Fucoli Somepal
FUNDIÇÃO DE FERRO, S.A.

# OPERATION MANUAL



## FIRE HYDRANTS

## Model "SOMEPAL" and "CLASSIC"

PRODUTO Certif CERTIFICADO

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## 1. DESCRIPTION

Fire Hydrants are equipment developed mainly to be used for water supply for firefighting, and can also be used for water supply.

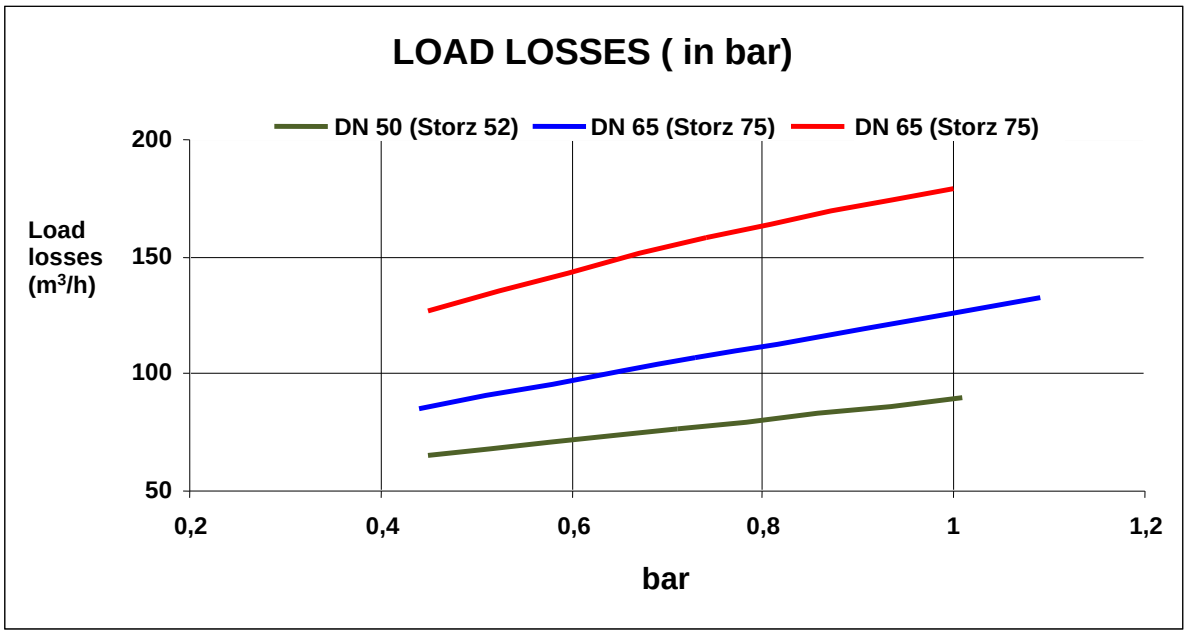
In the preparation of this manual, the terms applied have the following definitions, taken from the reference standard – EN 14384.
*PILLAR FIRE HYDRANT* – fire hydrant with column shape, which emerges from below ground level, intended primarily to supply water for firefighting and also may be use by water utilities
*DRY PILLAR FIRE HYDRANT* – pillar fire hydrant, the column of which empties automatically when the main valve is closed.
*WET PILLAR FIRE HYDRANT* - pillar fire hydrant, the column of which remains full of water.
*BREAK SYSTEM* – mechanism which allows the above ground part of the hydrant to separate from the below ground part when subjected to impact whilst maintaining the seal of the main valve.
*DN NOMINAL SIZE* - alphanumeric designation of the size of pipework components used for reference purposes. It comprises the letters DN followed by a dimensionless round number which is loosely related to the effective dimensions, in millimeters, of the bore or external diameter of the end connections.
*PN NOMINAL PRESSURE* - alphanumeric designation used for reference purposes and related to a combination of numerical and dimensional characteristics of a component of a pipe system. It comprises the letters PN followed by a dimensionless round number.
*FLOW COEFFICIENT Kv (Cv)* – rate of flow in cubic metres per hour that will cause a differential pressure of one bar through the fire hydrant.

