

Saint Gobain PAM UK Ltd.,  
Ilkeston, Derbyshire, England

# OPERATING AND MAINTENANCE MANUAL

## **FH2-CE Fire Hydrant**

### **GENERAL**

#### **Instructions for Use**

Thank you for selecting a Saint-Gobain PAM UK product. With correct use, it will give long and reliable service. This manual has been prepared to assist you to safely install, operate and maintain the FH2-CE model Fire Hydrant to its maximum efficiency. For ease of reference, the manual has been divided into sections covering all aspects of use, and it is in the users best interests to read and fully understand it.

#### **Health and Safety at Work**

**It is recommended that whenever work is being carried out on a valve that may involve the release of internal pressure, the valve is fully depressurised prior to carrying out any tasks. For convenience, draining of the line may be beneficial.**

**It is essential that the user of the fire hydrant is also aware of the weight of the components and/or assemblies that must be handled and manipulated during installation and maintenance. It is the users responsibility to ensure that safe working practices are followed at all times.**

Whenever Saint-Gobain PAM UK products are installed, operated, or maintained, it is essential that the staff that undertake these operations are adequately trained. The hazards associated with pressurised liquids and gasses can be severe, and it is the responsibility of the user to ensure that trained, competent staff undertake these duties.

This manual has been designed to assist, but it can never fully replace quality training in the workplace. Saint-Gobain PAM UK technical staff are available to answer any questions relating to specific problems that may not be covered by this manual.

Saint-Gobain PAM UK hydrants are designed to be fit for purpose, and manufactured to a high and reliable standard, thus providing a safe product with minimum risk to health when used correctly for the purpose for which it was designed. However, this assumes that the equipment is used and maintained in accordance with this manual. The user is advised to study this manual, and to make it available to all staff that may need it as a reference.

Saint-Gobain PAM UK cannot be held responsible for any incidents arising from incorrect installation, operation or maintenance. The responsibility for this must rest

wholly with the user.

## **Spare Parts**

The use of inferior materials or parts in a hydrant can have serious consequences. It is Saint-Gobain PAM UK policy to use only materials of the highest quality, manufactured to its own designs, and thoroughly checked and tested in accordance with an internal Quality Assurance system that is approved to ISO 9001. To guarantee the highest level of safety and performance, it is absolutely essential that only genuine Saint-Gobain PAM UK approved spare parts are used. Saint-Gobain PAM UK will accept no responsibility whatsoever for the use and subsequent failure of any non-approved parts.

## **COMMISSIONING**

If the hydrant is to be used at the end of a line for pressure testing, it is important to note the following:

1. The pressure rating of the hydrant
2. If an automatic drain plug is fitted it may not provide a totally drop tight seal, and as such alternative arrangements may need to be provided.

### **INSPECTION (every 3 months).**

#### **Visually inspect the installation for the following:**

1. Physical damage to the surface box.
2. Rubble or silt in the chamber preventing access to the hydrant.
3. The plastic outlet cap is present and undamaged.
4. Damage to or theft of the square top and outlet.
5. Water leaking from outlet.

### **TESTING (every 12 months unless the visual inspection reveals damage).**

1. Fit a blanking cap to the screwed outlet, but do not tighten fully.
2. Open the hydrant slowly allowing the entrained air to be safely vented past the blanking cap.
3. When all the air is removed, shut the valve, and fully tighten the blanking cap onto the outlet.
4. Pressurise the valve by opening the hydrant.
5. Check for leaks between body and cover, from the stem seals and from the frost valve.
6. Count the number of turns to move from the valve stopper from the fully closed to fully open position (approximately 8 turns). This will ensure maximum flow-rate through the valve during operation.
7. Close the hydrant, then slacken and remove the blanking cap.
8. Check that the water retained in the hydrant is draining through the frost valve with valve closed.
9. Replace the plastic outlet cap.

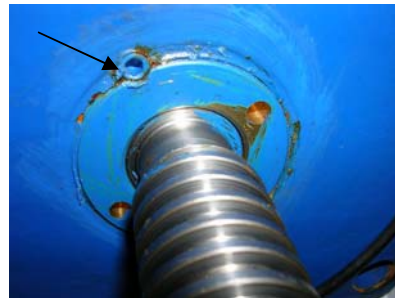
## MAINTENANCE INSTRUCTIONS

**The design of the FH2 hydrant does not allow maintenance under pressure. ENSURE THAT THE HYDRANT IS ISOLATED FROM THE WATER SUPPLY PRIOR TO COMMENCING WORK**

1. Safely release any pressure in the line by opening the hydrant 2 turns.
2. Undo the 4 M12 cover bolts and lift off the cover, stem and stopper assembly.
3. Fixed Stopper – gate seal replacement
  - (a) Undo the 8 mm stopper bolt and remove the retaining washer.
  - (b) Replace the gate seal and reassemble the stopper sub-assembly.
  - (c) Apply a small amount of Loctite 648 or similar to the threads, and secure.
  - (d) Replace the cover o-seal.
4. Loose stopper gate seal replacement
  - (a) Remove and replace the entire one piece seal and stopper.
  - (b) Replace the cover o-seal.
5. Fixed and Loose stopper – stem seal replacement.
  - (a) Undo the hexagon socketted grub screw (arrowed) from the brass sealing nut, then unscrew and remove the sealing nut and stem. The sealing nut and stem seals can then be replaced, and the hydrant top re-assembled.
6. Re-assembly:

Apply a small amount of WRAS approved grease to the o-ring seal fitted to the cover.
7. Re-fit the cover assembly ensuring that the anti-rotation lugs on the stopper are located between the channel guides in the body.
8. Check that the O-seals are located correctly then fit and tighten the cover bolts to a torque of 80Nm.
9. Outlet seal replacement:

Undo the 4 M12 outlet bolts and remove the outlet and plastic cap.
10. Replace the O-ring on the outlet and apply a small amount of WRAS approved grease to the O-ring seal.
11. Ensure that the seal is located correctly in its groove, fit the strap on the



plastic cap to one of the bolts, then re-fit and tighten the bolts to a torque of 80Nm.

12. Check the hydrant for satisfactory operation.

13. Replace the plastic cap onto the outlet before leaving the valve.