ROAD JOINTS

# WRB EXPANSION JOINT

Data sheet n°: CV1-3

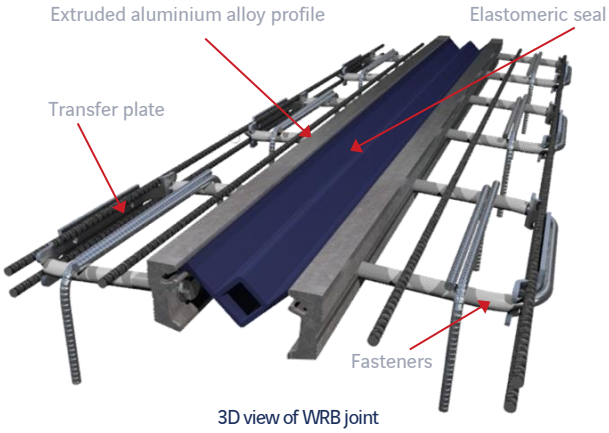
- Easy to install
- Watertight
- Cost-effective
- 3 axis movement capacity

## 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 WRB joint belongs to the nosing joints range and comprises two extruded aluminium alloy profiles supplied in 3-metre lengths and laid face-to-face.
These elements are anchored by a series of slightly inclined fasteners in reinforced micro-concrete beams bonded to the main structure by seam reinforcement bars. These fasteners include U-shaped anchors with a load transfer plate. These units are installed end-to-end to form the joint line. A continuous elastomeric seal completes this assembly.




3D view of WRB joint

## Applications

WRB joints can be used for all types of structures:

- Concrete, steel, and composite structures.
- Slab, cable-stayed, suspension, lifting or tilting bridges
- New build or repair works

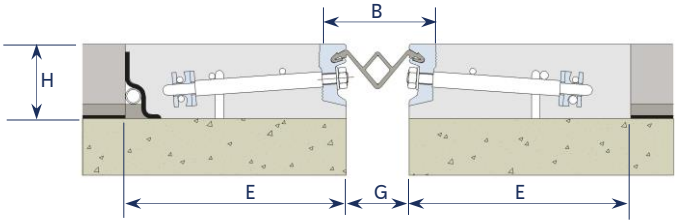
## Advantages

- **Easy to install**: the WRB joint is placed within the revetment thickness of the bridge. No need to create recesses.
- **Fully watertight** joint, due to the efficiency of the elastomeric continuous clamped seal
- **Three axis movement capacity**: the absence of saw teeth allows the WRB joint to move in the 3 degrees of freedom. It is therefore suitable for flexible deck, skew angle line or structure on elastomeric bearings.
- **Particularly economical**

## Models

The WRB joint is available in 3 versions: WRB50, WRB65, WRB75.
Only the geometry of the elastomeric profile changes for these 3 models.

## General dimensions




WRB joint cross section

| Type | B | | G | | E | H |
|---|---|---|---|---|---|---|
| | mini | maxi | mini | maxi | mini | mini |
| **WRB50** | 65 | 115 | 15 | 65 | 250*/200 | 60/70 |
| **WRB65** | 65 | 130 | 15 | 80 | 250*/200 | 60/70 |
| **WRB75** | 65 | 140 | 15 | 90 | 250*/200 | 60/70 |

Dimensions in mm
* in presence of a drain

WRB50 skew line

Saint-Louis Bridge, Paris (France)

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# WRB EXPANSION JOINT

## Installation

The WRB joint is installed after the surface coating, to ensure accurate joint height adjustment.

