

Global Network



Sumitomo Heavy Industries, Ltd.
Industrial Machinery Segment, Plastics Machinery Div.

● TOKYO	Sumitomo Heavy Industries, Ltd. Industrial Machinery Segment, Plastics Machinery Div., Global Sales Dept.	Tel: +81-3-6737-2576
● CHIBA	Sumitomo Heavy Industries, Ltd. Chiba Works / Technology Center	Tel: +81-43-420-1471
● U.S.A.	Sumitomo (SHI) Demag Plastics Machinery North America, Inc. Atlanta Office / Technology Center	Tel: +1-770-447-5430
	Sumitomo (SHI) Demag Plastics Machinery North America, Inc. Cleveland Office	Tel: +1-440-876-8960
	Sumitomo (SHI) Demag Plastics Machinery North America, Inc. Chicago Office / Facility and Tech Center	Tel: +1-847-947-9569
	Sumitomo (SHI) Demag Plastics Machinery North America, Inc. Anaheim Office / Training and Demo Center	
● MEXICO	SHI Plastics Machinery de Mexico, S.A. DE. C.V. Monterrey Office	Tel: +52-81-8356-1714, -1720, -1726
	SHI Plastics Machinery de Mexico, S.A. DE. C.V. Leon Office	Tel: +52-477-179-1730
● BRAZIL	Sumitomo (SHI) Demag do Brasil Comercio de Máquinas para Plásticos Ltda.	Tel: +55-11-4403-9286
● GERMANY	Sumitomo (SHI) Demag Plastics Machinery GmbH (Schwaig)	Tel: +49-911-5061-0
	Sumitomo (SHI) Demag Plastics Machinery GmbH (Roßleben-Wiehe)	Tel: +49-34672-97-0
● UNITED KINGDOM	Sumitomo (SHI) Demag Plastics Machinery (UK) Ltd.	Tel: +44-1296-739-500
● FRANCE	Sumitomo (SHI) Demag Plastics Machinery (France) S.A.S.	Tel: +33-1-60-33-20-10
● SPAIN / PORTUGAL	Sumitomo (SHI) Demag Plastics Machinery España	Tel: +34-96-111-63-11
● POLAND	Sumitomo (SHI) Demag Plastics Machinery Polska Sp. z o.o.	Tel: +48-34-370-95-40
● AUSTRIA	Sumitomo (SHI) Demag Plastics Machinery GmbH (Branch Austria)	Tel: +43-664-2311357
● HUNGARY	Sumitomo (SHI) Demag Plastics Machinery Hungária Kft	Tel: +36-70-332-7869
● ITALY	Sumitomo (SHI) Demag Plastics Machinery (Italia)	Tel: +39-011-95-95-057
● RUSSIA	JSC Sumitomo (SHI) Demag Plastics Machinery	Tel: +7-495-937-97-64
● CZECH / SLOVAKIA	Sumitomo (SHI) Demag Plastics Machinery Česko spol. s.r.o.	Tel: +420-296-226-210
● IRELAND	Sumitomo (SHI) Demag Plastics Machinery Ltd.	Tel: +353-86-8254731
● SHANGHAI	Sumitomo (SHI) Plastics Machinery (Shanghai) Co., Ltd.	Tel: +86-21-3462-7556
● DALIAN	Sumitomo (SHI) Plastics Machinery (Shanghai) Co., Ltd. Dalian Office	Tel: +86-411-8764-8052
● TIANJIN	Sumitomo (SHI) Plastics Machinery (Shanghai) Co., Ltd. Tianjin Office	Tel: +86-22-5871-5537
● SUZHOU	Sumitomo (SHI) Plastics Machinery (Shanghai) Co., Ltd. Suzhou Office / Technical Center	Tel: +86-512-6632-1760
● NINGBO	Ningbo Sumiju Machinery, Ltd.	Tel: +86-574-2689-0162
	Demag Plastics Machinery (Ningbo) Co., Ltd.	Tel: +86-574-2690-6600
● DONGGUAN	Dongguan SHI Plastics Machinery Ltd. / Technical Center	Tel: +86-769-8533-6071
● TAIWAN	SHI Plastics Machinery (Taiwan) Inc.	Tel: +886-2-2831-4500
	SHI Plastics Machinery (Taiwan) Inc. Taichung Office	Tel: +886-4-2358-7334
● KOREA	SHI Plastics Machinery (Korea) Co., Ltd.	Tel: +82-2-757-8656
	SHI Plastics Machinery (Korea) Co., Ltd. Southern Office	
● SINGAPORE	SHI Plastics Machinery (S) Pte., Ltd. / Technology Center	Tel: +65-6779-7544
● THAILAND	SHI Plastics Machinery (Thailand) Ltd. / Technology Center	Tel: +66-2-747-4053, -4054, -4055, -4056
	SHI Plastics Machinery (Thailand) Ltd. South Office	
● MALAYSIA	SHI Plastics Machinery (Malaysia) SDN BHD	Tel: +60-3-7958-2079, -2081
	SHI Plastics Machinery (Malaysia) SDN BHD Penang Office	Tel: +60-4-604-397-5725
● VIETNAM	SHI Plastics Machinery (Vietnam) LLC	Tel: +84-24-3728-0105
	SHI Plastics Machinery (Vietnam) LLC Ho Chi Minh Branch	Tel: +84-8-3514-6645
● INDONESIA	PT. SHI Plastics Machinery (Indonesia)	Tel: +62-21-829-3872, -3873
● PHILIPPINES	SHI Plastics Machinery (Phils) Inc.	Tel: +63-2-8845-0877, -8844-0632
● INDIA	SHI Plastics Machinery (India) Private Ltd.	Tel: +91-124-2217056, -64
	SHI Plastics Machinery (India) Private Ltd. Chennai Office	Tel: +91-124-2217056, -64

Double-shot

All-electric Double-shot Injection Molding Machine



Double-shot

All-electric Double-shot Injection Molding Machine



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.

Lineup	
SE30DU2-CI	(290kN)
SE75DU2-CI	(730kN)
SE130DU2-CI	(1270kN)
SE230HS2-CI	(2250kN)
SE280HS2-CI	(2740kN)
SE400HS2-CI	(4000kN)

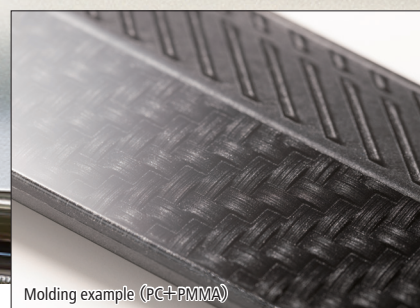
www.shi.co.jp/plastics/



Pursuing greater possibilities of parts with the Double-shot

Enhancing product added-value by combining different materials

Two-material molding allows molded parts of multiple colors or differing materials to be produced in a single process. This approach opens the door to higher levels of design aesthetics and functionality that cannot be obtained from single-material molding. Moreover, because it noticeably improves production efficiency by reducing the number of components, processing steps and required floor space, two-material molding enhances the added-value of products.



Molding example (PC+PMMA)

Molding performance and lineup matched to manufacturer needs

Specialized for two-material molding, our Double-shot series solves productivity, stability and maintainability issues by integrating a number of highly reliable proprietary technologies into an all-electric machine with an established reputation for precision and stability. With clamping forces ranging from 290 kN to the world's highest* 4,000 kN class and a wide selection of modules to choose from, we have a solution for most any manufacturer's needs.

* World's largest class of all-electric double-shot molding machines

Manufacturer needs and solutions

High productivity	Toggle clamping system	Our highly reliable toggle technology accumulated over the years realizes fast, assured mold opening and closing.
	Rotary ejector rod	The mold rotary unit uses a servomotor drive and mechanical stop to ensure no time is wasted while rotating. At the same time, it keeps molding stable over repetitious production cycles.
	Rotation speed	
	Rotation precision	
Stable precision molding	Double Center Press Platens	Tried-and-trusted components are on board. It is designed and built to answer the growing needs for thin-wall filling.
	SKII control	
	Direct drive	
	High-speed injection	
Filling for thin-wall parts	Flash mode/control	
Mold support	Wide platen	The great freedom of mold design and mountable weight makes it possible to produce longer parts.
	Proprietary temperature control piping	
Ease of setup/maintenance	Independently turning plasticizing units	Features for temperature control piping for the rotary unit, screw cleaning and F/R single display are available.
	Temperature control piping for rotary unit	
	N9 controller	



SE30DU2-CI SE75DU2-CI SE130DU2-CI SE230HS2-CI SE280HS2-CI SE400HS2-CI

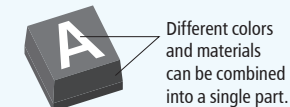
World's largest class of all-electric double-shot molding machines

Solutions made possible by two-material molding

If you consider the vast range of material combinations available, the imaginable solutions offered by two-material molding are virtually endless. Our double-shot machines enable all kinds of molding possibilities and provide manufacturers the means to achieve high value-added production.

Variety of applications

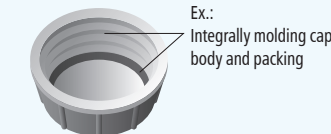
Combining different colors or grades of the same material or different materials entirely opens the door to new applications in molding.



Different colors and materials can be combined into a single part.

Functionality

Molded parts can be given properties of resins with conflicting elements like improved sealing or resistance.



Ex.: Integrally molding cap body and packing

Dimensional accuracy

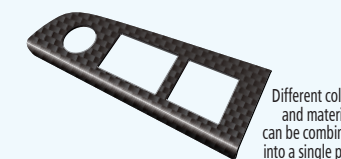
Since parts can be designed without consideration for downstream processing, dimensional variation caused by shrinkage is reduced. Moreover, improved dimensional stability can be expected in production of thinner-wall parts.



Even easily mismatching structures ... can be accurately molded.

Design aesthetics

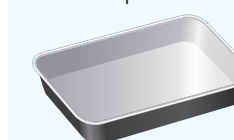
Parts with notable design features such as texture and color can be made.



Different colors and materials can be combined into a single part.

Durability

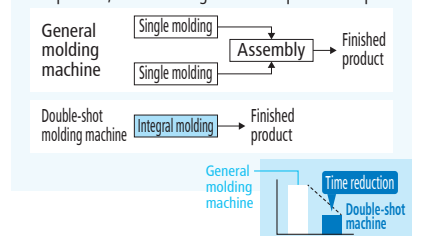
Strength and resistance to heat, weather and wear will be improved because the appropriate resin can be placed in the appropriate location.



Ex.: Tray Shock-absorbing material is used on the outside to enhance durability.

Production efficiency

Two-material molding noticeably improves production efficiency by reducing the number of processing steps, components, manufacturing time and required floor space.



Molded part examples

Elastomers



Translucent/Transparent resins



Advantages of parallel type double-shot machine

Compared to vertically, horizontally and diagonally arranged layouts, there are many advantages to positioning injection units in parallel.

Space savings

Double-shot machine with injection units arranged in parallel requires less space than vertically arranged type machine, which needs the height for the second injection unit, or horizontally arranged (right-angle layout) type machine, which requires twice the floor space.

Suited for wide variety, small lot production

Because not only hot runners but cold runners can be used, double-shot machines make it easy to produce a wide variety of parts in small quantities.

Easy setup

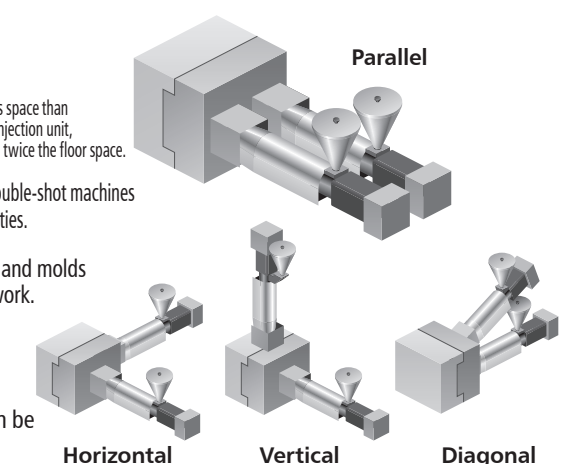
Use of integrated mold make it easy to align nozzles and molds so that injection units do not hamper maintenance work.

