T200BB controller, is easy to set up and operate. Once installed, all that is required of the user is to set up a blow-down time. Automatic blow-down occurs on each feedwater pump fill cycle.

1.1 Components of the T200BB Boiler Blow-down System

The following components are required for boiler blowdown control:

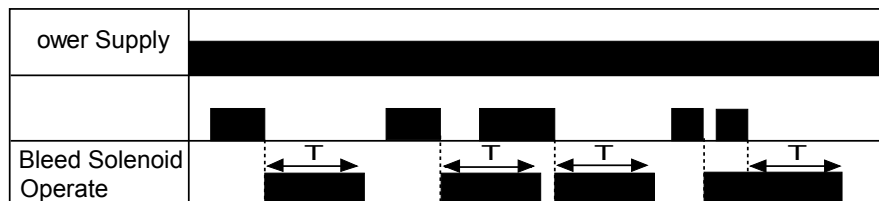
1. T200BB Timer Control Box incorporating Rhomberg 48T100 timer set on Function E (or NAI S PM4H-A timer set on Mode OS).
2. Isolation/Globe Valve installed on outlet of sample line of boiler.
3. Y-strainer to prevent solids from clogging the solenoid valve.
4. Steam Solenoid Valve.
5. Check Valve.
6. Blow-down line.

The diagram below outlines the Bypass Assembly used in a boiler blow-down system. This assembly consists of a globe valve, Y-strainer, a steam solenoid and a check valve. Point 'A' in the diagram is the manifold inlet, taken from the boiler sample line. Point 'B' leads to the boiler blow-down line. The globe valve is necessary as it isolates the bypass to service any of the components.



2. DESCRIPTION OF OPERATION

Rhomberg 48T100 Timer set to Function E, or
NAIS PM4H-A Timer set to Mode OS



T = Time set on large clear dial

The T200BB is activated by the boiler feedwater pump to which it is connected. The boiler feedwater pump controls the make-up water addition which affects the total dissolved solids entering the boiler.

Whenever the feedwater pump switches off (ie. the boiler is full), the T200BB is activated and blowdown commences. The blowdown solenoid opens and remains open for a time period set up by the operator (time ranges available are in seconds, minutes, hours or 10 hours). After experimentation, the correct time setting will provide sufficient blow-down time to keep the TDS of the boiler water at a desirable level.

Note: The T200BB should be connected so that it is continuously powered when the boiler is operating. This ensures that the blowdown time remains constant, regardless of when the feedwater pump switches on again.

