



# Teguflex® Expansion Joints TF

## Teguflex® TF DN25 to DN600

### FOR ALL TYPES OF INDUSTRIAL APPLICATIONS

To absorb pressure loads, relieve movement stresses, reduce noise, isolate vibration and compensate for thermal elongation and misalignment.

Teguflex® Expansion Joints help to prolong the life of motive equipment: air conditioning, heating and ventilation systems, in commercial, institutional or residential buildings, factories and aboard ships.

To be used in power generating stations, sewage disposal and water treatment plants; process piping in paper and pulp, chemical and petroleum refining plants

### Design

Reinforced rubber bellow available in a wide range of elastomers, equipped with rotating flanges carbon steel zinc plated

Different textile reinforcements according to the working conditions required (nylon cord, aramid, etc)

Self sealing - no need of additional gaskets

Standardized production process, to meet the most demanding applications of the market

### Pressure rating

Nominal pressure		
Condition	Max. T °C	Pressure
Max working pressure	70 °C / 90 °C	16 bar / 10 bar
Test pressure	20 °C	25 bar
Burst pressure	20 °C	> 50 bar

### Flanges

Standard drilling available: PN10, PN16, ANSI150, other norms under request

Standard material: S235 carbon steel, AISI 316 stainless steel

Finish treatment: zinc plated. Other treatments available under request: epoxy painted, hot dip galvanised

### Materials and applications of TEGUFLEX® Expansion Joints

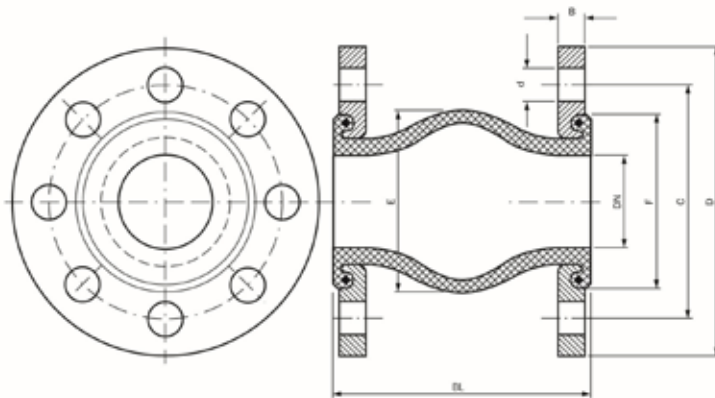
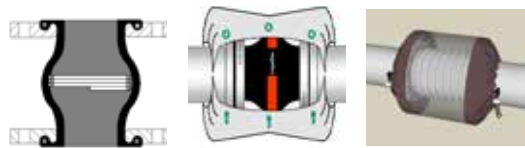
Color stripe	Temperature range	Applications
RE 	- 35/+ 90 °C	<b>WATER</b> Hot water, cooling water with salt solutions, chlorine solutions, esters and ketones.
HP 	- 35/+ 130 °C	<b>WATER &amp; STEAM</b> Hot water, steam, hot air up to 130 °C.
DW 	- 25/+ 90 °C	<b>DRINKING WATER</b> ACS - WRAS Certified
WH 	- 25/+ 90 °C	<b>FOOD</b> Food and beverages. Including fats and oils.
YE 	- 25/+ 90 °C	<b>OIL</b> Water, saline solutions, alkalis, mineral oils, vegetable or animal oils, oils aerosols, propane and butane gas, etc.
HO 	- 25/+ 120 °C	<b>HOT OIL</b> Oil, mix of water and oils, mix of compressed air and oils, etc.
BL 	- 35/+ 90 °C	<b>ABRASION</b> Abrasive materials, suspended stones, mud, calcium, etc.
GR 	- 25/+ 90 °C	<b>CHEMICALS</b> Strong and concentrated acids, etc. Compressed air and oil aerosols.
FP 	- 15/+ 150 °C	<b>CHEMICAL HIGH TEMPERATURE</b> Chemical products highly aggressive at high temperature

Maximum and minimum temperature values for the elastomer  
Check pressure and temperature rating table



## Teguflex® TF Range

Available in the most common sizes of the market, Teguflex TF range can be equipped with accessories for specific working conditions: vacuum ring AISI 316, flame guards 15540, PTFE safety shields



### Dimensions and movements

DN (mm)	BL (mm)		F	Permissible movements			Maximum vacuum	Weight (kg)		Spring rate (kg cm) ±25%	
				Axial (mm)	Lat (mm)	Ang (°)		Without vac ring (bar)	Universal (Type U)	Tied (Type L)	Axial
	P	W									
25/32	130	150	72	-30/+20	20	35°	0.8	3	4	-50/+75	50
40	130	150	80	-30/+20	20	35°	0.8	3	5	-50/+75	50
50	130	150	90	-30/+20	20	35°	0.8	4	6	-50/+75	50
65	130	150	105	-30/+20	20	30°	0.8	5	7	-50/+75	50
80	130	150	120	-30/+20	20	30°	0.5	6	8	-50/+75	60
100	130	150	140	-30/+20	20	25°	0.5	7	10	-65/+85	65
125	130	150	165	-30/+20	20	15°	0.5	8	12	-65/+85	65
150	130	150	190	-30/+20	20	15°	0.5	10	16	-75/+100	75
200	130	200	240	-30/+20	20	15°	0.3	15	24	-100/+150	100
250	130	200	290	-30/+20	20	10°	0.3	20	34	-100/+150	100
300	130	200	340	-30/+20	20	10°	0.3	24	45	-100/+150	100
350		200	425	-30/+20	20	10°	0.3	32	54	-100/+150	100
400		200	470	-30/+20	20	10°	0.3	45	71	-100/+150	100
450		200	510	-30/+20	20	10°	0.3	52	81	-150/+200	150
500		200	560	-30/+20	20	10°	0.3	63	100	-150/+200	150
600		200	655	-30/+20	20	6°	0.3	95	140	-175/+250	175

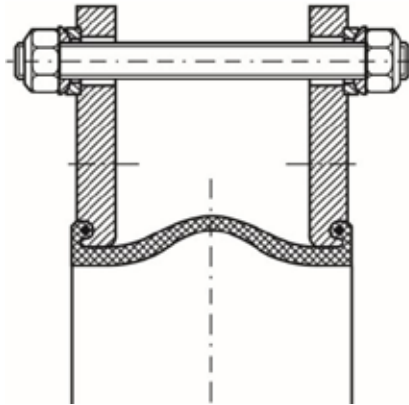
**Note:** maximum values do not apply simultaneously.

The use of tie rods as a protection from improper anchoring of the pipe must be avoided



## Type U Universal Type

Allows movement in all directions:  
axial compression, axial extension,  
lateral and angular



## Type L With tie rods

Tie rods are used to minimize possible damage to the expansion joint caused by excessive motion of the pipeline. They control axial extension, and block angular displacement



### With spherical washers

Spherical washers equal axial and lateral load distribution smoothly  
Recommended for relevant lateral movement  
The nuts and washers can be placed to block extension completely, or partially limit this displacement



### With rubber bushes

For vibrations  
Small diameters only



Expansion joint with tie rods blocking axial extension

## Teguflex® TF

### QUALITY AND CERTIFICATIONS

Available with Type approvals DNV-GL (Der Norske Veritas) and ABS (American Bureau of Shipping)

PED 2014/68/EU (Pressure Equipment Directive) compliant

Certifications for specific elastomers are also available: ACS and WRAS for drinking water, FDA for food use. ATEX for safe use in potentially dangerous environments

ISO 9001, ISO 14001, ISO 45001

