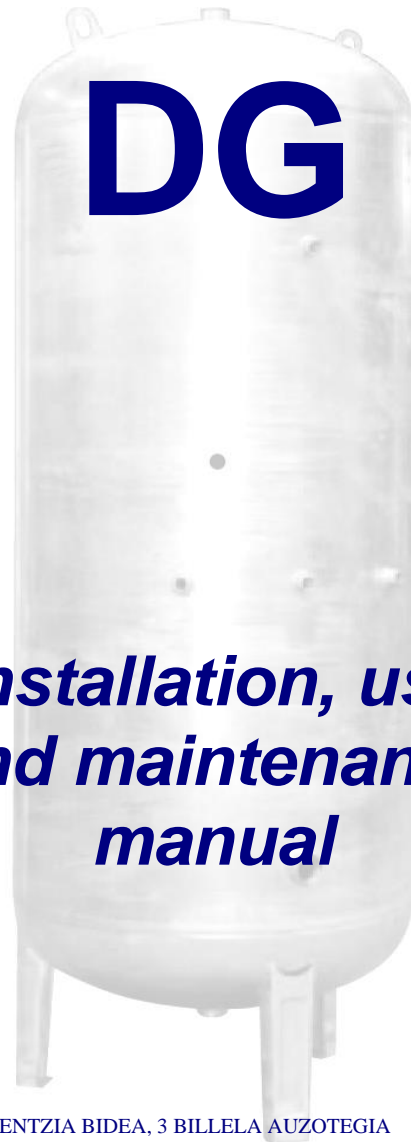




***Non-bladder  
galvanized  
hydropneumatic tanks***



***Installation, use  
and maintenance  
manual***

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## 1. DESCRIPTION

Welded steel tanks manufactured according to the European Directive 2014/68/UE. They are made of two inlaid bottoms, joined together through welding cords following the proper procedure and according to the required authorized staff. They are loosely able to resist the working pressure for which they have been designed.

They are hot dip galvanized both internally and externally, complete with sleeves for all fittings and all the special features required for a perfect installation.

Tanks are tested for tightness and strength at a pressure 1.5 times the maximum working pressure.

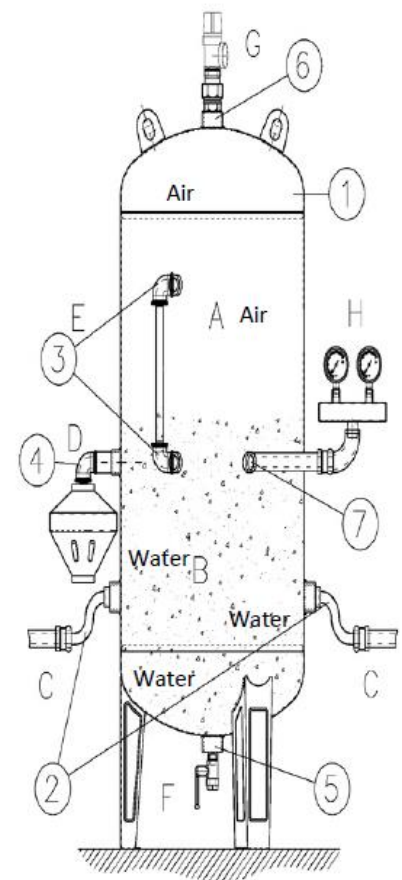
The maximum operating temperature is 60°C.

## 2. VESSEL COMPONENTS

Figure 1 shows schematically the different connections or sleeves of the galvanized

- 1.- Tank made of welded stainless steel or galvanized steel plate
- 2.- Water inlet and outlet
- 3.- Connections for the indicator
- 4.- Connections for injectors
- 5.- Water purge connection /drain connection
- 6.- Safety valve connection
- 7.- Connection to pressure switches

- A.- Pressurised air zone which acts as a driving fluid during the water return phase of the system
- B.- Reserve water area
- C.- Ducts or pipes connecting the tank to the installation
- D.- Air injectors
- E.- Viewing tube
- F.- Water purge
- G.- Safety valve
- H.- Pressure switches



*Figure 1*

### 3. MAIN CHARACTERISTICS

- ④ **Family:** DG
- ④ **Use:** Acumulador hidroneumático galvanizados SIN membrana para grupos de presión
- ④ **Volume:** 100 - 5.000 litres
- ④ **Mode:** Vertical
- ④ **Maximum service pressure:** 8 – 10 Bar
- ④ **Test pressure:** 12 – 15 Bar
- ④ **Temperature Min / Max:** -10°C / +100°C
- ④ **Dimensions:** according to attached table
- ④ **Connections:** according to attached table
- ④ **Finish:** Galvanized
- ④ **warranty:** 2 years
- ④ Designed and manufactured according to European Directive 2014/68/EU

