

THINK TECH FORWARD

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YIZUMI

P-E

200T-550T

P-E SERIES HIGH-SPEED  
INJECTION MOLDING MACHINE



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[2] The picture in the catalogue is for reference only. The real object should be considered as final.  
[3] The data in the catalogue is obtained from internal testing in YIZUMI laboratory.  
Please refer to the actual machine for the final data. YIZUMI reserves the right of final interpretation upon disputes and ambiguities.



THINK TECH FORWARD

# P-E Series Electric High-Speed Injection Molding Solution

In response to the market demand for thin-wall injection-molded products, YIZUMI has developed an electric high-speed injection molding machine — P-E series. The machine is capable of meeting the production requirements for high quality, high precision, and high efficiency. It provides customers with an efficient, energy-saving, stable, and clean injection molding system solution.

## More accurate control

- Repeatability of mold opening  $\leq 0.02\text{mm}$ ;
- Repeatability of injection  $\leq 0.05\text{mm}$ ;
- Repeatability of plasticizing  $\leq 0.04\text{mm}$ .

## More stable operation

- Platen parallelism (with load)  $\leq 0.05\text{mm}$ ;
- TBF (Tie Bar Free) technology with high stability, no pollution to the production environment;
- Unique large beveled toggles design, smoother force transmission;
- High-quality ball screw, fast and precise toggle movement.

## More energy-saving control system

- Servo motors and high-efficiency transmission ensure good energy utilization of the equipment. Compared with ordinary injection molding machines, it can save energy by 30-50% (it may vary according to working conditions);
- Closed-loop temperature control reduces deviation and energy consumption loss.

## More highly-efficient production

- Improved plasticizing efficiency shortens molding cycle time;
- Built-in hydraulic pump station supports a variety of mold processes with great flexibility and efficiency;
- Dry cycle time of 2-3.6s. Faster dry cycle enables higher production efficiency.



# Injection Unit



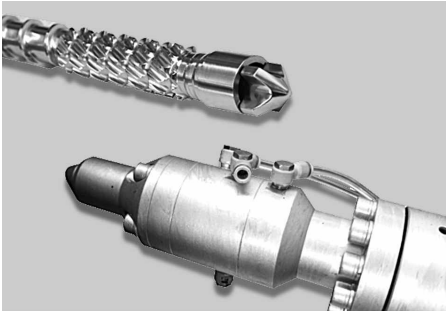
Injection speed:

350mm/s

Suitable for thin-wall products.  
Problems like flash, flow lines could be avoided.

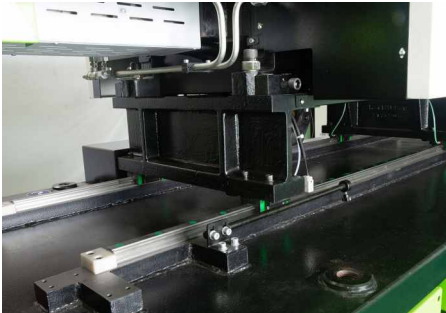
500mm/s

Suitable for ultra-thin wall products.  
Shorter cycle time to prevent product deformation after cooling.



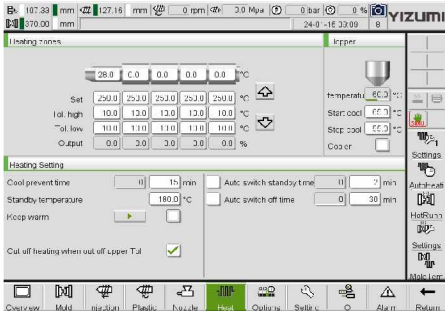
## Appropriate screw and barrel components

Professional screw and barrel components will be selected according to the characteristics of different raw materials and production processes to ensure the plasticizing quality.



## Horizontal double-carriage design

- Effectively eliminate rotary torque to ensure a reliable and stable injection;
- No unnecessary friction. Fast forward and backward.



## Closed-loop temperature control

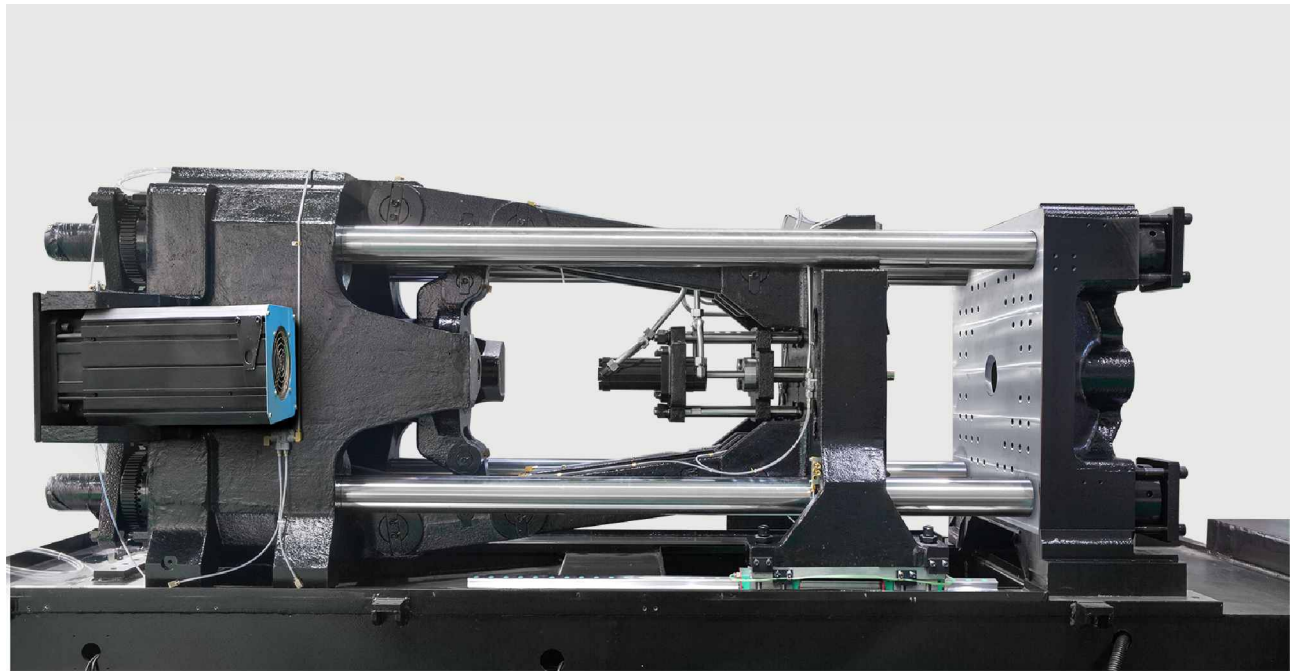
Static deviation:  $\pm 0.5^{\circ}$ .



