VXT COMMERCIAL

Model VXTC-120

Programmable Water Feeder for Commercial Boilers.

120 VAC Operating Voltage

Patent Pending

SPECIFICATIONS:

Max Fluid Temperature:	130° F
Max AmbientTemperature:	100° F
Flow Rate:	10 GPM
Maximum Feed:	10 minutes @ 10 gpm = 100 gal.
Electrical:	120 VAC - 60 HZ

- **Universal Compatibility:** Works with any low water cut-off or pump controller - float type or probe type.
- **Water Metering:** Every VXT Commercial Feeder comes with a high quality Hydrolevel water meter for precise measurement of fresh water make-up.
- **On-Board Diagnostics:** LED indicates Delay/Feed modes, Controller Signal Indicator and more.
- **Programmable Feed Delay Settings:** From no delay to 10 minutes, the VXT can be set to meet system conditions.
- **Lock-Out Flood Protection:** To prevent steam system flooding, the VXT will not allow its solenoid valve to feed more than 10 minutes without an interruption from the LWCO or pump controller.
- **"Feed Above the LWCO" Technology:** Fine tune boiler water levels by allowing for 15 seconds to 2 minutes past controller sensor.

HOW TO INSTALL

1 WARNING!

WARNING: To prevent electrical shock and equipment damage, power must be off during installation and servicing of the control. To prevent serious burns the boiler should be thoroughly cooled before installing or servicing the control.

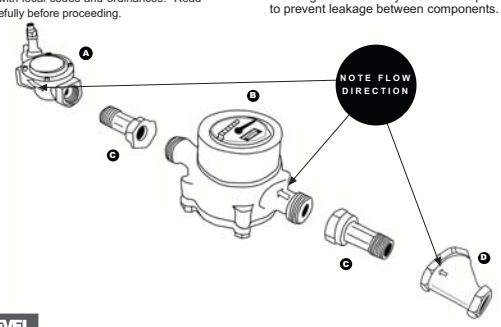
Only qualified personnel may install or service the control in accordance with local codes and ordinances. Read instructions carefully before proceeding.

2 ASSEMBLY

Locate the following items in the shipping carton:

Ⓐ (1) 3/4" solenoid valve, Ⓑ (1) Hydrolevel water meter, Ⓒ (2) 3/4" brass adaptors, Ⓓ (1) 3/4" brass Y strainer,

Assemble them as shown in Diagram 1 located below. Be sure flow arrows on both solenoid, meter and strainer are all facing the correct way. Use teflon tape or similar sealant to prevent leakage between components.



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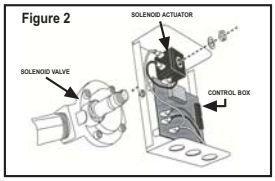
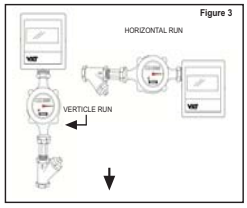
3 ORIENTATION

Figure 2

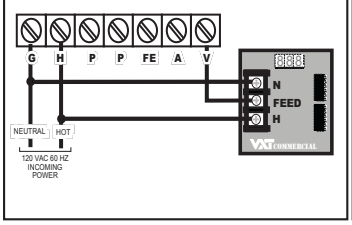


Slide solenoid actuator head (connected to control box) over solenoid shaft and tighten in place with nut and washer **(Figure 2)**. Align the control box for maximum viewing ability by orientating it with the direction of the water flow **(Figure 3)**. The face of the water meter can be turned by using a screwdriver on the side tabs - removing and reattaching.

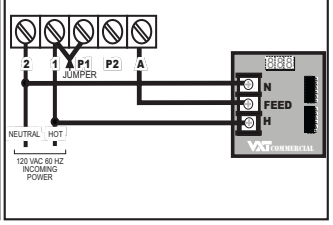
Figure 3



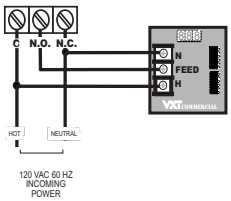
SAFGARD MODELS 250, 250M, 250WC, 250MWC



SAFGARD MODELS 450, CG450, CGT450 SERIES

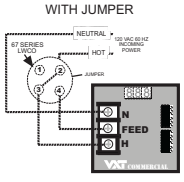


MCDONNELL & MILLER MODELS 47-2, 51-2, 51-S-2

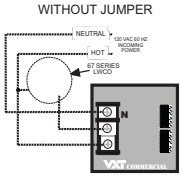


MCDONNELL & MILLER MODELS 67, 67S, 63

WITH JUMPER



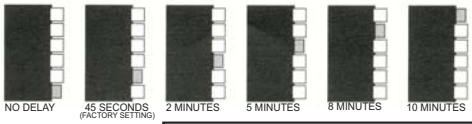
WITHOUT JUMPER



5 SETTINGS

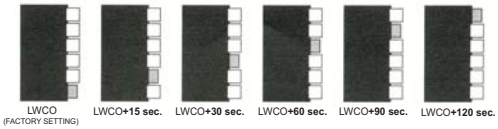
SELECT FEED DELAY

The VXT gives you the ability to match the feeder to the system conditions. Most steam systems require at least some delay before the introduction of fresh water. This allows the low water cut-off or pump control to detect whether a true need for water exists or whether condensate is returning to the boiler. SOME PROCESS APPLICATIONS AND CERTAIN STEAM SYSTEMS REQUIRE WATER IMMEDIATELY UPON A CALL FOR WATER. FOR THESE JOBS SELECT A 'NO DELAY' SETTING.



