



FSD Connects

Agenda

1. FAQ of Annual Inspection Checklists
2. Common Issues in FSI Annual Inspection
3. Q & A Session



Frequently Asked Questions - Annual Inspection Checklists for Fire Service Installations

CHIN Ka-ho
Senior Station Officer
Fire Service Installations Task Force

Annual Inspection Checklists



**Fire Hydrant/
Hose Reel
Systems and
Supply Tanks**



**Sprinkler
Systems**



**Water
Supplies**



**Revised
FH/HR
Systems and
Supply Tanks**



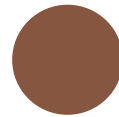
**Fire Alarm
Systems**



2019



2020



2021



2022



Annual Inspection Checklists

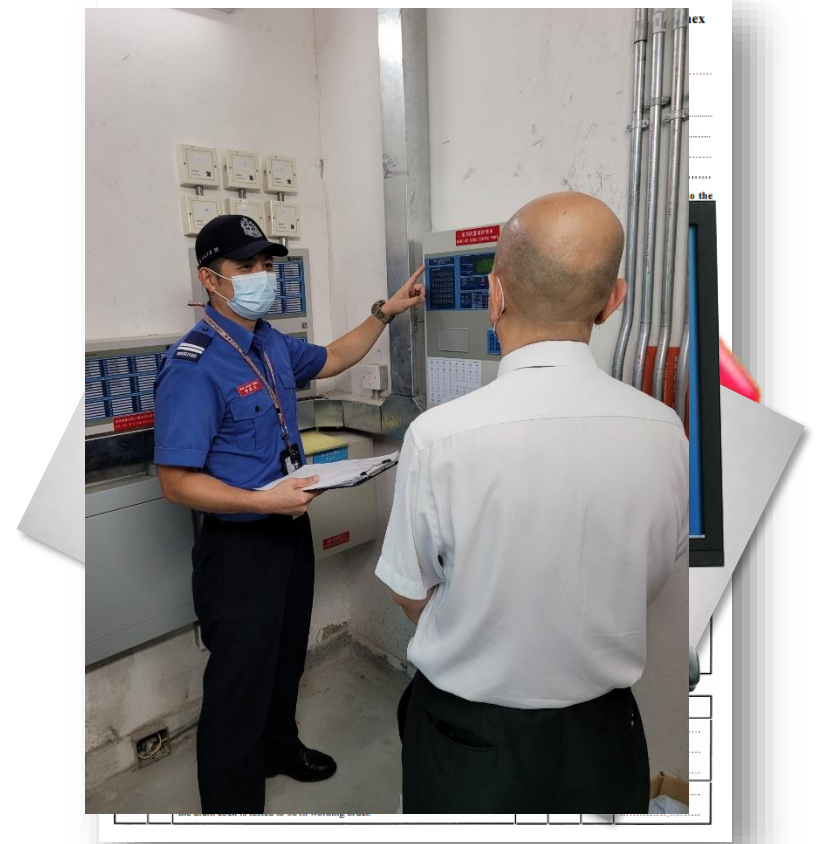
- ◆ **Assist RFSICs to conduct AI**
- ◆ **Standardize procedures**
- ◆ **Specify minimum requirements**
- ◆ **Strengthen the quality of work by RFSICs**
- ◆ **Assist FSI Owners to keep the FSI in efficient working orders**

Annual Inspection Checklists

- ◆ **Assist RFSICs to conduct AI**
- ◆ **Standardize procedures**
- ◆ **Specify minimum requirements**
- ◆ **Strengthen the quality of work by RFSICs**
- ◆ **Assist FSI Owners to keep the FSI in efficient working orders**

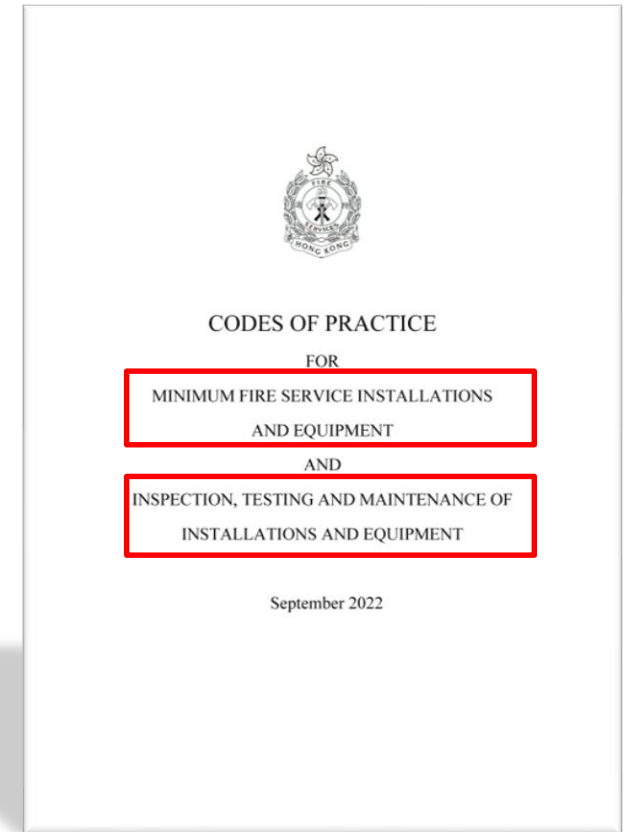
Duties and Responsibilities of RFSIC

- ◆ **Conduct inspection, testing and maintenance according to the AI Checklists**
- ◆ **Complete the AI Checklists accordingly**
- ◆ **Sign the completed AI Checklists**
- ◆ **Retain for at least 7 years (Scanned or Hard Copy)**
- ◆ **Produce the completed checklists upon FSD request**



FAQ

- ◆ **What standards shall a RFSIC follow when conducting inspection, testing and maintenance?**
 - **Provision and Specification -
Appropriate version of CoP FSI**
 - **Inspection, Testing and Maintenance -
CoP ITM**
 - **Relevant Circular Letters**
 - **AI Checklists**



FAQ

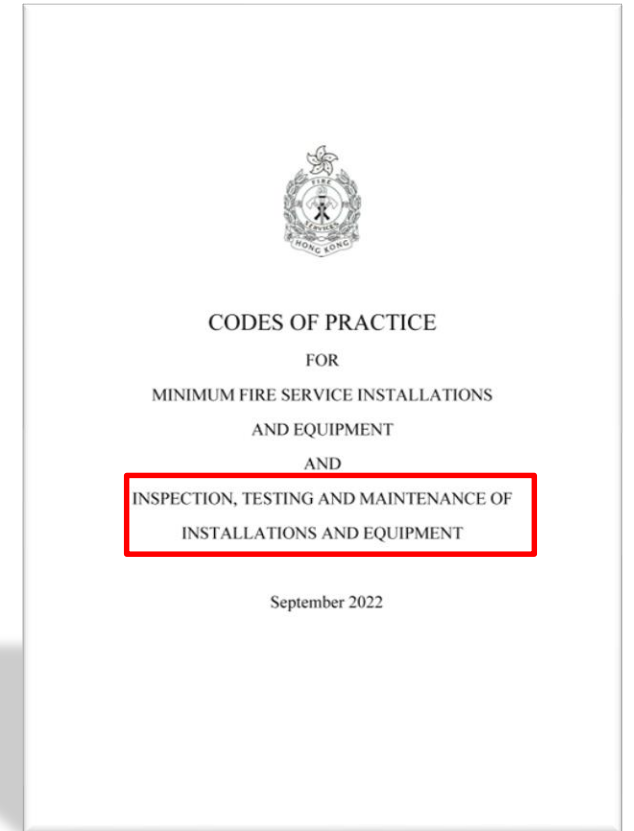
◆ What if there are requirements in the AI Checklists, which are not required according to relevant CoP FSI for the subject building?

➤ RFSIC may tick “N/A” (denoting Not Applicable) for the item

		Yes	No	N/A	Remarks
e.	The contactor(s), relay(s), timer(s), interface module(s), switch(es), circuit breaker(s), indicator(s), terminal block(s) and other components, where applicable, and the wirings inside the pump control panel(s) are intact, properly wired and free from any sign of damage/overheating and undue deterioration.	[]	[]	[]
f.	The control buttons, switches, indicators and meters are properly labelled in terms of usage.	[]	[]	[]
g.	The reading(s) on the voltmeter(s), where provided, is/are within the acceptable range.	[]	[]	[]
h.	The reading(s) on the ammeter(s), where provided, is/are within the acceptable range.	[]	[]	[]
i.	The control buttons and switches are tested to operate properly and are in the correct positions.	[]	[]	[]
j.	The switch(es) for suspending pump operation, where provided, is/are in the correct position(s).	[]	[]	[]
k.	The indicator(s), where provided, is/are tested to operate properly and are in proper status.	[]	[]	[]
A2.7	As-built Framed Schematic Diagram (where provided)			[]	If N/A, go to A2.8
	Legible as-built system schematic diagram(s) is/are displayed conspicuously at the pump room/enclosure/space.	[]	[]	[]

FAQ

- ◆ Are AI Checklist applicable to annual inspection only?
 - CoP ITM
 - ***“For inspection, testing and maintenance other than acceptance inspection and annual inspection, the same standard of annual inspections shall be followed”***