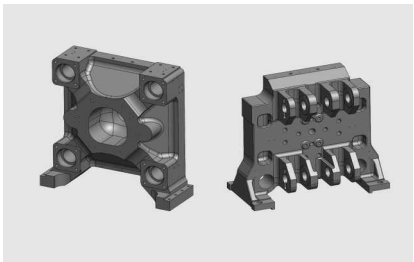
## Closed-loop injection pressure control technology

- Provide more accurate control for more stable, reliable and precise molding;
- The stability precision of injection pressure and holding pressure is at  $\pm 0.02\text{Mpa}$ .

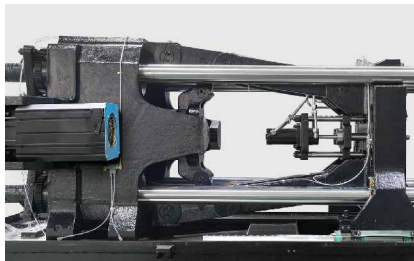
# Clamping Unit



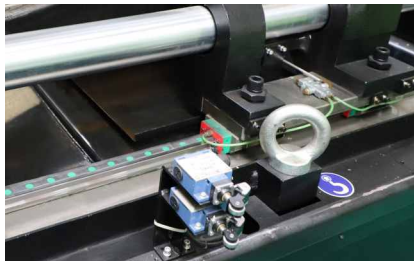
- High stability of the tie-bar free (TBF) technology
  - The clamping unit adopts the TBF (Tie Bar Free) technology for easy operation and maintenance;
  - Keep the mold area clean to prevent product contamination.



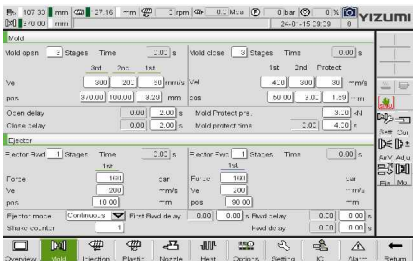
- Highly-rigid platen
  - Offer great rigidity and uniform distribution of force;
  - Suitable for injection molding with precision molds;
  - Reduced platen deformation;
  - Prolonged service life;
  - Ensured product quality;
  - Platen parallelism (after load)  $\leq 0.05\text{mm}$ ;



- Unique large beveled toggles design
  - Large beveled structure can better transfer force from the tail toggle hole to the center of the platen to minimize the platen deformation;
  - The overall optimization of toggle strength and rigidity.



- Linear rail moving design for mold opening/closing
  - The directional accuracy reaches  $0.02\text{mm}$ ;
  - Fast and steady mold opening. Repeatability of mold opening position  $\leq 0.02\text{mm}$ .



- Unique "SMART" mold protection feature
  - Can detect very small obstacles and resistance;
  - Reduce the extent of mold damage when there are foreign objects in the mold cavity or faulty operation occurs.



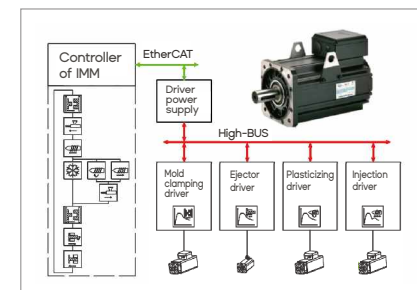
- Dual-cylinder parallel ejection design
  - Uniform force application for mold release;
  - Can achieve functions such as synchronized ejection and various modes of ejector retraction, etc.

# Control System



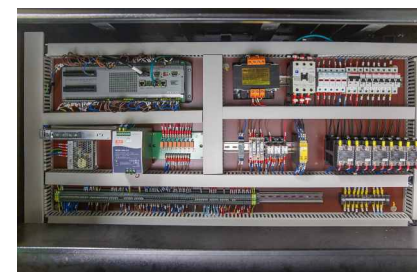
## European KEBA2000 controller

- The powerful system is easy to operate and ideal for the high-performance solutions for electric injection molding machines;
- 15-inch HD color touchscreen display with clear and neat screen layout;
- Standard features: Process Quality Control (PDP), and Statistical Process Control (SPC);
- Oscilloscope with chart display function to record the curve of process data change;
- Centralized (networked) real-time remote operation and control;
- Advanced HW and SW systems to support Industry 4.0;
- 1ms scan cycle;
- 16 levels of user access management to ensure data security.



## Unique servo direct control (SDC) technology

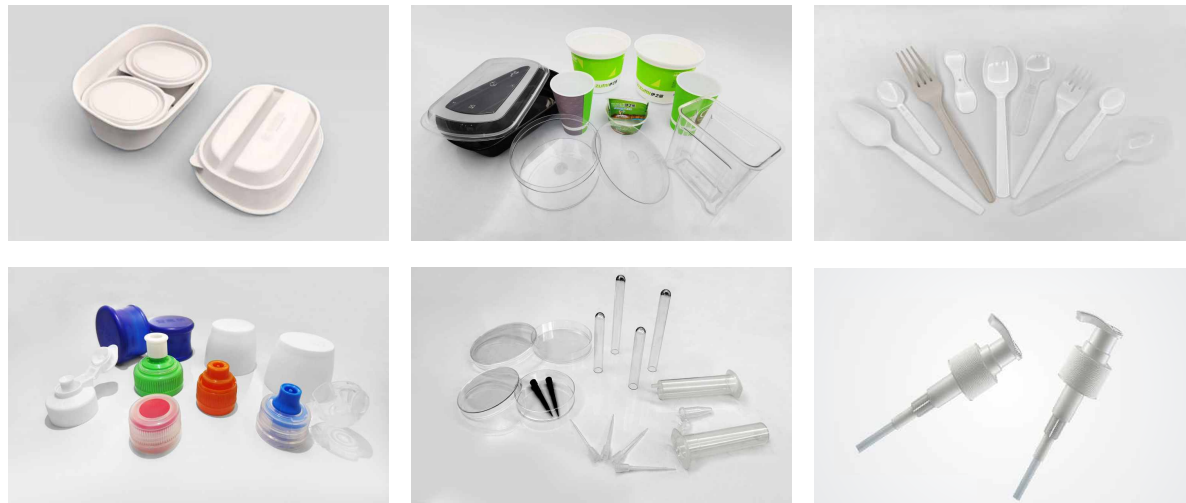
- Process algorithm independently developed by YIZUMI for the servo drive;
- Servo motor controls injection, plasticizing, clamping independently, allowing faster feedback, more responsive control, and improved control accuracy;
- More precise control of speed, position and pressure to meet the requirements of precision equipment.



