

**Double-shot** All-electric Double-shot Injection Molding Machine

**Sumitomo**  
SHI  
DEMAG

# Double-shot

All-electric Double-shot Injection Molding Machine



PHOTO : SE400HS-CI

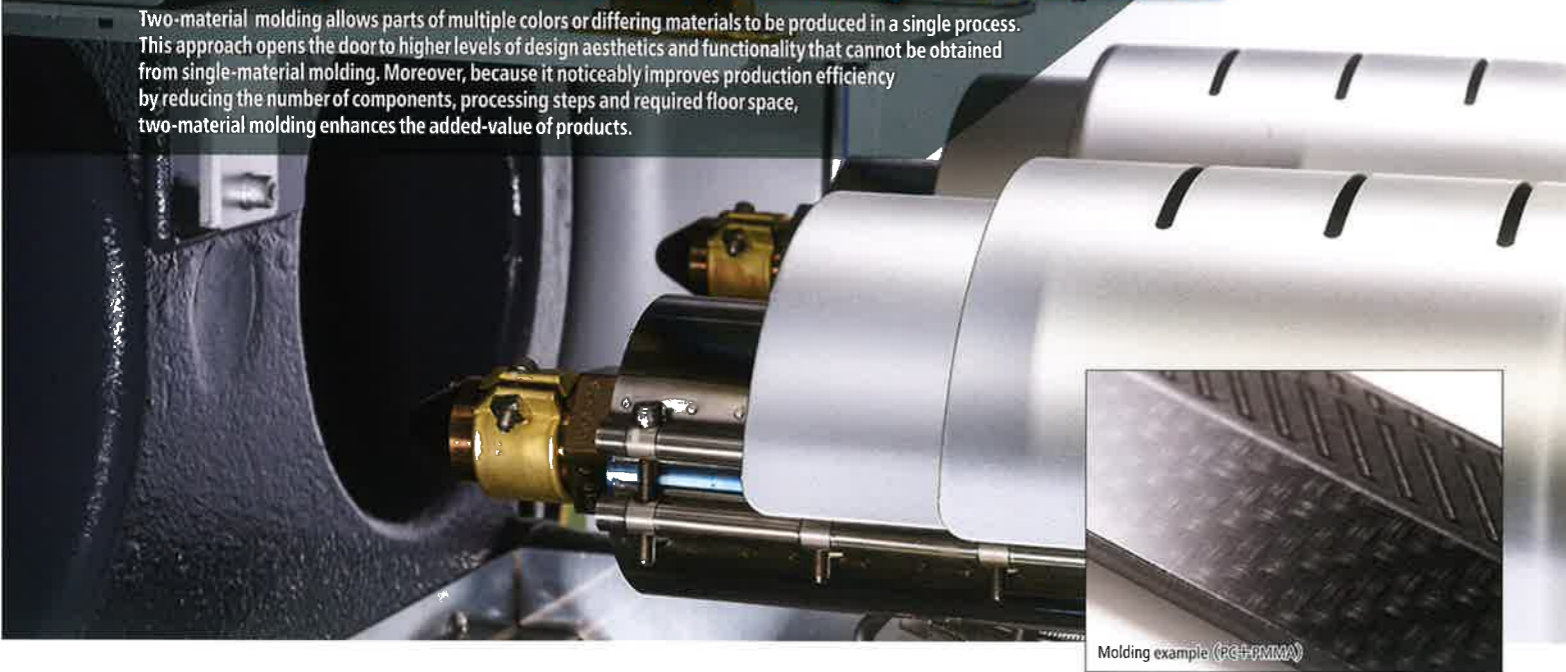
## Lineup

<b>SE30DU-CI</b>	(290kN)
<b>SE75DU-CI</b>	(730kN)
<b>SE130DU-CI</b>	(1270kN)
<b>SE230HS-CI</b>	(2250kN)
<b>SE280HS-CI</b>	(2740kN)
<b>SE400HS-CI</b>	(4000kN)

## Pursuing greater possibilities of parts with the Double-shot

### Enhancing product added-value by combining different materials

Two-material molding allows 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

