

**SPECIFICATIONS**

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**HAITIAN MAIII/h SERIES**

Energy-saving servo injection molding machines

**PERFORMANCE EDITION**

900 - 10,000 kN



HT 20230331-IV



High-speed packaging injection molding machine

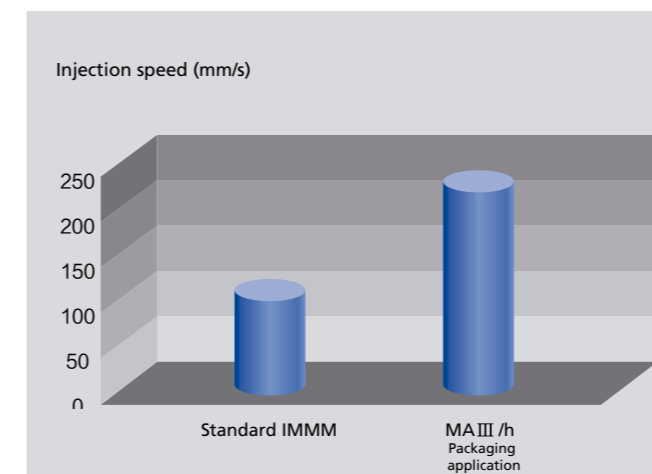
## HAITIAN MAIII/h SERIES

Haitian is dedicated in providing customers with new technologies to improve the production of their plastics parts. Our close cooperation with customers provide a better understanding for the challenges the injection industry has to face. Designed to provide a faster injection speed and reduced cycle times, the MAIII/h series offers a wider spectrum for the production of parts requiring additional molding performance.



### High injection speed

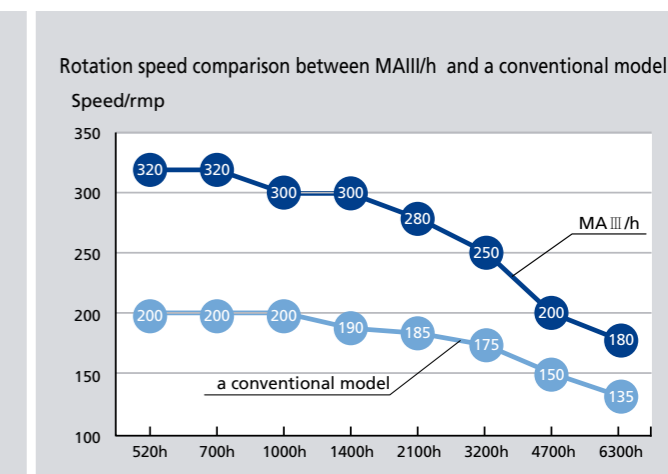
Higher injection speeds provide a faster filling speed for thin-walled products, reducing internal stress on the molded part.



The injection speed chosen for an application depends on the product.

### High screw rotation speed (increased plasticizing capacity)

Special screws for special engineering plastics can be selected according to requirements to ensure the best product quality



ADVANTAGE GO FACTORY CLOUD 2.0

### MONITORING UPGRADE

Go Factory Cloud 2.0 is an industry cloud platform at the SaaS level for small and medium-sized manufacturing companies. It provides convenient real-time monitoring of injection molding machines and their production conditions via cloud services and mobile apps. An accurate, sensitive perception system can be implemented within one day.

#### Higher Process Control: Broader Process Spectrum

With a higher injection speed and faster control response time, the molding process window is increased for parts requiring a higher level of molding performance.

#### Stronger Mechanical Structure

The total structure of the machine is 30% stronger in comparison to traditional injection molding machines, designed to ensure that the MA III/h meets the demands towards a high performance machine.

#### Increased Productivity

The higher performance of the MA III/h series machine brings additional production benefit due to the reduced cycle time and improved injection process control.

#### Extremely Economical: Lower Cost

The MA III/h Series utilizes our patented servo-hydraulic drive technology. Compared to traditional hydraulic systems using fixed speed motors and accumulators to achieve a higher machine performance, The MA III/h provides significant energy saving.

