

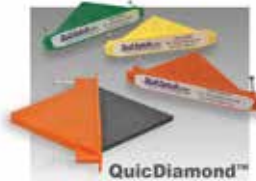
# CONCRETE CHATS

A MONTHLY NEWSLETTER OF BOMETALS, INC.

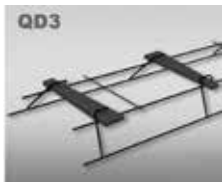
MAY 2026

## Load Transfer Devices – Plate Dowels

Plate dowels are the next step forward for load transfer devices. Development began in the 1990s with wider spread adoption taking hold in the mid-2000s. Advancements related to plate dowels include more surface area to transfer load from one slab to another, shorter embedment lengths than those found with smooth round dowels, and tapered sides for less restriction of movement as concrete sets, which helps reduce cracking due to restraint of that movement. While square plate dowels are used effectively for many applications, we will focus on the tapered, or diamond shaped, plate dowels here.



**Diamond Dowels:** Used in construction joints, these dowels are typically about 4.5" square plates rotated so the longer tip-to-tip diameter of a little over 6" is along the joint face. Plastic sleeves are designed to help guide the dowel into place during installation and also to allow freedom of movement as concrete sets.



**Single-Tapered Baskets:** Designed for use at control joints, these plates are square on one side and tapered on the other. Width at the center of the joint is typically 2" or 2.5", depending on plate thickness with length of approximately 12". Basket heights vary to allow the dowels to be placed at the center of the concrete slab.



**Double-Tapered Baskets:** Also for use at control joints, both sides of these plates taper from a center width of approximately 3" down to a point at either end. The length is about 12", like single-taper plates, which provides space to accommodate construction tolerances related to placement at sawed joints.

**Inclusion in ACI Documents:** Dowel size and spacing tables in ACI 360R-10 (2010) Guide to Design of Slabs-on-Ground and ACI 330.2R-17 (2017) Guide for the Design and Construction of Concrete Site Paving for Industrial and Trucking Facilities include plate dowels in addition to round and square dowels.

The design and use of plate dowels at concrete joints continues to grow and evolve. The initial focus for use of these dowels was industrial floors where they have been successfully employed for over twenty years. Plate dowels are also suitable for a wide range of exterior applications and, as such, are available with epoxy coatings for corrosion protection.

**QuicTip▶** [QuicDiamond flat plate dowel - BoMetals Inc.](#) and [QuicDiamond Basket Assembly - BoMetals Inc.](#) (Single-Taper and Double-Taper) are available for interior and exterior use with and without [Fusion Bonded Epoxy Coating](#).

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