

Aluminum Window Door Synchronous Corner Crimping Machine

Instruction Manual

CATALOG

1. Purpose and scope of application.....	3
2. Main technical parameters.....	3
3. Working principle and structural characteristics.....	3
3.1 Working principle.....	3
3.2 Structural characteristics.....	3
4. Installation and commissioning.....	4
4.1 Installation.....	4
4.2 Commissioning.....	4
5. Operating procedures.....	6
6. Maintenance and care.....	7
7. Possible failures and troubleshooting.....	7
8. Drawing.....	9

1. Purpose and scope of application

Aluminum door and window heavy-duty corner forming machine is a special equipment for assembling aluminum doors and windows. By inlaying the angle code, the profiles are formed into a 90° angle; suitable for 90° angle connection of aluminum doors and windows.

2. Main technical parameters

Power supply: 380V 50Hz 3P

Motor power: 3 KW

The maximum height of the group profile: 130mm

Adjustment range of main positioning block: 90mm

Oil pump flow: 4L/min

Rated pressure of hydraulic system: 10MPa

3. Working principle and structural characteristics

3.1 Working principle

When the profile that needs the group angle is placed between the positioning block and the compression positioning block, step on the foot valve, the main positioning block rises before positioning the profile, and after an appropriate delay, the group angle cylinder pushes the group angle knife forward. Movement, the group angle cylinder drives the group angle knife to stamp the profiles, so that the two profiles are connected by the angle code.

3.2 Structural characteristics

This machine adopts electric and hydraulic joint operation control, which has the characteristics of light operation and reliable use. Due to the hydraulic adjustment structure of the synchronization valve, the left and right group angles are completely synchronized, thereby eliminating the influence of oil pressure fluctuations on the group angle quality, and the group angle is more accurate. The front and rear positioning adopts the method of up and down adjustment and front and back adjustment, which is suitable for processing profiles with different cross-sectional shapes and sizes.

4. Installation and commissioning

4.1 Installation

4.1.1 Installation foundation:

The machine should be installed on a solid and level ground.

4.1.2 Grounding

The grounding screw should be connected with a cross-sectional area of not less than 2.5MM green-yellow copper wire, so that the grounding resistance is not greater than 4 ohms.

4.1.3 Power on

Input voltage: 380V 50Hz 3P

4.1.4 Check the oil circuit

Open the back cover of the machine body, and the oil level of the oil tank should be kept above the center line of the oil mark to prevent the oil pump from being emptied. When refueling, use a 120 mesh filter to filter out impurities in the new oil.

4.2 Commissioning

When the installation is completed, the following sequence adjustments should be made for a certain profile.

4.2.1 Loosen the relief valve, press the hydraulic start button, and observe the direction of rotation of the motor (the motor should rotate clockwise when viewed from above). Turn the linkage switch to the off position, step on the foot valve to adjust the relief valve, and turn the relief valve clockwise to adjust the hand wheel, the system working pressure increases, otherwise the system pressure decreases.

4.2.2 Turn the linkage switch to the on position, and adjust the positioning delay on the control panel to 2S~3S. The back-off delay has been adjusted before leaving the factory. Under normal circumstances, no adjustment is required. Under special circumstances, the electrical box can be opened to adjust the time relay.

4.2.3 Place the profile with the angle code installed in front of the compression positioning block, and the outer corner point of the 45-degree seam is aligned with the top of the 90-degree internal angle of the compression positioning block. Adjust the height of the main positioning block according to the height of the profile to adapt it to the profile. The

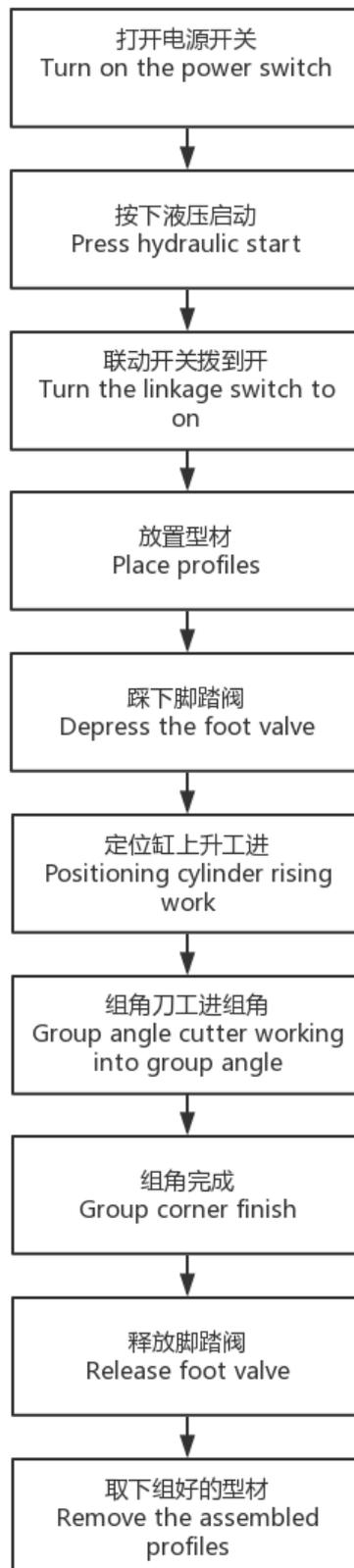
height of the group corner tool is compatible with the height of the corner code connected to the profile. When the inner rib of the profile is special, the main positioning block should be replaced so that it can penetrate into the cavity between the ribs, so that it does not reach the rib, so the main positioning block Designed as a live connection, so that users can configure various positioning blocks according to the profile.

