

MH500 servo hydraulic system in the application of JINJUN bottle blowing machine

Abstract: Dongguan JINJUN machinery co., LTD is a professional research and development, production, sales, 10mL to 220L automatic microcomputer high efficiency and energy saving plastic blow molding machines and plastic machinery ancillary equipment manufacturers, widely used in servo motor and frequency converter, for clients to truly achieve automation, cost savings, improve efficiency; The company is engaged in producing 20 years, during this period, has won the "private technology enterprises in guangdong province" and "national hi-tech enterprise" honorary title, enjoys a high reputation in the bottle blowing machine industry.

Keywords: Bottle blowing machine, servo hydraulic system, MH500

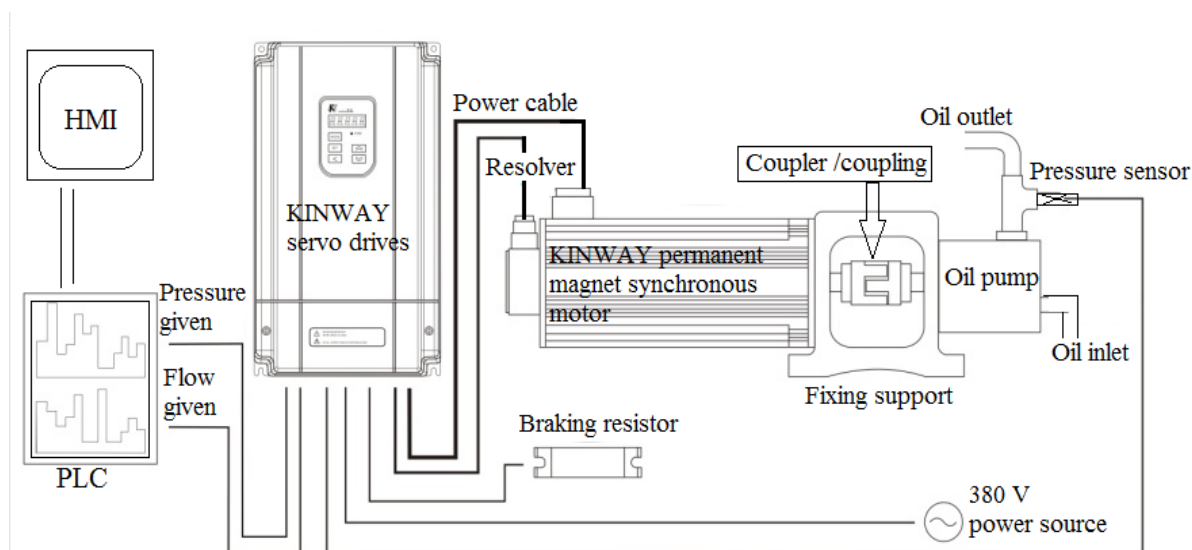
1. The project is introduced:



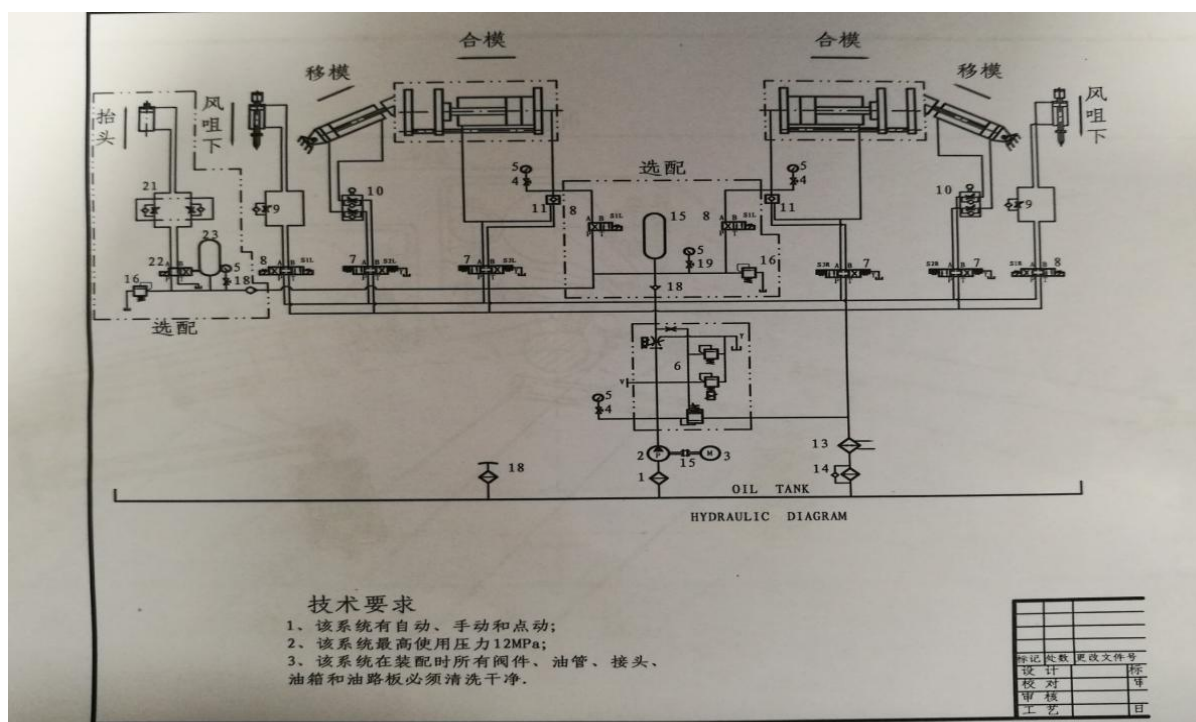
The equipment of power source is divided into three parts:

- 1) Extrusion part adopts INVT universal inverter driven induction motor through the reduction gear drive screw rotation, the action after the machine drive device, a constant running, no stop time;
- 2) Blanking, blow molding and mold release use pneumatic;
- 3) Move mould, open and close mold, blowing mouth up and down, using hydraulic system. Choose MH500 servo control of hydraulic system.

