

AUS & NZ
ISSUE 2022



DANLEY™

**Residential
Pavements**



Articulating Joint
which mitigates
tripping hazards.

PaveX™ Geared™

Articulating Control Joint

Product Guide

**New! Geared™ Profile
with co-extruded
Rip-A-Strip™ Capping!**

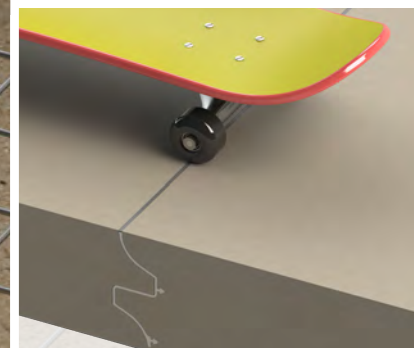
PAVE X™



- Articulating Control Joint System ideal for soil-heave or tree root ingress.
- Safer Pavements: Reduces public liability exposure for councils.
- Low maintenance and reduced remedial/replacement costs.
- Complies with the requirements of AS 3727.1:2016

www.danley.com.au

Refer to the back of this
booklet for contact information.



Safety & Sustainability: Mitigates tripping hazards caused by soil heave or tree roots. Reduces costly ongoing remedial works.

PaveX™ Geared™

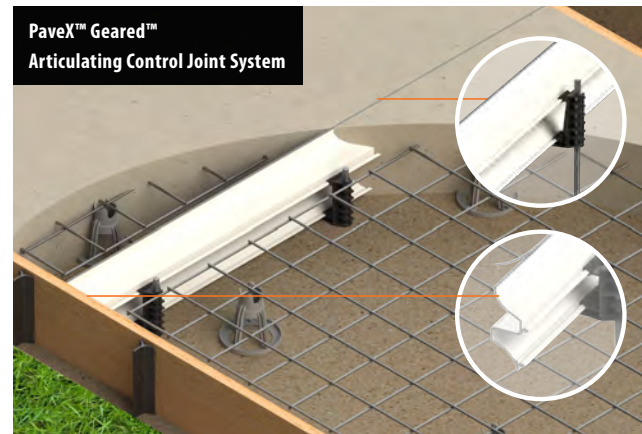
Product Description

PaveX™ Geared™ is designed specifically for concrete footpaths and shared bikeways impacted by soil heave or tree root ingress. An innovative articulating formed control joint system, PaveX™ Geared™ allows for concrete pavement sections to rise and/or fall whilst limiting differential deflection and mitigating tripping hazards.

PaveX™ Geared™ is available in 100mm, 125mm and 150mm profile heights. Extruded in corrosion-free, UV stabilised uPVC to standard 3 metre lengths, PaveX™ Geared™ profiles are co-extruded with Rip-A-Strip™ Capping in either Black or Grey which provide clean, laitance-free joint lines. PaveX™ Geared™ is sold in kits which includes Galvanised Stakes and Brackets for fast and easy on-site installation. Clip-on Joiners are sold separately.

PaveX™ Geared™ complies with the requirements of AS 3727.1:2016 Residential Pavements.

Applications & Environments



Footpaths

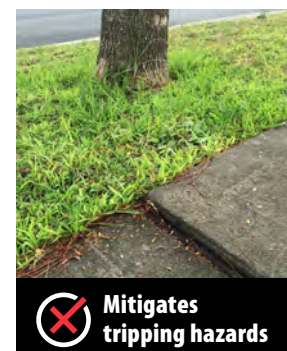
Bicycle Paths

Driveways

Urban Streetscapes

Features & Benefits

- Safety: The innovative key-shaped profile allows for the articulation of concrete slabs that mitigate differential deflection that can cause trip hazards.
- Designed for environments susceptible to soil heave or tree root ingress.
- Complies with the requirements of AS 3727.1:2016 Residential Pavements.
- Innovative keyed profile provides load transfer without the need for dowels.
- Available in standard profile heights of 100mm, 125mm and 150mm.
- Profiles are available in standard 3 metre lengths.
- Corrosion-Free: PaveX™ Geared™ is extruded from UV stabilised uPVC.
- PaveX™ Geared™ is co-extruded with Flexible PVC Rip-A-Strip™ Capping Rip-A-Strip Capping to provide a clean and laitance-free joint finish.
- No joint filler required.
- PaveX™ Geared™ will butt up to any given edge, including columns.
- Supplied in Kits, complete with brackets and stakes for fast and efficient installation.
- Lightweight and easy to carry around the job site.
- Reduces the risk of early shrinkage cracking, producing architecturally aesthetic pavements.
- Optional: PaveX™ Geared™ Joiners are sold separately.

