Punch Options — Shapes and Keyways

**STANDARD SHAPES**

- Round
- Square
- Hex
- Oblong
- Rectangle

Non-stock sizes and shapes of stock style tooling can be shipped in 24 hours.

**NON-STANDARD SHAPES**

- J-Oval (Ellipse)
- T-Teardrop
- G-Triangle
- M-Octagon
- OO-Curved Oblong

- D-Half Oblong
- Q-Flatted Round
- P-Double Flatted Round
- C-Knockout
- R-Corner Round

Radius corners can be furnished upon request. Please specify shape and radius required.

**STANDARD KEYWAYS**

Cleveland Steel Tool recommends the use of Keyways for positive alignment of shaped punches. Different ironworker machines use different size and style keyways. Some common styles, shapes and sizes are stocked with keyways, but the necessary keyway can be added to any punch upon request.

- Square Keyway
- "V" Keyway
- Side Keyway
- Radius Keyway

**STANDARD KEYWAY POSITIONS**

**OPTIONAL KEYWAY POSITIONS**

Keyway Sizes
- 1/4" x 1/8"
- "V" Groove
- 2mm x 4mm
- 3mm x 6mm
- Custom sizes

Visit clevelandsteeltool.com for promotions, new items, updates and the latest news.
**CHOICE OF PUNCH FACES**

Cleveland Steel Tool offers a Crown Face with Center Point as our standard punch face. Other punch faces are available for special applications, including reducing distortion, and reducing tonnage requirements.

- **CST Standard**
  - Crown Face
  - Center Point
  - This standard face includes a center point for alignment and a crown face to reduce chipping of the cutting edge in heavy punching applications.

- **Full Crown**
  - This face reduces the chipping of cutting edges in heavy punching applications. The center point is removed for height clearance between the punch and the material.

- **Flat Face**
  - Center Point
  - This face includes a center point for alignment and a flat face to reduce distortion when punching repetitive holes in a narrow flat bar such as a fence or railing.

- **Flat Face**
  - This face is used when punching thin material to reduce deformation of punched material caused by a center point. This punch is also used when the slug is being retained.

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**PUNCH STYLES**

These punch styles can be made to your exact specifications. Please provide the style number you require including all dimensions.

- **"Y" Shear**
  - This face is used mainly on thicker material to reduce tonnage.

- **"Y" Shear with Center Point**
  - This face is also used on thicker material to reduce tonnage but has a center point for alignment.

- **"Z" Shear**
  - This face is used for thin material to reduce tonnage and distortion. Must be used on material 16 gauge thick or lighter.

- **Concave Shear**
  - This face reduces tonnage and distortion on material 1/4" thick and less. This punch will break if used on thicker material.

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Visit clevelandsteeltol.com or call 800-446-4402 for price and availability.