

CROSS WEB PERFORATING BLADES AND PINS FOR A WIDE RANGE OF INDUSTRIES -

Perforation blades can be made to push against hard, anvil surfaces, even hardened steel, or made to push against softer surfaces, such as brush rollers. This setup depends on the material being perforated and the severity of the perforation tear that is required. Stewarts of America manufacture both flat blades and blades with tapered teeth. The tapered teeth allow the penetration of the blade to be adjusted, therefore allowing the operator to adjust the tear strength of the perforation while using only a single blade.

Perforation ratios:

It is important to select the appropriate cut and tie ratio of the perforation, as this has a direct effect on the tear ability of the perforation in the material.

Perforations are classified according to burst strength or TPI (Teeth Per Inch or Ties Per Inch).

Burst strength is a measurement of the pressure that is required to separate the material at the perforated location. The material weight, material thickness and material composition all have a direct effect on the burst strength.

Tear strength is the resistance that a perforation offers in preventing a label or form from separating at the perforated area.

Light release is easily torn (3-6 TPI)

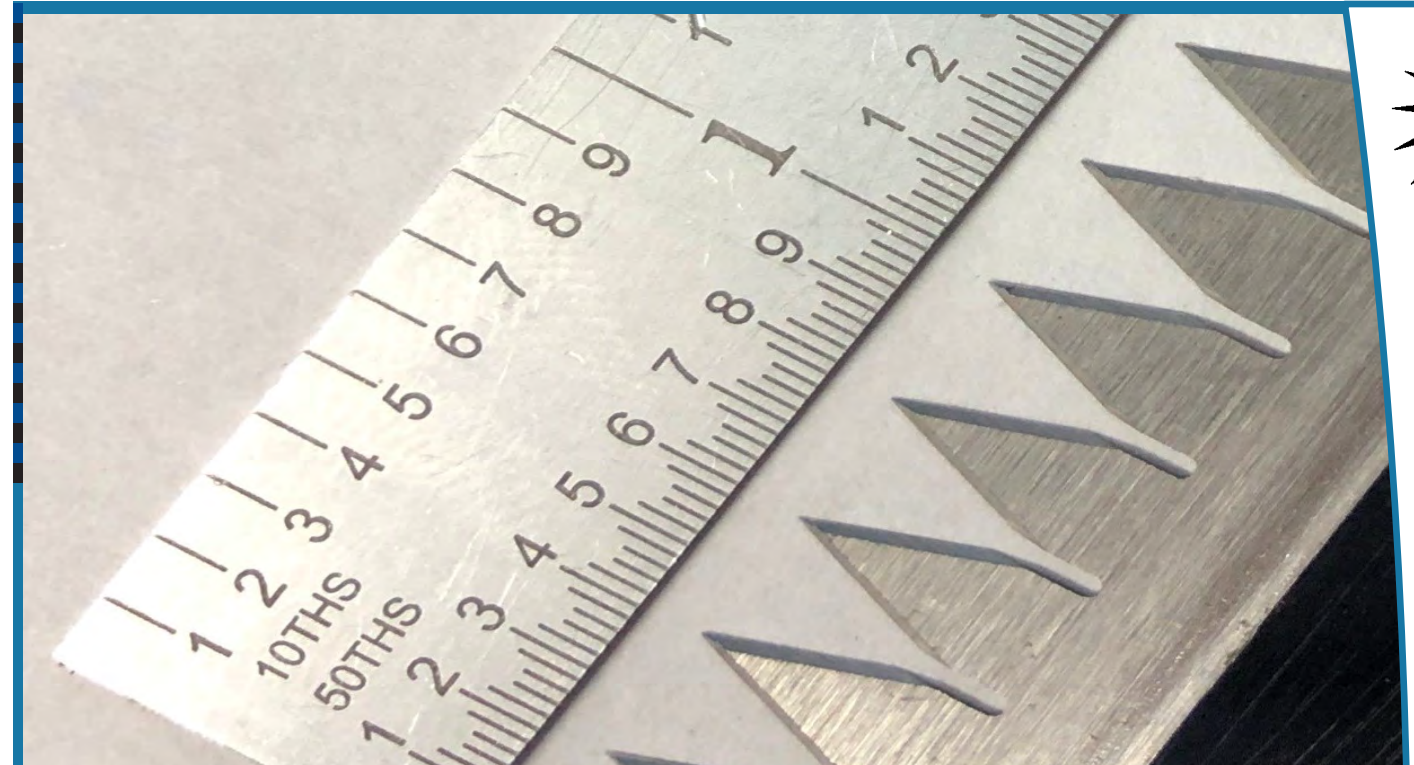
Medium has moderate tear resistance (7-10 TPI)

High release provides the greatest resistance (11-18 TPI)



Stewarts of America, Inc.
"On the sharp End of Pinpoint Technology"