<b>High productivity</b>	<b>Toggle clamping system</b>	Our highly reliable toggle technology accumulated over the years realizes fast, assured mold opening and closing.
	<b>Rotary ejector rod</b>	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.
	<b>Rotation speed</b>	
<b>Stable precision molding</b>	<b>Rotation precision</b>	Tried-and-trusted components are on board. It is designed and built to answer the growing needs for thin-wall filling.
	<b>Double Center Press Platens</b>	
	<b>SKII control</b>	
<b>Filling for thin-wall parts</b>	<b>Direct drive</b>	Freedom of mold design and mountable weight is greatly increased, making possible to produce longer parts.
	<b>High-speed injection</b>	
	<b>Flash mode/control</b>	
<b>Mold support</b>	<b>Wide platen</b>	Setup, maintainability and operability have been greatly improved with features like temperature control piping for the rotary unit, screw cleaning and F/R single display.
	<b>Proprietary temperature control piping</b>	
<b>Ease of setup/maintenance</b>	<b>Independently turning plasticizing units</b>	
	<b>Temperature control piping for rotary unit</b>	
	<b>N9 controller</b>	



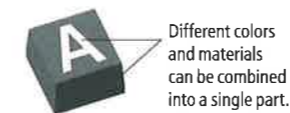
World's largest class of all-electric double-shot molding machines

## 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 that were not possible before.



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

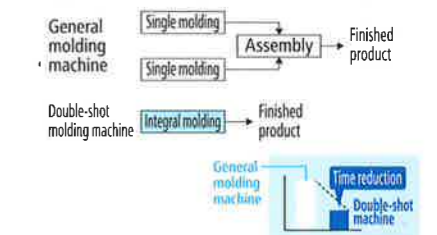
Strength and resistance to heat, weather and wear will be improved because the appropriate resin can be placed in the appropriate location.



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



## Benefits of parallel type double-shot machine

Compared to vertically, horizontally and diagonally arranged layouts, there are many benefits to positioning injection units 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

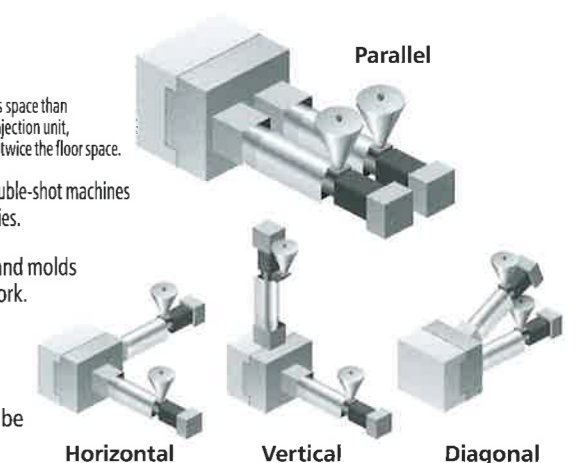
Use of integrated mold make it easy to align nozzles and molds so that injection units do not hamper maintenance work.

### Shorter cycle times

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

### Cleanroom compatible

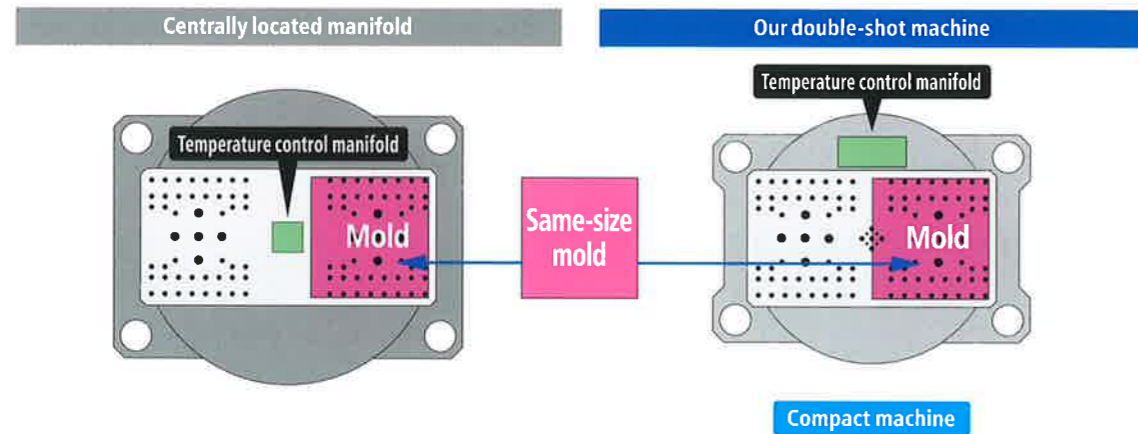
Safety door is hermetically sealed and gases can be easily recovered from the purging cover.



