SINCE 1958

Technology Creates the Future

60 Years of Focus, Determined to Continue Innovating

Hong Kong

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202012

SPEED

HIGH-SPEED SERVO SERIES

DESIGNED BY JAPANESE EXPERTS

ULTRA HIGH SPEED

HIGH PRECISION

FAST RESPONSE

CHEN HSONG

SPEED High-Speed Servo Series

Applications

Thin-Walled packaging

Mobile Phones and Precision Electronics

Consumer Electronics

Medical Consumables

SPEED

The SPEED series has been developed with a primary focus on delivering very high injection speeds and very short cycle times, all the while ensuring rock-solid stability and no-compromise precision. It is, literally, the best of all worlds.

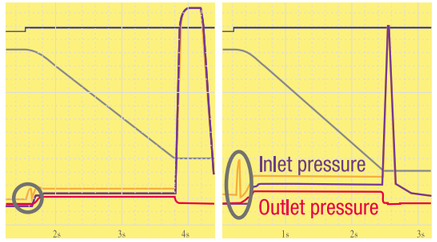
The secret ingredient behind this unbelievable performance is Precision Hydraulics™ technology - a Japanese-based technological revolution that achieves unprecedented precise and accurate motion control at the highest operating speeds. The result is performance, reliability and stability infinitely close to Japanese-standard injection moulding machines, operating at 300-500mm/s injection and as short as a 1.5-second dry cycle.

Key Technologies

Precision Hyraulics™

“Brains over Brawn” – Precision Hydraulics™ is a revolutionary technology developed by senior Japanese engineers over many years of intensive research. It employs the latest in software simulation technology and the most updated control theory to all but eliminate unnecessary pressure drops, yielding a hydraulic circuit that is highly optimised, virtually shock-free, and smooth as silk. A machine equipped with Precision Hydraulics™ technology can easily match the performance of a Japanese-standard injection moulding machine costing double or triple the price.

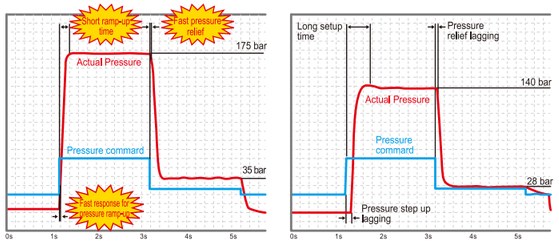
Injection Speed Response



Smooth, stable, no overshoots, no fluctuations

Competition 160-ton Fluctuations, over-shoots

V/P Switch-Over



Snappy and accurate

Competition 160-ton - slow response

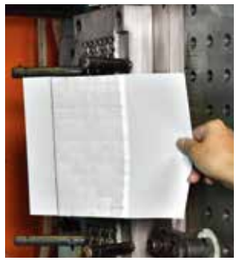
A new industry benchmark for low-pressure mould protection

High-precision linear potentiometers are used for the clamping, injection and ejector axes which, when combined with highly-optimised algorithms, enable superior low-pressure mould protection - effective even with obstacles thinner than 0.1mm (or the thickness of a sheet of paper)!

Before mould close, put in a sheet of standard A4 paper

Almost closing detecting paper

Low-pressure mould protection causes clamp to open



A4 Paper is not even punctured through!

