

Danley™ PD3™ with RynoBar™

Technical Data Sheet

March 2023

Product Description

The PD3™ Tapered and Sleeveless Plate Dowel Cradles which provides the world's best performance in limiting joint deflection is now available with RynoBar™

The RynoBar™ is a patented Travel Bar, or sacrificial retention system pre-fitted to all Danley™ PD3™ Plate Dowel Cradles.

- Traditionally, a series of deformed bars are tack-welded to keep cradles intact whilst in transit to site.
- Leading Engineers and Contractors suspect that un-cut steel travel bars are the significant factor in flooring failure resulting from restraint (parallel cracking).
- The Danley™ RynoBar™ is designed to yield in early shrinkage concrete, eliminating the need to cut travel bars before concrete placement.

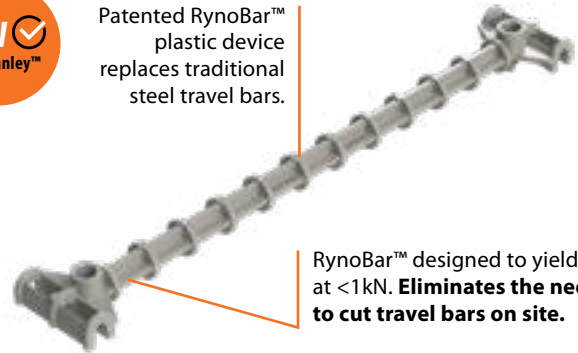
Advantages

The RynoBar™ is a patented, plastic Travel Bar designed with specific yield points in early concrete shrinkage, which eliminates the need to cut travel bars.

- **Improved Safety:** Eliminates the sharp edges on traditional steel travel bars.
- **Faster Set & Installation:** Saves time, effort and money on site! Say goodbye to cutting traditional steel travel bars.
- **Quality Assurance:** RynoBar™ is engineered to accurately yield at the saw cut joint.
- **Durability:** Designed to be tough when it needs to be! RynoBar™ will get your PD3™ cradles on site in one piece.
- **Quality Design:** The RynoBar™ is proudly designed and manufactured in Australia!

NEW ✓
from Danley™

Patented RynoBar™ plastic device replaces traditional steel travel bars.



RynoBar™ designed to yield at <1kN. **Eliminates the need to cut travel bars on site.**

Danley™ PD3™ Plate Dowel Cradle System

Now with UV Stabilised shrink-wrap sleeves



PD3™ Compatibility

The full range of Danley™ PD3™ Plate Dowel Cradles are delivered to site, fitted with RynoBar™ travel bars.

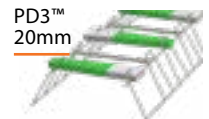
PD3™
6mm



PD3™
10mm



PD3™
20mm



PD3™ System Trade Benefits

Engineering Benefits:

- Provides highest performance in controlling joint deflection.
- Compliance with ACI 360R-10, design recommendations, limits differential deflection to <0.25mm.
- The RynoBar™ is designed to yield at <1kN eliminating the risk of restraint.
- Galvanised finish to AS/NZS 4680.
- Accuracy of dowel placement ensures the most effective load transfer performance.

Asset Protection Benefits:

- Reduces the risk of spalling damage to the concrete at the joints.
- Reduces maintenance & downtime costs.
- Provides a smoother surface at the joints.

Concreter Benefits:

- Speed and accuracy of dowel placement.
- Lowest placement cost. RynoBar™ eliminates the need to cut travel bars.
- Pour through capability.
- Greater stakeholder satisfaction.
- Wider sweet spot for saw cut placement provides greater tolerance for accuracy.
- UV stabilised shrink wrap maintains bondbreaker integrity if cradles have prolonged exposure to the elements

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Product Specifications

Concrete strength: 30MPa. **Joint opening:** 5mm
 Design capacities should be compared with factored loads
 Limiting capacity is concrete shear cone capacity

Product Performance Data:

Slab Thickness (mm)	PD3™ with RynoBar™ Item Code	Dowel Thickness (mm)	Dowel Spacing (mm)	Single Dowel Design Capacity (kN)	Single Wheel Design Load (kN) (mid panel joint)	Single Wheel Design Load (kN) (edge loading)
125	PD306450125 *	6	450	10.3	55	30
150	PD306450150 *	6	450	14.3	82	45
175	PD306450175 *	6	450	18.8	112	62
200	PD306450200 *	6	450	23.9	154	84
150	PD310450150 *	10	450	14.3	82	45
175	PD310450175 *	10	450	18.8	112	62
200	PD310450200 *	10	450	23.9	154	84
250	PD320300250G	20	300	40.2	392	215
300	PD320300300G	20	300	55.6	605	333
360	PD320400360G	20	400	77.3	747	410
425	PD320400425G	20	400	99.9	1062	584

* Add either a "B" or "G" to the end of these item codes to order cradles with Dowels in **Black** or **Galvanised** finish.

Concrete Compressive Strength Effect:

Strength (MPa):	30	32	35	40	45
Factor:	1	1.03	1.08	1.15	1.22

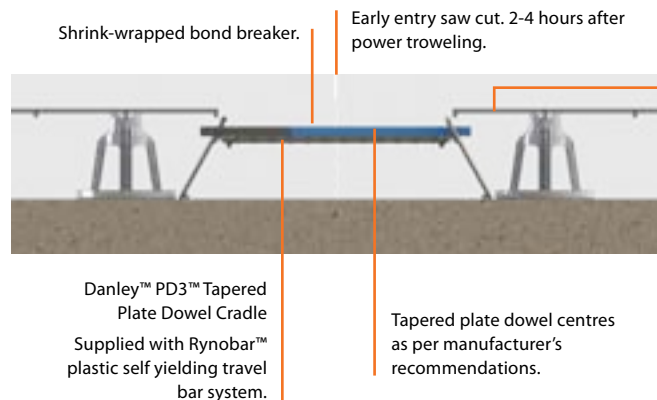
Manufacturing Tolerances :

Overall Length:	Overall Height:	Dowel Centres:
±10mm	±5mm	±5mm

How to specify the PD3™

Danley™ PD3™ sleeveless tapered plate dowel cradle system fitted with the RynoBar™ plastic self-yielding travel bars is for use in sawcut contraction joints, providing bilateral movement and limiting differential deflection under load to no more than 0.25mm. Complies with ACI 360R-10.

Available in 6mm, 10mm and 20mm.



In the absence of any other information, this mesh placement is a suggestion only, and is superseded by the engineer's design.

Reinforcement should be supported correctly with bar chairs complying to AS/NZS 2425:2015. The cradle/dowel should not be used as reinforcing support.

Material Technical Data:

Component	Dimension (mm)	Material Type	Material Standards	Steel Grade Equivalent	Yield Stress	Tensile Strength (MPa)	Standards Compliance
6mm PD3™ Dowel	6 x 300	Cold Drawn Steel	Q345	≥Grade 300	345 MPa	550	AS/NZS 3679.1
10mm PD3™ Dowel	10 x 300	Cold Drawn Steel	Q345	≥Grade 300	345 MPa	550	AS/NZS 3679.1
20mm PD3™ Dowel	20 x 300	Cold Drawn Steel	Q445	≥Grade 300	345 MPa	550	AS/NZS 3679.1
Wire Cage	Ø4.95	Hard Drawn Wire	AS/NZS 4671	Grade 500L	500 MPa	650	AS/NZS 4671
RynoBar™	Ø12.5	Polypropylene	-	-	<1kN	-	-
Galvanising	-	Hot Dipped Galv	AS/NZS 4680	-	-	-	AS/NZS 4680

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