## Production efficiency spawned from a 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

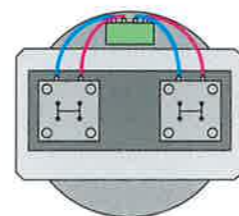
Option Patented

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.

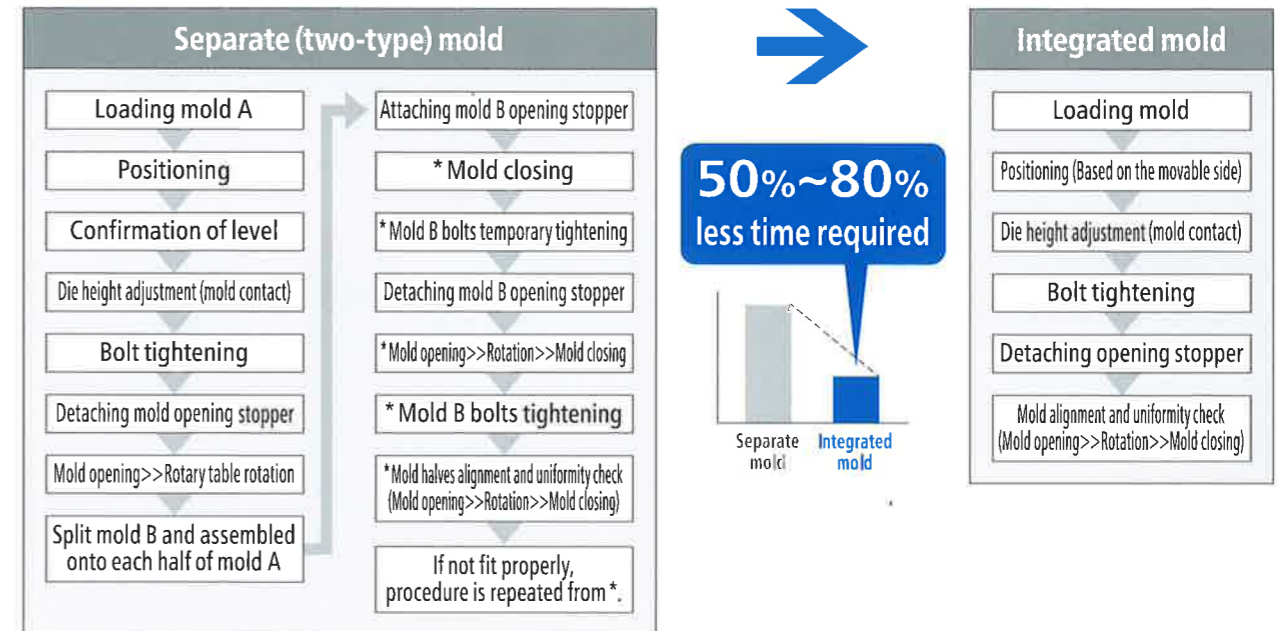
- SE30DU-CI 1 line
- SE75DU-CI 2 lines \*4 lines
- SE130DU-CI 2 lines \*4 lines
- SE230HS-CI 2&4 lines \*8 lines
- SE280HS-CI 2&4 lines \*8 lines
- SE400HS-CI 2&4 lines \*8 lines

