

# Heavy Duty Universal Loop Bender

**Forms Wide Range of Strap Copper  
Conductors for:**

- Hairpin Loops
- Double Knuckle Coils
- Multiple Turn Coils
- Interpole Coils
- Rectangular Coils
- S-Bends

**Simple Adjustment —  
Change Forming Pin in 10 Seconds  
Complete Setup Within 2 Minutes.**

**Versatile Bender — Includes 14 Forming  
Pins and Adapter Sets from 1/4" to 2-3/8"  
Diameter — Special 1/8" and 3/16" Pins  
Available.**

**Requires  
Little Effort to Form Coils  
Uniformly, Accurately and Rapidly.**

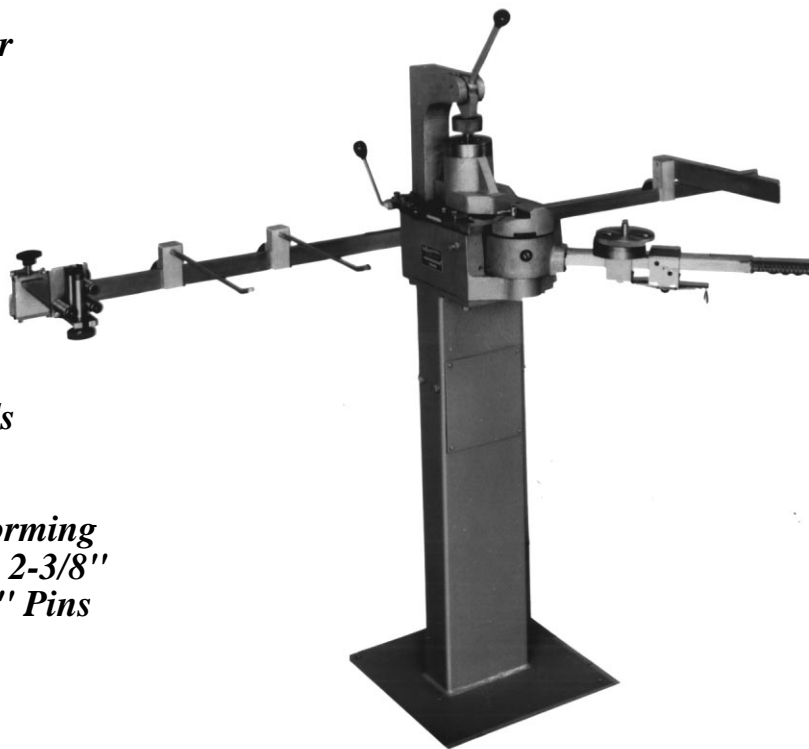
## Versatile, Time Saving Bender

The Heavy Duty Universal Loop Bender is an extremely versatile, pedestal mounted, lever operated machine capable of edge bending a wide range of strap copper conductors for various types of armature coils, rotor coils and interpole coils. Hairpin coils, double knuckle coils, multiple turn coils, rectangular coils and S-bends can be precisely formed with ease. Conductors ranging from .020" x .125" to as heavy as .385" x 1.125" have been formed and in one instance 24 conductors, .025 x .125" arranged four deep by six wide were formed.

## Pins and Adapters

The Bender is provided with 43 forming pins, forming pin adapters and bending arm pins including the following pin diameters: 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 1-3/4, 2, 2-1/4 and 2-3/8"

Minimum standard inside diameter of bend is 1/4" and maximum outside diameter is 6". Even smaller forming



**Production Proved in Hundreds of  
Manufacturing and Repair Plants.**

pins can be furnished on special order. Any angle up to 180° can be formed. The size, width to thickness ratio, temper, number of conductors, conductor arrangement as well as the forming pin diameter all influence the bending force necessary. Two bending arms approximately 19" and 47" in length are furnished.

## Simplicity of Adjustment

In less than 10 seconds, a forming pin with adapter can be changed from one size to another. Setting for conductor width and thickness is rapidly accomplished by screw adjustments and the unit is ready to form copper in less than 2 minutes. The bending jaw and forming pin are spring loaded and automatically accommodate to any thickness of copper conductors up to 5/8".

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## Base Construction

The rigid cast iron base of the Bender is bolted on top of a 4" x 8" tubular steel pedestal. The base supports the forming mechanism and has attached to it steel bars extending to both sides of the unit. These bars support the adjustable wire guide, wire supports and the loop gauge.

## Bending Device

The lever operated bending device is ball bearing mounted on a vertical spindle secured in the base. This part, designated as the chuck, supports the spring loaded forming pin with its notched adapter and also the spring loaded bending jaw. The bending jaw is screw adjustable to the width of the copper to be formed. A crank type wrench is provided.

## Pressure Foot

The pressure foot mounted above the chuck serves to hold the copper flat as it is formed on edge. This pivot mounted arrangement affords unequalled loading and unloading ease. The design of the pressure foot assembly for the PRJ Heavy Duty Bender is of particular benefit in forming multiple turn interpole coils as each succeeding turn can easily be raised over the pressure foot as the forming proceeds. A convenient lever operated cam closes the machine for the forming operation. The pressure foot is adjusted to the thickness of the copper by means of a screw with a large knurled head upon which the cam acts.

## Secure Conductor

An adjustable backup plate mounted to the left of the forming pin is set to the width of the copper and serves to secure the conductor in place against the force of the bending jaw as the chuck is rotated by the operator. A quick acting clamp holds the backup plate in position.

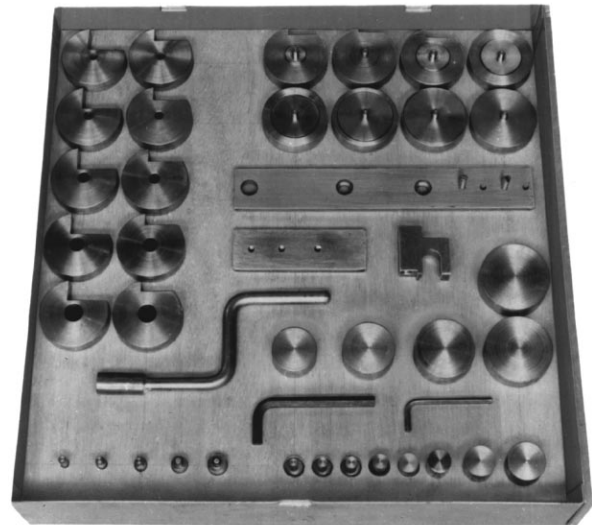
## Easy Coil Removal

When forming multiple turn loops, double knuckle, or interpole coils, the mechanism mounted on the bending arm is utilized and supports a bending arm pin. A cam release mechanism allows easy removal of the completed coils as each turn is formed. An eccentric adjustment is provided and is used in the forming of double knuckle coils. An adapter for forming square or rectangular coils is provided.

## Floor Space Required

The PRJ Universal Loop Bender requires an 18" x 96" floor area with a semi-circular area in front of the machine. This area should have a 50" radius centered on the forming pin. Minimum recommended work area should be eight feet square. In some instances, additional space to the left is required when copper is fed directly from a reel, or reels, into the bender.

The Bender is shipped complete with crank-type chuck wrench and a steel box having an insert with individually sized retaining holes for forming pins, bending arm pins and adapters.



## SHIPPING DATA

Item No.	Net Weight	Crated Weight	Boxed for Export	Dimensions			Cubic Feet
				L	W	H	
E-755	350 lbs.	550 lbs.	625 lbs.	64"	28"	30"	31

PRJS-ULB-0597

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