## Standardized basically wiring layout

Neat wiring and standardized interface layout for easy expansion, maintenance and operation.

# Application



## Food Packaging

Cover a wide range of packaging for various food, beverages, plastic cutlery, IML packaging. Provide a variety of equipment and mold options. Offer production line turn-key delivery in collaboration with high-quality solution providers.

## Daily Chemical Packaging

Suitable for precision production of cosmetic pump, flip top cap, pull ring cap.

## Disposable Medical Consumables

Injector, petri dish, vacuum tube, and other products. Provide clean, efficient, and stable system solutions.

## Thin-wall Plastic Products

For plastic products with high L/T ratio and light weight, it can effectively improve production efficiency and product quality.

## YIZUMI High-Speed Packaging

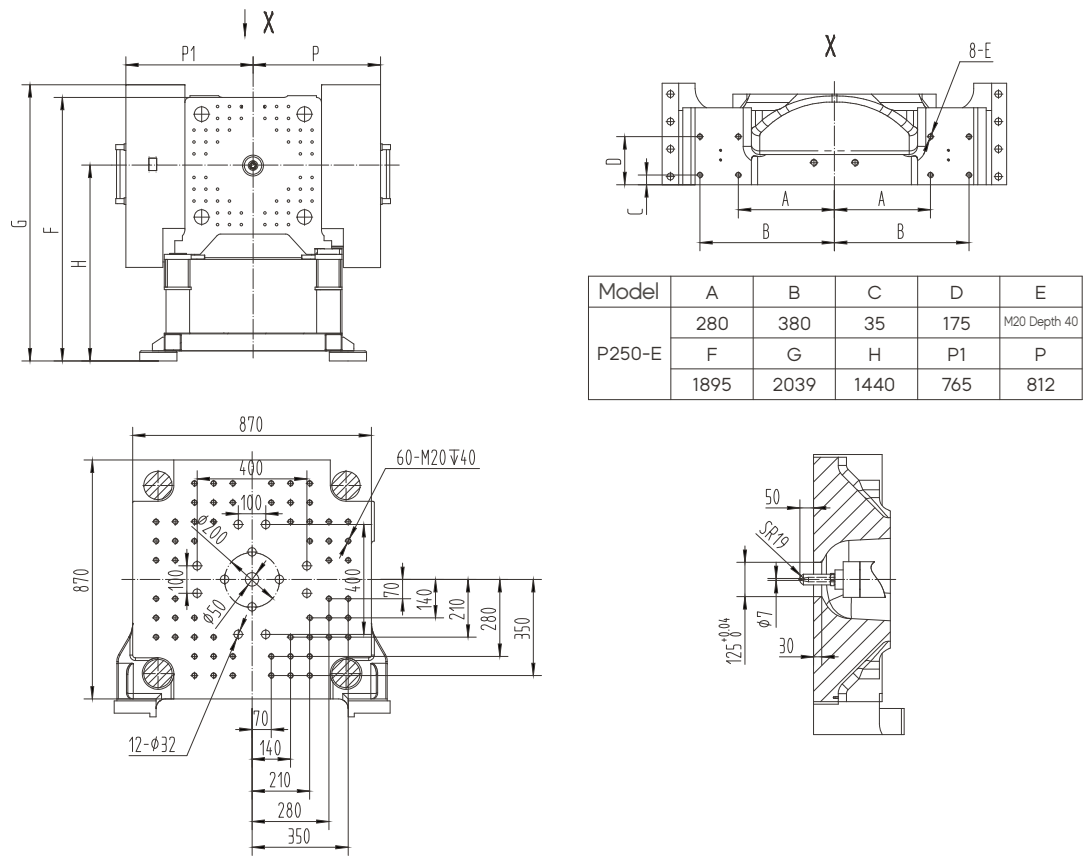
Committed to providing the best cost-effective solution in the packaging industry.



