

**KING**  
INDUSTRIAL 

# 48"-12GA. BOX & PAN BRAKE



**MODEL: KC-BP4812**

# INSTRUCTION MANUAL

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## IMPORTANT INFORMATION

### WARRANTY INFORMATION

**2-YEAR**  
LIMITED WARRANTY  
FOR THIS 48" BOX & PAN BRAKE

### PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

### REPLACEMENT PARTS

Replacement parts for this tool are available at our authorized service centers across Canada. For servicing, contact or return to the retailer where you purchased your product along with your proof of purchase.

### LIMITED TOOL WARRANTY

KING CANADA makes every effort to ensure that this product meets high quality and durability standards. KING CANADA warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, repairs or alterations and lack of maintenance. KING CANADA shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products. To take advantage of this warranty, the product or part must be returned for examination by the retailer. Shipping and handling charges may apply. If a defect is found, KING CANADA will either repair or replace the product.

**IMPORTANT: IF THIS MACHINE IS DAMAGED DUE TO FEEDING MATERIALS THAT ARE A THICKER GAUGE STEEL THAN 12GA., THE WARRANTY WILL BE NULL AND VOID.**

# OPERATION



## INTRODUCTION

The box and pan brake is the culmination of many year's experience in the development, manufacture and application of hand bending brakes. This style of brake incorporates all the outstanding features of a standard hand brake. In addition, it has removable, sectioned fingers, offers added depth and increased clearances, providing greater versatility and range of uses in the sheetmetal shop.

## ADVANTAGES OF OPERATION

We offer this machine with a great deal of pride, because of its wide range of applications and its many advantages. Some of the primary benefits: the machine can be used to form a box or pan having four sides and a bottom from one sheet of metal. In addition, a narrow return flange on the top of a box can be made, as in the manufacture of electric switchboxes.

## APPLICATIONS AND USES

The box and pan brakes are used by manufacturers for forming electrical and electronic switch boxes, cutout boxes and panel board cabinets. They are also used extensively in the manufacture of conveyor baskets, tote boxes and all classes of box and pan work, as well as a wide variety of other work. The predominant application for these machines today is in the forming of radio, TV and other electronic chassis. The labor-saving features of the box and pan brakes are obvious. They are in great demand due to their efficiency in quantity production and in a variety of job work applications.

## NOSE BARS

Nose bars are quickly interchangeable so that special bars such as radius types can be used. Radius bends such as those in modern metal furniture and cabinets can be made with these round nose bars, as shown in Fig.A on the following page.

A full length nose bar can be used instead of the individual nose bars for each size finger. With the full length nose bar in place, the machine becomes a straight bending brake.

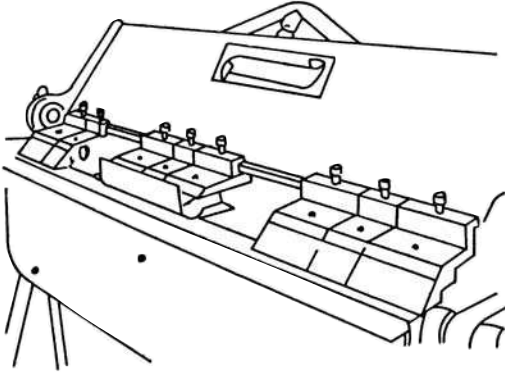
Tubular shapes can be formed by extending nose bars between fingers, as shown in Fig.B. With the fingers set in the regular position, large tubular shapes can be formed by allowing the metal to spring out of shape against the top side of the fingers. In most metals the shape is distorted only while it is being finished up. As soon as the tube is removed from the brake, the metal springs back to the correct shape. Deep channels can be formed with the help of the finger extension.

## CAPACITY

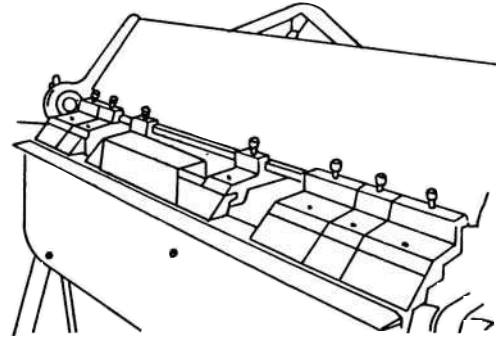
Capacity of box and pan brakes is the same as that of standard hand brakes. It is rated at 1" flange or weir on mild steel. Narrower flanges can be bent on lighter metal. When the brake is used for capacity work, the rein-foreign angle bar must be in the normal or top position. When the angle bar is removed, the capacity of the brake is reduced four gauges. When the 1/4" insert bar is removed-reducing the bending leaf edge to 1/4" thickness-the capacity of the machine is reduced seven gauges. Minimum reverse bends are 1/4".

