



# IMPRESS-PLUS

ENERGY EFFICIENT COLD CHAMBER DIE CASTING MACHINE

# To Be Better In Every Way

## 1 Energy Saving System

Saving on average >50% of energy consumption by equipping with servo motor.

## 2 Quick Die Change System (Optional)

Reduces manpower and machine idle time during mold change.

## 3 Smart Die Height Adjustment

Customer just need to set the target clamping force, machine will automatically adjust the die height accordingly to each die tool, thus, tool change time is brought to a minimum.

## 4 Meter Out Injection Control

Injection speed is controlled at the outlet side of the cylinder allowing faster acceleration in the transition phase. The plunger can be decelerated at the end of injection avoiding pressure spikes which cause flash and damage on die.

## 5 Intuitive Control

The simple operator panel layout and integrated display panel make operation easier.

## 6 Platen Surface Hardening Technology (Optional)

Platen surface is heat-treated to prevent horizontal pits.



# Capable Injection, Steady Quality And Great Efficiency

## Advanced Control System

LK control system technology allows effortless production. IMPRESS-PLUS is equipped with multiple automated features developed to simplify machine operation and maximize machine production time. In addition to the standard features, many other peripheral equipment can be configured to create a fully automated production cell.

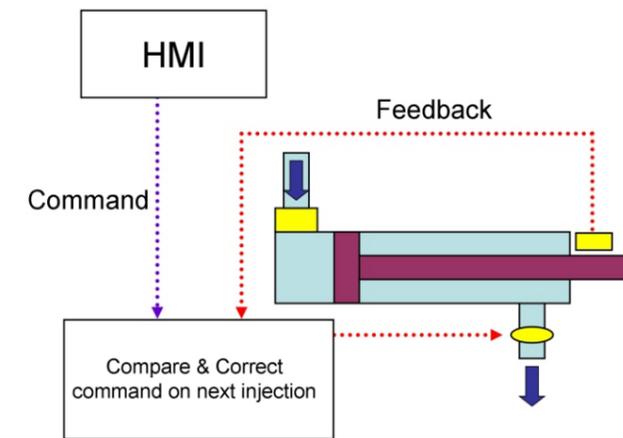


## All-around Monitoring

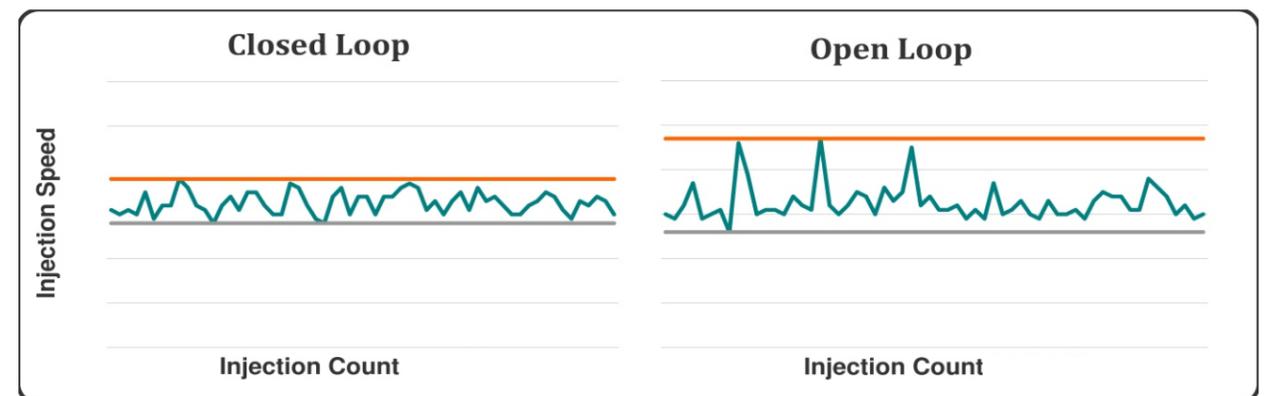
IMPRESS-PLUS is equipped with injection curve display to monitor each casting shot. Online quality monitoring allows defective casting to be detected if injection speed is out of range. The entire machine can be monitored from easy navigable pages.

