

## Maintenance

1. It is recommended to carry out a visual inspection procedure once a month to check the following items:
  - 1.1 The indicator body and window are not damaged.
  - 1.2 The valve indicated is open.
  - 1.3 The indicator is correctly displayed in the "OPEN" position.
2. It is recommended to lock the indicator for operating the water control valve of the fire protection system at the fully open position (as shown in Figure 17).
3. The indicator should be closed two turns a quarter and then reopened to verify that the indicator is in the fully open position. Any damaged parts must be replaced immediately. If there are any damaged parts, signs of tampering, or problems with the position of the valve, the indicator should also be physically tested to ensure that the valve is in the fully open position. In case of temperature and pipeline pressure changes, it is recommended that the bolts should be tightened again after the valve works for 24 hours to compensate for any looseness that may occur.

**Note:** Before closing the main valve of the fire protection system for maintenance of the indicator or the fire protection system controlled by it, the permission of the relevant department must be obtained before closing the affected fire protection system. The relevant authorities and all personnel who may be affected by this decision must be notified.

It is recommended that the fire protection system be inspected by a qualified inspection institution.

## Installation & Application

### 1. Preparation before installation

Please read the instructions carefully before installation. The manufacturer does not accept liability for the damage caused by improper installation.

### 2. Installation steps and precautions

- 2.1 Remove two bolts and nuts from the top section of the indicator (Figure 3).

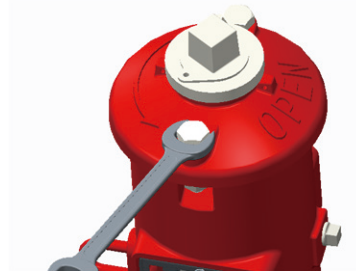


Figure 3

- 2.2 Remove the upper cover assembly from the body (Figure 4).



Figure 4

- 2.3 Loosen the fixing bolts and nuts of each SHUT (Figure 5), but do not remove the nuts. **Note:** the OPEN fixing bolts and nuts do not need to be adjusted.

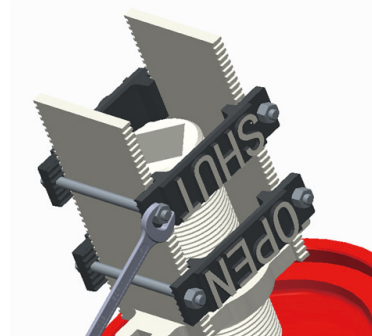


Figure 5

- 2.4 Adjust the distance (number of teeth) between SHUT and OPEN, as shown in Figure 6, to ensure that the two "SHUT" planes are evenly located on both sides of the target frame. See Table 3 for specific specifications and the number of teeth.

(Note: for bulge and groove, calculate 1 rectangular tooth respectively, and the tooth width is 2mm)

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Table 3

Size NPS	Number of rectangular teeth exposed between SHOU and OPEN		
	American Standard / BS Type B	BS Type A	DIN
4	2	8	8
5	3	3	3
6	6	18	18
8	12	28	28
10	18	18	30
12	24	24	38
14	32	32	32
16	37	37	37
18	25	25	25
20	30	30	30
24	38	38	38

Note: These dimensions are only applicable to the vertical indicator posts installed on the NRS gate valves of HMI brand. If NRS gate valves of other manufacturers are used, these dimensions may be different. These distances are approximate values and must be verified after being installed with the gate valve.

Instructs the planes shall be perpendicular to the target carrier nut after assembly. The two planes on the same side should be parallel, the letters of the planes fixed by the same bolts should be consistent, and the distance between the two planes and the upper end face of the target carrier nut should be consistent (the number of exposed teeth is the same).

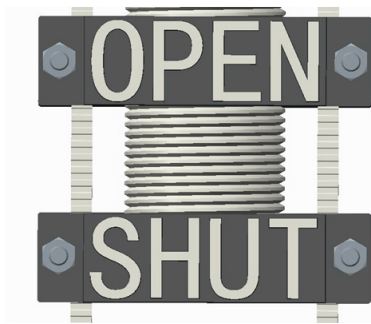


Figure 6

2.5 After the adjustment, tighten the nuts of each SHUT. Be careful not to over-tighten the nuts (Figure 7).

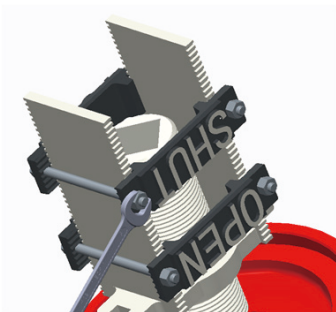


Figure 7

2.6 Turn the stem to ensure that the distance between the top of the OPEN plane and the machined surface in the cover is 144mm, as shown in Figure 8 below.