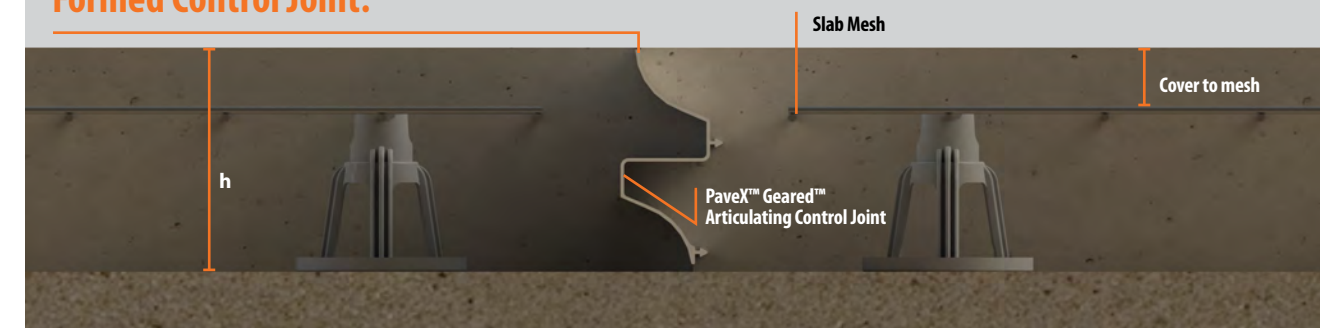


Compliance & Technical Data

PaveX™ Geared™ complies with the requirements of AS 3727.1:2016 Residential Pavements

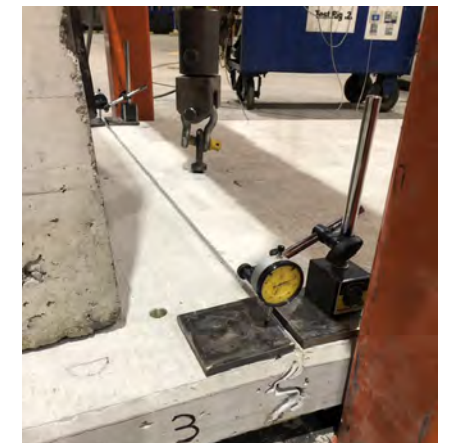
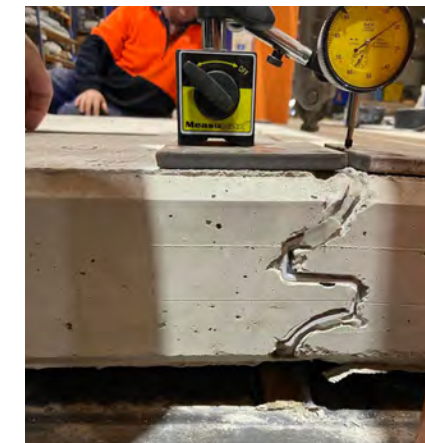
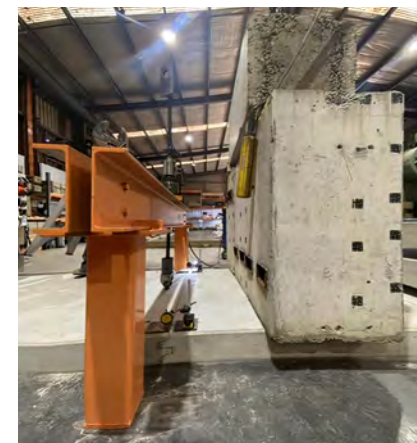
AS 3727.1:2016 - Compliance Information

Formed Control Joint:



- Full slab depth (h) articulating formed control joint with interlocking shear keys providing load transfer.
- Spacing of Geared™ to be no greater than prescribed in Table 5.2 of AS 3727.1:2016.
- The steel reinforcing mesh shall be placed as per the requirements of AS 3727.1:2016
- Flexible PVC Rip-A-Strip™ Capping
- No sealant required at top of formed control joint.

Testing & Validation



PaveX™ Geared™ joint system validation testing was carried out in concrete at Danley's inhouse testing centre.

The assessment was set up to demonstrate functionality and compliance to AS 3727.1:2016 load requirements. 100mm and 125mm slabs were tested in 25MPa concrete to standard with load carrying capacities of 3 tonne and 5 tonne respectfully to suit light vehicle loads.