## Highly Capable Smart Injection Control System

IMPRESS-PLUS is equipped with a comprehensive injection control system simplifying the setup process. Speed and position values are directly inputted to create the injection profile for each product. The control system has the ability to store these settings for future use to improve setup efficiency.

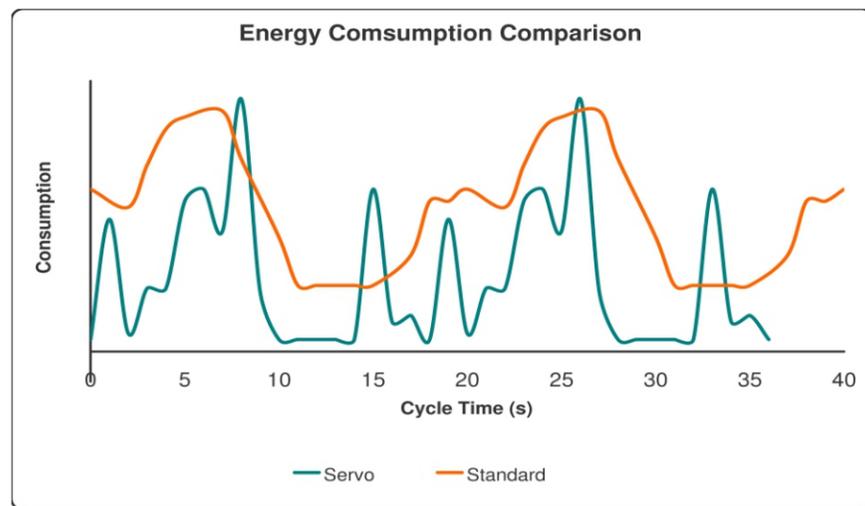


The LK Smart Injection Control System provides highly repeatable injection performance by using closed loop system. The system includes real-time control in the slow phase and fast phase speed adjustment on the following injection. The deceleration capability prolongs the service life of the die tool and eliminates flashes in the product.



# Energy Saving System

IMPRESS-PLUS will provide savings from the very beginning of production operation. A die casting machine is idle at about 80% of a production cycle. IMPRESS-PLUS is equipped with servo motor where energy is only consumed when required. It will achieve more than 50%\* reduction in electricity consumption compared to standard motors. Dry cycle time is reduced by the fast response of servo motor to directly control hydraulic oil flow and pressure.

