

ROAD JOINTS

Wd EXPANSION JOINT

Data sheet n°: CV1-6

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

Introduction

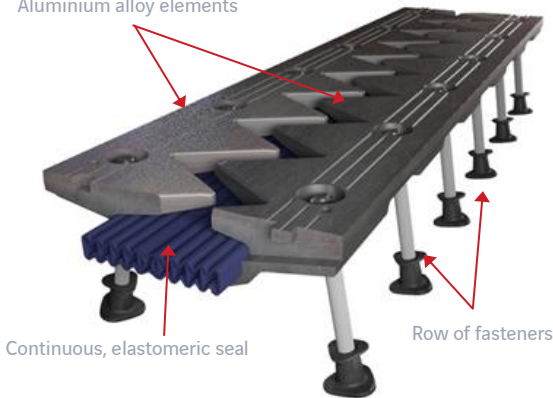
Expansion joints for road bridges are used to ensure the continuity of the running surface and its load bearing capacity (safety and comfort of the users) while guaranteeing the structure freedom of movement.

Description

The Wd joint is a cantilever joint consisting of pairs of separate cast aluminium alloy elements with triangular saw teeth. These one-metre units are installed end-to-end to form the joint line. They are anchored to the main structure by prestressed fasteners.

A continuous elastomeric seal placed between the joint elements, along the joint line, completes this assembly.

Aluminium alloy elements



Applications

Wd joints can be used for all types of structures:

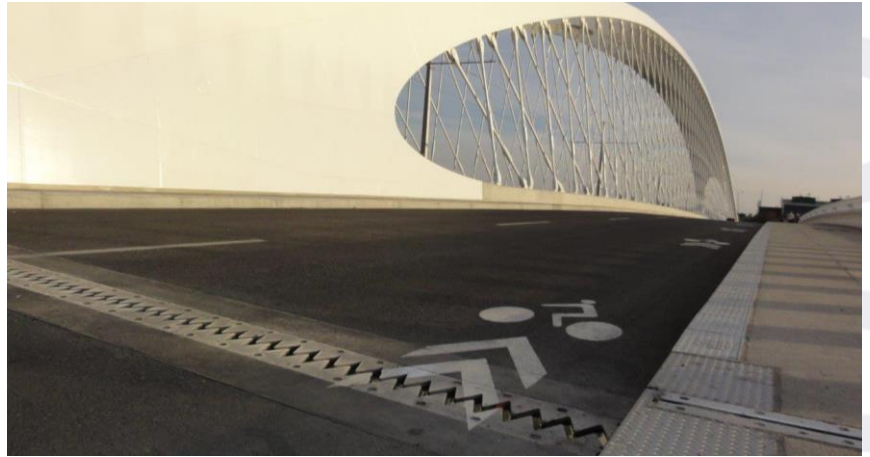
- Concrete, steel, and composite structures
- Slab, cable-stayed, suspension, lifting or tilting bridges
- New build or repair works



Chaban-Delmas lifting bridge (France), equipped with Wd110

Advantages

- **Robustness**, based on optimised shapes for the high-grade aluminium elements
- **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 units for quick removal of the joint if necessary, with no traffic interruption except on the affected lane
- **Corrosion protection** owing to the aluminium alloy properties that prevent damages from harsh weather conditions
- **Waterproofing** ensured by a continuous rubber seal



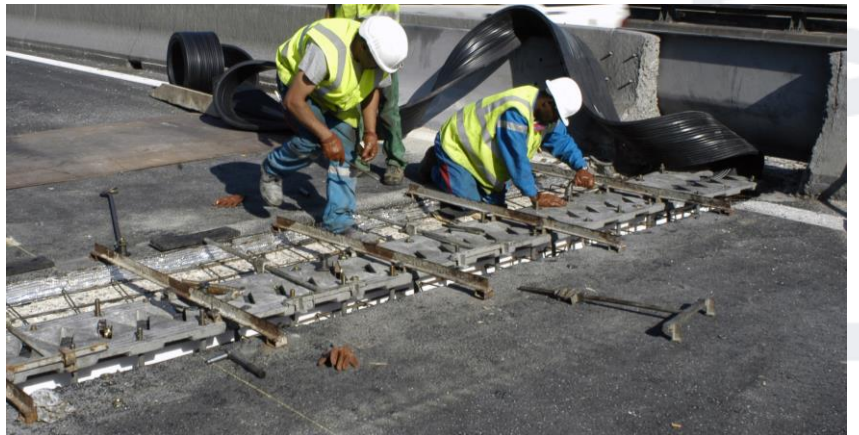
Wd 80 on Troja bridge, Czech Republic

Installation

The Wd joint is installed on site by expert Freyssinet teams. The joint's aluminium units are securely anchored to the structure using prestressed fasteners.

