## WRAPPER BRAKE MANUAL INDEX:

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PREPARATION FOR OPERATION

Preparation jobs for operation:
1) Space of Installation
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5) Oil Supply
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7) Check

1) Space of Installation
Install the machine at the large space which can feed material and remove the material easily, easy maintenance.

2) Foundation
The foundation must be strong and even surface.

3) Lifting and Transportation
Use proper crane, forklift or other lifting equipment in according to the machine’s weight. When slinging machine with crane, sling holes are the sling position for cable wire. When transport machine with forklift, please move it on the right position and pay attention to its gravity center. Machine must be well levelled after positioned, the leveling will influence the accuracy and use term.
4) Installation

Precaution Items:

| (1) Quality for operator and maintenance man | 1. Unqualified operators are not allowed to operate machine before they received a training course. Unauthorized and un-qualified personnel are not allow to access to areas such as electrical cabinet, motor, transformers, and relay boxes ( Connectors )
   2. The key switch of mode selection should be kept by authorized person. |
| (2) Restriction for material | Other purpose of working is prohibited. It is not applicable to process fragile materials such as wood, glass and etc. |
| (3) Restriction for working environment | The machine is prohibited to be used in environment which temperature over 40ºC. |
| (4) Operator protection device | 1. Wear safety gloves or similar protection device during handling, installation or cleaning. 
   2. During handling, installation or cleaning, anyone should wear helmet for protection. 
   3. Wear safety shoes and ear protection device if necessary. |
| (5) Disposal of wastes | The disposal of wastes, such as oil, coolant, and chips, must comply with the local regulations. |
| (6) Illumination for working environment | Keep area around machine well lighten(>500 Lux) and dry. |
| (7) Noise for working machine | The actual noise measured results in factory is about 72 dB(A) under without production. (condition: leave machine body 1m distance and at 1.6m height from the floor, and 80% of maximum speed). If the noise pressure is over 80 dB(A) while operating, please wear proper ear defender. |

Before machine arrival, customer should contact qualified company for transportation work, and all machine installation conditions(e.g.: placement space, power source, air source….,)should be ready.

※ Notice:

Don’t operate machine before the attendant tests of qualified people and training. Our company will not take responsibility for any action without authority and random usage.
5) Oil Supply
Using AW#46 hydraulic oil. (Example: SHELL hydraulic oil. AW#46)
Refill the oil from inlet port until to the oil level reaches the blue line on gauge.
Please prepare a ladder under 50cm when refill the oil from oil inlet port.

※Note:
How to exhaust air from hydraulic system
In the first time to start machine, air is subject to fall into oil, most because oil supply to tank. And, after maintenance the air also might easily get into hydraulic system. In normally, please dry run machine for 5 ~ 10 min, the air can be bled from the hydraulic system.

6) Line Distribution
Use correct capacity and wiring to distribute the machine electric box line.
Different machine model shall use different wiring and ground wire.
Connect all the electric wires, and push PUMP START button, in this first time to operate machine, please confirm if motor runs the right direction as the label on motor indicated. If it does, machine is ready for working.
In future, if customer moves machine, please check its motor rotation direction once again.
The correct motor rotation direction is as below drawing.

※Note:
1. Please connect earth for safety is necessary.
2. If motor rotation is going on wrong direction, turn off the electric power source immediately. Turn off the factory electric power and change any 2 wires of the R.S.T in the electric control box. If motor runs on wrong rotation for long time, pump will get damaged.
3. Please turn off factory electric power during changing the wires.
7) Check
1. Fill up the hydraulic oil (AW-46#) to 80% of the capacity of oil tank.
2. Connect “R”, “S”, “T” wires to power supply, turn on the over relay switch.
3. Press POWER ON button, the motor will start working.
4. Check the rotation direction of motor (it must follow the arrow direction).
5. Supply all grease lubricant feeding points.
6. Adjust levelling of machine.

After installation, or every maintenance, tool setting, pre-production work, please check items as follows:
1. Check if guards fixed (avoid people get in machine movement area, at the rear of the machine) and in place.
2. Check if blade seat can be stopped when the E.M. Stop is pushed.
3. Check machine works normally in manual mode.
If above item is normal, please press the reset button, and that the machine is ready.

※ Note:

Once the Emergency stop button is pressed, the resetting procedure is to turn the EMERGENCY STOP button according to arrow direction (Right), then press the RESET button so that the machine is ready.
1) Operation Panel Description:

1. M15S PANEL  
   M15S controller panel, operator can set up bending angle and program here.

2. MOTOR START  
   Push button to start motor

3. MOTOR STOP  
   Push button to stop machine, will be locked every button pressed, turn it clockwise to unlock button

4. MODE  
   Key switch to operate machine in AUTO/ MANUAL mode

5. POWER  
   Key switch to turn ON/OFF power

6. PRESS UP/ DOWN  
   Key switch to drive clamp go up/ down in MANUAL mode

7. FOLDER UP/ DOWN  
   Key switch to drive folder apron go up/ down in MANUAL mode
2) Foot Pedal:

<table>
<thead>
<tr>
<th>#1</th>
<th>Left</th>
<th>to enable Folder Apron movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>#2</td>
<td>Middle</td>
<td>to enable Clamp Down movement</td>
</tr>
<tr>
<td>#3</td>
<td>Right</td>
<td>to enable Clamp Up movement</td>
</tr>
</tbody>
</table>

Auto Mode

1) Single Bending Step
1. Toggle key switch to Auto
2. Set up bending angle by keying in number keys on M15 controller panel, upper LED will display “tArGEl”, and push , the upper LED shows “STOP”, then push once again, machine is ready.
3. Step on foot pedal #2, clamp goes down and fix material.
4. Step on foot pedal #1, folder apron goes up and bends material to the setting angle, then goes down back its zero automatically.
5. Clamp goes up automatically, one circle operation finished.