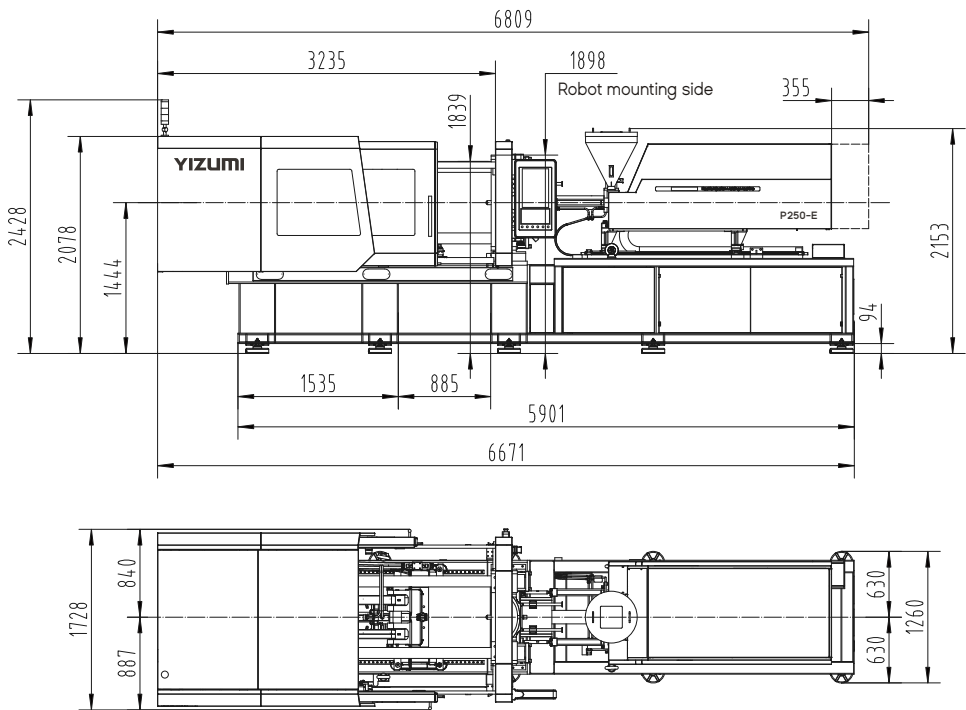
P250-E Specifications

| DESCRIPTION                  | UNIT   | P250-E      |     |     |          |      |      |
|------------------------------|--------|-------------|-----|-----|----------|------|------|
| International specification  |        | 430/2500    |     |     | 650/2500 |      |      |
| INJECTION UNIT               |        |             |     |     |          |      |      |
| Shot volume                  | cm3    | 164         | 214 | 270 | 258      | 326  | 403  |
| Shot weight (PS)             | g      | 150         | 197 | 249 | 237      | 300  | 370  |
|                              | oz     | 5.3         | 6.9 | 8.8 | 8.4      | 10.6 | 13.1 |
| Screw diameter               | mm     | 35          | 40  | 45  | 40       | 45   | 50   |
| Injection pressure           | MPa    | 261         | 200 | 158 | 253      | 200  | 162  |
| Screw L:D ratio              |        | 22 : 1      |     |     |          |      |      |
| Max.injection speed          | mm/s   | 500         |     |     |          |      |      |
| Screw stroke                 | mm     | 170         |     |     | 205      |      |      |
| Screw speed (stepless)       | r/min  | 0-400       |     |     | 0-350    |      |      |
| CLAMPING UNIT                |        |             |     |     |          |      |      |
| Clamping force               | kN     | 2500        |     |     |          |      |      |
| Opening stroke               | mm     | 560         |     |     |          |      |      |
| Space between bars (W×H)     | mmxmm  | 580*580     |     |     |          |      |      |
| Max. daylight                | mm     | 1160        |     |     |          |      |      |
| Mold thickness (Min.-Max)    | mm     | 220-600     |     |     |          |      |      |
| Hydraulic ejection storke    | mm     | 150         |     |     |          |      |      |
| Ejector number               |        | 5           |     |     |          |      |      |
| Hydraulic ejection force     | kN     | 55          |     |     |          |      |      |
| POWER UNIT                   |        |             |     |     |          |      |      |
| Hydraulic system pressure    | Mpa    | 17.5        |     |     |          |      |      |
| Pump motor                   | kW     | 17          |     |     |          |      |      |
| Heating capacity             | kW     | 11          | 13  | 15  | 16       | 18   | 21   |
| Number of temp control zones |        | 5           |     |     |          |      |      |
| GENERAL UNIT                 |        |             |     |     |          |      |      |
| Dry cycle time               | s      | 2.2         |     |     |          |      |      |
| Oil tank capacity            | l      | 130         |     |     |          |      |      |
| Machine dimensions (LxWxH)   | mxxmxm | 6.8×1.7×2.4 |     |     |          |      |      |
| Machine weight               | Ton    | 11.3        |     |     |          |      |      |

