

# EXPANSION JOINTS

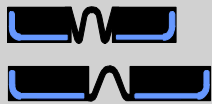


*CETEC expansion joints have been technically designed to work as a single element, to be absolutely tight and long-lasting.*

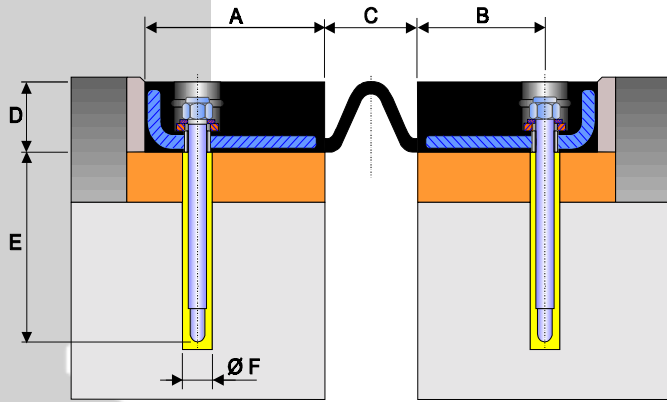
*They absorb horizontal, vertical and oblique movements, always remaining tight.*

*The elastomeric material used by CETEC joints has been formulated so that its properties are not affected by low temperatures keeping its capability of impact absorption also during winter. Besides, such material is prepared to resist wearing and abrasion and to increase resistance against bad weather conditions, chemical products and fire.*

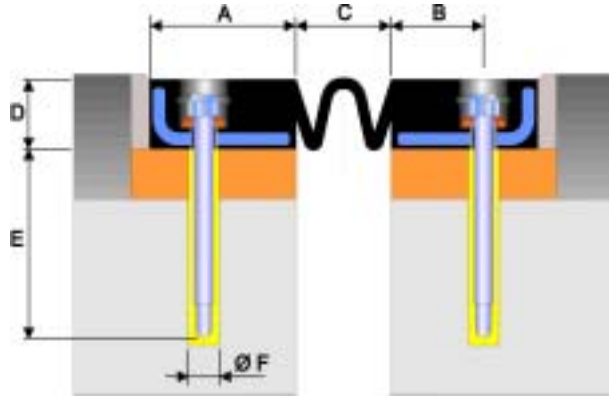




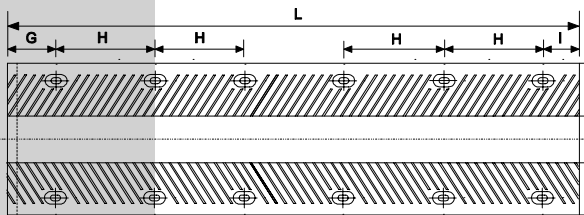
# TX TYPE JOINTS



**TX-50 TX-75**



**TX-60**



TYPE	MOVEMENT	A	B	C	D	E	F	G	H	I	L
TX-50	50	106	71	6-56	33	85	18	121	350	129	2000
TX-60	60	82	47	10-70	33	85	18	121	350	129	2000
TX-75	75	125	75	6-81	38,5	85	18	121	350	129	2000

Measures in mm.