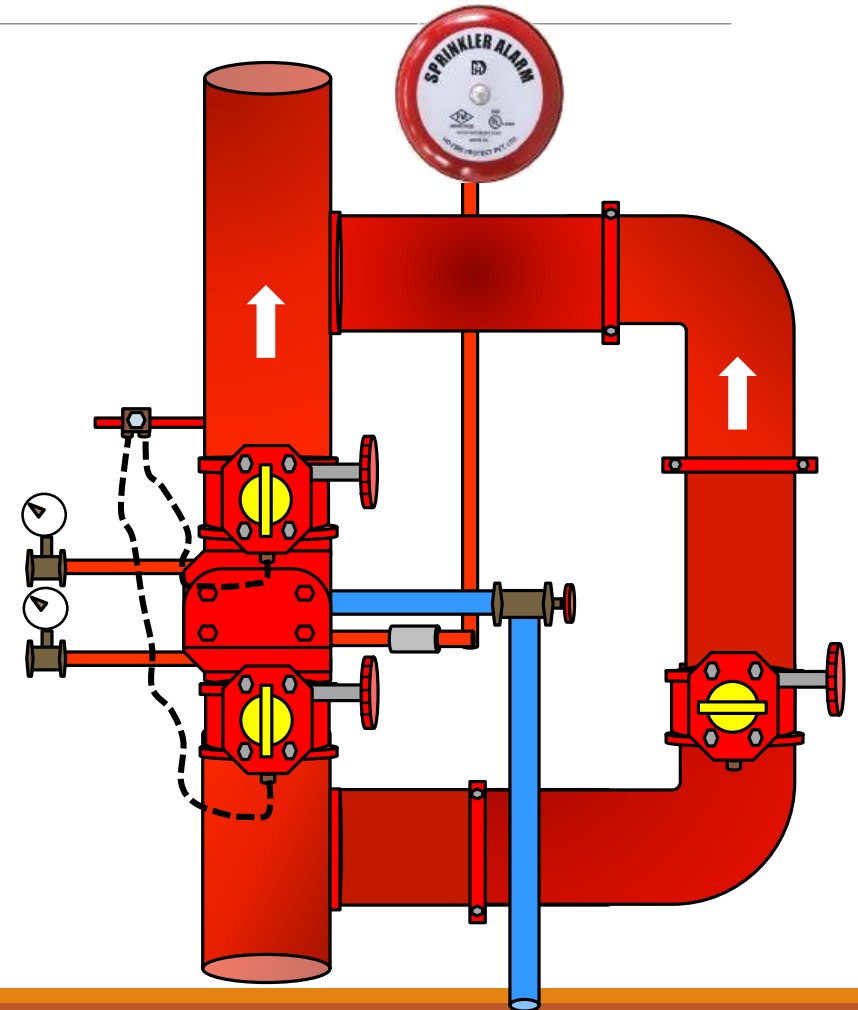
FAQ

- ◆ **What if an annual inspection is not conducted in full accordance with the AI Checklists?**
 - **FSD CL No. 4/2019**
 - **Not recognised as properly completed annual inspection**



FAQ

- ◆ Are FSI Owners required to provide equipment for flow and pressure testing for annual inspection?
 - The **provision and specification** of an FSI are required to comply with **appropriate CoP FSI**.
 - FSD does **NOT** limit the method of flow test.
 - RFSIC may advise the FSI owners for suitable testing methods.



FAQ

- ◆ **What if a RFSIC fails to fulfil its duties and responsibilities as stipulated in FSD CL No. 4/2019?**
 - **R.10(1), Cap 95A**
 - **Improper conduct or negligence**
 - **Rendering the RFSIC concerned unfit to be on the register**
 - **Refer to the **Disciplinary Board****



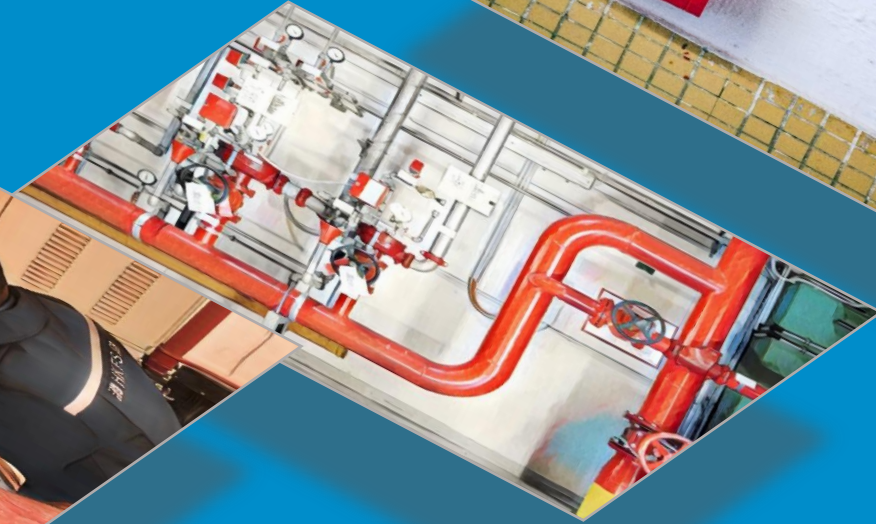
Thank you



FSD Connects

Common Observations in Annual Inspection of Building FSI

17th Oct 2022



Fire Service Installations Task Force
Acting Assistant Divisional Officer
TSO Kwong-chi

Various Inspections

by FSD





Content

01

FS Inlet

02

Pressure Reducing Valve

03

Pressure Switch

04

Emergency Lighting and Exit Sign

05

FE Maintenance Label

06

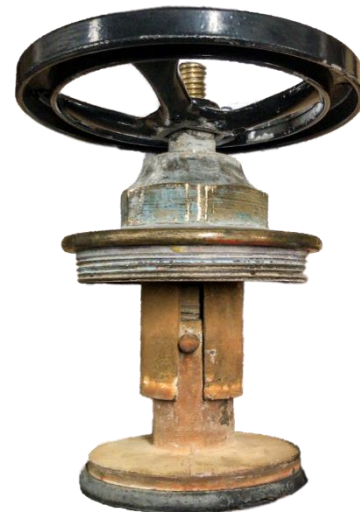
Miscellaneous (Alarm gong, SVMS, Battery)

