Global Network

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The machines in this series have acquired JIS B 6711:2021 (equivalent to ISO 20430:2020) certification.

We support the enhancement of our customers' corporate value through providing high performance, high quality, and safe injection molding machines.

www.shi.co.jp/plastics/

B032EN02-2402JD

Sumitomo SHI DEMAG

SE-EV-S-HD

All-electric Middle-sized Injection Molding Machine

Lineup

SE220EV-S-HD	(2200kN)
SE250EV-S-HD	(2500kN)
SE280EV-S-HD	(2800kN)
SE315EV-S-HD	(3150kN)
SE350EV-S-HD	(3500kN)
SE385EV-S-HD	(3850kN)
SE450EV-S-HD	(4500kN)
SE500EV-S-HD	(5000kN)

Sumitomo Heavy Industries, Ltd.

Our plastic machinery business advocates
"act! SUSTAINABLY - Creating a future,"
and we would like to promote the sustainability of
the global environment and the entire industry involved in injection molding.

The SE-EV-S-HD series of all-electric injection molding machines was developed on the 3 S's – sustainability, smart management and safety – concept to realize that.

SE-EV-S-HD

The SE-EV-S-HD does a big job for a small machine.

Large molds can be mounted while keeping the installation space of the molding machine small. This increases productivity per unit area.

For more information, see pg. 16.

act! SUSTAINABLY
Creating a Future

Sustainable Molding

Less defects and greater energy-savings realized by low injection pressure and low clamping force. Molding work supported by simple operation.

For more information, see pg. 04 – 09.

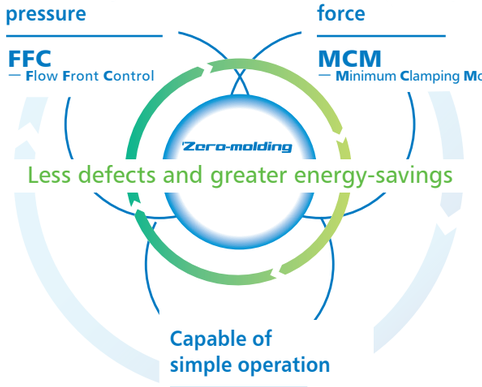
To reduce mold clamping force, technology to reduce injection pressure was developed.

Capable of filling with low injection pressure

FFC
— **F**low **F**ront **C**ontrol

Capable of molding with low clamping force

MCM
— **M**inimum **C**lamping **M**olding



Capable of simple operation

SPS
— **S**imple **P**rocess **S**etting

Comparison of power consumption per hour of our all-electric injection molding machines (3500kN class)

※Graph figures are for reference purposes only.
Actual power consumption will vary according to molding conditions.

7.523 kWh

5.689 kWh

- Improved drives and motors
- Our proprietary "Zero-molding" technology

5.231 kWh **-30%**

- Structural changes to mold clamping and injection units (e.g. linear guide system)

SE-EV-S-HD series consumes **30**% less power than the 1st generation all-electric machine.

Smart Management

Stronger system integration feature allows users to build a more efficient production environment.

For more information, see pg. 10 – 11.

Safety

Compliant with international safety standards. Contributes to further improving safety.

For more information, see pg. 12 – 13.

Sustainable Molding

Capable of filling with low injection pressure

Conventionally, in order to completely fill cavities, the screw was pressed forward and filling done at high injection pressure, but if the resin pressure is increased while the cavities are unevenly filled, burrs and short shots may occur.
The defects that resulted from these issues wasted both power and materials.

Benefits of low injection pressure

No more molding defects

Smooth filling prevents flashes and short shots, and widens the range of molding process window that produces good products.

Reduced CO_2 emission

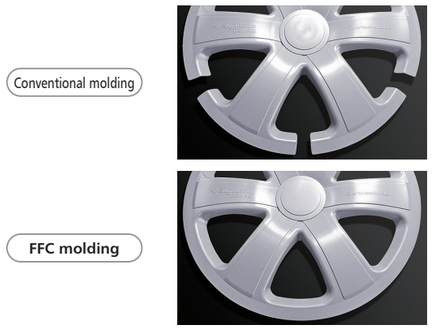
Eliminates the production of defective products and reduces the amount of wasted resin.

Energy-savings

Power consumption can be reduced thanks to the reduction of injection motor torque.

FFC — Flow Front Control

Comparison of filling capability



Product: Wheel cap (381 mm dia.)
Resin: PC+ABS

The FFC molding enables complete filling without raising injection pressure.

Support for low injection pressure

Flow Front Control (FFC)

**Cavities can be filled at low injection pressure by controlling the screw before and after V-P switchover, so that the viscosity of the resin itself promotes filling.
This approach improves cavity balance while also eliminating flashes and short shots at the same time.**

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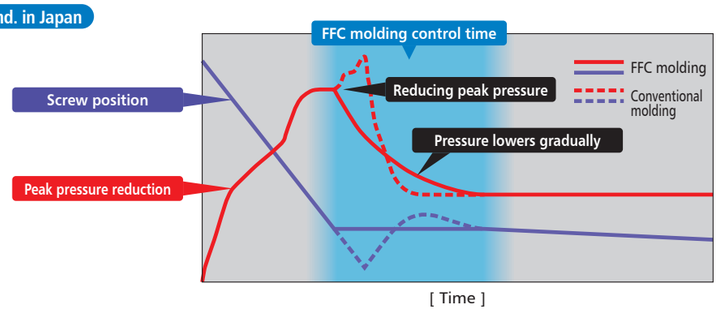

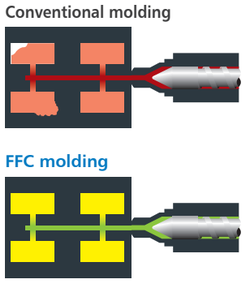

New! FFC guidance

Machines are preinstalled with guidance that allows anyone to easily master FFC by simply following setup flows.

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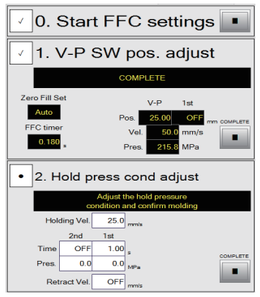
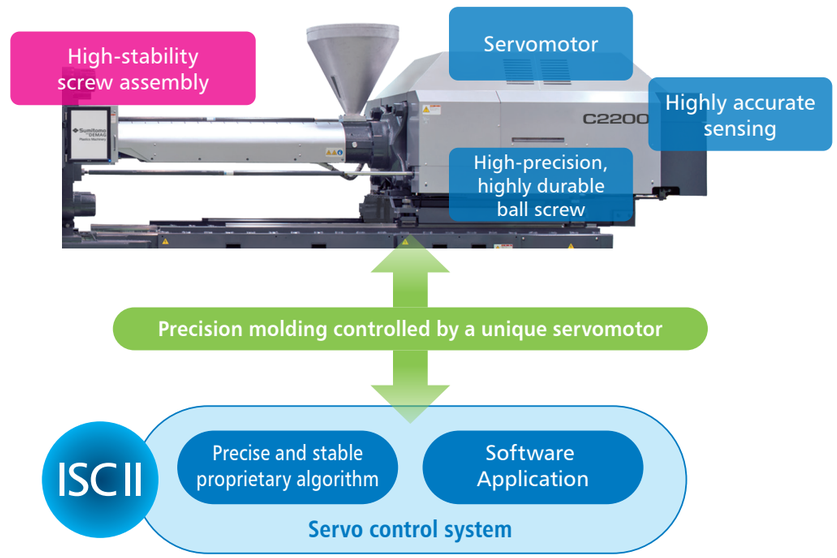
●Settings on screens 0 – 2 are accessed and completed by simply following the guidance.



Basic mechanical performance

Intelligent Servo Controller Ⅱ

**The injection unit, which integrates servo motors, sensing devices, ball screws and a screw assembly, is controlled by the latest control system ISC II (Intelligent Servo Controller II).
It gives users high-precision, high-response control over the screw, which translates into greater precision and stability in plasticization, filling and pressure holding processes, and allows them to work with lower filling pressures and improve cavity filling balance.**



Capable of molding with low clamping force

One thing that users can do to prevent flashes and other defects is to set a high mold clamping force. However, too much force inhibits the escape of gas, which leads to short shots and burning. It can also stress molds, which can impact mass-production in various ways. Also, it increases power consumption, which is not economically helpful.

Benefits of low mold clamping force

Unimpeded gas release

Since molds can smoothly release trapped gases, short shots and burning are prevented, and less mold deposits seen.

Longer lasting molds

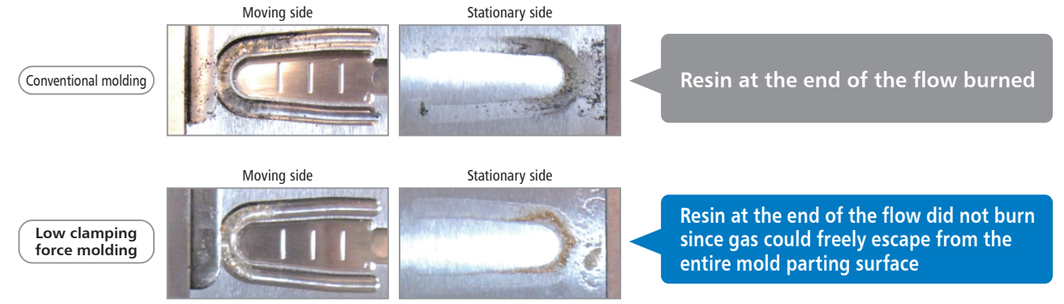
Low mold clamping force prevents deformation of mold, breakage of pins or galling of mold parts, and other damage to molds.

Energy-savings

Power consumption can be reduced thanks to the reduction of mold clamping motor torque.

MCM — Minimum Clamping Molding

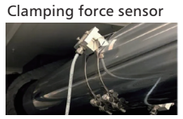
Comparison after 400 shots



Support for low mold clamping force

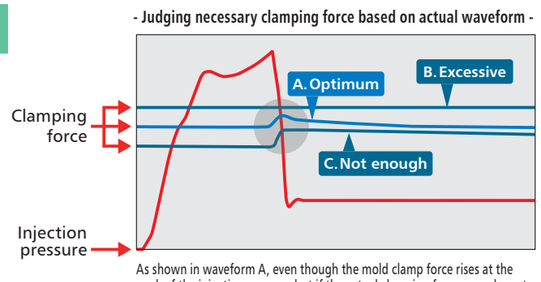
Clamping force monitor

Clamping force sensor



The monitor displays the mold clamping force as a waveform in real time during the molding process. Users can confirm whether the set clamping force is appropriate or not from the waveform.

- Judging necessary clamping force based on actual waveform -



As shown in waveform A, even though the mold clamp force rises at the peak of the injection pressure but if the actual clamping force goes down to the set clamping force during the holding pressure process, the set value of the mold clamping force can be judged sufficient.

Minimum clamping force detection

Clamping force sensors automatically detect the minimum force needed to completely seal mold parting surfaces. It gives users a good reference to easily determine the minimum force required.

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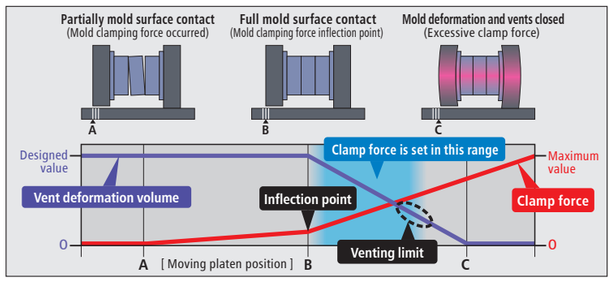

How mold clamping force is maintained during production

Mold clamping force feedback control

During mass-production, mold clamping force tends to rise because the mold expands under heat. With this function, the set clamping force is automatically maintained by using the detected clamping force to compensate for any changes in mold height.