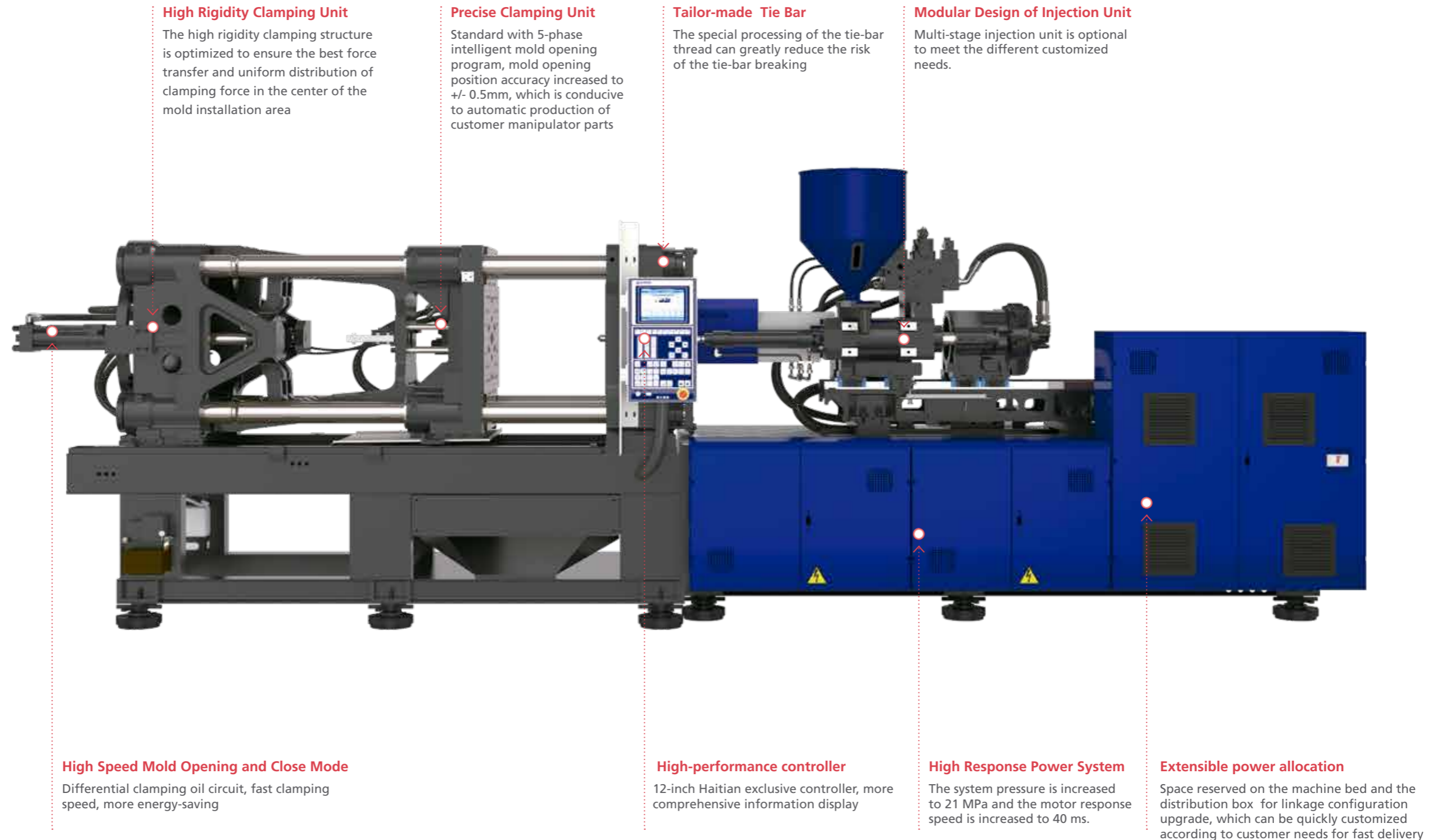


- + Open integration/connectivity
- + GO FACTORY CLOUD 2.0



High-speed packaging injection molding machine

## HAITIAN MAIII/h SERIES



### High Rigidity Clamping Unit

The high rigidity clamping structure is optimized to ensure the best force transfer and uniform distribution of clamping force in the center of the mold installation area

### Precise Clamping Unit

Standard with 5-phase intelligent mold opening program, mold opening position accuracy increased to  $\pm 0.5\text{mm}$ , which is conducive to automatic production of customer manipulator parts

### Tailor-made Tie Bar

The special processing of the tie-bar thread can greatly reduce the risk of the tie-bar breaking

### Modular Design of Injection Unit

Multi-stage injection unit is optional to meet the different customized needs.

### High Speed Mold Opening and Close Mode

Differential clamping oil circuit, fast clamping speed, more energy-saving

### High-performance controller

12-inch Haitian exclusive controller, more comprehensive information display

### High Response Power System

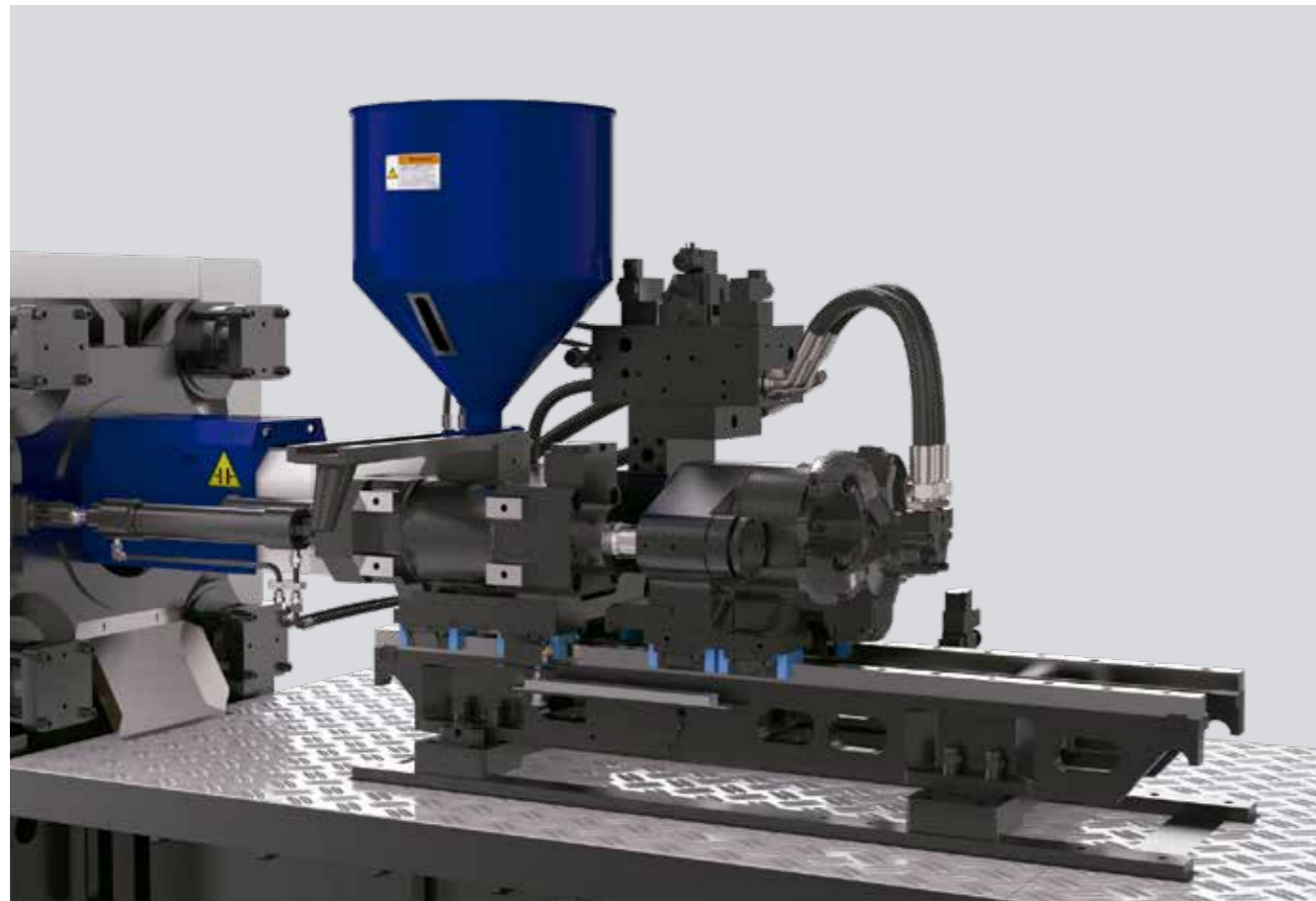
The system pressure is increased to 21 MPa and the motor response speed is increased to 40 ms.