01

FS Inlet



T-slot Type

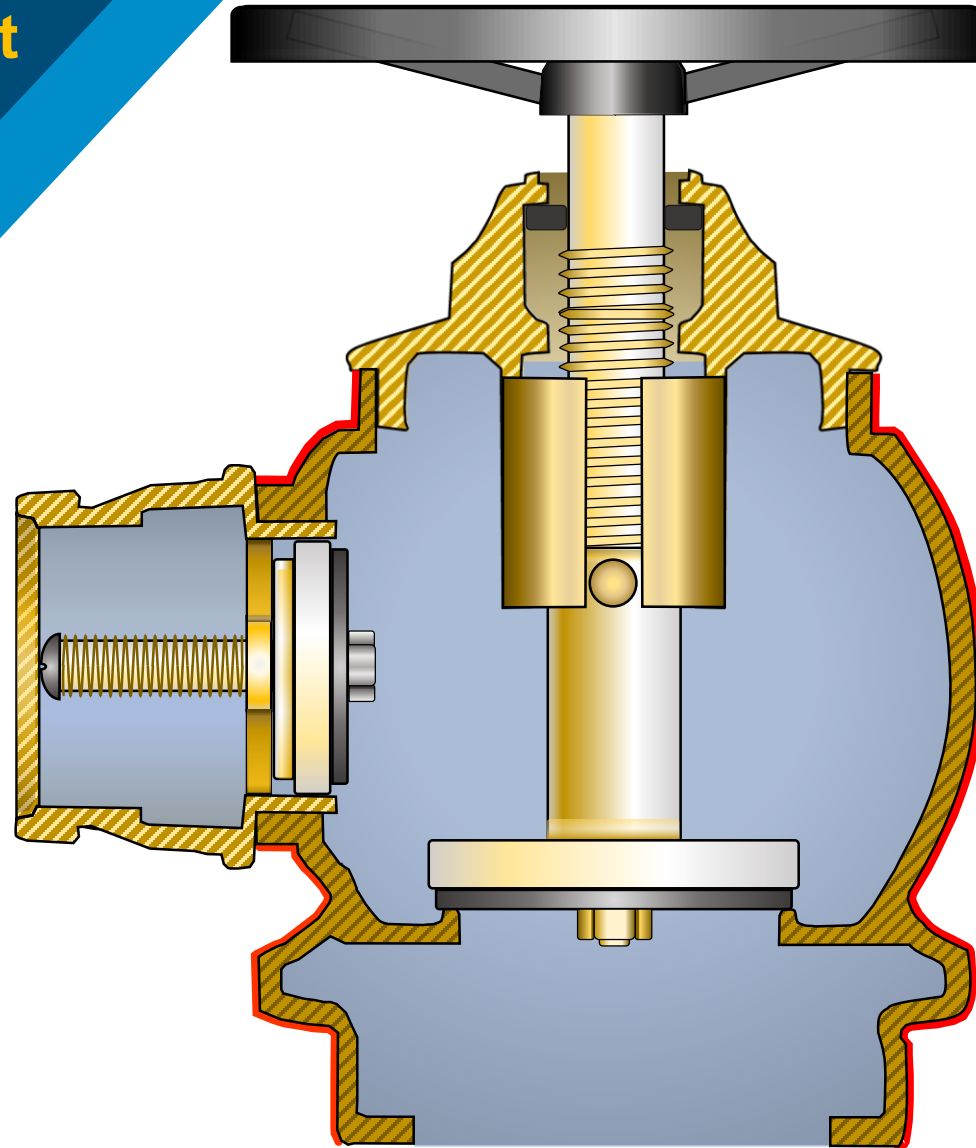


Cannot Fully opened

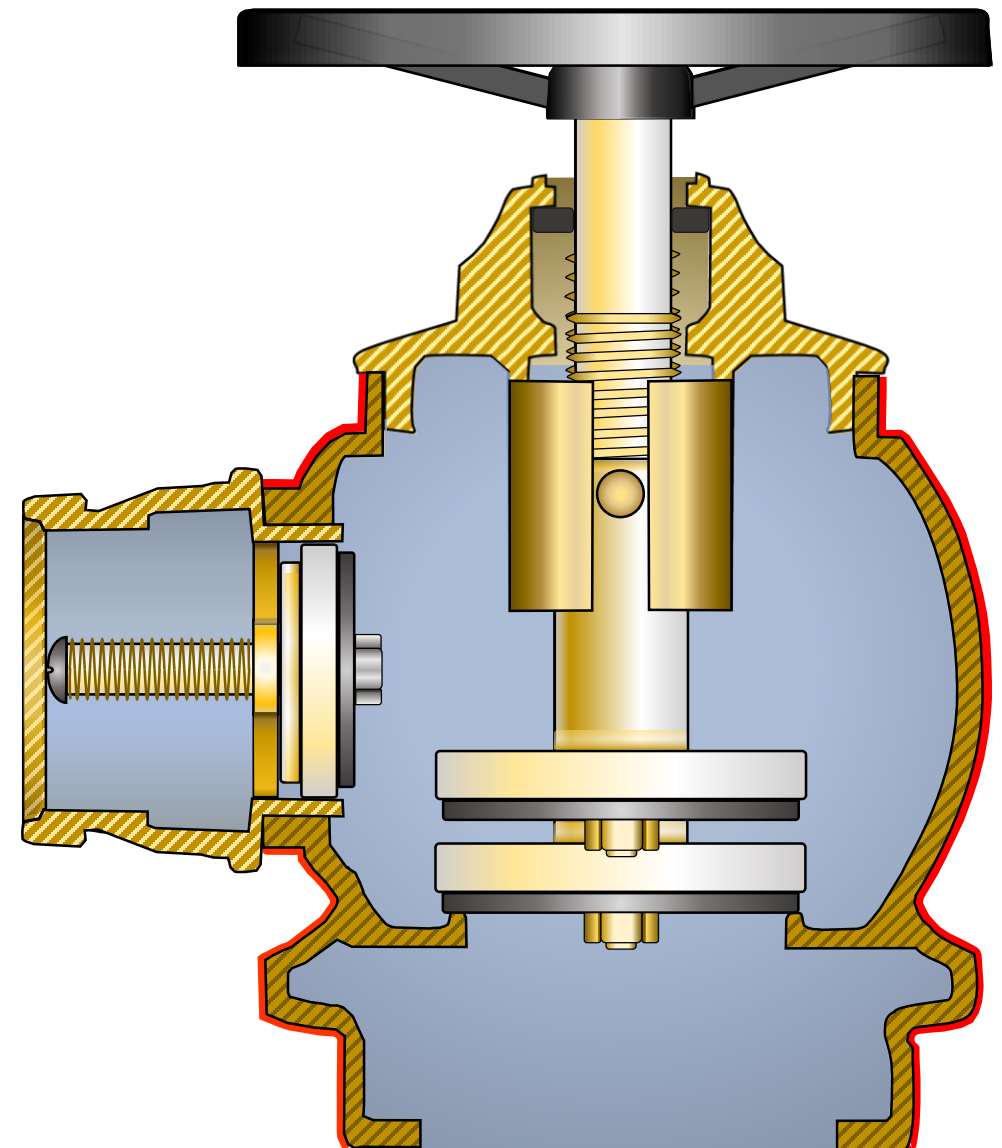
01

FS Inlet

T-slot Type



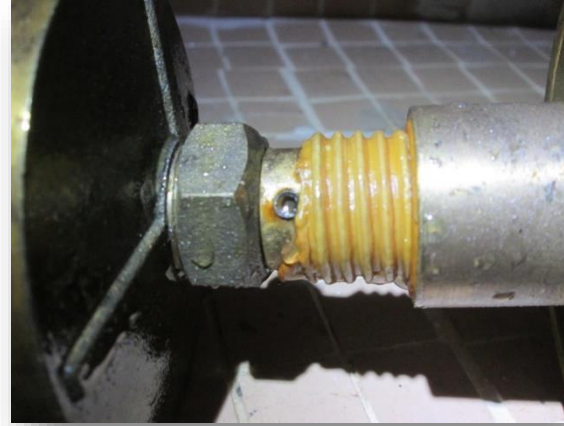
Normal T-slot Type Inlet



Defective T-slot Type Inlet

01 FS Inlet

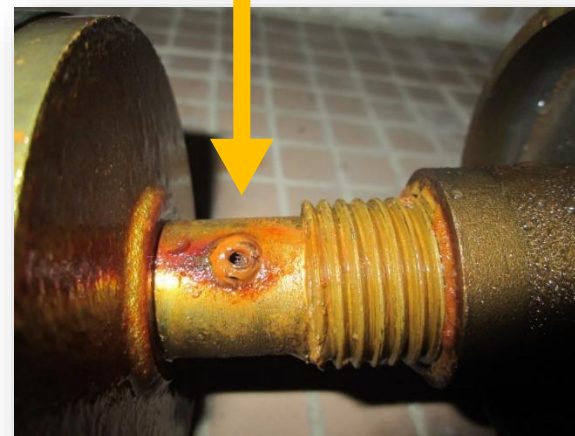
Nut Type



Seat disc detached



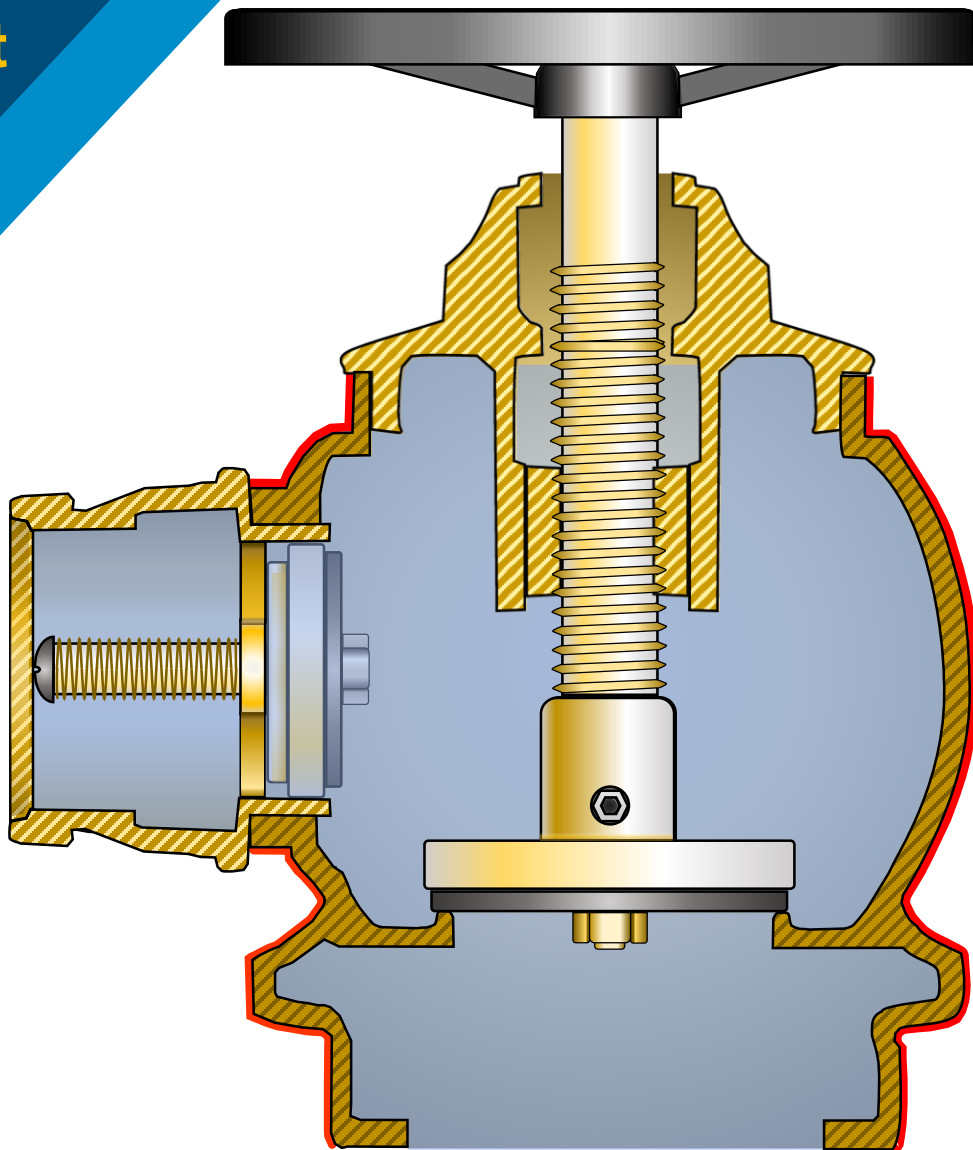
Severely Rusted Set Screw



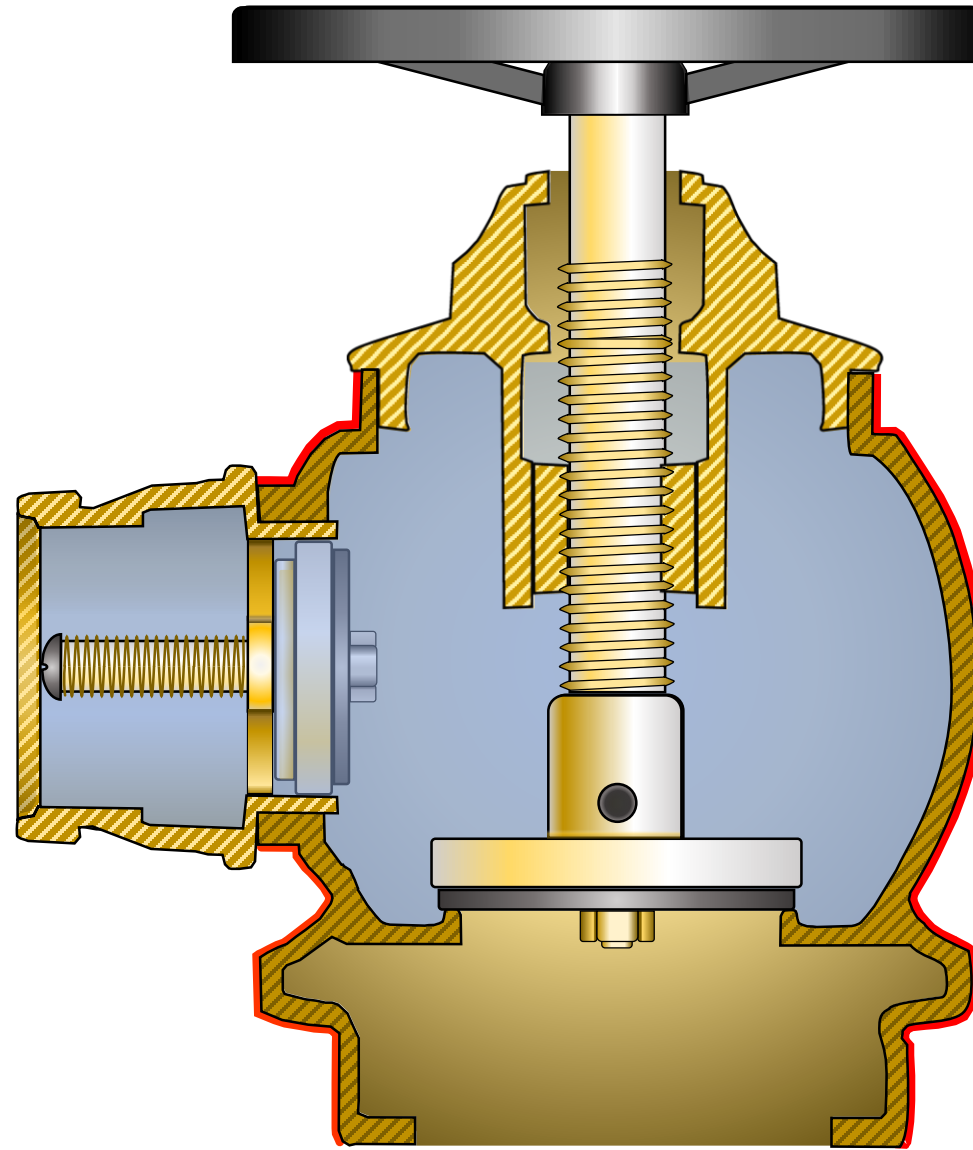