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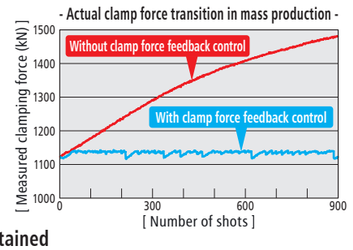
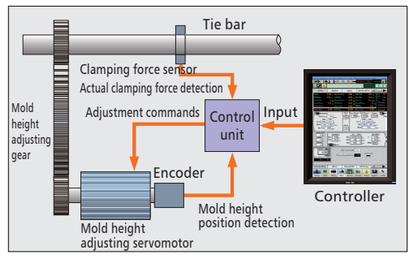
- Actual clamp force transition in mass production -

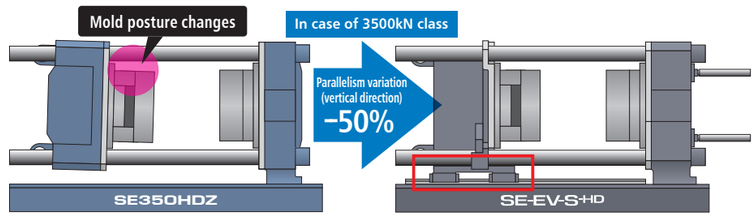




Basic mechanical performance

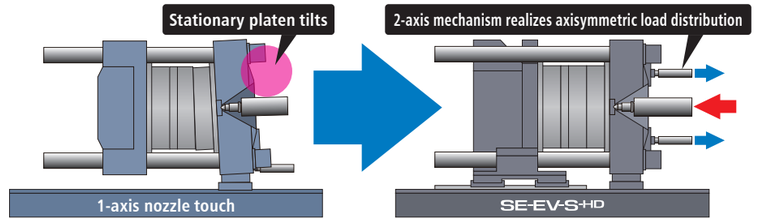
Platen support and bushless tie bars

The platen is supported to maintain a high degree of parallelism accuracy even when heavy molds are mounted. This prevents molds from warping and helps molding with the appropriate mold clamping force.



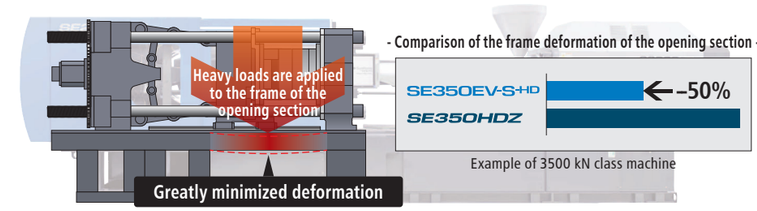
High precision nozzle contact mechanism

The 2-axis support mechanism provides an even load distribution centered on the nozzle. Thus, it is possible to prevent the stationary platen from tilting.



Highly rigid, low vibration frame

Designed and built with an emphasis on rigidity, it ensures smooth mold opening and closing while preventing galling of pins and other mold damages.



Capable of simple operation SPS — Simple Process Setting

Molding requires a wide range of knowledge and skill. Molding machine features must be set and used properly. Incorrect settings or operation can cause problems in mass-production that decrease work efficiency and cost users time, material and power. Moreover, complicated operations can only be performed by apt operator.

Benefits of user interface based on HCD (Human Centered Design)

Easy operation
The easy-to-understand displays prevent operational mistakes and enable anyone to master even high-performance features.

Waste elimination
An assistance feature designed to help users make the best settings promotes work efficiency while also reducing work time, resin waste and power consumption, which contributes to lower production costs.

Support for power-savings
Utilization of the power-saving support features promote the reduction of power consumption.

Operation screen based on HCD

Screens designed to facilitate operation

Mold mounting screen

Molds can be quickly and easily mounted by simply following the displayed workflow.

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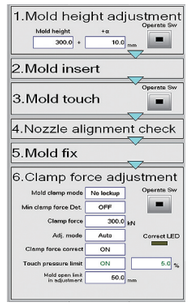
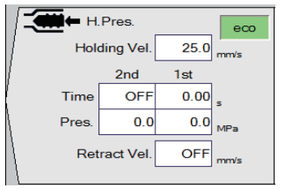


Automatic energy-saving control

New!

An “ECO” button has been added.



This feature reduces power consumption during the pressure holding stage. The low power mode can be set by just pressing a button.

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Support for time-efficient setup

Minimum melting time display

New!

Displays the minimum time required for the heating cylinder to complete heating up when returning from an interruption of molding. It reduces unnecessary waiting time and prevents resin from degrading in the interim.

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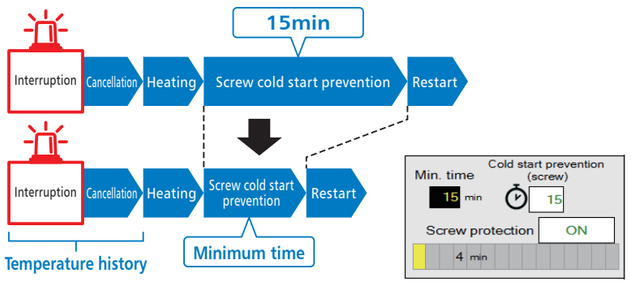
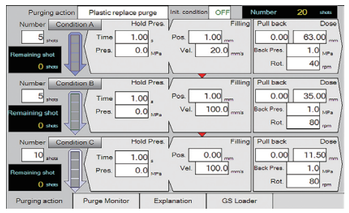


■Minimum time for screw cold start prevention

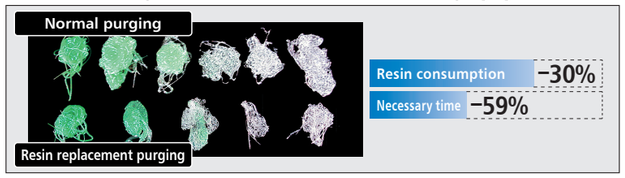
Purging function for resin replacement

An auto purging mode is provided to change the color or type of resin quickly and efficiently. It both shortens the amount of time required to change out resins and reduces the amount of resin consumed in the process.



The set purging process A to C are automatically switched.

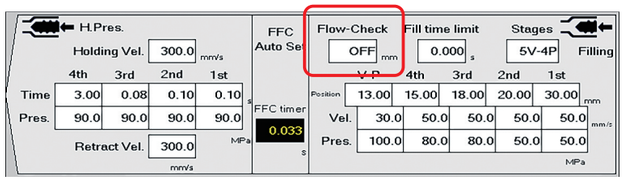
- Comparison of resin amount and time used for purging -



●The resin consumption and necessary time depend on purging process.

Flow front check

This feature helps users find the best V-P switchover position without altering production process.



Support for power-savings

Power consumption display

New!

The SE-EV-S series makes it possible to monitor power consumption on a per-shot basis. That data can also be logged to visualize how much power is required for each molded product. Moreover, data including setup time and downtime, and can be displayed for half-day, daily, 7-day and 30-day timeframes, providing users with a useful tool for promoting power-saving efforts.

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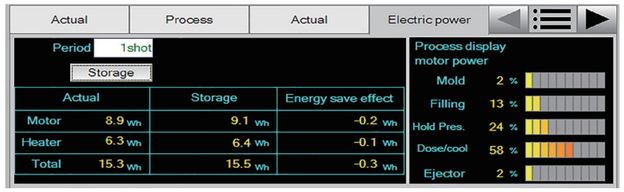
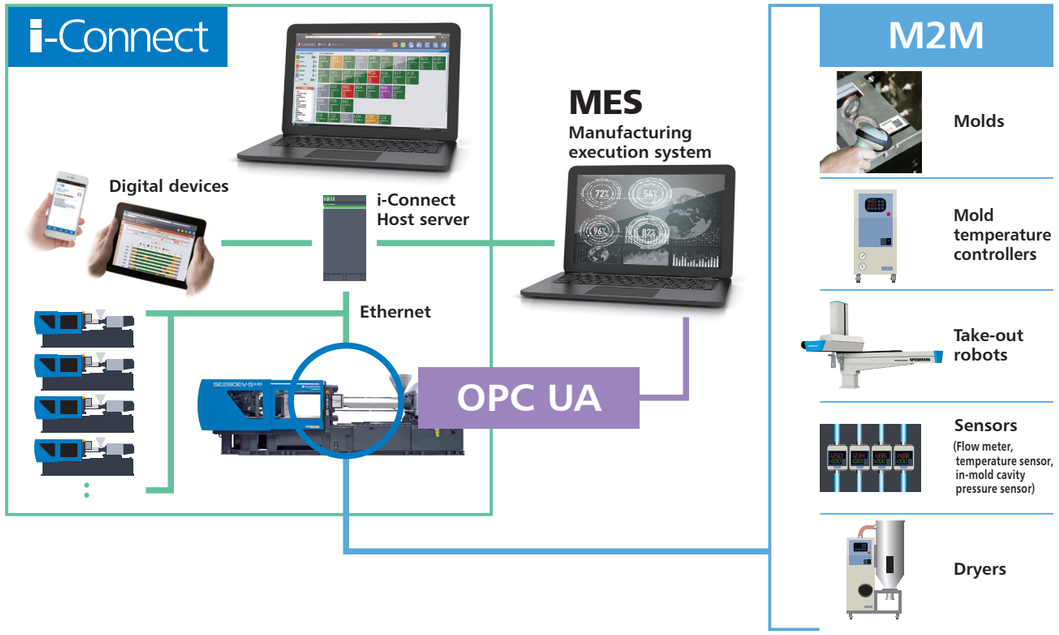
■Power consumption display screen



※This function does not measure the power consumption of the entire molding machine.

Convenient connections and cooperation

Manufacturers are increasingly looking to collect and utilize data to get around manpower shortages, reduce employee workloads and improve productivity.
So, the SE-EV-S series are now compliant with the international standard OPC UA as a standard feature for communication with MES.
Moreover, the i-Connect production quality control system that streamlines data collection from Sumitomo molding machines can also connect to MES.
When it comes to integration of molding machines and peripherals, we offer multiple M2M solutions that shorten the time spent calling up, monitoring and logging conditions from across production floors, and make production management a whole lot more efficient.



Production quality control system

i-Connect

i-Connect is a core application for IoT deployment at manufacturing sites. It was developed to give users a broader, deeper and easier grasp of information by integrating information from molding machines, peripherals and sensors.

Option

Less downtime

Multiple molding machines are monitored simultaneously. If trouble occurs, an alert is instantly issued, giving users a head-start on minimizing any downtime.

Accurate traceability

A wide range of molding data is accumulated, which allows users to track down trouble spots and improve issues across the whole molding environment.

Steppingstone to innovative production planning and production automation

By connecting to host systems like MES, i-Connect lets innovation-minded manufacturers step up to the plate.

Networking solutions for molding machines and MES

OPC UA compatibility as a standard feature

New!

The SE-EV-S series are compatible with the international protocol OPC UA which enables data exchanges across machines of differing manufacture and different OS, to provide data to host systems like MES (Manufacturing Execution System).
Sumitomo molding machines can feed MES some 200 types of data, including key data like operating status, turnout, product information and molding conditions.

M2M solutions for molding machines and peripherals

Verification by QR code

QR coding makes setup operations quick and mistake-free. Molding conditions can be called up and verified, as well as users verified, by assigning QR codes to molding conditions, take-out robot chuck plate, resins, user information, etc. and simply scanning the codes when setting up the line for production.

Option

※QR code is a registered trademark of DENSO WAVE INCORPORATED.

SPICCP communication for mold temperature controller

By connecting a molding machine and temperature controller over SPICCP, conditions can be shared between the two and the temperature controller operated from the molding machine. Besides shortening the time spent calling up conditions, this networking scheme is effective towards preventing careless mistakes that originate from human error.

Option

Take-out robot condition link

This configuration connects a molding machine and take-out robot, and saves take-out robot conditions in the molding machine, making it possible to call up take-out robot conditions together with molding conditions.
It spares users the expense of repairing damaged mold or chuck plate caused by mismatched conditions.

