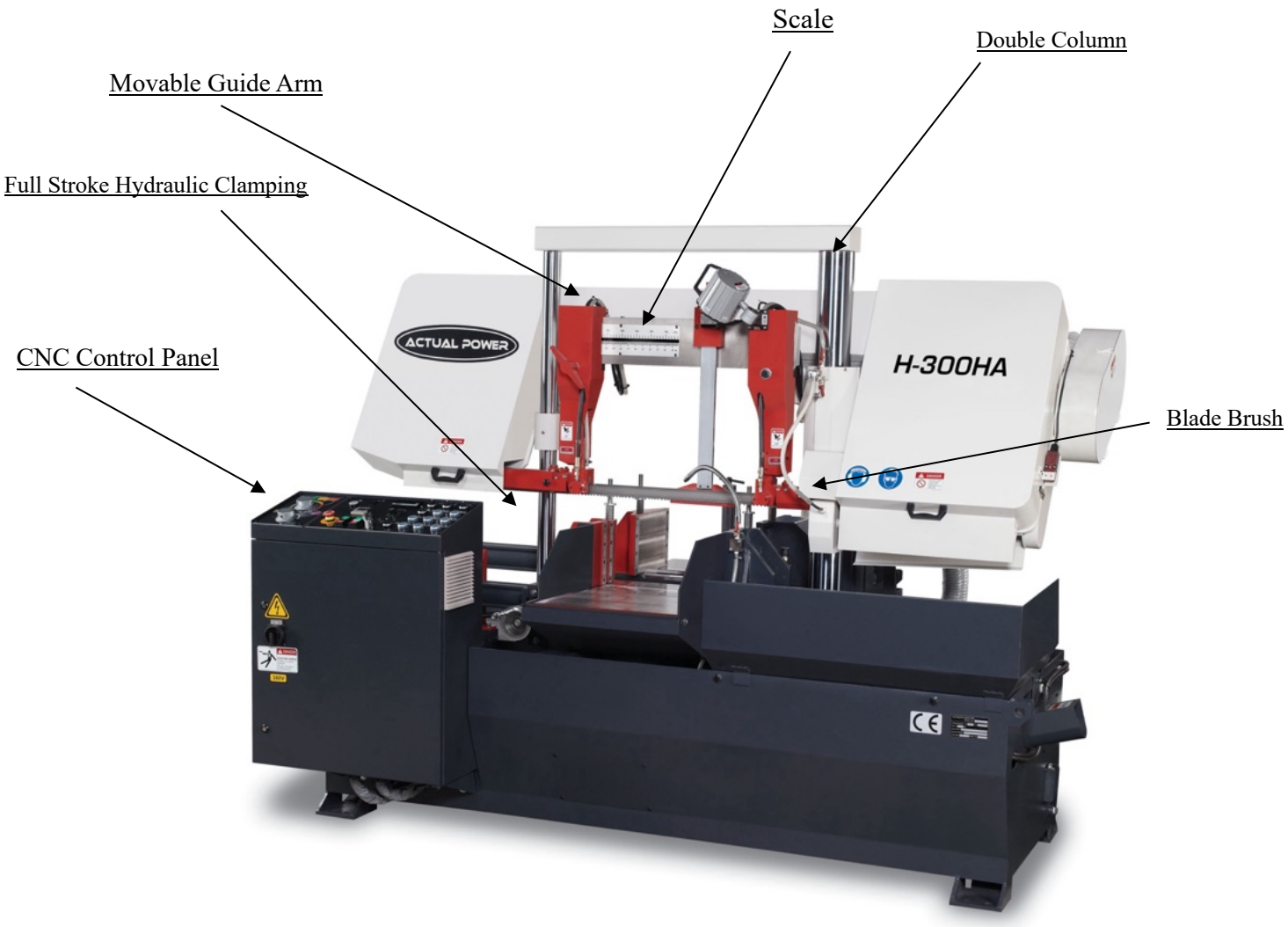
Masteel MH-4033HA

fully automatic double column horizontal band saw

operation manual

I : CHARACTERISTIC & SPECIFICATION

1. MODEL: MH-4033HA



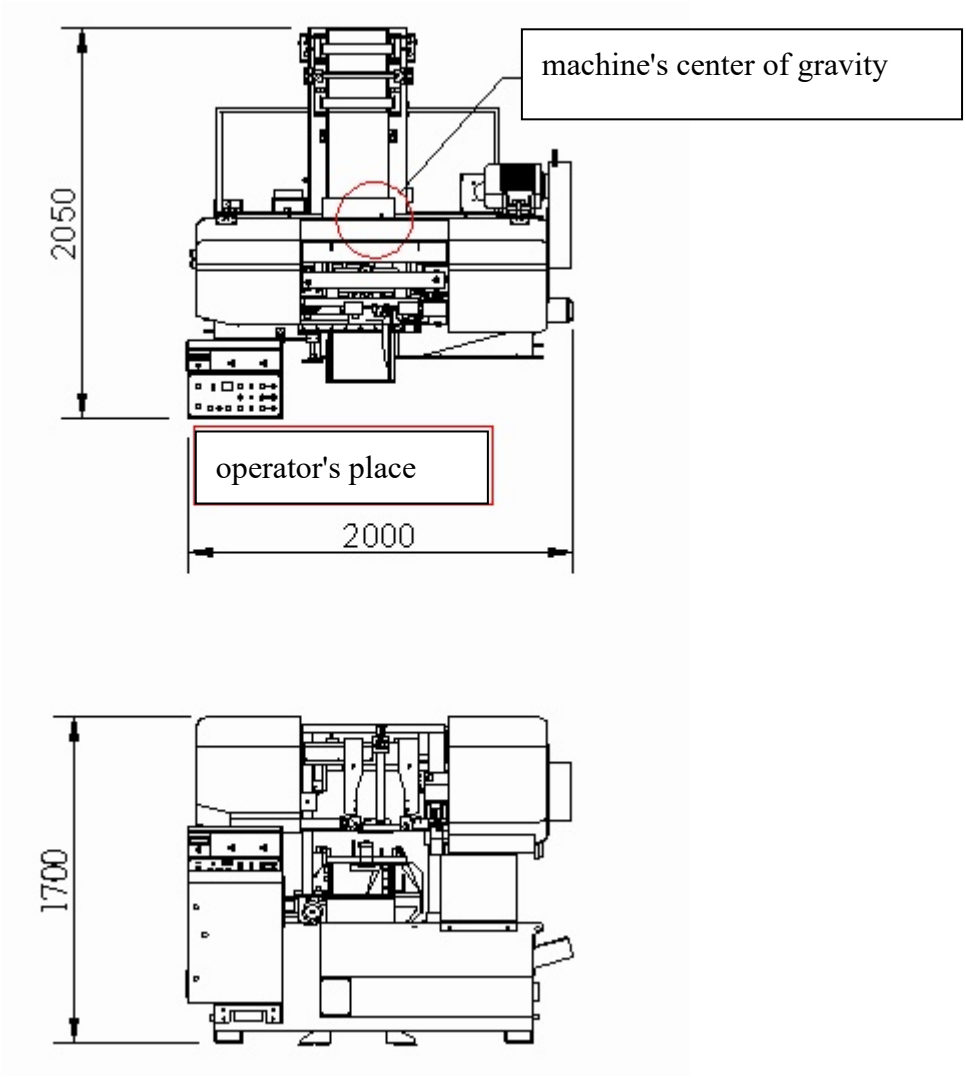
2. SPECIFICATION:

MODEL NO.		**MH-4033HA**
CAPACITY		○ 300mm
		□ 300x300mm
BUNDLE CUTTING		145x30 ~ 230x130mm(WxH)
BLADE SPEED		20 ~ 100M/min
BLADE TENSION		HYDRAULIC
BLADE SIZE		L3920xW34xT1.1mm
MOTOR	BLADE	3.7KW 5HP
	HYDRAULIC	0.75W 1HP
	COOLANT	0.1KW 1/8HP
TABLE HEIGHT		780mm
MACHINE WEIGHT (N.W.)		1650kgs
HYDRAULIC OIL CAPACITY		80L
CUTTING OIL CAPACITY		60L
MATERILA LENGTH OF SINGLE FEED		400mm x 9
FLOOR SPACE		2270 x 1150mm