P250-E Platen Dimensions



P250-E Machine Dimensions

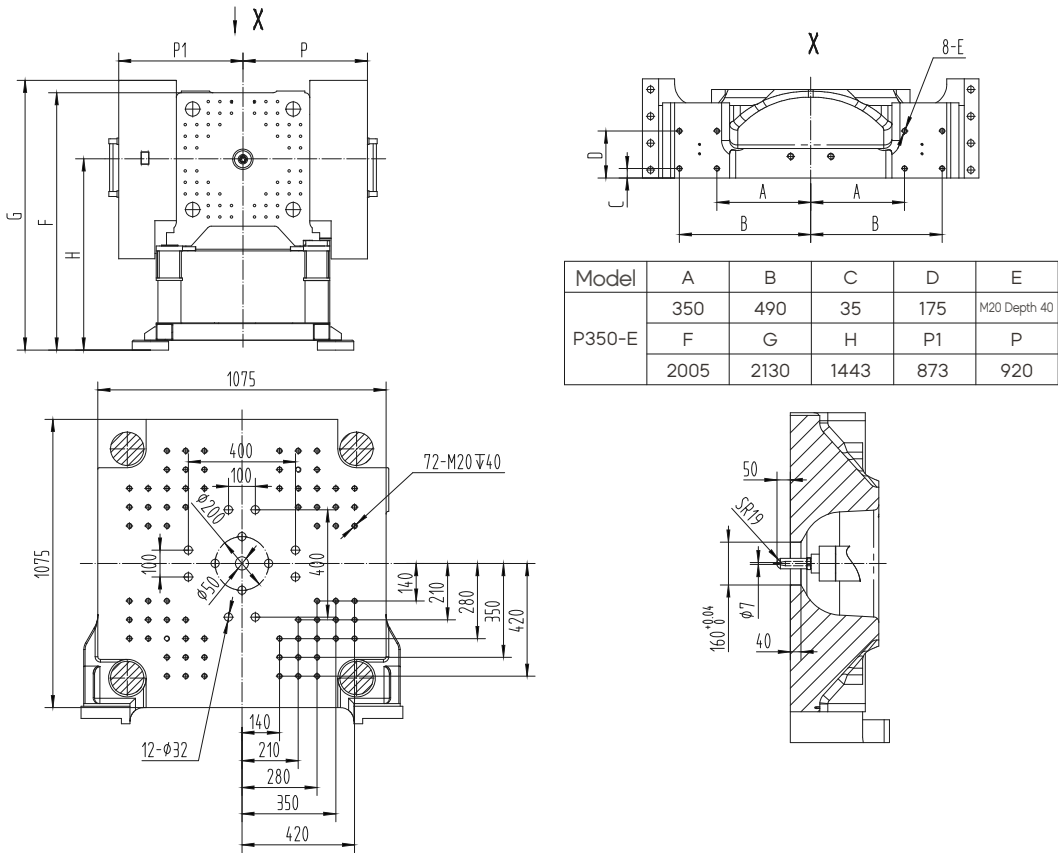




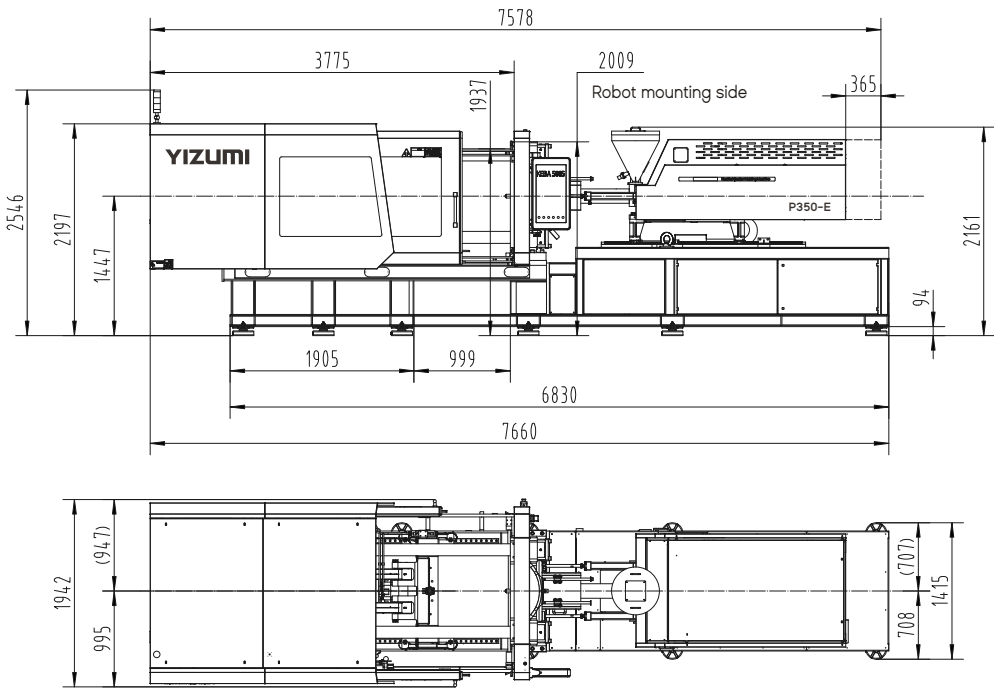
P350-E Specifications

| DESCRIPTION                  | UNIT  | P350-E      |      |      |           |      |      |
|------------------------------|-------|-------------|------|------|-----------|------|------|
| International specification  |       | 650/3500    |      |      | 1000/3500 |      |      |
| INJECTION UNIT               |       |             |      |      |           |      |      |
| Shot volume                  | cm3   | 258         | 326  | 403  | 461       | 558  | 664  |
| Shot weight (PS)             | g     | 237         | 300  | 370  | 425       | 514  | 611  |
|                              | oz    | 8.4         | 10.6 | 13.1 | 15.0      | 18.1 | 21.6 |
| Screw diameter               | mm    | 40          | 45   | 50   | 50        | 55   | 60   |
| Injection pressure           | MPa   | 253         | 200  | 162  | 218       | 180  | 151  |
| Screw L:D ratio              |       | 22 : 1      |      |      |           |      |      |
| Max.injection speed          | mm/s  | 500         |      |      |           |      |      |
| Screw stroke                 | mm    | 205         |      |      | 235       |      |      |
| Screw speed (stepless)       | r/min | 0-350       |      |      | 0-320     |      |      |
| CLAMPING UNIT                |       |             |      |      |           |      |      |
| Clamping force               | kN    | 3500        |      |      |           |      |      |
| Opening stroke               | mm    | 700         |      |      |           |      |      |
| Space between bars (W×H)     | mmxmm | 730*730     |      |      |           |      |      |
| Max. daylight                | mm    | 1450        |      |      |           |      |      |
| Mold thickness (Min.-Max)    | mm    | 300-750     |      |      |           |      |      |
| Hydraulic ejection storke    | mm    | 200         |      |      |           |      |      |
| Ejector number               |       | 5           |      |      |           |      |      |
| Hydraulic ejection force     | kN    | 99          |      |      |           |      |      |
| POWER UNIT                   |       |             |      |      |           |      |      |
| Hydraulic system pressure    | Mpa   | 17.5        |      |      |           |      |      |
| Pump motor                   | kW    | 25          |      |      |           |      |      |
| Heating capacity             | kW    | 16          | 18   | 21   | 24        | 26.5 | 29.5 |
| Number of temp control zones |       | 5           |      |      |           |      |      |
| GENERAL UNIT                 |       |             |      |      |           |      |      |
| Dry cycle time               | s     | 2.6         |      |      |           |      |      |
| Oil tank capacity            | l     | 130         |      |      |           |      |      |
| Machine dimensions (LxWxH)   | mxmxm | 7.6×1.9×2.5 |      |      |           |      |      |
| Machine weight               | Ton   | 16          |      |      |           |      |      |

