

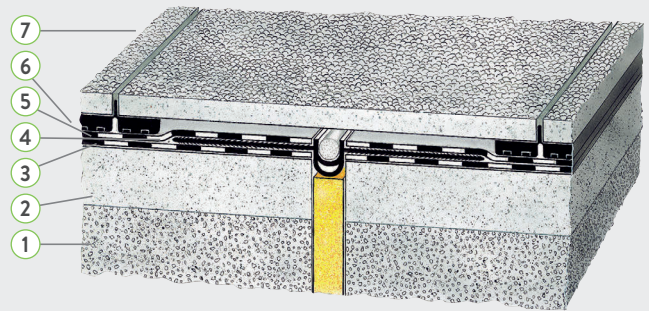
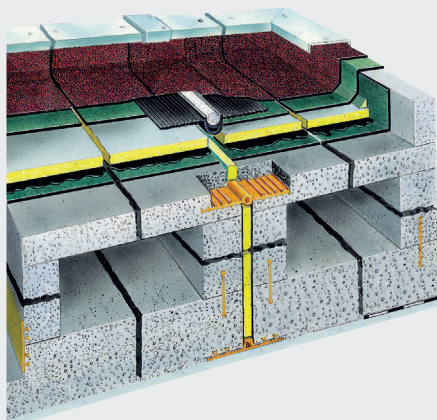
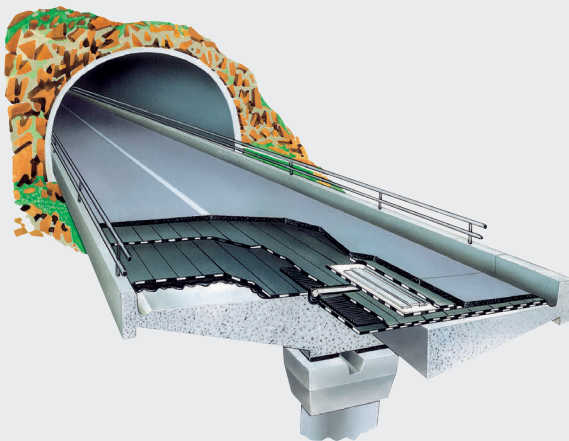
# 08.1 ELASTIC JOINT



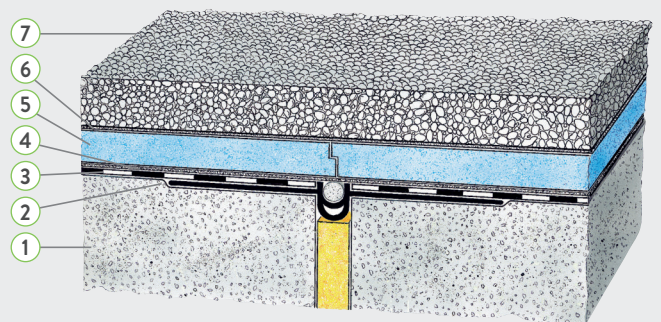
^ ART. 690



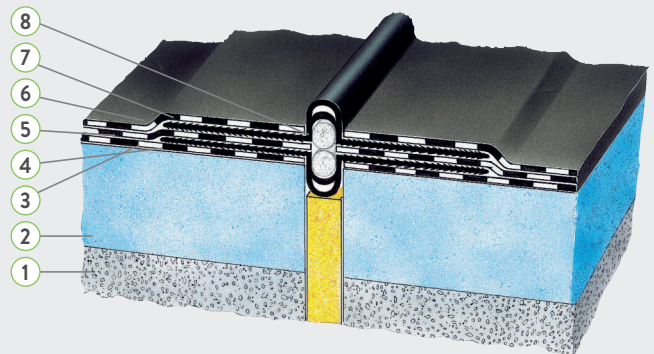
^ ART. 692



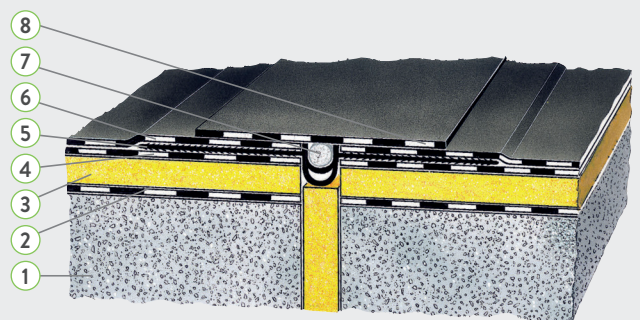
① Deck ② Lightweight concrete ③ Membrane ④ Elastic joint  
⑤ Membrane ⑥ ITALPROFILI supports ⑦ Paving tiles



① Deck ② Elastic joint ③ PVC-P Membrane  
④ Non-woven fabric ⑤ Insulation ⑥ Non-woven geo-textile ⑦ Gravel



① Deck ② Insulation ③ Membrane ④ Elastic joint ⑤ Membrane  
⑥ Double Elastic joint ⑦ Membrane ⑧ Double polyurethane foam filler



① Deck ② Vapour barrier ③ Insulation ④ Membrane ⑤ Elastic joint  
⑥ Membrane ⑦ Polyurethane foam filler ⑧ Partially attached membrane

Use a 25 mm. diameter closed cell polyurethane rod as filler for the Elastic joints.