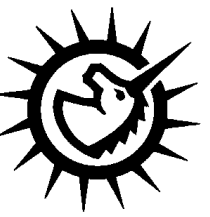
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CROSS WEB PERFORATING TOOLING AND MACHINERY



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Cross Web Perforation Tooling and Machinery



Precision tooling and machinery for Cross Web Perforating

CUSTOM MADE BLADES AND PINNED TOOLING FOR NEW AND EXISTING APPLICATIONS

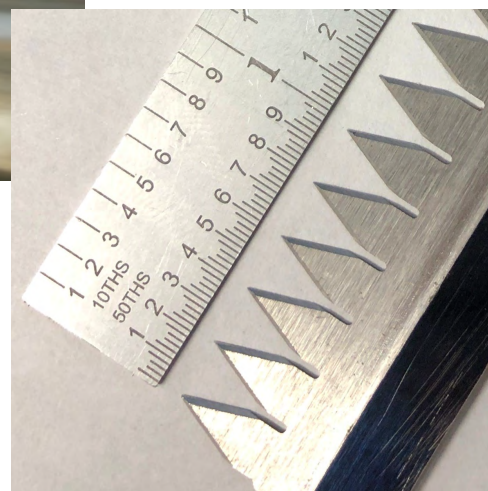
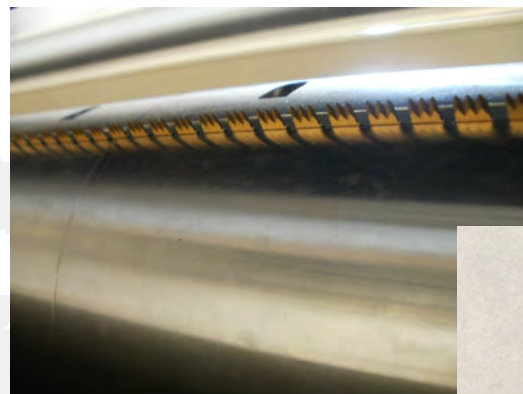
THE HOLE SOLUTION

FLEXIBLE INTEGRATION

Stewart's of America cross web perforating blades or pinned perforating bars can be a great value add, and can be manufactured custom to match the material that needs to be perforated. easily integrated into the following material that needs to be perforated. standard equipment:

- Extrusion Lines
- Bonding Lines
- Thermoforming Lines
- Slitter / Re-winders
- Simple Unwinds and Rewinds
- Laminators
- Printing Presses
- Bag/Pouch Making Machines
- Post Gusseting Equipment
- and more.....

Multiple blades or bars can be seated across the web so that blade or pin damage can be economically and easily changed out.



Cut to tie ratio examples

- 3 Tooth x .032" = 10% of hold
- 4 Tooth x .032" = 13% of hold
- 5 Tooth x .032" = 16% of hold
- 6 Tooth x .032" = 19% of hold
- 7 Tooth x .032" = 22% of hold
- 8 Tooth x .032" = 26% of hold
- 9 Tooth x .032" = 29% of hold
- 10 Tooth x .032" = 32% of hold
- 11 Tooth x .032" = 35% of hold
- 12 Tooth x .032" = 39% of hold
- 14 Tooth x .032" = 45% of hold
- 16 Tooth x .032" = 51% of hold
- 17 Tooth x .032" = 54% of hold
- Ask for our full table of perforation calculations to select the right cut and tie for your project!

Selecting the Perforation

- 3-4 TPI When once section of the material needs to easily separate from the other. Common applications are business forms.
- 5-6TPI This TPI has more tears, but is too loose for forms that must stay in tact
- 7-10 TPI A medium release with moderate tear resistance. Commonly used for perforating the liner between labels so the end user can separate them individually with ease
- 11-14 TPI Can be used in a fan folding applications, as the cut and tie ratio gives a stronger hold. The material typically has to be folded before tearing
- 15-18 TPI Mainly used for magazine inserts and mailers in commercial printing.

CROSS TEAR PERFORATOR

- Slotted aluminum roller to seat pinned bar or tear blade
- Brush back-up roll supports the film and allows proper blade penetration. A range of anvil rollers are available.
- Pneumatic open / close is an option for easy threading.
- Designed for either in- or out-of-line operation.
- Mechanical or Servo machine versions available
- Multiple rolls can be used in the mechanical version and carousel technology is available.
- Can work in registration (optional).



CUSTOM SOLUTIONS

Stewart's of America have the ability to design and manufacture a custom perforating solution for your specific application. Stewart's of America's engineers are well versed in a wide range of materials and the effects that perforating has on these materials. From Non-wovens to Films and Foils, Stewart's of America are your partners for the *Hole Solution*.



WEB SOLUTIONS

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GLOBAL SOLUTIONS

Stewart's of America has agents and offices worldwide. We ship to over 50 countries. Our equipment is designed with the global market in mind, utilizing electronic components that are available internationally, with the support of our Stewart's of America trained knowledgeable local agents.



Flexible Cross web Perf Solutions for your converting