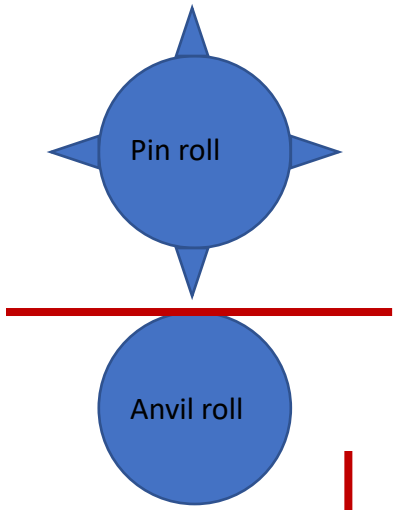
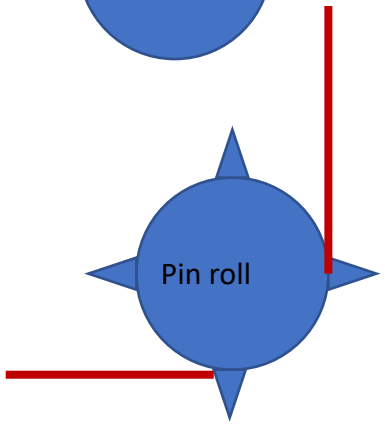
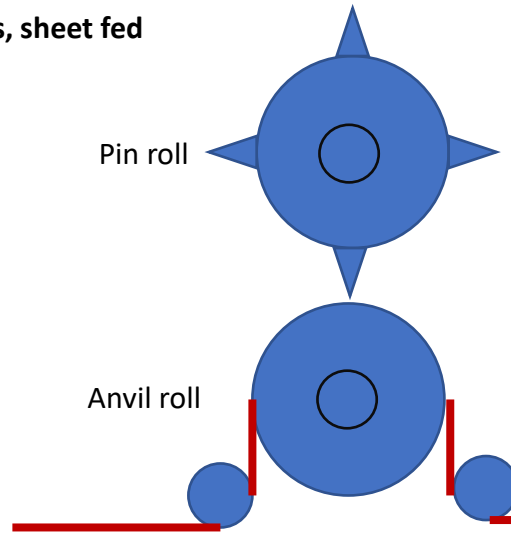
Rotary Perforation layouts

1. Over and under for RIGID materials, sheet fed

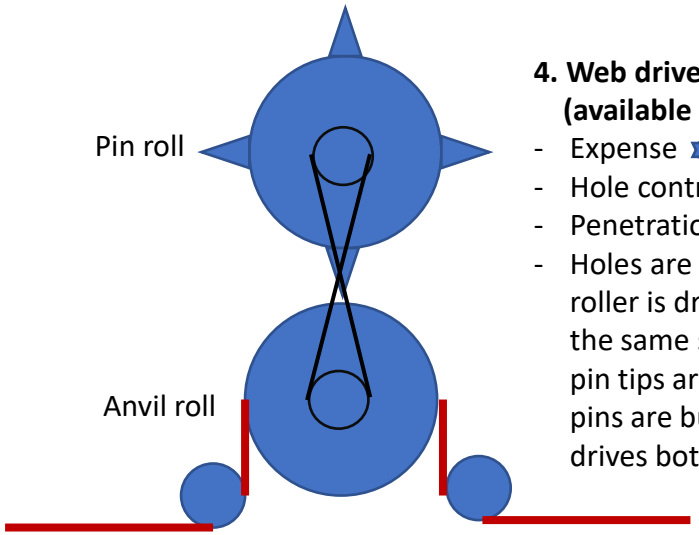




2. Pin roll wrap
- Expense ✸
- Hole control and repeatability ✸
- Penetration control ✸
- Holes are likely to vary depending on speed and tension

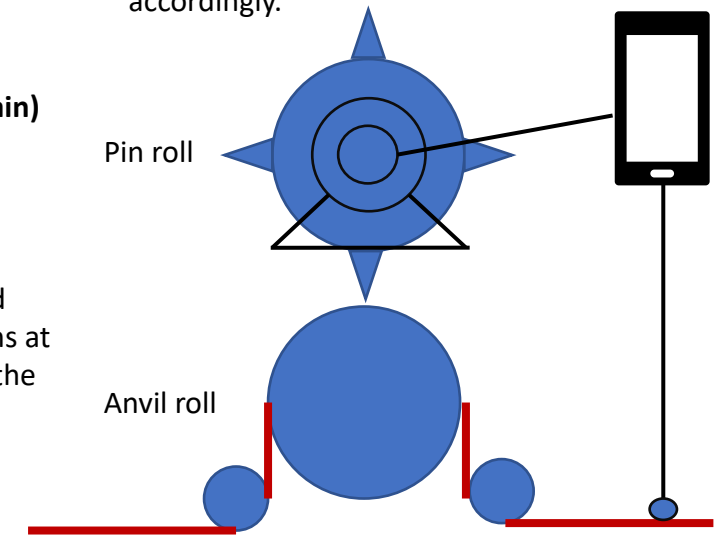


3. Undriven pin roll (cold econo-perf unit).
- Expense ✸✸
- Hole control and repeatability ✸✸
- Penetration control ✸✸
- Holes can vary depending on pin population of the pinned roller. If only a sparse population is used, and a pin is not always in contact with the material, the pinned roller has to be surface driven. This removes the ability to adjust the pin penetration into the material.



4. Web driven pin roll (linked with belt / chain) (available on standard cold perf unit).
- Expense ✸✸✸
- Hole control and repeatability ✸✸✸
- Penetration control ✸✸✸
- Holes are more controllable, as the pinned roller is driven off the anvil roller, so it spins at the same speed of the web whether only the pin tips are touching the material or if the pins are buried into the material. The web drives both rollers.

5. Electrically driven pin roll (available on standard cold perf units) (mandatory on hot perf units)
- Expense ✸✸✸✸
- Hole control and repeatability ✸✸✸✸
- Penetration control ✸✸✸✸
- Holes are more controllable, as the pinned rollers speed is electronically matched to the speed of the web. The pin roll speed can also be precisely trimmed to compensate for the change in engagement diameter as the pins penetrate further into the material, giving optimized control over hole geometry.
- This method is recommended for any lightweight, thin or materials with stretch, as the system takes the drag off the material. The lay-on encoder provided with the unit feeds back the web speed, and the drive ensures that the AC vector motor matches accordingly.



Anvil roll options: Brush, Rubber covered, Grooved, Felt covered, Other covering available