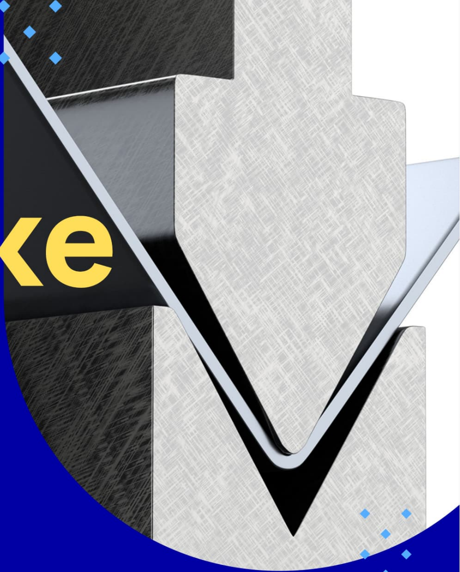
Press Brake

Coining Explained

» www.adhmt.com



Introduction

01 **Press brake bending:** Key in metal forming.

02 **Methods:** Air bending, bottom bending, coining.

03 **Coining:** Most popular due to precision & consistency.

Three Main Types of Bending

01

Air Bending: Minimum contact, leverage principle, suitable for small-medium production.

02

Bottom Bending: Closer contact, middle method between air bending &coining.

03

Coining: High tonnage, precise bending angle, metal matches punch & dieshape.

Deep Dive into Coining

Historical Context

Origin: Ancient coining technology.

Purpose: Precise shaping of coins.

Evolution: From coin-making to modern metal sheet bending.

Process

Core Principle: Use high tonnage to make metal sheets fit the geometry shapeof the punch and dies.

Steps

Material Preparation: Choose the right metal, cut to required shape & size.

Die Setting: Design punch & die for desired bending angle. Set tools on press brake.

Metal Positioning: Ensure metal sheet is stable on the press brake.

Exerting High Tonnage: Press metal sheet with high precision & contro.

Bending Finish: Achieve high-precision bending with the metal retaining its required geometric shape.

Benefits

Precision: Produces exact and consistent bends. Ideal for high precision industries like aerospace & medical device manufacturing.

Consistency: Metal conforms exactly to punch & die, ensuring uniform bending for both mass & custom production.

Wide Applicability: Suitable for various metal materials of different types & thicknesses.

Comparing Coining with Other Bending Methods

Air Bending VS. Coining
Tonnage difference,
contact difference,
bend angledetermination.

Bottom Bending VS. Coining
Material conformity,
tonnage difference.

FAQs

Difference between coining & embossing:
Coining for metal shape,embossing for surface pattern.

Disadvantages of coining:
High tonnage, material thinning, high cost, skilled operators needed.

Importance of tonnage in coining:
Determines contact degree, ensures accurate bending.

Conclusion

Metal bending tech:
Vital in fabrication.

Different methods:
Improve efficiency & product quality.