Option

Quality management package

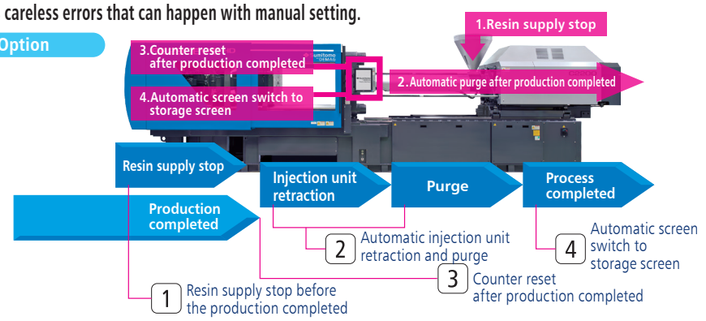
This package boosts quality management to a higher level by inputting analog readings (voltage and/or current) from external sensors that measure resin flowrate, mold internal pressure and other conditions, and making it possible to view and record measurements on waveform and logging screens.

Option

Production completion package

This package automates the processes performed at the end of a production run, such as the stoppage of resin supply system, injection unit retraction and purging. It reduces setup work prior to starting production and prevents careless errors that can happen with manual setting.

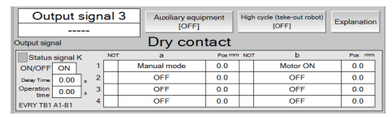
Option



Connection to peripherals

We have increased the number of status output signals from our molding machines to external units from a standard 5 channels to 20. Moreover, operation requests from peripherals for triggering injection, mold opening/closing, ejection and core pulling are listed on an easy-to-use input signals screen.
The acquired ability to control processes with reliable interlock signals not only enhances equipment protection and flexibility but also improves product quality and safety.

Option



Safety

Enables safe work

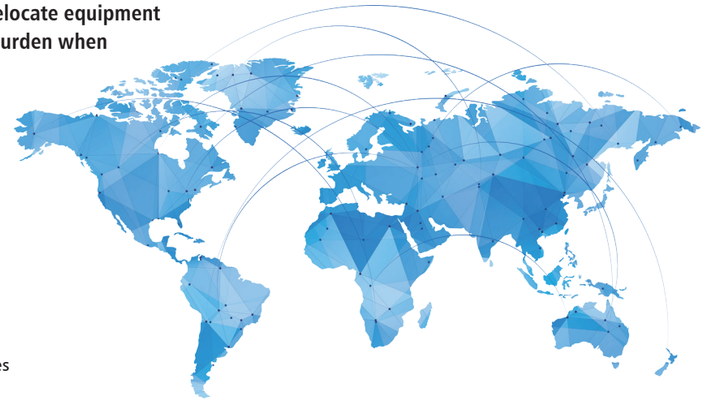
Compliant with the international safety standards ISO 20430:2020 (JIS B 6711:2021)

Safety is one of the biggest priorities of any manufacturing site anywhere in the world. Not long ago, Japan amended its national safety standards for injection molding machines (JIS B 6711:2021) to comply with international standards set forth in ISO 20430:2020.

Therefore, all Sumitomo injection molding machines now comply with ISO 20430:2020 and we are providing the same high level of safety across the globe.

Manufacture anywhere in the world

Even if you are looking to procure or relocate equipment across national/regional borders, the burden when changing specifications or remodeling will be reduced.
We assist businesses with globalizing their manufacturing activities.



※Safety requirements for molding machines differ according to the place of use.

Improved operator safety

More reliable safety doors

Since 2011, our molding machines have been equipped with ISO 20430:2020-compliant door locks that prevent access to internal areas of the machine until all moving parts come to a complete stop. Moreover, mechanisms that prevent monitoring sensors from being detached reduce the risk of accidents.

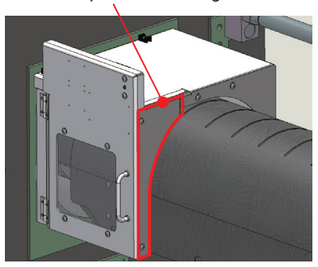
Safety has been further pursued through improvements to "Motion" mode status indications that make it easier to identify machine status.

Mechanisms that prevent monitoring sensors from being detached.

Improved shielding of purging covers

The shielding provided by purging covers has been improved to prevent unexpected resin splatter.
These improvements enhance operator safety by better protecting against burns and other accidents.

Area of improved shielding



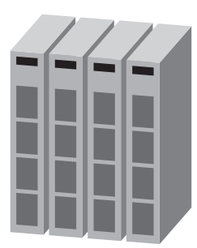
Improved hardware quality

Highly reliable control system

Safety PLC

A safety PLC is a piece of equipment complied with international safety standards to shut off and control power sources in response to input signals from safety devices.

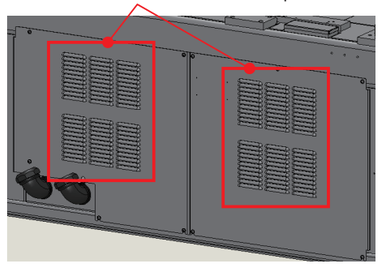
Duplication of the safety circuit with hardware increases the possibility of trouble due to increased number of parts, but we ensure a very high level of reliability with duplication through safety PLC based control software.



Enhanced waterproofing

Waterproofing has been enhanced to reduce the chance of trouble by adding packing to the control panel cover and adopting a louvre structure for vents, out of consideration of possible short-circuiting in a molding machine's electrical system that intruding water could cause.

Louvre-structured vent on the control panel cover



Capable of various molding

Performance requirements vary according to the molded product.
The SE-EV-S machines meet customer needs with various specifications for molding.

Fast filling spec injection unit

This injection unit enables molding of thin-walled, long and other kinds of problematic products by raising the maximum injection speed.

Option

- Maximum injection speed -

C560	500mm/s
C750	330mm/s
C1100	310mm/s
C1600	310mm/s
C2200	310mm/s
C3000	220mm/s

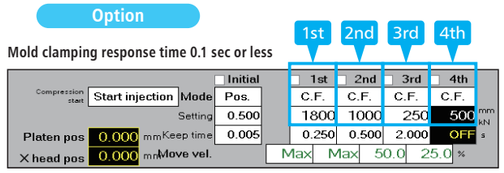
Mold clamping compression

●Some options cannot be selected when using mold clamping compression.

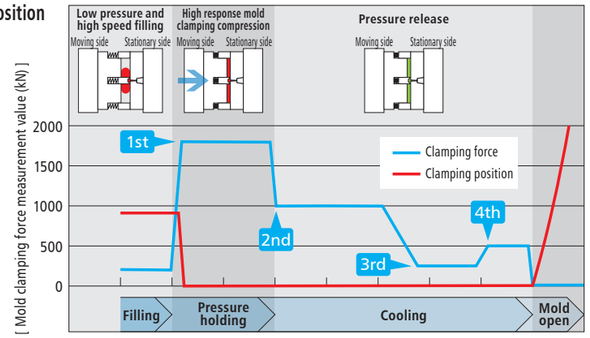
Compression operation can be performed by setting the mold position and clamping force in stages according to the product, even for thin-walled or thick-walled products. This meticulous approach to setting up production improves product quality and productivity by compensating for warping and deformation, reducing birefringence, etc.

Option

Mold clamping response time 0.1 sec or less



- Image of mold clamping compression operation -



Advanced special spec for fast-cycle molding SE-EV-S-HD CT-6 spec.

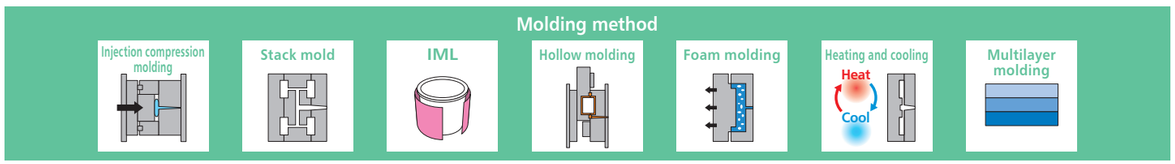
SE-EV-S-HD CT-6 spec.

**This model is specially designed for thin and medium-walled product, based on SE-EV-S-HD, with a fast filling injection unit and equipment supporting fast-cycle molding.
The filling and plasticizing capabilities have been improved, while maintaining space-saving performance and wide lineup of SE-EV-S-HD.**

Other options

Option

We can help molding other various types of products. Below are shown some examples. For more information, please feel free to contact us.



Screw lineup

Our screws come in a wide range of diameters and assembly specifications.

Option

Screw diameter

Choosing the right diameter screw for a molded product is a good first step towards sustainable molding by reducing power consumption and CO_2 emissions.

●Below are examples for SE280EV-S-HD (2800kN), SE315EV-S-HD (3150kN), and SE385EV-S-HD (3850kN). For other models, please see the main specifications page.

Injection unit	Screw diameter (mm)
C1100	45 50 56 63
C1600	45 50 56 63 71
C2200	50 56 63 71 80

Screw assembly specifications

We have a vast lineup of screw assemblies with specifications designed for molding all sorts of products. They are instrumental to reducing defects and ensuring screw parts last longer.

Suitable resins		Non-abrasive (wear) and corrosive resins	Resins may burn, resins with poor thermal stability	Resin containing less than 30% GF	Resin containing less than 30% GF / Flame retardant resins	Resin containing more than 30% GF / Resin containing a large amount of filler (GB, CF, MR)
Wear resistance		★	★	★★	★★	★★★
Corrosion resistance		★	★	★	★★	★★
Specifications		**Nitrided**	**Plated**	**Wear resistant**	**Wear and corrosion resistant A**	**Wear and corrosion resistant B**
Material	Screw	Nitrided	Plated	Wear and corrosion resistant A	Wear and corrosion resistant A	Wear and corrosion resistant B
	Cylinder	Wear resistant	Wear resistant	Wear resistant	Wear and corrosion resistant A	Wear and corrosion resistant B
	Screw tip (set)	Rotating type	Rotating type	Wear and corrosion resistant A Non-rotating type headset	Wear and corrosion resistant A Non-rotating type headset	Wear and corrosion resistant C Non-rotating type headset
Screw type	SD Screw	○	○	○	○	○
	SM Screw	–	○	○	○	–

For the C560 High filling spec, the screw assembly for SE-EV-S or for ultra-high pressure are selectable, and the spec above is not applicable.

★★★ Most suitable ★★ Suitable ★ Usable

Thick optical parts molding package

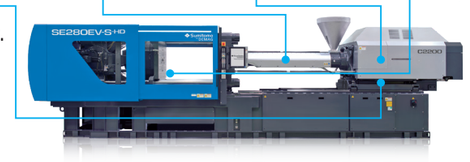
When molding thick-walled optical parts, the challenge is to prevent surface accuracy degradation and poor appearance due to sink marks. With the high basic performance of the machine, this package adds special features to hold high pressures for a long time, a screw for optical parts, and 10-modes for lens. It eliminates sink marks and appearance defects.

Option

Solving the specific issues of these products from four angles.

Thick optical parts molding package
SE-EV-S-HD Standard equipment

1 Pressure holding performance	2 Screw	3 Injection speed	4 Machine environment
Holds high pressures for long periods of time	Designed for resins used with optical parts	High resolution in low speed range 10-mode for lens	Bushless tie bar Tie bar plating



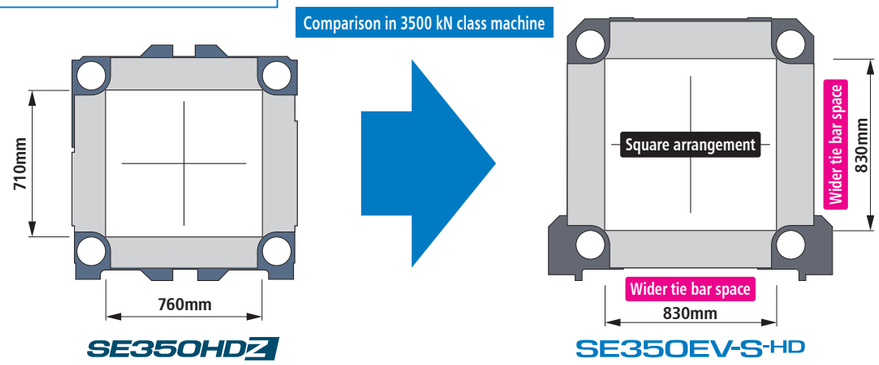
The SE-EV-S-HD series enables downsizing of molding machines

Even large and heavy molds can be mounted on the SE-EV-S-HD series.

