IBAIONDO

Non-bladder Hydro-pneumatic accumulators

DX

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.

Stainless steel tanks, complete with sleeves for all the accessories 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 100°C.

2. VESSEL COMPONENTS

Figure 1 shows schematically the different connections or sleeves of the stainless steel accumulator:

1.- Stainless welded steel plate tank
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

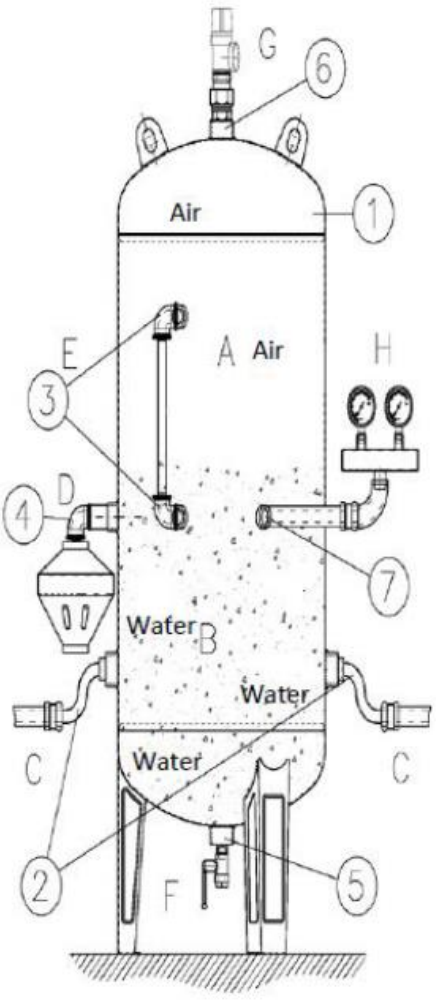
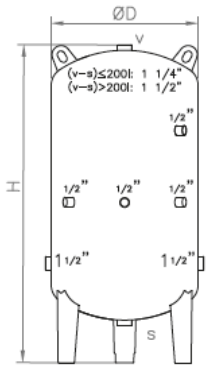
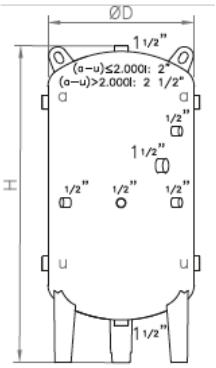


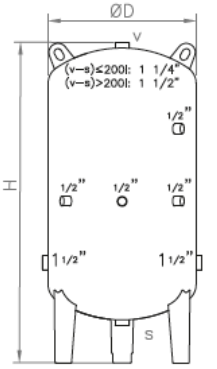
Figure 1

3. MAIN CHARACTERISTICS

- **Famiy:** DX
- **Use:** Acumulador hidroneumático inoxidable SIN membrana para grupos de presión
- **Volume:** 100 - 5.000 litres
- **Mode :** Vertical
- **Maximum service pressure:** 8 – 10 Bar
- **Test pressure**:12 – 15 Bar
- **Temperature Min / Max**: -10ºC / +100ºC
- **Dimensions:** according to attached table
- **Connections:** according to attached table
- **Finsih:** Sandblasted / industrial
- **Warranty:** 2 years
- Designed and manufactured according to European Directive 2014/68/EU







Vertical models 10 Bar industrial finish

Code	Model Volume (Lts)	Weight (Kg)	Ø D (mm)	H (mm)
17010330	100 DX	32	450	860
17020330	200 DX	46	550	1125
17030330	300 DX	71	550	1535
17040330	400 DX	82	550	1935
17050330	500 DX	105	650	1810
17060330	600 DX	141	650	2110
17075330	750 DX	190	750	2005
17100330	1000 DX	270	800	2310

Vertical models 10 Bar industrial finish

Code	Model Volume (Lts)	Weight (Kg)	Ø D (mm)	H (mm)
17150330	1500 DX	343	950	2535
17200330	2000 DX	490	1200	2245
17400330	4000 DX	870	1400	3080
17500330	5000 DX	1.090	1400	3755

Vertical models 10 Bar sandblasted finish

Code	Model Volume (Lts)	Weight (Kg)	Ø D (mm)	H (mm)
17010330 G	100 DX	32	450	860
17020330 G	200 DX	46	550	1125
17030330 G	300 DX	71	550	1535
17040330 G	400 DX	82	550	1935
17050330 G	500 DX	105	650	1810
17060330 G	600 DX	141	650	2110
17075330 G	750 DX	190	750	2005
17100330 G	1000 DX	270	800	2310

REMARK: For AISI 316 or horizontal models, contact factory.

4. APLICATION

Hydro-pneumatic accumulators DX 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.

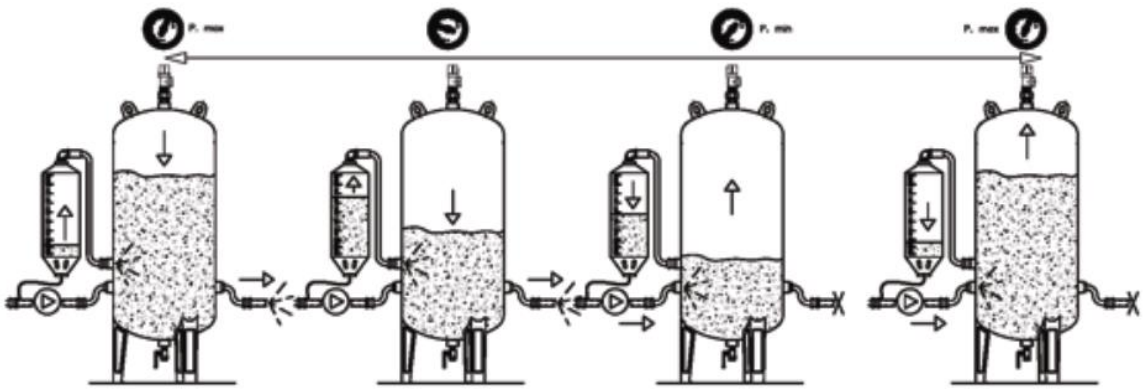
Not suitable for use with hydrocarbons or fluids belonging to Group 1 according to European Directive 2014/68/EU..

The most important technical characteristics of DX 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.

Check that the information on the sticker affixed to the hydro-pneumatic tank corresponds to the purchase specification and that it is suitable for the installation. Before installation, make sure that the volume of the hydro-pneumatic accumulator has been calculated by authorized personnel. Ensure that the technical staff has an appropriate profile and training in the installation of this type of equipment. In any case, the local regulations in force for the operation of hydro-pneumatic accumulators must be considered. Installation and operation must be carried out according to good practice by professional installers and authorized technical personnel.

They may be installed only vessels whose appearance does not provide damage to the body of hydropneumatic tank.

They shall be installed in an enclosure that has the necessary access dimensions to facilitate inspection of the hydro-pneumatic tank, with the filling valve, the connection sleeve to the system and the label being accessible.

The installation in which the hydro-pneumatic tank is placed must provide for the installation of a safety system to limit the pressure and ensure that the pressure does not exceed the upper design limit of the hydro-pneumatic tank

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

Do not install any valves whose closure could unintentionally disable the operation of the hydro-pneumatic tank.

Avoid direct radiation on the hydro-pneumatic accumulator in order to protect the diaphragm from overheating.

Ensure that the hoses and couplings are watertight and that the operating temperature and pressure for which the hydro-pneumatic tank is designed is never exceeded. Under no circumstances should the maximum operating pressure indicated on the label of the hydro-pneumatic tank be exceeded. The hydro-pneumatic tank 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