

**TORAFLEX® RUBBER JOINTS**  
**S10 - S15 Single Sphere Type**  
**Attributes of Design**



1 Spherical design for better strength and efficiency.

8 Light and easy to install, little installation space required, easy maintenance of replaceable bellows.

2 Precision injection moulded of synthetic rubber and nylon.

7 - 4 different allowable movements: axial compression and expansion, lateral and angular deflection.

3 Outer layer protects the bellows surface from eventual ozone attack, strikes and other environmental aggressions.



6 Loose flanges for easy assembly, specially machined to accept the full turned rubber, with standard execution in zinc plated steel.

4 Rugged design with high burst pressure, to absorb noise and vibration and withstand water hammers to a certain extent by:

- Inner Reinforcement placed in between the outer and inner layers. Made of Nylon plaited fabrics as standard, which provide high shell moulding resistance.
- End Bellows Reinforcement. Hardened steel wires to provide a greater consistence to the bellows outer neck.

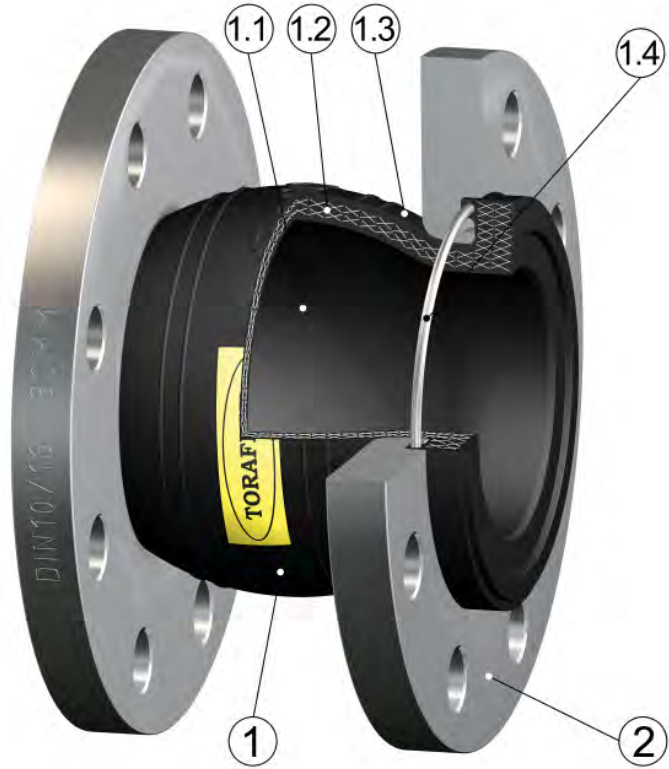
5 Full turned rubber design, self-sealing, no additional gaskets are required; it prevents electrolytic corrosion.

