ROAD JOINT

LW EXPANSION JOINT

Data sheet n°: CV1-10

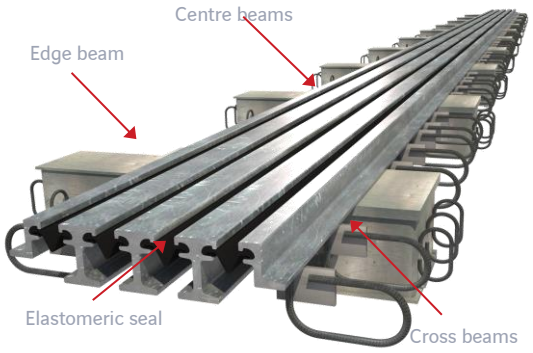
- Robust
- Very large movement
- All users
- Silent
- User comfort
- Watertight

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 LW joint is a modular expansion joint consisting of a succession of edge beams, watertight elements (elastomeric seals), movement-controlled metal centre beams, supported by moveable cross beams bridging the structural gap.



Applications

LW 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

Close-up view of noise reduction system on Nantua Bridge A40 Highway (France)

Advantages

- **Robustness:** high inertia of the beams ensures long working life
- **Perfect road surface continuity:** the top surfaces of the centre and edge beams are flush with the running surface, ensuring users' comfort.
- **Very large movements** thanks to the range of elementary elastomeric profiles chosen. Standard design up to 1,200 mm.
- **All users** (cyclists and vehicles) can ride on the LW thanks to the limited gap between the centre beams. without any additional accessories
- **Silent**: Noise reduction is achieved by adding dedicated devices installed on the running surface of the LW.
- **Watertight** units, owing to the continuous elastomeric seals

Installation of LW960 on Tancarville bridge (France)

Installation

The LW joint is installed on site by Freyssinet expert teams. Installation of the complete line can be done in one phase or lane by lane to avoid traffic. To guaranty perfect levelling with the road surface, joints are installed after the asphalt has been applied.

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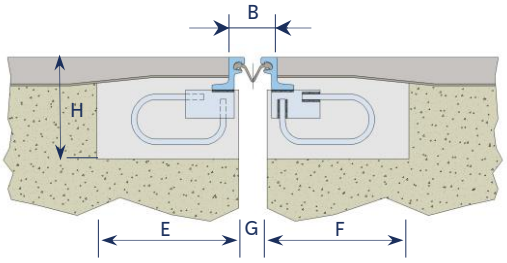
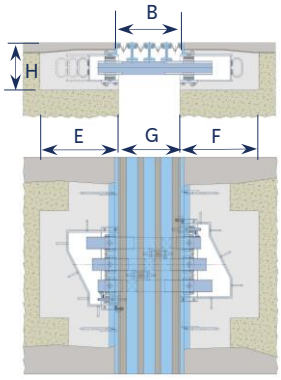
Models

3 models are available:

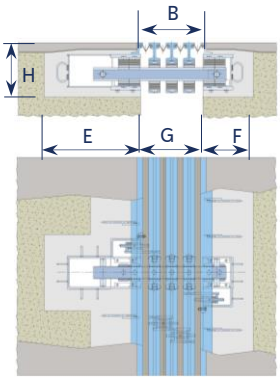
- **LW80 & LW100**: comprises a single elastomeric profile, no cross beam, no centre beams.
- **LW model T**: includes multiple cross beams (LW 160 & LW320). Each cross beam is welded to only one centre beam.
- **LW model L**: includes a single cross beam (from LW160 to LW1200). Each cross beam is connected to all centre beams.



LW80



LW model T



LW model L

Dimensions

Type	Movement	B		G		E	F	H	K
		mini	maxi	mini	maxi	mini	mini	mini	mini
LW80	± 40	80	160	30	110	350	350	250	-
LW100	± 50	80	180	30	130	350	350	250	-
LW160	± 80	160	320	110	270	400	350	330	210
LW240	± 120	240	480	190	430	480	350	340	350
LW320	± 160	320	640	270	590	560	350	350	480
LW400	± 200	400	800	350	750	640	350	360	340
LW480	± 240	480	960	430	910	720	350	370	340
LW560	± 280	560	1120	510	1070	800	350	390	340
LW640	± 320	640	1280	590	1230	880	350	400	370
LW720	± 360	720	1440	670	1390	960	350	420	370
LW800	± 400	800	1600	750	1550	1040	350	430	370
LW880	± 440	880	1760	830	1710	1120	350	440	390
LW960	± 480	960	1920	910	1870	1200	350	450	390
LW1040	± 520	1040	2080	990	2030	1280	350	460	390
LW1120	± 560	1120	2240	1070	2190	1360	350	470	390
LW1200	± 600	1200	2400	1150	2350	1440	350	480	390

Dimensions in mm

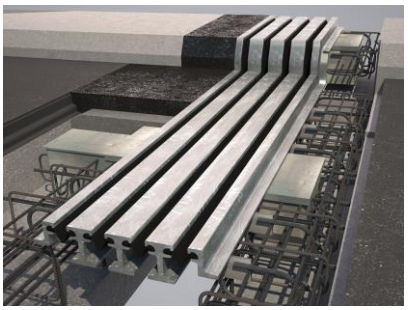
Movement range

LW joints are manufactured to order and can be adapted to the directional movement of the main structure, straight or skew.
The capacity varies from 80 to 1200 mm depending on the model, but larger movement capacities can be provided on request.

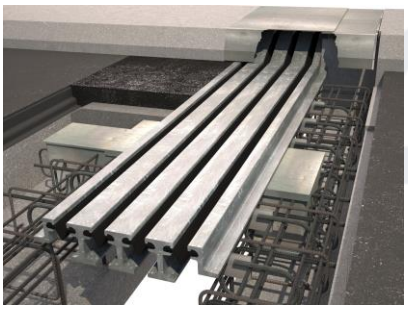
Type	Movement capacities		
	Longitudinal	Transversal	Vertical
LW80	± 40	± 20	± 20
LW100	± 50	± 20	± 20
LW160	± 80	± 14	± 20
LW240	± 120	± 21	± 20
LW320	± 160	± 28	± 20
LW400	± 200	± 35	± 20
LW480	± 240	± 42	± 20
LW560	± 280	± 49	± 20
LW640	± 320	± 56	± 20
LW720	± 360	± 63	± 20
LW800	± 400	± 70	± 20
LW880	± 440	± 77	± 20
LW960	± 480	± 84	± 20
LW1040	± 520	± 91	± 20
LW1120	± 560	± 98	± 20
LW1200	± 600	± 105	± 20

Add-ons

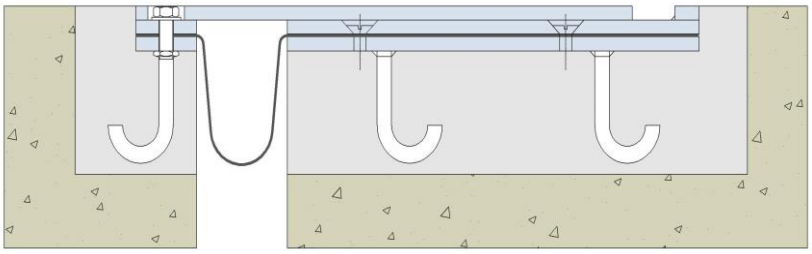
LW joints perfectly fit the transversal profile of the carriageway, kerb and footpath.



Continuity of the LW sections



Footpath treated with a PL joint



PL footpath joint

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