4.2.4 Front and rear position adjustment of the main positioning block: Depress the foot valve to move the main positioning block to the front limit position, then rotate the positioning cylinder to adjust the hand wheel, and finally bring the main positioning block to the position shown in "Figure 2".

4.2.5 Adjustment of the compression positioning block: Loosen the compression screw and adjust the height of the compression positioning block so that it is symmetrical with respect to the groove of the main positioning block. Then adjust its front and back position: first install the corners of the profile to be placed on the position of the main positioning block, then loosen the compression screw, adjust the front and rear position of the compression positioning block, and finally make the profile positioned correctly . When finished, take out the profile.

4.2.6 Adjustment of the position of the group of corner knives: Loosen the clamping screws so that the upper and lower positions of the two groups of corner knives are symmetrically distributed on the upper and lower sides of the clamping positioning block, and do not exceed the edge of the profile, and tighten the screws. Rotate the skateboard to adjust the hand wheel, and adjust the front and back position of the pair of corner knives. When adjusted to the maximum stroke of the group corner knife, its position should meet the requirements.

5. Operating procedures



6. Maintenance and care

6.1 The working medium of the oil pump is N32 mechanical oil or hydraulic oil. When the ambient temperature is lower than 10 degrees, N15 mechanical oil or hydraulic oil can be used; when the ambient temperature is higher than 40 degrees, N46 mechanical oil or hydraulic oil can be used. But it is not allowed to change the oil of other brands at will.

6.2 The liquid level of the oil tank should be kept above the oil mark to prevent the oil pump from evacuating. When refueling, use a 120 mesh filter to filter out impurities in the new oil, clean the oil filter every two months, clean the oil tank once every six months, and replace the new oil at the same time, and then replace the new oil once a year.

6.3 The normal working oil temperature is 20~50 degrees. When the oil temperature is too high, cooling measures must be taken or the pump should be stopped. Only after the oil is fully cooled, can it work normally; when the oil temperature is too low, direct work is not allowed, and it needs to be added. Temperature measures can increase the oil temperature through external heating or low pressure operation.

6.4 The working pressure of the pump shall not be increased arbitrarily.

6.5 High-pressure hoses are used for a long time. Due to the aging of hoses, the damage of various places will reduce the compressive strength of hoses. Regular inspection should be taken. Those who use frequently, generally check every six months. During the inspection, pressurize with a pressure test pump. Its pressure resistance is higher than 1.25 times of the rated pressure. If leakage, bulge or blast occurs, it must be replaced. When using high-pressure hoses, discounts or sharp bends should be avoided. Operators should be careful not to get too close to the pipes, so that they can be injured by the explosion.