Shorter cycle times

More effective features to shorten cycle time is incorporated into machines.

Cleanroom compatible

Safety door is hermetically sealed and gases can be easily recovered from the purging cover.

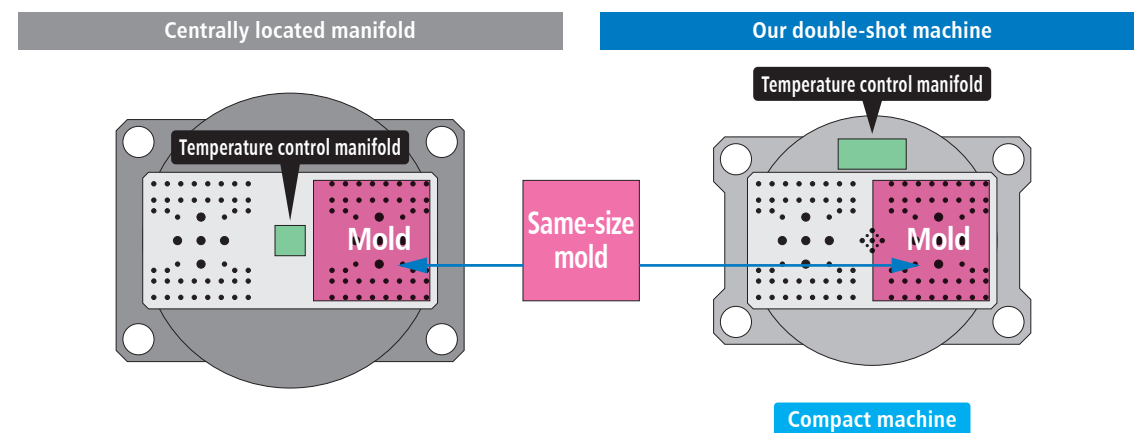


Horizontal Vertical Diagonal

Production efficiency spawned from the unique design

Piping routed to support greater freedom of molds

Since the manifold is not placed in the center of the rotary table, there will be no wasted space. This allows to mount the same size mold to smaller machines and leads to the achievement of "big jobs with a small machine" through an efficient mold use.



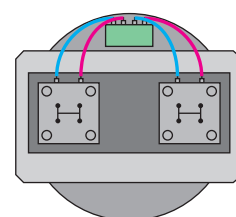
Temperature control piping on movable side for mold rotation

Hoses are routed through the cableveyor that runs along the outer edges of the rotary table to supply cooling water, mold heater and core pull (pneumatic or hydraulic) to the movable side mold. This shortens mold cooling time, improves transcription with heater and allows use of molds with core pull. Moreover, it facilitates hose maintenance and replacement.

Sumitomo's unique temperature control manifold to not get in the way during production setup.



The cableveyor makes hose maintenance quick and easy.



Piping lines are selectable according to application.

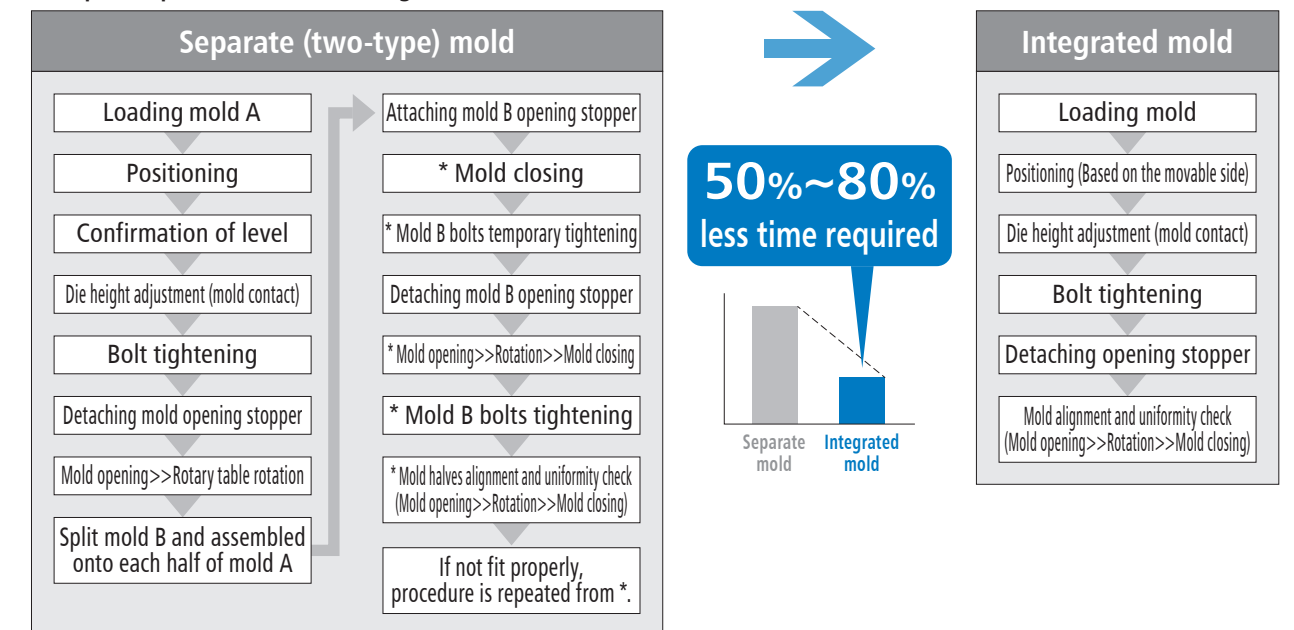
SE30DU2-CI	1 line	
SE75DU2-CI	2 lines	*4 lines
SE130DU2-CI	2 lines	*4 lines
SE230HS2-CI	2&4 lines	*8 lines
SE280HS2-CI	2&4 lines	*8 lines
SE400HS2-CI	2&4&6&8 lines	

* Available upon request

Shorter setup time with integrated mold

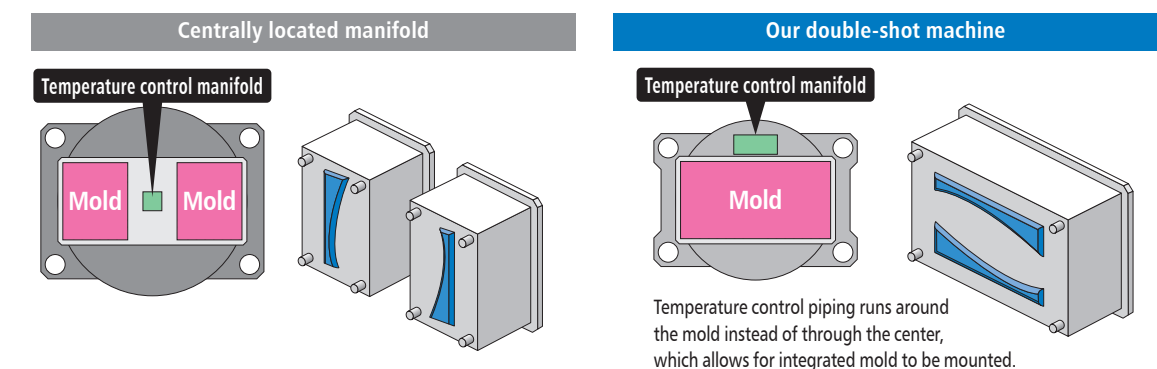
Thanks to an original design, our double-shot machine can easily mount large integrated mold. Compared to separate molds, integrated molds require considerably less time to set up, which translates into more efficient production operations.

Example comparison of mold mounting



Long parts available thanks to wider range of mountable molds

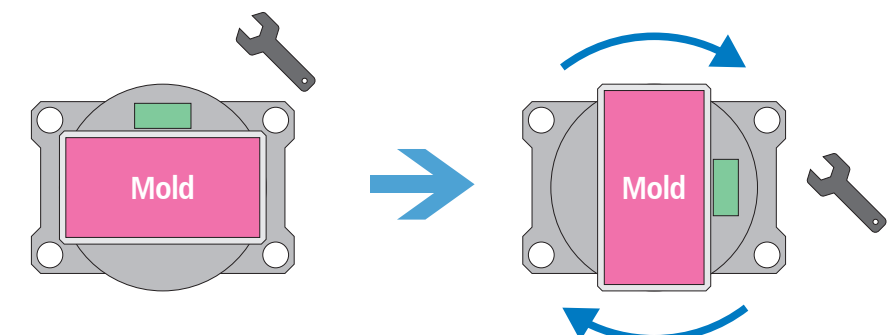
An original temperature control manifold and wider tie-bar clearance enable large mold to be mounted. It enables the molding of long parts, which was not possible with the separate (two-part) mold.



90° rotation stop feature greatly improves workability

SE400HS2-CI

The hard-to-reach top manifold faces the operator's side, making it easier to tighten bolts and perform other works. This greatly improves the workability on the large class machine SE400HS2-CI.



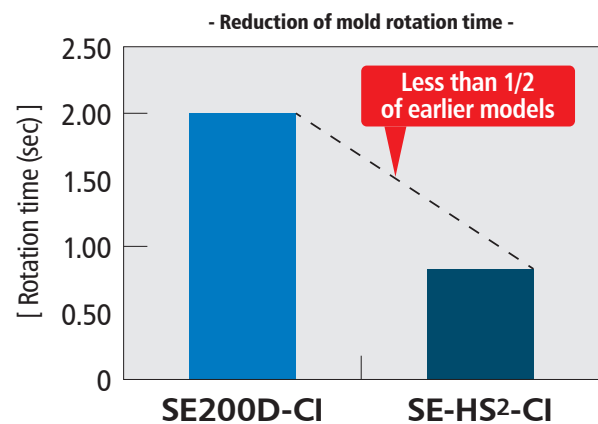
Features designed for cycle time reduction

Greatly shortened mold rotation time

Rotating time has been reduced to less than half of the earlier model SE200D-CI, leading to significant improvement in productivity.

- Mold rotation time -

SE30DU2-CI	0.5sec
SE75DU2-CI	0.8sec
SE130DU2-CI	0.6sec
SE230HS2-CI	0.8sec
SE280HS2-CI	0.8sec
SE400HS2-CI	1.5sec

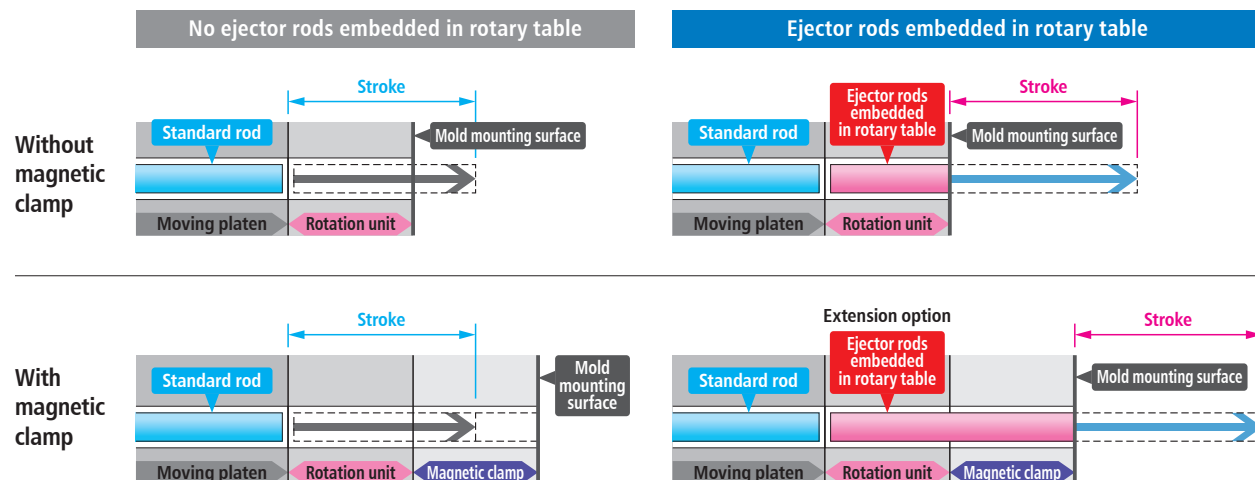


Ejector rods embedded in the rotary table

The ejection stroke can be effectively utilized to shorten the molding cycle.