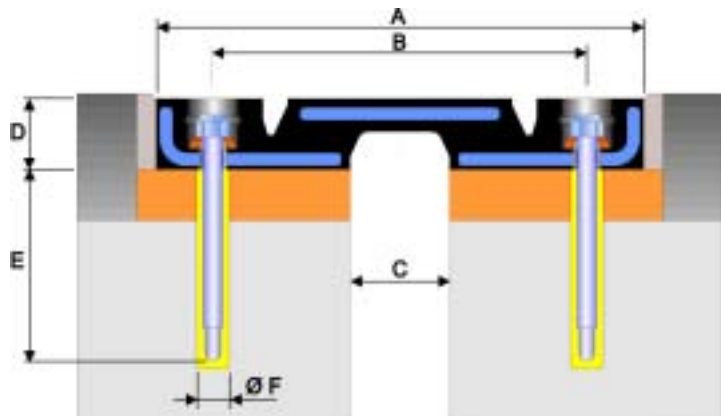


# T TYPE JOINTS

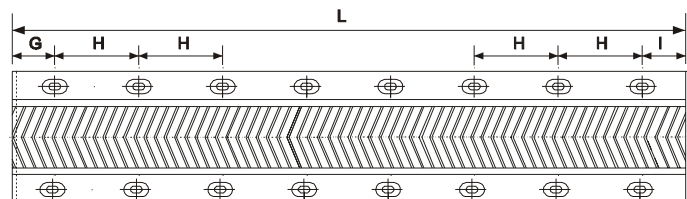
Joints type T have a central steel framework that allows the straining areas to be distributed so that its upper face presents as few openings as possible, consequently improving traffic conditions and reducing its noise.

These joints have been designed so that there appear no strains on the pavement surface, due to joint movement, thus permitting relative displacements between deck and abutment in transversal and longitudinal direction of the joint, the latter being a main characteristic for skew bridges.

The joint are fixed to the structure by means of chemical anchorages and nuts tightened with dynamometric wrenches, so that horizontal stresses are transmitted through friction between elastomer and concrete.



**T-40 T-100**



TYPE	MOVEMENT	A	B	C	D	E	F	G	H	I	L
T-40	40	272	205	35	35	150	18	143	350	107	2000
T-100	100	391	300	80	56	150	22	116	254	106	2000

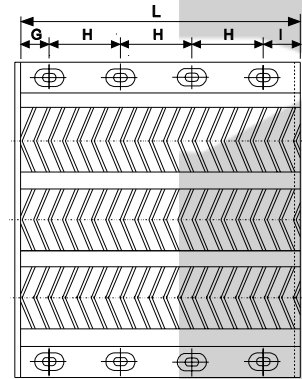
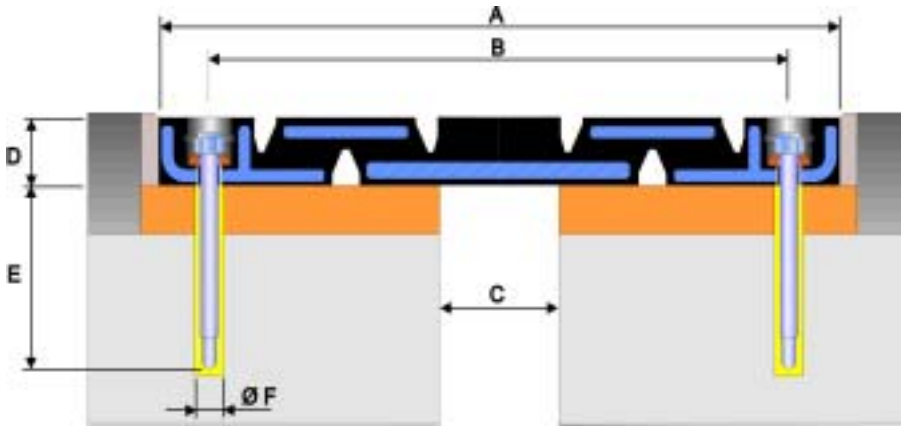
Measures in mm.

NOTE: All dimensions given are indicative. Design and dimensions may be modified by CTT without prior notification

# T TYPE JOINTS

When large opening and closing movements are required, using double upper framework joints with four areas of controlled straining allows to keep water-tightness and quality on the rolling surface, thus improving user comfort.

The grooves on the upper face of joints type T and TX provides a nonslip surface that makes water drainage easy and acts as a safety element. A steel reinforcement is vulcanised inside the modules, providing them with the appropriate stiffness and prevents them from bending.

