

ROAD JOINTS

WM EXPANSION JOINT

Data sheet n°: CV1-7



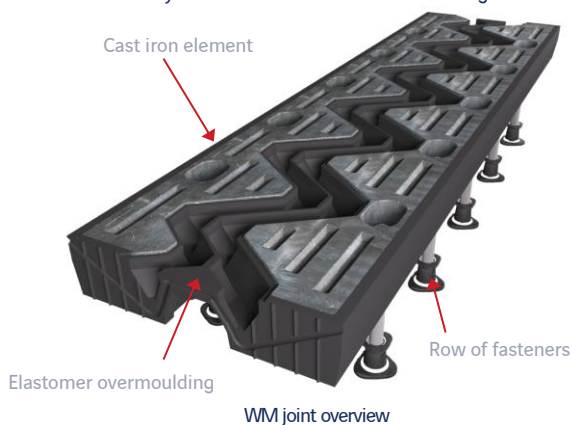
- Robust
- Watertight
- Easy maintenance
- Noise reduction
- Corrosion protection
- User comfort

Introduction

Expansion joints for road bridges are used to ensure the continuity of the running surface and its load bearing capacity (safety and comfort of the users) while guaranteeing the structure freedom of movement.

Description

The WM joint is a one-piece cantilever saw-teeth joint, comprising metal elements designed to accommodate moving loads at the gap. The inserts are elastomer-coated on surfaces not subject to abrasion, to protect against corrosion. The running surface is made from corrosion-resistant cast iron. The waterproof membrane, although very close to the road surface to enable removal of debris, does not come into direct contact with vehicle tyres. The elements are one metre long.



Advantages

- **Robustness**, based on optimised shapes for the high-grade cast iron element
- **High durability**, owing to efficient tension control bolts
- **Perfect road surface continuity** due to the triangular saw-teeth enabled operation with no gap, to ensure user comfort and significantly reduced noise over the joint
- **Easy maintenance** and **reduced traffic disruption** due to the easily accessible anchor bolts and one-meter long sections for removal of the joint if necessary, without interrupting traffic except on the affected lane
- **Corrosion protection** owing to the cast iron properties and elastomeric coating (socket)
- **Waterproofing** ensured by a continuous rubber membrane underneath the elements

Installation

The WM joint is installed on site by expert Freyssinet teams. The metallic elements of the joint are securely anchored to the structure using prestressed fasteners. Installation of the complete line can be done in one phase or lane by lane, to avoid traffic interruption. To guaranty perfect levelling with the road surface, joints are installed after the asphalt has been applied.

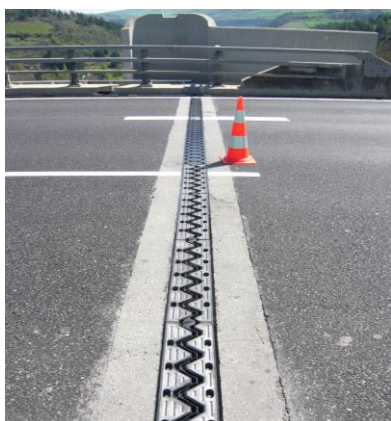


WM80 installed on Carennac bridge over the Dordogne river

Applications

WM joints can be used for all types of structures:

- Concrete, steel, and composite structures
- Slab, cable-stayed, suspension, lifting or tilting bridges
- New build works
- Best fit as like-to-like replacement for the former M joint in case of repair works

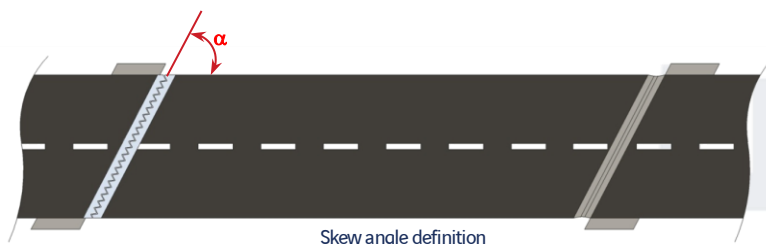


Marvejols A75 highway bridge (France) equipped with WM100

Movement range

The movement capacities of the WM range will vary according to the skew angle, i.e. the angle between traffic direction and longitudinal axis of the joint (in mm).

Type\skew angle	Straight 100 gr	90 gr	80 gr	70 gr	60 gr	50 gr
WM80	80	80	84	88	68	49
WM100	100	101	105	88	68	49



Skew angle definition

The transverse movement capacity of WM80 and WM100 is +/- 20 mm.