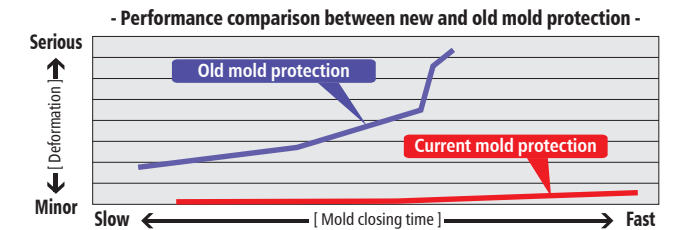
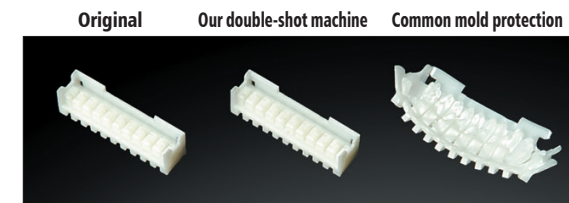
SE30DU2-CI
SE75DU2-CI
SE130DU2-CI

Optional
PAT. pend. in Japan



Fine-tune individual control before/after mold rotation

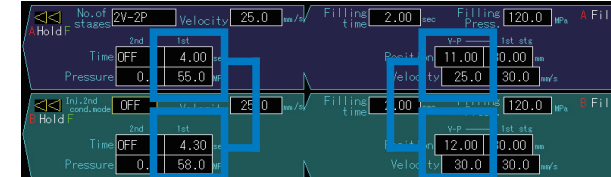
Even with two perfectly identical two-material molds, there is actually a difference after rotating the mold. With our double-shot machine, molding inaccuracies of the sort have been improved by making it possible to individually control conditions before and after the rotation. Moreover, because torque is meticulously detected, molds are subjected to less stress, which relieves the worries of damaging expensive molds and allows to extend the maintenance interval.



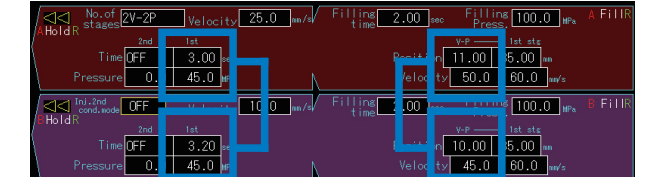
Example of mold protection settings



1st shot (front) conditions for each mold (A/B)



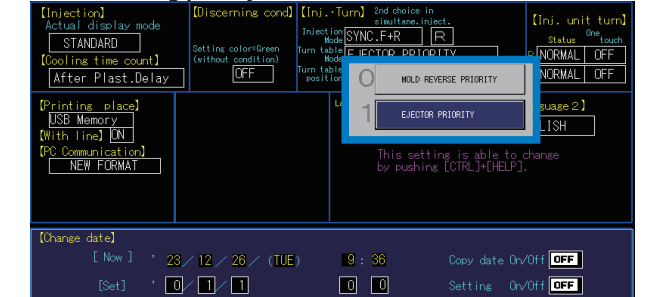
2nd shot (rear) conditions for each mold (A/B)



Rotating mode setting



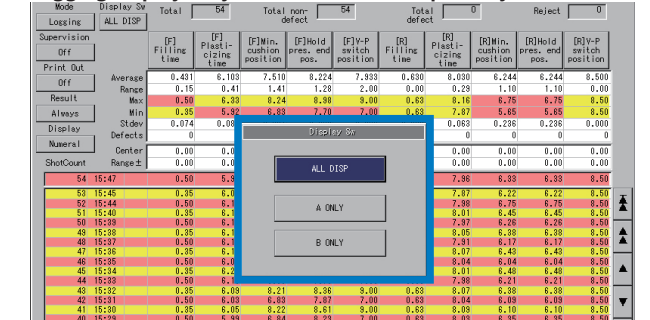
Rotation timing priority



Applicable to various filling patterns



Logging display easy to monitor molds separately

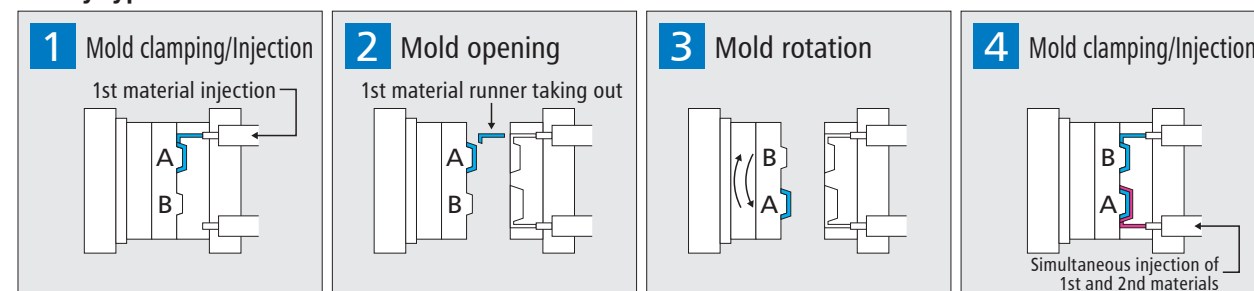


Capability for a wide range of molding processes and special resins

Diverse molding processes support molding complex shaped parts

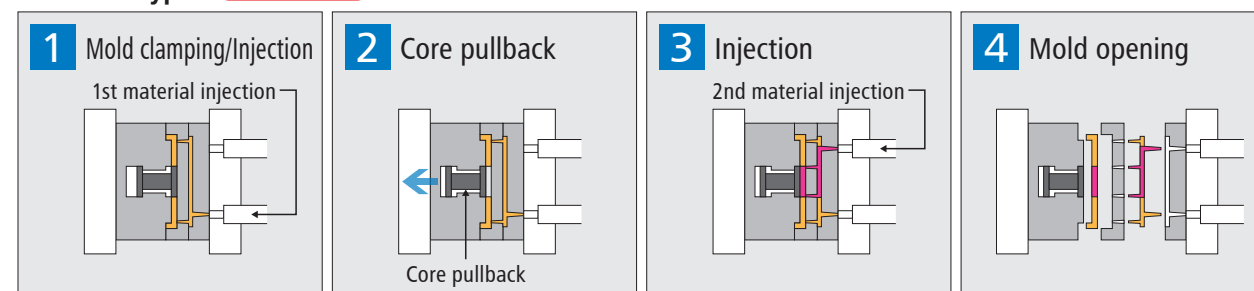
The double-shot machine easily handles complex shaped parts by rotary type, core back type and rotary + core back type injection molding. Besides the two-material molding, the series can also be applied for laminate and insert molding.

Rotary type



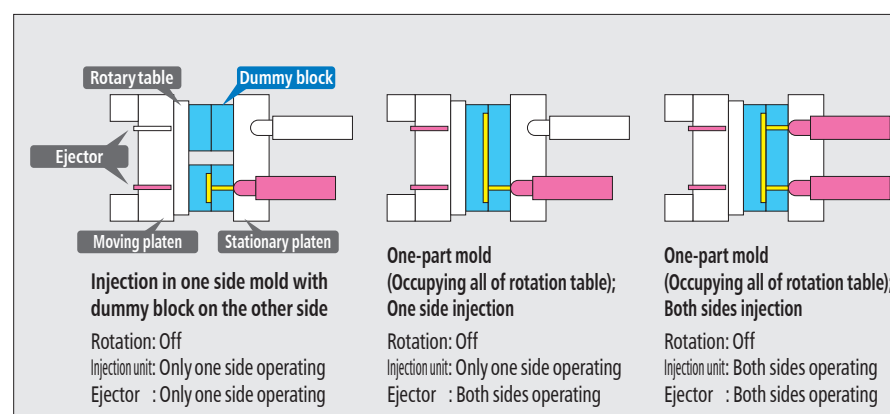
Core back type

Optional



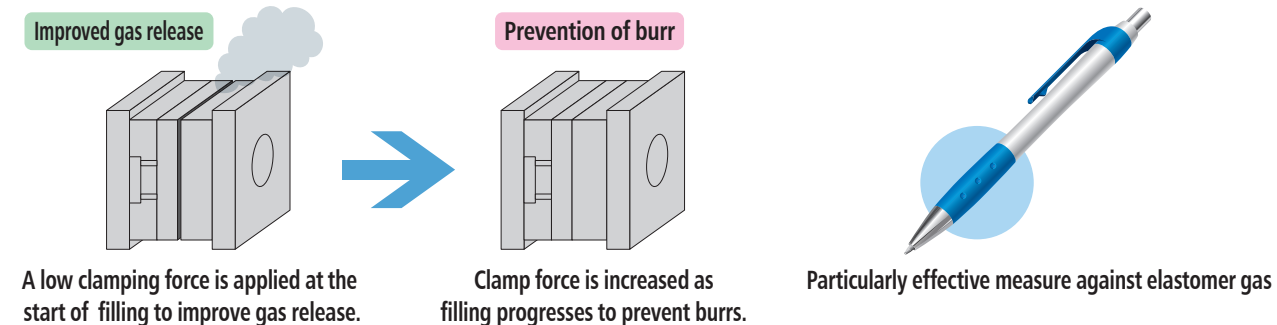
Single-color molding

The double-shot machine can be used as a single-color molding machine without rotating molds.



Multi-toggle

Multi-toggle is a mechanism that applies a low clamp force at the start of filling and then increases pressure as filling progresses. It improves gas release, prevents burrs from forming and lessens the frequency of mold cleaning. These benefits are especially appreciated in two-material molding where elastomers are often used.

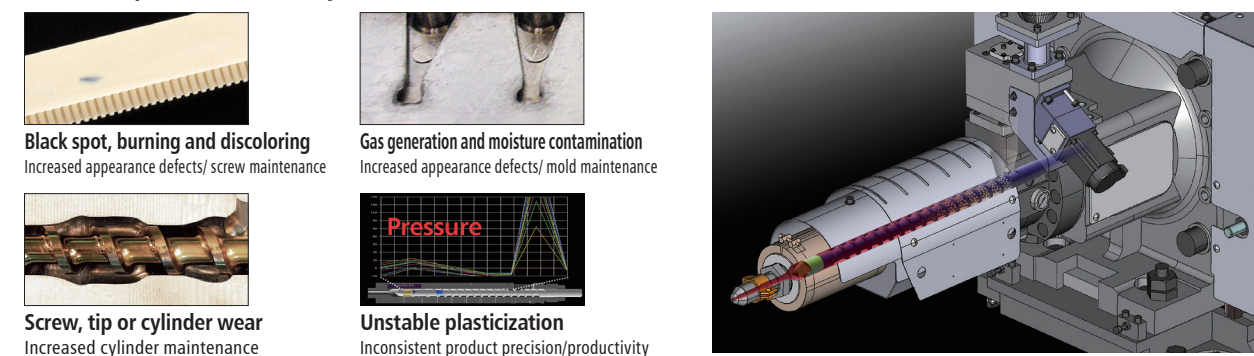


SL Screw

Optional

A new plasticizing system with a screw as the core, which was designed after visually analyzing the resin melting behavior against temperature and pressure with previous screws. It prevents melt resin stagnation and subsequent carbonization, and releases gas and moisture to realize stable plasticization.

