

## INSTALLATION, OPERATION AND MAINTENANCE MANUAL

### Rubber expansion joints



GENEBRE Reference: 2830 - 2830N - 2831 - 2831A - 2833

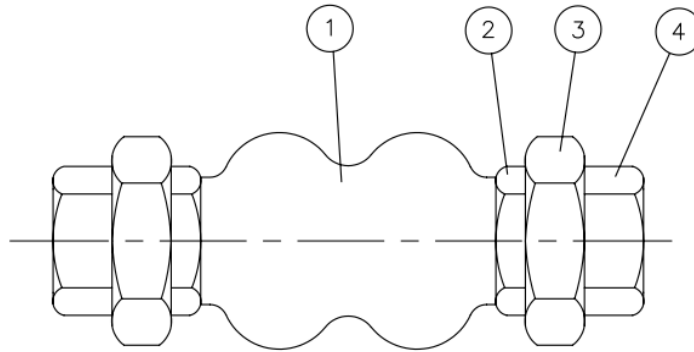
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## Installation, operation and maintenance instructions

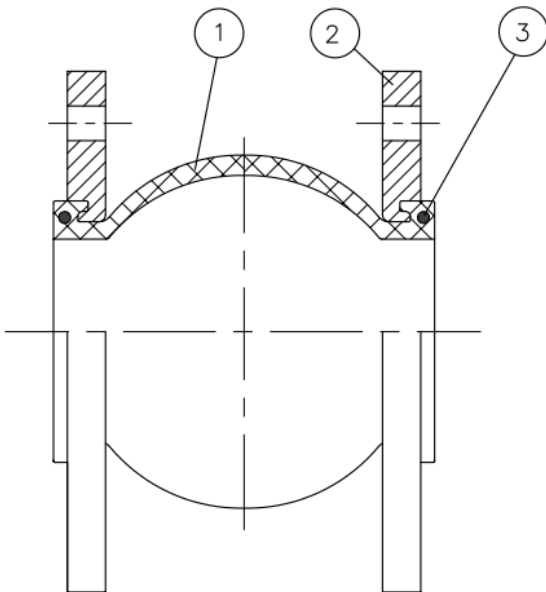
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## 1.) Breakdown

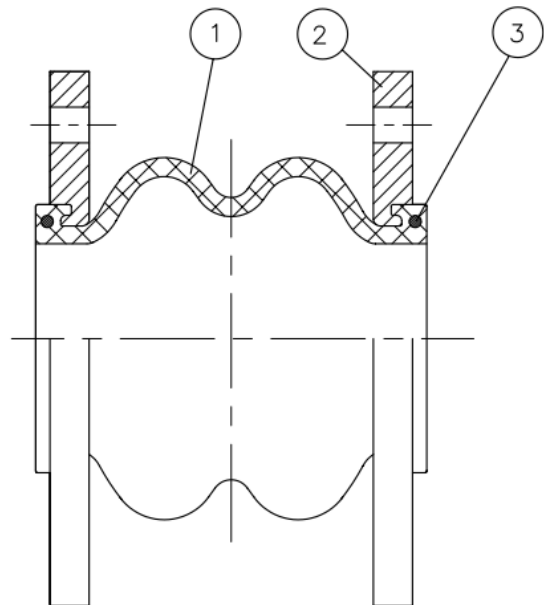
### 1.1) Drawing



**Art. 2830 / Art. 2830N**



**Art. 2831 / Art. 2831A**



**Art. 2833**

## 1.2) List of components

### Art. 2830 / Art. 2830N

Nº	Name	Material	Surface Treatment
1	<i>Body</i>	EPDM + Nylon	-----
2	<i>Clamp</i>	<i>Carbon steel</i>	<i>Zinc plated.</i>
3	<i>Union</i>	<i>Carbon steel</i>	<i>Zinc plated.</i>
4	<i>Racord</i>	<i>Carbon steel</i>	<i>Zinc plated.</i>

### Art. 2831 / Art. 2831A / Art. 2833

Nº	Name	Material	Surface Treatment
1	<i>Body</i>	EPDM + Nylon	-----
2	Flange	<i>Carbon steel</i>	<i>Zinc plated.</i>
3	<i>Ring</i>	<i>Carbon steel</i>	<i>Zinc plated.</i>

## 2) Storage

During storage, it is recommended to keep the product away from humidity, dirt, corrosive environments or direct sunlight. Do not remove the protective wrapping until joint is to be installed, to avoid damages or dirt accumulation. As much as possible, equipments must be stored in a dry and clean environment.

## 3) Installation instructions

### 3.1) Preparation

Remove any material remains of the product wrapping.  
Serious problems may arise with the installation of a joint in a dirty pipe.

Make sure the pipe is not dirty and doesn't have welding particles, for example, before installing it. This may cause irreparable damages to the elastomer when the equipment is started → *prepare a clean working area*.

Do not use sharp pointed objects when manipulating the product.

