

PB-

mm Hand folder

Operation Manual

Leave factory date:_____

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Operation Manual

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Total P4 No p1

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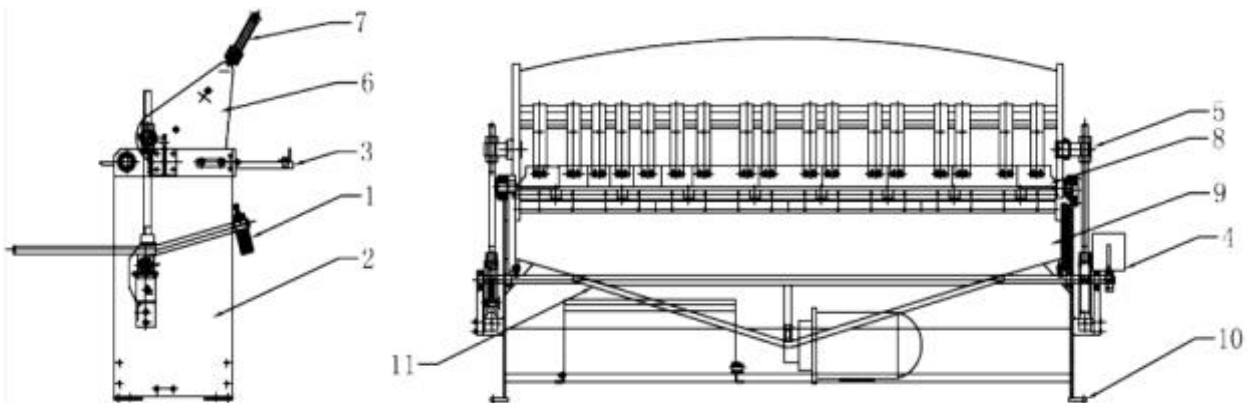
Operation Manual

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Total P4 No P2

Use and Capability:

According to the specs, the machine is widely used for the pressing and overturning work of the armor plate, colored metals, stainless steel plate with length 2.5m, thickness less 1.5mm. It's the formed processing equipment for the chests, ducts of home appliances, stainless steel kitchenwares, air-condition equipments.etc. The machine is entirely operated by hand, with orientation structure, can volume-produce workpiece which has fixed angle and especial shape. The bottom blade is fixed, top blade is impacted, top blade is impacted, then use the theory of table-flap upgrade to fold. In the whole course, workpiece and blade won't work oppositely and impactively, the surface of workpiece will be unknited and glabrous, it's specially suitable for the high cultured workpiece.

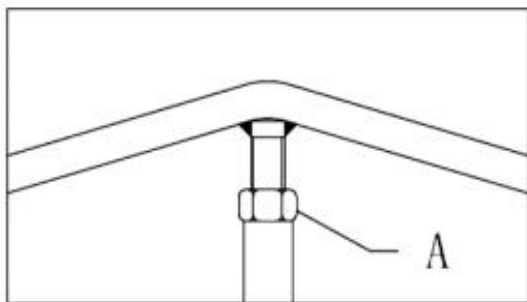
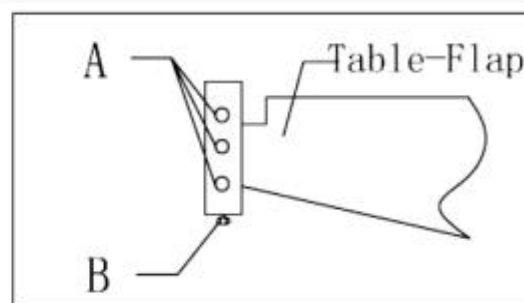


Structure and adjustment introduction:

- 1.small balancing hammer 2.side board 3.adjusting block
4.upper beam impacted handle 5.upper beam adjusting nut
6.big balancing hammer 7.upper beam 8.upper crossbeam strengthen metal
9.upper power blade 10.table-flap 11.table-flap handle 12.baseboard
13.lower crossbeam strengthen metal

Upper crossbeam and base crossbeam, table-flap make up of the table-flap structure .When the blade leaves factory , it has been adjusted in gyration center. According to the spec and thickness workpiece sheet thickness of machine the user can adjust.