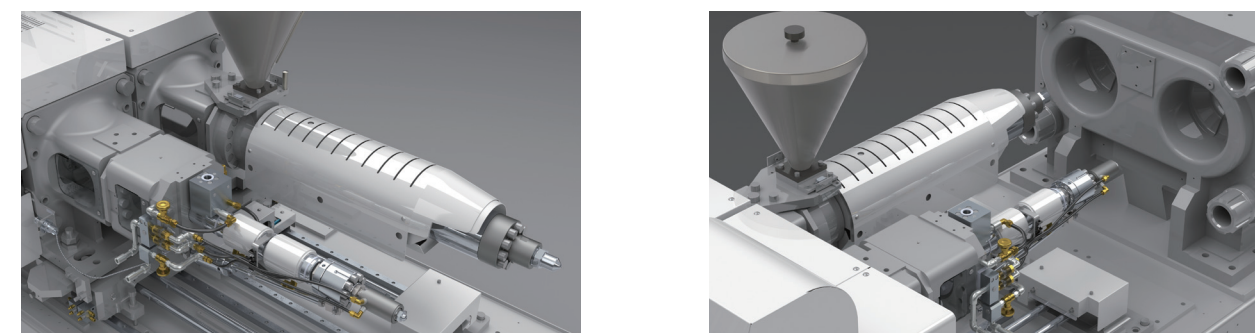
Defects improved or solved by SL Screw



LSR molding supported

Optional

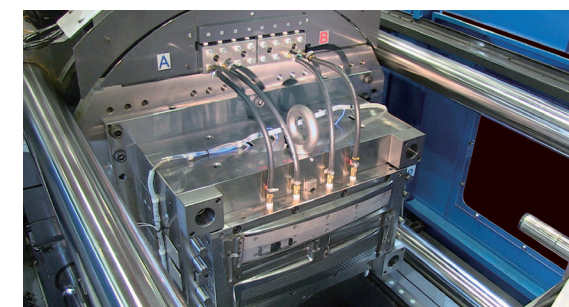
Liquid Silicone Rubber (LSR) is often used in two-material molding. Our LSR screw assembly uses a rotating sealing method that realizes small-capacity precision metering and low-speed filling. Highly stable LSR molding without burrs will be achieved.



Tie-bar plating

Optional

Prevents rust formation due to condensation, gases, etc.
Prevents contamination caused by rust.



Main Specifications

Item	Unit	SE30DU ² -CI	SE75DU ² -CI	SE130DU ² -CI
■ Clamping unit				
Clamping system		Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)
Clamping force (max.)	kN	290	730	1270
Clearance between tie-bars (H x V)	mm	370 x 290	560 x 360	660 x 360
Dimensions of rotary table (H x V)	mm	280 x 280	560 x 390	660 x 420
Daylight	mm	520	710	825 (800) *5
(Mold height extension 100 mm)		—	—	—
Mold opening stroke	mm	230	300	375 (350) *5
Platen speed max.	mm/s	1200	1300	1200
Mold height (min. - max.)	mm	180~290	160~410	180~450
(Mold height extension 100 mm)		—	—	—
Locating hole diameter	mm	2-φ60	2-φ60	2-φ120
(When inner dia. φ100 mm is selected)		—	—	—
Ejector system (ejecting points)		Motor driven type (1 point) x 2	Motor driven type (3 points) x 2	Motor driven type (5 points) x 2
Ejector ejection force	kN	7.8 x 2	20 x 2	21 x 2
(When ejector force power up is selected)		—	—	—
Ejector speed (max.)	mm/s	333	333	333
Ejector stroke	mm	70	91	100 (91) *6
Ejector rod protrusion amount	mm	-83 (61) *6	-62 (82) *6	-53 (82) *6
Max. mold weight (Fixed side)	kg	50	175 x 2	300 x 2
Max. mold weight (Movable side)		100	200 x 2	250 x 2

Injection unit

		C30			C65				C250			
		MN			MN		S		M			
Screw diameter	mm	16	18	20	16	18	20	22	25	28	32	36
Injection pressure (max.) *1,*2	MPa	266	210	170	266	210	235	194	281	284	217	171
Holding pressure (max.) *1,*2	MPa	212	168	136	266	210	216	178	225	227	174	137
Theoretical injection capacity	cm³	11	14	17	11	14	27	33	56	86	113	143
Injection weight (GPPS)	g	11	13	17	11	13	26	32	54	83	108	137
Plasticizing rate *3	kg/h	9.5	13	16	8.8	12	13	18	26	37	53	76
Injection rate	cm³/s	101	127	157	101	127	157	190	147	185	241	305
Screw stroke	mm	55			55		87		114	140		
Injection speed (max.)	mm/s	500			500				300			
Screw speed (max.)	min ⁻¹	430			400				400			
Number of temperature control zone		4			4			5	4	5		
Heater capacity	kW	2.7	2.7	3.1	2.7	2.7	3.5	3.9	5.5	6.6	7.6	8.5
Nozzle contact force	kN	2.9			A 5.8 / B 7.8 *7				A 11 / B 14 *7			
Nozzle protrusion	mm	35 / 50			35 / 65		30 / 45 / 65 / 80		45 / 65 / 85			
Hopper capacity (When the standard hopper is selected)	L	(6.0 x 2)			(6.0 x 2)				(15 x 2)			

Machine dimensions and weight

Machine dimensions (LxWxH) ^{*4}	mm	3524 x 1079 x 1526	4067 x 1318 x 1658	5579 x 1419 x 1860
(Mold height extension 100 mm)		—	—	—
Machine weight	t	3.0	5.0	7.6

^{*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} When the machine is equipped with an ejector unit with brake, the mold opening stroke is limited to the value in ().
^{*6} Values in () are for machines with ejector rods embedded in the rotary table.
^{*7} Selectable between A and B
^{*8} When the C250 injection unit is selected, it is necessary to select both sides.
 (This restriction does not apply to the SE400HS²-CI.)

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

SE230HS ² -CI	SE280HS ² -CI	SE400HS ² -CI
Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)
2250	2740	4000
920 x 560	920 x 560	1110 x 640
920 x 600	920 x 600	1140 x 870
1070 (1040) ^{*5}	1070 (1040) ^{*5}	1225
—	—	(1325)
510 (480) ^{*5}	510 (480) ^{*5}	625
1200	1200	1200
210～560	210～560	250～600
—	—	(250～700)
2 - ϕ 120	2 - ϕ 120	2 - ϕ 120
—	—	(2 - ϕ 100)
Motor driven type (5 points) x 2	Motor driven type (5 points) x 2	Motor driven type (9 points) x 2
45 x 2	45 x 2	60 x 2
—	—	100 x 2
333	333	267
150	150	220
97	97	150
750 x 2	750 x 2	1650 x 2
500 x 2	500 x 2	1300 x 2

C250*8									C360						C510						C250*8									C360						C510						C250						C560						C900					
M									M						M						M									M						M						M						L											
28	32	36	32	36	40	40	45	50	28	32	36	32	36	40	40	45	50	28	32	36	40	45	50	45	50	56	284	217	171	273	215	167	245	193	156	284	217	171	273	215	167	245	193	156	284	217	171	274	216	175	267	216	172						
227	174	137	218	172	134	196	154	125	227	174	137	218	172	134	196	154	125	284	217	171	274	216	175	213	172	137	86	113	143	129	163	201	201	254	314	86	113	143	129	163	201	201	254	314	86	112	142	201	254	314	329	406	509						
83	108	137	124	156	193	193	244	302	83	108	137	124	156	193	193	244	302	83	108	136	193	244	301	316	390	489	37	53	76	53	76	101	101	136	193	37	53	76	101	136	193	149	202	246															
185	241	305	241	305	377	377	477	589	185	241	305	241	305	377	377	477	589	215	281	356	439	556	687	556	687	862																																	
140						160						160						140						160						160						140						160						207											
300						300						300						300						300						300						350						350						350											
400						400						400						400						400						400						400						400						400						400		360			
5						5						5						5						5						5						5						5						6											
6.6	7.6	8.5	7.6	8.5	10.4	10.4	11.1	11.3	6.6	7.6	8.5	7.6	8.5	10.4	10.4	11.1	11.3	6.6	7.6	8.5	10.3	11.5	12.6	17.0	19.2	21.1																																	
A 11 / B 14*7						A 11 / B 14*7						24						A 11 / B 14*7						A 11 / B 14*7						24						A 11 / B 14*7						A 24 / B 29*7						A 29 / B 47*7											
45						65						65						45						65						65						45 / 65 / 80						45 / 65 / 80						50 / 65 / 85											
(30 x 2)																		(30 x 2)																		(C003:30 x 2) (C003a:50 x 2)																							

6462 x 1854 x 1997	6462 x 1854 x 1997	7533 x 2252 x 2191
—	—	(7633 x 2252 x 2191)
17.0	17.0	25.1
		26.1
		27.5

Standard Equipment

Plasticizing and injection unit (FR common)	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. Standard SD screw assembly (Open nozzle, Nitride screw)	○	○	○
2. Injection program control function 5 stages / 2 stages (Switching)	○	○	○
3. Holding pressure program control function 4 stages / 2 stages (Switching)	○	○	○
4. Screw pull back function (After holding pressure end/After dosing is completed)	○	○	○
5. Digital display function of screw position (0.01 mm setting)	○	○	○
6. Holding pressure time 0.01sec setting	○	○	○
7. V-P switchover function (Pressure/Position)	○	○	○
8. Filling delay timer function	○	○	○
9. Auto purging with nozzle touch or IJ unit retract confirmation	○	○	○
10. Heating cylinder temperature PID control max. 5 zones	○	○	○
11. Heating cylinder temperature switching function (Molding/Lowered temperature/Pursing)	○	○	○
12. Screw cold start prevention function (With variable interlock timer)	○	○	○
13. Injection unit retraction delay selector (With delay timer)	○	○	○
14. Remote setting function for sprue break stroke (Nozzle contact detection, Movement time setting)	○	○	○
15. Screw rotation speed digital display function	○	○	○
16. Purging cover device (With limit switch)	○	○	○
17. Purging saucer (Stainless steel)	○	○	○
18. Injection unit swivel device (With nozzle alignment adjustment mechanism)	○	○	○
19. Remaining cooling time display function	○	○	○
20. Dosing start delay timer function	○	○	○
21. Injection speed/Holding pressure rise speed selection function (10 modes)	○	○	○
22. Screw forward speed setting function during holding pressure	○	○	○
23. Screw pull back delay control function	○	○	○
24. Flash Speed Mode	○	○	○
25. Flash control	(75/130 only)	×	○
26. Flow front check	×	×	○
27. Synchro dosing function	○	○	○
28. Screw reverse rotation control function	○	○	○
29. Independent temperature control device of nozzle	○	○	○
30. Stepped heat-up operation	○	○	○
31. Standard energy saving heating cylinder cover (Two-layer structure)	○	○	○
32. Water cooling jacket temperature control device	○	○	○
33. Screw centering mechanism	○	○	○
34. Mold open operation function during dosing (Needle nozzle drive control)	○	○	○
35. Filling pressure multi-stage control function	○	○	○
36. Resin residence prevention function	○	○	○
37. One-touch manual dosing function	○	○	○
38. Auto grease lubrication unit	○	○	○

Control unit	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. 12.1-inch TFT color LCD screen	○	○	○
2. Touch panel type setting input device	○	○	○
3. Molding condition storage function (200 conditions)	○	○	○
4. Operation support function	○	○	○
5. Waveform display function (Waveform memory function, Display value reading function, Data storage by trigger, etc.)	○	○	○
6. Screen hard copy function	○	○	○
7. Take-out robot connection circuit device (With turn complete signal) *1	○	○	○
8. 3 languages selection (Japanese/English/Chinese)	○	○	○
9. Maintenance management function (Inspection time, Grease greasing time, Item, Operation method display)	○	○	○
10. Automatic start/stop function (Lowered temperature/Heater start/Molding machine stop)	○	○	○
11. Process display function	○	○	○
12. SSR heater drive circuit device	○	○	○
13. Industrial unit input function (Speed, Position, Pressure and rotation speed)	○	○	○
14. Molding machine status output signal (5 CH) *1	○	○	○
15. USB connection circuit device (Memory)	○	○	○
16. PC connection circuit (RS232C)	○	○	○
17. Protection for molding condition	○	○	○
18. Abnormal processing selection function	○	○	○
19. Initial reject/Short stop reject function	○	○	○

Screw assembly

* Elastomer resins often used in two-material molding can generally be used without requiring a special screw type or assembly.
Note: The above specification is not available for some molding machine models.
○ : Good match between screw type and assembly material △ : Selectable with restrictions
○ : Applicable ● : Specification not applicable or available for selection

Feature	Example resins	Compounding agent	Screw type			Assembly material					Example molded parts
			SD screw	SF screw	SM screw	Plated	For Optical use	Antistat, antistatic A	Antistat, antistatic B	High temperature	
Engineering plastics supported	PA・PBT・PP・ABS・POM・PC	Strengthening (GF30% or less), Combustion retarding	○	△	△	●	●	○	○	○	Mechanical parts, electronic components, etc.
Super-engineering plastics supported	LCP・PA9T	Strengthening (Under GF35%), Combustion retarding	○	△	△	●	●	○	○	○	Connector, electronic components, etc.
Optical resins supported	PA6T・PPS・PA46	Strengthening (GF30% or more), Combustion retarding, Anticorrosion	○	△	△	●	●	△	○	△	Connector, electronic components, etc.
High temperature specification	Cyclic polyolefin, PMMA, PC	Not strengthening	△	○	△	○	○	△	△	△	Optical components, transparent parts, etc.
	LCP, PEI, PEEK	Strengthening, Not strengthening	○	△	△	●	●	△	△	○	Mechanical parts, etc.