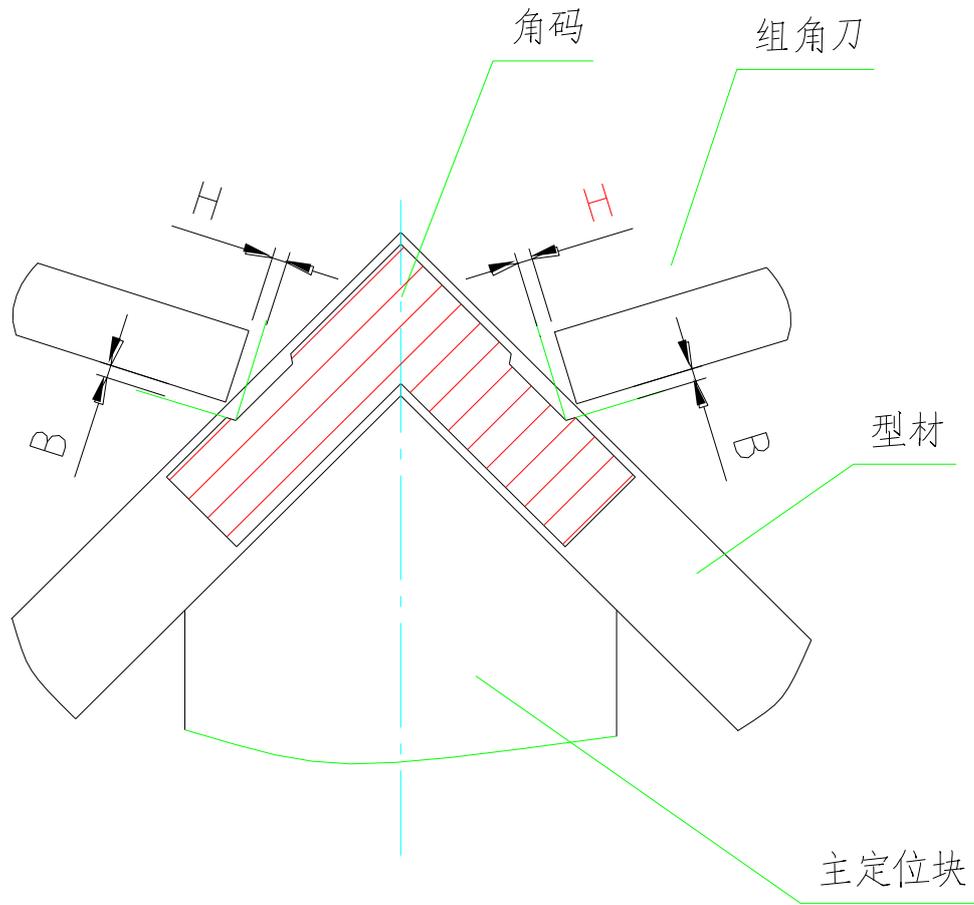
6.6 The hydraulic pump is overhauled once a year, all parts are cleaned with kerosene, pay attention to protect each matching surface, and do not bump it arbitrarily. After assembly, the moving parts should move flexibly without local blocking.

7. Possible failures and troubleshooting

Malfunction	Reason	Elimination method
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No pressure or insufficient pressure in the hydraulic system	The adjustment value of the relief valve is too low	Readjust the relief valve
	The system has a leak	Replace the seal or tighten the joint
	The temperature of the oil is too high or the viscosity is too small	Reduce oil temperature and replace recommended oil
	There is air in the system	Excluding air
Excessive noise in hydraulic system	The oil is too cold	Heating oil
	There is steam in the oil tank	Lower the oil temperature
	The oil level is too low	Increase oil
	Oil use error	Replace the recommended oil

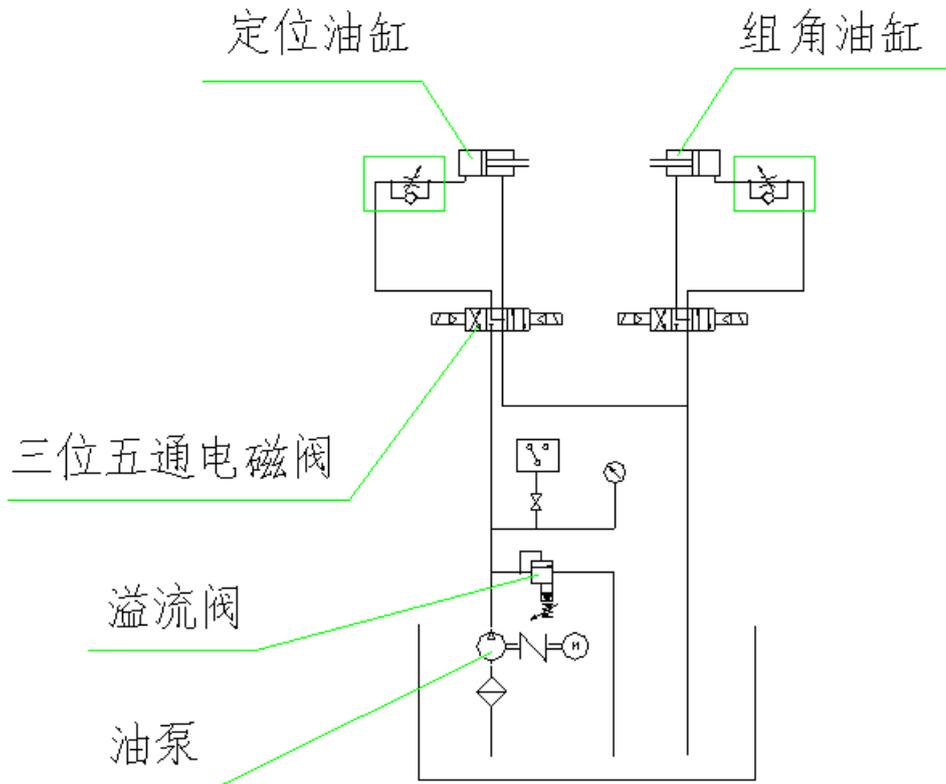
8. Drawing



$$B = 1.4\delta$$

$$H = 1.7\delta$$

δ -- 型材壁厚



Hydraulic principle diagram