## OPTIONAL CONSTRUCTION

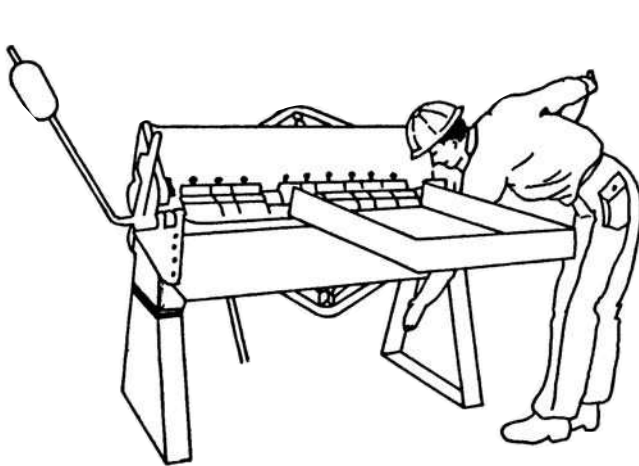
Options available on box and pan brakes are the same as those for standard hand brakes. A removable bottom bar, permits renewal of the bending edge whenever required, simply by replacing the bar. Bending leaf insert bars are interchangeable and are ideally suited where frequent changeovers are required. This type of construction can be furnished as optional at reasonable cost.



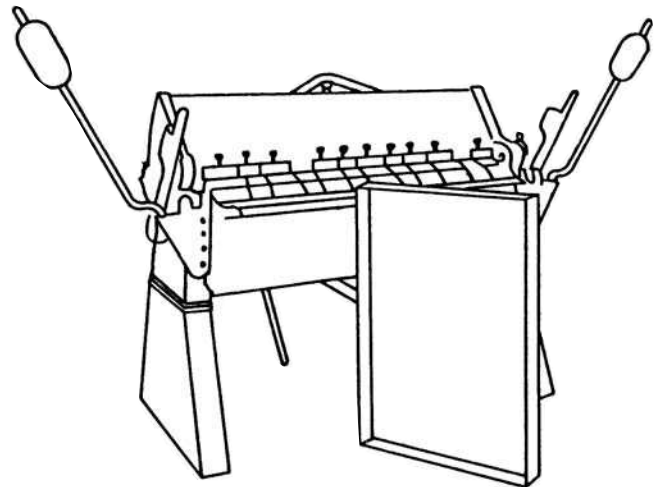
**FIG.A** - Radius nose bar used in line with straight bending fingers for forming contemporary furniture, cabinets.



**FIG.B** - Bridge-type nose bar extended between fingers to form tubular shapes.



**FIG.C** - Operator makes final bend in typical pan forming operation.



**FIG.D** - The box and pan brake with typical completed box shape.

# OPERATION & MAINTENANCE



## BENDING EDGE ALIGNMENT

When bending leaf is in down position, edge of leaf should be flush with edge of bottom bar. To maintain this alignment, ensure brake sets level on floor:

1. Adjust bending leaf center with fruss nut.
2. Adjust bottom center with Truss nut.
3. Adjust bending leaf ends with hinge adjustment screws. Loosen hinge bolts before and tighten again after adjustment.

## BOWED BENDING LEAF ADJUSTMENT

If bending leaf becomes bowed in center after use, tighten both tension bolts until center is brought into a straight line.

## CAPACITY

The bending capacity of the brake is determined by the bending edge thickness provided by the bending leaf bars when mounted on leaf.

1. Insert bar with angle bar and allow the full rated 1" minimum flange on capacity material.
2. Inserting the bar alone without angle bar reduces capacity of the brake four gauges.
3. Removing both insert bar and angle bar reduces capacity of brake seven gauges. These bars are removed only to make narrow offset bends.

## CAUTIONS

Never bend heavier material than rated capacity, even in shorter lengths.

Never bend against seams unless links are adjusted to clamp the full multiple thickness of seam and, top leaf is set back for clearance of the same full multiple thickness.

Always use material with square-sheared edges. Rolled edges will cause material to bow.

Always have both angle bar and insert bar mounted to leaf when making capacity bends.

Never use brake to bend rods. These will nick the nose bar.

Always adjust for differences in gauges. Especially never force-clamp the top on material heavier than that for which the links and top are set by using pipe extensions on clamp handles for leverage.

## NARROW OFFSET BENDS

Remove angle bar and insert bar, - use bending leaf only.

## PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.

## RADIUS BENDS

Both the angle bar and insert bar must be mounted to leaf to wipe material around radius nose bar.

## ADJUSTING FOR METAL THICKNESS

Clearance for bends is obtained by moving top leaf back at bending edge. If material to be bent is within four gauges of capacity, move top leaf back twice the thickness of the material. With lighter material, move top leaf proportionately forward if sharper bends are desired:

1. Unclamp handles slightly.
2. Adjust top leaf with top adjustment handles.

Clamping pressure of the links is changed by adjusting nuts.

## OVERBENDING ADJUSTMENT

If sheet bends over further on one side than on the other, set the top leaf back on the end where sheet is overbending.

1. Unclamp handles slightly on the side that is overbending.
2. Adjust top leaf with top adjustment handle.
3. Reclamp handle.

## DUPLICATE BENDS

Adjustable stop gauge may be positioned at any point on rod by means of lock bolt, to limit the degree of bend.

## COUNTERBALANCE

Counterweight can be raised or lowered on rod to properly counterbalance the bending leaf.

## CREEPING TOP LEAF ADJUSTMENTS

Should top leaf creep forward when clamping material:

1. Check that brake sets level on floor.
2. Ensure that top adjustment screw collars are locked into position so that the screws cannot move back and forth in saddles. Front shoulder of screws and face of collars must be snug against saddles with minimum clearance.

## LUBRICATION

Lubricate occasionally with SAE-30 oil where indicated by symbol L except for top adjustment screws and nuts which are lubricated by filling saddle cavities with grease.