150mm slabs were tested in 32MPa concrete to standard with load carrying capacity to suit a max. 10 tonne commercial vehicle load.

Validation of joint articulation to handle tree root ingress and reactive soils was conducted. Slabs were lifted on one side of the joint to achieve a minimum of 50mm unsupported lift off the subbase. Central or edge point loads and a dead load were applied to the lifted connecting slab. Load transfer and deflection control ($\leq 5\text{mm}$ or less as per AS3727.1:2016) through the joint was maintained at the point of lift and neighbouring joints.

Load transfer testing to meet AS2727.1:2016 formed control joints was also conducted on each size showing equal or better load transfer across the joint than traditional roll formed Danley Keyjoint (without dowels) of the same size.

How it Works



Neighbouring Joints: (Images 1 and 3)

PaveX™ Geared™ mitigates spalling on adjoining panels impacted by soil heave or tree roots, enabling articulation and providing for the smooth transition across multiple joint lines of adjoining concrete pavement sections.



Articulated Joint (Image 2)

Tree roots and reactive soils can result in soil heave, that cause differential deflection between concrete sections up to 50mm or greater, creating trip hazards and public liability exposure for councils.

PaveX™ Geared™ mitigates the differential deflection by articulating and provides a smoother and safer transition over the affected joint.



Installation Guidelines

PaveX™ Geared™

PaveX™ Geared™ Control Joint complies with the requirements of AS 3727.1:2016 Residential Pavements

Step 1



Preparing PaveX™ Geared™ for use.

For pavements less than 3 metres wide, pre-cut PaveX™ Geared™ profile to the required length with a saw. For paths greater than 3 metres wide, use the Geared™ Clip-on joiner (sold separately) to connect profiles together.

Step 2



Install the Stake Brackets on the Geared™ profile's utility rails.

Take note of the orientation of the Stake Bracket clips. Hold and press the stake bracket to engage the clips onto the rear rail of the profile.

Recommended spacings for Stake Brackets are 600mm centres (maximum) and 100mm in from the ends.

Step 3



Placing PaveX™ Geared™ at the prescribed joint locations.

We recommend the use of a string line. Place PaveX™ Geared™ at the prescribed joint locations, perpendicular to the timber formwork. Before hammering, ensure the threaded end of the stakes are at the top & that the flat sides of the stakes are parallel to the profile. Hammer the provided stakes through the stake brackets until the top of thread is approx. 25mm below the top of the Geared™ profile.

Step 4



Locking PaveX™ Geared™ into position.

Lift the Geared™ profile until flush with the top of the timber formwork. Using a wrench, twist the stake 90° to lock the profile in place.

Suggestion: Twist and lock in the stake brackets at both ends first.

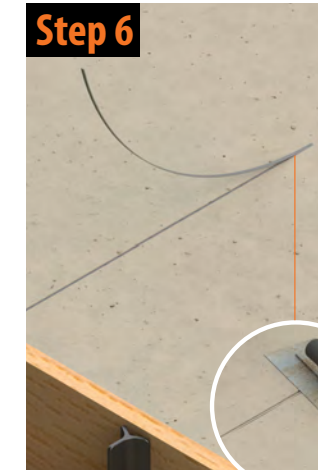
Step 5



Place mesh either side of the joint in accordance to AS 3727.1:2016.

Cut and lay the mesh. Mesh must be supported by bar chairs that comply with AS/NZS 2425:2015 and are positioned at a maximum of 600mm centres. Pour the concrete across the profile, ensuring to vibrate at regular intervals on both sides of the joint.

