

Rubber Expansion Joints

Toraflex®



Why choosing the Toraflex® range of Flexible Joints?

Comeval® COMEVAL VALVE SYSTEMS, S.L. y CIA. Soc. Comandataria
 C/ta Rotes 15 | Polígono Industrial El Puig | 46100 EL PUIG (Valencia) SPAIN

DECLARATION OF CONFORMITY / DECLARACIÓN DE CONFORMIDAD
 as defined by / de acuerdo a
 Pressure Equipment Directive 97/23/EC / Directiva de Equipos a Presión 97/23/CE

For the following Pressure Equipment / Para los siguientes Equipos a Presión:

Product / Producto:
RUBBER JOINTS / MANGUITOS ANTIVIBRATORIOS

Brand / Marca: **(COMEVAL®)**
 Series: **TORAFLEX S10, S15, S20, S30**
 Applicable Standards / Normas aplicables:
EN 1092-1, EN 12266-1

Responsible for making this declaration / Responsable de esta declaración:
 Authorized representative established within the EU / Representante autorizado en la UE
 Company name / Nombre de Empresa:
COMEVAL VALVE SYSTEMS, S.L. y CIA. Soc. Comandataria
 Company address / Dirección de Empresa: **Les Rotes, 15 46540 EL PUIG (Valencia) SPAIN**

We confirm by this declaration that the range of Rubber Joints defined to the above series are products not included in the scope of European Directive 97/23/EC, in accordance with its article 1.3-15, being designed and manufactured according to the sound engineering practice in this State, which ensures its safe operation.
 Declaramos que el rango de Manguitos Antivibratorios incluido en las series anteriormente definidas queda excluido de la Directiva Europea 97/23/CE, según su artículo 1.3.15, y están diseñados y fabricados de acuerdo las buenas prácticas de la técnica en uso en este Estado, que garantizan la seguridad en su funcionamiento.

This declaration was signed in EL PUIG, on January 9, 2015.
 Esta declaración fue firmada en EL PUIG, a 9 de Enero de 2015.

Managing Director / Director Gerente:
 Director Gerente

- Strictly compliant with legal regulations, safety and reliability.
- Stringent QC with vulcanized rubber shell tests and traceability of steel materials.
- R&D experience over 30 years of manufacture.
- Wide experience in Polymer technology and industry application. Diversity of rubber grades.
- Ample know how on pipework lay out.
- Large inventory of expansion joints available in Spain.
- Large availability of accessories and options.

TORAFLEX **Comeval®**
 Les Rotes, 15 - 46540 El Puig - SPAIN

MATERIAL TEST CERTIFICATE ACC. TO EN10204/3.1

Certificate-Order No.: 11543078 Date: 01-04-15

Equipment description: **TORAFLEX RUBBER JOINTS**
 S10N DN150

BILL OF MATERIALS

S10 FLANGES	S235JR
RUBBER	NBR

FLANGES AND UNIONS MATERIAL TEST

Heat No.	Description	Qv/DN	CHEMICAL ANALYSIS %					PHYSICAL TESTS		
			C	Mn	Si	P	S	Yield Strength (kg/mm ²)	Tensile Strength (kg/mm ²)	Elongation Test (%)
II	FLANGES S235JR	1-DN150	0.22	0.18	0.21	0.012	0.024	20	41	28

RUBBERS MATERIAL TEST

Batch No.	Description	Qv/DN	Hardness Shore A	Adhesion kg/cm	Tensile Strength kg/cm ²	Elongation Test (%)
14-2071	S10 NBR Rubber	1-DN150	60	7	132	412

TEST | **PRESSURE TEST (bars)** | **RESULT**
 SH11 (HYDROSTATIC) | 16 | OK

TEST STANDARD: EN12266-1 / DN 120 PART-3
 VISUAL AND DIMENSIONAL INSPECTION SATISFACTORY IN CONFORMITY WITH APPROVED DESIGN

REMARKS:
 • UNLESS THE WHOLE PRODUCTION BATCH HAD BEEN ORDERED BY A SPECIFIC CUSTOMER, ONLY COPIES ARE RELEASED
 • ORIGINAL CERTIFICATES ARE RETAINED AT DIVERSE CENTRES FOR A FIVE YEAR PERIOD

INSPECTED BY: COMEVAL VALVE SYSTEMS, S.L. y CIA. SOCIEDAD COMANDATARIA
 C/ta Les Rotes, 15 | Polígono Industrial | 46540-EL PUIG (Valencia) | Spain
 Tel.: 96 88 11 11 | Fax: 96 88 11 77 20

QUALITY CONTROL | INSPECTED: | WITNESS / NOTIFY BODY (IF ANY)

Rubber Joints are excluded from the Pressure Equipment Directive PED 97/23/CE, according to its article 1.3-15.



Full turned rubber design, self-sealing, no additional gaskets are required. It prevents electrolytic corrosion



Rubber material identification and maximum service pressure and temperature.