1. Adjustment of the space S between upper crossbeam blade and table-flap blade : To adjust left right block 3 , can adjust the space between upper beam and table-flap S , to make $S = 1.3t$ (t is thickness) , to adjust 5 to make upper and base blade balanceable , then to lock the bolt . When the space is too small , the blade wears badly .
2. Adjustment of the support capability and folding level degree : The fulcrums of upper crossbeam , base crossbeam and table-flap all distribute at both ends of upper . During processing workpiece , it's hard to avoid definite detours . That will effect the linearity of workpiece . If you make angles of both sides suitable, angle of interspace won't be enough . In order to work over this problem . by screwing down and adjusting nut A to make upper and base crossbeam both endured and make the interspace protruded (max-height 0.5mm) to compensate the distortion. Table-flap jiggles up and down A , B makes it balanceable. It can guarantee the quality of workpiece .

**Picture 2****Picture 3**

Operation Manual

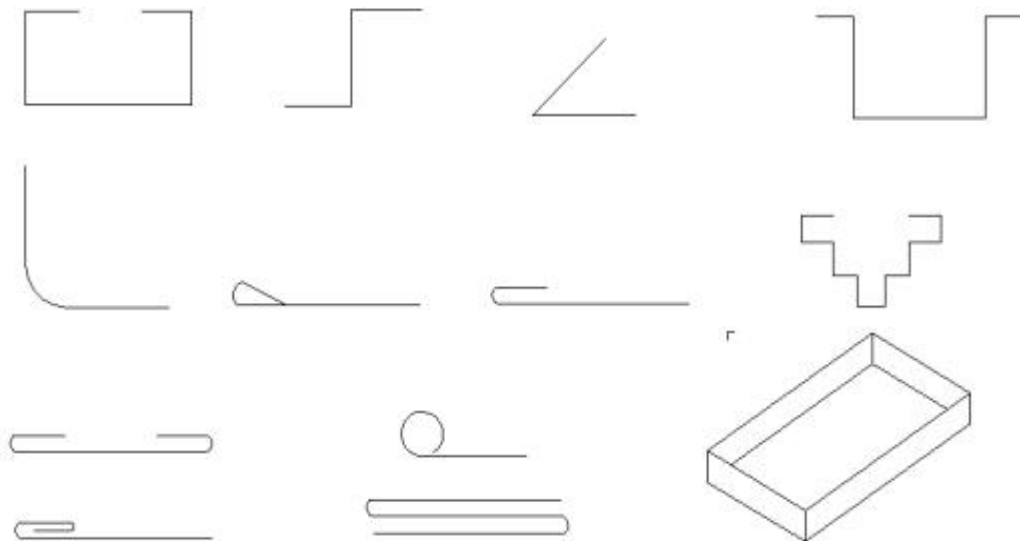
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Total P4 No P4

Machine operation and use introduction

Clamp sheets between upper and base crossbeam , fix the angle localizer in the left folding axis , turn table-flap to angle localizer , then can fold workpiece with needed angle .

The machine is using 45 ° power blade . 45 ° power blade uses interseeted blade form . Clients can make different power blade length in term of the workpiece size and fold different sized chests . Representative folding can be seen below , picture 4 .



picture 4

Logical use and servicing

Please check the distance of blades , “ S ” in picture 2 folding shouldn't exceed value stipulated , avoiding to wear power blade . You'd better averagely use every part of blade , make them wear averagely . During operation , people mustn't stand behind the balance hammer , in order to avoid accident . Please pay atebtion to the station of axes and lubricate situation .