Wide tie bar spacing

Thanks to the wide tie bar spacing and square design, side-entry molds are available.

Comparison in 3500 kN class machine



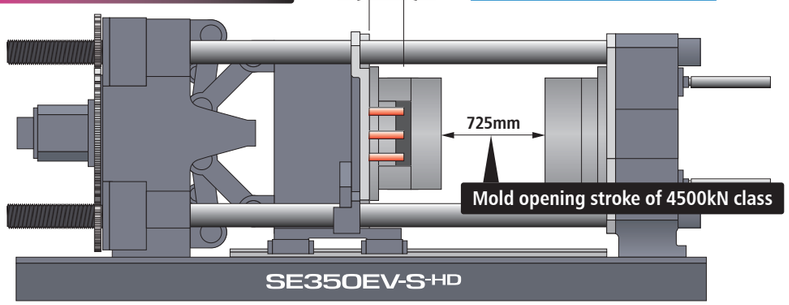
Wide mold opening stroke, mold height and ejector stroke

Built to accommodate large molds

●With some models, the mold thickness can only be extended by 100mm.

Option

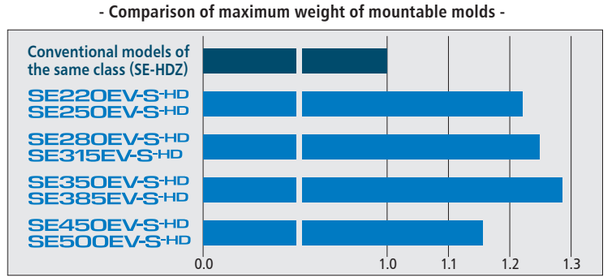
Maximum ejector stroke in the same class



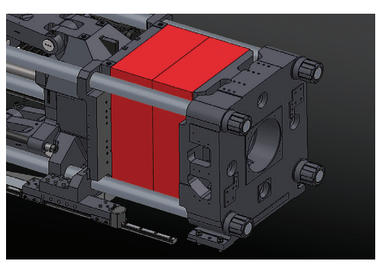
Increase of maximum mold weight

Heavy molds can be mounted thanks to a structurally stronger frame.

- Comparison of maximum weight of mountable molds -



Assuming all the cases of the same-class SE-HDZ series are set to 1.0



Horizontal (tie bar spacing) x vertical (platen dimensions) x maximum mold height is the weight of the mountable mold.

Less economic loss with proper maintenance

Sudden interruptions during production runs result in wasteful downtime and production delays.
Plus, it might cost to get the system back up and running. These interruptions can be avoided with failure prevention.
That is why we propose making a switch from "repairing your equipment" to "keeping it from stopping".

High-performance maintenance and inspection service

Tomenai Service

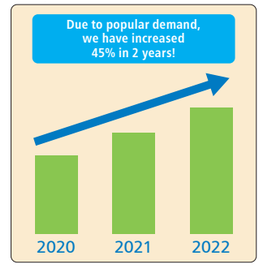
Regular maintenance service for each unit.
High performance can be maintained stably.

Maintenance menu

We have a long list of maintenance and service items. If we were to compare it to humans, what we can do for your equipment equates to a health checkup and immunizations.

Standard	Inspection and cleaning of control circuit, mold clamping circuit, heater temperature monitoring, and grease supply circuit.
Options	Mold clamping accuracy adjustment, belt tension adjustment, cylinder wear measurement, etc.

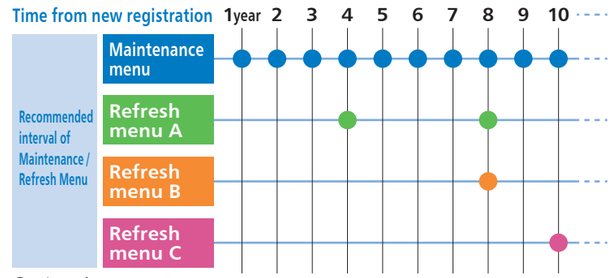
■Growth of our "Maintenance Menu" implementation



Refresh menu

Besides the annual maintenance menu, there is a menu of longer term refreshing options. When combined with regular maintenance, refreshing menu can realize more stable and secure production. The "Refresh Menu" has the effect of extending machine life.

Every 4 years	Refresh menu A
	Inspection and replacement of CPU fans, NC unit fans, motor fans and encoder batteries
Every 8 years	Refresh menu B
	Inspection and replacement of NC unit electrolytic capacitors and contacts for motor drive power
Every 10 years	Refresh menu C
	Replacement of CPU cards, etc.



●Estimated implementation time

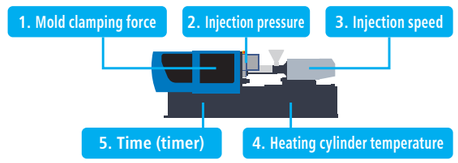
To enjoy stable high-performance from your equipment for years to come, it is strongly recommended to periodically have equipment serviced and refreshed.

※Daily inspections should be performed by the customer at the appropriate time based on operating hours and pre-operating conditions.

All-electric machine

Verification/calibration service

Specified items and parts are calibrated, which effectively enhances the accuracy of quality management efforts.



Member support service

Tomenai.net

Our information website for members is loaded with useful support content from operating guides and troubleshooting help to applications for honing one's production engineering skills.

www.tomenai-service.net/

●To sign up, contact your nearest our dealer.

Standard Equipment

Plasticizing and injection unit
1. Injection program control function (Multi-stage control)
2. Holding pressure program control function (Multi-stage control)
3. Screw pull back function (Before starting dosing/After dosing is completed)
4. Digital display function of screw position (0.01 mm setting)
5. Holding time 0.01 seconds setting function
6. V-P switchover function (Pressure/Position)
7. Filling delay timer function
8. Pursing device with interlock (Select the position where the interlock function is unused or the injection device is retracted)
9. Heating cylinder temperature control 6 zones *2
10. Standard capacity heater
11. Heating cylinder temperature switching function (Molding/Lowered temperature/Pursing)
12. Screw cold start prevention function (With variable interlock timer and minimum melting time display)
13. Remote setting function for sprue break stroke (Reverse timing selection with delay timer, Nozzle contact detection, Movement time setting)
14. Screw rotation speed digital display function
15. Purging cover device (With limit switch)
16. Injection unit swivel device (With nozzle alignment adjustment mechanism)
17. Remaining cooling time display function
18. Dosing start delay timer function
19. Injection speed/Holding pressure rise speed selection function (10 modes)
20. Screw forward speed setting function during holding pressure
21. Screw pull back delay control function
22. Synchro dosing function
23. Screw reverse rotation control function
24. Independent temperature control device of nozzle
25. Standard energy saving heating cylinder cover (Two-layer structure)
26. Water cooling jacket temperature control device
27. Mold open operation function during dosing (Shut off nozzle drive control)
28. Filling pressure multi-stage control function
29. Resin retention prevention function
30. One-touch manual dosing function
31. High-precision, high-pressure nozzle contact device (Nozzle contact force 3-step variable)

Control unit
1. 15 inch TFT color LCD screen
2. Touch panel type setting input device
3. Molding condition storage function
4. Operation support function
5. Molding support function
6. Waveform display function (Waveform memory function, Display value reading function, Data storage by trigger, etc.)
7. Screen hard copy function
8. Take-out robot connection circuit device *1
9. Screen switching function in up to 15 languages
10. Maintenance management function (Inspection time, Grease greasing time, Item, Operation method display)
11. Automatic start/stop function (Lowered temperature/Heater start/Molding machine stop) *1
12. Process display function
13. SSR heater drive circuit device
14. Industrial unit input function (Speed, Position, Pressure, Rotation speed)
15. Molding machine status output signal (5 ch) *1
16. USB connection circuit device (Memory)
17. Protection function of saved conditions
18. Abnormal processing selection function
19. Initial reject/short stop reject function
20. Change screen color scheme function
21. Numerical and character input keypad layout change function (Select from 2 types)
22. Takeout robot entry permission signal
23. OPC UA server

Monitor unit
1. Actual value display function
2. Heater breakage monitoring device
3. Auxiliary equipment abnormality monitoring function (3 ch) * 1
4. Abnormality monitoring function (Maximum cushion, Minimum cushion, Filling pressure, Mold protection, Cycle time, Dosing)
5. Abnormality monitoring condition automatic setting function
6. Abnormal history display function (Abnormal item/Occurrence time display)
7. Quality control function (Statistical function of actual values, Various graph functions, 100,000 shot storage and data confirmation function)
8. Production number management function (Molded product discrimination function, Automatic production completion, Stocker feed signal, Data logging, Production counter with reset)
9. Auto start function (Heater, External output signal)
10. Heating cylinder temperature monitoring function (All zones)
11. Self diagnosis function
12. Abnormal alarm buzzer
13. Shot counter
14. Processing function when cycle monitoring is abnormal (Heater processing mode change)
15. All process display screen function
16. Monitoring function to prevent forgetting to set monitoring
17. Ejector protrusion torque monitoring function
18. Maintenance time notification function (Maintenance time notification based on the number of shots/elapsed time)
19. Injection pressure monitoring function (5 points)
20. Cycle analysis function

Clamping unit
1. Mold opening/closing position and speed program control function (5-stage/3-stage switching)
2. Mold protection function
3. Low pressure mold clamp function
4. Mold opening/closing pause function
5. Remote control function of clamp force
6. Remote control function of mold space
7. Ejector remote setting function (2-speed control, Pressure, Stroke, Delay timer, Multiple time protrusions)
8. Current value input function (Ejector protrusion position)
9. Current value input function (Mold open limit position)
10. Clamp mode selection function (Lock up)
11. Ejector protrusion interlock function (Ejector can be operated only at the mold opening completion position in manual mode)
12. Ejector protrusion function during mold opening
13. Ejector protrusion function during mold clamp
14. Mold plate return confirmation device (Input signal to molding machine) Metal outlet connection * 1
15. Mold opening/closing signal (Spear control signal) *1
16. Valve gate drive circuit (Control circuit only) *1
17. Stand by mode function for mold installation (Low mold opening/closing speed)
18. Toggle cover with polycarbonate window
19. Emergency stop push button switch (Operation side/Non-operation side)
20. Safety door with polycarbonate window
21. Screw holes for mounting the take-out robot
22. Grease centralized greasing device for mold clamp/injection unit
23. Mold clamp safety device (Electric/Mechanical)
24. Mold opening/closing low vibration or high speed mode selection function
25. Movable platen support device (Linear guide type)
26. Double Center Press Platens mechanism
27. Product drop confirmation connection circuit *1
28. Multi-toggle function (Multi-stage clamp force setting)
29. Tie bar plating specification
30. Ejector motor device with brake
31. S-MOVE function (Low vibration control)
32. Ejector standby position function
33. Control device for mold installation space with servo motor
34. Dry cycle mode function

Others
1. Auto grease supply unit (Cartridge grease type)
2. 3-way take-out frame
3. Mold cooling water block device (2 systems) (Flow indicator and valve are options)
4. Standard tool (Ring spanner for nozzle)
5. Standard spare parts (Fuses, Air filters)

