

WE ARE EXPERTS IN RUBBER

Trelleborg have over a hundred years' experience in the manufacture of rubber products. We make major investments in R+D. Our sales representatives, chemists and engineers are striving to find better solutions for our customers through the ongoing development of new compounds, materials, designs and production methods. The Trelleborg Group has more than 22.000 employees and is established in over 40 countries

A comprehensive programme for construction :
Structural Bearings, Deck Joints for Bridges (Transflex®), Piping Compensators (Teguflex®), Special Hoses, Rubber-Metal Mouldings.



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TRANSFLEX®

HIGH MOVEMENT SEISMIC JOINTS FOR BRIDGES





In 1964 the American rubber manufacturer General Tire developed a system of expansion joints for bridges called "TRANSFLEX®". It registered the patent of invention and the trademark worldwide.

In 1971 the Expandite Division carried out the first installation in Spain with TRANSFLEX® material (Bailen-Ferraz flyover in Madrid). In 1997 the Trelleborg Group integrated the Expandite Division into its organisation.

At the present time Trelleborg IESA, a company within the TRELLEBORG Group, has the rights of ownership of the trademark, manufacture and distribution, which are carried out through its Expandite Division.

In Trelleborg IESA we have invested heavily in R+D, and because of this and our desire to improve and innovate we have expanded our product range as far as bridge joints are concerned by developing a new expansion joint system for bridges, the Transflex 1600 to 6400 high movement models.

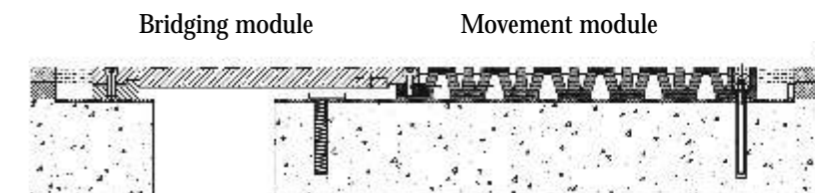


Models

There are various models of this type of joint available, depending on the movements they must absorb and the width of the structural opening they must bridge.

Their design is based on the same TRANSFLEX® principle, with three special features:

- A bridging module, formed by a robust part, whose task will be to bridge and support the traffic on the structural opening.
- A movement module, formed by steel reinforced rubber, whose task will be to absorb the specified movements.
- Safety anchor bars which, located longitudinally to the highway, prevent deformations and possible sagging in the movement modules.
- Two available versions: one a symmetrical model and the other asymmetrical, the symmetrical model for joints between bridge decks and the asymmetrical model for joints between the deck and abutment.



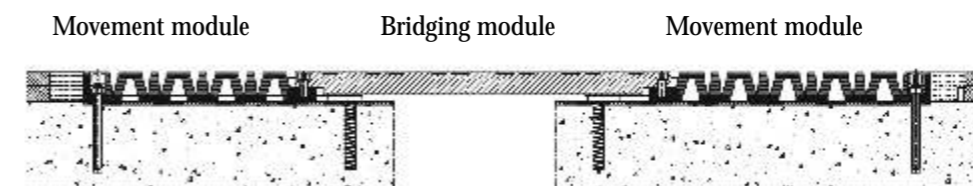
Due to the large spans provided by the new structures and the criteria used to calculate and design the same, it was necessary to create systems capable of supporting ever increasing movements. Here we do not refer to these joints simply as expansion joints, as hitherto, but as seismic joints, in order to allow for the earthquake phenomenon that is increasingly being taken into account throughout the world.

The new models of High Movement Transflex joints have been designed for total lengths ranging from 400 to 1600 mm. By increasing the available range of movements to meet practically every requirement, thereby providing the option of using steel reinforced rubber joints instead of metal joints, which have been used up till now, with all the advantages this brings, particularly in terms of preservation and maintenance work.

The High Movement models have been developed on the basis of the Transflex® principle and are formed by two modules, the movement module and the bridging module.

