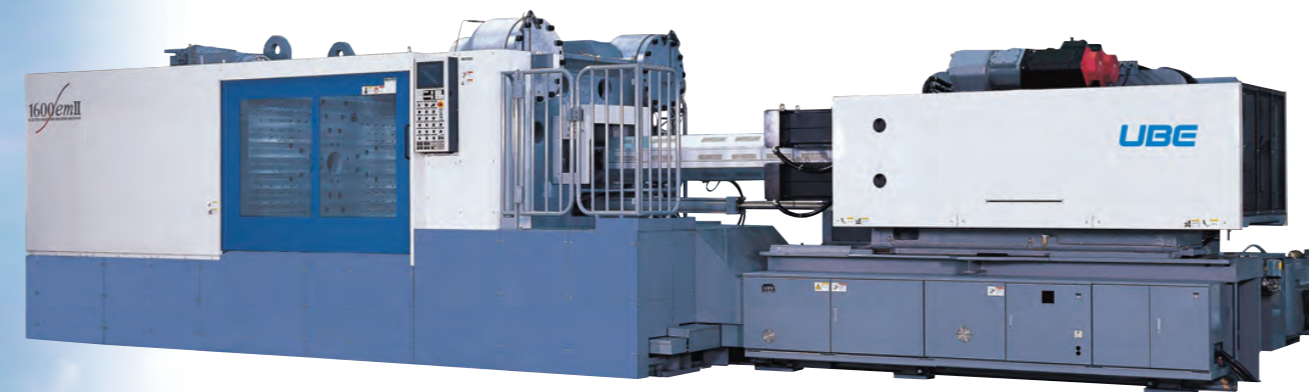




# The Standard for a New Generation

The two-platen clamping mechanism has become increasingly popular in the large-sized injection moulding market and has gained numerous delivery records and reliability since our company first introduced ahead of competitors. The high-end “emII series” meets the goals of carbon neutrality and our valued customers.

## Meeting the Needs of a New Generation and Shaping the Future

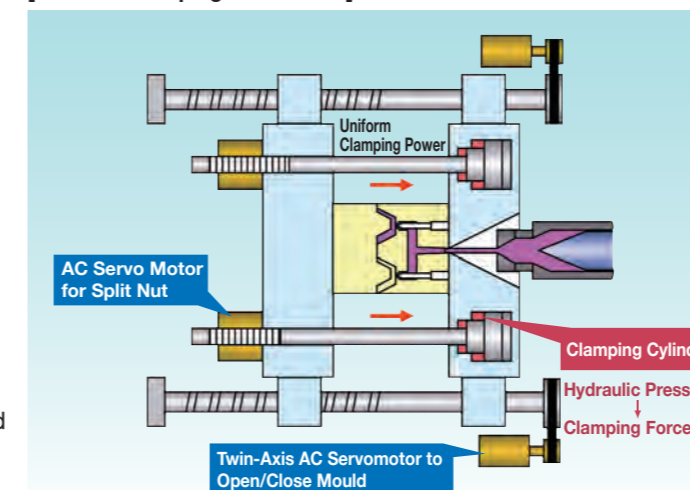


### High Speed, High Precision, Small Footprint

#### Two-Platen Clamping Mechanism

- Featuring a short 2-platen clamping mechanism, the machine's dimensions allow for an efficient factory layout.
- Four-point clamping design maintains precision over the long term, extending the life cycle of your moulds. This design works very well even with offset moulds and single moulding.
- Dual controlled ball screws provide synchronously driven, highly responsive mould opening and closing motions.
- AC servomotor driven tie-bar split nuts operate at high speed. Simultaneous actuation of the four split nuts keeps cycle time to a minimum.
- Mould open/close dry cycle reduced by 20% (compared with our hydraulic models).
- Built-in hydraulic power unit features large-capacity supply and reduces core actuation time.

[2-Platen Clamping Mechanism]

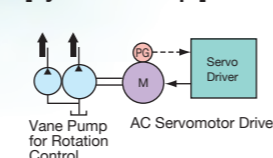


### Carbon neutrality

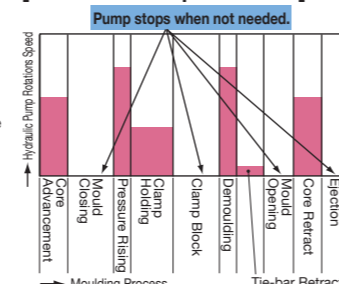
#### Eco-Servo-Pump System

- Built-in eco-servo-pump system uses a rotation-controlled vane pump with AC servomotor drive.
- Designed to achieve energy savings for each set of operating conditions through highly precise and extremely responsive pump rotation control. The pump system can be stopped when hydraulic operation is not needed.

