

AYTON T29 Superior Panel Base Anchor - 10K (PBA-S 10K)

Tilt-Up Seismic Shear Connector Kit

TECHNICAL DATA SHEET

DESCRIPTION

The Dayton Superior Panel Base Anchor is a quick, discrete and durable system engineered for a permanent connection of concrete panels to footings.

APPLICATION

The Panel Base Anchor an optional shear connector can be used in solid panels, insulated sandwich panels and insulated composite panels. They can also be applied to anchor site cast tilt-up panels or plant casted precast panels.



FEATURES

- Patent-pending system developed by Dayton Superior's Tilt-Up experts to meet vertical integrity requirements for a nominal tensile strength of 10,000 lbs. Refer to ACI 318-19 section 16.2.4.3(b)
- Provides both in-plane and out-of-plane shear resistance
- Meets ACI 318-19 Seismic requirements per Sections 17.10 and 18.5
- Not dependent on top of footing elevation relative to top of slab elevation
- Offered with a hot dipped galvanized finish
- May eliminate requirement for Slab On Grade leave-out strips, if project loading permits.
- Applications in cracked concrete are acceptable. Please contact Dayton Superior for additional information.
- Readily verifiable installations
- Connection is discreetly installed on exterior face of panel/structure

BENEFITS

- Straight forward installation use the same on-site skills & equipment required for panel brace installation
- Engineered, two-part design makes it lighter and easier to install into panels
- May eliminate the need for additional epoxy, grouted or welded structural connections
- Requires a single anchor connection to the footing. Simply anchor to the footing with a galvanized threaded rod epoxy anchor, or galvanized threaded screw-in anchor
- No panel patching is required after installation
- Low-profile design provides a discrete connection once grouted and backfilled
- No welding required provides savings on additional trade expenses
- Does not compromise rated anchor strength caused by angled install - our 90° angled design was developed to drill straight into concrete to simplify calculations for your project requirement needs
- One size applicable for all solid panel thicknesses down to 5-1/2"
- The panel anchor's plastic face plate functions as a slab saver, eliminating the need for a separate saver.
- Accommodates horizontal movement of panel due to temperature and shrinkage

TECHNICAL DATA

■ For more technical information and detailed calculations, refer to the "Superior Panel Base Anchor PBA-S Calculations for In-Plane and Out-of-Plane Seismic Shear Capacity" by Dayton Superior.

DN[®] T<u>29 Superior Panel Base Anchor - 10K (PBA-S 10K)</u>

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PERIOR

TECHNICAL DATA

Panel Base Anchor	with Seismic Shear Con	nector Design Table
PBA-S wit	thout the shear anchor a	ttachment
Tension (uplift) ¹	Nominal Uplift	N _n = 11.4 kips
	Factored Uplift	N _u = 8.5 kips
PBA-S v	vith the shear anchor atta to resist in-plane shear	achment
Tension (uplift) ¹	Reduced Nominal Uplift	N _n = 10.0 kips
	Factored Uplift	N _u = 8.5 kips
Shear (in-plane)	Nominal Shear	V _n = 5.1 kips
	Factored Shear	V _u = 4.6 kips
A 1 5 # 2	Bolt Design Tension	N _n = 2.3 kips/bolt
AUCTION BOILS	Bolt Design Shear	V _n = 3.8 kips/bolt
PBA-S v	vith the shear anchor atta o resist out-of-plane shea	achment ar
Shoar (out of plano)	Nominal Shear	V _n = 7.8 kips
Snear (out-of-plane)	Factored Shear	$V_u = 7.0$ kips
Anchor Bolto ²	Bolt Design Tension	N _n = 6.9 kips/bolt
AILLIUI DUILS	Bolt Design Shear	V _n = 5.3 kips/bolt

(1) Requires the use of 1/2" diameter galvanized F1554 Grade 55 threaded rod.

(2) The EOR is responsible for designing both anchor bolt connections between the shear anchor attachment and the footing in order to meet these required values.

INSTALLATION

- 1. Attach the plastic void to the base sub-assembly. It will snap into place.
- 2. Position this assembly against the formwork in the desired location and nail it in place, making sure to keep the sticker face against the slab surface.
- 3. Secure the ends of the rebar using bar supports or by tying them into the rebar mat. Place concrete when ready.
- 4. Tilt the panel into place after meeting the 2,500 psi compressive strength requirement. Shim and grout as needed to level the panel. The shim and grout required for leveling should not exceed 2" thick.
- 5. Locate the sticker and punch the insert bar through. It should slide-in until it touches the face of the panel.
- 6. Slide the seismic shear connector into place such that the insert bar sits between the vertical plates of the connector.