### Extensible power allocation

Space reserved on the machine bed and the distribution box for linkage configuration upgrade, which can be quickly customized according to customer needs for fast delivery

High-speed packaging injection molding machine

**HAITIAN MAIII/h SERIES**



**Modular Combination Design of Injection Unit**

Based on the modular design, one clamping unit can be combined with a multiple choice of the injection unit and power combination, to meet different product requirements.

| INJECTION UNIT | 520h        | 700h        | 1000h       | 1400h       | 2100h       | 3200h       | 4700h       | 6300h       | 8100h       |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| CLAMPING UNIT  |             |             |             |             |             |             |             |             |             |
| MA1700 III     | Standard    | Combination |             |             |             |             |             |             |             |
| MA2100 III     | Combination | Standard    | Combination |             |             |             |             |             |             |
| MA2700 III     |             | Combination | Standard    | Combination |             |             |             |             |             |
| MA3300 III     |             |             | Combination | Standard    | Combination |             |             |             |             |
| MA3900 III     |             |             |             | Combination | Standard    | Combination |             |             |             |
| MA4800 III     |             |             |             |             | Combination | Standard    | Combination |             |             |
| MA5500 III     |             |             |             |             |             | Combination | Standard    | Combination |             |
| MA6500 III     |             |             |             |             |             |             | Combination | Standard    | Combination |
| MA8000 III     |             |             |             |             |             |             |             | Combination | Standard    |
| MA10000 III    |             |             |             |             |             |             |             |             | Combination |

■ Standard range      ■ Combination possibilities



**Figure ①**  
The friction coefficient is low, and the resistance of injection and plasticization process is small and well-distributed

**Figure ②**  
Non-welding technology for the pipelines to eliminate the risk of oil leakage under high pressure and high speed

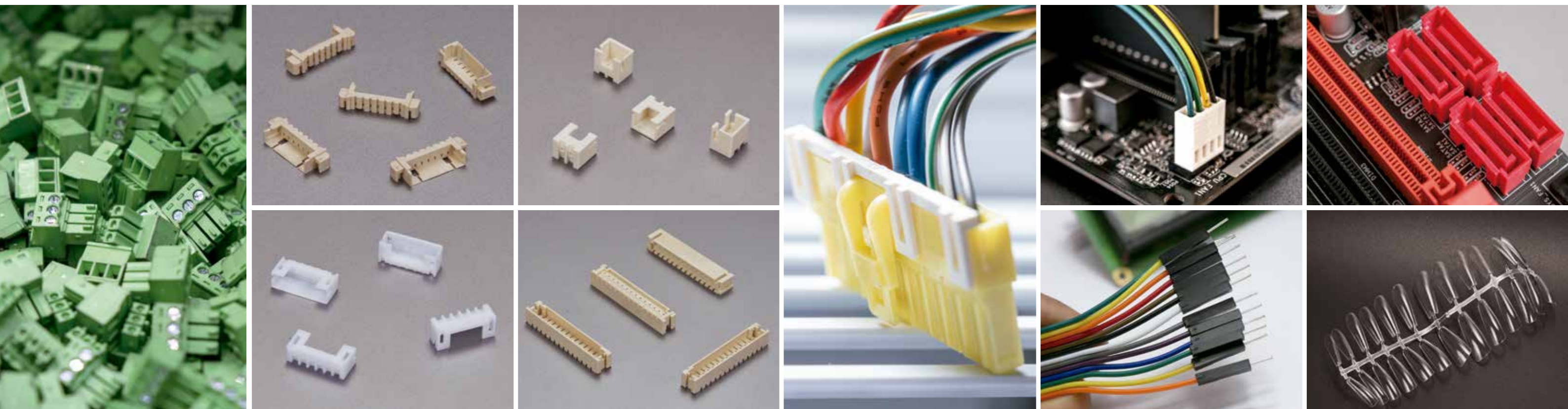
**Figure ③**  
New type of mold-adjusting drive structure, more balanced control of thread gap, improved wear resistance for easy maintenance

**Figure ④**  
The self-locking mould adjusting system can prevent looseness of mould adjusting for high speed machine and greatly improve the stability and reliability of injection molding machine

**Figure ⑤**  
Optimized design of high rigidity clamping structure ensures the optimal force transfer and uniform distribution of clamping force in the center of the mould installation area.

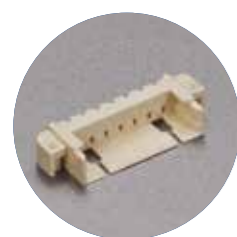
Connector products

**APPLICATIONS** (900-2500kN)



**Product: connector**

Machine: MA1200III/280h  
 Raw materials: LCP  
 Cavity: 48  
 Weight per product: 0.12g  
 Cycle time: 12s



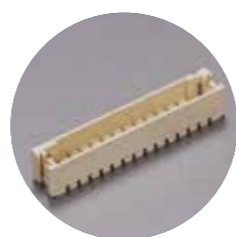
**Product: connector**

Machine: MA1600III/400h  
 Raw materials: PA66  
 Cavity: 128  
 Weight per product: 0.13g  
 Cycle time: 15s



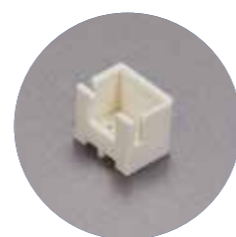
**Product: connector**

Machine: MA1600III/400h  
 Raw materials: PA66  
 Cavity: 48  
 Weight per product: 0.18g  
 Cycle time: 10.5s



**Product: connector**

Machine: MA900III/280h  
 Raw materials: LCP  
 Cavity: 88  
 Weight per product: 0.19g  
 Cycle time: 15s



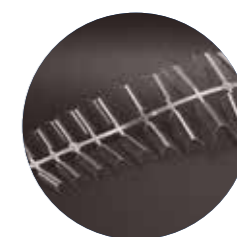
**Product: connector**

Machine: MA1600III/400h  
 Raw materials: PA66  
 Cavity: 48  
 Weight per product: 0.16g  
 Cycle time: 11.5s



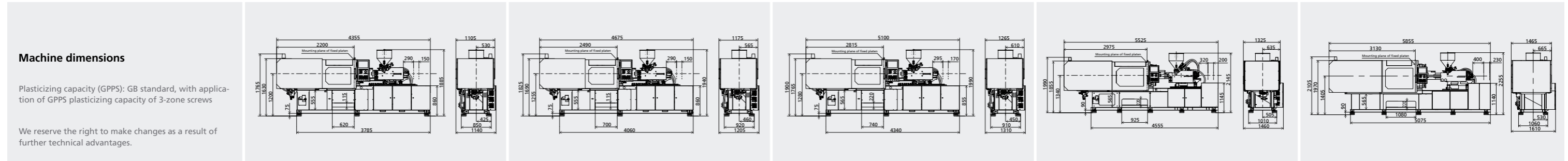
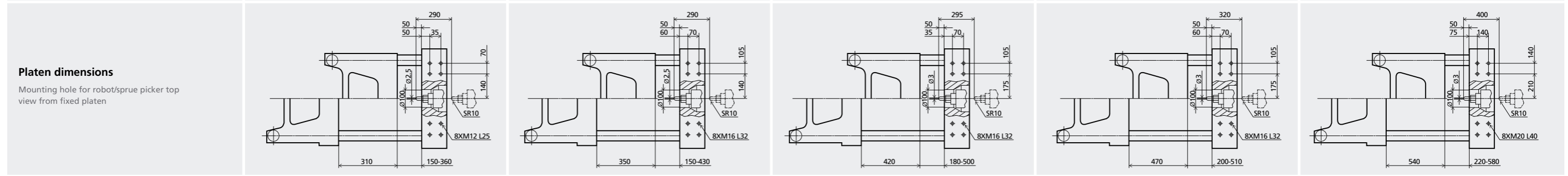
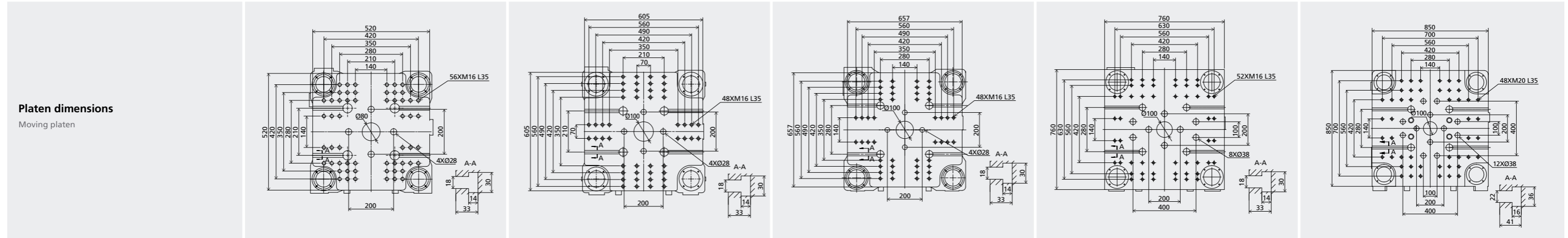
**Product: nail stickers**