#### Vertical models 8 bar

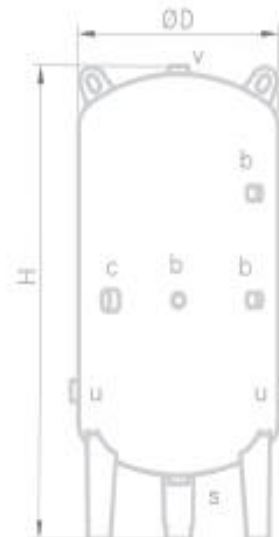
| Weight (kg) | Code     | Model Capacity | Pressure Max. (bar) | Dimensions |        | R Water connection |       |      |      |
|-------------|----------|----------------|---------------------|------------|--------|--------------------|-------|------|------|
|             |          |                |                     | Ø D (mm)   | H (mm) | u                  | v - s | b    | c    |
| 77          | 10050008 | 500 DG         | 8                   | 650        | 1860   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 119         | 10075008 | 750 DG         | 8                   | 750        | 2080   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 195         | 10100008 | 1000 DG        | 8                   | 800        | 2350   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |

| Weight (kg) | Code     | Model Capacity | Pressure Max. (bar) | Dimensions |        | R Water connection |       |      |      |
|-------------|----------|----------------|---------------------|------------|--------|--------------------|-------|------|------|
|             |          |                |                     | Ø D (mm)   | H (mm) | a - u              | v - s | b    | c    |
| 250         | 10125101 | 1250 DG        | 8                   | 900        | 2300   | 2"                 | 1 ½"  | 1/2" | 1 ½" |
| 264         | 10150101 | 1500 DG        | 8                   | 950        | 2465   | 2"                 | 1 ½"  | 1/2" | 1 ½" |
| 358         | 10200101 | 2000 DG        | 8                   | 1100       | 2490   | 2"                 | 1 ½"  | 1/2" | 1 ½" |
| 413         | 10250101 | 2500 DG        | 8                   | 1100       | 3045   | 2 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 550         | 10300101 | 3000 DG        | 8                   | 1200       | 3200   | 2 ½"               | 2"    | 1/2" | 1 ½" |
| 690         | 10400101 | 4000 DG        | 8                   | 1400       | 3140   | 4"                 | 2"    | 1/2" | 1 ½" |
| 898         | 10500101 | 5000 DG        | 8                   | 1400       | 3790   | 4"                 | 2"    | 1/2" | 1 ½" |

#### Vertical models 10 bar

| Weight (kg) | Code     | Model Capacity | Pressure Max. (bar) | Dimensions |        | R Water connection |       |      |      |
|-------------|----------|----------------|---------------------|------------|--------|--------------------|-------|------|------|
|             |          |                |                     | Ø D (mm)   | H (mm) | u                  | v - s | b    | c    |
| 22          | 10010010 | 100 DG         | 10                  | 400        | 1040   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 36          | 10020010 | 200 DG         | 10                  | 550        | 1150   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 48          | 10030010 | 300 DG         | 10                  | 550        | 1615   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 85          | 10050010 | 500 DG         | 10                  | 650        | 1860   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 158         | 10075010 | 750 DG         | 10                  | 750        | 2080   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |
| 227         | 10100010 | 1000 DG        | 10                  | 800        | 2350   | 1 ½"               | 1 ½"  | 1/2" | 1 ½" |

| Weight (kg) | Code     | Model Capacity | Pressure Max. (bar) | Dimensions |        | R Connexion d'eau |       |      |      |
|-------------|----------|----------------|---------------------|------------|--------|-------------------|-------|------|------|
|             |          |                |                     | Ø D (mm)   | H (mm) | a - u             | v - s | b    | c    |
| 302         | 10125301 | 1250 DG        | 10                  | 900        | 2300   | 2"                | 1 ½"  | 1/2" | 1 ½" |
| 343         | 10150301 | 1500 DG        | 10                  | 950        | 2465   | 2"                | 1 ½"  | 1/2" | 1 ½" |
| 490         | 10200301 | 2000 DG        | 10                  | 1100       | 2490   | 2"                | 1 ½"  | 1/2" | 1 ½" |
| 555         | 10250301 | 2500 DG        | 10                  | 1100       | 3045   | 2 ½"              | 1 ½"  | 1/2" | 1 ½" |
| 640         | 10300301 | 3000 DG        | 10                  | 1200       | 3200   | 2 ½"              | 2"    | 1/2" | 1 ½" |
| 870         | 10400301 | 4000 DG        | 10                  | 1400       | 3140   | 4"                | 2"    | 1/2" | 1 ½" |
| 1,03        | 10500301 | 5000 DG        | 10                  | 1400       | 3790   | 4"                | 2"    | 1/2" | 1 ½" |



## 4. APLICACION

Hydro-pneumatic accumulators DG intended for use in water abstraction, drinking water supply systems as well as fire-fighting systems, being an essential part of the pressure group. In addition to maintaining a reserve of pressurised water and guaranteeing an optimum water supply, they extend the life of the booster set, significantly reducing the number of pump start-stop manoeuvres, as well as saving energy.