2. Hydraulic system schematic diagram:



System diagram



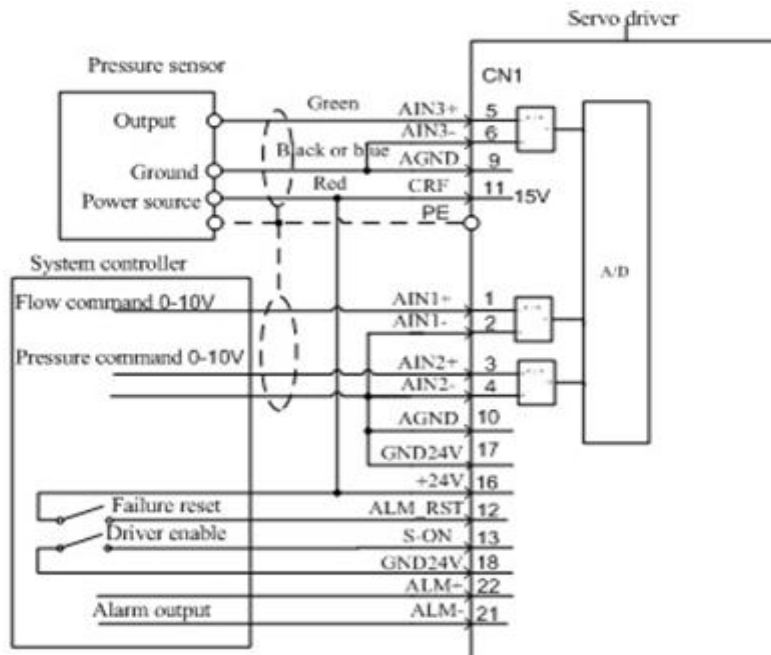
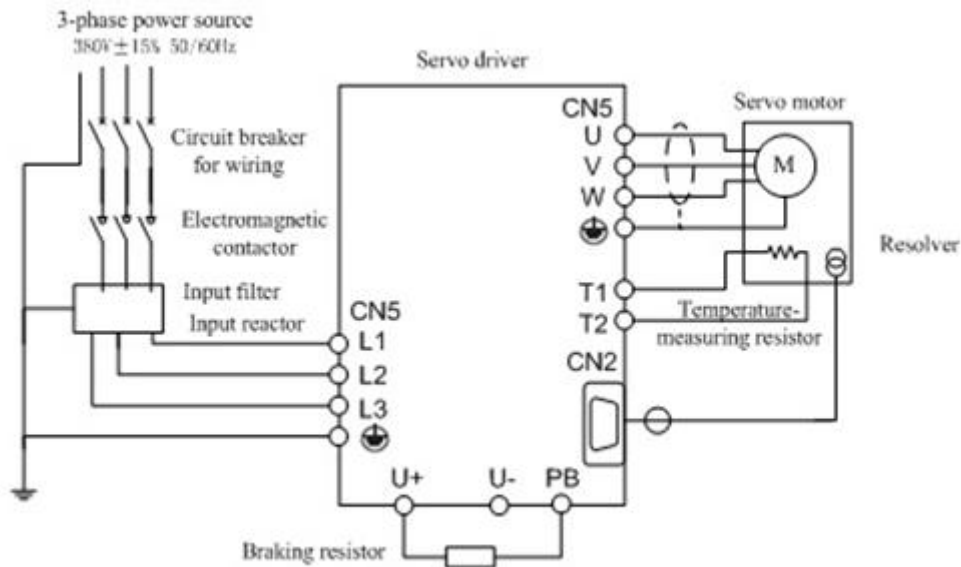
Hydraulic control principle diagram

3. MH500 configuration:

Due to the equipment in the automatic production cycle, only action switch, no pause time and holding time. So the machine does not exist to stop state. To prevent motor overheating, motor running under the rated torque only, not included in the overload coefficient.

Gear-pump	EKERLE-32ml/r	Servo-motor	K078F20C18P
Servo-driver	CT-1802-A-*		
The system total flow	64 L/m	The system pressure	140 bar

4. System wiring diagram:



5. Debugging and parameter Settings:

- 1) Based on the system wiring diagram to connect cables;
- 2) According to the operating instructions set drive parameters;
- 3) Cooperate with PLC and HMI, calibration of pressure and flow;
- 4) The whole machine pressure, and action to run the test,
- 5) The mould trial production.(full automatic operation)

6. References:

- 1) MH500 hydraulic servo product manuals;
- 2) MH500 hydraulic servo product introduction.