Machine: MA1200III/280h  
 Raw materials: AAS  
 Cavity: 26  
 Weight per product: 0.8g  
 Cycle time: 13s



# Specification

|                                | MA900 III /280h |     |                | MA1200 III /280h |     |                | MA1600 III /400h |      |               | MA2000 III /500h |      |                | MA2500 III /750h |      |                |      |
|--------------------------------|-----------------|-----|----------------|------------------|-----|----------------|------------------|------|---------------|------------------|------|----------------|------------------|------|----------------|------|
|                                | AA              | A   | B              | AA               | A   | B              | AA               | A    | B             | AA               | A    | B              | AA               | A    | B              |      |
| INJECTION UNIT                 |                 |     |                |                  |     |                |                  |      |               |                  |      |                |                  |      |                |      |
| Screw diameter                 | mm              | 28  | 32             | 36               | 28  | 32             | 36               | 32   | 36            | 40               | 36   | 40             | 45               | 40   | 45             | 50   |
| Screw L/D ratio                | L/D             | 21  | 22.5           | 20               | 21  | 22.5           | 20               | 21   | 23.3          | 21               | 22.5 | 20             | 22               | 22.2 | 20             |      |
| Injection volume (theoretical) | cm <sup>3</sup> | 92  | 121            | 153              | 92  | 121            | 153              | 137  | 173           | 214              | 204  | 251            | 318              | 289  | 366            | 451  |
| Injection weight (PS)          | g               | 84  | 110            | 139              | 84  | 110            | 139              | 125  | 157           | 195              | 186  | 228            | 289              | 263  | 333            | 411  |
| Injection rate (PS)            | g/s             | 112 | 146            | 185              | 112 | 146            | 185              | 146  | 185           | 228              | 185  | 228            | 289              | 229  | 290            | 358  |
| Injection speed (max)          | mm/s            |     | 200            |                  |     | 200            |                  |      | 200           |                  |      | 200            |                  |      | 200            |      |
| Injection pressure             | MPa             | 268 | 205            | 162              | 268 | 205            | 162              | 254  | 201           | 162              | 243  | 197            | 156              | 247  | 195            | 158  |
| Plasticizing rate (GPPS)       | g/s             | 7.6 | 12.2           | 16.1             | 7.6 | 12.2           | 16.1             | 11.7 | 18.9          | 23.1             | 17   | 21             | 27.9             | 19.6 | 29             | 36.5 |
| Screw speed                    | rpm             |     | 0-300          |                  |     | 0-300          |                  |      | 0-300         |                  |      | 0-285          |                  |      | 0-270          |      |
| CLAMPING UNIT                  |                 |     |                |                  |     |                |                  |      |               |                  |      |                |                  |      |                |      |
| Clamping force                 | kN              |     | 900            |                  |     | 1200           |                  |      | 1600          |                  |      | 2000           |                  |      | 2500           |      |
| Mold movement stroke           | mm              |     | 310            |                  |     | 350            |                  |      | 420           |                  |      | 470            |                  |      | 540            |      |
| Dist. between tie bars (HxV)   | mm              |     | 360x360        |                  |     | 410x410        |                  |      | 470x470       |                  |      | 510x510        |                  |      | 580x580        |      |
| Mold height max.               | mm              |     | 360            |                  |     | 430            |                  |      | 500           |                  |      | 510            |                  |      | 580            |      |
| Mold height min.               | mm              |     | 150            |                  |     | 150            |                  |      | 180           |                  |      | 200            |                  |      | 220            |      |
| Ejection stroke                | mm              |     | 100            |                  |     | 120            |                  |      | 140           |                  |      | 140            |                  |      | 150            |      |
| Ejector force                  | kN              |     | 33             |                  |     | 33             |                  |      | 33            |                  |      | 62             |                  |      | 62             |      |
| OTHERS                         |                 |     |                |                  |     |                |                  |      |               |                  |      |                |                  |      |                |      |
| System pressure                | MPa             |     | 17.5           |                  |     | 17.5           |                  |      | 17.5          |                  |      | 17.5           |                  |      | 17.5           |      |
| Pump motor power               | kW              |     | 22             |                  |     | 22             |                  |      | 26            |                  |      | 31             |                  |      | 45             |      |
| Heater power                   | kW              | 7.8 | 9.7            | 9.7              | 7.8 | 9.7            | 9.7              | 11.5 | 14.75         | 14.75            | 12.4 | 14.75          | 14.75            | 16.7 | 19.5           | 19.5 |
| Machine dimension (LxWxH)      | m               |     | 4.36x1.15x1.88 |                  |     | 4.68x1.21x1.95 |                  |      | 5.10x1.31x2.0 |                  |      | 5.60x1.45x2.15 |                  |      | 5.86x1.61x2.26 |      |
| Machine weight                 | t               |     | 3.1            |                  |     | 4.0            |                  |      | 4.7           |                  |      | 6.3            |                  |      | 7.8            |      |
| Hopper capacity                | kg              |     | 25             |                  |     | 25             |                  |      | 25            |                  |      | 50             |                  |      | 50             |      |
| Oil tank                       | l               |     | 190            |                  |     | 200            |                  |      | 230           |                  |      | 300            |                  |      | 370            |      |



Thin-walled packaging products

**APPLICATIONS** (1700-10000kN)



**Product: Flower pot**

Machine: MA6500III/4700h  
 Raw materials: PP  
 Cavity: 8  
 Weight per product: 50.0g  
 Cycle time: 16.3s



