

# CHEMfix 612

## Bridge Expansion Joint

### Description

**CHEMfix 612** is a sophisticated expansion joint formed of a continuous section of molded, vulcanized elastomeric material. The joint encases two identical metal inserts of a Shape which is best suited for withstanding heavy loads.

The **CHEMfix 612** is designed with elements whose extremities are known for withstanding extreme water tightness requirements as well as the accommodation of the deformations arising from structural movement.

### PLACING

The product has the section of symmetrical triangles with sides that are crescent shaped so that there is no gap when concrete is placed. It can be easily installed on new structures And old structures to replace existing joints. The use of the cast iron anchorage unit, specially designed to suit the shape of the **CHEMfix 612**, permits vertical anchorage by producing a bond. This enables the product to produce protrusions on the surface where the concrete and the expansion joint are bonded together to increase their adhesiveness.

### PROPERTIES

#### Water Tightness

The continuity of the elastomeric over the total length of the joints ensures water tightness. The ends of the units can be covered with matching flaps and can be vulcanized or bonded together with adhesives.

#### Resistance

All the metal anchorage and the fixing parts are corrosion protected. The elastomeric resists the action of oil, greases, petrol and de-icing brine.

### TECHNICAL INFORMATION

**Hardness:** 70<sup>0</sup>

**Tensile Strength:** 165.0

**Ultimate Elongation:** 420.0

**Change in Durometer:** + 4<sup>0</sup>  
**Hardness (max)**<sup>0</sup>

**Change in Tensile Strength:** -5  
**(max)**<sup>0</sup>

**Change in Ultimate Elongation:** - 20

## Comfort Factor

The elastomeric cushions and the rubber body of the joint are designed to absorb the wheel impact and the irregularities on the surface of the carriageway.

## FIELD OF APPLICATION

The **CHEMfix 612** is intended for movements up to 65 mm.

Two types of elements are available, depending upon the type of use envisaged:

- Those with steel or Aluminum insert that are for common use;
- Those with cast iron inserts, for heavy traffic.

## INSTALLATION

- The Concrete Deck surface has to be prepared. The topping on either side of the joint axis must be cut back and removed.
- The Joint elements should be positioned together with their anchoring devices. Sealing Holes should be drilled.
- The additional rebar should be placed and sealed with epoxy resin.
- Concrete should be set in between the joint elements and the toppings on both sides of the gap.
- As soon as the concrete is completely set, dismantle the positioning jigs, the joint Elements and the framework. Clean and re-position the joint elements and permanently tighten the fixing bolts.

## FIXING

Screws: M14 H.R. 10.9 corrosion protected (bichromatic zinc coating) –elastic limit  $R_e \geq 880$  MPa.

Cast iron Socket: conventional elastic limit at 0.2% elongation  $R_{p0.2} \geq 215$  MPa.

Threaded Bar: M14 H.R. 10.9 corrosion protected – elastic limit  $R_e \geq 880$  MPa.

## Metallic Parts

The metallic inserts are corrosion protected by the elastomeric. Elastic limit: Steel:  $R_e \geq 235$  MPa; Cast Iron:  $R_{p0.2} \geq 225$  MPa; Aluminum alloy:  $R_{p0.2} \geq 235$  MPa.

The rebar pins are of HA  $\emptyset 12$  and the distribution bars are of  $\emptyset 10$  Adx Sealing resin: **CHEMfix Epoxy Resin**