## 08.1 ELASTIC JOINT

### EXPANSION JOINTS FOR BITUMINOUS OR PVC-P WATER-PROOFING MEMBRANES FOR USE ON ROOFS, TUNNELS, VIADUCTS ETC.

- 1) The ITALPROFILI® Art. 690 has the following characteristics:
  - a - two 150 mm lateral wings with 35° angled ribs at 1 mm in height and a series of slots along the outside edge to ensure sound anchorage to the bitumen and to the bituminous membrane;
  - b - a central body with 2 different thicknesses which preform both as an expansion joint and a seal and is 38 mm x 38 mm x 25 metres in length.
- 2) The joint is extruded using a specially stabilized thermoplastic but "rubbery" type material which is compatible with bitumen and with bituminous membranes. This material has a high

mechanical resistance both in expansion and contraction, also at low temperatures and is highly resistant to UV, ozone and other chemical and atmospheric agents.

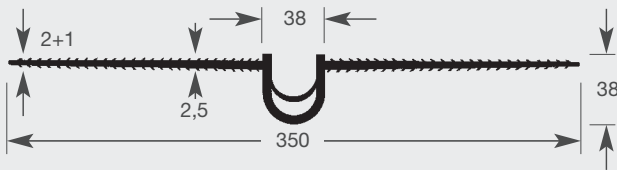
- 3) Art. 692 has the same characteristics as Art. 690 with the exception of the lateral wings which are smooth to facilitate welding to PVC membranes.

**NOTE:** Preparatory work before installing the elastic joint.

- 1 - Lay out the joint with the bulb facing towards the top.
- 2 - Leave to relax for 15-20 minutes so that any creases or similar in the materials caused during packaging or shipping are eliminated. This enables the joint to return to its natural state and return to its initial shape.

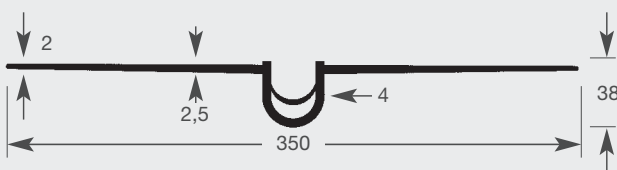
### MECHANICAL AND PHYSICAL CHARACTERISTICS - Art. 690

DESCRIPTION	TEST METHOD	UNITS	VALUE
Density	ASTM D 792	g/cm <sup>3</sup>	1.13
Hardness 15"	ASTM D 2240	Shore A	70
Tear strength without notch	ASTM D624	KN/m	30
Tensile modules 100% elongation	ASTM D 638	MPa	2.5
Tensile moduls 300% elongation	ASTM D 638	MPa	3.2
Tensile strength	ASTM D 638	MPa	5.0
Elongation at break	ASTM D 638	%	580
MFI (190°C, 49.05 N)	ASTM D 1238	g/10 min	5.10

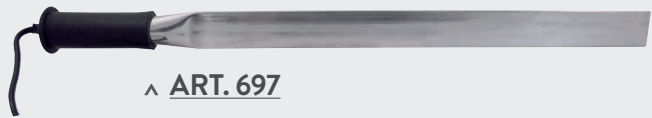


### MECHANICAL AND PHYSICAL CHARACTERISTICS - Art. 692

DESCRIPTION	TEST METHOD	UNITS	VALUE
Specific weight	DIN 53457	Kg/dm <sup>3</sup>	1.30
Hardness shore A	DIN 53505 ASTM D2240	Shore A	68
Flow index	ASTM D1238 N. 21. 18 temp. °C 190	g/600 s	13.0
Tear Strength	DIN 53515 ASTM D624 Without notch	KN/m	53
Ultimate elongation		%	310
Abrasion resistance	DIN 53516	mm <sup>3</sup>	155
Working range		°C	80
Cold resistance		°C	-35



### BLADE HEATER ELEMENT FOR THE MANUAL WELDING OF JOINTS, WATERSTOPS, PVC SHEETS AND SIMILAR



#### ^ ART. 697

Blade size mm. 540x43x3,8  
220 V - 50 Hz single phase power feed  
Power rating 465 WatT

## INSTALLATION METHOD (SANDWICH SYSTEM)

The area where the joint is to be installed must be 38 to 42 mm wide, 40 mm deep and free from debris and impurities.

- 1 - Apply a coat of primer 50 to 60 cm wide on either side of the joint.
- 2 - Torch apply a 30 cm wide strip of APP type membrane to the underside of either wing of material while the joint is in position.
- 3 - Ensuring that the joint is correctly positioned proceed to raise the membrane which has been welded to either wing and torch apply the same to the deck, making sure that a roller or similar is used to press the membrane into position.
- 4 - Torch apply a 30 to 40 cm wide strip of membrane over the upper surface of the two wings and fully bond to the underlying membrane and deck.

For other installation systems: see drawing.

**NOTE:** When using a roofing torch, heat the membrane avoiding direct contact of the flame with the joint itself.

### JOINTING OF THE ELEMENTS

The various profiles can be jointed on site by welding the extremities using a hot air hand welder (Art. 401) or a hot blade, "thermal sword" (Art. 697).

If using a hot blade proceed as follows:

- The edges of the joint must be perfectly squared off.
- Insert the hot blade between the pieces to be jointed and melt the material for approximately 2 mm each side, then press the edges together.
- Hold the pieces in position for approximately 2 minutes but then wait until the connection has cooled completely before handling.