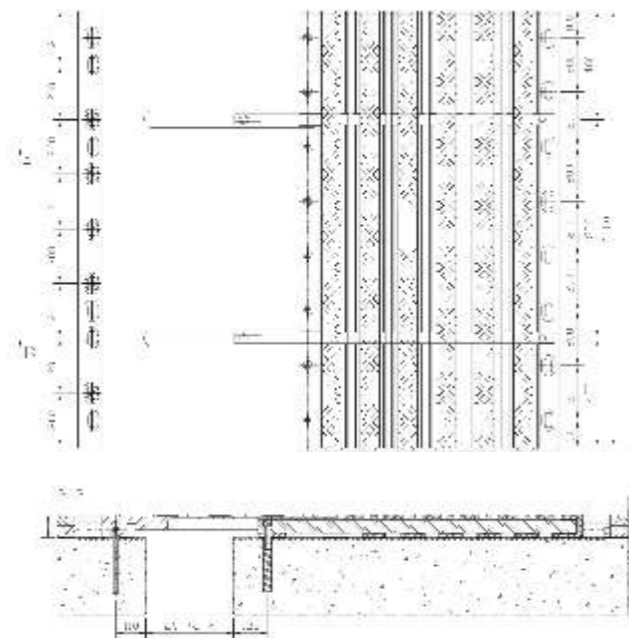
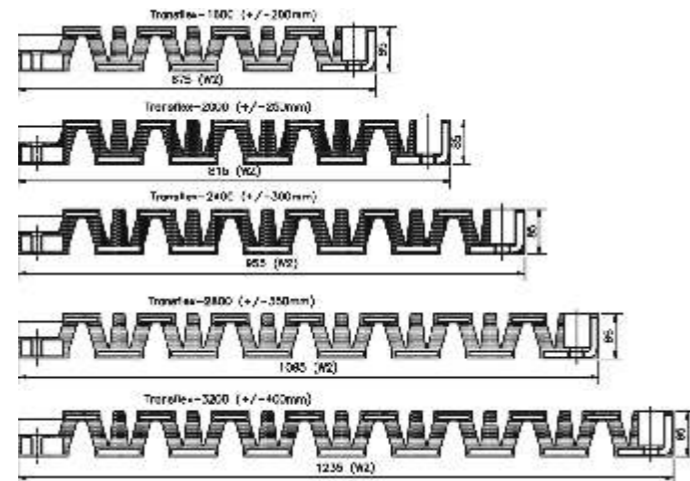
The movement module is the "mobile" section consisting of rubber and steel, and has the task of adjusting to the movements expected.

The bridging module is the "fixed" section, its task being to bridge the structural opening.



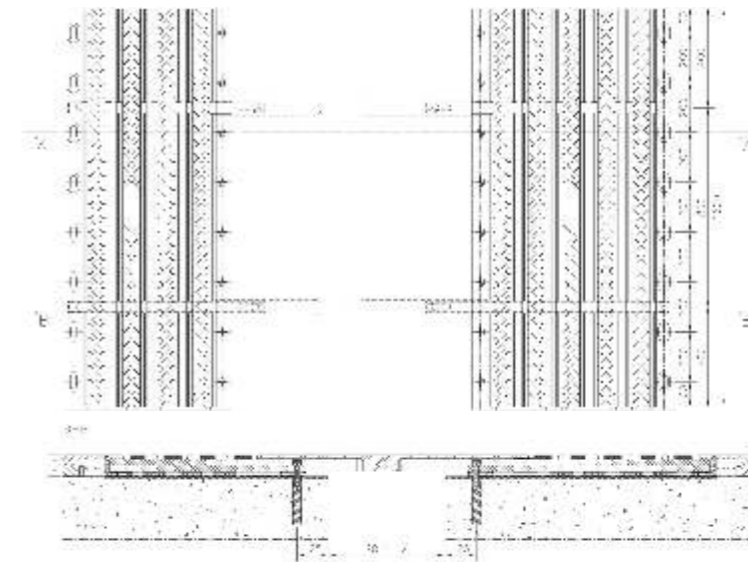
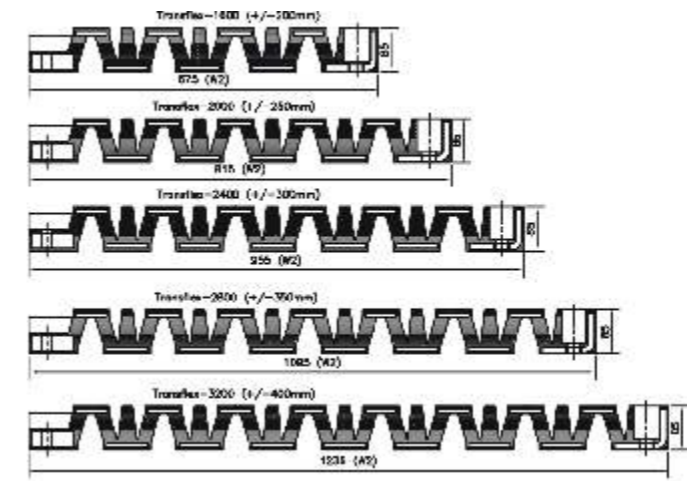