Inner Reinforcement placed in between the outer and inner layers. Made of nylon plaited fabrics as standard.

Toraflex®- A comprehensive portfolio of flexible expansion joints for pipework systems

S10 Single sphere Expansion Joints

DN25 - DN1200 / PN10-16 / Flanged to EN1092-2 type 21/B, PN10/16 / Marking: EN19 / Pressure Tests: EN12266-1



- Loose flanges for easy assembly.
- Precision injection molded of synthetic rubber and nylon.
- 4 different allowable movements: axial compression and expansion, lateral and angular deflection.
- Outer layer protects the bellows surface from eventual ozone attack.
- Spherical design for better strength and efficiency.

S15 Single sphere Expansion joint, single length

DN25 - DN300 / PN10-16 / Flanged to EN1092-2 type 21/B, PN10/16 / Marking: EN19 / Pressure Tests: EN12266-1



- Loose flanges for easy assembly.
- Precision injection molded of synthetic rubber and nylon.
- 4 different allowable movements: axial compression and expansion, lateral and angular deflection.
- Outer layer protects the bellows surface from eventual ozone attack.
- Spherical design for better strength and efficiency.

S20 Double Sphere Expansion Joints

DN25 - DN600 / PN10-16 / Flanged to EN1092-2 type 21/B, PN10/16 / Marking: EN19 / Pressure Tests: EN12266-1



- Loose flanges for easy assembly.
- Precision injection molded of synthetic rubber and nylon.
- 4 different allowable movements: axial compression and expansion, lateral and angular deflection.
- Outer layer protects the bellows surface from eventual ozone attack.
- Spherical design for better strength and efficiency.
- Double sphere design allows greater axial, lateral and angular movements subject to less effort and material wearing down during movements.
- With optional root ring

S30 Threaded unions Expansion Joints

DN25 - DN1200 / PN10-16 / Threaded to EN10266-1, GAS-Rp-BSPP/ Marking: EN19 / Pressure Tests: EN12266-1



- Light and easy to install.
- Precision injection molded of synthetic rubber and nylon.
- Outer layer protects the bellows surface from eventual ozone attack.
- Spherical design for better strength and efficiency.
- Double sphere design allows greater axial, lateral and angular movements subject to less effort and material wearing down during movements.
- With root ring as standard.

Rubber materials

EPDM, NBR/CR, NBR, PTFE/EPDM, HYPALON, VITON, NEOPRENE

Applications

Marine: Fresh water generators, machine room equipment, marine engines, on deck systems, water cooling lines, lubricating circuits...

H.V.A.C: Heating, ventilating and air conditioned, specially absorbing vibrations and noise caused by pulsating pressure stations, cooling towers, condensers, chillers, compressors, rooters...

Power: Hydroelectric plants, turbine lines, cooling towers, condensate lines and deaireators...

Water Works and Environmental Services: Water treatment plants, pollution filters, strength balance in sewage lines, centrifugal rooters, sludge pumping lines...

Process Industry: slurries, solvents and other chemical compounds...



End Bellows Reinforcement. Hardened steel wires to provide a greater consistence to the bellows outer neck.



Limit rods can control joint bellow over-extension and/or over-compression. Limit rods can be used for vacuum service in combination with vacuum rings.



Root ring. for increasing strength.

Options within the Toraflex® range



Flanges

ANSI class 150# standard, Stainless Steel material, Hot dip galvanized.



Spool Joints

Special construction spools for civil construction and plant machinery



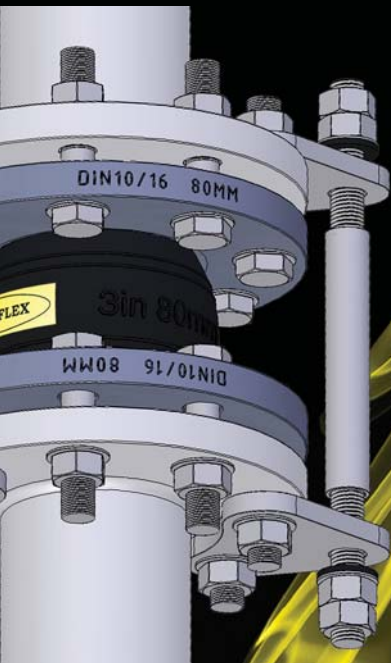
Metal Joints

S25 and S50 stainless steel bellows, double corrugated layer, inner sleeve for gaseous and higher temperature media.

Typical applications and allowable movements:

- EPDM rubber bellows:
- Fresh and sea water, hot water in HVAC installations.
- NBR rubber bellows:
- Kerosene, oils and fats.
- Hypalon® rubber bellows:
- Acids and alkalis, chloride
- Axial movement, angular movement and lateral movement only without limiting rods.

On site and Off site after market service and engineering support



We provide engineering application on installation and pipework layout upon request. Our support also includes general arrangement drawings, fluid compatibility tables, Operating and Maintenance Instructions and Certificates.



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