P350-E Platen Dimensions



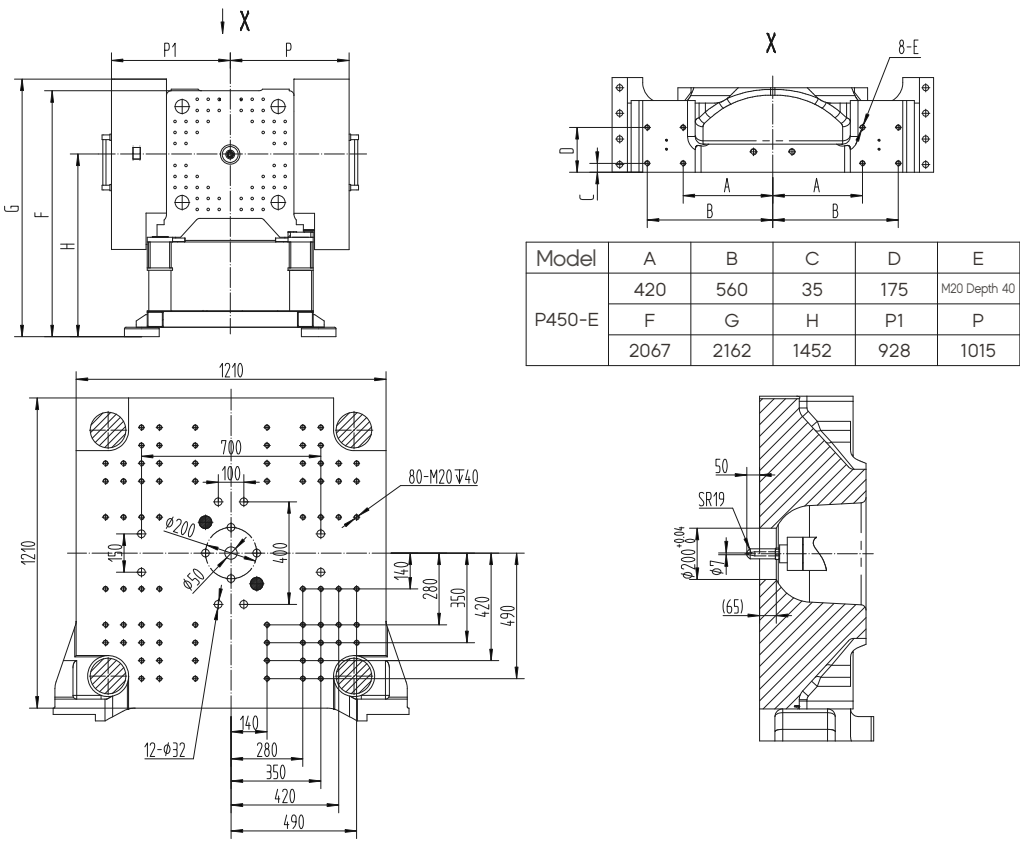
P350-E Machine Dimensions



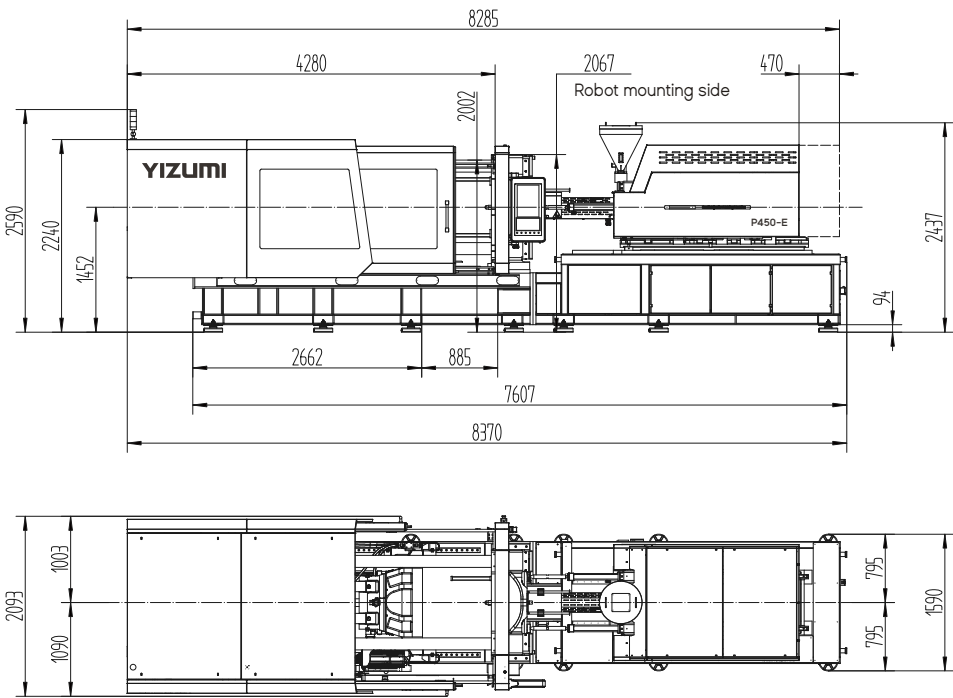
P450-E Specifications

| DESCRIPTION                  | UNIT  | P450-E      |      |      |           |      |      |
|------------------------------|-------|-------------|------|------|-----------|------|------|
| International specification  |       | 1000/4500   |      |      | 1350/4500 |      |      |
| INJECTION UNIT               |       |             |      |      |           |      |      |
| Shot volume                  | cm3   | 461         | 558  | 664  | 630       | 749  | 879  |
| Shot weight (PS)             | g     | 425         | 514  | 611  | 579       | 689  | 809  |
|                              | oz    | 15.0        | 18.1 | 21.6 | 20.4      | 24.3 | 28.5 |
| Screw diameter               | mm    | 50          | 55   | 60   | 55        | 60   | 65   |
| Injection pressure           | MPa   | 218         | 180  | 151  | 214       | 180  | 153  |
| Screw L:D ratio              |       | 22 : 1      |      |      |           |      |      |
| Max.injection speed          | mm/s  | 500         |      |      | 350       |      |      |
| Screw stroke                 | mm    | 235         |      |      | 265       |      |      |
| Screw speed (stepless)       | r/min | 0-320       |      |      | 0-300     |      |      |
| CLAMPING UNIT                |       |             |      |      |           |      |      |
| Clamping force               | kN    | 4500        |      |      |           |      |      |
| Opening stroke               | mm    | 780         |      |      |           |      |      |
| Space between bars (W×H)     | mmxmm | 820*820     |      |      |           |      |      |
| Max. daylight                | mm    | 1580        |      |      |           |      |      |
| Mold thickness (Min.-Max)    | mm    | 300-800     |      |      |           |      |      |
| Hydraulic ejection storke    | mm    | 200         |      |      |           |      |      |
| Ejector number               |       | 5           |      |      |           |      |      |
| Hydraulic ejection force     | kN    | 99          |      |      |           |      |      |
| POWER UNIT                   |       |             |      |      |           |      |      |
| Hydraulic system pressure    | Mpa   | 17.5        |      |      |           |      |      |
| Pump motor                   | kW    | 25          |      |      |           |      |      |
| Heating capacity             | kW    | 24          | 26.5 | 29.5 | 26.7      | 29.1 | 31.5 |
| Number of temp control zones |       | 5           |      |      |           |      |      |
| GENERAL UNIT                 |       |             |      |      |           |      |      |
| Dry cycle time               | s     | 3.2         |      |      |           |      |      |
| Oil tank capacity            | l     | 130         |      |      |           |      |      |
| Machine dimensions (LxWxH)   | mxmxm | 8.3×2.1×2.6 |      |      |           |      |      |
| Machine weight               | Ton   | 23          |      |      |           |      |      |