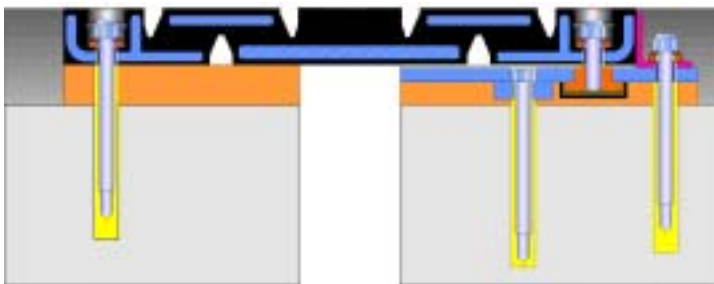


**T-160 T-250 T-330**

TYPE	MOVEMENT	A	B	C	D	E	F	G	H	I	L
T-160	160	724	618	121	75	170	22	152	305	152	1830
T-250	250	890	787	158	93	190	26	152	305	152	1830
T-330	330	1115	990	200	110	190	26	125	250	125	1250

Measures in mm.

# TU-TXU TYPE JOINTS



PTFE is used to obtain low friction on the transverse movement in order to minimize loads transferred to the deck of the bridge.

This solution is more simple and cheaper than those based on metallic expansion joints.

Installation and economy takes benefit of this joint in all projects where earthquake loads are involved.

Guided expansion joints have been designed to allow large transverse movements on the bridge in case of earthquake.

With this joint, the energy of the earthquake can be disipated.

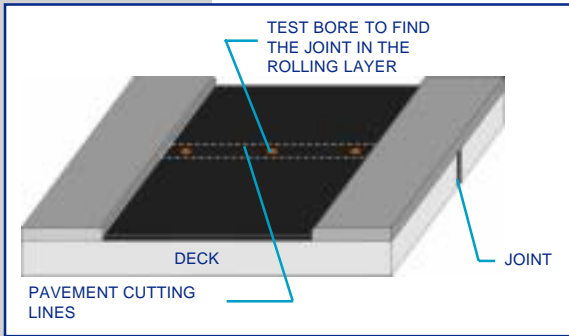
Guided expansions joints are based in our standard models with one row of anchors fixed to the transverse guides in such a way that it can work as a standard expansion joint in normal conditions and allows large transverse movements under earthquake.