Certificate of Competency			Hand folder		
NO.	The item and checking method	Content and standard requirement	Qualified	Unqualified	Signature
1	Appearance	(1)The surface with oil paint is even,shining,intact, no visible extrusive granule and bur.The following situations aren't allowed: the surface is obviously accidented, oil paint is sagging , bubbling ,blushing and dulling.			
		(2) The surface cannot be uneven ,scratched and rusty.			
		(3) The words of the logo and scutchcon should be clear and durable. The logo and scutcheon is fixed correctly ,even upright.			
2	Noise	Impact Noise, screech and noise caused by improper assembly aren't allowed during working.			
3	cleaning degree	The surface and interior of the machine should be neat,no oil stain, dust rust,iron scrap and other sundries.			
			Allowable Tolerance	Measuring	Signature
4	Geomctrical Precision	(1) The tolerance for the level clearance uniformity of top beam and the die (upper blade and lower blade) is 0.15mm .	0.15		
		(2) The swaying angle between upright joint surface and working table-board is $\pm 1^\circ$.This upright joint surface is between die (blade) and folding plate beam .	$\pm 1^\circ$		
5	Machining precision	(1) The clearance for beeline degree of sheet bending's doesn't exceed 1 mm per 1000mm.	1mm		
		(2) The angle difference of sheet bending doesn't exceed 2° per 1000mm.	2°		
		(3) Radius tolerance of sheet bending doesn't exceed 1mm per 1000mm.	1mm		
<p>This machine is qualified by cheekup and approved for release</p> <p style="text-align: center;">Chief Quality Control Engineer :</p> <p style="text-align: center;">Date :</p>					

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Packing List

NO	Model	Name	Qty	Remark
01	6	Inner hexagon spanner	lpc	
02	10	Inner hexagon spanner	lpc	
03	12	Inner hexagon spanner	lpc	
04		Oil gun	lpc	
05	22-24	Double-ended spanner	lpc	
06	17-19	Double-ended spanner	lpc	

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Certificate of Competency

**This machine is qualified by checkup
and approved for release**

Quality Management Department(stamp)

Factory Director(stamp)

Series No:_____

Date: _____

Panbrake

Setup & Operation - Hydraulic Clamp Models

CAPACITY

The capacity of your machine is stated on the specifications plate on the frame. This capacity is a mild steel rating. The capacity for other materials will vary. For example Stainless Steel is approximately **0.5x** the mild steel rating & aluminium is **1.5x** the mild steel rating.



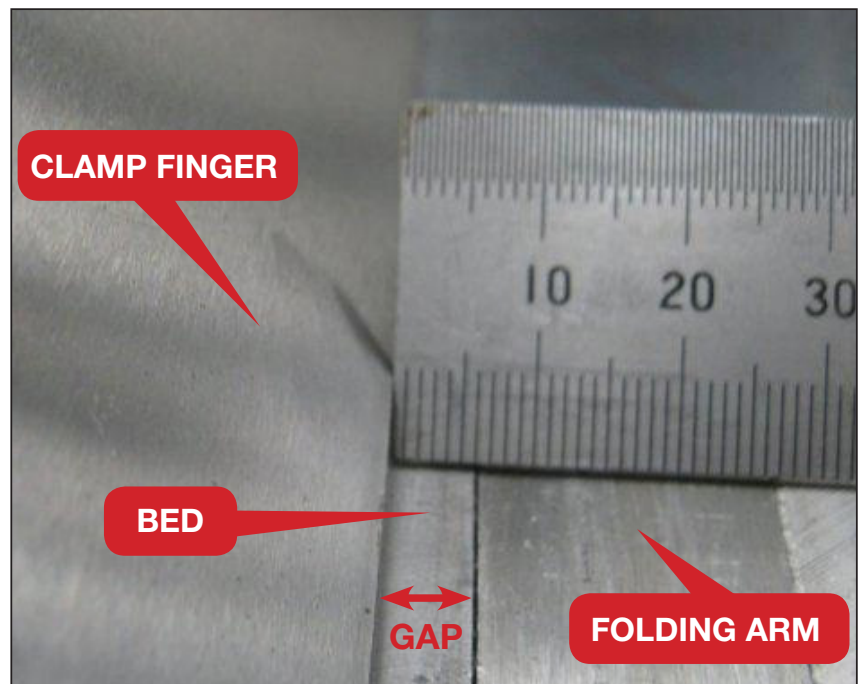
SETTING CLAMP GAP

Set the clamp gap to match your material thickness.