01

FS Inlet

Nut Type



Normal Nut Type Inlet



Defective Nut Type Inlet

01

FS Inlet

Remove top cover



Remove coupling



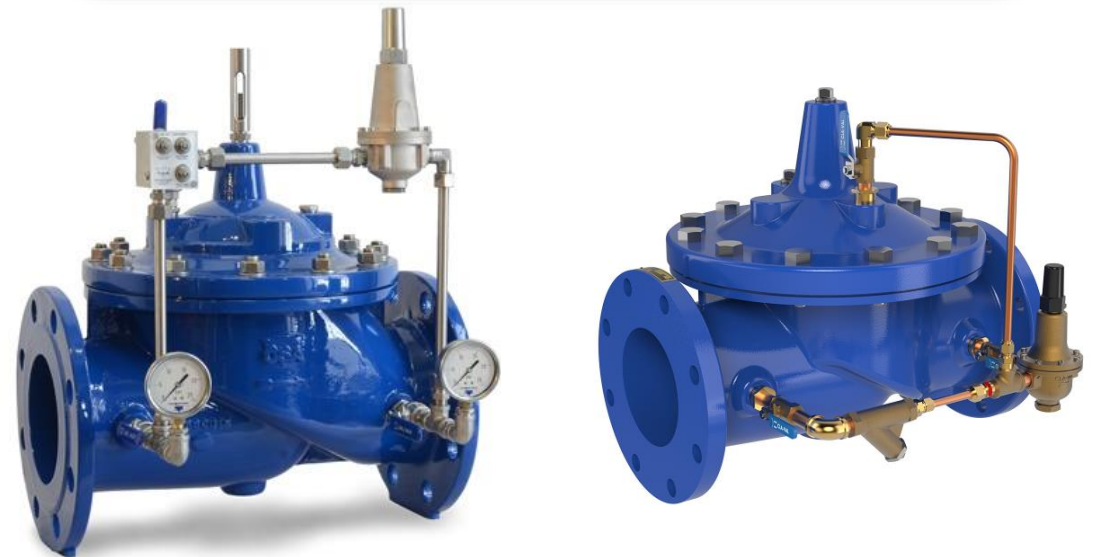
02

Pressure Reducing Valve

Direct Acting Type



Pilot Operated Type

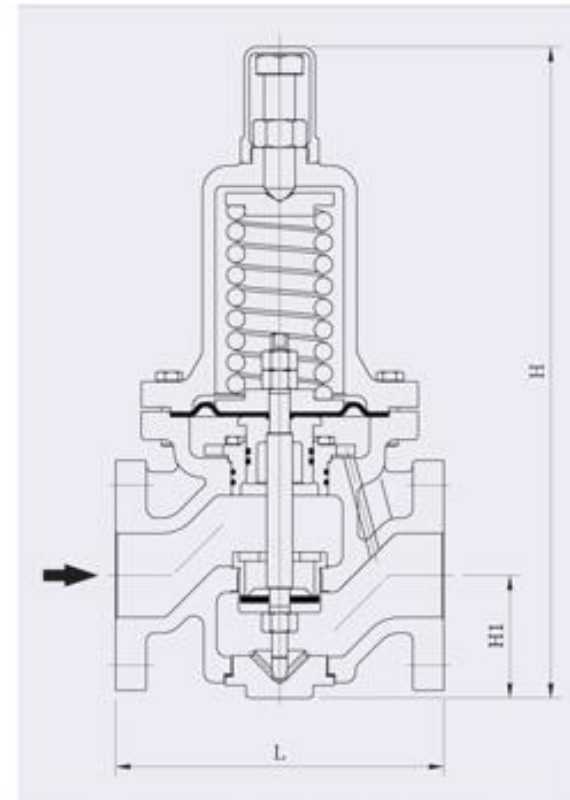


02

Pressure Reducing Valve

Direct Acting Type

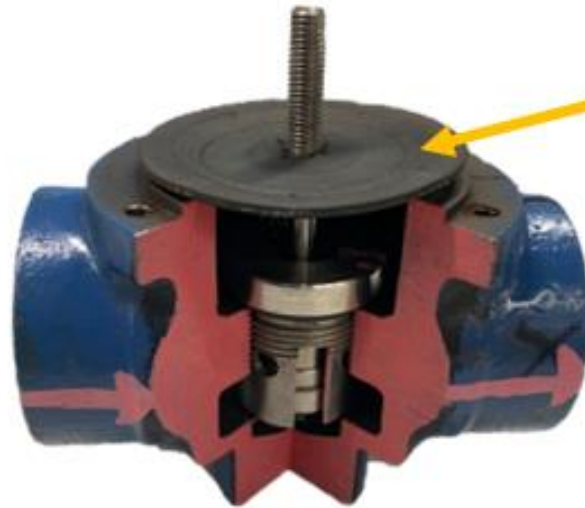
The valve opens or closes depending on the pressure difference between two chambers



