

Saving energy to a great extent with the replacement of the hydraulic driving sources of injection molding machines with electric motors.

Fully Electric Plastic Injection Molding Machine

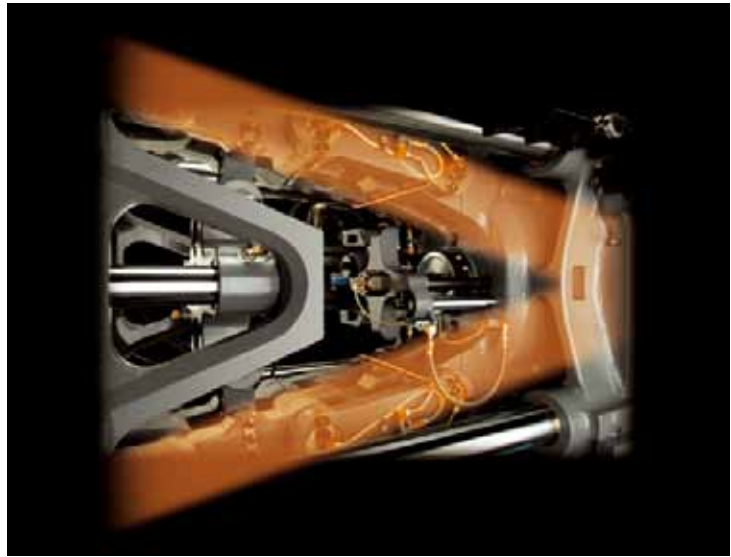
Feature

- A motor with a clamping force of 850 tons compared with a hydraulic device with the same clamping force makes it possible to save a power consumption of approximately 92,000 kW with 35-tons CO₂ emissions annually.
(Based on Toyo Machinery & Metal's in-house measurement and calculation results on the condition that the motor and the hydraulic device are operated 5,000 hours annually at a cycle of 72 seconds).
- Ensures the fine control and precise reproducibility of injection and clamping with an electric motor.
- A 90% reduction of lubricant supply supported by uniquely developed grease- and lubrication-saving design.

Overview

(Technical principles, actions, etc.)

New technologies, such as a V-clamp and die plate optimization, are applied to the clamping mechanism in order to use the driving force of the electric motor highly efficiently. Resin is filled into a cavity at high pressure. Therefore, the clamping of a mold requires great force. The V-clamp and die plate optimization developed in academic-industrial cooperation with Kyoto University realizes the transmission of uniformed clamping force to the parting surfaces of molds, thus generating necessary clamping force with energy saved.



V-clamp mechanism



PLASTAR SI-850IV Large-sized Fully Electric Plastic Injection Molding Machine

Applicable field
Plastic Molding Industries and In-house Manufacturer of Automotives and Consumer Electronics Manufacturers, and Assembly Manufacturers

Water

Energy saving/Energy recovery

Energy storage/Energy creation

New energy

Waste disposal/
Recycling/
Resource saving

Air

Soil

Other

TOYO MACHINERY & METAL CO., LTD.

Sales Engineering Division Plaster Sales Engineering Department 523-1 Fukusato, Futami-cho, Akashi-shi, Hyogo 674-0091

● TEL / +81-78-942-2345 ● FAX / +81-78-942-2332 ● E-Mail / k-ohashi@toyo-mm.co.jp ● <http://www.toyo-mm.co.jp>