The clamp gap must be minimum **1.5 x Material Thickness**

Example: If 4mm is to be bent, then the clamp "GAP" must be set to minimum of 6mm

Each panbrake may have a different mechanism for adjusting the clamp gap but you must maintain the **1.5 x Material Thickness** to prevent overload and possible damage.



Some machines have a quick adjusting arm with pin positions marked 0-8. This should represent your clamp gap.

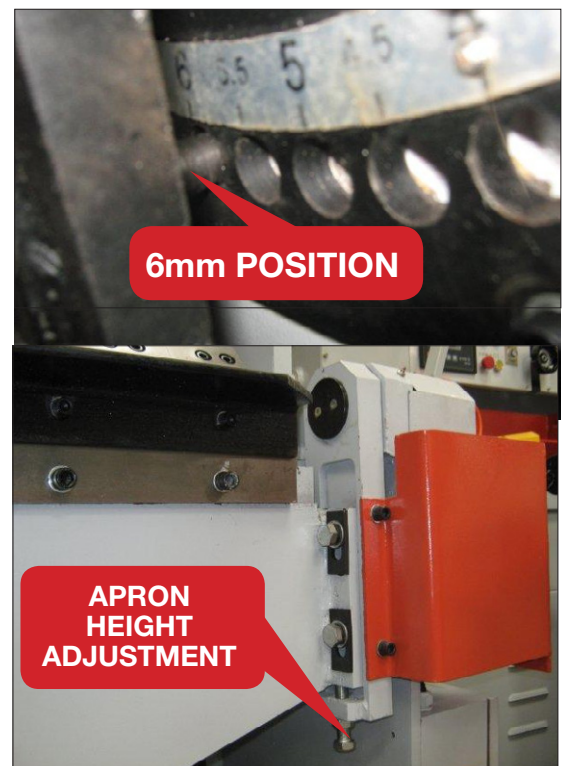
Example: If you are bending 4mm put the pin in position 6. This must be done on both sides of the machine.

You may have to use a combination of top clamp adjustment and apron adjustment when doing thicker material like 6mm aluminium.

(1.5 x 6mm = 9mm, so you need a total gap of 9mm)

Example: If the top clamp gap is 6mm the apron must be dropped down 3mm to keep a 9mm total gap.

NOTE: Must release locking bolts before adjusting apron up / down. Tighten when at correct height.



CORRECT CLAMP OPERATION

If your panbrake has hydraulic clamping it will have a 2 stage travel on the clamp. When the foot pedal is pressed the clamp will travel down continuously and stop approximately 20mm above the bed. Release the clamp pedal and press again to complete clamping.

Important - The clamp pressure is set to bend the maximum capacity over the full length. If shorter pieces, very thin or softer materials are used, there is a possibility that damage can be caused to either the work piece or the fingers. There are 2 clamping techniques the operator can use depending on the material used.

Light clamping - The operator can use the clamp foot pedal with caution and only use enough force required to hold material for bending. It is used when clamping thin aluminium or small pieces of thicker material.



**CORRECT
AMOUNT OF
FORCE**



**TOO MUCH
AMOUNT OF
FORCE**

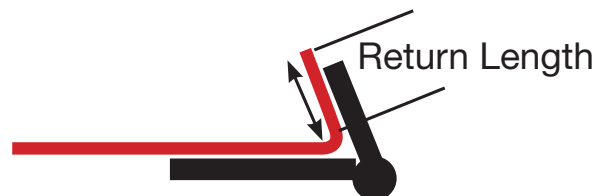
Heavy clamping - There is a pressure switch that is set to maximum clamping pressure. The operator can press the clamp pedal until full capacity clamping is achieved. This technique can be used for bending full lengths of thicker material.

Double check GAP - You must now clamp your job and check the clamp gap to make sure it is correct.