**Product: Handle**

Machine: MA3900III/2100h  
 Raw materials: PE+Color Master Batch  
 Cavity: 24  
 Weight per product: 7.0g  
 Cycle time: 12.9s



**Product: 20L paint bucket**

Machine: MA6500III/6300h  
 Raw materials: PP  
 Cavity: 1  
 Weight per product: 750.0g  
 Cycle time: 14.3s



**Product: Wall socket**

Machine: MA2100III/700h  
 Raw materials: PC  
 Cavity: 6  
 Weight per product: 12.7g  
 Cycle time: 18.3s (cooling time 7.0s)



**Product: Fork**

Machine: MA3300III/1400h  
 Raw materials: PS  
 Cavity: 32  
 Weight per product: 3.8g  
 Cycle time: 12.0s



**Product: 5ml syringe**

Machine: MA2700III/1000h  
 Raw materials: PP  
 Cavity: 60  
 Weight per product: 1.98g  
 Cycle time: 12.2s

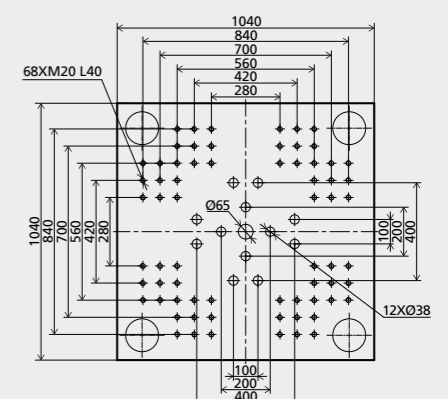
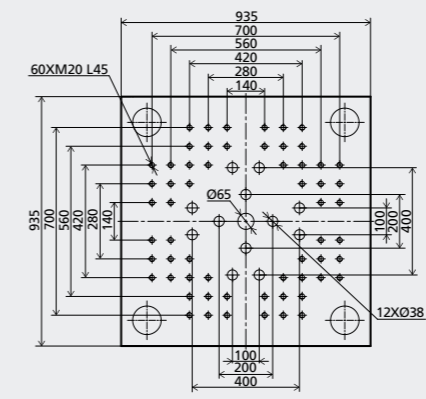
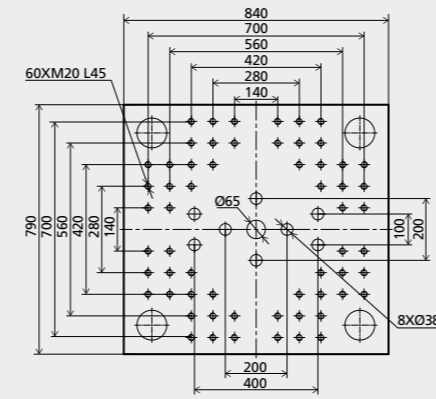
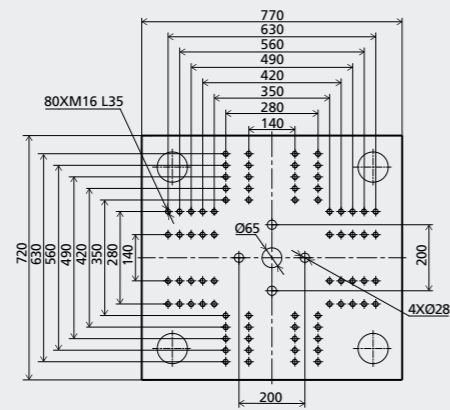


# Specification

|                                | MA1700 III /520h |             | MA2100 III /700 h |             | MA2700 III /1000h |             | MA3300 III /1400h |             |  |
|--------------------------------|------------------|-------------|-------------------|-------------|-------------------|-------------|-------------------|-------------|--|
|                                | A                | B           | A                 | B           | A                 | B           | A                 | B           |  |
| INJECTION UNIT                 |                  |             |                   |             |                   |             |                   |             |  |
| Screw diameter                 | mm               | 40          | 45                | 50          | 50                | 55          | 60                | 65          |  |
| Screw L/D ratio                |                  | 22.5        | 20                | 22.2        | 22                | 20          | 21.7              | 20          |  |
| Injection volume (theoretical) | cm <sup>3</sup>  | 251         | 318               | 334         | 412               | 471         | 570               | 862         |  |
| Injection weight (PS)          | g                | 229         | 289               | 304         | 375               | 429         | 519               | 785         |  |
| Injection rate (PS)            | g/s              | 229         | 289               | 289         | 357               | 357         | 432               | 605         |  |
| Injection speed (max)          | mm/s             |             | 200               |             | 200               |             | 200               |             |  |
| Injection pressure             | MPa              | 207         | 163               | 211         | 171               | 212         | 175               | 193         |  |
| Plasticizing rate (GPPS)       | g/s              | 28          | 36                | 32          | 40                | 45          | 52                | 68          |  |
| Screw speed                    | rpm              | 0-320       |                   | 0-320       |                   | 0-300       |                   | 0-300       |  |
| CLAMPING UNIT                  |                  |             |                   |             |                   |             |                   |             |  |
| Clamping force                 | kN               | 1700        |                   | 2100        |                   | 2700        |                   | 3300        |  |
| Mold movement stroke           | mm               | 430         |                   | 490         |                   | 540         |                   | 640         |  |
| Dist. between tie bars (HxV)   | mm               | 520x470     |                   | 570x520     |                   | 620x620     |                   | 720x720     |  |
| Mold height max.               | mm               | 520         |                   | 550         |                   | 600         |                   | 650         |  |
| Mold height min.               | mm               | 180         |                   | 200         |                   | 220         |                   | 240         |  |
| Ejection stroke                | mm               | 140         |                   | 150         |                   | 150         |                   | 160         |  |
| Ejector force                  | kN               | 34          |                   | 67          |                   | 67          |                   | 67          |  |
| OTHERS                         |                  |             |                   |             |                   |             |                   |             |  |
| System pressure                | MPa              | 21          |                   | 21          |                   | 21          |                   | 21          |  |
| Pump motor power               | kW               | 31          |                   | 36          |                   | 48          |                   | 60          |  |
| Heater power                   | kW               | 14.86       |                   | 20.63       |                   | 22.3        |                   | 30.5        |  |
| Machine dimension (LxWxH)      | m                | 5.8x1.8x2.3 |                   | 5.9x1.8x2.2 |                   | 7.0x2.0x2.2 |                   | 7.5x2.1x2.5 |  |
| Machine weight                 | t                | 7.0         |                   | 8.5         |                   | 11.0        |                   | 14.8        |  |
| Hopper capacity                | kg               | 50          |                   | 50          |                   | 50          |                   | 50          |  |
| Oil tank                       | l                | 295         |                   | 345         |                   | 475         |                   | 580         |  |

