Press Brake: What Is Used For

INFOGRAPHIC

Introduction

Essential tool in metal fabrication.

Bends metal sheets into precise shapes.

Key property: Metal ductility – ability to stretch and bend without breaking.

Core Functions

Bends metal sheets into various shapes.

Produces complex bending shapes: combination, cascade, radius.

Works with various metals: steel, stainless steel, etc.

CNC-controlled for precise and repeatable parts.

Boosts production efficiency.

Quick prototype creation.

On-site use for small batch production.

Easy tool replacement for varied angles and shapes.

Origin of "Press Brake"

Dates back to the 15th century.

Evolved from grain grinding machines to modern bending tools.

Bending Process

Factors affecting bending force: metal thickness, bending angle, bending radium.

Types: Hydraulic (CNC), Pneumatic, Electric, Mechanical.

Speed & Precision: Hydraulic offers fast speed and high accuracy.

Considerations Before Bending

Choose the right material.
Ensure correct bending range.
Measure bending radium.
Optimize bending process.
Select appropriate tools.
Ensure operator expertise.
Prioritize safety.
Maintain tools and dies.
Have clear designs and drawings.

Applications

Automotive: car body components.
Electronics: TV casings, refrigerator panels.
Construction: roof structures.
HVAC: ventilation ducts.
Household: oven inner shells.
Light machinery: blades.
Prototyping & customization.
Furniture & decor: metal furniture, artistic designs.

FAQs

Lifespan: 15-30 years with proper maintenance.

Press Brake vs. Hydraulic Press: Depends on specific needs.

Cost: Varies by size, capacity, brand.

Types: Mechanical, Hydraulic, CNC, Tandem, Servo-Electric, Pneumatic.

Conclusion

Vital in modern society: construction, automotive, electronics.

Choose the right machine for your needs.

ADH Machine Tool: 40+ years in press brake manufacture.

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