SELECT FEED AMOUNT

The VXT comes factory set to stop its feed cycle when the low water or pump controller is satisfied. *If the controller is located properly this may be adequate.* If the LWCO or pump controller is located slightly low in relation to the gauge glass, it may be advantageous to allow a small amount of water above the normal feed stop level. For this reason, the VXT Commercial allows you to choose short amounts of time the feeder solenoid valve will stay energized ***after the controlling device is satisfied.*** For information on selecting proper feed amount settings, see section below



DETERMINING PROPER FEED SETTINGS

Most installations should have a properly located low water cut-off or pump controller and should need no more water than the **factory setting: LWCO**. In this setting the VXT will de-energize the feed valve as soon as the controller is satisfied.

In some cases, floats or probes are located at a level that doesn't permit the feeder to bring in water to a working level. For these installations, the VXT offers "Feed Above the LWCO" technology.

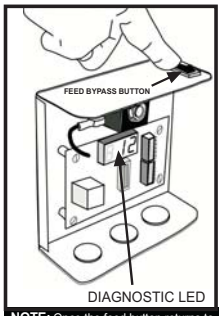
In this mode the feeder will allow the solenoid to remain open for a short period of time after the controller is satisfied.

To set the feeder up in this mode follow these steps:

A. Bring just enough water into the boiler to de-energize the feeder circuit - usually the minimum safe water line with a LWCO, usually several inches higher with a pump controller. **NOTE:** *If this is an optimal working water line leave the VXT in the factory setting of LWCO.* If water is lower in the gauge glass than is acceptable as a working level proceed to step B.

B. Using the VXT's feed bypass button introduce water into the boiler until it reaches the optimum working level. Note the number on the VXT's DIAGNOSTIC LED - See Figure 3 . Set the feeder to the nearest LWCO+ position.

NOTE: *The VXT can only deliver water 120 seconds above the controller feed stop point. If this level is still inadequate, repipe the LWCO or pump controller to a higher level.*



NOTE: Once the feed button returns to the "off" position the number displayed on the LED will remain illuminated for 10 seconds. The LED will then revert to normal operation display.

5 OPERATION

INITIAL POWER-UP

Upon initial power up, the control will go through a 10 second self-diagnostic test cycle. During this period various characters will be displayed on the LED screen and the solenoid will power up for approximately one second. This only takes place upon powering of the control.

MANUAL FEEDS

Each time the manual feed button is pressed the control LED will begin counting in seconds. This will continue as long as the feed button is pressed. When the button returns to the off position, whatever number the feeder has counted to during the manual feed will remain on the LED for approximately 10 seconds. The LED will then return to its normal display function.

DIAGNOSTIC SYMBOLS

The Diagnostic LED can be used to troubleshoot programming errors and indicates mode of operation. See Diagram 4 - below, for diagnostic symbol interpretations.

NORMAL OPERATING MODE
Feeder is powered and on.

DELAY BEFORE FEED MODE
Allows for condensate to return prior to feed (45 sec. to 10 min.)

FEED MODE
Solenoid Valve is open.

TIMER
Counts seconds when FEED button is pressed. Useful for selecting feed setting.

ERROR
Improper dipswitch setting. Check that ONE Delay and ONE Feed switch is selected.

LOCK-OUT MODE
Feeder has fed 10 minutes and continues to receive a call from the boiler control. Check operation of boiler control. Reset feeder by removing power momentarily.

FEED CALL
Illuminated decimal indicates feeder is receiving a call from the boiler control.

LIMITED MANUFACTURER'S WARRANTY

We warrant products manufactured by Hydrolevel Company to be free from defects in material and workmanship for a period of two years from the date of manufacture or one year from the date of installation, whichever occurs first. In the event of any claim under this warranty or otherwise with respect to our products which is made within such period, we will, at our option, repair or replace such products or refund the purchase price paid to us by you for such products.

In no event shall Hydrolevel Company be liable for any other loss or damage, whether direct, indirect, incidental or consequential. This warranty is your EXCLUSIVE remedy and shall be IN PLACE OF any other warranty or guarantee, express or implied, including, without limitation, any warranty of MERCHANTIBILITY or fitness for a particular purpose. This warranty may not be assigned or transferred and any unauthorized transfer or assignment thereof shall be void and of no force or effect.

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