



Version 2018

HA SERIES

Hi-Tech Intelligent
Injection Molding Machine



IT'S VERY WELL
MADE IN TAIWAN





ISO9001:2008
Certification



CE Certification



ANSI Certification



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Fu Chun Shin Group (FCS) has been an international plastic injection molding machinery manufacturer since 1974. We have been developing advanced manufacturing technologies for the plastic industry for more than 40 years. Following our tradition, FCS has recently developed a servo-driven hydraulic injection molding machine to meet the industry request for power saving.

By adopting the advanced servo system, the HA series has achieved excellent energy-saving, precision movement, fast response time, low noise levels, low oil temperature, and a user friendly HMI (Human – Machine Interface) control.

The FCS HA series adopts high efficient motor and driver system. It can reduce the power consumption by 70% over the ordinary fixed pump injection molding machine. At the same time, the closed-loop design improves the precision and repeatability. With the need for green technology and global competition, the FCS HA series hi-tech intelligent injection molding machine will be your first choice when selecting hydraulic power injection molding machines.

**FCS**

www.fcs.com.tw

High Energy Saving

Under ideal working conditions, power consumption is reduced by 40%, when compared to that of variable displacement and 70% less than that of fixed displacement pumps in an effort to become more efficient.

High Precision

FCS machine movement is precisely controlled even at low pressure and flow rates with variations of $\pm 0.5\%$. The semi-closed loop hydraulic system can produce part weight error in the range of $\sim 0.4 - 0.7\%$.

Fast Response

The dynamically controlled servo system is equipped with a pressure feedback monitoring device for high precision and sensitivity. The closed-loop design allows precise control, shorter cycle times and improved production efficiency.

Low Noise

As opposed to a standard fixed pump hydraulic system, the HA series servo pump is only "on" when there is fluid demand, which greatly reduces the noise level in the work area to less than 70dB.

Low Oil Temperature

Due to the servo pump efficiency, the hydraulic oil temperature is maintained at a lower temperature which intensively saves water.

PQ Control

Pressure (P) and flow (Q) can be controlled by a simple voltage signal into FCS' Computer Control System.



New Mold Adjusting Mechanism

The new mold adjusting platen mechanism design doesn't require its mounted nut for torque tuning and distributes force evenly on the tie bars.



Oil-less Bearing

Oil-less bearing on the moving parts of platen and toggle, greatly reduces maintenance cost, and provides for a cleaner production environment.



Automatic Lubrication System

An automatic lubrication system circulates and distributes oil equally for greater efficiency in lubrication and enhanced toggle life.



Highly Rigid Structure Frame

Designed based on Finite Element Analysis (FEA) for Stress and Strain effects to ensure the HA's excellent frame structure.





New Patented Injection Sliding Structure

The new pillar guiding plate structure is shortened to avoid barrel inclination and deformation. And with Molybdenum Disulfide coated bushings, it produces a less resistant, faster moving, very clean, oil free injection sliding structure.



Semi-closed Loop System (optional)

Adopts a semi-closed loop hydraulic system to effectively promote molding stability.



Patented Regeneration Loop

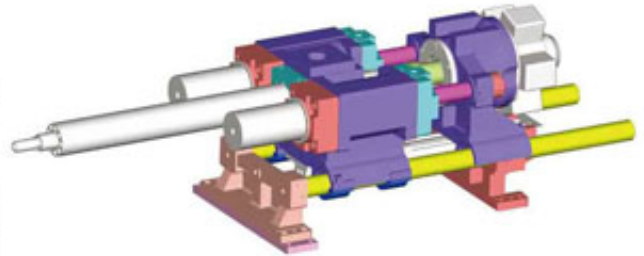
A patented feature that allows high speed or high pressure production for lower energy consumption.



Digital Back Pressure Installation

The back pressure can be directly changed and set on the controller for easy operation.

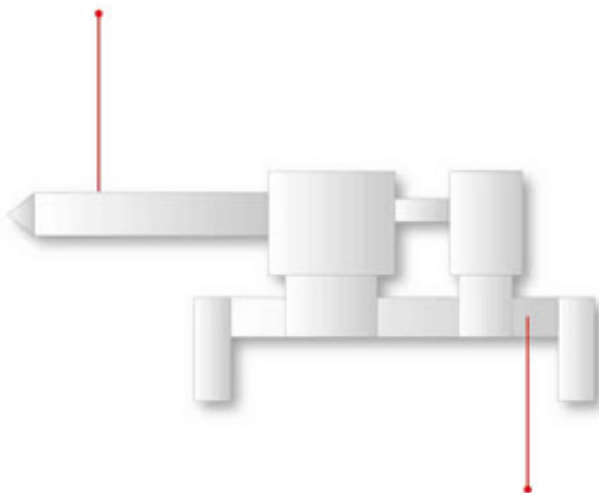
- Screws are made only with high-grade steel plus a final plasma (hardening) step.
- Barrel are made with special alloy, which is suitable for normal corrosive material (glass fiber<15%)
- Dual (balanced) injection cylinders. No lateral forces act on the unit during injection, enabling precise injection control.



The injection assembly is guided with patented molybdenum disulfide coated bearings.

Conventional Guide Plate Design

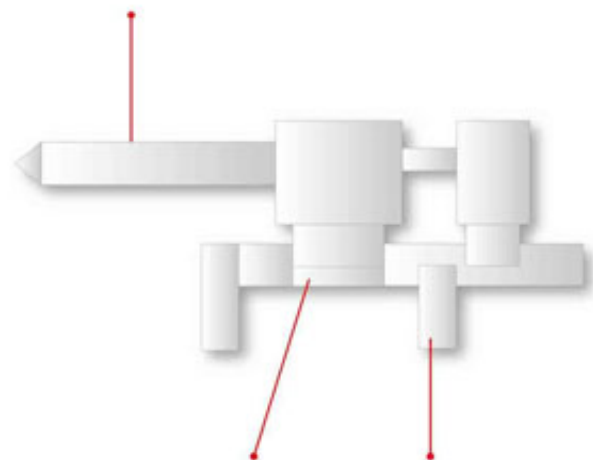
Barrel deflection will accelerate wear of screw.



Guide plate deflected, bent or deformed due to larger span.

FCS Newly Developed Guide Plate

Clearance between the guide rod and plate has been re-designed to prevent deflection of the barrel.



Molybdenum Disulfide film treated for permanent lubrication free operation.

Reduced span to prevent the guide plate from being bent or deformed.