[System Concept]



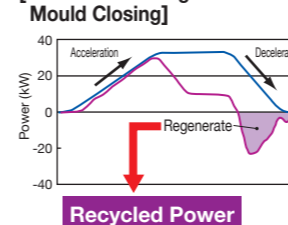
[Pattern of Pump Actuation]



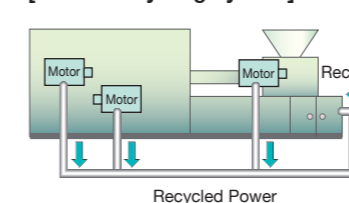
#### Power Recycling System

- The motor operates as a generator during deceleration (braking), sending power back to the power source.

[Power Use during Mould Closing]



[Power Recycling System]



## Compact, Faster, and Environmentally Conscious

●Two-platen clamping mechanism **Compact, Faster, and Highly Precise**

●Eco-servo-pump **Carbon neutrality**

●Direct-drive injection **Ideal for thin-wall moulding**

●UB Screw **Lower material costs**

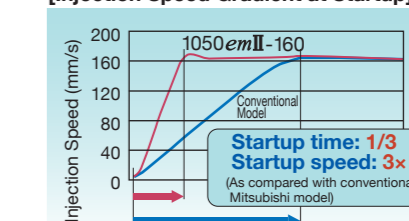
●MAC-IX **User friendly, Easy to operate**

## Ideal for Thin-Wall Moulding

### Direct-Drive Injection Mechanism

- Direct-drive mechanism uses original high-torque, low-rev AC servomotor. (Synchronous drive through control of 2 or 4 ball screws.)
- Top-class high-speed injection startup. Ideal for thin-wall moulding. (Speed response is on a par with high-speed hydraulic servo valve systems.)

[Injection Speed Gradient at Startup]

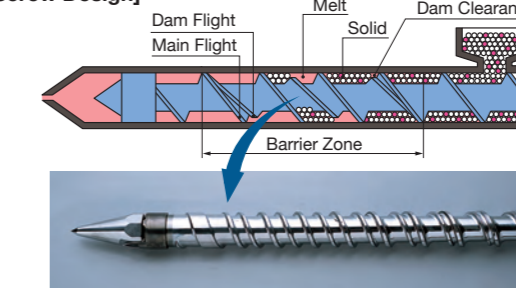


## Lower Material Costs

### UB Screw

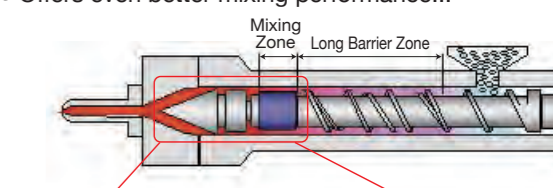
- Our original screw design features long barrier zone and dam configuration for separation of the melted and solid resin. The design offers superlative and energy-efficient kneading and plasticizing performance.
- Solid-free plasticizing enables high-multiple master batch moulding and significantly expands the range of usable colorants—contributing to lower overall material costs.

[Screw Design]



### Super Mixing Screw (option)

- Offers even better mixing performance...



MD (multi-dam) UB Screw



Polygonal multi-dam configuration delivers excellent shearing and separation of unmelted resin.

MF (multi-finned) UB Screw



Optimally designed Dulmage-type tip delivers efficient dispersion of melted resin.

## The new and improved MAC-IX controller

- Exceptional operability with two screens combined on one large screen
- An upgraded security function that utilizes ID card authentication is equipped as standard
- Stable moulding by high-speed control that is six times faster than a conventional system

### Upgraded Operability

- Swing and tilt mechanism  
Easier operation with control panel swing and tilt.
- Injection waveform memory  
An ideal process, waveform can be saved and displayed on-screen for checking shot-to-shot repeatability. This feature helps ensure consistent production.
- Vertically long screen  
Long, vertical screens can display twice the trend data compared to a conventional system.

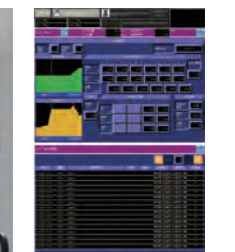
### High-speed, high-accuracy control

- Reduced scan time  
Scan time is shortened to 1/6 of a conventional system by using EtherCAT® High-speed communication which provides for stable weight of the moulded product.

®EtherCAT® is a registered trademark of Beckhoff Automation GmbH.



Control panel with two independent screens  
Swing and tilt function



Injection setting can be changed while checking setting records