

TOOLING TECH TIP

DOMED PUNCH HEADS

High compression force and high speed on certain tableted applications run with flat head punch profiles, i.e., vitamin, or other natural products, may be causing premature head wear. Standard TSM "flat" head profiles feature angled head punches (24 degree angle for "B" and 25 degree angle for "D" configurations). The outside head angles blend into the head flat through a 5/16" radius. The impact of heavy forces acting on this small radius surface - and at higher operating speeds - effectively "work hardens" the punch head in the area around the 5/16" radius. The result is pitting of the head flat and deformation of the transition surface between the outside head angle and head flat.

As an alternate to the TSM "flat" head profile, you may wish to consider the TSM "domed" head profile. In place of the straight head angle the domed head configuration uses a more gradual 5/8" radius arc that blends directly into the head flat. The 5/16" radius to the flat is eliminated and the stress in this area is reduced by virtue of the broader radius.

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