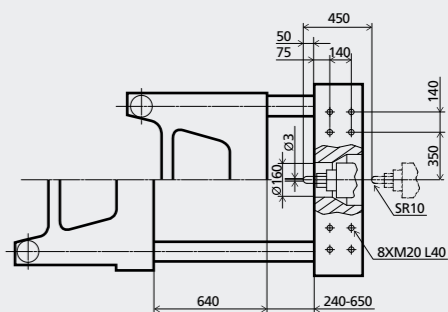
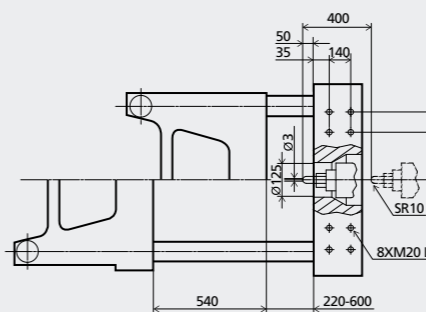
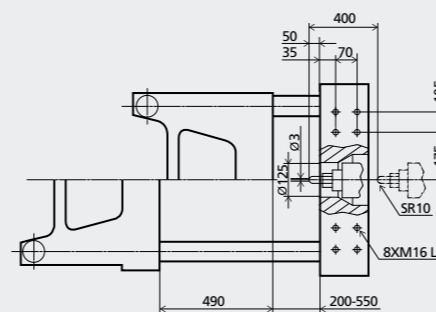
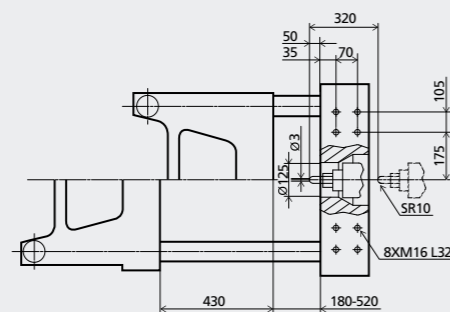
## Platen dimensions

Moving platen



## Platen dimensions

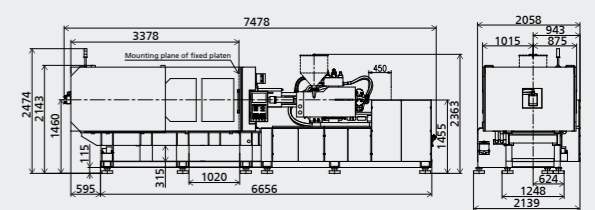
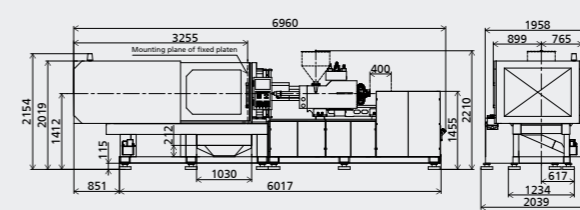
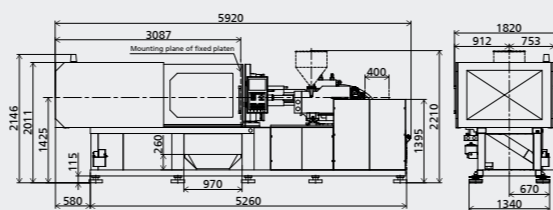
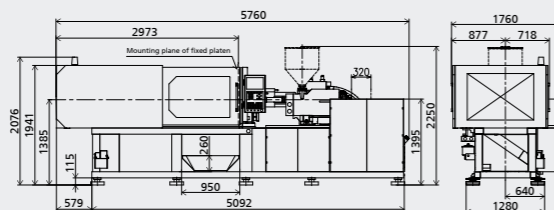
Mounting hole for robot/sprue picker top view from fixed platen



## Machine dimensions

Plasticizing capacity (GPPS): GB standard, with application of GPPS plasticizing capacity of 3-zone screws

We reserve the right to make changes as a result of further technical advantages.



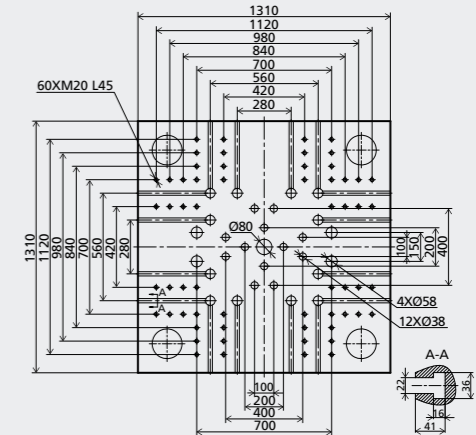
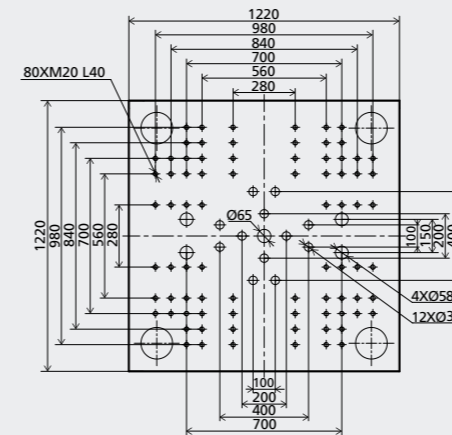
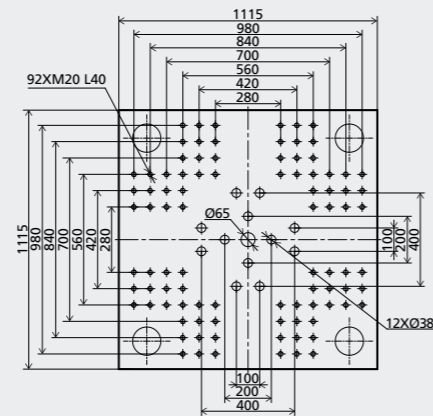