Clamp unit	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
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. Clamp force feedback control	○	○	○
8. Ejector (With selective multi-functions & return check)	○	○	○
9. Ejector protrusion delay timer	○	○	○
10. Ejector remote setting function (Speed, stroke and pressure)	○	○	○
11. Ejector 2-speed control	○	○	○
12. Ejector protrusion holding device	○	○	○
13. Ejector protrusion interlock function (Ejector can be operated only at the mold opening completion position in manual mode)	○	○	○
14. Ejector protrusion function during mold opening	○	○	○
15. Ejector protrusion function during mold clamp	○	○	○
16. Mold plate return confirmation device (Input signal to molding machine) Connection by metal concent 2 lines on the mold reversal table *1	○	○	○
17. Mold opening/closing signal (Spear control signal) Dry A contact *1	○	○	○
18. Valve gate drive circuit device (Control circuit only, 2 lines) *1	○	○	○
19. Stand by mode function for mold installation (Low mold opening/closing speed)	○	○	○
20. Safety door with acrylic window	○	○	×
21. Safety door with polycarbonate window	×	×	○
22. Emergency stop push button switch (Operation side/Non-operation side)	○	○	○
23. Clamp cover with acrylic window	○	○	×
24. Toggle cover with polycarbonate window	×	×	○
25. Screw holes for mounting the take-out robot	○	○	○
26. Grease centralized greasing device for mold clamp unit	○	○	○
27. Mold clamp safety device (Electric/Mechanical)	○	○	○
28. Mold opening/closing low vibration or high speed mode selection function	○	○	○
29. Movable platen support device (Sliding type)	○	○	×
30. Movable platen support device (Linear guide type)	×	×	○
31. Double center press platen (Fixed platen side, Moving side)	×	○	○
32. Center Press Platen mechanism (Fixed platen side)	○	×	×
33. Displacement prevention in mold mounting (Clamp force set to 0 ton)	○	○	○
34. Product drop confirmation connection circuit *1	○	○	○
35. Oil pan under mold clamp unit (Detachable for cleaning and maintenance)	×	○	○
36. High speed mold rotating unit (With remote speed control and dust cover)	○	○	○
37. Multi-toggle function	○	○	○
38. Ejector unit with brake	×	×	○
39. Clamping force balance monitor (4ch)	×	×	○
40. Rotary table lock pin	×	×	○

Monitor unit	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. Actual value display function	○	○	○
2. Heater breakage monitoring device	○	○	○
3. Auxiliary equipment abnormality monitoring function (1ch) *1	○	○	○
4. Abnormality monitoring function (Maximum cushion, Minimum cushion, Filling pressure, Mold protection, Cycle time, Dosing time)	○	○	○
5. Abnormality monitoring condition automatic setting function	○	○	○
6. Abnormal history display function (Abnormal item/Occurrence time display)	○	○	○
7. Product quality monitor	○	○	○
8. Quality control function (Statistical function of actual values, Various graph functions, 100,000 shot storage and data confirmation function)	○	○	○
9. Production number management function (Molded product discrimination function, Automatic production completion, Stocker feed signal, Data logging, Production counter with reset) *1	○	○	○
10. Auto start function (Auxiliary facility)	○	○	○
11. Heating cylinder temperature monitoring function (All zones)	○	○	○
12. Self diagnosis function	○	○	○
13. Abnormal alarm buzzer	○	○	○
14. Shot counter	○	○	○
15. Molding cycle time monitor (Attended/unattended selection)	○	○	○
16. Total production control circuit	○	○	○
17. All process display screen function	○	○	○
18. Monitoring function to prevent forgetting to set monitoring	○	○	○
19. Maintenance key switch	○	○	○

Others	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. Auto grease supply unit (Cartridge grease type)	○	○	○
2. 3-way take-out frame	(130 only)	○	○
3. Mold cooling water block device (2 systems) (Flow indicator and valve are options)	○	○	○
4. Standard tool (Offset wrench for nozzle)	○	○	○
5. Standard spare parts (Touch-up paint, fuse)	○	○	○

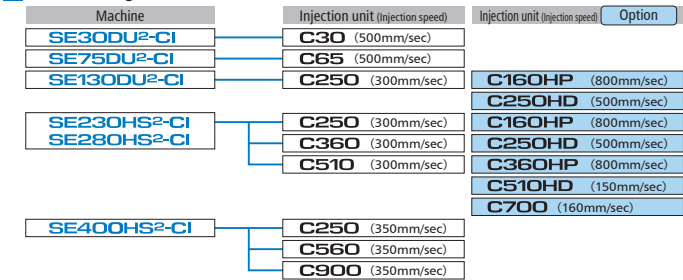
Optional Equipment

Plasticizing selection	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. Hard chromium plating screw assembly	○	○	○
2. Wear & corrosion resistant I1 & I11 screw assembly	(75/130 only)	○	×
3. Wear and corrosion resistant A screw assembly	×	×	○
4. Wear and corrosion resistant B screw assembly	×	×	○
5. High-temperature screw assembly (Max. temp. 450 °C)	○	○	○
6. SF screw	○	○	×
7. SM screw	×	×	○
8. SK screw tip (Material : STD, MK, TiN)	○	○	○
9. Needle valve nozzle (Needle is operated by pneumatic.)	(75/130 only)	○	○
10. High capacity heater	○	○	○
11. Zone 1 high capacity heater	○	○	○

Plasticizing and injection unit	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. Resin temperature finder (Only for needle nozzle type)	(75/130 only)	○	○
2. Standard type hopper	○	○	○
3. V/P switchover by mold cavity pressure	○	○	○
4. Needle valve nozzle drive circuit	(75/130 only)	○	○
5. FTC nozzle electric control circuit (Built-in)	(30 only)	×	×
6. High temperature heater control circuit (Up to 499 °C)	○	○	○
7. Hopper swivel mounting plate	(75/130 only)	○	○
8. Plating resin inlet of cooling water jacket	○	○	○

Control and monitor unit	DU2-CI	HS ² -CI (230/280)	HS ² -CI (400)
1. Leak circuit breaker (AC200V, 220V 3ø3W+E) (Japan and Asia only)	○	○	○
2. Mold temperature monitor (2 Zone. stationary platen non-operation side)	○	○	○
3. Mold temperature monitor (2 Zone. mold reversal table)	×	○	○
4. Auxiliary facility monitor (STD. + 2ch) *1	○	○	○
5. Analog data output connection circuit	○	○	○
6. Mold temperature controller (Stationary platen's non-operation side. K=CA 2 zone)	○	○	○
7. Mold temperature controller (mold reversal table. K=CA 2 zone)	×	○	○
8. Automatic starting system (Heater+Water supply+External output signal)	○	○	○
9. Revolving alarm lamp (Mounted on the toggle support non-operation side)	○	○	○
10. Revolving alarm lamp (Mounted on the toggle support operation side)	×	×	○
11. Multi function 3-color LED alarm lamp (Mounted on the toggle support non-operation side)	○	○	○
12. Multi function 3-color LED alarm lamp (Mounted on the toggle support operation side)	×	×	○
13. 4-line closed circuit water connection lines (Stationary side, with flow detector, Stop valve, Cooling water stop valve, Filter)	○	○	○
14. 2-line closed circuit water connection lines (Stationary side, with flow detector, Stop valve, Cooling water stop valve, Filter)	○	○	○
15. Spare power supply outlet selection	○	○	○
16. Electric power supply receptacles	○	○	×
17. Electric power supply receptacles	×	×	○
18. Electric power supply receptacles	×	×	○
19. Key-lock switch for molding setup	○	○	○
20. Name plate : Blue	○	○	○
21. Motion 07	○	○	○
22. Motion GB	○	○	○
23. Emergency stop link (traverse robot & die cart)	×	×	○
24. DC24V power supply for external signal (power only)	×	×	○

Module configuration



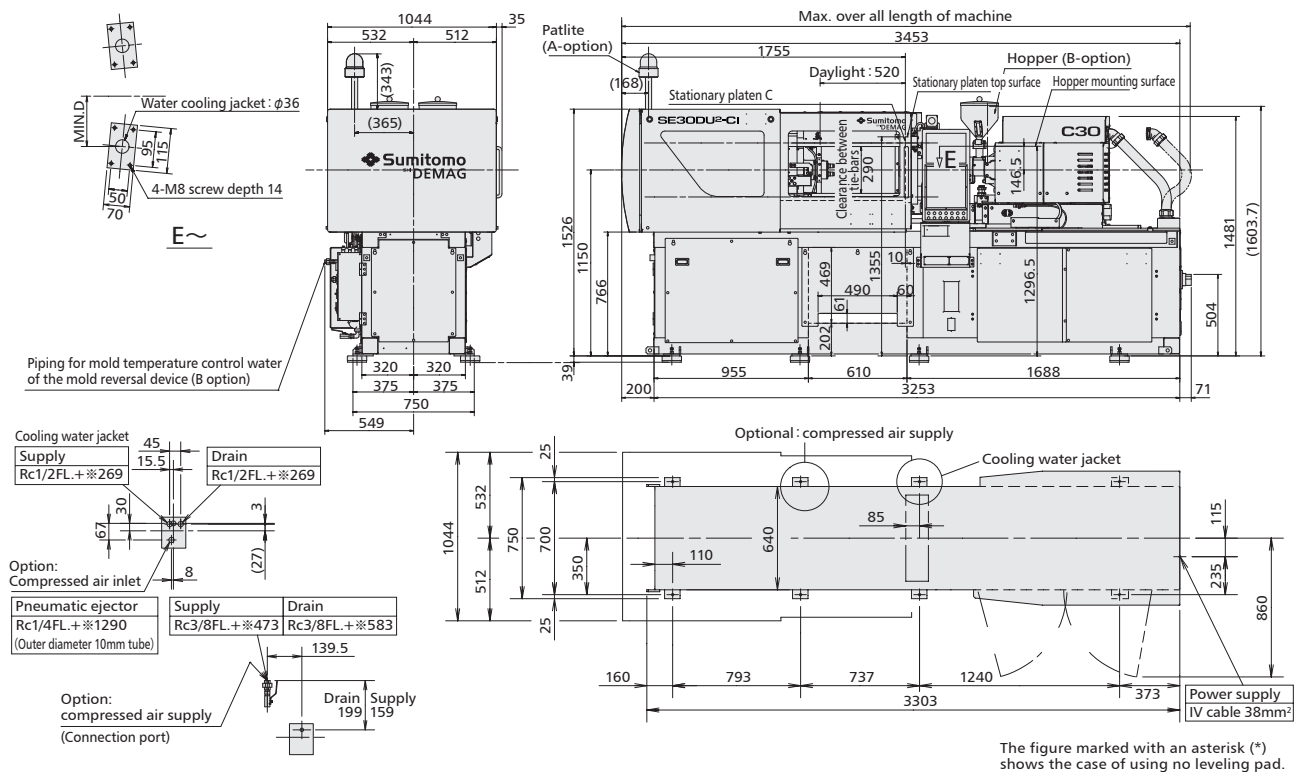
Machine utility list

● This table presents an example case of utilities. Values will change according to the place of use and operating conditions.