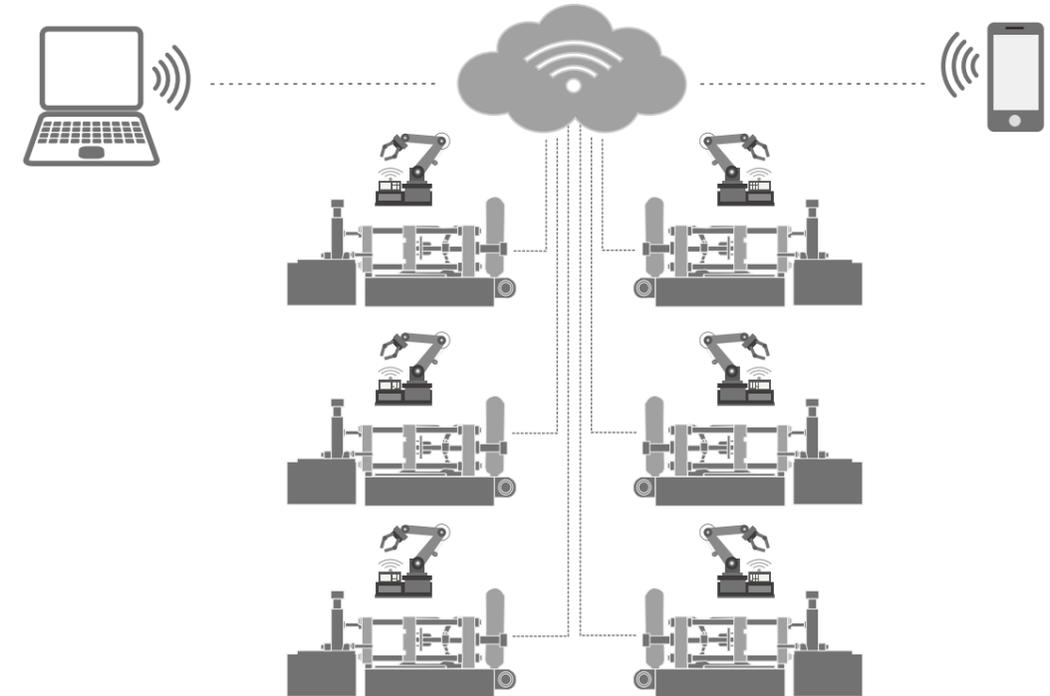


Item	Standard Motor (A)	Servo Motor (B)	Actual Energy Saving (A-B)	Percentage of Energy Saving
Energy Consumption per cycle	0.19 kWh	0.07 kWh	0.12 kWh	63.16%
Energy Consumption per hour	14.34 kWh	5.74 kWh	8.60 kWh	59.97%
Energy Consumption per day (22 working hours per day)	315.44 kWh	126.26 kWh	189.18 kWh	59.97%
Energy Consumption per month (26 working days per month)	8201.34 kWh	3282.71 kWh	4918.63 kWh	59.97%
Energy Consumption per year (12 months per year)	98416.03 kWh	39392.50 kWh	59023.53 kWh	59.97%

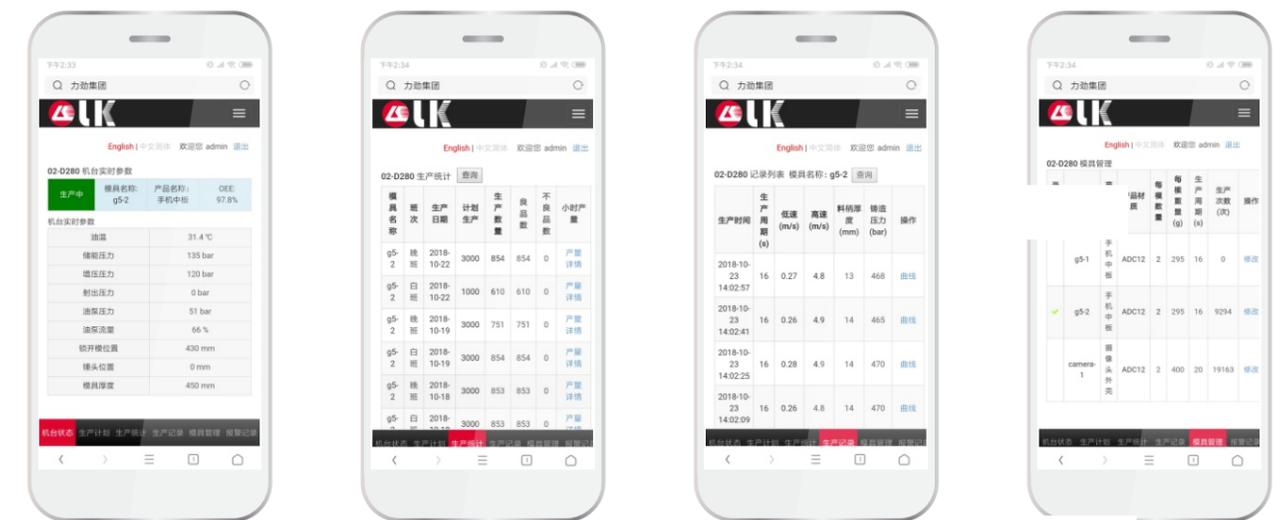
Energy consumption data of DCC400 obtained from a client producing automotive parts

# LK-NET (optional)

The unique monitoring system from LK monitors the production status of the die casting machine and the peripherals using Ethernet on a realtime basis, achieving remote monitoring on the user's computer or mobile phone. The PLC of the die casting machine can be uploaded, downloaded, monitored and diagnosed using the Internet, achieving remote monitoring and maintenance.



The monitoring system, developed by LK, is based on Industry 4.0 hardware/software applications, integrating functions such as production management, malfunctioning management, production tracing and energy consumption management, achieving realtime production monitoring and raised production efficiency. Also, our monitoring system can provide an outstanding management platform for customers.



• Remote monitoring interface on mobile phone