II : MACHINE INSTALLATION

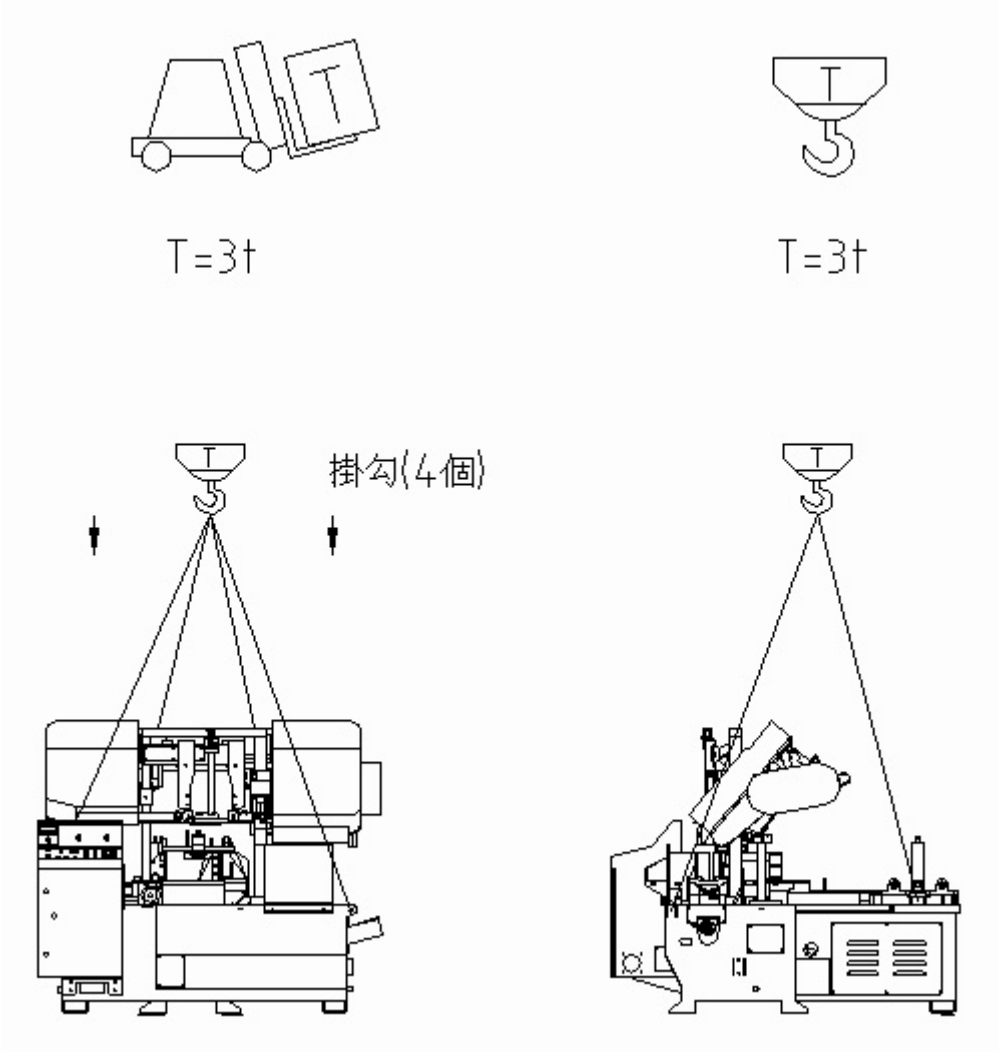
1. Machine Installation

Please figure out enough space for working, inspection and maintenance afterward.
Refer to the machine floor space drawing below:



2. Machine Transportation

Be careful to take apart the outer package and fixing screw. Please make use of forklift truck or overhead crane to transit the machine. During the process, please keep the machine balance in the forklift truck and avoid to have any impact or tremble happened when machine was transported by the overhead crane.
(Note: please hang the machine from the hook exactly)
(Machine Weight: 1650kgs)



3. Clean

After positioning the machine, clean up the anticorrosive from the machine, then lay on a coat of thin oil.

(Please removes the fixing iron plate between saw frame and table before machine operation.)

4. Adjust Level And Fixing

To calibrate the machine level for the correct flow direction of cooling water and accurate saw cutting.

There are ten adjusting screws at the base for adjusting the machine level.

5. Hydraulic Oil Level

Check the oil drain port screw was tighten or not then look over the level of hydraulic oil in the oil tank from the oil gauge. If the oil level is too low, please open the oil tank cover and pour into the standard capacity. Before the machine delivery, the oil tank was loaded with enough capacity previously.

6. Cooling Water

Before the machine delivery, the cooling water should be drained out completely.