Zero-molding features	
1. Zero-molding main screen: Simple process setting	18. Zero-molding: Clamp force feed back function
2. Zero-molding main screen : Production monitor (Production number/Process/Abnormality/Actual results)	19. Clamp force multi-stage control function (Cross-head position control)
3. Specifications/Function confirmation screen (Standard functions/Optional functions/Abnormality handling/Specification list/Monitoring device)	20. Zero-molding: Molding condition support monitor function (Peak clamp force, Pack pressure, Status display)
4. Minimum mold clamp force detection function (Automatic measurement)	21. Actual value monitor switching function (Actual/Process/Power/Waveform/Temperature graph)
5. Setup support: Mold installation screen (Mold height, Mold contact, Clamp force, Mold open/close in preparations, Ejector setting)	22. Monitoring setting: Function to automatically set all at once
6. Setup support: Mold condition setting screen (Open/close, Ejector multi-stage setting)	23. Molding condition access restriction function (Condition range, Screen display, Password function)
7. Setup support: Mold opening limit/Ejector protrusion position teaching function (Current value input)	24. Automatic condition change function for molding start (By short shot method)
8. Setup support: Protection setting screen (Mold protection, Ejector protection)	25. Protection: Screw protection function
9. Setup support: Multi-purging function (Gate purging, Resin replacement purging, Slight time stop purging, Low-viscosity resin purging, Resin viscosity measurement)	26. Energy saving mode function of holding pressure (with automatic energy saving control function)
10. Setup support: Temperature condition reference/Calling function	27. Waveform display function: Simple display by process (Injection, Holding pressure, Dosing, Mold opening, Mold closing, Ejector, Mold height)
11. Setup support: Resin residence alarm/Monitoring function	28. Waveform display function: Waveform save completion message
12. Setup support: Nozzle/Heating cylinder temperature rise mode function (Step/Nozzle delay/Process temperature control)	29. Waveform display function: Automatic waveform save function (Always/Trigger/Abnormal)
13. Zero-molding Molding condition setting screen: Z-Screen (Filling, Holding pressure, Dosing, time, Temperature, Mold clamp force)	30. Quality control function: Waveform monitoring function
14. Zero-molding: FFC control (with guidance function)	31. Quality control function: Molding process monitor logging function (Temperature, Temperature control output, Peak clamp force, Pack pressure)
15. Zero-molding: FFC control, mode setting function	32. Production control function: Function to set the number of cavities and manage the number of products
16. Zero-molding: Function to check the filling position and short shot position by flow front check	33. Production control function: Operation status management function (operating time, motor load factor, power consumption monitor)
17. Screw reversal decompression control function	

*1 All input and output signals are no-voltage contact signals. Power is not supplied with output signals.
*2 The number of zone varies depending on the screw diameter and screw type.
*3 The max. injection speed differs as follows; C750 - C2200: 280 mm/s, C3000: 220 mm/s. Standard injection speed applies to C560.
*4 The extended distance is added to the machine dimensions. Please refer to the drawing of machines.
*5 The max. width is 1000 mm for SE350EV-S-HD - SE500EV-S-HD.
● Specifications are subject to change without notice for performance improvement.
● Standard specification models of the SE-EV-S-HD series comply with the safety standards of Japan, China and the nations of Southeast Asia.
They can also be modified to comply with the safety standards of Korea (KCs Mark), USA, Brazil, the nations of Oceania and Canada. For more information, contact us.

Optional Equipment

Plasticizing selection
1. Ion-nitride screw assembly
2. Hard chromium plating screw assembly
3. Wear/corrosion resistant screw assembly (Except for C560, C750)
4. Wear and corrosion resistant A screw assembly
5. Wear and corrosion resistant B screw assembly
6. Wear and corrosion resistant Cscrew assembly (For C560 only)
7. High-temperature screw assembly (Max. temp. 450 ℃) (For C560 only)
8. SD Screw assembly
9. SM Screw assembly
10. Screw tip set - Rotation type
11. Screw tip set - Rotation type, TiN coating (For C560 only)
12. Screw tip Corrosion and wear resistant A - Non-rotation type
13. Screw tip Corrosion and wear resistant B - Non-rotation type (For C560 only)
14. Screw tip Corrosion and wear resistant C - Non-rotation type
15. Open type nozzle (Except for C560, C750)
16. Needle valve shut off nozzle (Air type nozzle open/close cylinder) (Except for C560, C750)
17. Open nozzle (Only for C560, C750)
18. Needle valve shut off nozzle (Air type nozzle open/close cylinder) (For C750 only)
19. Cylinder nozzle (Except for C560)
20. Zone 1 high capacity heater
21. High capacity heater (For C560 only)
22. Extension nozzle
23. High insulated cylinder cover (For C560 only)

Plasticizing and injection unit
1. Resin temperature sensing device (Only when needle valve nozzle is equipped)
2. Standard type hopper
3. V/P switchover by mold cavity pressure
4. Needle valve nozzle drive circuit
5. Hopper slide device (The hopper swivel mounting plate is applied to the C560)
6. Plating resin inlet of cooling water jacket
7. Circulation air assist device for injection unit (Except for C560, C750)
8. Purge resin receiving tray (Stainless steel)
9. Heater for PA (Nylon) resin (Except for C560)
10. High filling specification *3
11. Power module for thick-wall molding (Except for C560)

Control and monitor unit
1. Leak circuit breaker (AC 200 V, 220 V 3ø3W+E) (Japan and Asia only)
2. Mold temperature monitor (Type K)
3. Mold temperature monitor (Type J)
4. Mold automatic temperature adjuster
5. Automatic starting system (Heater, Water supply, External output signal) *1
6. Revolving alarm lamp
7. High function 3-color LED signal tower
8. Closed circuit type cooling water pipe 1 system 4 branches
9. Closed circuit type cooling water pipe 1 system 2 branches
10. Closed circuit type cooling water pipe 2 systems 10 branches
11. Personal computer connection circuit (Ethernet)
12. Electric power supply socket
13. Power source outlet for tools
14. Name plate: Blue
15. Motion07
16. MotionGB
17. Addition of motor breaker
18. Emergency stop interlock (Unloader, Cart) *1
19. DC 24 V power for external signal equipped (Power source only)

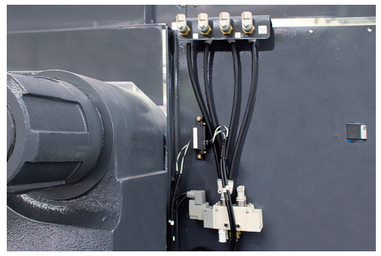
Clamping unit
1. Hydraulic core pull hydraulic pipe
2. Hydraulic core pull control circuit
3. Pneumatic core pull
4. Pneumatic core pull circuit
5. Core rotation control circuit
6. SPI take-out robot connection circuit
7. SPI AN-146/EUROMAP67 product unloader connection circuit
8. High precision heat insulating plate (5 mm/10 mm, Cross type) *5
9. Die Clamp control unit
10. Valve gate drive circuit
11. Valve gate control circuit
12. Locate diameter 100 mm (Applied to screw dia. ø45 - ø56)
13. Full metallic toggle cover
14. Hydraulic package
15. SPI pattern platen
16. EUROMAP pattern platen
17. Locating ring (Cooling fit, Bolted)
18. Safety door automatic open/close device (Operation side)
19. Safety door automatic open/close device (Non-operation side)
20. Mold space extension 100 mm *4
21. Mold space extension 200 mm *4
22. T groove platen
23. Slide core return check *1
24. Hydraulic drive circuit (Built-in)
25. Dust prevention cover above toggle (Fixed type) *4
26. Dust prevention cover above toggle (Slide type) *4
27. Hydraulic drive circuit (Separate type)
28. Increased ejector force
29. Multi air
30. Mold clamp connection circuit *1
31. Magnet clamp connection circuit *1
32. Safety door release specification control circuit
33. Safety door wide expansion (100 mm) opposite to operation side *4
34. Cooling water pipe 2 systems 8 branches

Spare parts and accessories
1. Spare parts A (Mechanical parts: Mechanical stopper, Lub. parts)
2. Spare parts A (Electrical parts: Thermocouple)
3. Spare parts for export (Encoder, Limit switch, Inductive proximity sensors)
4. Leveling pads (For one machine)
5. Anchor bolts (For one machine)
6. Locating ring (Transition fit)
7. Mechanical parts and hook for hosting machine
8. Tool A (Tools, Tool box, Rocol paste)
9. Ejector rods
10. Grease gun
11. Grease cartridge for automatic lub (700 cc)
12. Grease cartridge for manual lub (400 cc)
13. Injection unit turning handle (Except for C560)
14. Tool for disassembly screw tip set (Except for C560)
15. High precision heat insulating plate (5 mm/10 mm, Cross type) *5
16. Easy camp

Clamping unit 29

Multi air

This equipment greatly increases the ease with which products can be extracted by integrating air ejectors and cavity ventilators. It comes with up to 4 pneumatic control circuits.



Clamping unit 33, 34

Safety door wide expansion (100 mm) opposite to operation side
Cooling water pipe 2 systems 8 branches

These equipment greatly shorten setup time by eliminating the trouble associated with piping work.

Screw Assembly

Suitable resins		Non-abrasive (wear) and corrosive resins	Resins may burn, resins with poor thermal stability	Resin containing less than 30% GF	Resin containing less than 30% GF / Flame retardant resins	Resin containing more than 30% GF / Resin containing a large amount of filler (GB, CF, MR)
Wear resistance		★	★	★★	★★	★★★
Corrosion resistance		★	★	★	★★	★★
Specifications		**Nitrided**	**Plated**	**Wear resistant**	**Wear and corrosion resistant A**	**Wear and corrosion resistant B**
Material	Screw	Nitrided	Plated	Wear and corrosion resistant A	Wear and corrosion resistant A	Wear and corrosion resistant B
	Cylinder	Wear resistant	Wear resistant	Wear resistant	Wear and corrosion resistant A	Wear and corrosion resistant B
	Screw tip (set)	Rotating type	Rotating type	Wear and corrosion resistant A Non-rotating type headset	Wear and corrosion resistant A Non-rotating type headset	Wear and corrosion resistant C Non-rotating type headset
Screw type	SD Screw	○	○	○	○	○
	SM Screw	—	○	○	○	—

★★★ Most suitable ★★ Suitable ★ Usable

For the C560 **High filling spec,** the screw assembly for SE-EV-S or for ultra-high pressure are selectable, and the spec above is not applicable.