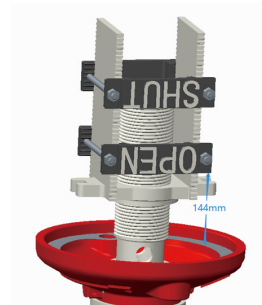


Figure 8

2.7 Install the indicator body, stand pipe and base flange assembly on the gate valve and lock it with the 4 bolts and nuts provided. Note: Make sure that the gate valve is fully open before installation.

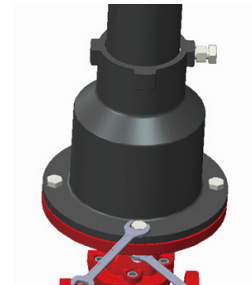


Figure 9

2.8 Loosen the two bolts and nuts which fix the indicator body and stand pipe, and adjust the ground line of the indicator body to be flush with the ground according to the trench depth.

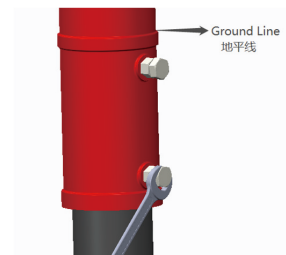


Figure 10

2.9 While ensuring that the indicator body is flush with the ground, tighten the bolts and lock nuts to fix the indicator body on the stand pipe (see Figure 11).

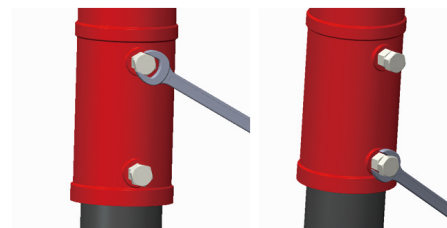


Figure 11

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2.10 Put the stem and socket assembly into the indicator body (see Figure 12), place the socket on the square operating nut of the gate valve, and ensure that the socket and the square operating nut are engaged.

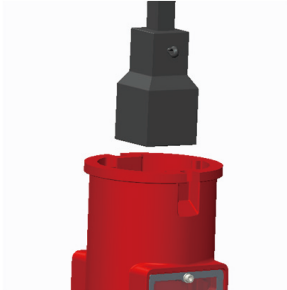


Figure 12

2.11 As shown in Figure 13, mark the inside of the indicator body at 50mm from the top, and cut off the stem at the mark. **Note: if the stem is removed from the body in order to cut it to a proper length, please ensure that the stem is fully engaged with the operating nut of the valve during reinstallation.**

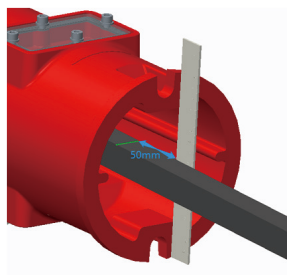


Figure 13

2.12 Reinstall the complete upper cover assembly onto the indicator body. **Note: since the gate valve is in the open state, the OPEN plane must be displayed in the indicator body window after installation, as shown in Figure 14.**



Figure 14

2.13 Reinstall and tighten the two bolts / nuts.



Figure 15

2.14 Use the operating wrench to fully open and close the valve once, and check whether the indicator works normally. When the valve is in the fully open position, verify that the "OPEN" plane is fully visible in the window. When the valve is in the fully closed position, verify that the "SHUT" plane is fully visible in the window.



Figure 16

2.15 Reinstall the operating wrench on the indicator. If necessary, lock the wrench to the position shown in the figure.



Figure 17

3. If necessary, the supervisory switch can be installed on the vertical indicator posts. For installation and operation instructions, please refer to our supervisory switch for indicator post user manual.



Figure 18

## Transportation & Storage

1. The indicator shall be firmly fixed in the packing box to prevent the indicator from moving up and down during transportation.
2. The indicator shall be protected from rain and moisture during transportation and shall be handled with care.
3. The indicator shall be stored in a well-ventilated and dry room, and placed neatly. It shall not be stored together with articles liable to cause corrosion.
4. In order to prevent the operating wrench from being damaged by collision during transportation, the operating wrench and the body shall be separated by cardboard and fixed with packing tape.