02

Pressure Reducing Valve

Direct Acting Type



Diaphragm



02

Pressure Reducing Valve

Lack of proper maintenance



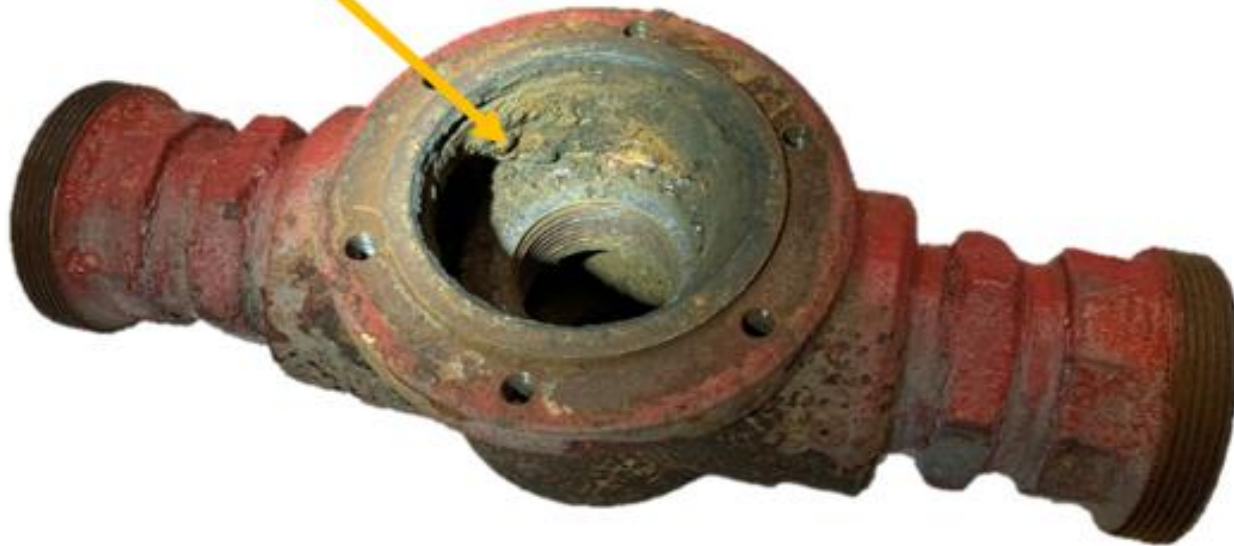
02

Pressure Reducing Valve

Lack of proper maintenance

Severely rusted

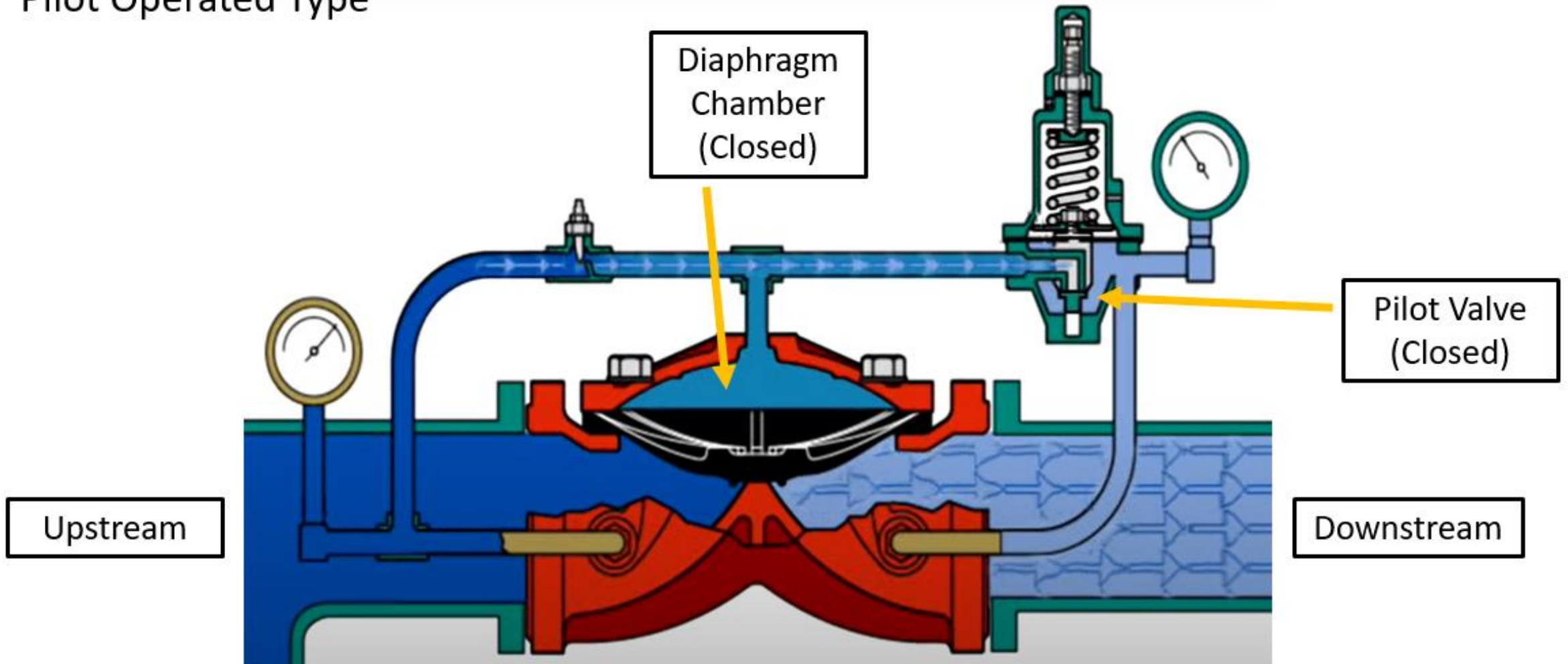
Cracked diaphragm



02

Pressure Reducing Valve

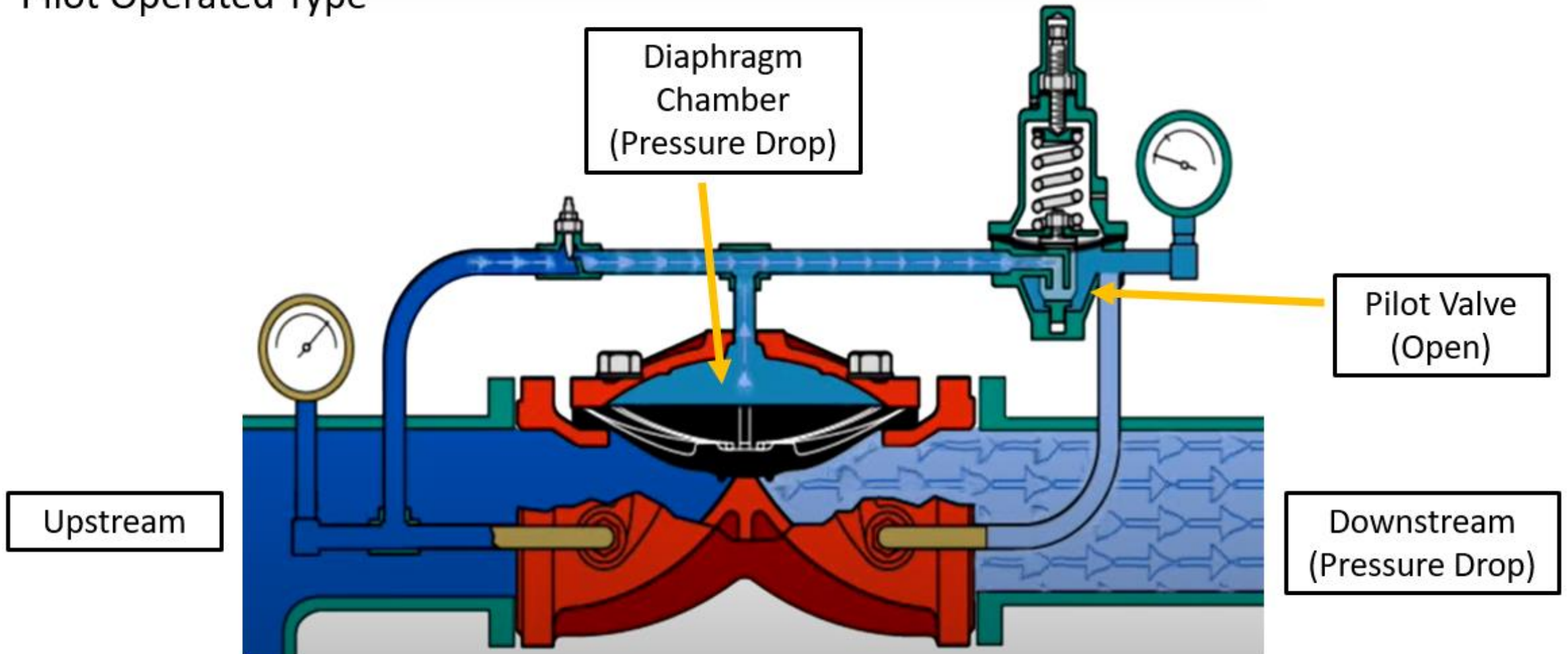
Pilot Operated Type



02

Pressure Reducing Valve

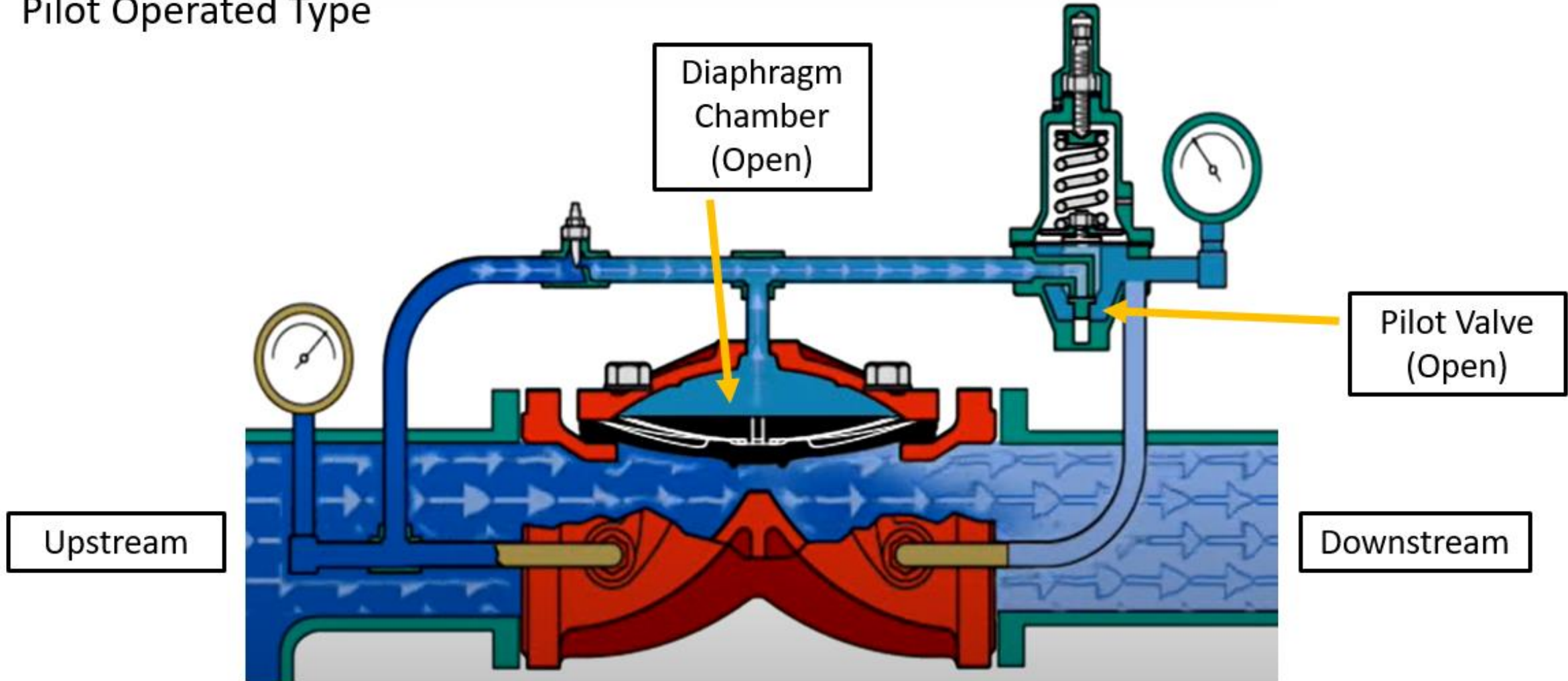