9 Lot number punched for full traceability purpose.

10 Rubber material identification and maximum service temperature.



**TORAFLEX® RUBBER JOINTS**  
**S10 and S15 Single Sphere Type**  
**Parts and Materials**

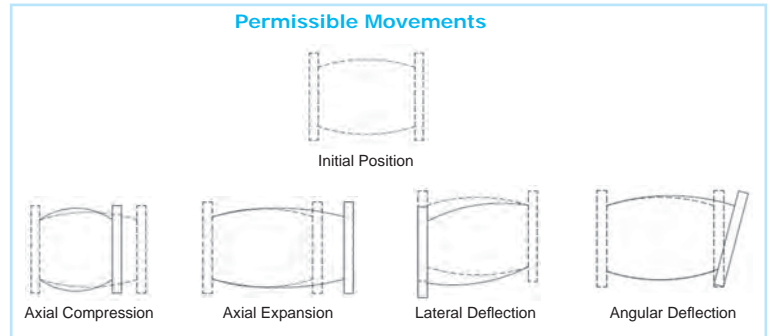
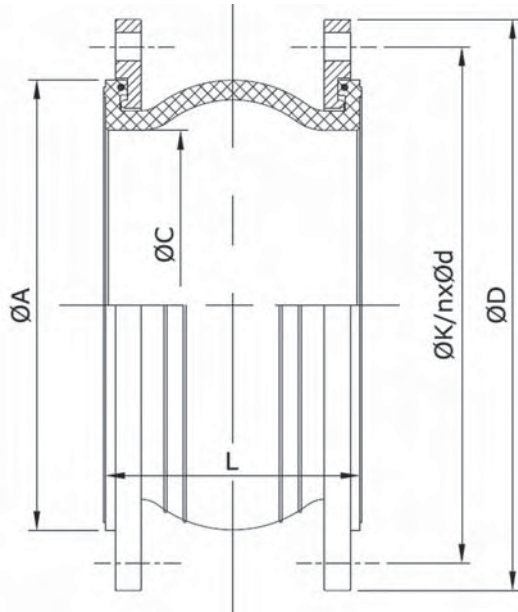


<b>1- Vulcanised Rubber Bellows:</b>	1.1 Rubber core (inner)
	1.2 Nylon tire cord
	1.3 Rubber cover (outer)
	1.4 Hard Steel Wire
Rubber options: EPDM, NBR, Hypalon, Neoprene, Viton, Butyl Rubber, Natural Rubber, PTFE/EPDM	
<b>2- Loose Flanges:</b>	
Standard Material: Carbon Steel Zinc Plated S235JR to EN10025 (old St 37-2 to DIN 17100)	
Flange Options: Stainless Steel AISI 304, AISI 316, etc.	

# TORAFLEX® RUBBER JOINTS

## S15 Single Sphere Type - Single Length

### Joint Dimensions and Permissible Movements



DN		BUILDING LENGTH (mm)		MAX. MOVEMENTS ALLOWED FROM INITIAL POSITION*				ΦA (mm)	ΦC (mm)	Approx. Weight (kg)	
Inch	mm	INITIAL (L)	TOLERANCE INSTALLED (min-max)	AXIAL COMPRESSION (mm)	AXIAL EXPANSION (mm)	LATERAL DEFLECTION (mm)	ANGULAR DEFLECTION			PN10	PN16/ASA150
1"	25	130	122-133	30	20	30	35°	60	25	4	4
1.1/4"	32	130	122-133	30	20	30	35°	68	35	4	4
1.1/2"	40	130	122-133	30	20	30	35°	68	37	4,5	4,5
2"	50	130	122-133	30	20	30	35°	86	50	5,5	5,5
2.1/2"	65	130	122-133	30	20	30	30°	106	65	7	7
3"	80	130	122-133	30	20	30	30°	118	72	8	8
4"	100	130	122-133	30	20	30	25°	152	98	9	9
5"	125	130	122-133	30	20	30	25°	182	122	11	11
6"	150	130	122-133	30	20	30	15°	213	146	13	13
8"	200	130	122-133	30	20	30	15°	262	194	19	19
10"	250	130	122-133	30	20	30	10°	323	245	24	27
12"	300	130	122-133	30	20	30	10°	372	295	29	33

Dimensions are expressed in mm, and subjected to manufacturing tolerances. Data can be altered without notice by our Design Department for the product benefit.

\* The stated movements are solely valid with the joint subject to a single movement direction. Values are proportionally reduced along with the movement combination.

\* Given tolerance installed and movements allowed are valid for rubber bellows. For bellows with PTFE sleeve, values must be reduced by 1/2.

\* Increasing temperatures reduce the permissible movements capacity and number of cycles.

### Manufacture Design Standards

- QA certified to EN ISO 9001 procedures.
- Testing procedure according to EN12266-1.
- Marking according to EN19.
- Flanges drilled to EN1092-1 PN10, PN16, or ASME B16.5 ASA150.
- Rubber Joints are excluded from the Pressure Equipment Directive PED 97/23/CE, according to its article 1.3-15.