Main Specifications

■Clamping unit

Item	Unit	SE220EV-S-HD	SE250EV-S-HD	SE280EV-S-HD	SE315EV-S-HD
Clamping system		Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)
Clamping force (max.)	kN	2200	2500	2800	3150
Clearance between tie-bars (HxV)	mm	660 x 660	660 x 660	730 x 730	730 x 730
Platen size (HxV)	mm	930 x 930	930 x 930	1020 x 1020	1020 x 1020
Daylight	mm	1175	1225	1275	1325
(Mold height extension 100 mm)	mm	(1275)	(1325)	(1375)	(1425)
(Mold height extension 200 mm)	mm	(1375)	—	(1475)	—
Mold opening stroke	mm	575	625	625	675
Platen speed max.	mm/s	1349	1431	1298	1394
Mold height (min. - max.)	mm	200～600	200～600	300～650	300～650
(Mold height extension 100 mm)	mm	(200～700)	(200～700)	(300～750)	(300～750)
(Mold height extension 200 mm)	mm	(200～800)	—	(300～850)	—
Locating hole diameter	mm	ø120	ø120	ø150	ø150
(Locating ring inner diameter ⌀120 mm)	mm	—	—	(ø120)	(ø120)
(Locating ring inner diameter ⌀100 mm)	mm	(ø100)	(ø100)	(ø100)	(ø100)
Ejector system (ejecting points)		Motor driven type (13 points)	Motor driven type (13 points)	Motor driven type (13 points)	Motor driven type (13 points)
Ejector ejection force	kN	60	60	60	60
(When ejector force power up is selected)	kN	(100)	(100)	(100)	(100)
Ejector speed (max.)	mm/s	267	267	267	267
Ejector stroke	mm	220	220	220	220
Mold weight (max.)	kg	2800	2800	3800	3800
(Moving side (max.))	kg	(1850)	(1850)	(2500)	(2500)

■Injection unit

		C750				C1100				C750				C1100			
		M				L				M				L			
Screw diameter	mm	36	40	45	50	45	50	56	63	36	40	45	50	45	50	56	63
Injection pressure (max.) *1,*2	MPa	259	274	215	174	267	230	187	148	259	274	215	174	267	230	187	148
Holding pressure (max.) *1,*2	MPa	259	274	215	174	267	230	187	148	259	274	215	174	267	230	187	148
Theoretical injection capacity	cm^3	162	201	337	416	365	510	640	810	162	201	337	416	365	510	640	810
Injection weight (GPPS)	g	156	193	323	399	350	490	614	778	156	193	323	399	350	490	614	778
Plasticizing rate *3	kg/h	48	63	98	134	98	151	192	227	48	63	98	134	98	151	192	227
Injection rate	cm^3/s	162	201	254	314	254	314	394	498	162	201	254	314	254	314	394	498
(When high speed filling specification is selected)	cm^3/s	(335)	(414)	(524)	(647)	(493)	(608)	(763)	(966)	(335)	(414)	(524)	(647)	(493)	(608)	(763)	(966)
Screw stroke	mm	160		212		230	260			160		212		230	260		
Injection speed (max.)	mm/s	160				160				160				160			
(When high speed filling specification is selected)	mm/s	(330)				(310)				(330)				(310)			
Screw speed (max.)	min^{-1}	250								250							
Number of temperature control zone		5				6				5				6			
Heater capacity	kW	8.5	10.3	11.1	12.2	17.0	19.2	21.1	28.4	8.5	10.3	11.1	12.2	17.0	19.2	21.1	28.4
Nozzle contact force	kN	43				58				43				58			
Injection unit moving stroke	mm	395								395							
Nozzle protrusion	mm	65								65							
Hopper capacity (When the standard hopper is selected)	L	(50)				(100)				(50)				(100)			

C1100				C1600					C2200					C1100				C1600					C2200				
L				L					L					L				L					L				
45	50	56	63	45	50	56	63	71	50	56	63	71	80	45	50	56	63	45	50	56	63	71	50	56	63	71	80
267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
365	510	640	810	365	510	714	904	1148	510	714	997	1266	1608	365	510	640	810	365	510	714	904	1148	510	714	997	1266	1608
350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544	350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544
98	151	192	227	98	151	192	227	230	151	192	227	230	303	98	151	192	227	98	151	192	227	230	151	192	227	230	303
254	314	394	498	254	314	394	498	633	314	394	498	633	804	254	314	394	498	254	314	394	498	633	314	394	498	633	804
(493)	(608)	(763)	(966)	(493)	(608)	(763)	(966)	(1227)	(608)	(763)	(966)	(1227)	(1558)	(493)	(608)	(763)	(966)	(493)	(608)	(763)	(966)	(1227)	(608)	(763)	(966)	(1227)	(1558)
230	260			230	260	290			260	290	320			230	260			230	260	290			260	290	320		
160														160													
(310)														(310)													
250				250			200		250		200			250				250			200		250		200		
6														6													
17.0	19.2	21.1	28.4	17.0	19.2	21.1	28.4	30.5	19.3	21.2	28.4	30.5	34.6	17.0	19.2	21.1	28.4	17.0	19.2	21.1	28.4	30.5	19.3	21.2	28.4	30.5	34.6
58														58													
420														420													
65														65													
(100)														(100)													

■Machine dimensions and weight

		6466 x 1832 x 2057	6466 x 1832 x 2084	6566 x 1832 x 2057	6566 x 1832 x 2084
Machine dimensions (LxWxH) *4	mm	6466 x 1832 x 2057	6466 x 1832 x 2084	6566 x 1832 x 2057	6566 x 1832 x 2084
(Mold height extension 100 mm)	mm	(6566 x 1832 x 2057)	(6566 x 1832 x 2084)	(6666 x 1832 x 2057)	(6666 x 1832 x 2084)
(Mold height extension 200 mm)	mm	(6666 x 1832 x 2057)	(6666 x 1832 x 2084)	—	—
(Dust prevention cover above toggle (Fixed type))	mm	(6466 x 1832 x 2100)	(6466 x 1832 x 2100)	(6566 x 1832 x 2100)	(6566 x 1832 x 2100)
(Dust prevention cover above toggle (Slide type))	mm	(6466 x 1832 x 2245)	(6466 x 1832 x 2245)	(6566 x 1832 x 2245)	(6566 x 1832 x 2245)
(Safety door wide expansion)	mm	(6466 x 1932 x 2057)	(6466 x 1932 x 2084)	(6566 x 1932 x 2057)	(6566 x 1932 x 2084)
Machine weight	t	11.6	12.6	11.6	12.6

7236 x 1972 x 2102			7336 x 1972 x 2102		
(7336 x 1972 x 2102)			(7436 x 1972 x 2102)		
(7436 x 1972 x 2102)			—		
(7236 x 1972 x 2145)			(7336 x 1972 x 2145)		
(7236 x 1972 x 2285)			(7336 x 1972 x 2285)		
(7236 x 2072 x 2102)			(7336 x 2072 x 2102)		
15.0	15.1	15.7	15.0	15.1	15.7

*1 The max. injection pressure and max. hold pressure are calculated values and represent machine output, not resin pressure.
*2 The max. injection pressure and max. hold pressure are not sustained pressure levels.
*3 The plasticizing rate is shown for a machine equipped with SD Screw.
*4 The total length of the machine is to the front end of the injection unit when mounting the screw of the smallest diameter.
● Specifications are subject to change without notice for performance improvement.

Main Specifications

■Clamping unit

Item	Unit	SE350EV-S-HD	SE385EV-S-HD	SE450EV-S-HD	SE500EV-S-HD	C560 High filling spec (Common to all models)
Clamping system		Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)	The specifications and numerical values are the same as those of each model.
Clamping force (max.)	kN	3500	3850	4500	5000	
Clearance between tie-bars (HxV)	mm	830 x 830	830 x 830	920 x 920	920 x 920	
Platen size (HxV)	mm	1140 x 1140	1140 x 1140	1300 x 1300	1300 x 1300	
Daylight	mm	1425	1475	1625	1675	
(Mold height extension 100 mm)	mm	(1525)	(1575)	(1725)	(1775)	
(Mold height extension 200 mm)	mm	(1625)	—	(1825)	—	
Mold opening stroke	mm	725	775	825	875	
Platen speed max.	mm/s	1346	1438	1109	1167	
Mold height (min. - max.)	mm	350～700	350～700	350～800	350～800	
(Mold height extension 100 mm)	mm	(350～800)	(350～800)	(350～900)	(350～900)	
(Mold height extension 200 mm)	mm	(350～900)	—	(350～1000)	—	
Locating hole diameter	mm	ø150	ø150	ø150	ø150	
(Locating ring inner diameter ϕ120 mm)	mm	(ø120)	(ø120)	(ø120)	(ø120)	
(Locating ring inner diameter ϕ100 mm)	mm	(ø100)	(ø100)	(ø100)	(ø100)	
Ejector system (ejecting points)		Motor driven type (13 points)	Motor driven type (13 points)	Motor driven type (21 points)	Motor driven type (21 points)	
Ejector ejection force	kN	60	60	100	100	
(When ejector force power up is selected)	kN	(100)	(100)	(150)	(150)	
Ejector speed (max.)	mm/s	267	267	267	267	
Ejector stroke	mm	220	220	220	220	
Mold weight (max.)	kg	5200	5200	7500	7500	
(Moving side (max.))	kg	(3450)	(3450)	(5000)	(5000)	

■Injection unit

	Unit	C1100 L				C1600 L					C2200 L					C1100 L				C1600 L					C2200 L				
Screw diameter	mm	45	50	56	63	45	50	56	63	71	50	56	63	71	80	45	50	56	63	45	50	56	63	71	50	56	63	71	80
Injection pressure (max.) *1,*2	MPa	267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
Holding pressure (max.) *1,*2	MPa	267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
Theoretical injection capacity	cm^3	365	510	640	810	365	510	714	904	1148	510	714	997	1266	1608	365	510	640	810	365	510	714	904	1148	510	714	997	1266	1608
Injection weight (GPPS)	g	350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544	350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544
Plasticizing rate *3	kg/h	98	151	192	227	98	151	192	227	230	151	192	227	230	303	98	151	192	227	98	151	192	227	230	151	192	227	230	303
Injection rate	cm^3/s	254	314	394	498	254	314	394	498	633	314	394	498	633	804	254	314	394	498	254	314	394	498	633	314	394	498	633	804
(When high speed filling specification is selected)	cm^3/s	(493)	(608)	(763)	(966)	(493)	(608)	(763)	(966)	(1227)	(608)	(763)	(966)	(1227)	(1558)	(493)	(608)	(763)	(966)	(493)	(608)	(763)	(966)	(1227)	(608)	(763)	(966)	(1227)	(1558)
Screw stroke	mm	230	260	290		230	260	290			260	290	320			230	260	290		230	260	290			260	290	320		
Injection speed (max.)	mm/s	160														160													
(When high speed filling specification is selected)	mm/s	(310)														(310)													
Screw speed (max.)	min^{-1}	250				250			200		250		200			250			200	250			200		250		200		
Number of temperature control zone		6														6													
Heater capacity	kW	17.0	19.2	21.1	28.4	17.0	19.2	21.1	28.4	30.5	19.3	21.2	28.4	30.5	34.6	17.0	19.2	21.1	28.4	17.0	19.2	21.1	28.4	30.5	19.3	21.2	28.4	30.5	34.6
Nozzle contact force	kN	58														58													
Injection unit moving stroke	mm	450														450													
Nozzle protrusion	mm	65														65													
Hopper capacity (When the standard hopper is selected)	L	(100)														(100)													

	Unit	C2200 L					C3000 L				C2200 L					C3000 L			
Screw diameter	mm	50*6	56*6	63	71	80	63	71	80	90	50*6	56*6	63	71	80	63	71	80	90
Injection pressure (max.) *1,*2	MPa	230	230	216	188	148	216	216	187	148	230	230	216	188	148	216	216	187	148
Holding pressure (max.) *1,*2	MPa	230	230	216	188	148	216	216	187	148	230	230	216	188	148	216	216	187	148
Theoretical injection capacity	cm^3	510	714	997	1266	1608	997	1425	1809	2290	510	714	997	1266	1608	997	1425	1809	2290
Injection weight (GPPS)	g	490	685	957	1216	1544	957	1368	1737	2198	490	685	957	1216	1544	957	1368	1737	2198
Plasticizing rate *3	kg/h	151	192	227	230	303	182	230	303	390	151	192	227	230	303	182	230	303	390
Injection rate	cm^3/s	314	394	498	633	804	498	633	804	1017	314	394	498	633	804	498	633	804	1017
(When high speed filling specification is selected)	cm^3/s	(608)	(763)	(966)	(1227)	(1558)	(685)	(871)	(1105)	(1399)	(608)	(763)	(966)	(1227)	(1558)	(685)	(871)	(1105)	(1399)
Screw stroke	mm	260	290	320			320	360			260	290	320			320	360		
Injection speed (max.)	mm/s	160									160								
(When high speed filling specification is selected)	mm/s	(310)					(220)				(310)					(220)			
Screw speed (max.)	min^{-1}	250		200			200				250		200			200			
Number of temperature control zone		6									6								
Heater capacity	kW	19.3	21.2	28.4	30.5	34.6	28.4	30.5	34.6	35.0	19.3	21.2	28.4	30.5	34.6	28.4	30.5	34.6	35.0
Nozzle contact force	kN	58									58								
Injection unit moving stroke	mm	495									495								
Nozzle protrusion	mm	65									65								
Hopper capacity (When the standard hopper is selected)	L	(100)									(100)								