\* Available upon request

## Shorter setup time with integrated mold

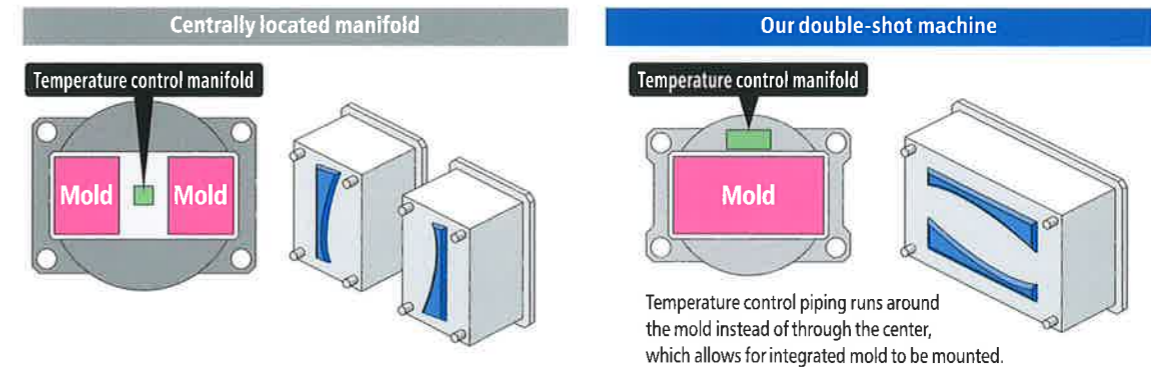
Thanks to an original design, our double-shot machine can easily mount large integrated mold. Compared to separate molds, integrated molds require considerably less time to set up, which translates into more efficient production operations.

Example comparison of mold mounting



## Long parts available thanks to wider range of mountable molds

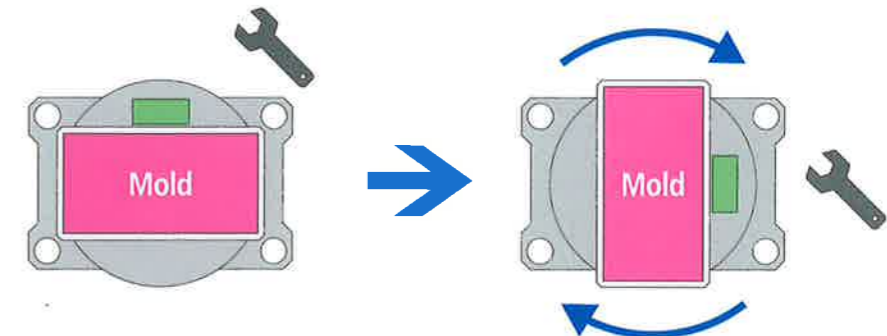
An original temperature control manifold and wider tie-bar clearance enable large mold to be mounted. It enables the molding of long parts, which was not possible with the separate (two-part) mold.



## 90° rotation stop feature that greatly improves workability

SE400HS-CI

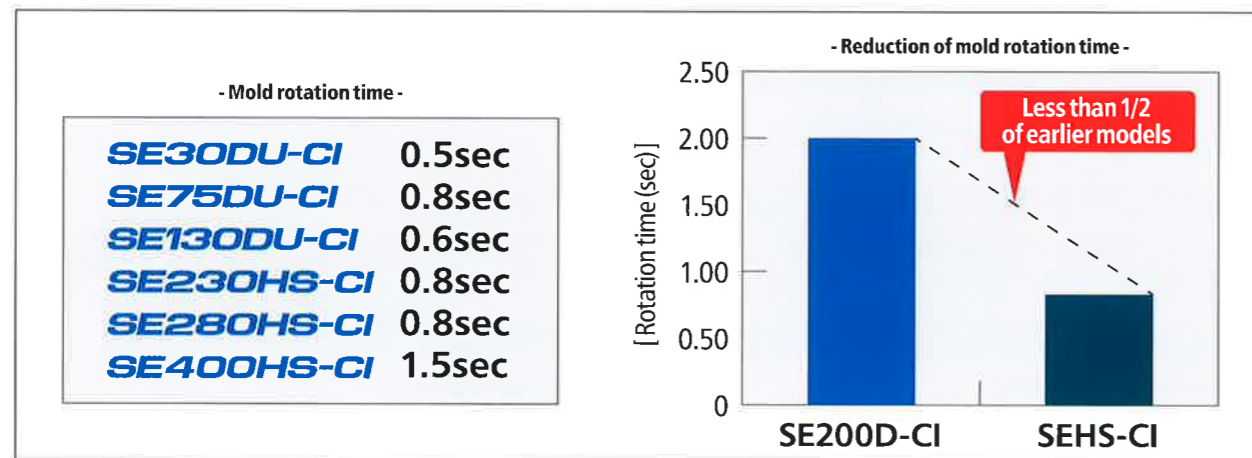
The hard-to-reach top manifold faces the operator's side, making it easier to tighten bolts and perform other works. This greatly improves the workability on the large class machine SE400HS-CI.