Please infuse the enough cooling water into the machine before operation.

Check the drain water port screw was tighten or not and then implant the suitable water volume.

The aperture of filling is under the meshed hole of steel blade brush.

7. Power Supply

1. Before connect the power please make sure the wire is long enough to connect between the power supply and machine. (Only certificated electricians could be appointed to do this matter.)

2. Switch OFF the power supply and connect the machine wire. Please confirm the power voltage is matched with machine. Connect the power wire and ground wire precisely.

3. Before switch ON the power supply, please check the wire connection is correct or not.

4. Draw up the emergency switch and turn on the power, at this time the lamp will be lighted up to show the power was connected completely.

5. Press the hydraulic button on the control panel.
   (Note: Please removes all of the transport fixing screw before this procedure.)

6. Press the UP button of saw frame.
   If it doesn’t work, please exchange the wires.

7. Press the emergency switch to cut off the power supply.

8. Turn off the power supply switch.

9. Exchange the two wires of the power supply.

10. Repeat the step of 3 and 6.

8. Inspection Before Operation

After the complete machine installation, please do the final inspection properly.
The item is listed as below:

1. Take all of the fixing plate for transporting purpose off.
2. Check screws and fixing items.
3. Check water pipe and wire guide tube.
4. Make sure the cooling water is enough and hydraulic pressure is normal.
5. Tools or other materials should not be left on the machine.

III : OPERATION METHOD

1. The Description Of Operation Panel

MODEL: MH-4033HA

(1) <u>Emergency Stop Button</u>

Press the button to stop all of the machine function.

(picture 1)

(2) <u>Power Light</u>

When the emergency stop switch was drew up, the power lamp will be lighted up to show the normal connection of electric power.

(picture 2)

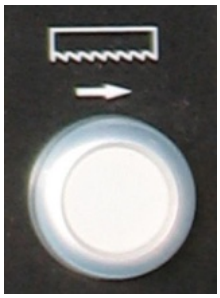
(3) <u>Hydraulic Button</u>

Press this button to start the hydraulic motor.

(picture 3)

(4) <u>Blade Start Button</u>

Press this button to start the saw blade motor and coolant pump at the same time. The saw frame will descend according to the speed of flow control valve.



(picture 4)

(5) <u>The Switch For Choosing Cooling Water</u>

to start the coolant pump and make the cooling water flow. The switch could be turned on independently without the start of blade motor.

* Turn to the position of **OFF** to stop the coolant pump.

(picture 5)

(6) <u>The Switch For Work Light</u>

For work light use only.

(picture 6)

(7) <u>The Switch For Blade Cutting Speed</u>

To control the rotational speed of blade cutting.
The more large number to indicate,
the more cutting speed to obtain.

(picture 7)

(8) <u>The Switch For Circulation And Manual Mode Changeover</u>

* Turn the position to
Materials will be cut under the mode of circulation by repeat.

* Turn the position to
For manual operation.

* Turn the position to
For single circulation work.

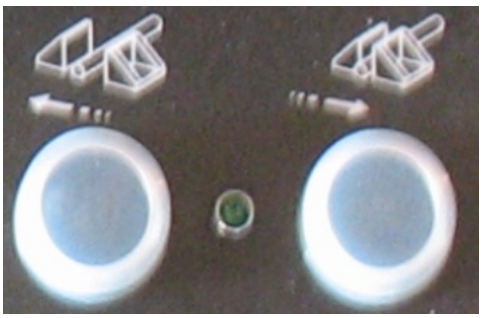
(picture 8)

(9) <u>The Adjusting Button For Movable Clamp Of Feeding Table</u>

Press this button
the work piece will be clipped tight by the clamp.
When the lamp was lighted on, the clipping process
was finished completely.

Press this button
The work piece will be loosen.

If the guide wheel base is not higher 20mm than
the movable clamp, the moving measure of the clamp
will be 1 inch for one step.



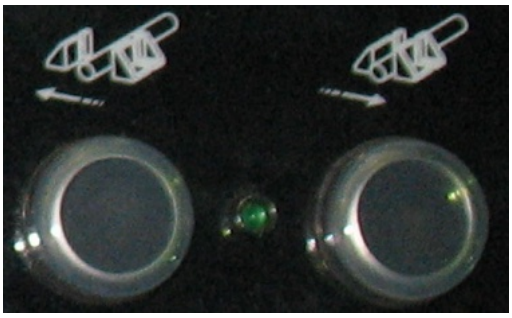
(picture 9)

(10) <u>The Adjusting Button For Movable Clamp Of Table</u>

Press this button

the work piece will be clipped tight by the clamp.

