

## I DESCRIPTION OF EQUIPMENTS FOR CATEGORY I AND ABOVE

**Type of equipment :** Under pressure accessories (In this document the term "accessory" refers to valves, non-return valves, etc.).

**Sizes DN concerned :** DN ≥ DN32.

**Types of valves concerned**

- ✦ Ball valves series : 1003, 2003, 2008, 2014, 2022, 2023, 2027, 2028, 2029, 2034, 2035, 2038, 2091, 2112, 2124, 2148, 2850, 2851, 21110, 21240, 3101, 3111, 3150.
- ✦ Diaphragm valves series: 2100, 2107, 2108, 2109, 2200, 2207, 2208, 2209, 2300, 2307, 2308, 2309.
- ✦ Butterfly valves series : 3600, 3610, 3700, 3800.
- ✦ Non return valves with spring series: 2001, 2068.
- ✦ Sight glasses series: 2030, 2043.
- ✦ Wafer swing check valves series: 2044, 2054.
- ✦ Y Strainer series : 4610, 4570, 4620, 4580, 4630

**Fluid :** Gaz or liquid group I for accessories : 25 mm < DN ≤ 100 mm  
Liquid group I and Gaz or liquid group II for accessories : DN ≥ 125 mm.

**Year of manufacture of the accessory:** Following Job Order (written OF on the label)

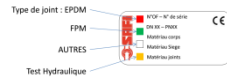
**Batch Identification:** Following Job Order (written OF on the label)

**PS (PN) of the accessory :** Written on the label

**PT :** 1.43 x PS (PN).

**Reference of the accessory :** On the document relevant the goods (dispatch note).

**Label on the accessory :** Example



## II PRESSURES AND TEMPERATURES

**Operating pressure (PS) and operating temperature (TS):** Technical data sheets on which the pressure/temperature curves for fluids are and on which the materials are "chemically resistant" are listed below:

Data sheet N° 3211A for valves series: 1003, 2001, 2003, 2008, 2014, 2022, 2023, 2030 (PPFV), 2038, 2091, 2112, 2124, 2148, 21110, 21240.

✦ Data sheet N° 3211C for valves series: 2027, 2028, 2029, 2034, 2035, 2043, 2068, 2200, 2207, 2208, 2209.

✦ Data sheet N° 3211D for valves series: 2030 (PP), 2100, 2107, 2108, 2109, 3150.

✦ Data sheet N° 3211F for valves series: 2300, 2307, 2308, 2309, 3101.

✦ Data sheet N° 3211L for valves series : 3111.

✦ Data sheet N° 8903 for valves series: 3600, 3610, 3700, 3800.

✦ Data sheet N° 3211M for valves series: 2091.

✦ Data sheet N° 3211P for valves series: 2850, 2851.

✦ Data sheet N° 9200 for valves series: 2044.

✦ Data sheet N° 9201 for valves series: 2054.

✓ Too hot or too cold fluid: respect the pressure / temperature curves on the data sheets mentioned above. In addition, for cold fluids, it is necessary to ensure that, at the given temperature, the fluid remains in a liquid or gaseous state. When a valve is in use, the tightness system must not be subjected to a lower temperature than the retraction of their raw materials (-5 à -10°C for FPM and FPPM; below -40°C for other materials).

✓ The operator must check and ensure that the fluids are compatible with the accessory (body, seals, etc.), by taking into consideration the pressure and temperature of the fluid. The operator must also ensure that the fluids are compatible with each other and that all piping is cleaned after every change of fluid.

✓ SAFI valves and accessories are not designed to be used with an external pressure higher than the atmospheric pressure.

✓ The user must provide a cover vent for retention areas for ball valves used for unsteady chemical fluids. Standard lids are forbidden. The user can contact SAFI who will suggest a suitable solution.

✓ The user must install suitable protection housings for the use of highly corrosive fluids, dangerous, and in case of the limits of the conditions of service are above reasonably predictable excess.

✓ The accessories are designed to be used at an ambient temperature of 40°C maximum (for higher temperatures, please contact SAFI). The accessories must not be exposed to sources of heat (flame, fire, external sources, etc.).

## III ASSEMBLY

- ✓ The flanged must be assembled according to technical data sheet n° 3200.
- ✓ The tightening torque of the flange bolts must also comply with data sheet n° 3200.
- ✓ The distance between the flanges of the pipe and the valve flanges must correspond.
- ✓ Lengths, diameters, materials, heights, threaded lengths, etc. must be adapted to the function. The valves must be assembled in a way that does not put additional stress on the accessories.
- ✓ During the installation, the correct sealing products must be used for the assembly of threaded parts / accessories, pipe joints, flanges, etc.
- ✓ All pipe work should be correctly aligned to prevent any additional stress being placed on the accessories.
- ✓ The body nuts for double union accessories must be tightened to the torque values given on data sheet n° 3019.
- ✓ The majority of SAFI accessories have mounting points, which must be used to support the accessory. If not, the user must install appropriate methods of supporting the accessory without changing the accessory in any way, without drilling or welding and considering the mass of fluid contained.
- ✓ The accessory must not support the weight of the pipe work. It is imperative to support the pipe work so that it does not generate any interference / stress on the accessories. The piping must be fixed allowing for any expansion and that this does not put any additional forces / stress on the accessories. Expansion joints / arrangements can be put in to place on the pipeline to absorb them.
- ✓ The non-return accessories must not be mounted in close proximity to a pump.
- ✓ The user must ensure that the mounting direction of the non-return accessories is correct.
- ✓ The user must comply with the supplied assembly instructions and additional information (catalogue).
- ✓ The use of tools reducing the strength of operating system is totally forbidden.