## Features designed for cycle time reduction

### Greatly shortened mold rotation time

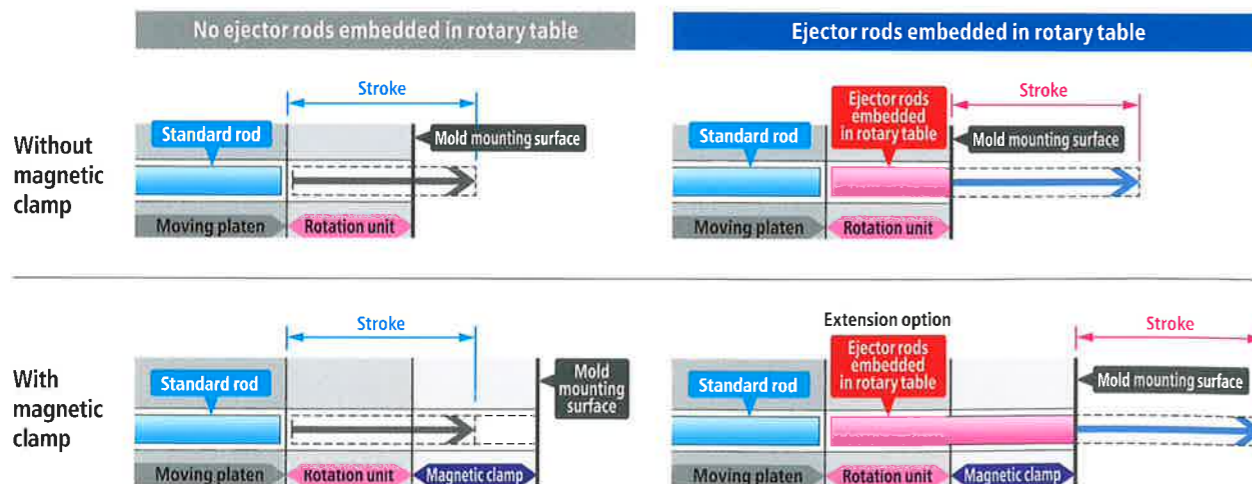
The performance of mold rotary unit and mold opening/closing unit have been thoroughly reviewed comparing with the conventional machine. Accordingly, rotating time has been reduced to less than half of the earlier models, which leads to significant improvement in productivity.



### Ejector rods embedded in the rotary table

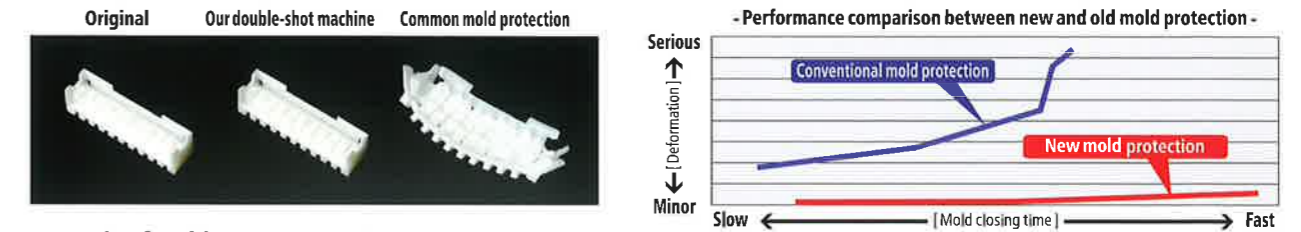
The ejection stroke can be effectively utilized to shorten the molding cycle.

SE30DU-CI SE75DU-CI SE130DU-CI **Option** Patented



### 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.



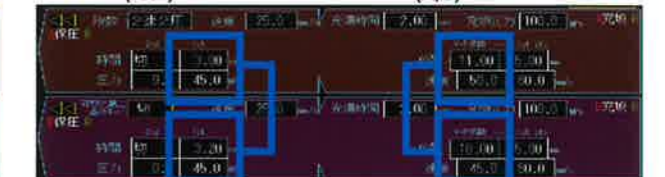
### Example of mold protection settings



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



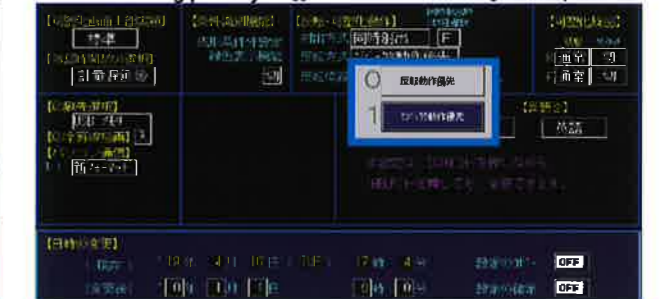
### 2nd shot (rear) conditions for each mold (A/B)



