TRITON – SINUS
Steel Armoured Expansion Joint

PRODUCT DESCRIPTION

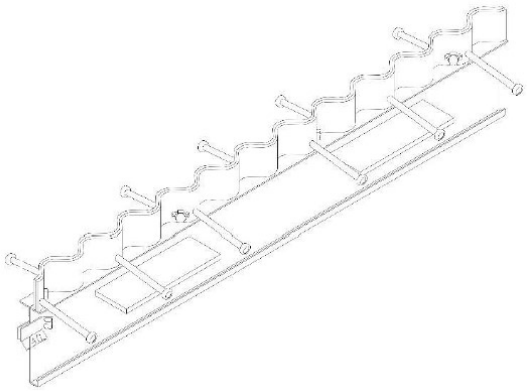
Sinusoidal-profiled permanent joint system with steel armouring. Installed within concrete slabs to ensure continuous load transfer between adjacent slabs. Protects slab edges from impact and wear. Allows for height adjustment to fit varying slab depths. Ideal for industrial floors, logistics, and distribution centre.

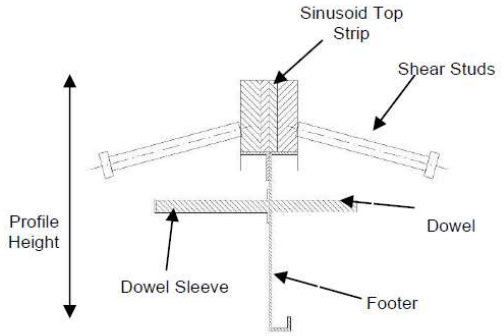
KEY FEATURES

- Sinusoidal geometry for smooth traffic flow and effective load transfer.
- Complies with EN 2002/44/EC low-vibration standards.
- Reduces stress on forklift wheels → lower maintenance and operational costs.

APPLICATIONS

- Industrial floor slabs
- Warehouses and logistics centres
- Multi-level mezzanines
- Exposed concrete slab edges
- Heavy-duty commercial areas





TECHNICAL DATA

Profile Height	125-295mm	**Dowel**	5/6 pcs.
Profile Length	2,620mm (± 2mm)	**Dowel Size**	145 x 145 x 6mm 145 x 145 x 8mm 145 x 145 x 10mm
Weight (Per Length)	30.59 - 37.64kg	**Dowel Spacing**	500mm
Steel Grade	Joint : Q235 or Galvanised Dowels : Q355 Studs : Q195	**Dowel Sleeve**	Highly resistant ABS
Top Strip	H: 50mm D: 5mm (x2)	**Frangible Fastener**	Nylon bolt with steel nut
Shear Studs	28 pcs. (on both sides)		
Footer	H: variable D: 2mm		

SPECIFICATIONS

The structural load capacity of the expansion joint, expressed in kilonewtons per linear meter (kN/m), depends on dowel density along the joint. Upon request, Triton can supply ultimate load values for specific failure modes,
For information, this exercise is calculated with C25/30, S355 dowels 145 x 145 x 6mm with spacing of 600mm or 500mm and considering plate dowel depth at mid-depth.

Joint Opening	0	5	10	15	20	25
145mm x 145mm x 6 600cc	149	93	63	46	36	29
145mm x 145mm x 8 600cc	199	139	101	77	62	51
145mm x 145mm x 10 600cc	249	187	143	113	92	77

The first number is Joint strength in KN/m without considering the concrete breaking. The second number is smaller, as it is driven by concrete strength and also assuming plate dowel at mid-depth.

INSTALLATION

- **Reference Line:** Stretch a string along the planned installation path to set a reference.
  Place the first joint profile parallel to this line.
- **Levelling:** Raise the profile to the final floor height using wedges or approved levelling systems.
- **Anchoring:** Drive or drill two vertical pins into the ground next to each anchor end.
  Add more pins along the length if needed for added stability.
- **Alignment Check:** Use a laser level to ensure accurate height and alignment.
  Inspect flatness across both width and length.
- **Fixing:** Weld the anchor pins to the profile. Where welding is not permitted, use adjustable feet.
- **Connection:** Insert the next profile into the connection point. Its height will align automatically; adjust the opposite end using wedges.
- **Repeat:** Continue the process until reaching a termination point (e.g., wall, column, or joint intersection).

HEALTH AND SAFETY INFORMATION

All welding personnel must wear certified PPE, including:

- Eye and hearing protection
- Flame-resistant gloves
- Safety helmet and steel-toe boots
- Full-body protective clothing

These precautions meet safety standards and protect against thermal hazards, arc flash, airborne particles, and mechanical impact during installation.