	Unit	C560 Ultra high-pressure spec		C560 Standard pressure spec					
Screw diameter	mm	32	36	28	32	36	40	45	50
Injection pressure (max.) *1,*2	MPa	343	332	284	273	259	274	216	175
Holding pressure (max.) *1,*2	MPa	274	265	227	218	207	219	172	140
Theoretical injection capacity	cm^3	128	162	86	128	162	201	254	314
Injection weight (GPPS)	g	123	156	83	123	156	193	244	301
Plasticizing rate *3	kg/h	37	53	37	53	76	101	136	193
Injection rate	cm^3/s	–	–	–	–	–	–	–	–
(When high speed filling specification is selected)	cm^3/s	402	508	307	402	508	628	795	981
Screw stroke	mm	160		140	160				
Injection speed (max.)	mm/s	–							
(When high speed filling specification is selected)	mm/s	500							
Screw speed (max.)	min^{-1}	400							
Number of temperature control zone		5	6	5					
Heater capacity	kW	7.9	8.4	6.5	7.5	8.5	10.3	11.5	12.6
Nozzle contact force	kN	43							
Injection unit moving stroke	mm	*5							
Nozzle protrusion	mm	30		65					
Hopper capacity (When the standard hopper is selected)	L	(50)							

■Machine dimensions and weight

	Unit																		
Machine dimensions (LxWxH)*4	mm	7446 x 2072 x 2192							7546 x 2072 x 2192							8361 x 2252 x 2292		8461 x 2252 x 2292		The machine dimensions are the same as the values when the minimum injection unit of each model is installed.
(Mold height extension 100 mm)	mm	(7546 x 2072 x 2192)							(7646 x 2072 x 2192)							(8461 x 2252 x 2292)		(8561 x 2252 x 2292)		
(Mold height extension 200 mm)	mm	(7646 x 2072 x 2192)							—							(8561 x 2252 x 2292)		—		
(Dust prevention cover above toggle (Fixed type))	mm	(7446 x 2072 x 2225)							(7546 x 2072 x 2225)							(8361 x 2252 x 2330)		(8461 x 2252 x 2330)		
(Dust prevention cover above toggle (Slide type))	mm	(7446 x 2072 x 2375)							(7546 x 2072 x 2375)							(8361 x 2252 x 2465)		(8461 x 2252 x 2465)		
(Safety door wide expansion)	mm	(7446 x 2172 x 2192)							(7546 x 2172 x 2192)							(8361 x 2352 x 2292)		(8461 x 2352 x 2292)		
Machine weight	t	17.2			17.3			17.9	17.3			17.4			18.0	24.9	25.7	24.9	25.7	*7

*1 The max. injection pressure and max. hold pressure are calculated values and represent machine output, not resin pressure. *2 The max. injection pressure and max. hold pressure are not sustained pressure levels.
*3 The plasticizing rate is shown for a machine equipped with SD Screw. *4 The total length of the machine is to the front end of the injection unit when mounting the screw of the smallest diameter.
*5 The injection unit moving stroke differs as follows;
SE220EV-S-HD and SE250EV-S-HD: 395 mm, SE280EV-S-HD and SE315EV-S-HD: 420 mm, SE350EV-S-HD and SE385EV-S-HD: 450 mm, SE450EV-S-HD and SE500EV-S-HD: 495 mm
*6 Extended linear guides are installed.
*7 The machine mass C560 high filling spec injection unit differs as follows;
SE220EV-S-HD and SE250EV-S-HD: 11.5, SE280EV-S-HD and SE315EV-S-HD: 14.2, SE350EV-S-HD: 16.4, SE385EV-S-HD: 16.5, SE450EV-S-HD and SE500EV-S-HD: 23.4
● Specifications are subject to change without notice for performance improvement.

Main Specifications

Model	SE220EV-S-HD	SE250EV-S-HD
Use application	CT-6 spec.	CT-6 spec.

■Clamping unit

Clamping system		Double toggle (5 points)	Double toggle (5 points)
Clamping force (max.)	kN	2200	2500
Clearance between tie-bars (HxV)	mm	660 x 660	660 x 660
Platen size (HxV)	mm	930 x 930	930 x 930
Daylight	mm	1175	1225
(Mold height extension 100 mm)		(1275)	(1325)
(Mold height extension 200 mm)		(1375)	—
Mold opening stroke	mm	575	625
Platen speed max.	mm/s	1349	1431
Mold height (min. - max.)	mm	200～600	200～600
(Mold height extension 100 mm)		(200～700)	(200～700)
(Mold height extension 200 mm)		(200～800)	—
Locating hole diameter	mm	φ120	φ120
(Locating ring inner diameter φ120 mm)		—	—
(Locating ring inner diameter φ100 mm)		(φ100)	(φ100)
Ejector system (ejecting points)		13 points	13 points
Ejector ejection force	kN	60	60
(When ejector force power up is selected)		(100)	(100)
Ejector speed (max.)	mm/s	267	267
Ejector stroke	mm	220	220
Mold weight (max.)	kg	2800	2800
(Moving side (max.))		(1850)	(1850)

■Injection unit

		C750				C1100				C750				C1100			
		M				L				M				L			
Screw diameter	mm	36	40	45	50	45	50	56	63	36	40	45	50	45	50	56	63
Injection pressure (max.) *1,*2	MPa	259	274	215	174	267	230	187	148	259	274	215	174	267	230	187	148
Holding pressure (max.) *1,*2	MPa	259	274	215	174	267	230	187	148	259	274	215	174	267	230	187	148
Theoretical injection capacity (CT-6 STD (High-rotation))	cm^3	162	201	254	314	329	406	510	645	162	201	254	314	329	406	510	645
Theoretical injection capacity (High-capacity mode)	cm^3	162	201	337	416	365	510	640	810	162	201	337	416	365	510	640	810
Injection weight (GPPS) (CT-6 STD (High-rotation))	g	156	193	244	302	316	390	489	619	156	193	244	302	316	390	489	619
Injection weight (GPPS) (High-capacity mode)	g	156	193	323	399	350	490	614	778	156	193	323	399	350	490	614	778
Plasticizing rate *3 (CT-6 STD (High-rotation))	kg/h	76	101	136	193	149	202	246	290	76	101	136	193	149	202	246	290
Plasticizing rate *3 (High-capacity mode)	kg/h	48	63	85	121	93	126	171	227	48	63	85	121	93	126	171	227
Injection rate	cm^3/s	335	414	524	647	493	608	763	966	335	414	524	647	493	608	763	966
Screw stroke (CT-6 STD (High-rotation))	mm	160		160		207	207			160		160		207	207		
Screw stroke (High-capacity mode)	mm	160		212		230	260			160		212		230	260		
Injection speed (max.)	mm/s	330				310				330				310			
Screw speed (max.) (CT-6 STD (High-rotation))	min^{-1}	400				400	360	320		400				400	360	320	
Screw speed (max.) (High-capacity mode)	min^{-1}	250				250	250	250		250				250	250	250	
Number of temperature control zone		5				6				5				6			
Heater capacity	kW	8.9	10.8	11.4	12.6	22.1	25.0	29.4	35.3	8.9	10.8	11.4	12.6	22.1	25.0	29.4	35.3
Nozzle contact force	kN	43				58				43				58			
Injection unit moving stroke	mm	395								395							
Nozzle protrusion	mm	65								65							
Hopper capacity (When the standard hopper is selected)	L	(50)				(100)				(50)				(100)			

■Machine dimensions and weight

Machine dimensions (LxWxH) *4	mm	6466 x 1832 x 2057	6466 x 1832 x 2084	6566 x 1832 x 2057	6566 x 1832 x 2084
(Mold height extension 100 mm)		(6566 x 1832 x 2057)	(6566 x 1832 x 2084)	(6666 x 1832 x 2057)	(6666 x 1832 x 2084)
(Mold height extension 200 mm)		(6666 x 1832 x 2057)	(6666 x 1832 x 2084)	—	—
(Dust prevention cover above toggle (Fixed type))		(6466 x 1832 x 2100)	(6466 x 1832 x 2100)	(6566 x 1832 x 2100)	(6566 x 1832 x 2100)
(Dust prevention cover above toggle (Slide type))		(6466 x 1832 x 2245)	(6466 x 1832 x 2245)	(6566 x 1832 x 2245)	(6566 x 1832 x 2245)
(Safety door wide expansion)		(6466 x 1932 x 2057)	(6466 x 1932 x 2084)	(6566 x 1932 x 2057)	(6566 x 1932 x 2084)
Machine weight	t	11.8	12.9	11.8	12.9

*1 The max. injection pressure and max. hold pressure are calculated values and represent machine output, not resin pressure.
*2 The max. injection pressure and max. hold pressure are not sustained pressure levels.
*3 The plasticizing rate is shown for a machine equipped with SM Screw.
*4 The total length of the machine is to the front end of the injection unit when mounting the screw of the smallest diameter.

Model	SE280EV-S-HD	SE315EV-S-HD
Use application	CT-6 spec.	CT-6 spec.

■Clamping unit

Clamping system		Double toggle (5 points)	Double toggle (5 points)
Clamping force (max.)	kN	2800	3150
Clearance between tie-bars (HxV)	mm	730 x 730	730 x 730
Platen size (HxV)	mm	1020 x 1020	1020 x 1020
Daylight	mm	1275	1325
(Mold height extension 100 mm)		(1375)	(1425)
(Mold height extension 200 mm)		(1475)	—
Mold opening stroke	mm	625	675
Platen speed max.	mm/s	1298	1394
Mold height (min. - max.)	mm	300～650	300～650
(Mold height extension 100 mm)		(300～750)	(300～750)
(Mold height extension 200 mm)		(300～850)	—
Locating hole diameter	mm	φ150	φ150
(Locating ring inner diameter φ120 mm)		(φ120)	(φ120)
(Locating ring inner diameter φ100 mm)		(φ100)	(φ100)
Ejector system (ejecting points)		13 points	13 points
Ejector ejection force	kN	60	60
(When ejector force power up is selected)		(100)	(100)
Ejector speed (max.)	mm/s	267	267
Ejector stroke	mm	220	220
Mold weight (max.)	kg	3800	3800
(Moving side (max.))		(2500)	(2500)

■Injection unit

		C1100				C1600					C2200				C1100				C1600					C2200				
		L				L					L				L				L					L				
Screw diameter	mm	45	50	56	63	45	50	56	63	71	50	56	63	71	80	45	50	56	63	45	50	56	63	71	50	56	63	71	80
Injection pressure (max.) *1,*2	MPa	267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
Holding pressure (max.) *1,*2	MPa	267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
Theoretical injection capacity (CT-6 STD (High-rotation))	cm^3	329	406	510	645	329	406	562	711	902	406	561	773	982	1246	329	406	510	645	329	406	562	711	902	406	561	773	982	1246
Theoretical injection capacity (High-capacity mode)	cm^3	365	510	640	810	365	510	714	904	1148	510	714	977	1266	1608	365	510	640	810	365	510	714	904	1148	510	714	977	1266	1608
Injection weight (GPPS) (CT-6 STD (High-rotation))	g	316	390	489	619	316	390	539	682	866	390	539	742	943	1196	316	390	489	619	316	390	539	682	866	390	539	742	943	1196
Injection weight (GPPS) (High-capacity mode)	g	350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544	350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544
Plasticizing rate *3 (CT-6 STD (High-rotation))	kg/h	149	202	246	290	134	182	246	290	327	162	219	290	327	343	149	202	246	290	134	182	246	290	327	162	219	290	327	343
Plasticizing rate *3 (High-capacity mode)	kg/h	93	126	171	227	93	126	171	227	234	126	171	227	234	275	93	126	171	227	93	126	171	227	234	126	171	227	234	275
Injection rate	cm^3/s	493	608	763	966	493	608	763	966	1227	608	763	966	1227	1558	493	608	763	966	493	608	763	966	1227	608	763	966	1227	1558
Screw stroke (CT-6 STD (High-rotation))	mm	207	207			207	207	228			207	228	248			207	207			207	207	228			207	228	248		
Screw stroke (High-capacity mode)	mm	230	260			230	260	290			260	290	320			230	260			230	260	290			260	290	320		
Injection speed (max.)	mm/s	310														310													
Screw speed (max.) (CT-6 STD (High-rotation))	min^{-1}	400	360	320		360		320	280		320		280	250		400	360	320		360		320	280		320		280	250	
Screw speed (max.) (High-capacity mode)	min^{-1}	250	250	250		250		250	200		250		200	200		250	250	250		250		250	200		250		200	200	
Number of temperature control zone		6														6													
Heater capacity	kW	22.1	25.0	29.4	35.3	22.1	25.0	29.4	35.3	40.6	25.1	29.5	35.3	40.6	43.8	22.1	25.0	29.4	35.3	22.1	25.0	29.4	35.3	40.6	25.1	29.5	35.3	40.6	43.8
Nozzle contact force	kN	58														58													
Injection unit moving stroke	mm	420														420													
Nozzle protrusion	mm	65														65													
Hopper capacity (When the standard hopper is selected)	L	(100)														(100)													

