

BOX & PAN BRAKE OPERATION MANUAL

PB2420

PB4816



 **WARNING**

Read and understand all instructions before using this tool. The operator must follow basic precautions to reduce the risk of personal injury and/or damage to the equipment.

HAZARD DEFINITIONS

Please familiarize yourself with the hazard notices found in this manual. A notice is an alert that there is a possibility of property damage, injury or loss of life if certain instructions are not followed.

DANGER! This notice indicates an immediate and specific hazard that will result in severe personal injury or loss of life if the proper precautions are not taken.

WARNING! This notice indicates a specific hazard or unsafe practice that could result in severe personal injury or loss of life if the proper precautions are not taken.

CAUTION! This notice indicates a potentially hazardous situation that may result in minor or moderate injury if proper practices are not taken.

NOTICE! This notice indicates that a specific hazard or unsafe practice will result in equipment or property damage, but not personal injury.

WORK AREA

1. Operate in a safe work environment, Keep your work area clean, well-lit and free of distractions. Place lights so you are not working in a shadow.
2. Keep anyone not wearing the appropriate safety equipment away from the work area.
3. Store unused tools properly in a safe and dry location to prevent rust or damage. Lock tools away and keep out of the reach of children.

Usage

1. This machine can be used to bend mild steel and other sheet metals of equal yield strength. This pan and box brake is designed to fold sheet metal into boxes, pans, or trays. It can bend 16 gauge mild steel, and 20 gauge.
2. Main technical specification

Model	PB2420	PB4816
Max. Working Length	24"	48"
	610mm	1220mm
Max. Sheet Metal Thickness	20 Gauge	16 Gauge
	1mm	1.5mm
Folding Angle	0-135°	0-135°
Finger Width	1", 2", 3", 8", 10"	Five 2", Six 3", Five 4"
Packing Size (L × W × H)	33-7/8" × 13-3/4" × 17-5/16"	63-3/8" × 18-7/8" × 26-3/4"
	860 × 350 × 440mm	1610 × 480 × 680mm
Weight	138.9 lbs.	474.1 lbs.
	63 kg	215 kg

3. Installation and caution

3.1 Installation

3.1.1 Please check whether the part of this machine are fully equipped and not damaged according to the parts list or part figure.

3.1.2 This machine should be mounted on workbench or specific stand (not supplied)

3.1.3 Please leave plenty room around the machine for your easy operating, in order to avoid injury.

3.1.4 Please remove the anti-rust grease on processing surfaces and some parts included kerosene.

3.2 Caution

3.2.1 Please read the manual before operation and make yourself understand its structure and principle completely.

3.2.2 Please don't operate the material width and thickness than table list max. Range.

3.2.3 Always wear industrial standard approved eye protection, using safety equipment such as dust mask, non-skid safety shoes, a helmet and hearing protection will reduce the chances of serious injuries.

3.2.4 Do not expose the device to the rain or wet conditions.

3.2.5 Dress appropriately do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from the moving parts to avoid getting

caught in the moving parts. Failure to pay attention could cause serious injury or even death.

3.2.6 It is forbidden to use the extending case to cover the handle for the purpose of lever function.

4. Operation

4.1 By turning the pin (#15) at the back of the frame, the eccentric case (#17) is driven to backwards. Meanwhile, the right and left eccentric handles (#07, #11) should be loosened. Therefore, the desired bending clearance can be decided. If the thickness of blank to be bent is in the range of the rated value 16(20) gauge for mild steel, the upper die frame (#01) should be moved backwards, to ensure that the clearance is the twice of the thickness of the blank (from the out edge of the frame Pattern plate). The clearance may be decreased appropriately according to the bending angle, in the bending operation of non-ferrous metals.

4.2 The magnitude of pressure, which clamps down on the blank can be changed by adjusting appropriately the nuts (#13) on the right and left connecting rods (#9, #12).

4.3 If the blank is blocked when it is bent in the allowance magnitude it is may be loosened turning the eccentric handles (#07, #11) on the blocked end. The clearance can be changed by running the eccentric case (#17), which is located at the back of the frame and then, the upper die

frame(#01) can be moved appropriately. After that. Clamping down again the eccentric handle on the blocked end. Therefore, the bending operation can be performed right now.

4.4 After the utilization of the machine to a long time, the mobile pattern plate (#03) may be deflected to a convex or a concave. This deflection can be overcome by adjusting the nut (M12) on the mobile pattern plate (#03). Therefore, the mobile pattern plate (03#) can be drawn. The adjustment does not stop unless the edge of the mobile pattern is in the same plane of the bending center.

4.5 Please check up the edge of upper die frame (#01) before bending operation, in order to find there is any convex or winding. If winding edge is found, please adjust as the followings; clamps the right and the left eccentric handles (#07,#11) tight, turn the mobile pattern plate(#03) to 90 degrees, then place with another straight convex plate after that, tighten the nuts (#13) on the right and left connection rods (#09, #12).

5. Maintenance

Lubricate the rotating parts of the machine. (#32 lubricating-oil)

6. ACCESSORIES

The inner-hexagon spanner M41 piece

The two-head spanner 17X19 1 piece

7. Parts list

NO	Name	NO	Name
1	Upper Die Framework	12	Right Eccentric Rod
2	Frame	13	Nut
3	Mobile Pattern	14	Clevis
4	Case	15	Pin
5	Nut	16	Washer
6	Handle Case	17	Eccentric case
7	Left Eccentric Handle	18	Position-fixing Shaft
8	Case	19	Shaft
9	Left Connecting Rod	20	Clamp plate
10	Washer	21	Brake Dies
11	Right Eccentric Handle		

8. Assembly diagram