# Specification

|                                | MA3900 III /2100h |      | MA4800 III /3200h |      | MA5500 III /4700h |              |
|--------------------------------|-------------------|------|-------------------|------|-------------------|--------------|
|                                | A                 | B    | A                 | B    | A                 | B            |
| <b>INJECTION UNIT</b>          |                   |      |                   |      |                   |              |
| Screw diameter                 | mm                | 65   | 70                | 70   | 80                | 90           |
| Screw L/D ratio                |                   | 21.5 | 20                | 22.9 | 20                | 24.8         |
| Injection volume (theoretical) | cm <sup>3</sup>   | 1061 | 1231              | 1423 | 1859              | 2261         |
| Injection weight (PS)          | g                 | 966  | 1120              | 1295 | 1692              | 2057         |
| Injection rate (PS)            | g/s               | 605  | 700               | 700  | 914               | 845          |
| Injection speed (max)          | mm/s              |      | 200               |      | 200               | 185          |
| Injection pressure             | MPa               | 198  | 170               | 224  | 171               | 210          |
| Plasticizing rate (GPPS)       | g/s               | 78   | 91                | 98   | 117               | 97           |
| Screw speed                    | rpm               |      | 0-280             |      | 0-250             | 0-200        |
| <b>CLAMPING UNIT</b>           |                   |      |                   |      |                   |              |
| Clamping force                 | kN                |      | 3900              |      | 4800              | 5500         |
| Mold movement stroke           | mm                |      | 700               |      | 780               | 850          |
| Dist. between tie bars (HxV)   | mm                |      | 755x755           |      | 830x830           | 840x840      |
| Mold height max.               | mm                |      | 730               |      | 780               | 850          |
| Mold height min.               | mm                |      | 280               |      | 320               | 350          |
| Ejection stroke                | mm                |      | 180               |      | 200               | 220          |
| Ejector force                  | kN                |      | 110               |      | 110               | 158          |
| <b>OTHERS</b>                  |                   |      |                   |      |                   |              |
| System pressure                | MPa               |      | 21                |      | 21                | 21           |
| Pump motor power               | kW                |      | 72                |      | 25+72             | 48+72        |
| Heater power                   | kW                |      | 39.5              |      | 46.5              | 67.1         |
| Machine dimension (LxWxH)      | m                 |      | 7.9x2.1x2.5       |      | 8.5x2.3x2.6       | 10.2x2.4x2.8 |
| Machine weight                 | t                 |      | 17.0              |      | 23.0              | 30.5         |
| Hopper capacity                | kg                |      | 50                |      | 50                | 100          |
| Oil tank                       | l                 |      | 670               |      | 830               | 920          |

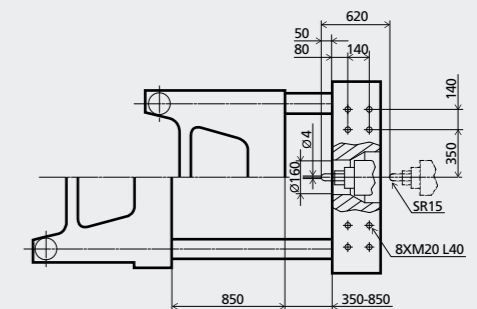
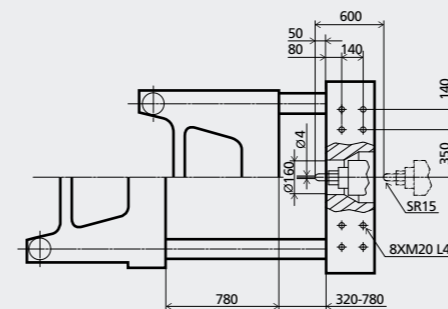
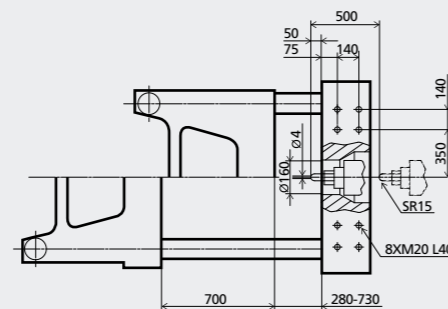
## Platen dimensions

Moving platen



## Platen dimensions

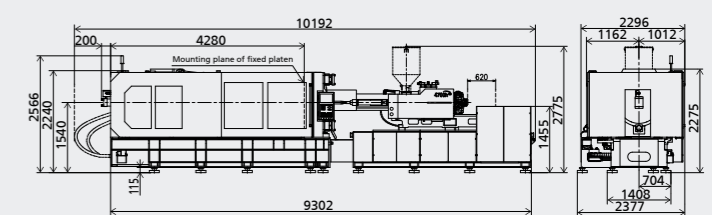
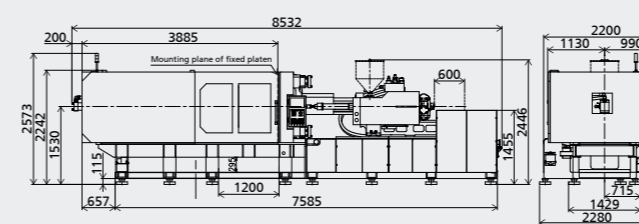
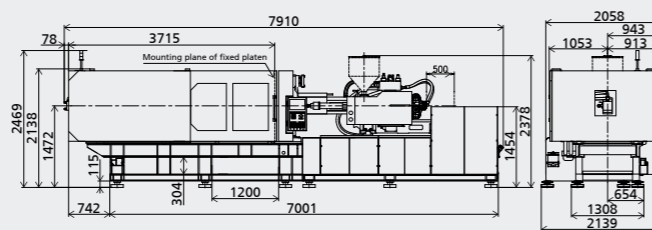
Mounting hole for robot/sprue picker top view from fixed platen



## Machine dimensions

Plasticizing capacity (GPPS): GB standard, with application of GPPS plasticizing capacity of 3-zone screws

We reserve the right to make changes as a result of further technical advantages.

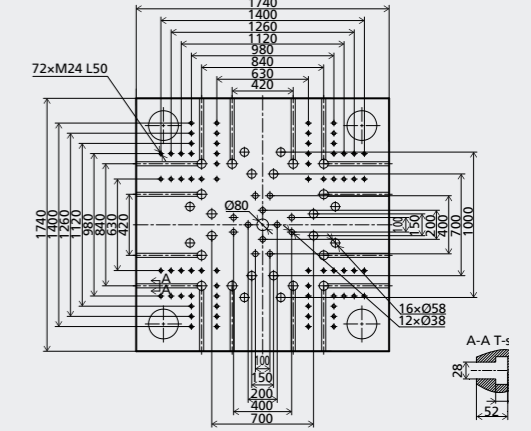
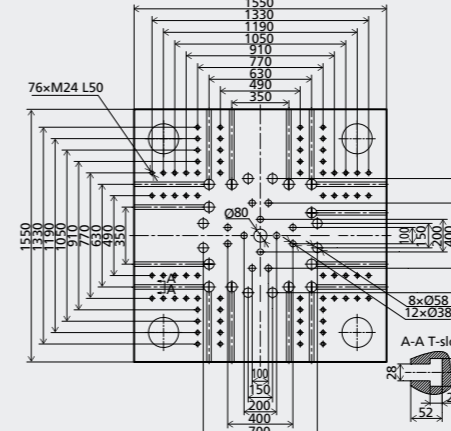
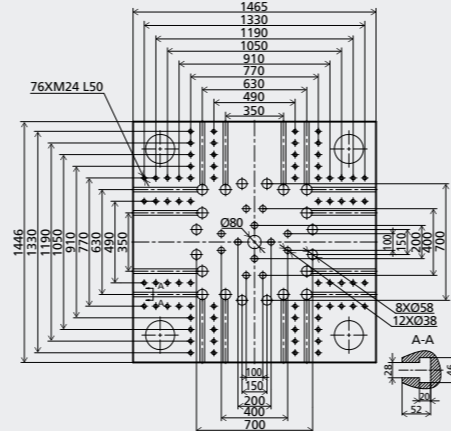
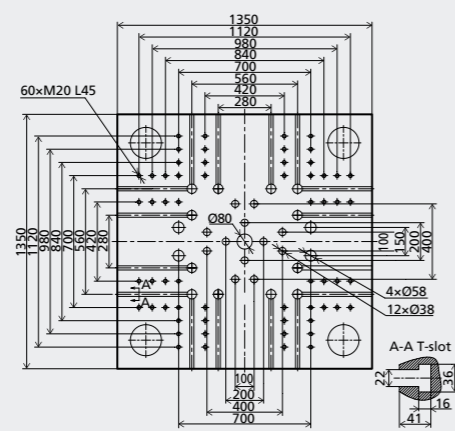


