Fucoli Somepal
FUNDIÇÃO DE FERRO, S.A.
DESDE 1946

UNDERGROUND FIRE HYDRANT

OPERATION MANUAL

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APLICATION

UNDERGROUND FIRE HYDRANT

DN80 / DN100

HEAD OFFICE
Estrada de Coselhas
3000-125 Coimbra - PORTUGAL
Tel.: (+351) 239 490 100
Fax: (+351) 239 490 198
comercial@fucoli-somepal.pt

BRANCH OFFICE
Rua de Aveiro 50
3050-420 Pampilhosa - PORTUGAL
Tel.: (+351) 239 490 100
Fax: (+351) 231 949 292
comercial@fucoli-somepal.pt

www.fucoli-somepal.pt

CONTENTS

1. GENERAL DESCRIPTION

The hydrants are equipment developed mainly to be used for water supply in firefighting, and may also be used in water supply by water companies.

A maximum working pressure of 16 bar and a maximum temperature of 70 °C are also restrictions on the hydrant's. Any additional use is seen as improper. Damage from incorrect use is not the manufacturer's responsibility

This product has at least the following mark:

	Marking	Observation
Product manufacturer	Fucoli-Somepal	See section 10 – Further information.
Design/ Model 	Two versions: (1) DN80 (2) DN100	Identification according to model and type of water outlets. Check the datasheet Undergrpund Fire Hydrant 07.300
Identification	Lot/date/product code	Identified in the product itself. See section 1.2 – Product marks.
Nominal diameter	e.g. DN and numerical value	Numerical value for DN in [mm].
Pressão nominal	PN e valor numérico	Numerical value for PN in bar. See section 6 – Installation. Pressure data is displayed as overpressure above atmospheric pressure.
Working pressure range	Operation pressure range PN and numerical value	
Service temperature	Max. permitted temperature	From 0º C (excluding frost) to 70ºC
Material	EN-GJS-500	Identification of the materiais of the compoments in the technical datasheet.

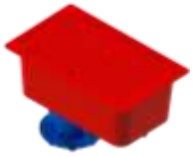
ATTENTION: The markings should neither be covered, painted nor altered to remain identifiable.

1.1. PRODUCT DESCRIPTION

Underground hydrants are equipped with STORZ outlets, however are prepared to meet the requirements of other countries with outlets type as: GUILLEMIN, BARCELONA, CONVENTIONAL THREAD or others whose diameters are adapted to the fire brigades.

Underground fire hydrant with protective box option with stem cap

Underground fire hydrant with protective box option with handwheel



Underground fire hydrant with closed protective box

Ref.	Product	PN	DN dimensions	
			80	100
07.300	Underground fire hydrant with protective box option with stem cap	16	Storz 75*	Storz 110*
07.300	Underground fire hydrant with protective box option with handwheel	16	Storz 75*	Storz 110*
07.300	Underground fire hydrant without protective box option with stem cap	16	Storz 75*	Storz 110*
07.300	Underground fire hydrant without protective box option with handwheel	16	Storz 75*	Storz 110*

*The *option "+ double flanged 90º duckfoot bend DN80 " [for dimensions and more information see technical sheet 10.1004]
Also a option with na automatic ball drain