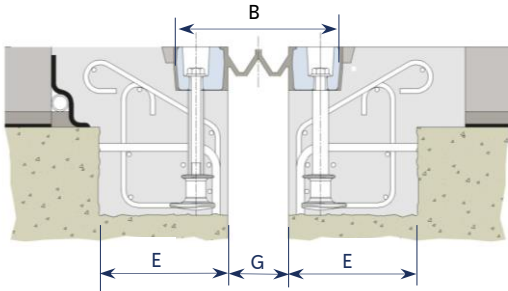
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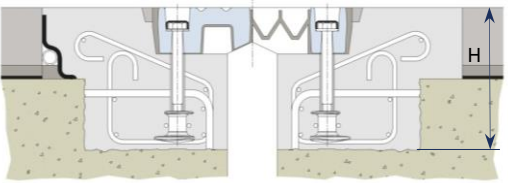
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WM EXPANSION JOINT

General dimensions



WM80 cross section



WM100 cross section

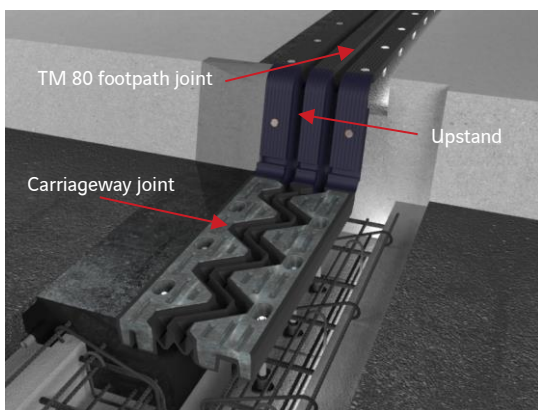
Type	B		G		E	H
	mini	maxi	mini	maxi		
WM80	165	245	10	80	170	210
WM100	225	320	15	115	200	210

Dimensions in mm

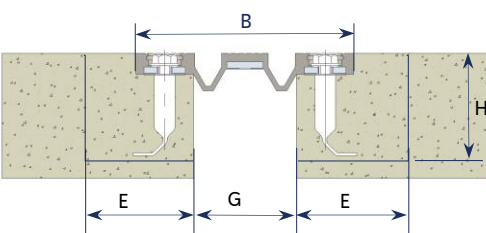
Add-ons

To complete the overall waterproofing of the carriageway joint and to ensure continuity of the joint treatment on non-traffic areas, the following add-ons are available:

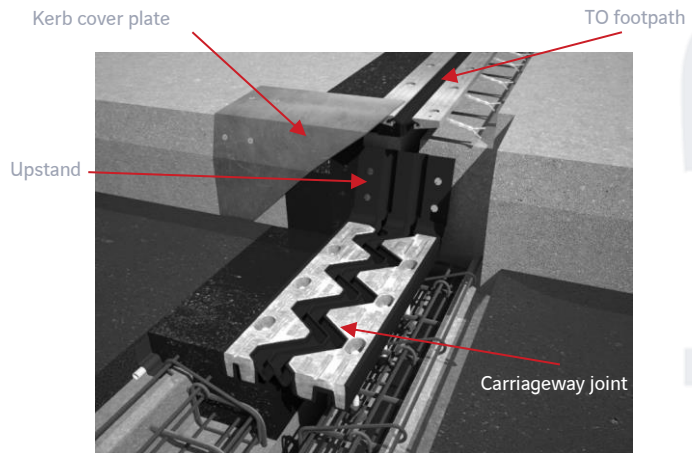
- Footpath joint
- Upstand and kerb
- Drain



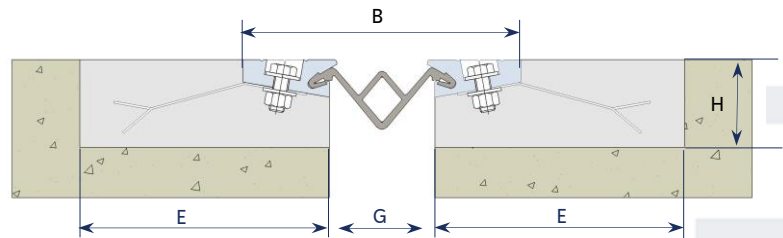
WM with M footpath



M Footpath rubber element



WM with TO footpath



TO Footpath aluminium profile

Type	Model	B		G		E	H
		mini	maxi	mini	maxi		
WM80	TO80	150	230	12	92	150	70
WM80	M80	110	190	10	90	175	100
WM100	TO100	150	250	12	112	150	70
WM100	M100	155	255	15	115	175	100

Dimensions in mm



WM80 in the process of installation, Orly Airport (France)