Installation of the complete joint 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.

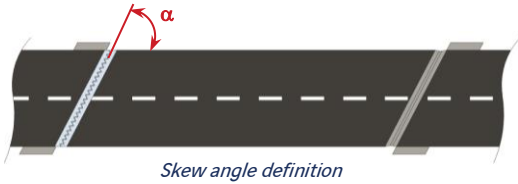


Saint-Cloud Viaduct, France – Wd160

Wd EXPANSION JOINT

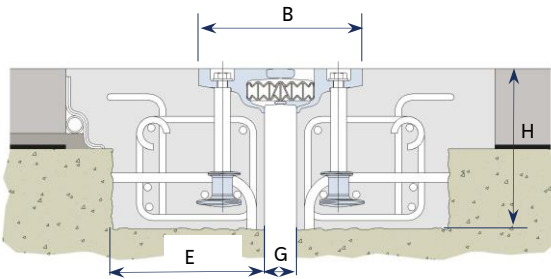
Movement range

The movement capacities of the Wd 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
Wd60	60	60	63	67	71	68
Wd80	80	81	84	89	90	87
Wd110	110	111	115	120	110	100
Wd160	160	161	168	170	157	151
Wd230	230	232	195	147	135	112
Wd320	320	233	196	157	130	128

General dimensions

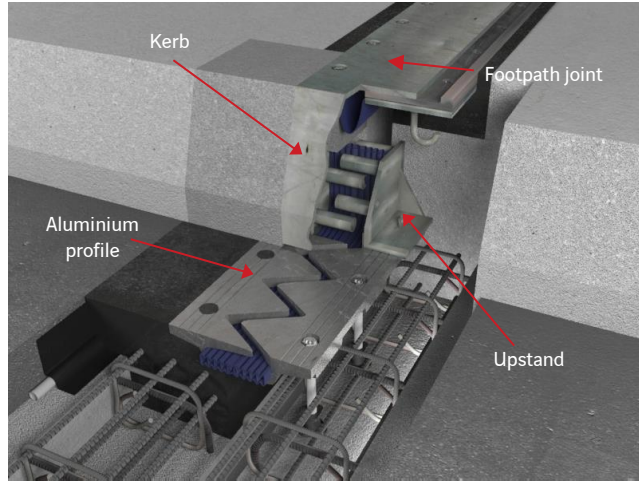


Type	B		G		E	H
	mini	maxi	mini	maxi		
Wd60	185	245	20	80	200	200
Wd80	220	300	30	110	200	200
Wd110	300	410	40	150	250	250
Wd160	400	560	50	210	300	280
Wd230	440	670	70	300	350	280
Wd320	450	770	70	390	350	300

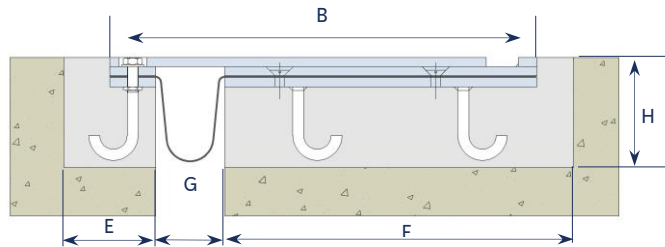
Add-ons

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:

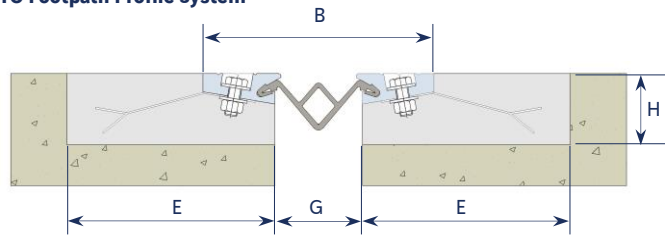
- Footpath joint
- Upstand and kerb
- Drain



PL Footpath Plate System



TO Footpath Profile System



Type	Model	B		G		E	F	H
		mini	maxi	mini	maxi			
Wd60	TO80	150	210	12	72	150	-	70
Wd80	TO80	150	230	12	92	150	-	70
Wd110	PL110	220	330	20	130	150	300	150
Wd160	PL160	280	440	30	190	150	350	150
Wd230	PL230	360	590	40	270	150	420	150
Wd320	PL350	490	810	50	400	150	540	150

Wd+

The surface of metal profiles in contact with concrete can be treated for joint lines installed in areas where de-icing by salt is frequently used. In this case, the Wd becomes Wd+.

A 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