2) Multi-angle Bending Step
1. Toggle to key switch to Auto.
2. Push , then push upper LED will display “P1”.
3. Push once again, “01” on the upper LED flashing, that accesses step 1 programing.
4. The upper LED shows “trG”, that is for bending angle setting, please set up desired bending angle by keying in number keys, and push 
5. The upper LED shows “Cnt”, that is for how many times you want to repeat this step 1, please set up it by keying in number keys, and push
6. After step 1 setting, it will automatically access step 2 programming, the upper LED shows flashing “02”, please repeat abovemention step 1 programming to set up step 2, or step 3, 4..., if required.
7. Please push , , and to finish and save the program.
8. Push and to select the program (e.g.: P1, P2, P3...), and push to execute the selected program.
3) Delete Program
1. Push PROG ,
2. Push to select the program you want to delete, then push PROG once again.
3. Push to select the step you want to delete.
4. Please note, all the steps which following the deleted step will be deleted automatically, e.g.: if there is 6 steps in one program, when you delete step 3, the following step 4, step 5 and step 6 will be deleted automatically.
5. Push STOP and ← to finish program delete

※ Note:
1. When Auto/ Manual mode switched, clamp and folder will go back their own zero position.(clamp stays at its TDC, folder apron stays at its BDC)
2. In auto mode, clamp and folder apron can go with jogging movement when foot pedal or key switch enabled.
3. 6 programs the most can be stored in M15S controller, 16 steps the most can be set up per program.
4. If the upper LED displays “nodAtA”, it means no any data in this program

Manual Mode
In manual mode, machine can be operated by both-the key switches on control panel and foot pedal. Clamp and folder apron are activated when key switch turned or foot pedal pressed; as key switch or foot pedal released, clamp and folder apron will stop and stay still(jogging movement).

1. PRESS UP/ DOWN: clamp goes down by key switch clockwise turning / by middle foot pedal pressed
   clamp goes up by key switch anti-clockwise turning / by right foot pedal pressed
2. FOLDER UP/ DOWN: folder goes down by clockwise turning / by left foot pedal pressed
   folder goes up by anti-clockwise turning / by left foot pedal pressed

※ Note:
1. Folder apron can be activated only after clamp finishes its movement, stays at its BDC.
Normal Operation
1. Turn Power Switch to ON, the key switch lights up.
2. Push Motor Start button, motor starts and clamp goes up to automatically TDC.
3. Turn key switch to manual mode.
4. Set up bending angle.
5. Feed material in, and to align its expected bending line.
6. Clamp going down by manual with jogging movement, step by step, please keep small clearance between material and clamp, after make sure of the bending line is aligned, drive clamp go down to press material until fixed.
7. Folder apron going up by manual with jogging movement, step by step until it reaches TDC, then going back to its zero by manual.
8. If trial bending goes well with manual mode, turn it to Auto mode, after material placement, press foot pedal to start machine operation.

※ Note:
1. Do not stretch hand into the gap between the folder and lower seat, and the opening between clamp and lower seat as well.
2. Do not be too close to machine as folder apron activated.
3. Feed grease lubricant periodically. (Three to four times a year)
4. Regularly change hydraulic oil and clean filter.

ARRANGEMENT FOR UPPER PUNCHES

Upper punches on clamp can be taken out and set up for working on different kind of bending application
BENDING ANGLE RESET

If there is a discrepancy between setting angle and real bending angle, please correct it by following instruction.

E.g.: if the setting angle is 90°, but after bending, the measured angle is 88°, there is -2° difference.

Please toggle machine to MANUAL mode, and key in the measured angle “88” to the M15S controller, then press twice, after the 88 shows on the LED, please keep press the RESET button for 1 second, and the correction is done.
HYDRAULIC CIRCUIT

<table>
<thead>
<tr>
<th>No.</th>
<th>Item</th>
<th>Spec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Motor</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Pump</td>
<td>KCL-V15-15</td>
</tr>
<tr>
<td>3</td>
<td>Check Valve</td>
<td>CRG-03-50</td>
</tr>
<tr>
<td>4</td>
<td>Pressure Adjust Valve</td>
<td>BSG-03</td>
</tr>
<tr>
<td>5</td>
<td>One-way Sol. Valve</td>
<td>DSG-01-2B38</td>
</tr>
<tr>
<td>6</td>
<td>Two-way Sol. Valve</td>
<td>DSG-03-3C2</td>
</tr>
<tr>
<td>7</td>
<td>Two-way Sol. Valve</td>
<td>DSG-03-3C2</td>
</tr>
<tr>
<td>8</td>
<td>Hydraulic Cylinder</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Suction Filter</td>
<td>03</td>
</tr>
</tbody>
</table>