	Model	SE30DU2-CI		SE75DU2-CI		SE130DU2-CI		SE230HS2-CI		SE280HS2-CI		SE400HS2-CI		Notes
		F	R	F	R	F	R	F	R	F	R	F	R	
Specification	Injection unit	C30	C30	C65	C65	C250	C250	C320	C250	C360	C510	C560	C560	
	Screw diameter	φ18	φ20	φ20	φ22	φ32	φ36	φ32	φ36	φ36	φ45	φ40	φ50	
Cooling water	Required cooling water volume (cooling water jacket)	0.6ℓ/min	0.7ℓ/min	0.8ℓ/min	0.9ℓ/min	1.8ℓ/min	2.0ℓ/min	1.8ℓ/min	2.0ℓ/min	2.6ℓ/min	2.4ℓ/min	2.9ℓ/min	2.9ℓ/min	* Molding machine only
	Screw standard of primary piping (in and out)	1/2B		1/2B		1/2B		1/2B		1/2B		1/2B		* Shared mold
	Screw standard of secondary piping (in and out)	1/4B		1/4B		1/4B		1/4B		1/4B		1/4B		
Electricity	Power specification	200V 3ø 3W+E												
	Heater capacity	2.7kW	3.1kW	3.5kW	3.9kW	7.6kW	8.5kW	7.6kW	8.5kW	8.5kW	11.1kW	10.3kW	12.6kW	
	Main breaker size	125.0A		150.0A		200.0A		225.0A		225.0A		250.0A		
	Screw size of primary power terminal	M8		M8		M8		M8		M8		M8		
	Wire size of primary power	38.0mm ²		50.0mm ²		80.0mm ²		100.0mm ²		100.0mm ²		100.0mm ²		
	Screw size of ground terminal	M8		M8		M8		M8		M8		M8		
	Wire size of ground	22.0mm ²		30.0mm ²		50.0mm ²		50.0mm ²		50.0mm ²		50.0mm ²		
	Required power capacity	43.3kVA		52.0kVA		69.3kVA		77.9kVA		77.9kVA		86.6kVA		* Molding machine only

Dimension & Foundation Plan

Injection unit	Screw diameter	A	B	C	D	Max. over all length of machine
C30	MN 16, 18	511	460	481	129	3479
	20	561	465	486	134	3517

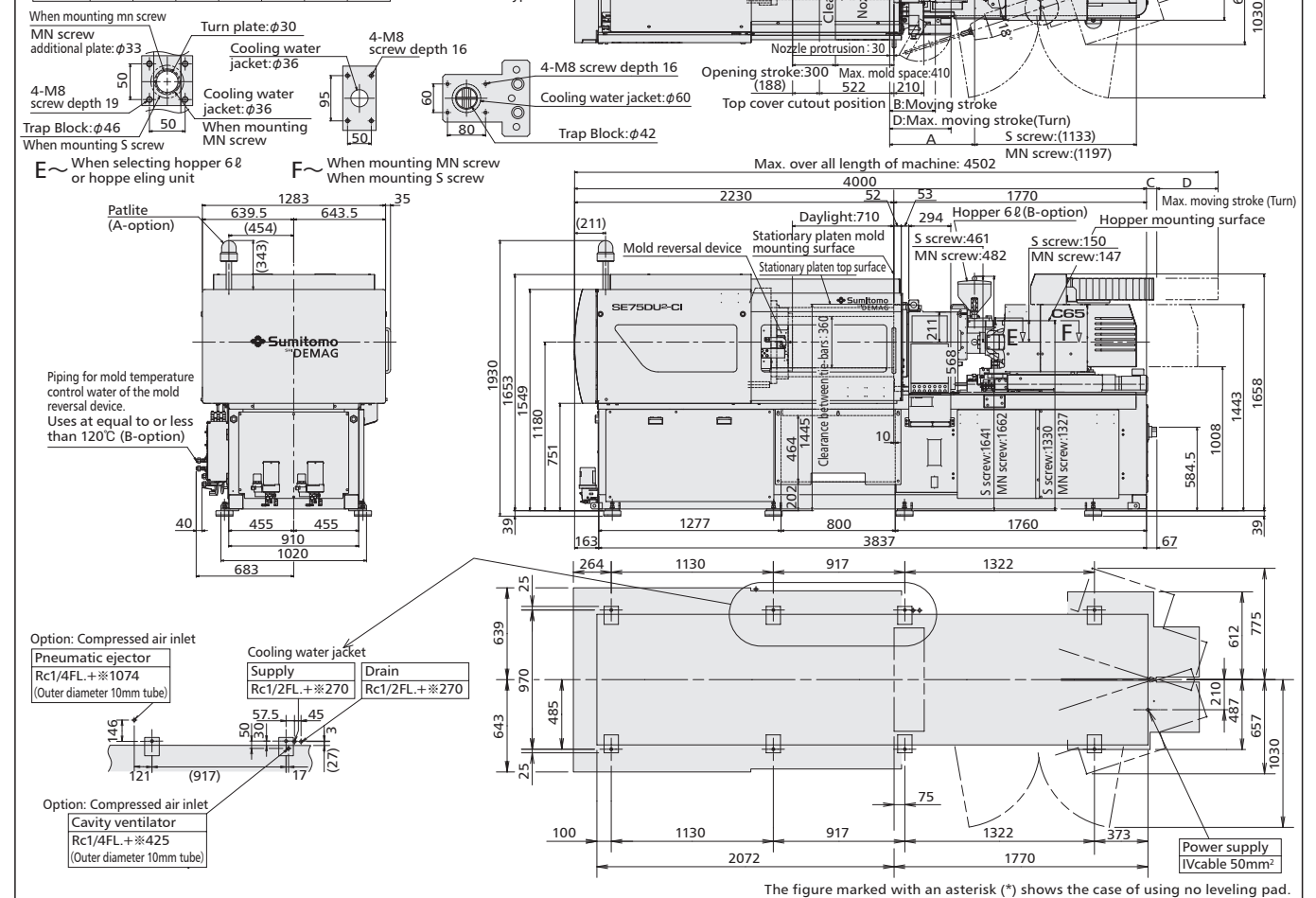


Mold Mounting Diagram (Mold Mounting Diagrams comply with JIS B 6701.)