Step 6

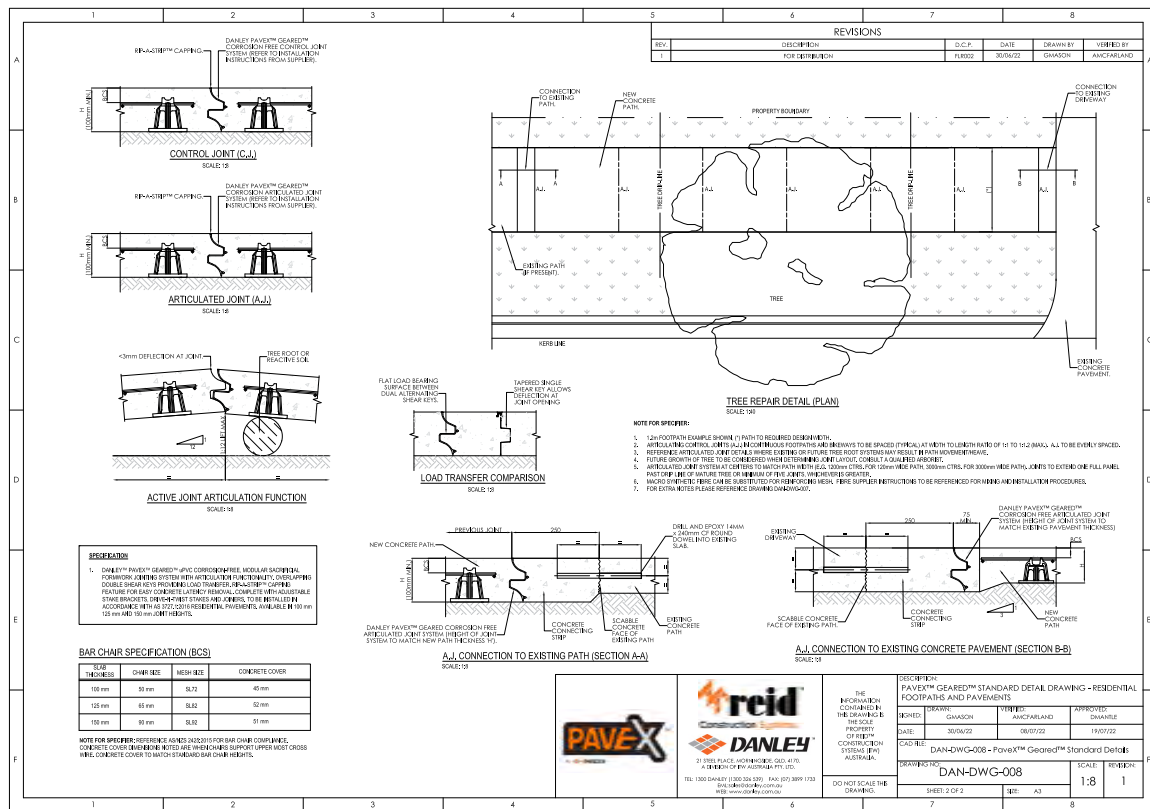


Concrete finishing: Removing the Rip-A-Strip™ Capping.

Screed the wet concrete. Lightly trowel with a hand float, ensuring all voids are closed. Remove the Geared™ Rip-A-Strip™ portion of the capping within 2-6 hours to produce a clean, laitance-free joint line.

How to Specify

PaveX™ Geared™ Specification Details



Scan the QR Codes to download a copy of the PaveX™ Geared™ Specification Details in either DWG or PDF format.



DWG

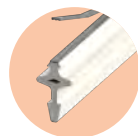


PDF



Specifying PaveX™ Geared™ for Formed Control Joints

DANLEY™ PAVEX™ GEARED™ uPVC CORROSION-FREE, MODULAR SACRIFICIAL FORMWORK JOINTING SYSTEM WITH ARTICULATION FUNCTIONALITY. OVERLAPPING DOUBLE SHEAR KEYS PROVIDING LOAD TRANSFER. RIP-A-STRIP™ CAPPING FEATURE FOR EASY CONCRETE LATENCY REMOVAL. COMPLETE WITH ADJUSTABLE STAKE BRACKETS, DRIVE-N-TWIST STAKES AND JOINERS. TO BE INSTALLED IN ACCORDANCE WITH AS 3727.1 :2016 RESIDENTIAL PAVEMENTS. AVAILABLE IN 100 mm 125 mm AND 150 mm JOINT HEIGHTS.



Specifying PaveX™ Crack-A-Joint™ for Weakened Plane Joints

DANLEY™ PAVEX™ CRACK-A-JOINT™ CORROSION-FREE uPVC JOINT TO INDUCE A CONTROLLED CRACK TO THE FULL DEPTH OF THE CONCRETE. CREATES AN EARLY WEAKENED PLANE (MIN. 1/4 SLAB DEPTH) IN ACCORDANCE WITH AS 3727.1 :2016 RESIDENTIAL PAVEMENTS. PROVIDES A FLUSH JOINT SUPPORT THAT PROTECTS THE ADJACENT CONCRETE INTERFACE FROM EDGE SPALLING AND INCLUDES A CO-EXTRUDED RIP-A-STRIP™ CAPPING FEATURE FOR EASY CONCRETE LATENCY REMOVAL.