Pilot Operated Type



02

Pressure Reducing Valve

Pilot Operated Type



02

Pressure Reducing Valve

Pilot Operated Type

Direct Acting
Type PRV



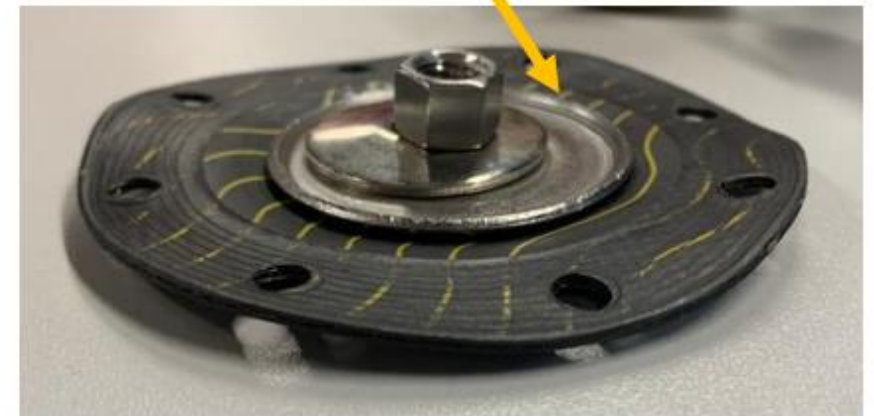
02

Pressure Reducing Valve

Pilot Operated Type



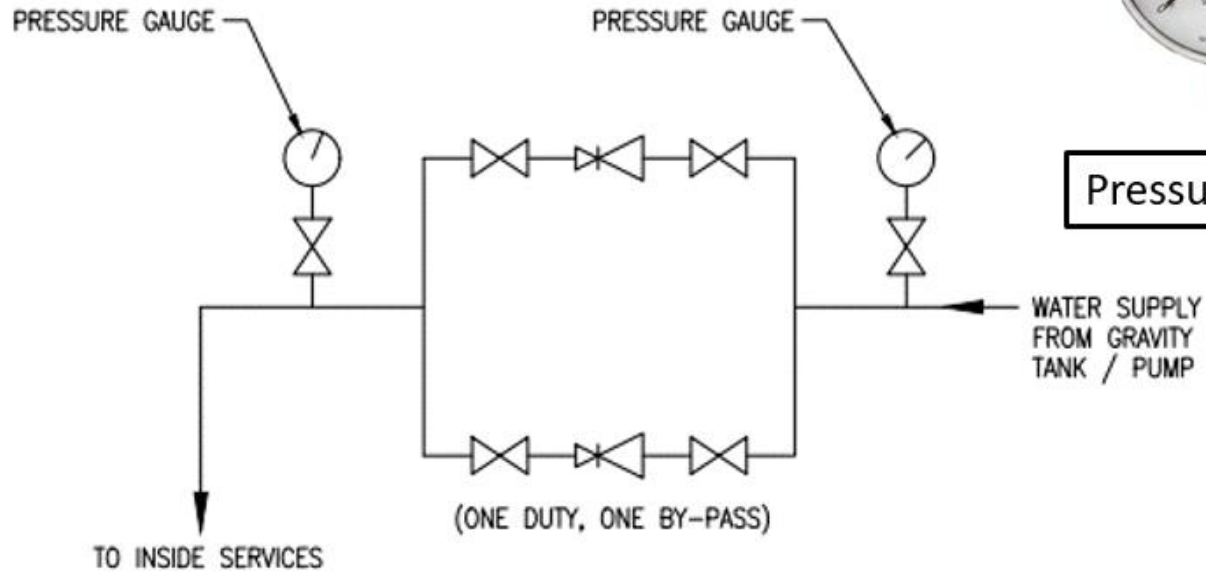
Diaphragm



02

Pressure Reducing Valve

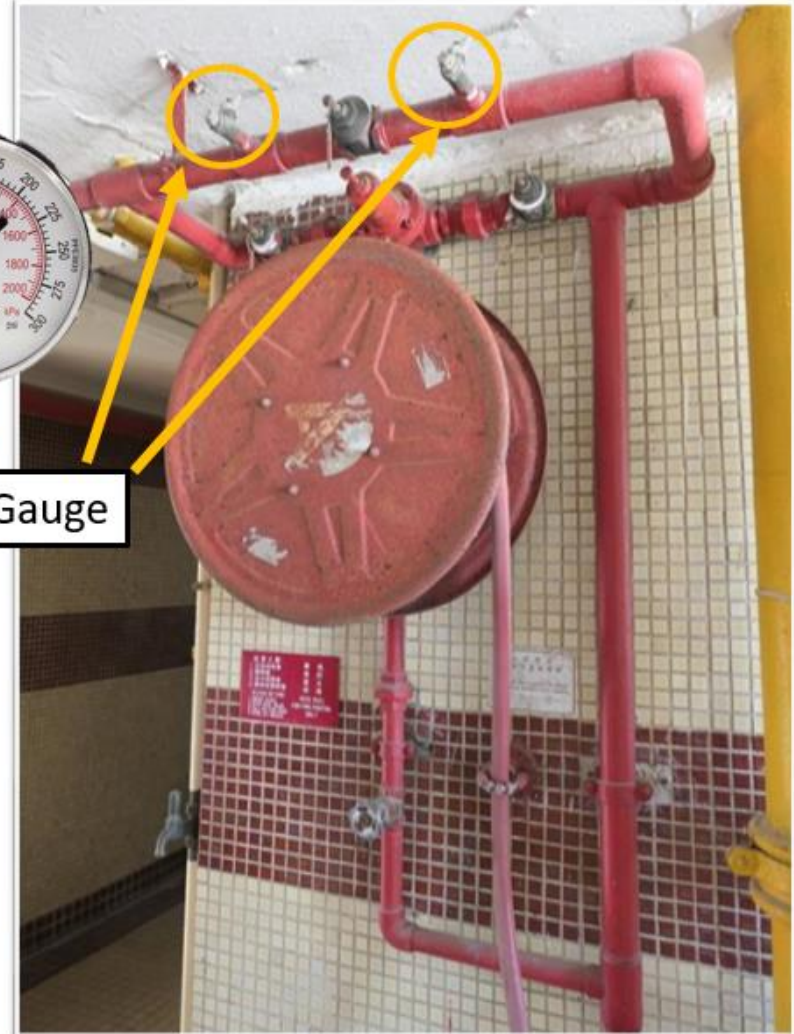
Technical Requirements for Plumbing Works in Buildings