The fire marks "SOMEPAL" and "CLASSIC", as standard and in accordance with RSCI, are equipped with STORZ type outputs 110; 75 and 52, however, are prepared to meet the requirements of other countries with outlets such as: GUILLEMIN, BARCELONA, CONVENTIONAL THREAD or others, whose diameters adapt to fire brigades.
For correct assembly, it is recommended to use the adjustment "S", which allows you to assemble, deviate or compensate between ±500 mm and between 0 and 360º, corresponding to the requirements of the certification standard - EN 14384. After assembly of the frame, the ducts must be put into operation with and completely open so that any residues that may exist inside them can be expelled to the outside through the mouths. To do this, run enough water to ensure good cleaning, thus avoiding the accumulation of residues in the sealing area.

The pillar fire hydrant marketed by Fucoli-Somepal have the following hydraulic characteristics:
- MOT (maximum operating torque) - 125 Nm
- mST (minimum strength torque) - 250 Nm
- Kv Coefficient
  DN 50 (Output STORZ 52) – 92
  DN 65 (Output STORZ 75) – 126
  DN 100 (Output STORZ 110) - 184

| | Fire Hydrant CLASSIC/SOMEPAL | Fire Hydrant CLASSIC/SOMEPAL with built-in curve |
|---|---|---|
| Drain valve flow time | 9,1 minutes/meters | 5,2 minutes/meters |

- Water remaining above the obturator: 45 ml.
- According to the reference standard the Fire Hydrants "SOMEPAL" and "CLASSIC" belong to class C (With drainage (dry) and fuse system).
- Load losses are as follows:




These characteristics are in accordance with the reference standard, and are proven in the test reports they were submitted to at CATIM, a laboratory accredited under the 89/106/EC directive.

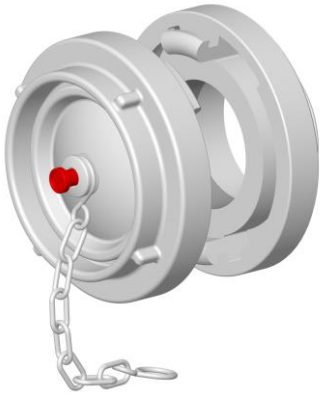
## 2. HANDLING

The Pillar Fire Hidrant, Model "SOMEPAL" and "CLASSIC" must be operated exclusively with the appropriate switch and in the possession of the various fire brigades. For their complete opening, the key must be turned to the left (+), just 10 (ten) turns to open them fully. To close it, the key must be turned in the opposite direction (-), the same ten turns being enough to completely close the hydrant

Note – The first three laps at the opening and the last three laps at the close are considered "dead" laps. The frame only starts the opening cycle on the fourth turn (this situation is covered in the reference standard – EN 14384, section 4.9).