# Specification

|                                | MA6500 III /4700h |      | MA7500 III /4700h |      | MA8000 III /6300h |      | MA10000 III /8100h |      |              |
|--------------------------------|-------------------|------|-------------------|------|-------------------|------|--------------------|------|--------------|
|                                | A                 | B    | B                 | C    | A                 | B    | A                  | B    |              |
| <b>INJECTION UNIT</b>          |                   |      |                   |      |                   |      |                    |      |              |
| Screw diameter                 | mm                | 80   | 90                | 100  | 90                | 100  | 100                | 110  |              |
| Screw L/D ratio                |                   | 24.8 | 22                | 24   | 24.4              | 22   | 24.2               | 22   |              |
| Injection volume (theoretical) | cm <sup>3</sup>   | 2261 | 2861              | 2861 | 3533              | 2988 | 4006               | 4847 |              |
| Injection weight (PS)          | g                 | 2057 | 2604              | 2604 | 3215              | 2720 | 3645               | 4410 |              |
| Injection rate (PS)            | g/s               | 845  | 1069              | 1045 | 1150              | 1042 | 1215               | 1470 |              |
| Injection speed (max)          | mm/s              |      | 185               | 181  | 161               | 180  |                    | 170  |              |
| Injection pressure             | MPa               | 210  | 166               | 177  | 171               | 211  | 171                | 202  |              |
| Plasticizing rate (GPPS)       | g/s               | 97   | 122               | 122  | 151               | 118  | 146                | 108  |              |
| Screw speed                    | rpm               |      | 0-200             |      | 0-200             |      | 0-180              |      | 0-125        |
| <b>CLAMPING UNIT</b>           |                   |      |                   |      |                   |      |                    |      |              |
| Clamping force                 | kN                |      | 6500              |      | 7500              |      | 8000               |      | 10000        |
| Mold movement stroke           | mm                |      | 930               |      | 1000              |      | 1040               |      | 1220         |
| Dist. between tie bars (HxV)   | mm                |      | 880x880           |      | 960x940           |      | 1000x1000          |      | 1160x1160    |
| Mold height max.               | mm                |      | 980               |      | 1000              |      | 1000               |      | 1160         |
| Mold height min.               | mm                |      | 380               |      | 400               |      | 420                |      | 500          |
| Ejection stroke                | mm                |      | 240               |      | 260               |      | 280                |      | 320          |
| Ejector force                  | kN                |      | 158               |      | 186               |      | 186                |      | 215          |
| <b>OTHERS</b>                  |                   |      |                   |      |                   |      |                    |      |              |
| System pressure                | MPa               |      | 21                |      | 21                |      | 21                 |      | 21           |
| Pump motor power               | kW                |      | 48+72             |      | 60+95             |      | 72+72              |      | 72+72        |
| Heater power                   | kW                |      | 67.1              |      | 81                |      | 86.05              |      | 103.25       |
| Machine dimension (LxWxH)      | m                 |      | 10.3x2.4x2.8      |      | 11.2x2.5x2.8      |      | 11.2x2.5x2.9       |      | 12.2x2.6x3.0 |
| Machine weight                 | t                 |      | 35                |      | 39                |      | 43                 |      | 55.5         |
| Hopper capacity                | kg                |      | 100               |      | 100               |      | 100                |      | 100          |
| Oil tank                       | l                 |      | 920               |      | 920               |      | 1040               |      | 1130         |

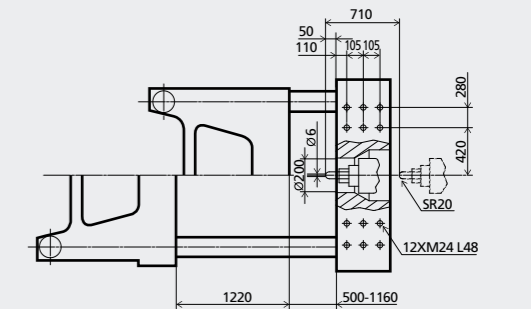
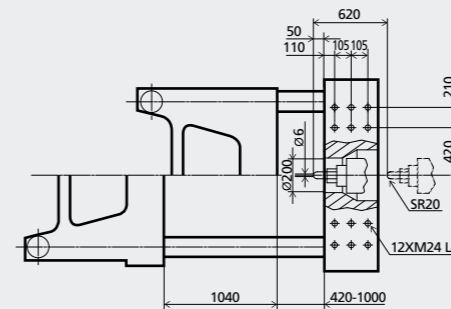
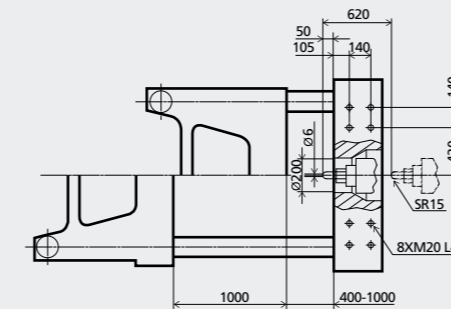
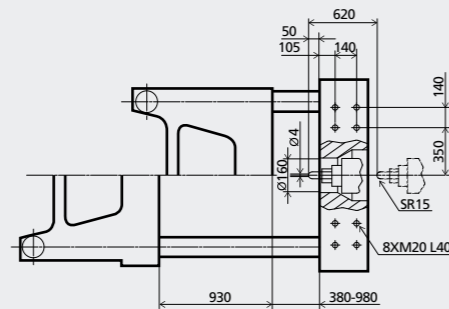
## Platen dimensions

Moving platen



## Platen dimensions

Mounting hole for robot/sprue picker top view from fixed platen



## Machine dimensions

Plasticizing capacity (GPPS): GB standard, with application of GPPS plasticizing capacity of 3-zone screws

We reserve the right to make changes as a result of further technical advantages.

