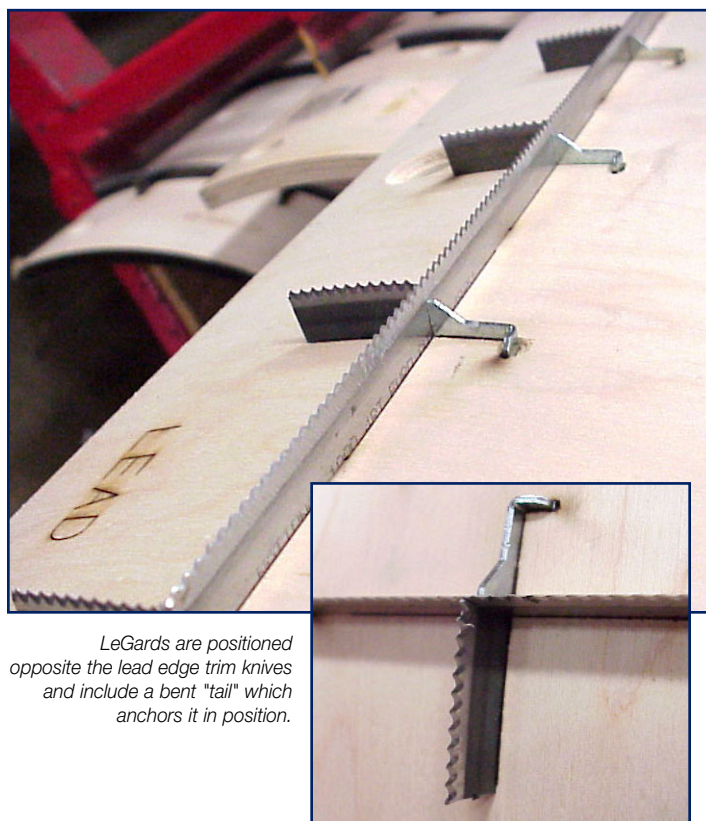


LeGard braces the lead edge knife!

LeGards (lead edge guards) were developed in response to the ongoing problem of damage to the lead edge knives in rotary dies. The lead knife in a rotary die is subjected to a tremendous amount of side impact force, when entering the nip of the press, especially when cutting heavier weight materials. This force will cause the knife to deflect away from the miter joint between the trim knives and the lead knife, creating a gap for waste material to accumulate in. The material is also trapped between the lead knife and the waste ejection rubber. As this waste material accumulates, the waste ejection rubber is then forced out of position and soon forced off the die. With no waste ejector, it is then only a short amount of time before the lead knife is folded over and damaged enough to require replacement.

In order to prevent this damage, many diemakers use 5/8" thick wood, 6 pt. knife on the lead edge, slot rubber material for waste ejection, braces to reinforce the knife or build up the trailing side of the lead knife with metal or other materials as a brace. The use of 5/8" thick wood causes the rubber in the die to be over-compressed causing it to fail prematurely. Most press operators will increase the impression because the scrap isn't stripping, and quickly damage the die due to over impression. The use of 6 pt. lead knife creates a situation where more pressure must be used in order to achieve complete cutting. It takes more force to drive a wider knife into the diecutter blankets than it does for the standard 4 pt. knife. A 6 pt. knife also requires a larger and weaker miter on the trim knives. These can frequently fail, consequently build-up with trim material, and cause production delays. Additionally, the use of hard rubber for lead waste ejection also means that more pressure must be applied in order to achieve full trim removal. Due to the rotating action of rotary presses, the hard rubber will travel towards the lead knife and "bunch-up" there, creating a very dense material. The use of reinforcement braces or build up, is generally labor-intensive and interferes with the cut sheet and ejection material.

Using LeGards for all denser materials (Single Wall ECT 44 or 275# and higher and all Double Wall and Triple Wall), reduces lead knife failure.



LeGards are positioned opposite the lead edge trim knives and include a bent "tail" which anchors it in position.

LeGards can also be used in other situations, such as tight miter tangent areas, which are prone to opening during diecutting. These areas previously required welding in order to hold them together, LeGards offer an easy and effective solution.

LeGards allow for the use of 1/2" wood and 4 pt. cutting rules that are more economical. Plus, the additional benefits of better stripping and longer tooling life.

LeGards help extend rubber life and minimize pressure.