## 3. RISK IDENTIFICATION

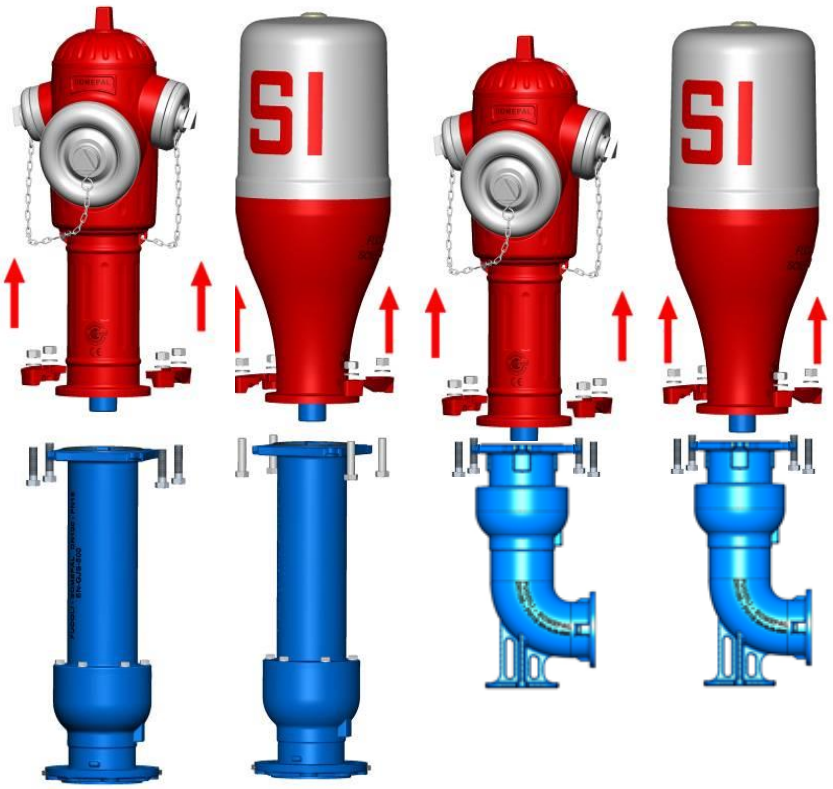
Throughout its development, marketing and after-sales service, no potential risks of use were identified. In marketing and after-sales assistance, there are no risks associated with assembly and operation.
In hearing the customer's opinion, it was identified that when removing the protective cover from the flanges when the frame is under load, the covers can be projected. As a preventive measure, at least one of the protective covers has been equipped with a trap that guarantees total safety in handling.



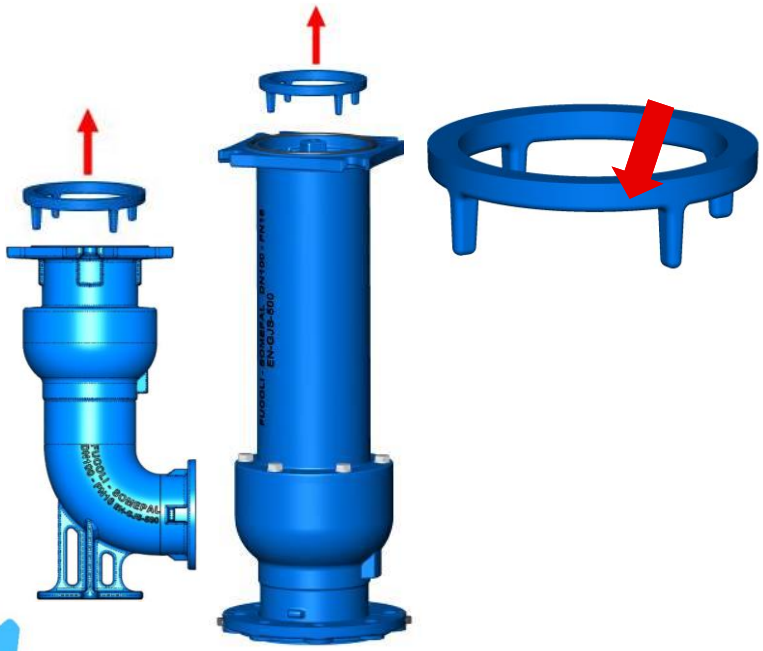
## 4. MAINTENANCE

Maintenance operations on this type of equipment are vital so that when they are needed, they are permanently in perfect working condition.
Maintenance work must be carried out in accordance with the applicable regulations, the installation and maintenance manual and that recommended by the best practices in the sector. It is the opinion of the Technical Section of Fucoli-Somepal that the functional performance of the milestones must be checked annually, with another frequency being at the discretion of the equipment manager.
One of the components to be checked in maintenance actions must be the surface state of the plug, a component coated with elastomer and vitally important for sealing the frame. For the sealing system disassembly operations to take place as exemplified, the Fire Markers must be installed and the conduits clean of debris - ET 209.