Table 1

1.2. COMPONENTES E MATERIAIS

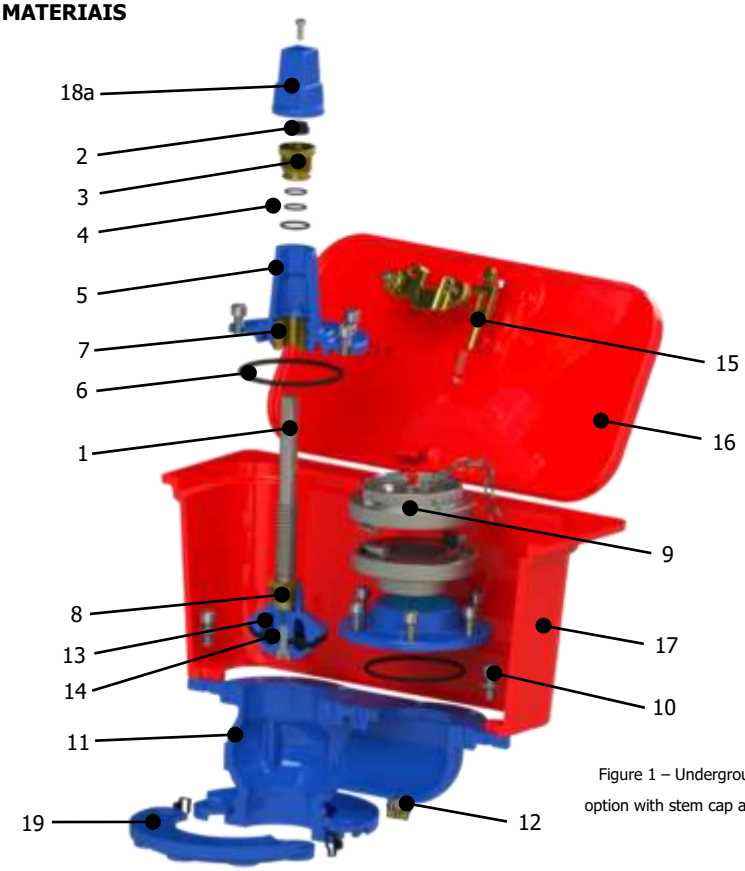


Figure 1 – Underground fire hydrant DN80 with protective box option with stem cap and na automatic ball drain [ref. 07.300]

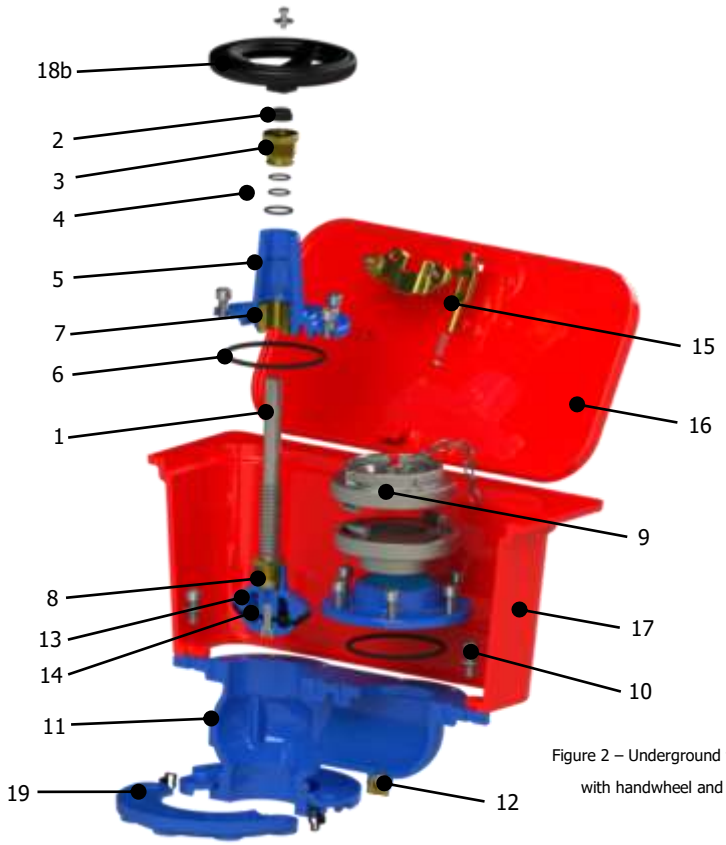


Figure 2 – Underground fire hydrant DN80 with protective box option with handwheel and na automatic ball drain [ref. 07.300]

Component list

pos.	components	material	standard
1	Stem	Stainless steel AISI 420	EN 10088 - 1
2	Clearing joint	Elastomer	
3	Gland	Brass	EN 12164
4	O-rings	Elastomer EPDM WA	EN 681 - 1
5	Cover	Ductile iron EN-GJS-500-7	EN 1563
6	Bonnet gasket	Elastomer EPDM WA	EN 681 - 1
7	Stem nut	Brass	EN 12164
8	Obturador nut	Brass	EN 12164
9	Storz 75 cap	Aluminum AlSI 12	EN 1706
10	Bolts	Stainless steel A2	EN 10088 - 1
11	Body	Ductile iron EN-GJS-500-7	EN 1563
12	Automatic ball drain (option)	Brass	-

pos.	components	material	Standard
13	Obturator	Ductile iron EN-GJS-500-7	EN 1563
14	Obturator joint	Elastomer EPDM WA	EN 681 - 1
15	Lock	Brass	CB754S
16	Protective box cover	Ductile iron EN-GJS-500-7	EN 1563
17	Protective box	Ductile iron EN-GJS-500-7	EN 1563
18a	Stem cap	Ductile iron EN-GJS-500-7	EN 1563
18b	Handwheel	Aço estampado ST W24	EN 10111 e 10130
19	Flange	Ductile iron EN-GJS-500-7	EN 1563

