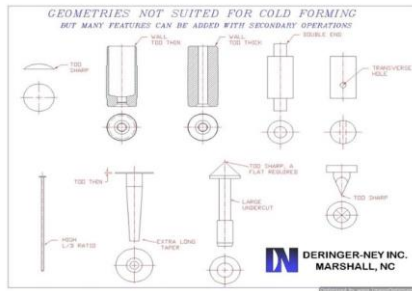
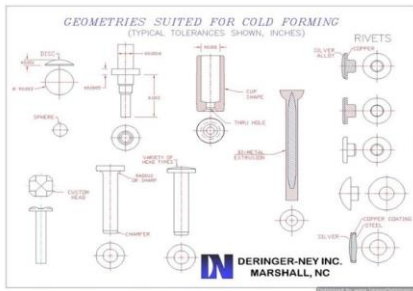
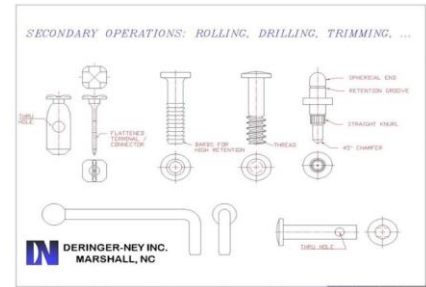


Cold Heading Tolerances and Technical Data

Geometries



The drawing below has some features that can be put on by typical secondary operations. Typical cold formed tolerances are shown on the diagrams. Tighter tolerances can be held if needed.



There are geometric limitations to parts that can be cold formed. Above are some sketches of parts showing features that can and cannot be cold formed.

Material for Cold Forming

This a list (admittedly incomplete) of metals suitable for cold forming, and some that are not. A general guideline for cold formability is that the metal's elongation must be at least 20%.

Suitable Alloy	Cold Formability Characteristic
Copper	Excellent
Gold, Silver and most of their Alloys	Excellent
Brass- Cartridge Brass	Good
Platinum, palladium, tantalum, and their alloys	Most are cold formable.
Titanium and its alloys	Pure Ti and alloys with high ductility, yes, but alloys like 6-4 are only hot headable.
Nickel and its alloys	Pure Ni yes, alloys with room temperature elongation of 20% or more, yes.
Iron and steels	Pure iron, yes. Steels, depends on the steel. Many are cold formable.
Non-Suitable Alloy	Cold Formability Characteristic
Brass-free machining grades (like C360)	Poor- chip-breaking additives promote cracking. Use instead 260 brass.
Cast iron	Too brittle
Silicon	Too brittle
Tungsten	Too brittle
Cobalt and cobalt alloys	Generally too brittle
Rhenium	Too brittle
Rhodium	Mostly too brittle

Useful Links

www.copper.org
www.onlineconversion.org
www.engineersedge.com

Copper Development Association
 Conversions from anything to anything else
 Engineering Reference Directory

For More Information

[Contact Us to discuss your application with one.](#)