If replacement is necessary, the following steps must be followed:

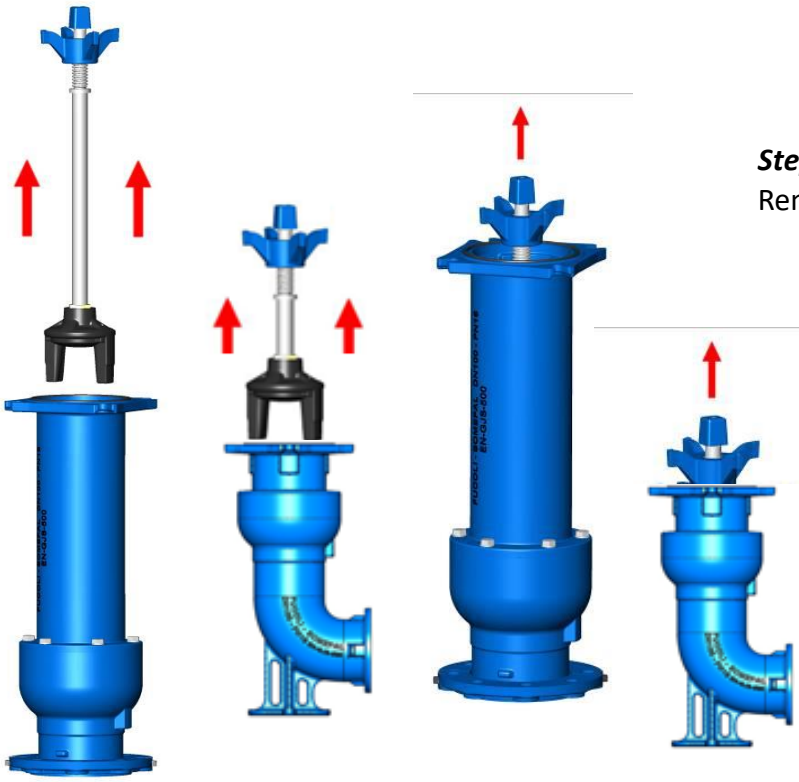



**Step 1**
Loosen the four screws that fasten the upper body to the lower body together with the fuse flanges.
Withdraw the upper body vertically, disengaging the upper shaft from the lower shaft.