When the lamp was lighted on, the clipping process was finished completely.



Press this button

The work piece will be loosen.

If the guide wheel base is not higher 20mm than the movable clamp, the moving measure of the clamp will be 1 inch for one step.

(picture 10)

(11) <u>The Switch For Single Piece or Bundle Cutting Exchange</u>

Turn the position of

For single work piece cutting.

Turn the position of

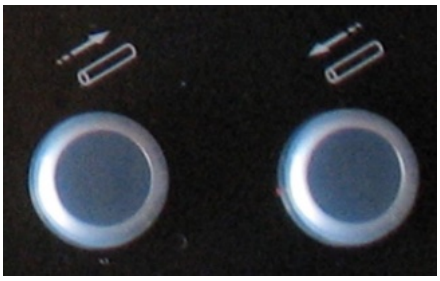
For bundle cutting.

(picture 11)

(12) <u>The Button For The Movement Of Feed Table</u>

Press this button

To make the feed table move forward.



Press this button

To make the feed table move backward.

(picture 12)

(13) <u>The Button For Saw Frame UP And Down</u>

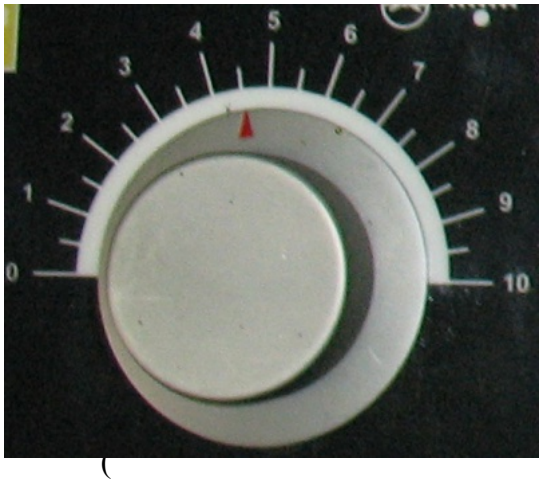
Press this button to Lift the saw frame.

Press this button to Descend the saw frame.

(picture 13)

(14) <u>The Switch Of Hydraulic Oil Control Valve</u>

To control the cutting speed.
The more large number to indicate,
the more cutting speed to obtain.



(

(picture 14)

(15) <u>The Switch Of Pressure Control For Blade Cutting</u>

To control the pressure given to the blade
during the process for different materials.
The more large number to indicate,
the more great pressure to offer.

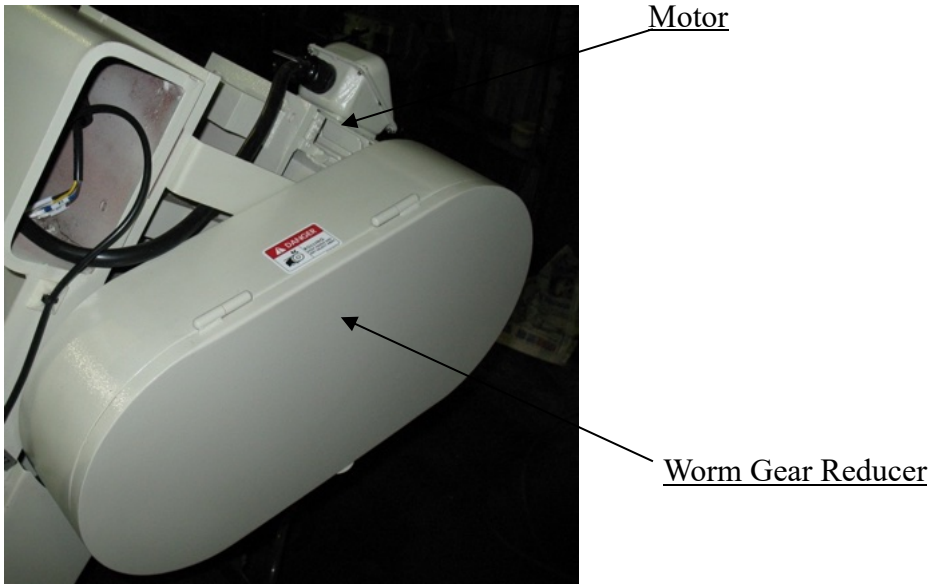
(picture 15)

2. MACHINE PARTS DESCRIPTION

(1) Worm Gear Reducer

The motor of driving pulley is 3.7 KW (5HP)

The rotation rate was adjusted by reducer and transmitted to driving pulley.

