MULTIFLEX EXPANSION JOINT

Technical Sheet Reference : FT A 0023 - 2006 09 18

GENERAL DESCRIPTION

The MULTIFLEX joints are flexible bridge expansion joints in which the thrust caused by the structure is taken up by the deformation of the elastomer parts. MULTIFLEX joints are made of molded elastomer elements, vulcanized and bonded to metal inserts designed to take up the running loads and distribute attaching forces. These elements are supplied in lengths of 2 meters up to the S250 model and in 1 meter lengths for the S350. They are subsequently connected to one another by a high quality adhesive joint to form a continuous, sealed and lasting sealing joint.

A RANGE, TWO TYPES

The range caters to two types of design : single module joints and bridged joints.

Single module joints
With this type of joint, the gap is bridged by a central insert supported by two elastomer strips absorbing the applied deformations. This design covers the movement range up to 150 mm.

The S80, S100 and S150 joints are designed to the same principle.

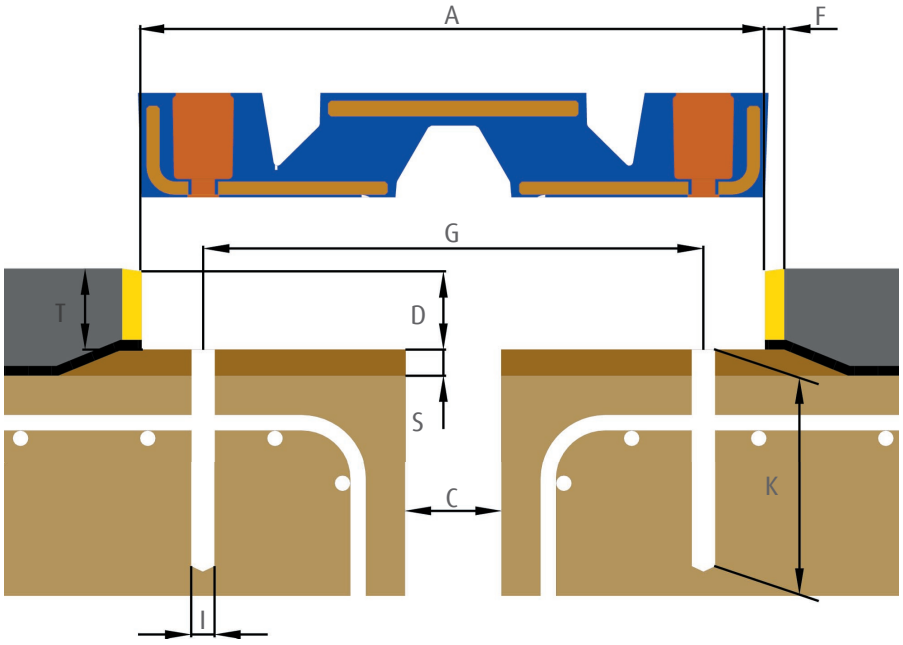
Bridged joints
With this type of joint, gap bridging and deformation functions have been separated :

- Running loads are brought to the gap by a strengthened central insert,

- The movement is taken up on either side by modules designed in the same way as a single module joint.

The S200, S250 and S350 joints address the movement range included between 200 and 350 mm.

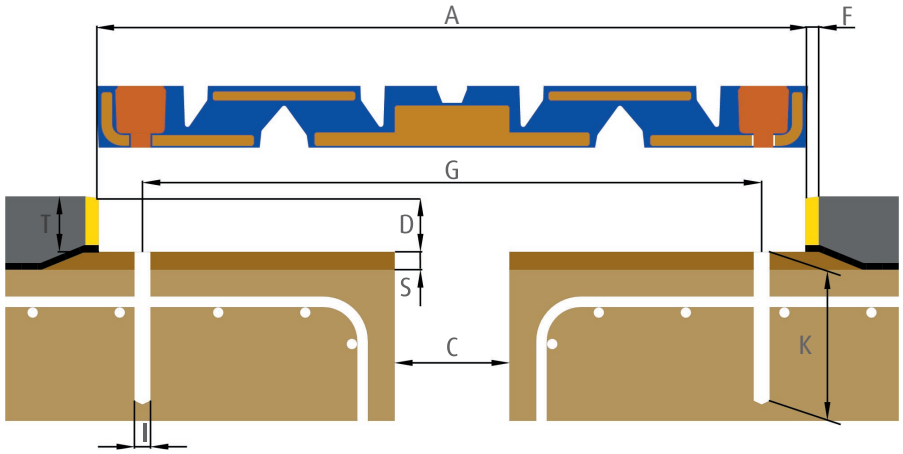
SINGLE MODULE JOINTS



Type	Movement		Size			Anchor	Seal	Entr' axes	Gap	Drilling	Weight
	±	Total	A	D	L	Ø / E	F	G	C	I / K	kg
S 80	40	80	357	46	2000	M16/165	10	270	60	18/125	71
S 100	50	100	391	53	2000	M16/165	15	300	70	18/125	85
S 150	75	150	485	80	2000	M16/165	20	385	90	18/125	166