7. Install anchoring

7a. With the insert bar and seismic shear connector fully engaged, pre-drill the 3 anchor holes into the footing – using the seismic shear connector as a template. The required drill size and depth may vary based on the type of anchorage used.

7b. 1/2" diameter F1554 Grade 55 galvanized threaded anchor rod with epoxy is recommended for anchorage [not included].

7c. Caution must be taken when drilling through slabs to minimize blowout at the bottom of the hole. Blowout of the concrete at the back of the slab can reduce the safe working load of the anchor.

7d. Thoroughly clean the drilled hole with

compressed air or suction to rid the hole of debris. 7e. When installing the center anchorage, slide it through the insert bar and seismic shear connector to guide the tip of the rod into the pre-drilled hole.

Dayton Superior recommends that the shear anchor be installed prior to the panel base grouting to ensure that the anchor can be installed tight against the top of the footing as designed.

<u>Click here</u> for the T29 Superior Panel Base Anchor PBA 10K Installation Guide





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RELATED PRODUCTS

- T29 Superior Panel Base Anchor
- T29 Shear Connector

HOW TO ORDER

The Superior Panel Base Anchor - 10K (PBA 10K) can be ordered as a palletized kit. Some on-site assembly is required.

The PBA 10K Palletized Seismic Kit includes the Panel Base Anchor only and does not include the Shear Connector or any Bolts.

The Seismic Shear Connector is ordered separately and is combined with the PBA 10K Palletized Seismic Kit for seismic applications.

Replacement parts are also available as needed.

ORDERING INFORMATION

SUPERIOR PANEL BASE ANCHOR 10K (PBA 10K) - PALLETIZED SEISMIC KIT OPTION



Weight

Does not include seismic shear connector or any bolts.

Product Code Description

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101795	PBA 10K - PALLETIZED SEISMIC KIT (NO BOLTS)	12.500 LB

PBA 10K SEISMIC SHEAR CONNECTOR

Designed to be used with the PBA 10K – Palletized Seismic Kit for seismic applications.

Product Code	Description	Weight
101780	PBA SEISMIC SHEAR CONNECTOR	14.000 LB

SUPERIOR PANEL BASE ANCHOR 10K (PBA 10K) -

REPLACEMENT PARTS

Product Code	Description	Weight
101355	PBA 10K - BASE SUB-ASSEMBLY (1)	6.25 LB/EA
101356	PBA 10K - INSERT BAR (2)	5.95 LB/EA
101357	PBA 10K - PLASTIC VOID (3)	0.35 LB/EA

Base Assembly



MANUFACTURER

Dayton Superior Corporation 1125 Byers Road Miamisburg, OH 45342 Customer Service: 888-977-9600 Technical Services: 877-266-7732 Website: www.daytonsuperior.com

WARRANTY (ACCESSORIES)

Limited Warranty. Dayton warrants, for a period of 60 days from the date of shipment (three years from the date of shipment in the case of formwork, excluding any consumable Products included with such formwork), that Products and any associated application drawings and engineering services provided by Dayton ("Ancillary Services") will be free from defects in material and workmanship and, in the case of custom designed formwork, that the formwork will meet the specifications set forth in the design drawings approved by Dayton and Customer. Any claim under this warranty must be made in writing within such warranty period. If any Product and/or Ancillary Service covered by a timely claim are found to be defective, Dayton will, within a reasonable time, make any necessary repairs or corrections or, at Dayton's option, replace the Product. Unless pre-authorized by Dayton in writing, Dayton will not accept any charges for correcting defects or accept the return of any Product. This warranty will not apply to any Products that have been subjected to misuse, neglect, storage damage, misapplication, accident or any other damage caused by any person other than Dayton, or that have not been maintained in accordance with Dayton's specifications. THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AS TO THE PRODUCTS AND ANCILLARY SERVICES. DAYTON MAKES NO OTHER WARRANTIES OR GUARANTEES EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE. THE REMEDIES SET FORTH IN THIS SECTION ARE CUSTOMER'S EXCLUSIVE REMEDY FOR BREACH OF WARRANTY.