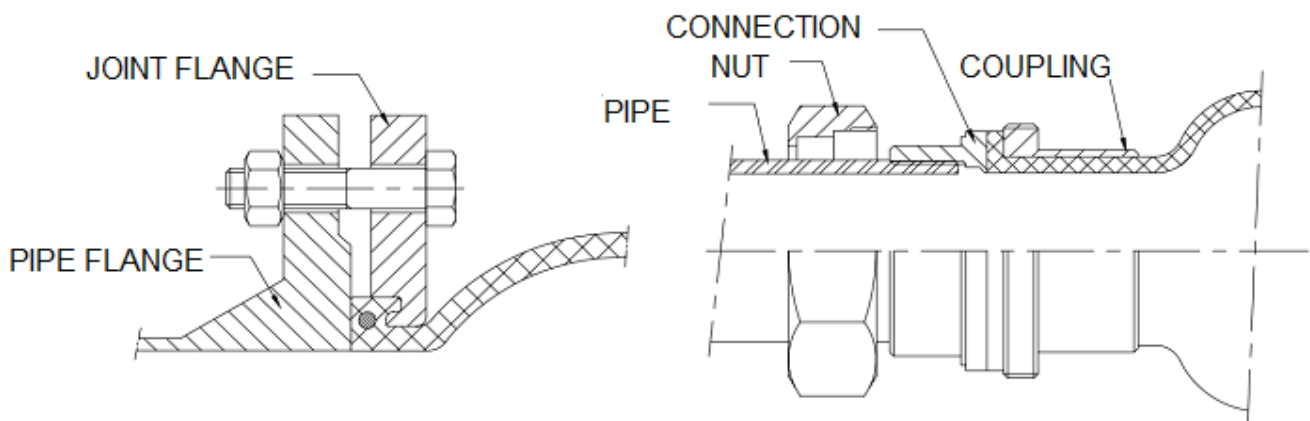
Plan beforehand enough space for future maintenance operations.

Gaskets between joints and pipe flanges are not necessary, as the elastomer is designed to keep tightness amongst them.

It is fundamental a correct selection and placement of the joint (see service settings in the technical specifications for this product) and a good anchoring and guidance of the system.

Rubber expansion joints are bidirectional and can be installed in any position.

### 3.2) Assembling



Art. 2831 / Art. 2831A / Art. 2833

Art. 2830 / Art. 2830N

### **IMPORTANT:**

- Rubber expansion joints by Genebre, S.A. are designed to be assembled between flanges DIN PN10 (art. 2831/art. 2833), flanges ANSI 150 (art. 2831A) or in a threaded GAS pipe (art. 2830) or NPT (art. 2830N)
- Generally, never install more than one joint between two fixed points
- Flanges used during assembling must be completely flat.
- Tightening of screws and nuts has to be crossed, gradual and even. To obtain more information, please consult the maximum torque values for the flanges in the table in section 7.1 of this manual.

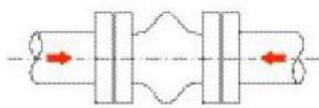
- In case of assembling through a slip-on flange (welding cable inside the pipe) it is recommended to place a joint or spacing element, as the elastomer can be damaged.
- When assembling threaded joints (art.2830 and art.2830N) make sure the union is tightened with a sealing element (PTFE tape or similar). It is also recommended not to exceed 30 Nm. torque.
- In case you want to use the joint as a way to muffle vibrations and noise in pumps, it is recommended to keep a certain distance between the joint and the pump, approximately 1 to 1.5 times the nominal diameter of the pipe
- Do not paint or lubricate the elastomer's body

## 4) Operational instructions

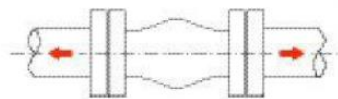
### 4.1) Operation

Rubber expansion joints provide an optimal result when used adjusted to the pressure and temperature values for which they have been designed.

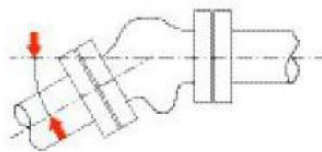
Displacements to be absorbed by joint will depend basically on the calculation done during installation design. These displacements can be in four different ways:



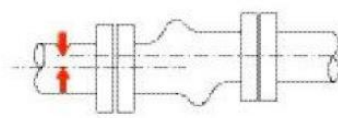
*Compresión Axial / Axial Compression*



*Elongación Axial / Axial Elongation*



*Deflexión Angular / Angular Deflection*



*Desplazamiento Lateral / Lateral Displacement*

Consult the displacement limits in the table included in the technical specifications for the product.

## 5) Maintenance operations

Rubber expansion joints are designed so that they do not require a periodical lubrication and/or maintenance. Note that their service life is limited and depends on parameters such as pressure, temperature, environmental conditions, exposure to ozone, number of cycles, materials compatibility, displacements or correct anchoring and guidance.

However, periodical checks explained below will be useful to extend the service life of the equipment and reduce installation problems:

- Verify all locks and threaded ends to check if they are loose or rusted. In case of leak, tighten as needed.
- If the leak persists, disassemble and check the state of contact surfaces and, if needed, replace the damaged pieces.
- In case the elastomer's body is excessively deformed or eroded, replace the whole product.

## 6) Reparation instructions

Before removing a valve or accessory from a pipe, always check if the line is completely drained and depressurized.

For design reasons, in case the joint is totally or partially damaged, it must be replaced completely.

## 7) Torques

### 7.1) Maximum recommended torque to tighten the flanges' screws

MEASURE	Maximum torque value (N.m.)
1 ¼" ~ 4"	50
5" ~ 6"	60
8" ~ 14"	80
16" ~ 20"	100

## 8) Hygiene and Safety Instructions

8.1) Fluid passing through a valve or accessory can be corrosive, toxic, flammable or pollutant. When operating valves, you must follow the security instructions and it is recommended to use personal protection gadgets:

- 1) Protect your eyes.
- 2) Wear gloves and appropriate working clothes.
- 3) Wear safety footwear.
- 4) Wear a helmet.
- 5) Have running water at hand.
- 6) To operate flammable fluids, make sure you have an extinguisher at hand.

8.2) Before removing a valve or accessory from a pipe, check always if the line is completely drained and depressurized.

8.3) Any valve being used by toxic services department needs to obtain a cleanliness certificate before being operated.