“SPANSAFE” STEEL PROTECTION TRAYS

Archatrak

Archatrak “Spansafe” galvanized steel sheet trays are designed for placing under our porcelain pavers in pedestal supported deck applications to provide both protection should a paver be accidentally damaged or mitigation against wind uplift.

The Archatrak “Spansafe” tray is constructed of 1mm thick galvanized steel sheet with ¾” high downturned edges on all four sides, folded to provide a double thickness edge for extra strength. Holes are drilled in the sheet for drainage. On the wind uplift tray, quarter circle steel plates are welded to each corner which enable a screw to secure the plate to the pedestal head and provide a flat surface to apply adhesive for bonding the paver to the tray. Trays are designed for 24” x 24”, 48” x 24” or 16” x 48” (nom.) porcelain pavers only.

SPECIFICATIONS

	Wind uplift tray	Shock protection tray	Shock protection tray
Size:	23 7/16” x 23 7/16”	23 7/16” x 23 7/16”	23 7/16” x 15 7/16”
Edge height:	3/4”	3/4”	3/4”
Weight:	10lb	7lb	4.6lb
Steel thickness at corners:	3/16”	1/32”	1/32”
Hold down washer:	1” diam x 3/16” thick	n/a	n/a

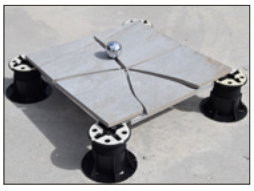
SHOCK PROTECTION

While porcelain pavers are exceptionally dense and durable, they can nevertheless suffer damage including cracking and breakage if heavy objects are dropped on them from a significant height. In accordance with the paver manufacturers’ recommendations, protection sheets or trays should be installed underneath the pavers when the pedestal height exceeds 4”, especially in high traffic situations. The Archatrak ‘Spansafe’ steel tray is designed to support the weight of an average person should a paver become damaged or broken, allowing the person to step away from the damaged paver to avoid potential injury.

INSTALLATION

The trays are installed by resting each corner of the downturned tray on a pedestal head. The pavers are then placed directly over the steel tray with each corner of the pavers butted tightly against the pedestal tabs. Standard pedestal head tabs will normally be high enough to avoid the need for additional height /special tabs since the total height of the tray at the corners is only 3/16”max. We recommend placing a rubber shim (e.g. our ETE-LGH2) or a bead of silicone adhesive between the pavers and the plates to minimize noise transmission and/or rattling.

Paver on tray



Broken paver supported by tray

Tray supporting person’s weight

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WIND UPLIFT MITIGATION

Wind uplift investigations commissioned by Archatrak indicated that blow off of porcelain pavers may occur with pavers installed on 8" high pedestals on elevated decks with a 12" high parapet, at wind speeds of 110 mph. However movement of the pavers on the pedestal heads may occur at lower wind speeds.

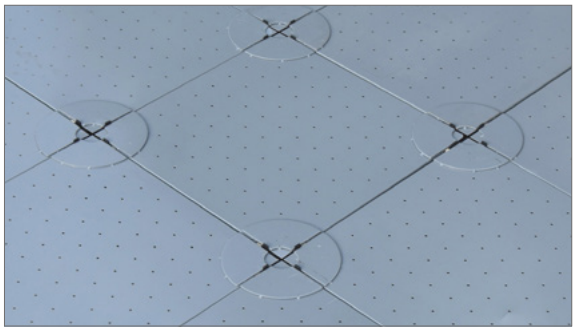
Studies on concrete pavers have indicated that locking pavers together can mitigate the effect of wind uplift on the critical corners and edges as the pavers are able to act together with an increased total weight to counterbalance the net uplift pressure.

The Archatrak 'Spansafe' wind uplift tray provides a mechanism for reducing shaking or side to side movement of the pavers as well as a means of securing the pavers to the pedestal heads with no visible fixing devices on the deck surface. Adhesive is used to bond the pavers to the tray which is in turn secured to the top of the pedestals and to each adjacent metal tray with a washer and screw assembly.

INSTALLATION OF TRAYS WITH HOLD DOWN SCREWS

After placing the inverted trays with each corner resting on a pedestal head, a stainless steel screw with an integral wide flat washer (available from Archatrak) is screwed into the center of the pedestals and tightened so that each corner of the metal tray is held tightly to the pedestal head. Adhesive is then applied to the quarter circle steel plates to bond the pavers to the plates. Pavers are then placed in position over the plates with the correct spacing provided by the tabs on the Eterno pedestal heads.

Further adhesive may also be used to bond the base of the pedestal to the substrate to provide additional wind uplift mitigation.



Wind uplift trays with added corner plates

Shock protection tray (no corner plates)

NOTE: While we believe the Archatrak 'Spansafe' tray and hold down screw system will provide a degree of wind uplift mitigation, we have not commissioned any specific wind uplift testing to quantify the additional benefits that this system may provide.

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