1.3. PRODUCT MARKING (BRANDS)

Sticker **A**
(Exemple)

Sticker **B**
(Exemple)

Sticker **C**
(Exemple)

Figure 3 – Underground Fire Hydrant stickers

A – Product page QRcode / datasheet number / model / manufacturer's website
B – Manufacturer / product code / lot / production date
C – CE registration number / manufacturer / performance statement certificate / reference standards / description / n º of turns to open / hydraulic characteristics

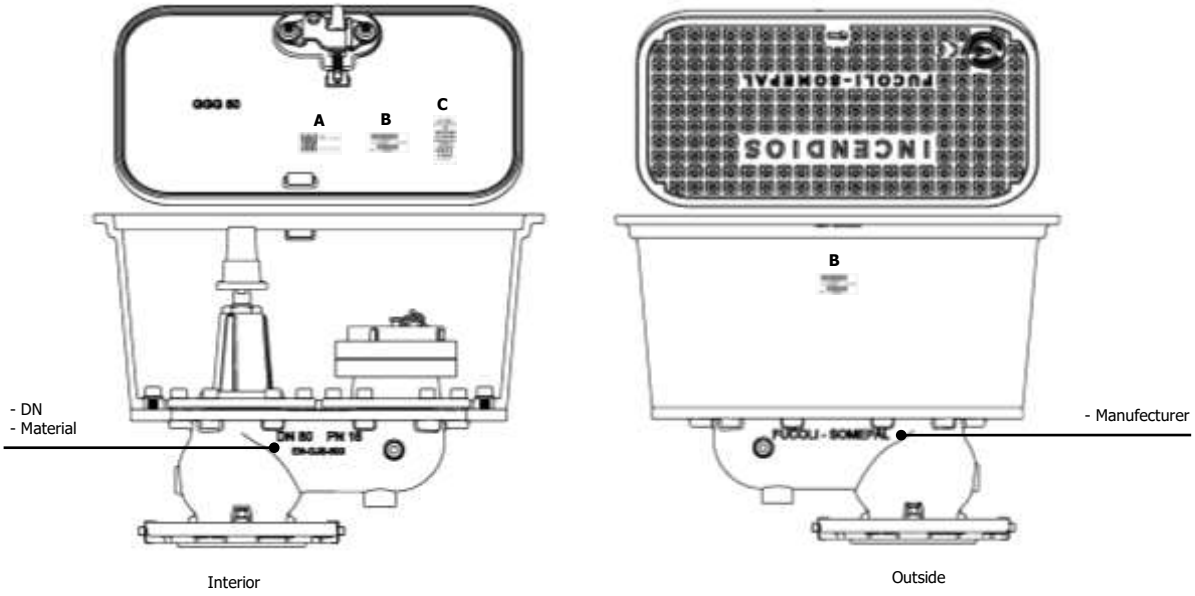


Figure 4 – Underground fire hydrant DN80 with protective box option with stem cap [ref. 07.300]