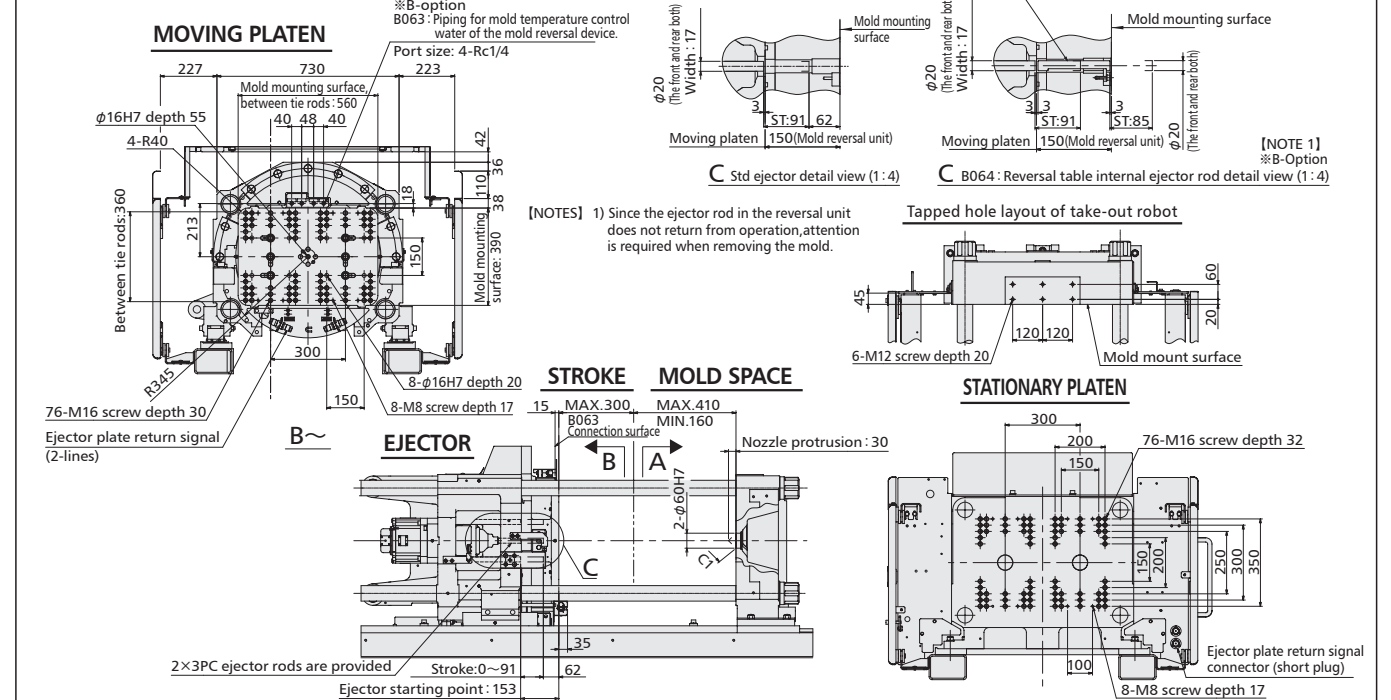


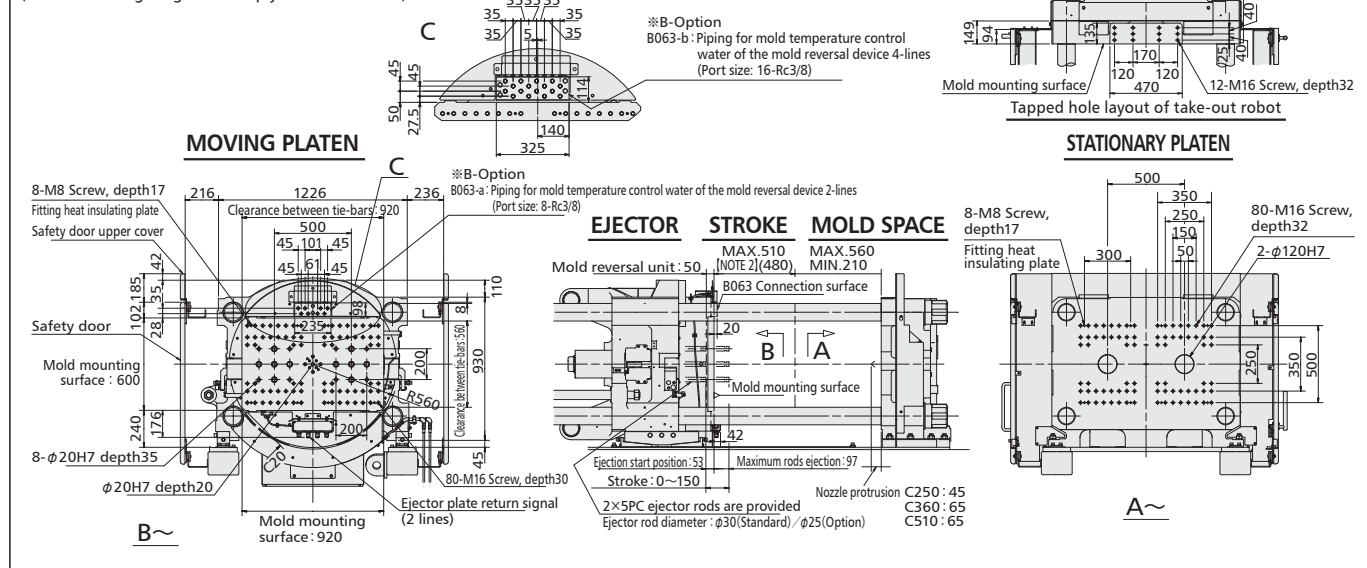
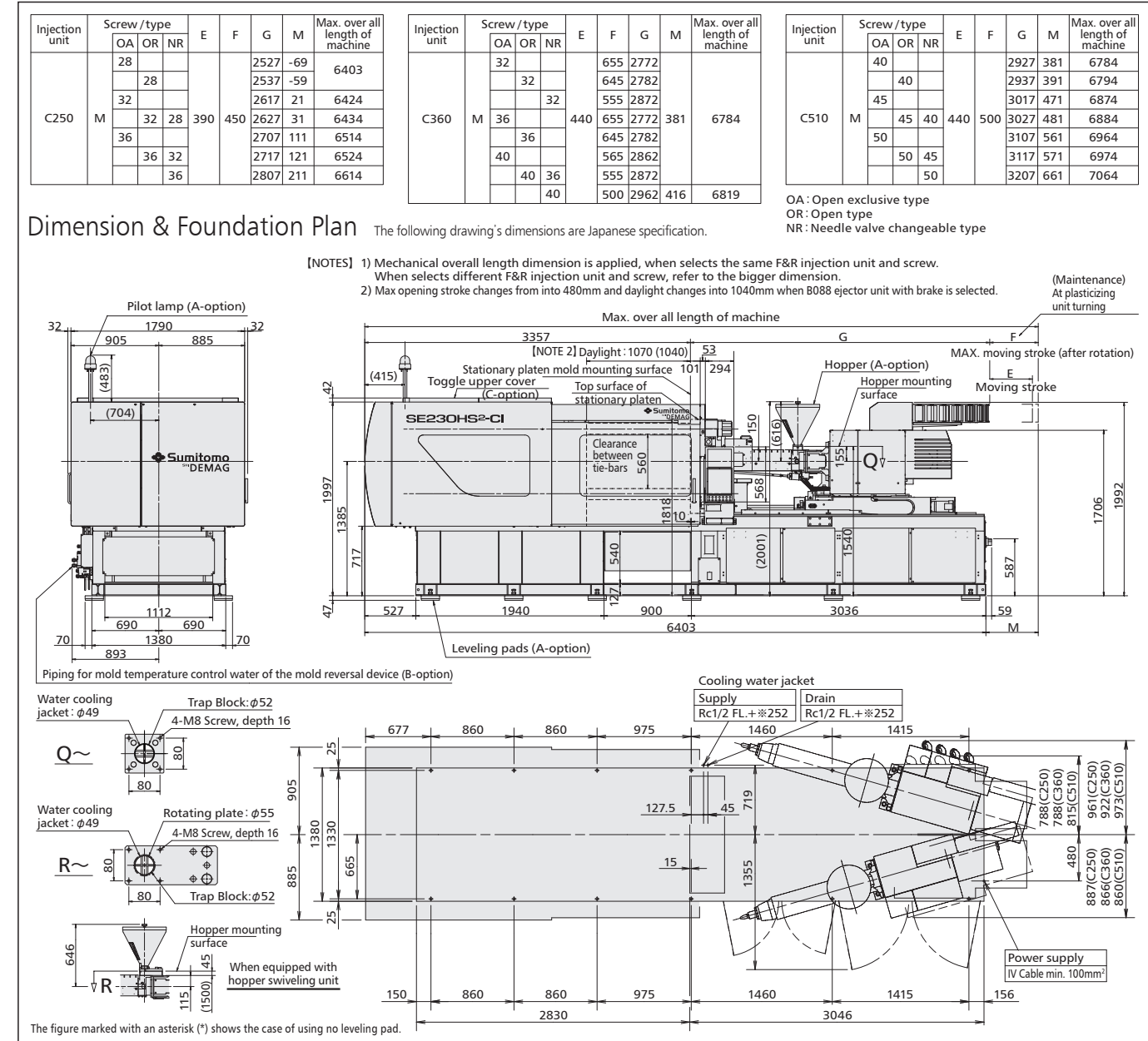
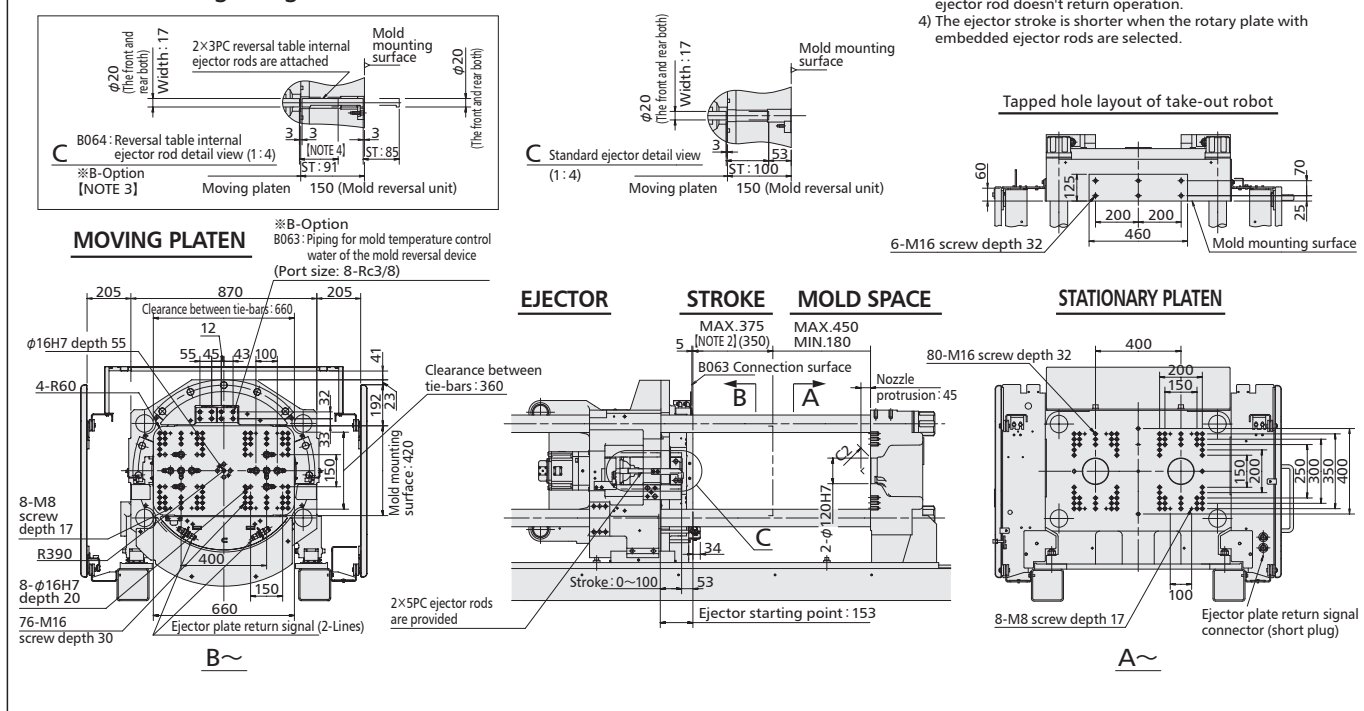
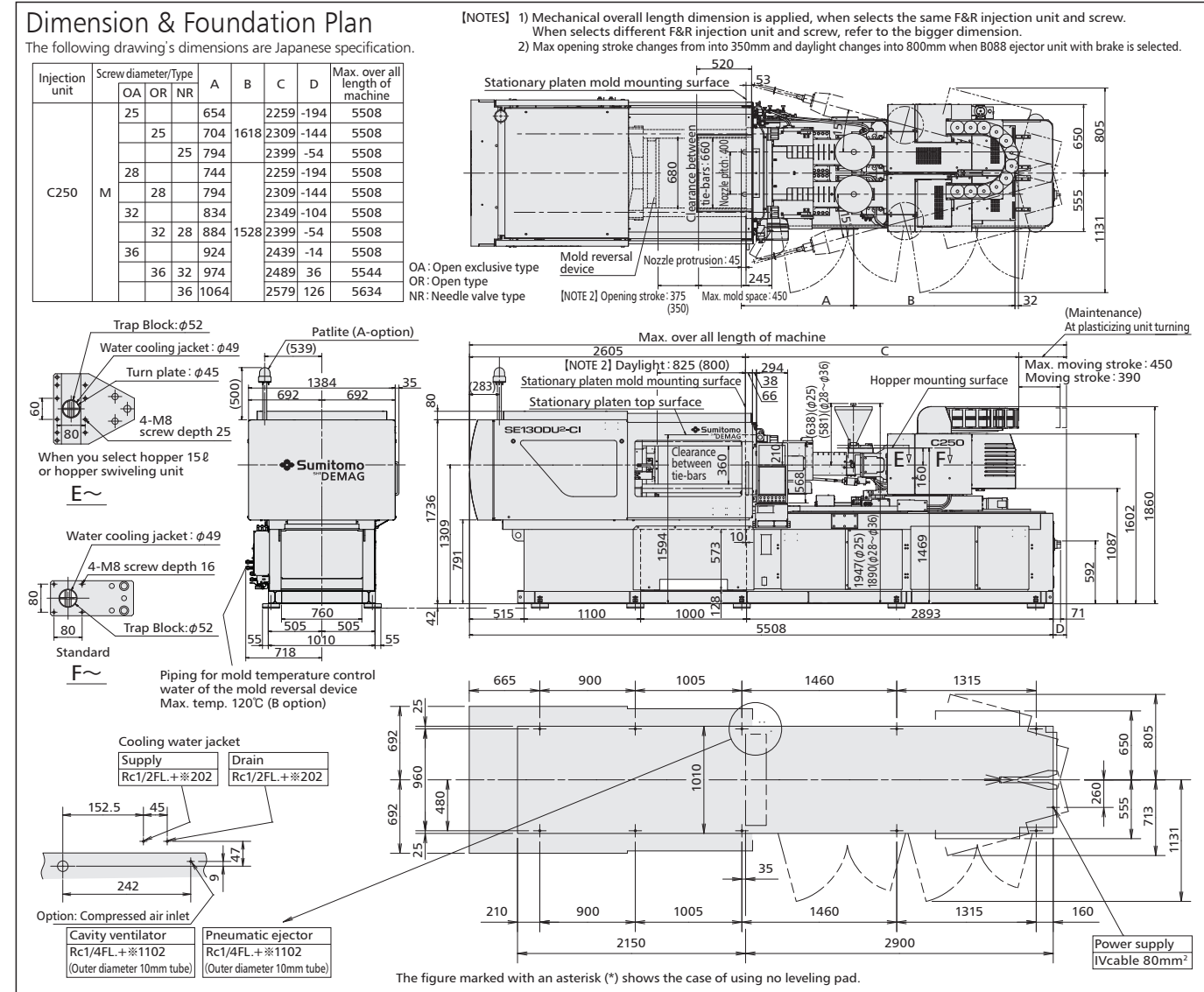
Injection unit	Screw diameter/Type			A	B	C	D
	OA	OR 18MM	NR				
C65	20			476	320	17	485
	22			540	320	17	485
	20	20		595	320	72	430
	22	20		650	320	127	375
		22		705	265	182	320

OA : Open exclusive type
 OR : Open type
 NR : Needle valve type



Mold Mounting Diagram (Mold Mounting Diagrams comply with JIS B 6701.)