■Machine dimensions and weight

Machine dimensions (LxWxH) *4	mm	7236 x 1972 x 2102			7336 x 1972 x 2102		
(Mold height extension 100 mm)		(7336 x 1972 x 2102)			(7436 x 1972 x 2102)		
(Mold height extension 200 mm)		(7436 x 1972 x 2102)			—		
(Dust prevention cover above toggle (Fixed type))		(7236 x 1972 x 2145)			(7336 x 1972 x 2145)		
(Dust prevention cover above toggle (Slide type))		(7236 x 1972 x 2285)			(7336 x 1972 x 2285)		
(Safety door wide expansion)		(7236 x 2072 x 2102)			(7336 x 2072 x 2102)		
Machine weight	t	15.3	15.4	16.1	15.3	15.4	16.1

● Specifications are subject to change without notice for performance improvement.
◇ This series originally comply to safety standards of Japan, the US, in addition, also China GB22530 and KC mark.

Main Specifications

Model	SE350EV-S-HD	SE385EV-S-HD
Use application	CT-6 spec.	CT-6 spec.

■Clamping unit

Clamping system		Double toggle (5 points)	Double toggle (5 points)
Clamping force (max.)	kN	3500	3850
Clearance between tie-bars (HxV)	mm	830 x 830	830 x 830
Platen size (HxV)	mm	1140 x 1140	1140 x 1140
Daylight	mm	1425	1475
(Mold height extension 100 mm)		(1525)	(1575)
(Mold height extension 200 mm)		(1625)	—
Mold opening stroke	mm	725	775
Platen speed max.	mm/s	1346	1438
Mold height (min. - max.)	mm	350～700	350～700
(Mold height extension 100 mm)		(350～800)	(350～800)
(Mold height extension 200 mm)		(350～900)	—
Locating hole diameter	mm	φ150	φ150
(Locating ring inner diameter φ120 mm)		(φ120)	(φ120)
(Locating ring inner diameter φ100 mm)		(φ100)	(φ100)
Ejector system (ejecting points)		13 points	13 points
Ejector ejection force	kN	60	60
(When ejector force power up is selected)		(100)	(100)
Ejector speed (max.)	mm/s	267	267
Ejector stroke	mm	220	220
Mold weight (max.)	kg	5200	5200
(Moving side (max.))		(3450)	(3450)

■Injection unit

			C1100				C1600					C2200					C1100				C1600					C2200				
			L				L					L					L				L					L				
Screw diameter		mm	45	50	56	63	45	50	56	63	71	50	56	63	71	80	45	50	56	63	45	50	56	63	71	50	56	63	71	80
Injection pressure (max.) *1,*2		MPa	267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
Holding pressure (max.) *1,*2		MPa	267	230	187	148	267	230	230	188	148	230	230	216	188	148	267	230	187	148	267	230	230	188	148	230	230	216	188	148
Theoretical injection capacity	CT-6 STD (High-rotation)	cm^3	329	406	510	645	329	406	562	711	902	406	561	773	982	1246	329	406	510	645	329	406	562	711	902	406	561	773	982	1246
	High-capacity mode		365	510	640	810	365	510	714	904	1148	510	714	977	1266	1608	365	510	640	810	365	510	714	904	1148	510	714	977	1266	1608
Injection weight (GPPS)	CT-6 STD (High-rotation)	g	316	390	489	619	316	390	539	682	866	390	539	742	943	1196	316	390	489	619	316	390	539	682	866	390	539	742	943	1196
	High-capacity mode		350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544	350	490	614	778	350	490	685	867	1102	490	685	957	1216	1544
Plasticizing rate *3	CT-6 STD (High-rotation)	kg/h	149	202	246	290	134	182	246	290	327	162	219	290	327	343	149	202	246	290	134	182	246	290	327	162	219	290	327	343
	High-capacity mode		93	126	171	227	93	126	171	227	234	126	171	227	234	275	93	126	171	227	93	126	171	227	234	126	171	227	234	275
Injection rate		cm^3/s	493	608	763	966	493	608	763	966	1227	608	763	966	1227	1558	493	608	763	966	493	608	763	966	1227	608	763	966	1227	1558
Screw stroke	CT-6 STD (High-rotation)	mm	207		207		207	207		228		207	228		248		207		207		207	207		228		207	228		248	
	High-capacity mode		230		260		230	260		290		260	290		320		230		260		230	260		290		260	290		320	
Injection speed (max.)		mm/s	310														310													
Screw speed (max.)	CT-6 STD (High-rotation)	min^{-1}	400		360	320		360		320	280		320		280	250	400		360	320		360		320	280		320		280	250
	High-capacity mode		250		250	250		250		250	200		250		200	200	250		250	250		250		250	200		250		200	200
Number of temperature control zone			6														6													
Heater capacity		kW	22.1	25.0	29.4	35.3	22.1	25.0	29.4	35.3	40.6	25.1	29.5	35.3	40.6	43.8	22.1	25.0	29.4	35.3	22.1	25.0	29.4	35.3	40.6	25.1	29.5	35.3	40.6	43.8
Nozzle contact force		kN	58														58													
Injection unit moving stroke		mm	450														450													
Nozzle protrusion		mm	65														65													
Hopper capacity (When the standard hopper is selected)		L	(100)														(100)													

■Machine dimensions and weight

Machine dimensions (LxWxH) *4	mm	7446 x 2072 x 2192			7546 x 2072 x 2192		
(Mold height extension 100 mm)		(7546 x 2072 x 2192)			(7646 x 2072 x 2192)		
(Mold height extension 200 mm)		(7646 x 2072 x 2192)			—		
(Dust prevention cover above toggle (Fixed type))		(7446 x 2072 x 2225)			(7546 x 2072 x 2225)		
(Dust prevention cover above toggle (Slide type))		(7446 x 2072 x 2375)			(7546 x 2072 x 2375)		
(Safety door wide expansion)		(7446 x 2172 x 2192)			(7546 x 2172 x 2192)		
Machine weight	t	17.6	17.8	18.4	17.7	17.9	18.5

*1 The max. injection pressure and max. hold pressure are calculated values and represent machine output, not resin pressure.
*2 The max. injection pressure and max. hold pressure are not sustained pressure levels.
*3 The plasticizing rate is shown for a machine equipped with SM Screw.
*4 The total length of the machine is to the front end of the injection unit when mounting the screw of the smallest diameter.
*5 Extended linear guides are installed.

Model	SE450EV-S-HD	SE500EV-S-HD
Use application	CT-6 spec.	CT-6 spec.

■Clamping unit

Clamping system		Double toggle (5 points)	Double toggle (5 points)
Clamping force (max.)	kN	4500	5000
Clearance between tie-bars (HxV)	mm	920 x 920	920 x 920
Platen size (HxV)	mm	1300 x 1300	1300 x 1300
Daylight	mm	1625	1675
(Mold height extension 100 mm)		(1725)	(1775)
(Mold height extension 200 mm)		(1825)	—
Mold opening stroke	mm	825	875
Platen speed max.	mm/s	1109	1167
Mold height (min. - max.)	mm	350～800	350～800
(Mold height extension 100 mm)		(350～900)	(350～900)
(Mold height extension 200 mm)		(350～1000)	—
Locating hole diameter	mm	φ150	φ150
(Locating ring inner diameter φ120 mm)		(φ120)	(φ120)
(Locating ring inner diameter φ100 mm)		(φ100)	(φ100)
Ejector system (ejecting points)		21 points	21 points
Ejector ejection force	kN	100	100
(When ejector force power up is selected)		(150)	(150)
Ejector speed (max.)	mm/s	267	267
Ejector stroke	mm	220	220
Mold weight (max.)	kg	7500	7500
(Moving side (max.))		(5000)	(5000)

■Injection unit

			C2200					C3000			C2200					C3000		
			L					L			L					L		
Screw diameter		mm	50*5	56*5	63	71	80	63	71	80	50*5	56*5	63	71	80	63	71	80
Injection pressure (max.) *1,*2		MPa	230	230	216	188	148	216	216	187	230	230	216	188	148	216	216	187
Holding pressure (max.) *1,*2		MPa	230	230	216	188	148	216	216	187	230	230	216	188	148	216	216	187
Theoretical injection capacity	CT-6 STD (High-rotation)	cm^3	406	561	773	982	1246	773	1140	1448	406	561	773	982	1246	773	1140	1448
	High-capacity mode		510	714	997	1266	1608	997	1425	1809	510	714	997	1266	1608	997	1425	1809
Injection weight (GPPS)	CT-6 STD (High-rotation)	g	390	539	742	943	1196	742	1095	1390	390	539	742	943	1196	742	1095	1390
	High-capacity mode		490	685	957	1216	1544	957	1368	1737	490	685	957	1216	1544	957	1368	1737
Plasticizing rate *3	CT-6 STD (High-rotation)	kg/h	162	219	290	327	343	254	327	343	162	219	290	327	343	254	327	343
	High-capacity mode		126	171	227	234	275	181	234	275	126	171	227	234	275	181	234	275
Injection rate		cm^3/s	608	763	966	1227	1558	685	871	1105	608	763	966	1227	1558	685	871	1105
Screw stroke	CT-6 STD (High-rotation)	mm	207	228	248			248	288		207	228	248			248	288	
	High-capacity mode		260	290	320			320	360		260	290	320			320	360	
Injection speed (max.)		mm/s	310					220			310					220		
Screw speed (max.)	CT-6 STD (High-rotation)	min^{-1}	320		280	250		280	250		320		280	250		280	250	
	High-capacity mode		250		200	200		200	200		250		200	200		200	200	
Number of temperature control zone			6								6							
Heater capacity		kW	25.1	29.5	35.3	40.6	43.8	35.3	40.6	43.8	25.1	29.5	35.3	40.6	43.8	35.3	40.6	43.8
Nozzle contact force		kN	58								58							
Injection unit moving stroke		mm	495								495							
Nozzle protrusion		mm	65								65							
Hopper capacity (When the standard hopper is selected)		L	(100)								(100)							

■Machine dimensions and weight

Machine dimensions (LxWxH) *4	mm	8361 x 2252 x 2292			8461 x 2252 x 2292		
(Mold height extension 100 mm)		(8461 x 2252 x 2292)			(8561 x 2252 x 2292)		
(Mold height extension 200 mm)		(8561 x 2252 x 2292)			—		
(Dust prevention cover above toggle (Fixed type))		(8361 x 2252 x 2330)			(8461 x 2252 x 2330)		
(Dust prevention cover above toggle (Slide type))		(8361 x 2252 x 2465)			(8461 x 2252 x 2465)		
(Safety door wide expansion)		(8361 x 2352 x 2292)			(8461 x 2352 x 2292)		
Machine weight	t	25.3		26.0	25.3		26.0

● Specifications are subject to change without notice for performance improvement.
◇ This series originally comply to safety standards of Japan, the US, in addition, also China GB22530 and KC mark.