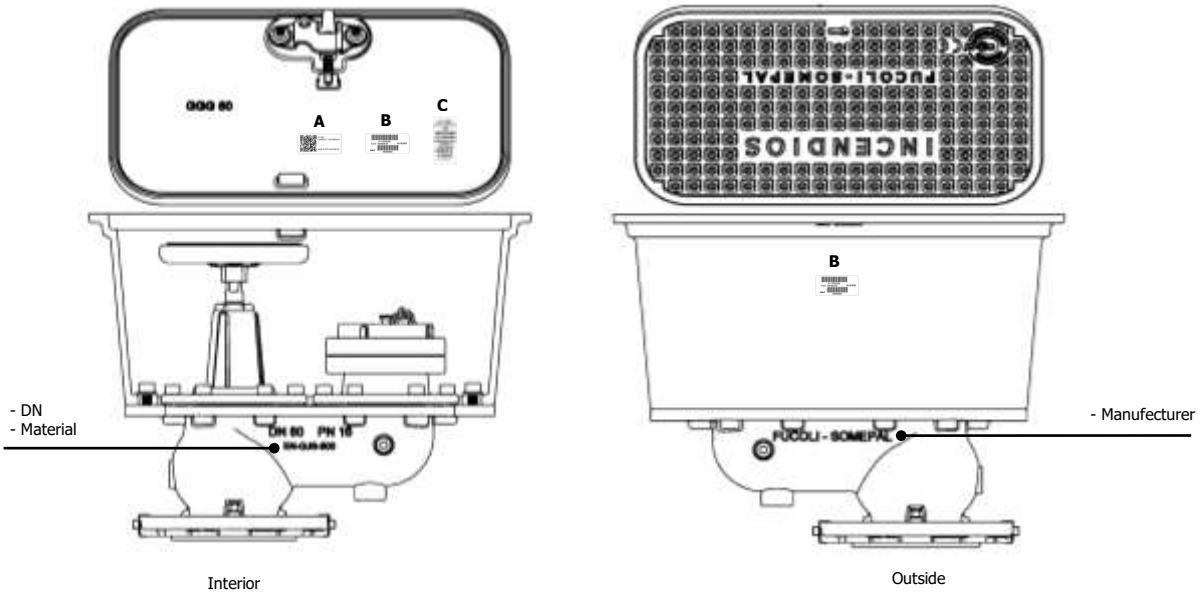


Figure 5 – Underground fire hydrant DN80 with protective box option with handwheel [ref. 07.300]

2. PONTENCIAL RISK IDENTIFICATION

Ao longo do seu desenvolvimento não foram identificados potenciais riscos de utilização. Na comercialização e assistência após venda, não foram associados ou constatados riscos na montagem e funcionamento.

3. BASIC INSTRUCTION FOR SAFETY

3.1. USED ADVICE

Ensure that all health and safety regulations are being applied on the system which this product is being installed. The following requirements identified below are no responsibility of the manufacturer, but have to be guaranteed by the user:

1. The product may only be used for purposes described in seccion 1.
2. The installation must be carried out by competent and trained person using the appropriate equipment. The main contractor must garantee that any operators or subcontractors involved in thre installation are properly competente to carry out the work. The installer shall assure that all equipment used during the instalation is properly maintained, suitable for safe installation and will not cause any damage to the product.
3. Whenever the products are installed, operated or maneuvered, the risks inherent in the pressurizing of liquids or gases must all be taken into account. The coupling must be fully insulated, depressurized and drained before starting the work.
4. The system must be designed properly so that the product is not in tension.
5. The Fucoli-Somepal products are designed to be suitable for their purpose and to high standard of realiability, providing a safe and low risk product when used correctly for the purpose for which it was designed.

The Fucoli-Somepal cannot be held responsibility for incidents involving installation, operation or incorrect maintenance. In this way the responsibility will be entirely on the user.

3.2. HANDLING HAZARDS

Operators must comply with the rules defined at the intervention place.

In addition to the defined, during maintenance operations, of the product or other elements where the product is installed, it is necessary to always comply with the safety rules, taking into account the risk of falling with a drop in the use of this type of products, seeking to delimit the dangerous area and allowing only access to operators who know the risks.

During handling the product, always use the following personal protective equipment

Protection gloves

Steel-tipped boots

You can prevent situations associated with the risk of product fall during handling

When moving the product manually, if the weight of the product exceeds 30 Kg, you must carry out with more than one operator.

Those involved in assembly/disassembly operations, utilization, inspection and maintenance must have read and understood this installation manual.

3.3. PRODUCT CHANGE

Before any modification and/or alteration to the product, carried out by the user, Fucoli-Somepal SA should be asked about it in order to give its approval. Otherwise, the warranty becames invalid.

The product warranty and/or liability will be void if the product is tampered with, which is not permitted. This includes modifications, repairs, component changes, and loosening factory-made connections.

4. STORAGE

Keep the product protected against dust any contaminating substances, placing it in the original packaging.

Under no circumstances should the fire hydrant be stored outside in order to avoid damage caused by the conditions environmental. The fire hydrant must not come into contact with any contaminating substances before installation. Weather protection must be provided. Ideally they should be stored in a place that protects the equipment from direct exposure to sunlight and freezing.

5. SUSTAINABILITY

Only recyclable materials are used in the fire hydrant packaging. Please sort them carefully and recycle them. Depending on their identification, the materials can be reused. Help us to contribute to the preservation of our environment by reusing and recycling.

Fucoli-Somepal is an environmentally certified company and our manufacturing process is powered by 100% renewable energy. Our products are designed and developed with eco-design as an essential way to promote the cycle economy.
"In the circular economy there is no waste, everything is reused, everything flows as if it were part of a large cyclical ecosystem."
Fucoli-Somepal is committed to a more sustainable future, making the circular economy one of our main concerns.

6. INSTALATION

These hydraulic characteristics are acording to EN 14339.