Specifying PaveX™ Expanda™ and HD Expanda™ For Expansion Joints

DANLEY™ PAVEX™ EXPANDA™ WITH KEYED-IN RIP-A-STRIP™ CAPPING CORROSION-FREE uPVC CORROSION-FREE, SACRIFICIAL FORMWORK JOINTING SYSTEM WITH FULL 10 mm EXPANSION CAPACITY. GLASS FIBRE REINFORCED POLYMER DOWELS PROVIDING LOAD TRANSFER. RIP-A-STRIP™ KEYED-IN CAPPING TO PREVENT WATER INGRESS WITH REMOVABLE TOP SECTION FOR SUBSEQUENT SEALING. COMPLETE WITH ADJUSTABLE CAM-LOCK STAKE BRACKETS, DRIVE-N-TWIST STAKES, CLIP-ON FEET AND MULTI-PURPOSE JOINER PLATE. TO BE INSTALLED IN ACCORDANCE WITH AS 3727.1:2016 RESIDENTIAL PAVEMENTS. AVAILABLE IN 100 mm, 125 mm AND 150 mm JOINT HEIGHTS.

Product Packaging & Kit Codes

Ordering PaveX™ Geared™ Kits **couldn't be simpler!**



PaveX™ Geared™

Kit Code:	Description	Packs per Kit
PXG100BKIT	PaveX™ Geared™ 100mm 5x3m Kit Black Rip-A-Strip™ Capping, Stakes & Brackets	2
PXG100GKIT	PaveX™ Geared™ 100mm 5x3m Kit Grey Rip-A-Strip™ Capping, Stakes & Brackets	2
PXG125BKIT	PaveX™ Geared™ 125mm 5x3m Kit Black Rip-A-Strip™ Capping, Stakes & Brackets	2
PXG125GKIT	PaveX™ Geared™ 125mm 5x3m Kit Grey Rip-A-Strip™ Capping, Stakes & Brackets	2
PXG150BKIT	PaveX™ Geared™ 150mm 5x3m Kit Black Rip-A-Strip™ Capping, Stakes & Brackets	2
PXG150GKIT	PaveX™ Geared™ 150mm 5x3m Kit Grey Rip-A-Strip™ Capping, Stakes & Brackets	2
PXGCJ	PaveX™ Geared™ Clip-on Joiner Pack Contains (sold separately)	1



EXAMPLE: When you place an order for PXG125KIT, here is what you'll receive on-site:

1

Pack: PXG125 (B or G) **Qty:** 1
Bag contains: PaveX™ Geared™ x 5pcs co-extruded uPVC with Rip-A-Strip™ Capping to 3 metre lengths

2

Pack: PXGSET **Qty:** 1
Carton contains: Carton contains: Stakes & Brackets with feet x 32pcs

PaveX™ Pack Weights & Dims

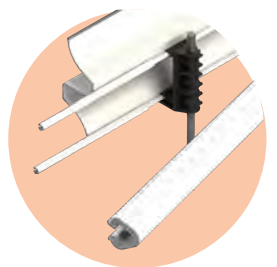
PaveX™ Geared™ Control Joint

Pack Code	Pack Size (L x W x H)	Colour:	Weight
PXG100	3010mm x 95mm x 92mm	Black or Grey	6.2kg
PXG125	3010mm x 101mm x 92mm	Black or Grey	8.3kg
PXG150	3010mm x 121mm x 101mm	Black or Grey	10.7kg
PXG100SET	363mm x 234mm x 150mm	-	8.1kg
PXG125SET	363mm x 234mm x 150mm	-	8.2kg
PXG150SET	363mm x 234mm x 150mm	-	8.3kg
PXGCJ	250mm x 250mm x 80mm	Grey	0.8kg

For pavements that are greater than 3 metres wide, PaveX™ Geared™ can be butted end-to-end, using the provided clip-on joiners.

Handy Hint: The use of the the Geared™ Joiners can help reduce wastage by making use of off-cut sections.

Prior to placing it into concrete, align the connecting Geared™ profiles, then clip the joiner over the arrowed rails at the rear of the profiles. PaveX™ Geared™ Clip-on joiners are compatible with across all profile heights. Sold separately in a pack of 50pcs.





customer service

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Information in this document is correct at the time of printing. Readers should contact RCS or consult RCS detailed technical information to ensure product is suitable for intended use prior to purchase.

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