***Step 2***
Remove the locking element vertically.


***Step 3***
Turn the nut support 10º in the direction of the arrows (left).



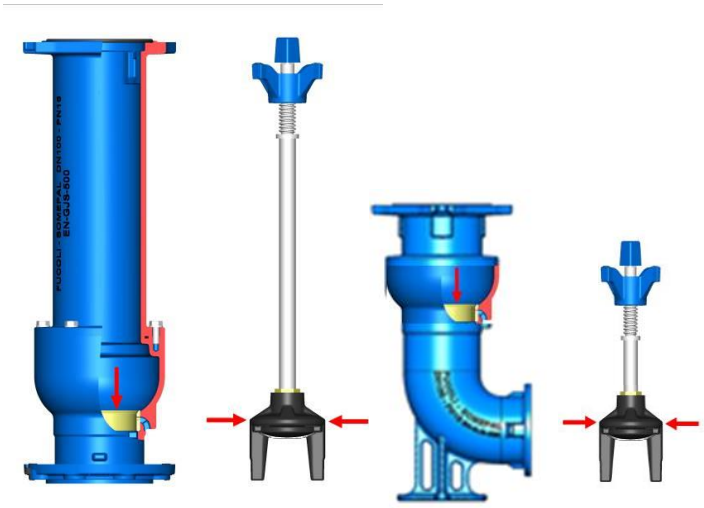
***Step 4***

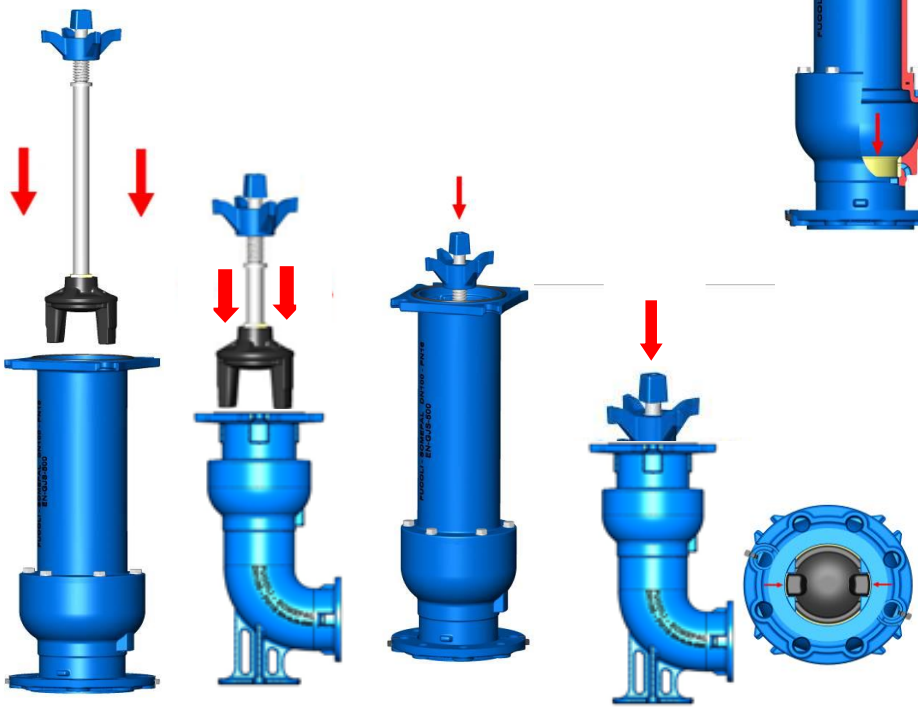
Remove the seal assembly vertically.

***Step 5***

Check:

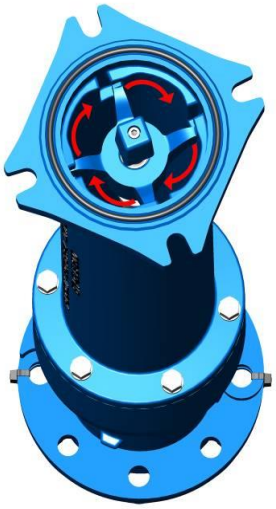
- the surface state of the plug elastomer.
- the superficial state of thirst.
- the absence of debris in the fence area.





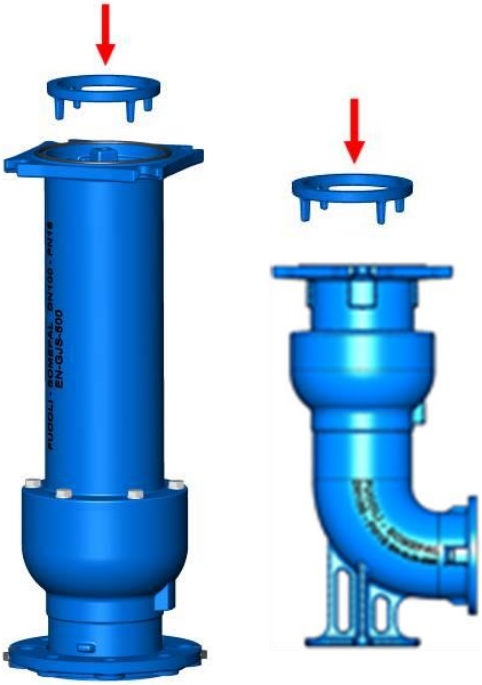
***Step 6***

Fit the sealing system, taking care not to damage the plug elastomer, taking into account its position.
(inverse of described in 4)