Installation must be done by professionals who are applicable to local, national, or international regulations.

These Fucoli-Somepal fire hydrants possess the following hydraulic characteristics:

- MOT (Maximum operating torque)
  DN 80 – 105 Nm
  DN 100 – 130 Nm

- mST (Minimum torque resistance)
  DN 80 – 210 Nm
  DN 100 – 260 Nm

-

HIDRAULIC CHARACTERISTICS Underground fire hydrant time for draining	
storz	(Kv)
DN80	95
DN100	184

Kv coeficient

6.1. UNDERGROUND FIRE HYDRANT INSTALLATION INSTRUCTION

The following steps must be followed

As a shut-off valve, the hydrant cannot be used in the intermediate position, it must be fully open or fully closed.

OPEN THE HYDRANT

1. Remove the cap.
2. Remova o tampão.
3. Then connect coupling to hose to the hydrant outlet.
4. Use the recommended key (ref. 07.500) to fully open the hydrant by rotating the operational dial counterclockwise as shown by the + arrow.
5. The maximum operating torque is 105 Nm (DN80) and 130 Nm (DN100).
6. Full open position is reached after 9 turns (DN 80) and 10 turns (DN 100).

The hydrant valve must be completely open, it must not be used to control the flow volume, this control must be carried out by the nozzle of the hose installed at the outlet.

CLOSE THE HYDRANT

1. Close the outlet armature.
2. Turn the stem cap/ handwheel clockwise to fully close the hydrant valve.
3. To avoid an overpressure situation in the hydrant body, slightly open the hose outlet.
4. The hydrant has a piston seal that operates radially. The tightness is therefore unaffected by the closing force
5. Remove the remaining outlet valves.
6. Insert the cap.

7. HANDLING

The underground fire hydrant can be operated with handwheel or stem cap and maneuver operations should be performed exclusively by duly accredited and / or approved for the purpose entities.

For a complete opening, the handwheel must be turned to the left, just 9 laps (DN 80) and 10 laps (DN 100) for totally open. For your closing the wheel should be rotated in the opposite direction, just the same circles to completely close.

option handwheel

option stem cap

Ref.05.700

8. MAINTENANCE

Fucoli-Somepal hydrants are free from required periodic maintenance because of their design and materials, however it is advised that they be operated once a year to assure flawless performance (opening and shutting cycle, following the instructions in point 6. Installation).

Maintenance operations on this type of equipment are vital, and when necessary, they keep it permanently in perfect working condition.

The installation and maintenance instructions, regulatory standards, and industry best practises must all be followed when doing maintenance. The Fucoli-Somepal Technical Department recommends that the functional performance of the hydrant should be checked once a year, at the equipment manager's discretion.

Maintenance must be done by qualified personnel, complying with local, national, and international regulations.

The condition of the obturator elastomer must be one of the components examined during maintenance procedures. The obturator joint can be changed on the spot.

During the operations of inspection and maintenance should be taken into account:

- The efficiency of means of fire protection is temporarily reduced;
- Depending on the estimated risk of fire, only a limited number of hydrants shall be simultaneously subjected to prolonged maintenance in a certain área;
- If adequate, fire brigades and Water companies should be advised in advance.

In repair of malfunctions:

Only original components that are in accordance with the manufacturer's instructions should be used to replace those considered unfit for use. However, if replacement parts are required for maintenance or repair, only original Fucoli-Somepal used parts can be used. We are not responsible for damage caused by non-original Fucoli-Somepal parts.

In accordance with current municipal, national, or international regulations, handling must be done by qualified individuals.

9. PERFORMANCE STATEMENT

The hydrants to which this Operations Manual refers are in accordance with Regulation (EU) nº 305/2011 - Construction Products Regulation, with the certificates issued by CERTIF:

Certificado Performance Statement
1328 - CPR – 0064
Underground fire hydrant DN80

Certificado Performance Statement
1328 - CPR – 0099
Underground fire hydrant DN100

10. FURTHER INFORMATION

You can obtain instructions, technical datasheet and addicional information at the following addresses:

HEAD OFFICE Estrada de Coselhas, 3000-125 Coimbra – Portugal Tel.: (+351) 239 490 100 Fax: (+351) 239 490 198 E-mail: comercial@fucoli-somepal.pt	**BRANCH OFFICE** Rua de Aveiro 50, 3050-420 Pampilhosa – Portugal Tel.: (+351) 239 490 100 Fax: (+351) 231 949 292 E-mail: comercial@fucoli-somepal.pt