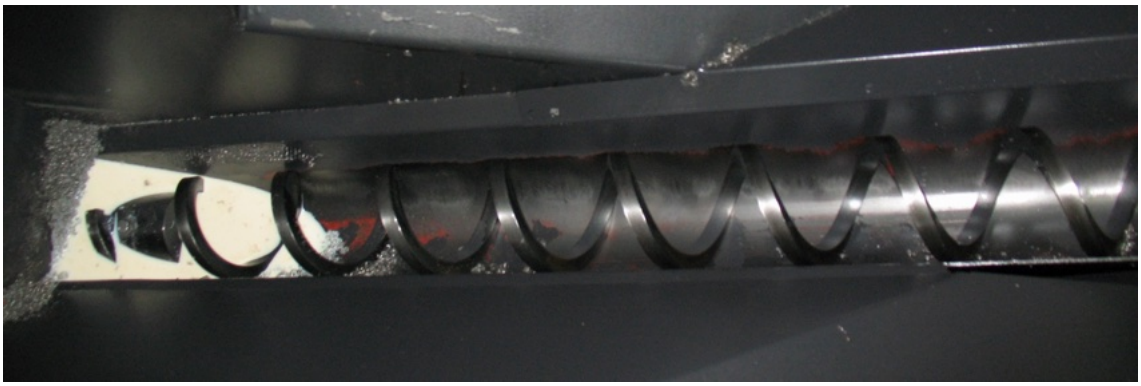


(picture 15)

(2) Chipping Discharge Device

Power Source: hydraulic motor

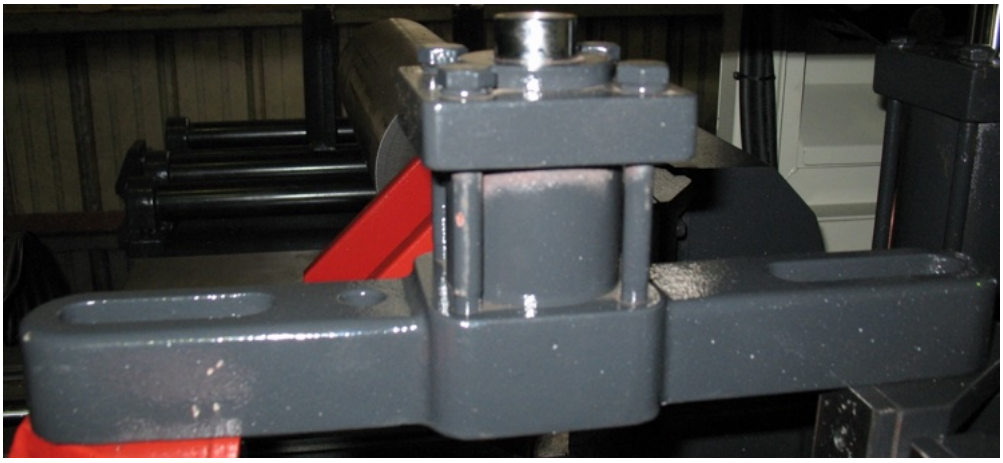
Banish the iron chipping from the machine.



(picture 16)

(3) Upper Impaction Device For Bundle Cutting

It is mobile and for the purpose of prevention the material slip out of looseness during the process.

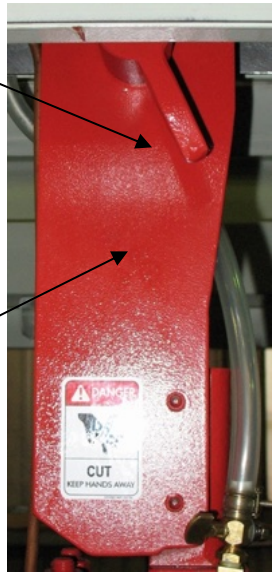


(picture 17)

(4) The Adjustment Of Movable Guide Arm

The left guide arm should be adjusted properly to close to the work piece.