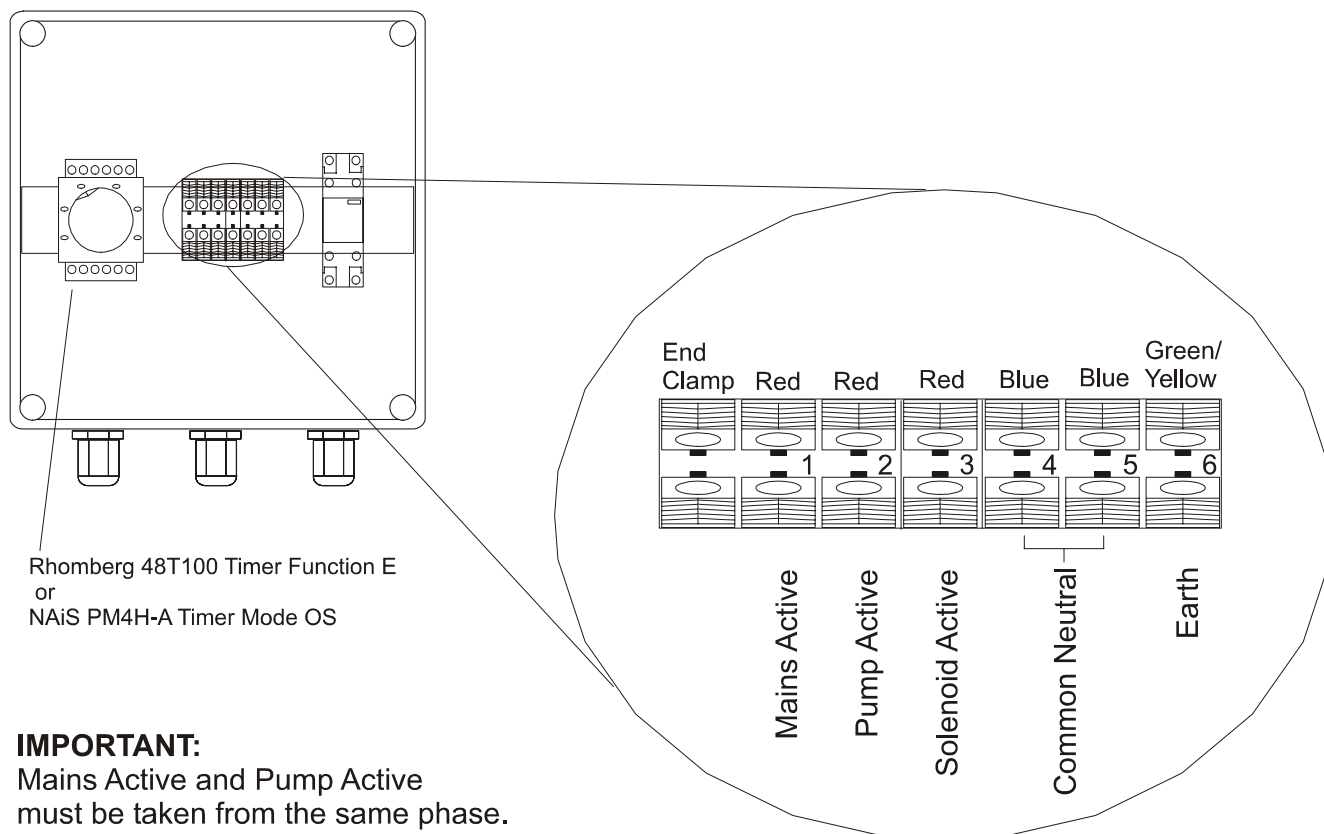
3. INSTALLATION

3.1 Mounting the T200BB Controller & Bypass Manifold Assembly

1. Mount the controller on a flat vertical surface away from extreme heat, humidity or areas where temperature variation is extreme.
2. Mount the T200BB such that the instrument is at eye-level to allow good visibility of the unit.
3. Make up the bypass manifold assembly as shown in section 1.1 which should be plumbed from the sample line. **THIS SHOULD ONLY BE PERFORMED BY A QUALIFIED BOILER FITTER.**
4. Use sufficient PTFE tape to provide leak-proof connection to sample line and other fittings.
5. Fit point 'A' of the bypass assembly to the sample line of the boiler.
6. Fit point 'B' of the bypass assembly to the main blow-down line. If necessary, weld a socket to the blow-down line. Make sure that no manual 'bottom' blow-down takes place when doing this installation.

3.2 Electrical Wiring Information

The diagram below shows the terminals for wiring situated between the timer and relay within the T200BB control panel.



3.3 Y-strainer Maintenance

The Y-strainer should be cleaned periodically to maintain trouble free operation.

4. SPECIFICATIONS

Control Panel

Power Supply:	220 – 240 VAC (same phase as feedwater pump)
Inputs:	240 VAC active from feedwater pump
Standard Outputs:	240VAC applied to Solenoid – 5 Amp rated.
LED Indication:	Power ON, Solenoid Operate, Timing
Controller Enclosure rating:	IP65 (ie. completely weatherproof)
Operating Temperature:	0 - 50°C

Manifold

Max. manifold size:	½"
Max. manifold pressure:	10.5 Bar (1050 kPa, 150 psi)