SPEED

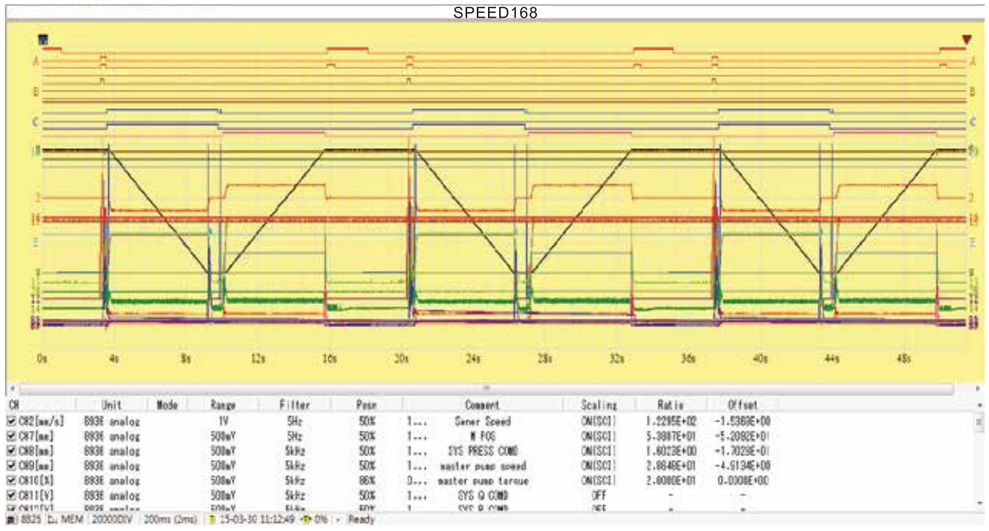
All-new intelligent controller

Special Features

1. Complies with JIS and IEC testing standards
2. Named-brand high-definition 10” TFT color LED screen
3. Integrated EtherCAT high-speed bus system
4. Integrated closed-loop function
5. Optimize barrel temperature PID algorithms
6. Optimize injection control algorithms
7. Optimize mould open control algorithms
8. Multiple languages
9. Intelligent fault diagnostics
10. Industrie 4.0 interface

Industrie 4.0 Framework

The entire hydraulic circuit was simulated in advanced software to highlight unnecessary pressure drops and shocks. These are then systematically eliminated through the drudging work of experienced engineers using top-of-the-line analytical tools. The result is a perfect motion curve tailor-made for the machine.

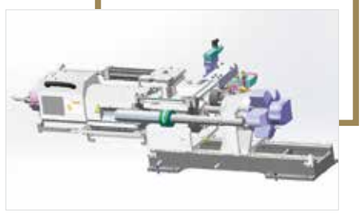


Advanced Japanese computer controller dynamically monitors minute variances in machine performance and adjusts in real-time for perfect hydraulics control. Perfect smoothness. Perfect accuracy. Perfect repeatability. Every single shot.

SPEED

Fine-Tuned Performance

Optimised Injection Unit Design
Superior melt quality and plasticising speed
Standard injection unit is specially optimised for high-speed applications with higher injection speeds and pressure.



Balanced Dual Hydraulic Cylinders And Linear Guide Rails
Low friction mechanism for high precision injection control
Non-contact potentiometers for the highest accuracy during high-speed injection; Eliminates wear and interferences for ultimate stability

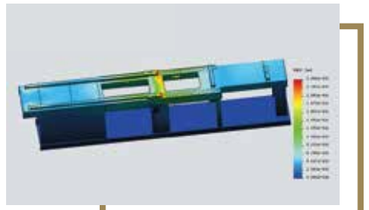
* Product images are for reference only and subject to change without notice.

Ultra High Speed, High Precision, Fast Responses
Top-of-the-line high-response servomotor with 2x faster dynamic responses
Faster responses for higher repeatability, control precision and energy efficiency

SPEED

Mechanical Design

Very Thick (And Strong) Platens
Minimal platen and toggle deformations
Optimised platen design distributes stresses evenly for higher part quality



Very Strong Machine Base
Machine base is rock-solid stable, ensuring the highest yield possible even for difficult products
Designed to match the unique requirements of ultra-high-speed motion curves, the machine base is specially designed to enhance structural strength, rigidity and stability by 50%, thus ensuring the highest part quality.

Perfect Alignment
Even stress distribution helps eliminate rejects
Stress is channelled through the centre of the moving platen before distributing outwards evenly. Advanced Japanese mechanical design guarantees perfect alignment of the four corners at all moments, effectively eliminating flashes.

Oil-Less Graphite Bushings
Friction-free, oil-free
Self-lubricating bushings have no need for lubricating oil while providing superior lubrication day in and day out, reducing unnecessary wear. Result is less pollution, less wear, less costs. Everyone wins.