P450-E Platen Dimensions



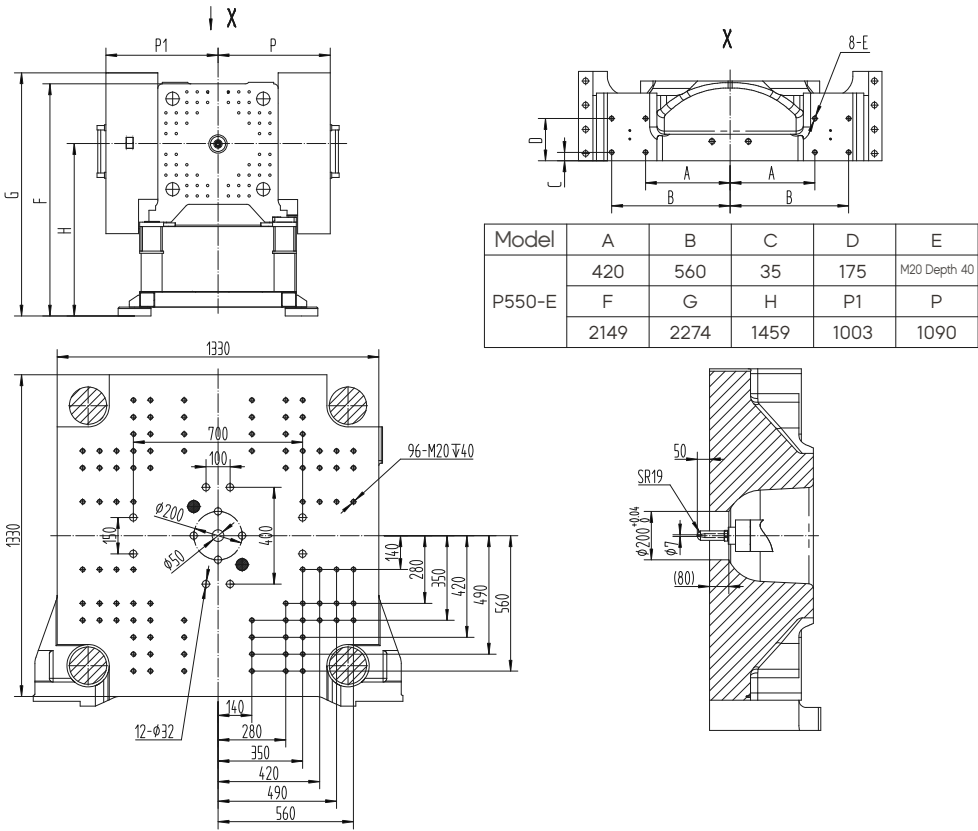
P450-E Machine Dimensions



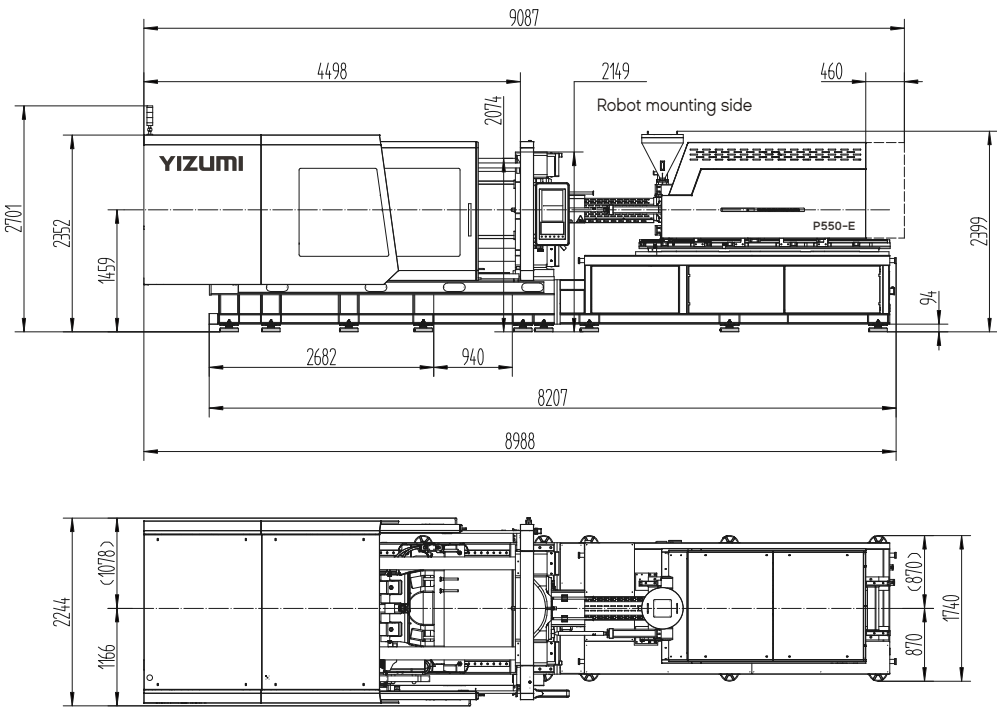
P550-E Specifications

| DESCRIPTION                  | UNIT  | P550-E      |      |      |           |      |      |
|------------------------------|-------|-------------|------|------|-----------|------|------|
| International specification  |       | 1350/5500   |      |      | 2040/5500 |      |      |
| INJECTION UNIT               |       |             |      |      |           |      |      |
| Shot volume                  | cm3   | 630         | 749  | 879  | 834       | 1135 | 1483 |
| Shot weight (PS)             | g     | 579         | 689  | 809  | 767       | 1044 | 1364 |
|                              | oz    | 20.4        | 24.3 | 28.5 | 27.1      | 36.8 | 48.1 |
| Screw diameter               | mm    | 55          | 60   | 65   | 60        | 70   | 80   |
| Injection pressure           | MPa   | 214         | 180  | 153  | 245       | 180  | 138  |
| Screw L:D ratio              |       | 22 : 1      |      |      |           |      |      |
| Max.injection speed          | mm/s  | 350         |      |      |           |      |      |
| Screw stroke                 | mm    | 265         |      |      | 295       |      |      |
| Screw speed (stepless)       | r/min | 0-250       |      |      |           |      |      |
| CLAMPING UNIT                |       |             |      |      |           |      |      |
| Clamping force               | kN    | 5500        |      |      |           |      |      |
| Opening stroke               | mm    | 850         |      |      |           |      |      |
| Space between bars (W×H)     | mmxmm | 920*920     |      |      |           |      |      |
| Max. daylight                | mm    | 1700        |      |      |           |      |      |
| Mold thickness (Min.-Max)    | mm    | 350-850     |      |      |           |      |      |
| Hydraulic ejection storke    | mm    | 200         |      |      |           |      |      |
| Ejector number               |       | 5           |      |      |           |      |      |
| Hydraulic ejection force     | kN    | 99          |      |      |           |      |      |
| POWER UNIT                   |       |             |      |      |           |      |      |
| Hydraulic system pressure    | Mpa   | 17.5        |      |      |           |      |      |
| Pump motor                   | kW    | 25          |      |      |           |      |      |
| Heating capacity             | kW    | 26.7        | 29.1 | 31.5 | 33.8      | 39.5 | 45   |
| Number of temp control zones |       | 5           |      |      |           |      |      |
| GENERAL UNIT                 |       |             |      |      |           |      |      |
| Dry cycle time               | s     | 3.6         |      |      |           |      |      |
| Oil tank capacity            | l     | 130         |      |      |           |      |      |
| Machine dimensions (LxWxH)   | mxmxm | 9.1×2.2×2.7 |      |      |           |      |      |
| Machine weight               | Ton   | 27.5        |      |      |           |      |      |