RETURN LENGTH - LIMITATION

Caution - There is a minimum "Return length" of **15 x Thickness of Material** when bending thicker material over 1mm. Damage could occur to machine if return is too short.

Example: If bending 4mm then the minimum return length must be 60mm.



WARNING

General Machinery Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

- 1. Read the entire Manual before starting machinery.** Machinery may cause serious injury if not correctly used.
- 2. Always use correct hearing protection when operating machinery.** Machinery noise may cause permanent hearing damage.
- 3. Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
- 4. Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
- 5. Always wear correct respirators around fumes or dust when operating machinery.** Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
- 6. Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
- 7. Keep work clean and make sure you have good lighting.** Cluttered and dark shadows may cause accidents.
- 8. Personnel must be properly trained or well supervised when operating machinery.** Make sure you have clear and safe understanding of the machine you are operating.
- 9. Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
- 10. Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
- 11. Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
- 12. Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
- 13. Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.
- 14. Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
- 15. Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
- 16. Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
- 17. Do not overreach.** Keep proper footing and balance at all times.
- 18. Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
- 19. Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
- 20. Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
- 21. Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
- 22. Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
- 23. Lock mobile bases.** Make sure any mobile bases are locked before using machine.
- 24. Allergic reactions.** Certain metal shavings and cutting fluids may cause an allergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
- 25. Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.

WARNING

Manual Panbrake Safety Instructions

Machinery House
requires you to read this entire Manual before using this machine.

- 1. Maintenance.** Make sure all moving parts are locked down before any inspection, adjustment or maintenance is carried out. Place a block of timber between the Top Tooling and bed to help save hand or fingers from being crushed.
- 2. Panbrake Condition.** Panbrake must be maintained for a proper working condition. Never operate a Panbrake that has damaged or worn parts. Scheduled routine maintenance should be performed on a scheduled basis.
- 3. Tooling Condition.** Never operate a Panbrake with damaged or badly worn tooling. Replace if required.
- 4. Hand Hazard.** Do not insert or extend your hands in between bending tools, under any circumstances, while the machine is in operation mode. Serious injury can occur.
- 5. Gloves & Glasses.** Always wear leather gloves and approved safety glasses when using this machine.
- 6. Work area hazards.** Keep the area around the Panbrake clean from oil, tools, objects & chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents.
- 7. Guards.** Operate machine only with all protective devices and guarding.
- 8. Material.** Do not over load the machines capacity by using material which is too thick or hard.
- 9. Warning Labels.** Take note of any warning labels on the machine and do not remove them.
- 10. Support arms.** Do not use support arms for intermediate storage of workpieces.
- 11. Operation.** During the bending process, the workpiece may leap up. Therefore, the material must be handled carefully.
- 12. Secure Panbrake.** Make sure you bolt and the machine down so it is secure when in operation.
- 13. Heating Material.** Heating metal with a torch while the metal is in the panbrake will weaken the fingers.
- 14. Pinching.** Prevent pinching by lowering the panbrake fingers when not in use.
- 15. Call for help.** If at any time you experience difficulties, stop the machine and call your nearest branch service department for help.

PLANT SAFETY PROGRAM

NEW MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

Manual Panbrake

Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures
 This program is based upon the Safe Work Australia, Code of Practice - Managing Risks of Plant in the Workplace (WHSA 2011 No10)

Item No.	Hazard Identification	Hazard Assessment	Risk Control Strategies <small>(Recommended for Purchase / Buyer / User)</small>
B	CRUSHING	LOW	Secure & support work material on table etc. Lower Panbrake fingers when not in use. Keep fingers clear during clamping. Ensure machine is bolted down.
C	CUTTING, STABBING, PUNCTURING	MEDIUM	Wear gloves to prevent cuts from sharp material offcuts.
F	STRIKING	MEDIUM	Ensure the area around the counter weight is kept clear.
Plant Safety Program to be read in conjunction with manufactures instructions			



www.machineryhouse.com.au



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Authorised and signed by:
 Safety officer:
 Manager:

Revised Date: 12th March 2012