Not suitable for use with hydrocarbons or fluids belonging to Group 1 according to European Directive 2014/68/EU.

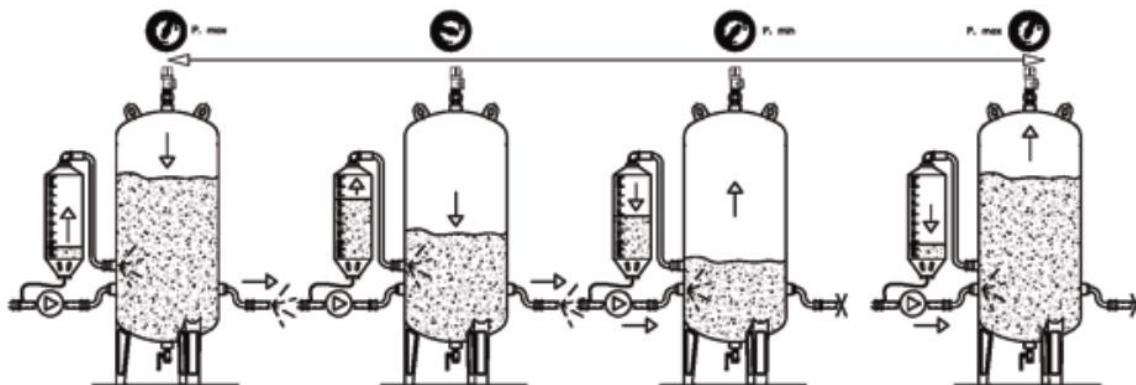
The most important technical characteristics of DG hydropneumatic accumulators and other data concerning their manufacture are indicated on the label attached to the product. This label must under no circumstances be removed or modified. In addition, a document containing the instructions for use of the product and the declaration of conformity is supplied with each unit.



## 5. OPERATION

Drinking water collected from the mains, from a tank, etc., is pumped to the storage tank by the pumping unit.

In these cases, there is no separation between air and water inside the tanks. The energy stored in the form of pressurised air in the storage tank drives the water into the drinking water network. When the minimum pressure value is reached, the pump will start, generating a vacuum that the injector will gradually draw air from the outside until the maximum set pressure value is reached. At this point we will have the boiler with the maximum volume of water and the pump will stop. As water consumption increases, the air remaining in the injector chamber is progressively drawn into the tank as a result of the depression produced inside the tank as the water level drops until the pressure between suction and delivery stabilises.



## 6. INSTALLATION

*Control on arrival:* Check as soon as possible the equipment matches the order and that all components are free from damage, and the correct instructions are enclosed. It is especially important to inspect the pressure vessel for any deformities that could affect its strength. In the event of defects or damage contact the manufacturer.

The hydropneumatic tank bears a designation plate containing all important and necessary data. Check that this matches the stipulated requirements and is appropriate for the system.

Before installation, make sure that the hydropneumatic tank volume has been calculated by authorized staff. Ensure that technical staff has an appropriate profile and training at the facilities of this type of equipment. In any case it should be considered local regulations for the operation of the hydropneumatic tank. Installation and operation must be carried out according to good practice by professional installers and qualified technicians.

They may be installed only vessels whose appearance does not provide damage to the body of hydropneumatic tank. It is prohibited drilling, welding on the vessel or in any item attached to it.

They shall be installed in an enclosure having the necessary access dimensions to facilitate inspection of the hydropneumatic tank.

The facility in which the hydropneumatic tank is placed should provide for the installation a security system that limit the pressure and ensure that the pressure does not exceed the maximum working pressure of the hydropneumatic tank.

Never exceed the working temperature (60°C) and the pressure for which the tank is designed.

It is prohibited drilling, welding on the vessel or any item attached to it.

Do not place any valve whose closure may unintentionally cancel the operation of the hydropneumatic accumulator.

Make sure the hoses and couplings are tight and the working temperature or pressure for which is designed the hydropneumatic tank is never exceeded. Under no circumstances exceed the maximum pressure indicated on the label of the hydropneumatic tank. The vessel could explode.

The pre-commissioning, subsequent fundamental changes in the installation and periodic reviews should be initiated by the user in accordance with regulations in operational safety test.

The pipes must be sized and installed in accordance with the specific requirements according to current national and local regulations.

## 7. MAINTENANCE

The maintenance must be performed only by the authorized staff..

As a maintenance rule, at least once every six months check the condition and operation of the tank.

Never disassemble the vessel without having depressurized the unit and the inner pipe or air chamber to safe values previously.

Periodic inspections must be carried out in accordance with the Pressure Equipment Regulations (REP).

Only original components from the manufacturer of the hydro-pneumatic tank may be used as spare parts.

## 8. NOTES

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