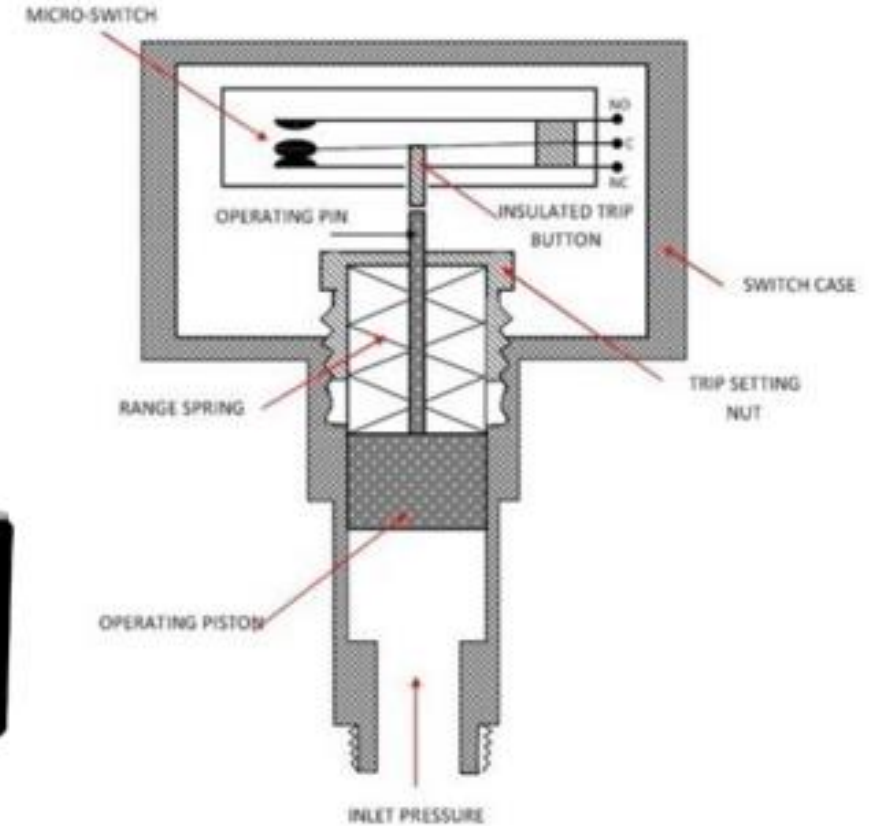
SCHEMATIC LAYOUT OF PRESSURE REDUCING VALVES



Pressure Gauge



- A device giving electric signal under change of pressure
- A common components in Sprinkler System and FH/HR System for changeover of water pumps





NC / NO / Common



NC / NO / Common



Adjustment



BS EN12845:2003**10.7.5.1 Number of pressure switches**

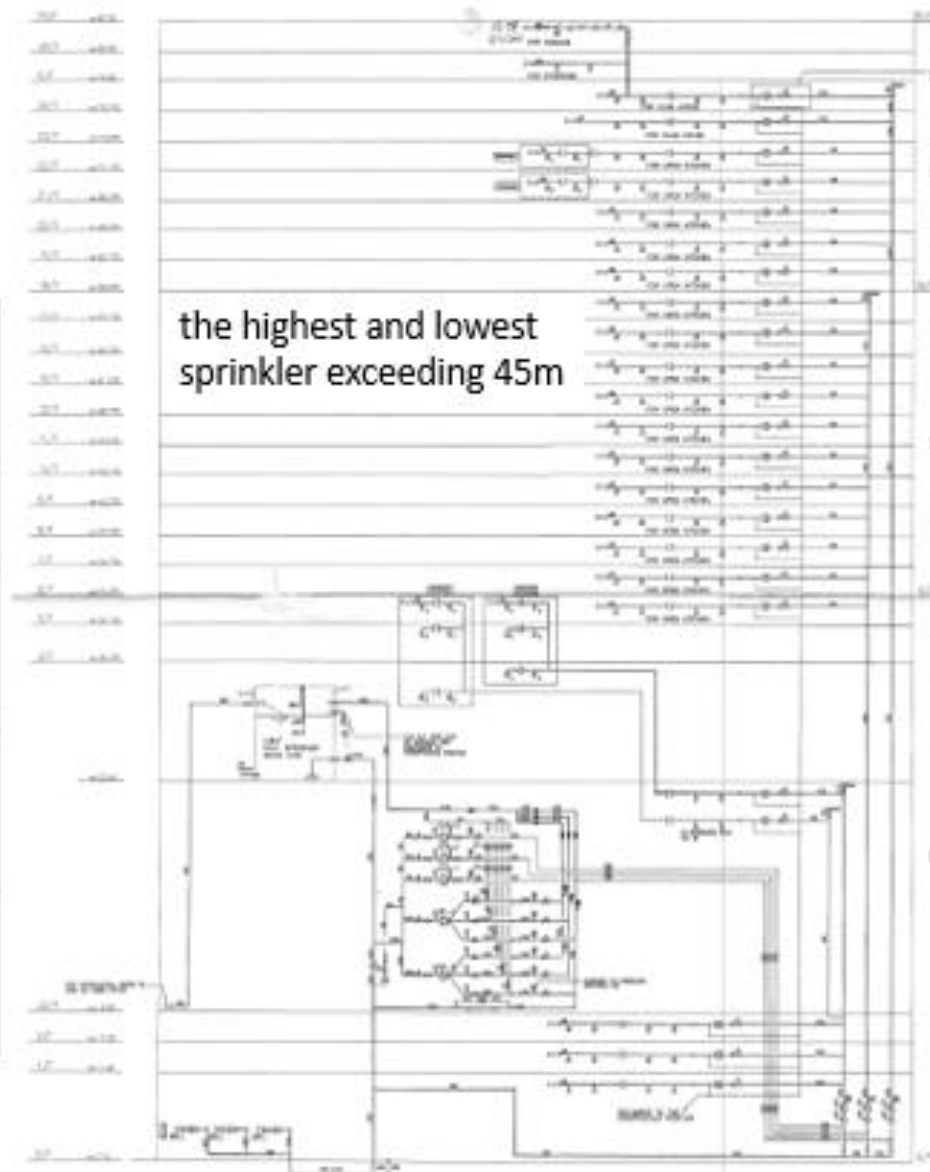
Two pressure switches shall be provided to start each pumpset. They shall be connected in series such that opening the contacts of either switch will start the pump with normally closed contacts. The pipe to the pressure switches shall be at least 15 mm in diameter.



Summary of Pump Cut-in Pressure and Standing Pressure Requirements

Standard	Main Pumps Cut-in Pressures		Jockey Pump Operating Pressure	Standing Pressure at Alarm Valve of High-rise System
29 th edition FOC Rules	Pumps must start at $\geq 0.8P$		N/A	N/A
LPC Rules - BS 5306-2: 1990	Pumps shall start at $\geq 0.8P$		Required in high-rise system to achieve the 125% standing pressure	$\geq 125\%$ of static head from highest sprinkler to alarm valve
LPC Rules – EN 12845: 2003	Duty pump shall start at $\geq 0.8P$	Standby pump shall start at $\geq 0.6P$	-	$\geq 125\%$ of static head from highest sprinkler to alarm valve
LPC Rules – EN 12845: 2015	Duty pump shall start at $> 0.8P$	Standby pump shall start at $\geq 0.8P$	Jockey pump cut-out pressure $\leq (P+0.5)$ bar	$\geq 125\%$ of static head from highest sprinkler to alarm valve

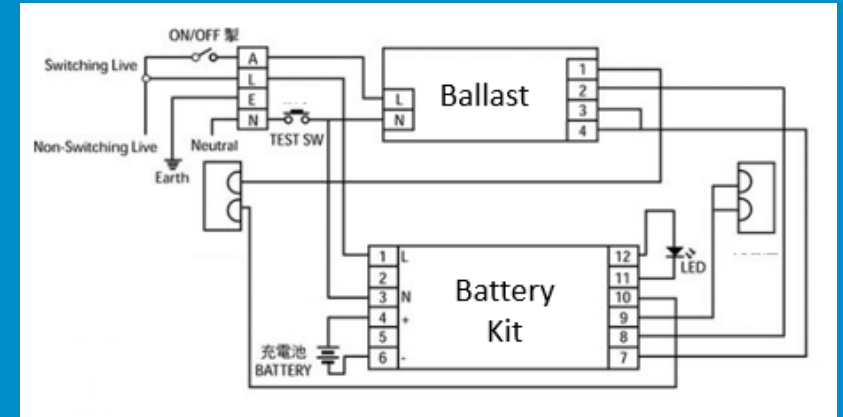
Note: P is the churning pressure of the main pump(s) under closed valve conditions.