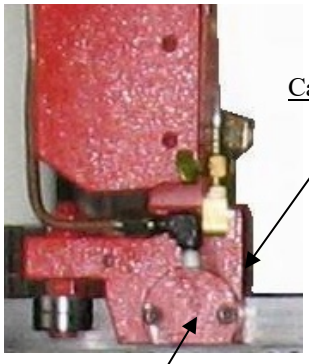
Step 1: loose carbide fixture
Step 2: loose locking handle
Step 3: move the guide arm to the work piece
Step 4: lock the handle



(picture 18)

(5) The Guide Wheel Base Of Hydraulic Clipping Carbide Fixture

Hydraulic clamp system make the blade cutting more stable.
Carbide material is more wear-resisting.



(picture 19)

(6) Switch of Safety Guard(For CE)

When the wheel cover be opened, the blade cutting will be stopped automatically.

(picture 20)

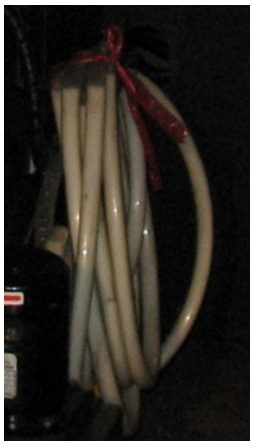
(7) Micro Clamp Device Of Table

To avoid the material scrape out of the direct contact, this clamp will step back by small extent during the working.

(picture 21)

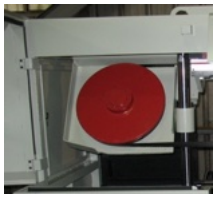
(8) Washing Gun

Flush the machine table surface or wash iron chipping away.



(picture 22)

3. THE INSTALLATION OF SAW BLADE



(picture 23)

(picture 24)

Step 1: Make the saw frame ascend to the position higher than the clamp.

Step 2: Open the right and left front door of the splash guard. (picture 23 and 24 above)

Step 3: Loosen the carbide fixture by manual.

Step 4: Pull the tension valve inside to release the blade tension.

Step 5: Clean up the iron chipping from the carbide fixture.

Step 6: Install the blade on the main driving pulley.
(Note: Please wear the glove to take the blade)

Step 7: The teeth of blade was faced down and turned to the right.

Step 8: The back of saw blade was touched the edge of main driving and drived pulley.

Step 9: Pull the tension valve outside to fasten the blade tension.

Step 10: Fasten the carbide fixture by manual.

Step 11: Adjust the position of blade brush.

Correct Wrong

Step 12: Close the splash guard and lock the safe knob.

3. OPERATION DIRECTION

Three are three operation mode of **H-300HA:**

1. Circulation By Repeat 2. Manual Way (manual operation for every function of machine)

3. Single Circulation Work

Step as below:

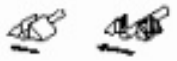
(a.) Start the hydraulic pump , and choose the mode of manual

(b.) By the basis of appearance , material and size of work piece to choose the proper blade cutting pressure and blade rotation rate setting.

(c.) Confirm that the saw blade was installed well.

(d.) Make the movable guide arm close to the work piece.

(e.) Move the materials to the clamp.

* Make the saw frame ascend and the position is higher than clamp.
* Make the clamp open and large than the material in width.
  (Optional: Hydraulic Cylinder)
* Move the material carefully to the position of front clamp.
* Press the button of front & back clamp  until the lamp was lighted on when the material was clipped tight.

(f.) Choose the proper blade speed according to the material of work piece.

Note: Process of above should only be fulfilled when the blade stopped.

Then make the following choice:

Circulation By Repeat or Single Circulation

*** Take the Circulation By Repeat for example:**

(a.) Turn the switch of circulation by repeat and manual mode to the position of

(b.) Press the start button of blade to deliver on the previous setting.

(c.) After repeat of cutting, blade will be stopped when the setting was carried out.

(d.) Take off the remainder.

*** Take the Single Circulation for example:**

(a.) Turn the switch of circulation by repeat and manual mode to the position of

(b.) Press the start button of blade to deliver on the previous setting.

(c.) After the completion of one circulation cutting, blade will be stopped directly.

(d.) Take off the remainder.

IV : MAINTENANCE

After Every Day Work:

1. Clean up the iron chipping on the machine.
2. Clean up the iron chipping of the carbide fixture.
3. Turn off all of the machine switch.

