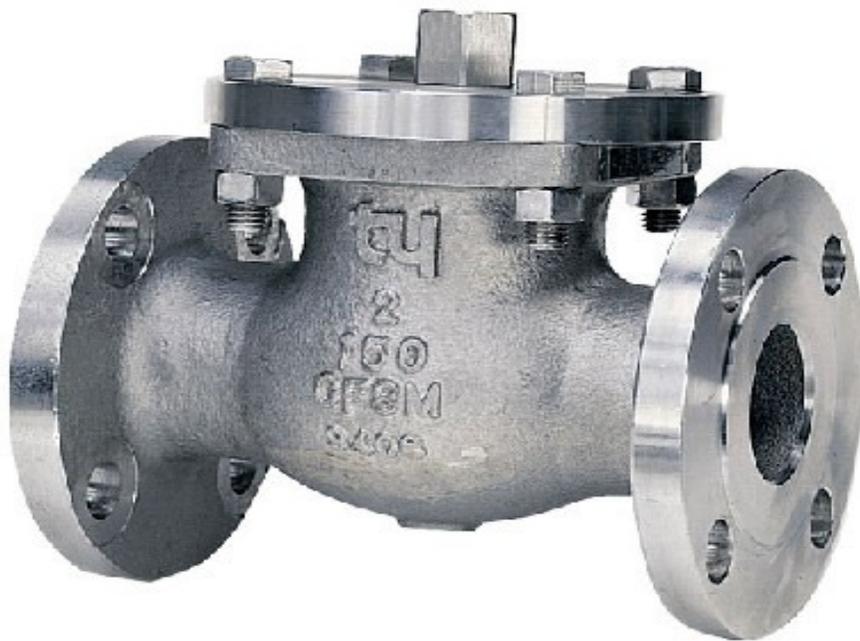




## **M-XF EXCESS FLOW VALVE Installation and Operation Manual**



# M-XF Excess flow valve

## Content

<b>1. Installation</b>	<b>3</b>
<b>2. Adjustment of valve</b>	<b>3</b>
<b>3. Maintenance / Cycling</b>	<b>3</b>
<b>4. Disassembly and Assembly</b>	<b>3</b>
<b>5. List of recommended spares</b>	<b>4</b>
<b>6. Operation of valve</b>	<b>4</b>
<b>7. Procedure to disassemble</b>	<b>5</b>

# M-XF Excess flow valve

## 1. Installation

The valves can be installed either horizontally or vertically. The valve's flow direction arrow should match with the actual flow direction as the valve only shut off in one direction. We calibrate the valve in a horizontal mode. If you plan to install the valve in a vertical orientation, please adjust the shut off setting to compensate for this by reviewing the flow rate (using an inline flow meter) for shutoff by actual field testing.

If adjustment is required for vertical orientation, the flow rate in the valve needs to be increased to the shut off flow rate desired. The valve's adjustment screw needs to be adjusted counterclockwise or clockwise until the valve shuts off. Little iteration may be needed to achieve the correct adjustment. Refer the part below that describes the valve adjustment on how to adjust the valve.

## 2. Adjustment of valve

The shut off flow rate of this valve can be changed by turning the adjustment screw (see cutaway drawing in datasheets as attached) clockwise or counterclockwise. The shut off flow rate will increase by turning the adjustment screw counterclockwise and decrease by turning the adjustment screw clockwise. For verifying the correct shut off flow rate an inline flow meter in the pipeline is required. The factory can provide a graph for adjustment screw depth vs. shut off flow rate on request with each valve.

**CAUTION: The adjustment screw must be turned gradually as otherwise the O-ring will be scored and torn if the adjustment screw is turned too rapidly.**

## 3. Maintenance / Cycling

These excess flow valve needs to be cycled through its basic function at least twice a year per NFPA (National Fire Protection Act) regulations. The valve can be cycled mechanically or by functionally testing the valve by allowing flow condition to reach its shut off flow rate.

Mechanically, to ensure the moving parts in working order and not obstructed by any large particle or other contamination. It is helpful to simulate the flow functions test. If it is not possible to do this, as a minimum, the adjustment screw should be screwed in completely (clockwise) until the piston meets the seat as this will confirm that the piston mechanism can travel to the seat without restriction and then the adjustment screw can be backed out into its set position by turning counterclockwise. (Please turn off your flow during this procedure). If the piston does not seat completely, refer to the next step for disassembly to clean out the valve or detailed examination.

You can also functionally test the valve by simulating the flow condition. Allow the flow rate to reach shut off flow condition and verify valve shuts off. The valve can be reset either by equalizing the pressure upstream and downstream through a by-pass line or by relieving the upstream pressure.