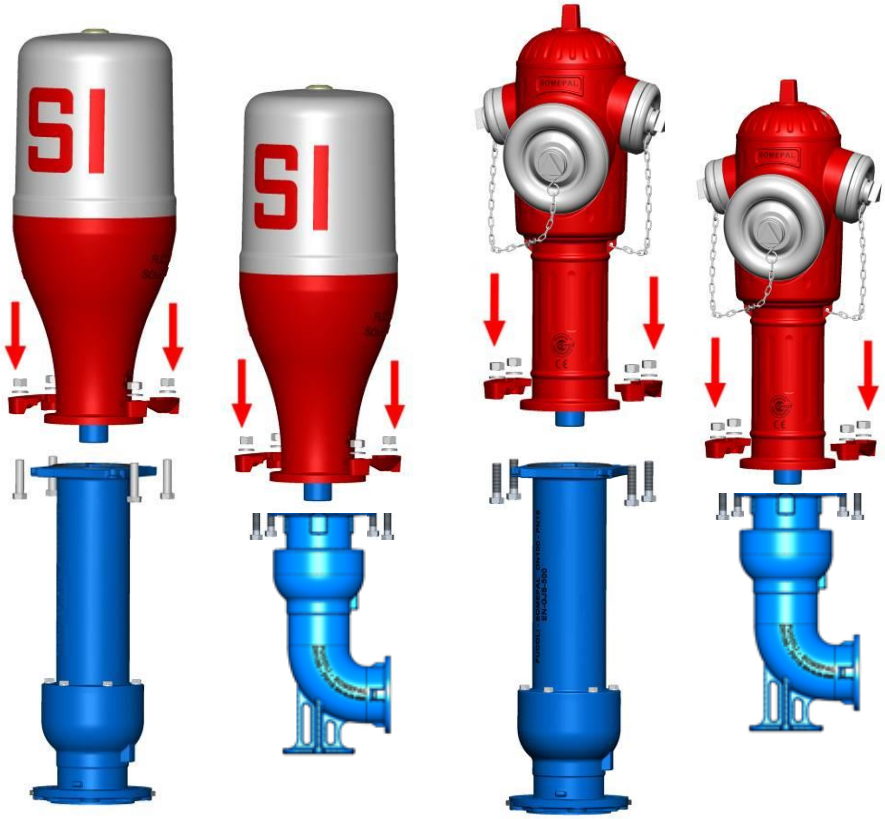
***Step 7***

Turn the nut support 10º in the direction of the arrows (right), as shown in the figure.
(Inverse of described in 3)



***Step 8***

Place the blocking element.
(the reverse is not described in step 2)




***Step 9***

Fit the upper body into the lower body taking into account the fit of the shafts, ensuring that the seal is correctly positioned in the housing.

Tighten the four screws that secure the two bodies and the fuse flanges.

During inspection and maintenance operations, the following must be taken into account:

- The effectiveness of fire protection means is temporarily reduced;
- Depending on the estimated fire risk, only a limited number of landmarks should be simultaneously subjected to prolonged maintenance in a given area;
- If appropriate, fire brigades and water companies must be notified in advance.

When repairing faults:
Only original components that are in accordance with the manufacturer's instructions should be used to replace those deemed unsuitable for use.

## 5. CERTIFICATE OF CONSTANCY OF PERFORMANCE

The Pillar Fire Hydrants to which this Operations Manual refers are in accordance with Regulation (EU) No. 305/2011 – Regulation of Construction Products, with the issuance of certificates by CERTIF:

Certificate of Constancy of Performance
1328 - CPR - 0065
Fire Alarm (Column Fire Hydrant) Model "SOMEPAL".
Fire Marker (Column Fire Hydrant) Model "CLASSIC".

Certificate of Constancy of Performance
13258 - CPR - 0739
Fire Alarm (Column Fire Hydrant) "SOMEPAL" model with built-in curve.
Fire Alarm (Column Fire Hydrant) "CLASSIC" model with built-in curve.