WRB joint during installation

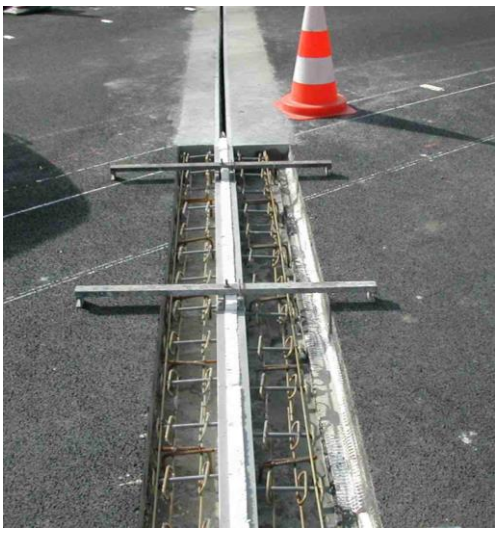
### Phasing:

- Cutting and removal of surface coating and adjustment of metal components
- Anchoring of seam reinforcement bars
- Concreting of kerfs
- Guides and formwork removal
- Anchors tensioning
- Installation of the elastomeric seal

The kerfs can be filled with a choice of materials:

- C40/50 concrete
- Ready-to-use mortar

Anchors can be prestressed when the mortar has reached a strength of 16 MPa.

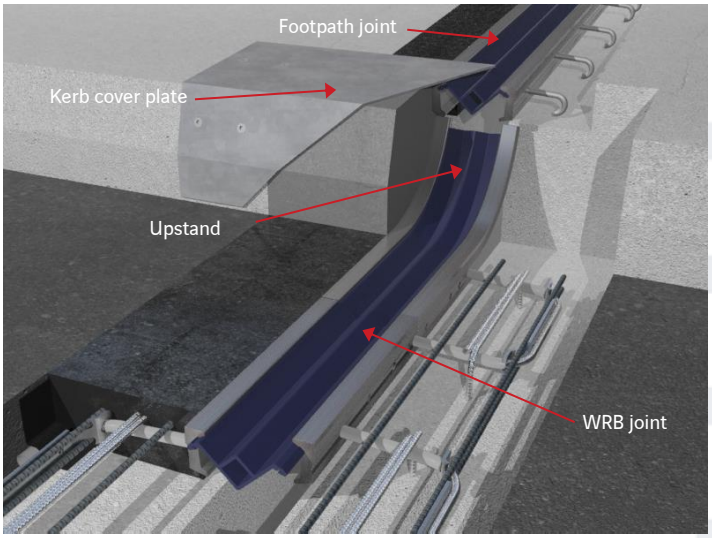


Installation lane by lane, to avoid traffic interruption

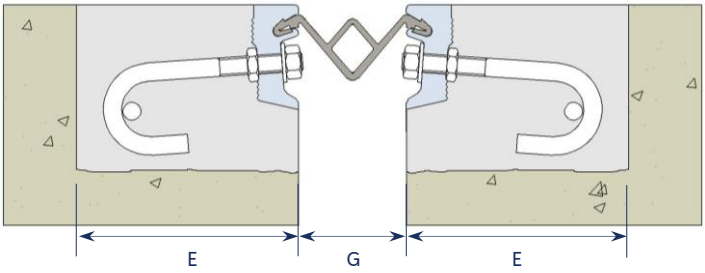
## Add-ons

To ensure general expansion joint watertightness and joint continuity on footpaths (or non-traffic areas), the following accessories are available:

- Footpath joints
- End section upstands




Upstand detail




TR Footpath

| Type | Model | B | | G | | E | H |
|---|---|---|---|---|---|---|---|
| | | mini | maxi | mini | maxi | mini | mini |
| **WRB50** | TR50 | 65 | 115 | 15 | 65 | 150 | 100 |
| **WRB65** | TR65 | 65 | 130 | 15 | 80 | 150 | 200 |
| **WRB75** | TR75 | 65 | 140 | 15 | 90 | 150 | 200 |

Dimensions in mm

## Global approach

- Specification and design services
- Manufacture by carefully selected partners
- Production supervision to ensure compliance with specifications defined
- Full installation / replacement or technical support
- Inspection and maintenance
- Certifications include ISO 9001, ISO 14001, ISO 45001