If NFPA regulations do not prevail, we recommend that valve be disassembled or cycle at least once per year to verify safe operation. The method to cycle of test its function is explained above. If the piston does not seat completely, refer to the next step for disassembly to clean out the valve or detailed examination.

# M-XF Excess flow valve

## 4. Disassembly and Assembly

It is very easy to disassemble this valve without taking it offline for cleaning or maintenance purposes.

- A. Shut off the flow to the valve completely.
- B. Remove the Bolts from the Bonnet.
- C. Pull out the entire Piston Guide and Piston/Poppet Assembly.
- D. Refer to drawing for disassembly as attached and unscrew Poppet Bolt using the Disassembly tool provided. ( The tool is needed for reassembly).
- E. The Piston, Spring and Poppet should all come apart and all parts can be cleaned and lubricated so as to make sure that the piston/poppet assembly travels freely inside the piston guide.
- F. Replace O-ring on Poppet if necessary.
- G. Reassemble the entire assembly using the tool and re-install in the valve (using a new gasket if necessary).

## 5. List of Recommended Spares for M-XF series

	<b>Quantity</b>
1. O-ring for Adjustment screw	1 piece
2. O-ring for Poppet	1 piece
3. Gasket for Piston Guide and Bonnet	1 set

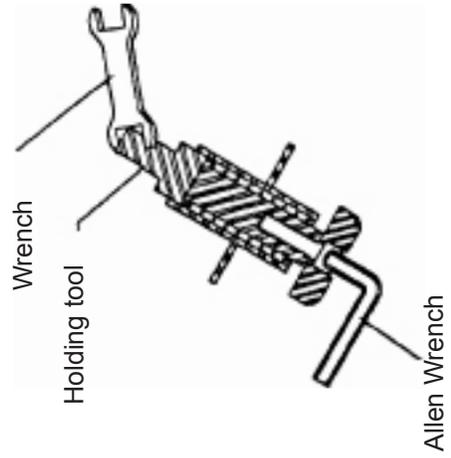
## 6. Operation of Valve

Please refer to data sheets as attached

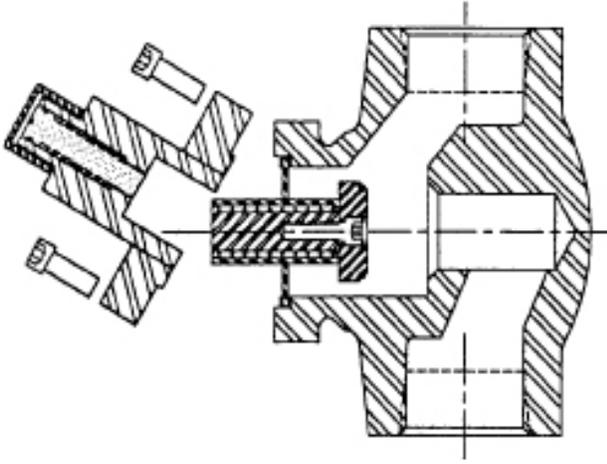
# M-XF Excess flow valve

Procedure to disassemble the M-XF adjustable safety excess flow valve to replace spring.

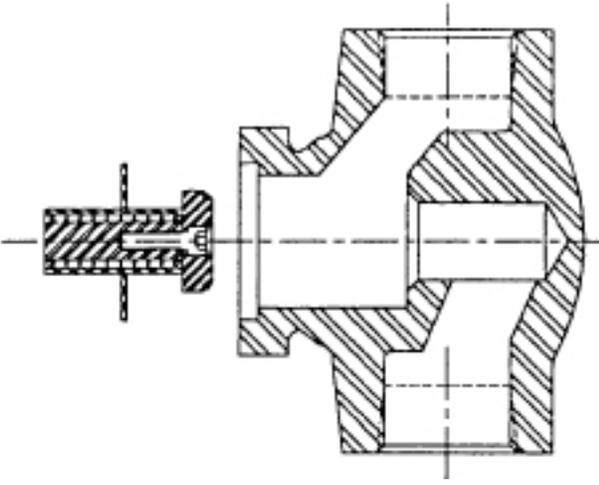
3. Using special holding tool provided, hold piston steady while unscrewing bolt with allen wrench.



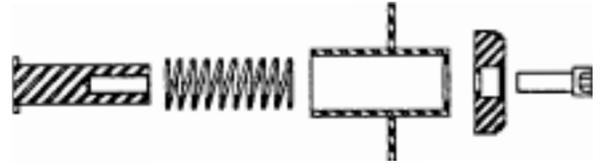
1. Unscrew Bolts and lift off Bonnet sub-assembly.



2. Lift out Piston sub-assembly from Globe body.



4. Once Bolts removed, entire sub-assembly will become apart.



5. Replace spring and re-assemble components.