Transflex® 1600-3200 expansion joints for bridges



Model	Movement (mm)	L (mm)	t (mm)	Wt (mm)	W1 (mm)	W2 (mm)	M	C at mid temp (mm)	X (mm)
Transflex 1600	400 (+/- 200)	1600	85	1280	665	675	M20	220	420
Transflex 2000	500 (+/- 250)	1600	85	1520	765	815	M20	270	520
Transflex 2400	600 (+/- 300)	1600	85	1760	865	955	M20	320	620
Transflex 2800	700 (+/- 350)	1600	85	2000	965	1095	M20	370	720
Transflex 3200	800 (+/- 400)	1600	85	2240	1065	1235	M20	420	820

Transflex® 3600-6400 expansion joints for bridges

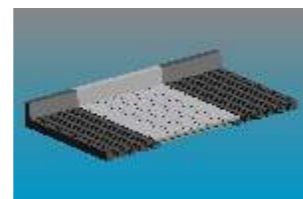
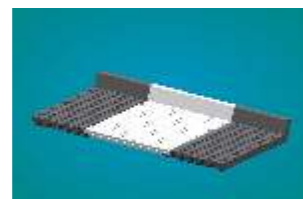
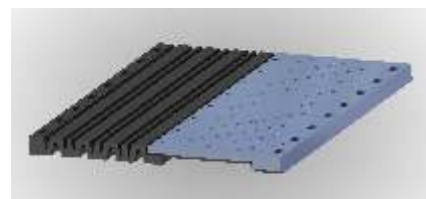


Model	Movement (mm)	L (mm)	t (mm)	Wt (mm)	W1 (mm)	W2 (mm)		M	C at mid temp (mm)	X (mm)
						wa	wb			
Transflex 3600	900 (+/- 450)	1600	85	2460	1090	675	815	M20	470	920
Transflex 4000	1000 (+/- 500)	1600	85	2700	1190	815	815	M20	520	1020
Transflex 4400	1100 (+/- 550)	1600	85	2940	1290	815	955	M20	570	1120
Transflex 4800	1200 (+/- 600)	1600	85	3180	1390	955	955	M20	620	1220
Transflex 5200	1300 (+/- 650)	1600	85	3420	1490	955	1095	M20	670	1320
Transflex 5600	1400 (+/- 700)	1600	85	3660	1590	1095	1095	M20	720	1420
Transflex 6000	1500 (+/- 750)	1600	85	3900	1690	1095	1235	M20	770	1520
Transflex 6400	1600 (+/- 800)	1600	85	4140	1790	1235	1235	M20	820	1620



Characteristics

- The joint absorbs movements up to 1,600 mm in length.
 - Modules rubber coated to protect the reinforcements .
 - They ensure comfortable travel over the joint.
 - Extraordinary durability.
 - Possibility of absorbing skew movements.
- “Transflex Type” installation. Does not require special work beforehand on the site, such as slotting or the arrangement of notches.
 - Easy, fast assembly when replacing old joints.
 - Impact loads are fully absorbed by the system.



TECHNICAL DATA

ELASTOMER	Value	Units	Test method
Indentation hardness	60±5	Shore A	ASTM D2240
Breaking load	150	Kgs/cm ²	ASTM D412
Elongation at rupture	425	%	ASTM D412/NFT46002
Rubber-steel adhesion	11,8 min	N/mm	ASTM D429 Method B
Low temperature resistance	-30	°C	ASTM D1329
Ozone resistance	No cracks		ASTMD1149 Method B 25ppcm (48 hours at 38°C)
Remanent deformation	35	% final maxim.	ASTM D395 Method B (24 hours at 70°C)
Thermal aging	5 -15 -25	Shore A % Inc. Loading % Inc. Elongation	ASTM D573 by hot air (70 hours at 70°C)

STEEL

Components manufactured to: ASTM Type A36
DIN 17-100 Type ST 37-2



NOTE:-

All reasonable care has been taken to provide the correct technical data on our products. All recommendations or suggestions regarding their use are made in good faith and are based on our experience. However, it is the responsibility of the user or designer to ensure that each product is suitable for the purpose for which it is intended and that the conditions of use are appropriate.

