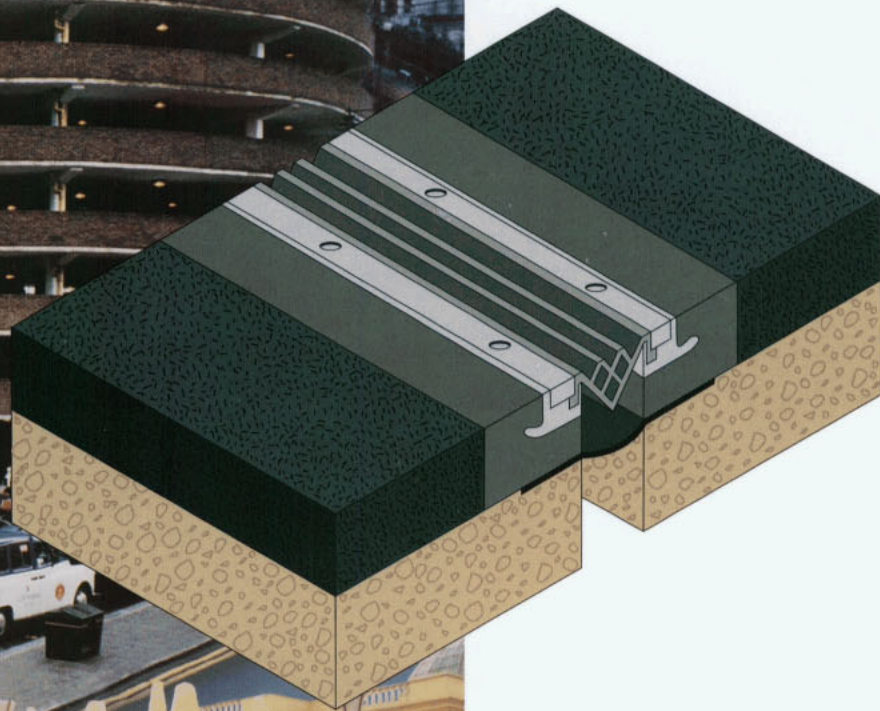




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BRITFLEX[®] 'UCP' EXPANSION JOINT SYSTEM



BRIDGING THE GAP
WORLDWIDE



BRITFLEX® 'UCP' EXPANSION JOINT SYSTEM

Description



above: MetroCentre,
Gateshead

Unlike conventional expansion joints which require extensive deck drilling, 'UCP' joints are simply bonded into position using a specially formulated polyureide resin with an unrivalled twenty year track record on the UK's busiest roads. Significant savings in installation costs and site possession time can be made, and each system is installed by USL's own skilled workforce with reassuring 'supply and install' packages offered to the client in all instances.

There are two 'UCP' joints currently manufactured to meet all medium expansion joint requirements, namely 'UCP' 50 and 70, capable of accommodating horizontal movements of 50mm and 70mm respectively. In addition to their unique design, longevity and ease of installation, each joint is manufactured to the highest standards using premium quality components. These include heavy gauge aluminium rails, a resilient waterproof EPDM seal and additional secondary waterproof membrane.

The joint is totally sealed and is impervious to most liquids, salt and other abrasive materials, preventing premature damage to either the structure or to the joint itself.

'UCP' joints are particularly suitable for applications where watertightness, low noise and smooth riding characteristics are paramount.

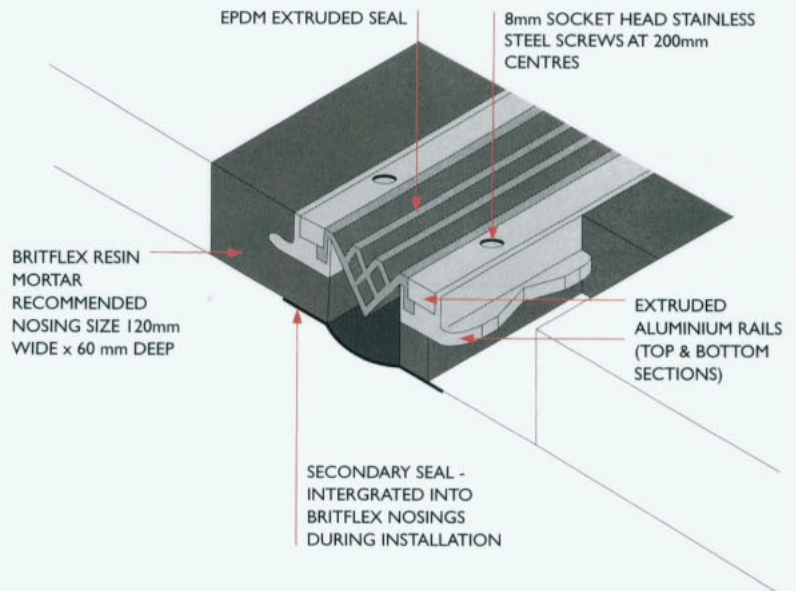
As the leading specialists to major clients, including local authorities, property companies and contractors, USL has a progressive attitude to product development, manufacturing excellence and quality control.

Introduction

The 'UCP' expansion joint system has been carefully developed to provide a safe, efficient and economical method of sealing deck movement joints. These joints utilise the proven design technology successfully used in the Highways Agency approved Britflex 'BEJ' range of expansion joints which are extensively used throughout Britain's motorway and trunk road network. The system has been the subject of extensive testing by the Transport Research Laboratory.