1. Every Day

Before operate the machine, please check the following procedure:

(1). Check the hydraulic oil level and refill the capacity if it is not enough.

(2). Check the cutting oil level and refill the capacity if it is not enough.

(3). Check the saw blade if it was installed on the saw frame or not.

(4). Check the blade steel brush contact the saw blade exactly or not.

2. One Week

Refill the lubrication for: drived wheel, driving wheel, hollow shaft reducer…etc.

3.Every Six Months

Replace the gear box oil of hollow shaft reduce.

Note: please replace the gear oil of gear box after 3 months or 600 hours, and the gear oil of hollow shaft reducer for the period of 6 months or 1,200 hours.

The variety of gear oil :

STORK, HIGH CLASS THUBAN 140

4. Every Year

Please leak out the used one and refill the capacity in enough.

The variety of hydraulic oil:

ISO-VG grade NO.32

Gear Oil 140 (VG460)
HYDRAULIC OIL AW32 (VG32)
High Temperature Grease NO.3

V : SAFE MATTERS

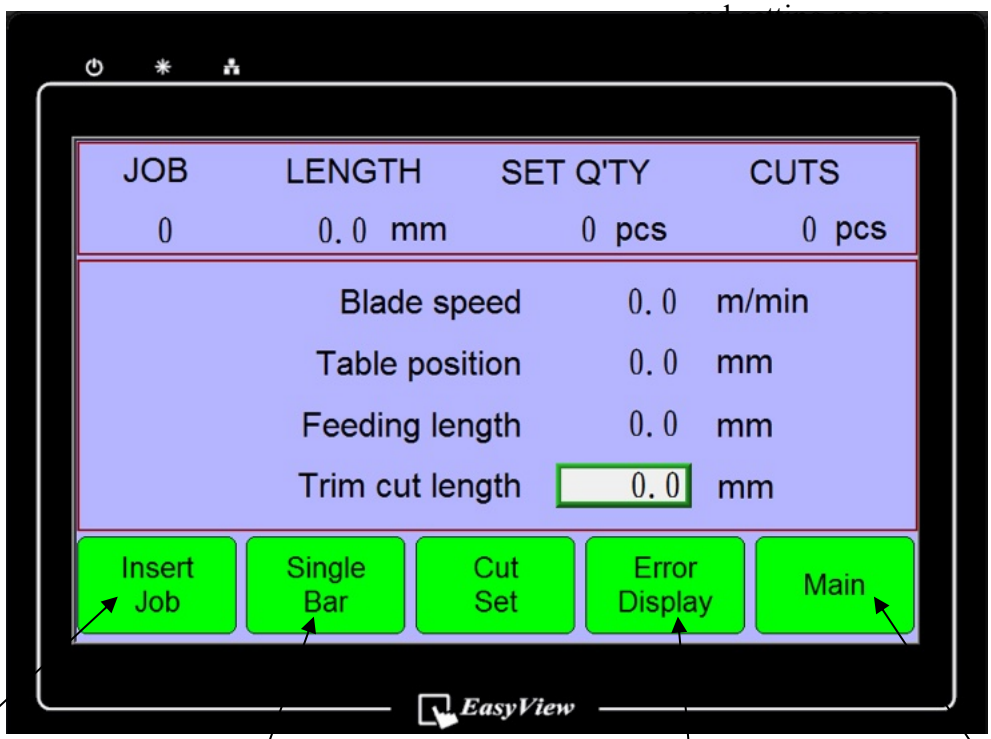
1. Please don’t approach the machine inside when the saw blade is on working.
2. Any maintenance will be forbidden during the machine operation.
3. Please offer the proper material measurement for machine cutting.
4. During the machine operation, please don’t play pranks around.
5. Please don’t smoke in the factory or put any flammable article nearby.
6. Please press the emergency button to stop the operation if any accident happened.

(picture 25)

7. The guidance of qualified professional was required for the first operation of the beginner.
8. Please wear the glove for the saw blade installation to avoid the blade wound.

V I: CNC CONTROL PANEL DESCRIPTION

Return to the operating



Setting of inserted job

Bundle or single cutting setting

Error Display

Return to the first page

Return to the operating and setting page

Bi-material blade

Clear the finished record

Trim setting

Job setting

Length setting

Quantity setting

Return to the operating and setting page