P550-E Platen Dimensions



P550-E Machine Dimensions



Standard and Optional Features

|                                                                    | Standard | Optional |
|--------------------------------------------------------------------|----------|----------|
| Injection Unit                                                     |          |          |
| Injection safety protection device (detection switch)              | ●        |          |
| Nitrided alloy-steel high-plasticizing screw and barrel            | ●        |          |
| Single injection cylinder                                          | ●        |          |
| Double carriage cylinder                                           | ●        |          |
| 5-stage injection speed / pressure / position control              | ●        |          |
| 3-stage holding pressure speed / pressure / time control           | ●        |          |
| 3-stage plasticizing speed / back pressure / position control      | ●        |          |
| Selectable suck-back degree before or after plasticizing           | ●        |          |
| Pre-injection delay function                                       | ●        |          |
| Pre-molding delay                                                  | ●        |          |
| Synchronous heating function                                       | ●        |          |
| Preheating function                                                | ●        |          |
| Resin retention prevention function                                | ●        |          |
| Screw cold start prevention                                        | ●        |          |
| Automatic purging                                                  | ●        |          |
| Injection pressure zero point correction function                  | ●        |          |
| Real time display function of plasticizing speed                   | ●        |          |
| Real time display function of plasticizing back pressure           | ●        |          |
| Ejection device movement setting (switch detection, movement time) | ●        |          |
| High output nozzle contact device (configurable)                   | ●        |          |
| Thermal insulation function                                        | ●        |          |
| Temperature optimization function                                  | ●        |          |
| Purge guard (with electrical protection)                           | ●        |          |
| Ceramic heater band                                                | ●        |          |
| Extended nozzle                                                    |          | ○        |
| Special screw set                                                  |          | ○        |
| Spring shut-off nozzle                                             |          | ○        |
| Stainless steel hopper                                             |          | ○        |
| Blowing device of barrel                                           |          | ○        |

|                                                                                | Standard | Optional |
|--------------------------------------------------------------------------------|----------|----------|
| Clamping Unit                                                                  |          |          |
| 5-stage mold opening and closing program control                               | ●        |          |
| Movable platen, linear guide rail for mold moving                              | ●        |          |
| Ejector progressive function                                                   | ●        |          |
| Ejector return delay monitoring function                                       | ●        |          |
| Mold height adjustment function                                                | ●        |          |
| Mold opening and closing, ejector curve functions                              | ●        |          |
| Low-pressure mold protection function (Ai high sensitivity mold protection)    | ●        |          |
| Mold adjustment mode, low-speed low-pressure mold opening and closing function | ●        |          |
| Ejection function in-mold (in-mold cutting function)                           | ●        |          |
| Mold opening and ejector return synchronization function                       | ●        |          |
| Ejector return signal confirmation function                                    | ●        |          |
| Selection of ejector action modes (four modes)                                 | ●        |          |
| Multiple ejector control functions                                             | ●        |          |
| Ejector delay function                                                         | ●        |          |
| Mold cooling water distributor                                                 | ●        |          |
| Design of adding anti-pinch and buffer strips on the side of the machine door  | ●        |          |
| Emergency stop function (operation side and non-operation side )               | ●        |          |
| Centralized lubrication                                                        | ●        |          |
| Opening and closing slope control (high, medium, and low modes)                | ●        |          |
| Blowing function (multiple sets of electrical interfaces)                      | ●        |          |
| Hydraulic ejector                                                              | ●        |          |
| Various positioning rings                                                      |          | ○        |
| Pneumatic ejection device                                                      |          | ○        |
| Pneumatic neutron device                                                       |          | ○        |
| Increased mold thickness                                                       |          | ○        |
| Heat insulating plate for mold                                                 |          | ○        |
| Special mold mounting hole                                                     |          | ○        |
| Hydraulic System                                                               |          |          |
| Servo power system                                                             | ●        |          |
| Automatic system pressure and flow adjustment                                  | ●        |          |
| High-performance hydraulic control valve                                       | ●        |          |
| Imported hydraulic seal                                                        | ●        |          |
| Low-noise hydraulic system                                                     | ●        |          |
| Hydraulic oil temperature detection and high/low temperature alarm             | ●        |          |
| Multiple water line devices                                                    | ●        |          |
| Unscrewing unit                                                                |          | ○        |
| Additional hydraulic core pulling                                              |          | ○        |

Standard and Optional Features

|                                                                                       | Standard | Optional |
|---------------------------------------------------------------------------------------|----------|----------|
| Control System                                                                        |          |          |
| Highly sensitive 15”TFT color touch screen                                            | ●        |          |
| Memory of molding conditions (over 500 items)                                         | ●        |          |
| One set of USB standard read and write ports operation panel                          | ●        |          |
| Multiple operating languages (Chinese and English)                                    | ●        |          |
| Real time display of molding data (200 pieces, and 5000 pieces can be saved in files) | ●        |          |
| Operation modification record                                                         | ●        |          |
| Alarm record                                                                          | ●        |          |
| Switching between international units (metric and imperial system )                   | ●        |          |
| I/O detection display function                                                        | ●        |          |
| Printer connection port (USB0)                                                        | ●        |          |
| Molding cycle monitoring function                                                     | ●        |          |
| Production management function                                                        | ●        |          |
| PDP data and charts                                                                   | ●        |          |
| Injection quality detection function                                                  | ●        |          |
| Analog-to-digital register                                                            | ●        |          |
| Molding temperature monitoring function                                               | ●        |          |
| Three-color alarm light                                                               | ●        |          |
| Low-pressure mold protection curve detection function                                 | ●        |          |
| Alarm buzzer                                                                          | ●        |          |
| Injection pressure protection function                                                | ●        |          |
| Quality issue alarm and processing function                                           | ●        |          |
| Real-time display of servo action curves for injection and plasticizing               | ●        |          |
| Actual value display function                                                         | ●        |          |
| Abnormality handling selection function                                               | ●        |          |
| Product quality monitoring function                                                   | ●        |          |
| Mold opening and closing, ejector curve functions                                     | ●        |          |
| Injection process curve monitoring function                                           | ●        |          |
| Air blow device                                                                       | ●        |          |
| Euromap 12 robot interface                                                            |          | ○        |
| Euromap 67 robot interface                                                            |          | ○        |
| Other languages                                                                       |          | ○        |
| Additional cooling water circuit                                                      |          | ○        |
| Heater disconnection detection function                                               |          | ○        |
| External transformer                                                                  |          | ○        |
| Electrical interface for cavity pressure detection                                    |          | ○        |
| Mold temperature display and control                                                  |          | ○        |
| OPC UA/DA                                                                             |          | ○        |

|                                                | Standard | Optional |
|------------------------------------------------|----------|----------|
| General                                        |          |          |
| Operation manual                               | ●        |          |
| Adjustable leveling pad                        | ●        |          |
| A tool kit                                     | ●        |          |
| Mold clamp                                     | ●        |          |
| Hopper                                         | ●        |          |
| Filter element                                 |          | ○        |
| Energy-saving heat retaining device for barrel |          | ○        |
| Hopper slider device (with roller)             |          | ○        |
| Mold temperature controller                    |          | ○        |
| Auto loader                                    |          | ○        |
| Dehumidifier                                   |          | ○        |
| Glass-tube water flowmeter                     |          | ○        |

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