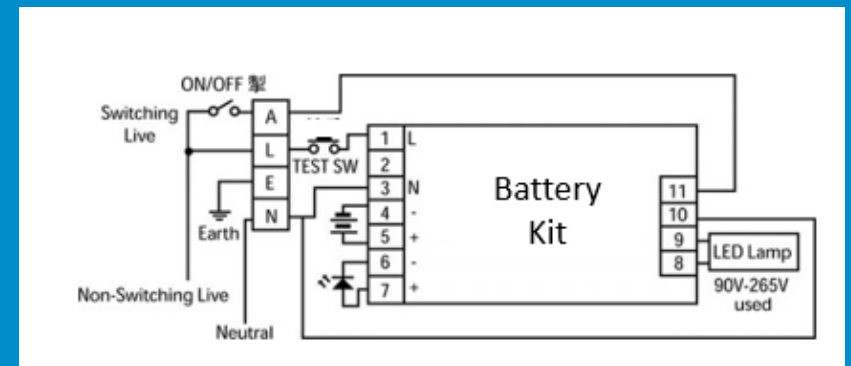
04

Emergency Lighting & Exit Sign

Fluorescent Tube

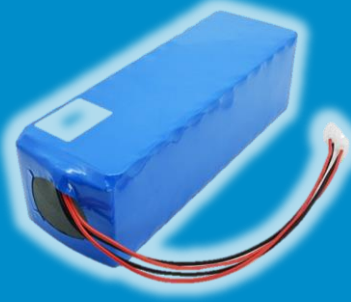


LED Tube



04

Emergency Lighting & Exit Sign



Battery Pack



Switch Box

Secondary power supply can be provided by battery pack or emergency generator



Emergency Generator



Switchboard

FE Maintenance Label

80 mm

25 mm x 25 mm space reserved for printing company trade mark
預留空間 25 毫米 x 25 毫米 可印上公司商標

50 mm x 30 mm space reserved for printing company name, address and telephone number
預留空間 50 毫米 x 30 毫米 可印上公司名稱、地址和電話

Company Name
公司名稱

Registration No.
註冊編號 RC3/

F.S. 251 No.
證書編號

Maintenance Date
是次檢查日期

Next Maintenance
下次檢查日期

Last Pressure Test
上次壓力試日期

Pressure test within 5 years for all fire extinguishers
所有滅火筒必須在五年內做壓力試

Year of Manufacture
產品製造年份

Maintenance Result
是次檢查結果

FAIL 不合格

PASS 合格

All items must be entered. 所有項目必需填寫。

125 mm

Times New Roman 3 mm
標楷體 4 毫米

Times New Roman 4 mm
標楷體 4 毫米

Boldface Times New Roman 3 mm
粗標楷體 4 毫米

Times New Roman 3 mm
標楷體 4 毫米

Times New Roman 4 mm
標楷體 4.5 毫米

6 mm x 6 mm Square Box
6 毫米 x 6 毫米 正方形

(White background label with black coloured characters)
(白色底標籤上印上黑色字)

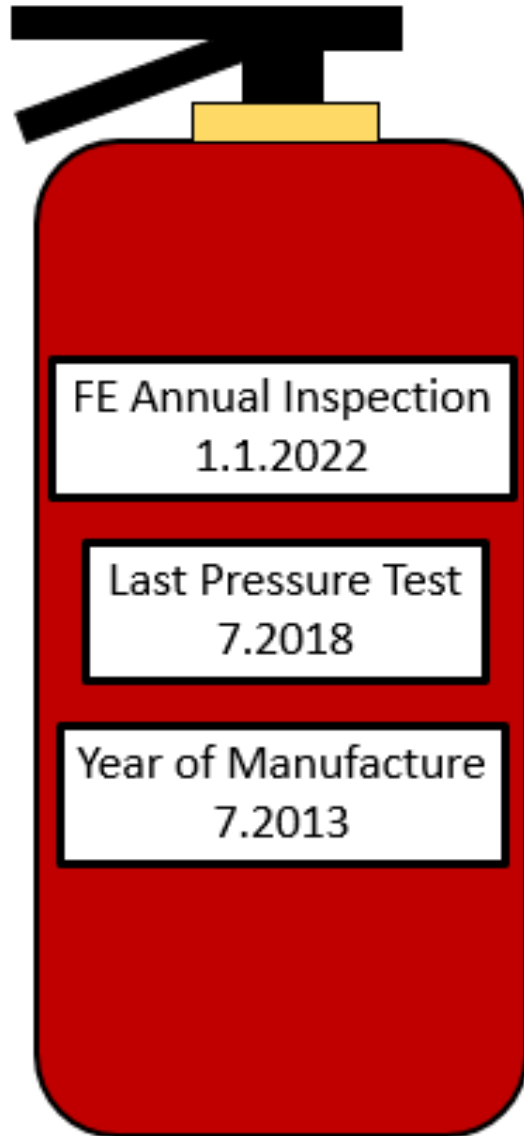


FE Maintenance Label



Year of manufacture of a FE can be found from a permanent marking or a label on the FE body

FE Maintenance Label



Registration No.	<u>RC3/0999</u>
F.S. 251 No.	<u>A01234567</u>
Maintenance Date	<u>1.1.2022</u>
Next Maintenance	?
Last Pressure Test	<u>7.2018</u>
Year of Manufacture	<u>2013</u>

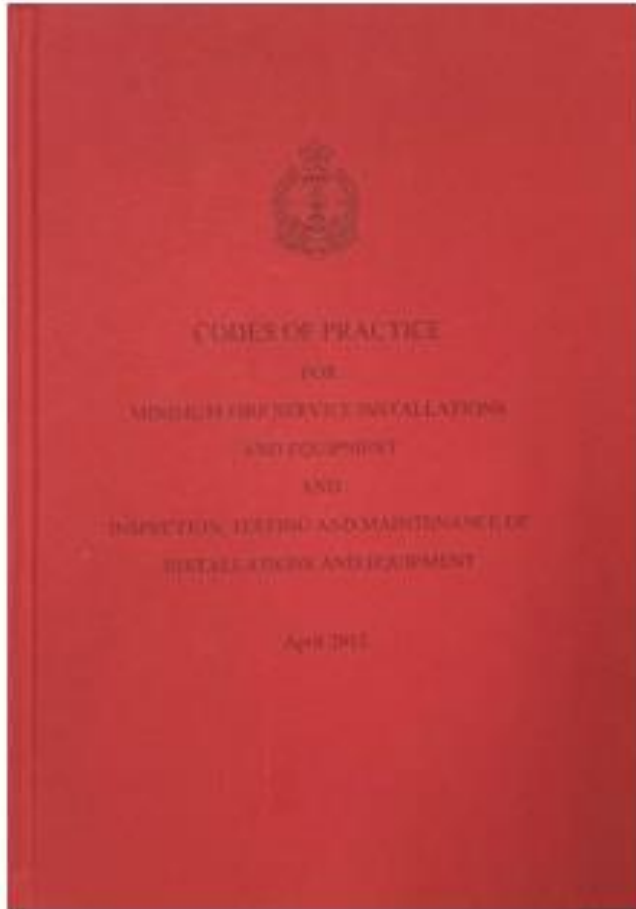
1.1.2023

FE Maintenance Label



Registration No.	<u>RC3/0999</u>
F.S. 251 No.	<u>A01234567</u>
Maintenance Date	<u>1.1.2022</u>
Next Maintenance	<u>?</u>
Last Pressure Test	<u>7.2017</u>
Year of Manufacture	<u>2017</u>

31.7.2022



5. Next Maintenance

This date means 12 months later and should be counted from the date of the last maintenance. If within 12 months period, the fire extinguisher is required to have pressure test, then the date of pressure test should be filled in.

Example: Maintenance Date : 5.9.2003
Last Pressure Test : 10.7.1999 (pressure test is required for every 5 years intervals)
Next Maintenance : 10.7.2004 (not 5.9.2004)



06

Miscellaneous (Alarm gong)

Alarm Gong of Sprinkler System

- Alarm gong is silenced by RFSIC during annual inspection by turning off the alarm gong valve.
- RFSICs remember to turn on the alarm gong valve after annual inspection.

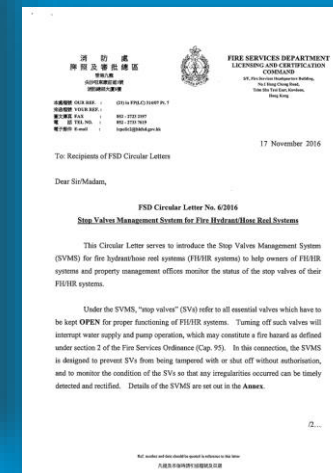
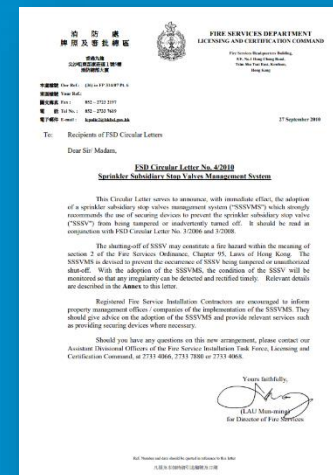


06

Miscellaneous (SVMS)

Stop Valve Management System

- Follow the requirements as stipulated in Circular Letters No. 4/2010 and No. 6/2016.





06

Miscellaneous (Battery)

Standby Battery

- Check the condition of the standby battery during annual inspection.
- Replace the battery according to its actual condition and relevant standards.
- Mark the date of replacement on the battery for easy reference.



THANK YOU

The slide features a white background with abstract blue shapes in the corners. The top-left corner has a dark blue shape with a white border. The bottom-right corner has a large blue shape with a white border. The text "Q&A" is centered in a bold, black, sans-serif font.

Q&A



Should you have any enquiries,
please contact us at **2733 1567** or
email to **hkfsdenq@hkfsd.gov.hk**