Advantages of the 'UCP' Expansion Joint System

- Versatile
- Watertight
- Installed quickly
- No drilling of deck required
- No mechanical fixings
- EPDM Seal easily removed if required
- Provides quiet comfortable riding characteristics
- Installed by USL's fully trained workforce
- Capable of accommodating movements of up to 70 mm
- Secondary Seal



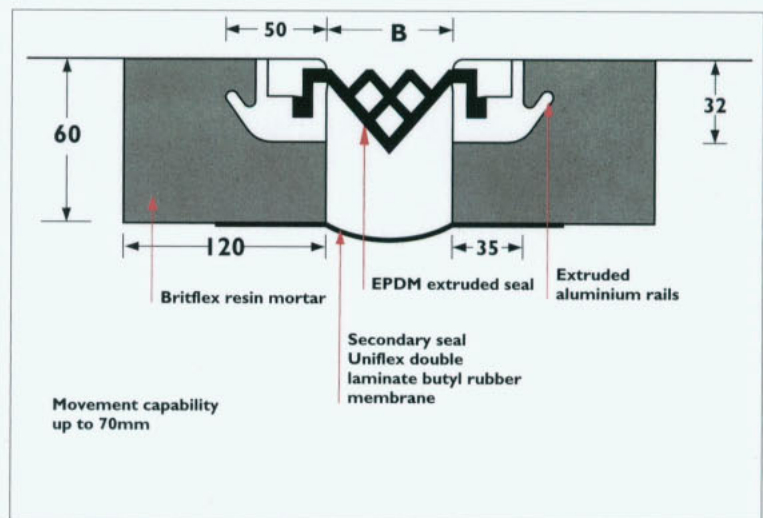
Applications

The applications for 'UCP' joints are numerous and include multi-storey car parks, podiums, pedestrian bridge access and egress ramps.

Each 'UCP' is available from stock.

Special sections are available to accommodate changes in direction both in plan and elevation.

Furthermore, intersections are available at 90° changes of direction or other skew angles as required.



Specification for the 'UCP' Expansion Joint

Materials

(i) **Polyureide Resin:**

A two part system comprising one clear component (Base) and one black (Hardener) supplied in colour coded drums.

(ii) **Aggregate:**

A mix of dried graded aggregates and fillers supplied in sealed plastic bags for one batch mix.

(iii) **Aluminium Rails:**

The extrusions are supplied in 4 metre lengths and are cut to length on site to suit requirements. Kerb units and mitred junctions may be prefabricated when considered necessary.

(iv) **EPDM Elastomeric Insert:**

The extruded elastomeric insert is available in two sizes namely 'UCP' 50 and 70 capable of accommodating horizontal movements of $\pm 25\text{mm}$ and $\pm 35\text{mm}$ respectively. The insert is supplied and installed in one continuous length up to 50 metres unless otherwise specified. Changes in direction on plan are accommodated by mitred junctions. Changes in a vertical plane may be insitu mitred sealed joints or curved to a 200 mm radius.

(v) **Secondary Membrane:**

Uniflex Membrane is a butyl rubber membrane capable of withstanding 300% elongation.



above: Canary Wharf, Infrastructure, London



above: Fountain Park, Edinburgh

Installation

General steps in the installation of the 'UCP' Expansion Joint System

- (i) Saw cut and remove existing surfacing to form a slot 120 mm x 60 mm each side of the expansion gap.
- (ii) Lightly scabble or wire brush the concrete deck to ensure that all loose and unsound materials have been removed.
- (iii) Prime the exposed surfaces of the structure with a mix of polyureide resin. The secondary membrane is formed at this stage using Uniflex, followed by a priming of polyureide resin.
- (iv) Position the rails with the correct spacers, attach these to the strongbacks and accurately set to ensure that it is level with the existing structure.
- (v) Place the polystyrene to form a shutter and prevent the resin mortar from flowing into the expansion gap.
- (vi) Mix and pour the polyureide resin mortar to form the resin mortar nosing.
- (vii) Once the resin mortar nosing has cured and been allowed to cool, remove the spacer plates, strongbacks and polystyrene shuttering.
- (viii) Install the EPDM Elastomeric seal.



above: West Quay, Southampton

Technical and Advisory Service

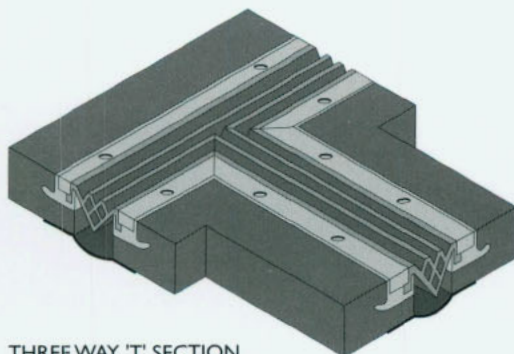
Further technical information may be obtained on request and consultation is encouraged to ensure choice of materials selected and detailing are optimised to suit inservice performance requirements and economic solutions.

Health and Safety

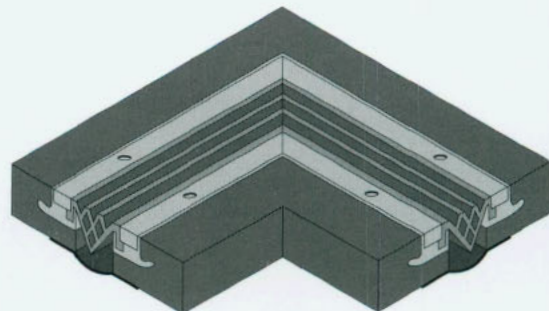
Universal Sealants (U.K.) Ltd. operate a strict policy on health and safety and details are available on request.

Note:

The colours used in all the illustrations may not be indicative of the finished product. Universal Sealants (U.K.) Ltd. reserve the right to update and improve the 'UCP' Expansion Joint System and its specification without notice and Engineers and Contractors should satisfy themselves that they have full and up to date information.



THREE WAY 'T' SECTION



TWO WAY FLAT 'L'



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