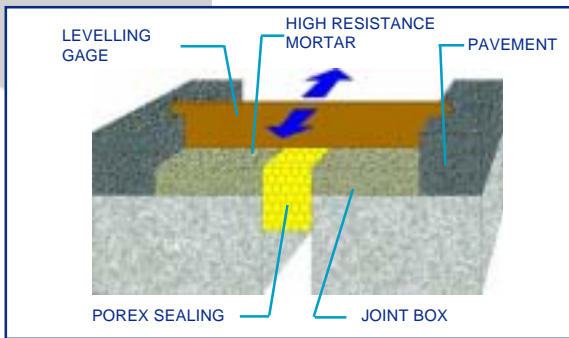




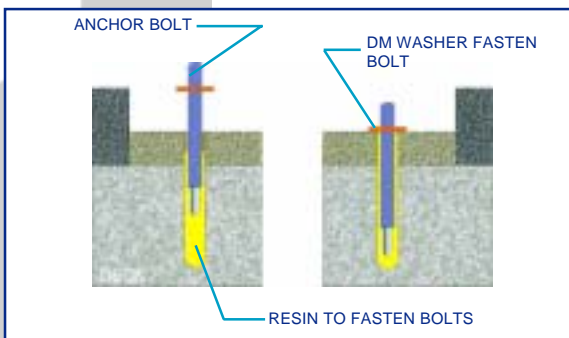
# INSTALLATION



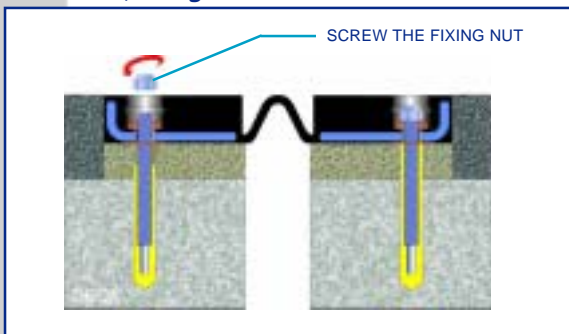
Locate the joint making 3 test bores at the edges and in the middle of the deck. Mark the joint with a marker on the asphalt and cut it.



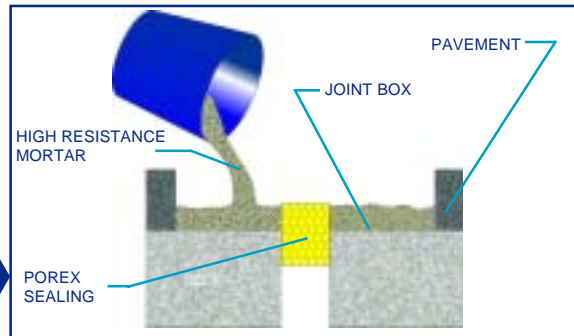
Level the high resistance mortar with a gage in order to ensure the total levelling of the joint base.



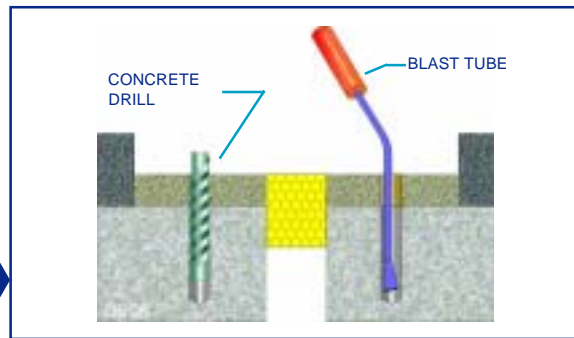
Pour the fastening resin up to 20 mm of the bore surface and place the anchor bolts 25 mm above the mortar, using the DM washer.



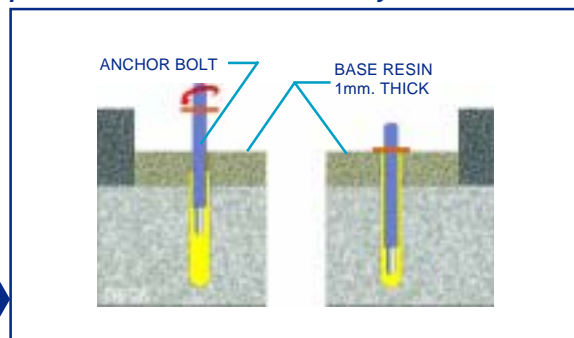
Install the joint and screw fixing nuts to the anchor bolts.



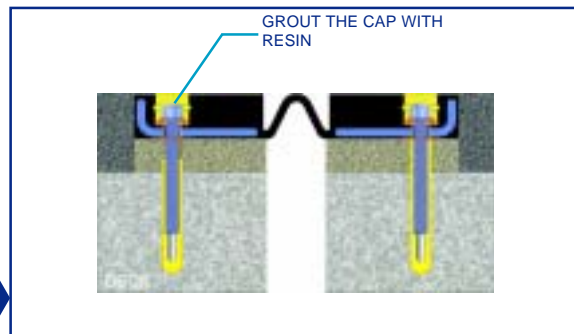
Place the porex lining for sealing and fill the joint box base with the high resistance mortar.



Once the mortar has hardened, mark the bores for the bolts, drill them and blow with air under pressure to clean inner dirt away.



Once resin has hardened, clean the base surface and spread a 1 mm. thick layer of resin.



Finally grout the bolts cap with sealing resin.

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