## IV USE

- ✓ The user must put in place all the necessary instruments to ensure the elimination of high pressure, water hammer, and shock load on the accessories.
- ✓ The voltage of the electric actuators (compact valves series, additional actuators, electric actuators, limit switches) must be checked to ensure that it is compatible with the supply. The voltages are marked on the aforesaid parts or on a notice attached. In the absence of this information, the user must contact SAFI. The necessary precautions must be taken to protect the electrical parts.
- ✓ The ball valves can support low vacuum but not high vacuum or ultra-high vacuum. The diaphragm valves can support a 0.5 bar vacuum. The non-return valves cannot be used under vacuum.
- ✓ The flow inside the accessories must conform to the technical data sheet n° 3019 for ball valves, n° 8920 for non-return valves with spring, and n° 2900B for diaphragm valves. The accessories should not be subject to a flow rate greater than 2m/s although the accessories can be used on flow rates of 3m/s.
- ✓ Plastic accessories are sensitive to sunlight (UV in particular). It is advisable to limit their exposure to sunlight (even for accessories containing carbon black which are more resistant). In all cases, a periodic external inspection of the accessories must be undertaken.
- ✓ The user must ensure that the accessory and/or actuator are correctly and adequately supported, so that no additional force/stress is generated on the valve and/or pipe work.
- ✓ The user must verify the force / output torque of the actuator in relation to the torque required by the valve to be actuated. If the actuator has significant additional force, the user must regulate its power and speed depending on the valve. The actuator may need support as well as the valve.
- ✓ The user must verify that the necessary air pressure is delivered to the actuator, taking care not to exceed the maximum allowed pressure.

## V MAINTENANCE & STORAGE

- ✓ The accessories can be affected by dust and dirt. It is essential that they be installed in a clean condition:
  - ✦ Keep them in their original packaging until they are installed.
  - ✦ Keep them stored away from dust.
  - ✦ Ensure that they are carefully checked (seal, mating surfaces, etc.) during installation for any dust, dirt, mechanical damage, etc.
- ✓ Abnormal vibrations can affect accessories. The user must ensure the isolation of all equipment generating vibrations. He must also verify the adequacy of the equipment that generates vibrations and the rest on the installation. If necessary an item suitable to eliminate or control vibrations should be used (such as Silentbloc, expansion joints, etc.).
- ✓ Before any intervention to repair a valve, the user must drain the pipes of all fluids and pressures. If the valve is disassembled, the user must drain and clean it through its opening.
- ✓ The user should undertake periodic external and internal inspections of the accessories to ensure that no damage has occurred by internal fluids or external environment. The frequency of these visits would depend on the conditions of use and any applicable legislations / regulations.
- ✓ SAFI only authorizes the use of original spare parts.
- ✓ The user must have received the necessary instructions from SAFI before repairing any accessory.

## VI ADDITIONAL INFORMATIONS

- ✓ The disassembly of accessories from the pipeline, or any other work undertaken, should only be made if the installation has been flushed, emptied and cleaned. The same precautions should be taken for disassembly, recycling or the destruction of accessories.
- ✓ The exterior of an accessory should not be in contact with corrosive fluids, which are not compatible with the materials of construction. If this is not possible, the user should ensure adequate protection. The valve should be externally inspected periodically.
- ✓ Static electricity as such has no effect on plastic accessories. Only its action on the fluid can cause a chemical reaction (explosion, combustion, etc.) which itself can cause damage to the accessory. The user must establish all methods that can limit this problem (grounding on various equipment of the installation, valves made from a material containing graphite fiber, special paints, etc.). Please contact SAFI.
- ✓ The standard actuators provided by SAFI are not approved for use in explosion proof or dangerous areas. Please contact us if necessary.
- ✓ Plastic accessories are sensitive to mechanical damage and impact, this for the duration of their life (transport, storage, assembly, etc.).
- ✓ It is forbidden to modify, drill, and machine the accessories for whatever reason. Only fusion of such additional suitable connections is permitted. The accessories cannot be used as part of a structure or as a support other than those authorized by SAFI.
- ✓ It is forbidden to engrave anything onto the accessories (cold, hot, etc.).
- ✓ The accessories are not designed for use with combustible gases: butane, propane, etc.
- ✓ Plastic accessories are sensitive to mechanical damage, fire, vibration, earthquakes, lightning, etc., and it is recommended such environmental issues are taken into account during the design/conception of the installations and positioned accordingly.
- ✓ SAFI accessories used outside of the instances mentioned in this instruction are strictly forbidden. Please consult SAFI for installations/applications not specifically mentioned in this instruction.

## VII ADRESSES

- SAFI-France BP1 – 13 Avenue Jacques Moison - 26770 Taulignan - France
- SAFI-Limited 35, Holton Road Heath Trading Park – BH16 6LT POOLE (Dorset) – Angleterre
- SAFI-DEUTSCHLAND Kunststoff-Armaturen-Vertriebs GmbH – Jahnstraße 29 – D-64319 Pfungstadt – Eschollbrücken - Germany
- SAFI-Fabrica de Valvulas S.L. C/Carboners, 35 – Pol. Ind. La cometa 43700 El Vendrell – Tarragona – Espagne
- SAFI Amérie Las Garzas Trade Center – Las Garzas #950, Galpon B – Quilicura – Santiago – Chili

**Please note:**

Data sheets for all SAFI accessories are available on request.

This notice is to be used as "instructions for use" for accessories described in Article 4.3 as well as the "conformity certificate" as per directive 2014/68/EU. These are available on request.

For those accessories refer to chapter 2, 3, 4, 5, 6 & 7 only in the current notice.

Instructions for use on other SAFI products are available at:

[www.safi-valves.com](http://www.safi-valves.com)