Note that T = D + 2 mm (all sizes are given in mm)

BRIDGED JOINTS



Type	Movement		Size			Anchor	Seal	Entr' axes	Gap	Drilling	Weight
	±	Total	A	D	L*	Ø / E	F	G	C	I / K	kg
S 200	100	200	800	69	2000	M20/220	20	700	140	24/170	356
S 250	125	250	890	78	2000	M20/220	20	790	160	24/170	422
S 350	175	350	1105	100	1000	M24/290	20	980	220	28/210	318

*L : length of the element (all sizes are given in mm)

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ADVANTAGES OF MULTIFLEX JOINTS

- **Comfort**

The user benefits in terms of comfort coming from the materials, designed specifically to soften the impact of vehicles wheels and flexibly absorb running surface irregularities.

- **Safety**

The upper face of the joint has non-skid grooves to offer users optimum safety.

- **Flexibility**

The MULTIFLEX joint is particularly capable of dealing with transversal and vertical movements as well as rotations of the bearing structures.

- **Fast installation**

MULTIFLEX joints do not require space to be left in the structures and are fitted directly into the thickness of the revetment.

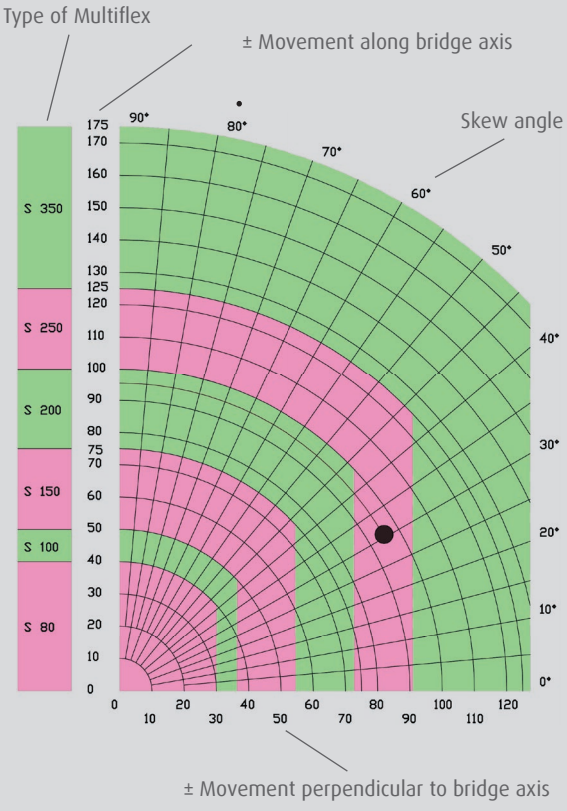
- **Durability**

All the metal parts are fully coated by an elastomer to guarantee outstanding resistance to corrosion

SKEW

The MULTIFLEX joint is designed to be totally adapted to skewed bridges. The following graph indicates the effective capabilities of each bias angle model.

For instance, the model having to take up ±95 mm in the axis of the bridge with a bias of 30° will be S250.



MATERIAL CHARACTERISTICS

The metal inserts are of steel grade S235 as per standard EN 10025. The leading properties are :

- Elastic limit : 235 N/mm²
- Breakage limit : 360 N/mm²

The elastomer used has the following main characteristics :

Characteristic	Specification	Standard
Hardness (ShoreA)	47	ISO 48
Tensile strength (N/mm²)	≥ 19	ISO 37
Elongation on breakage (%)	≥ 450	ISO 37
Tearing strength (N/mm)	≥ 20	ISO 34.1
Resilience (%)	≥ 30	ISO 4662
Compression set for 24h at 70°C (%)	≤ 20	ISO 815
Abrasion (mm3)	≤ 170	ISO 4649
Resistance to ozone for 48h 50 ppcm 20% elong.	No cracking	ISO 1431/1

INSTALLATION

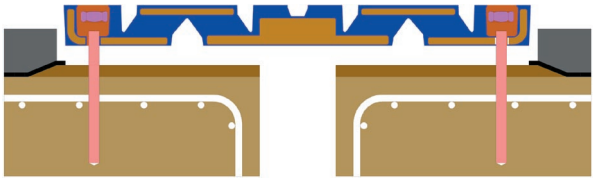
1. Revetment sawing

2. Recess clearing

3. Levelling

4. Drilling

5. Elements installation



6. Finition