SE280HS2-CI

Injection unit	Screw /type			E	F	G	M	Max. over all length of machine	
	OA	OR	NR						
C250	M	28				2527	-69	6403	
			28			2537	-59		
		32				2627	21	6424	
			32	28	390	450	2617	31	6434
		36				2707	111	6514	
			36	32		2717	121	6524	
				36		2807	121	6614	

Injection unit	Screw / type			E	F	G	M	Max. over all length of machine
	OA	OR	NR					
C360	M		32	440	655	2772	381	6784
			32		645	2782		
			32		555	2872		
		36			655	2772		
			36		645	2782		
		40			565	2862		
			40		555	2872		
			40		500	2962	416	6819

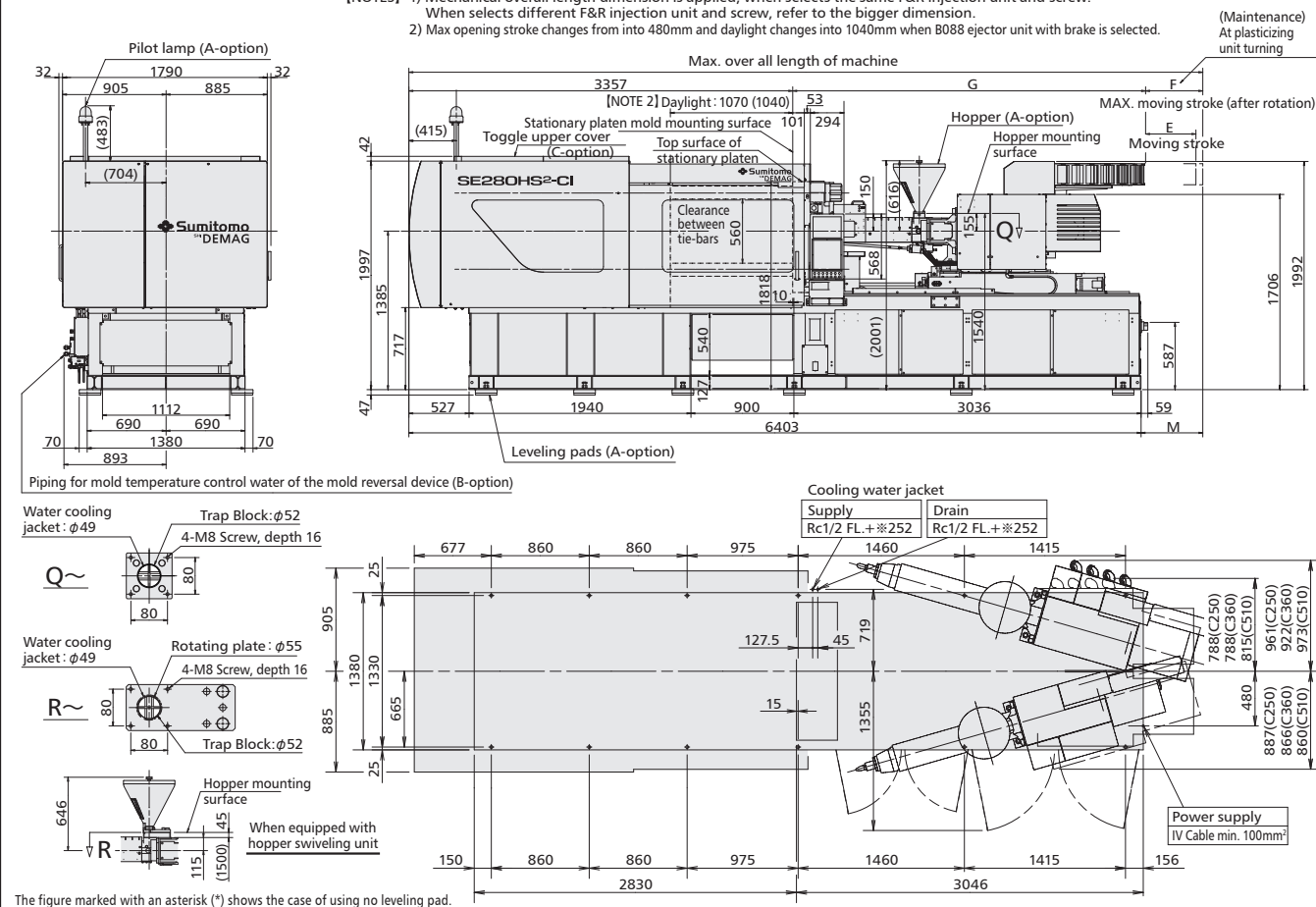
Injection unit	Screw /type			E	F	G	M	Max. over all length of machine	
	OA	OR	NR						
C510	M	40			440	500	2927	381	6784
			40				2937	391	6794
		45					3017	471	6874
			45	40			3027	481	6884
		50					3107	561	6964
			50	45			3117	571	6974
				50			3207	661	7064

OA: Open exclusive type
OR: Open type
NR: Needle valve changeable type

Dimension & Foundation Plan

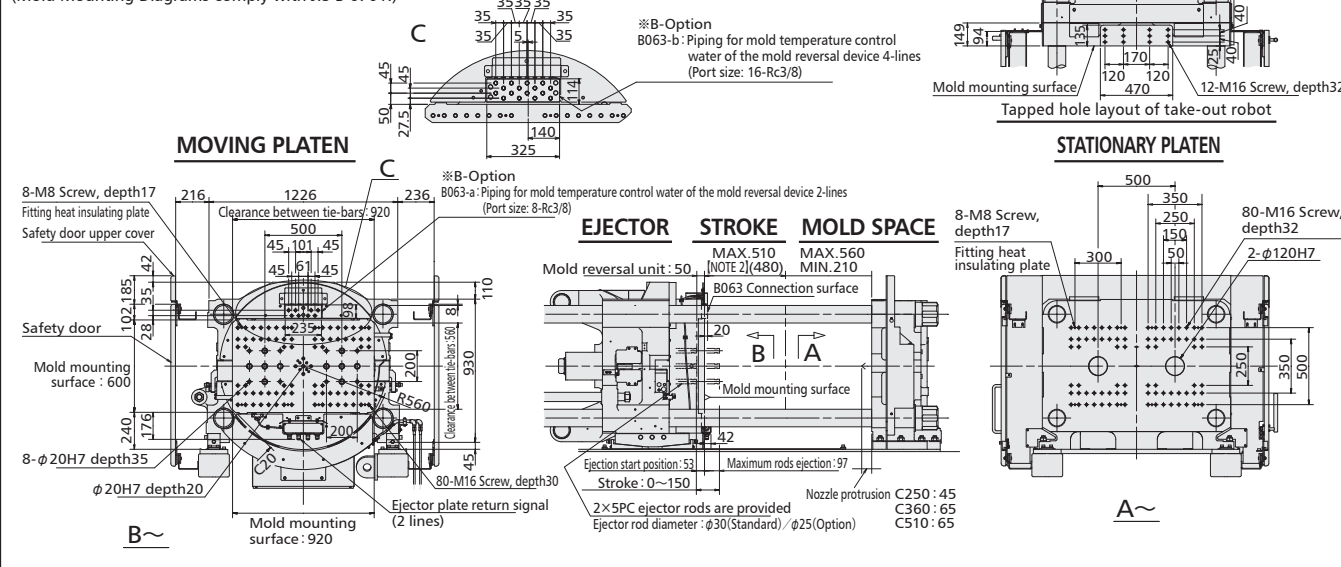
The following drawing's dimensions are Japanese specification.

[NOTES] 1) Mechanical overall length dimension is applied, when selects the same F&R injection unit and screw.
When selects different F&R injection unit and screw, refer to the bigger dimension.
2) Max opening stroke changes from into 480mm and daylight changes into 1040mm when B088 ejector unit with brake is selected.



Mold Mounting Diagram

(Mold Mounting Diagrams comply with JIS B 6701.)



SE400HS2-CI

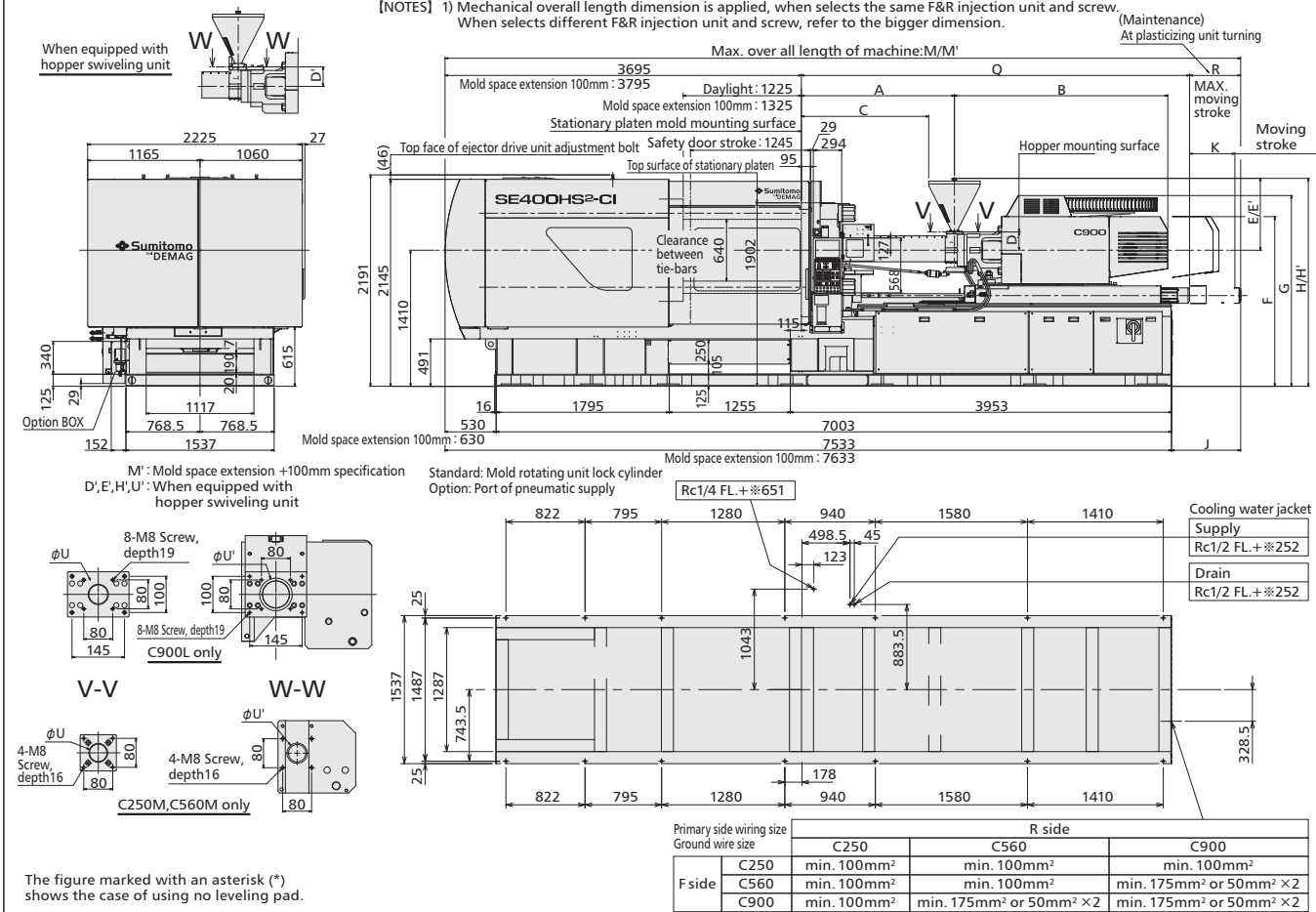
Injection unit	Screw diameter		A	B	C	D	D'	E	E'	F	G	H	H'	J	K	M	M'	Q	R	T	U	U'
	OR	NR																				
C250	28	28	729		462													2315				
			839		572													2425				
	32		819		552													2405				
		32	929	1459	662	155	140	711	696	1701	1978	2121	2106	-703	470	7533	7633	2515	530	20"	52	56
	36		909		542													2495				
C560		36	1019		752													2605				
	40		999		732													2777				
			1109		842													2897				
	45		1089	1723	932	155	140	711	696	1746	1977	2121	2106	-242	470	7533	7633	2977	530	20"	52	56
		45	1199		912													2977				
C900	50		1179		912													2957				
		50	1289		1022													3067				
	45		1137		870											7800	7900	3575				
	50	45	1267	2212	1000	189	202	745	777	1758	1977	2155	2187	717	470	7930	8030	3705	530	14"	90	90
	56		1272		1160											8090	8190	3805				
	56	1587		1320												8250	8350	4025				

OR: Open type
NR: Needle valve changeable type

Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

[NOTES] 1) Mechanical overall length dimension is applied, when selects the same F&R injection unit and screw.
When selects different F&R injection unit and screw, refer to the bigger dimension.



Mold Mounting Diagram

(Mold Mounting Diagrams comply with JIS B 6701.)