### Rotating mode setting



### Rotation timing priority



### Applicable to various filling patterns



### Logging display easy to monitor molds separately

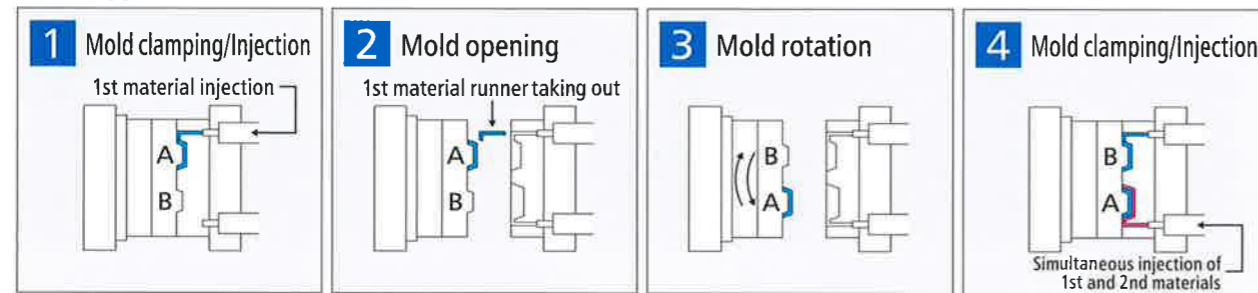


## Capability for a wide range of molding processes and special resins

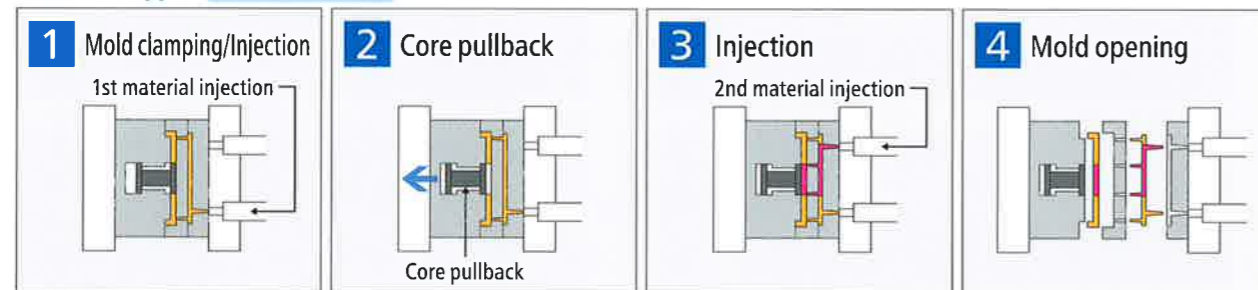
### Diverse molding processes support molding complex shaped parts

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

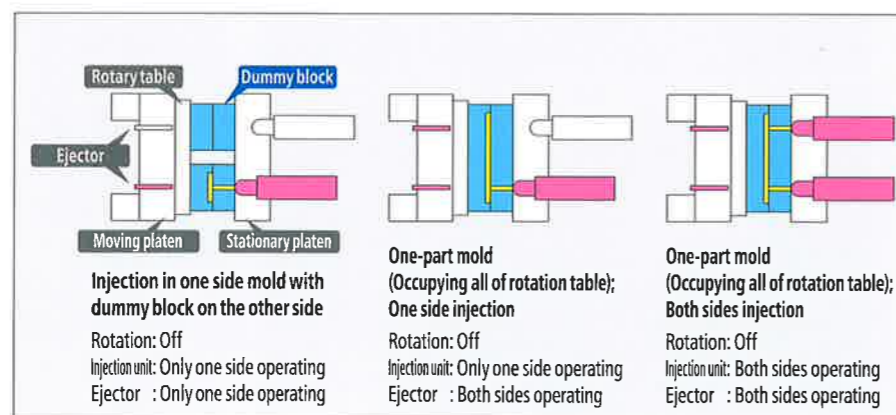


#### Core back type Option



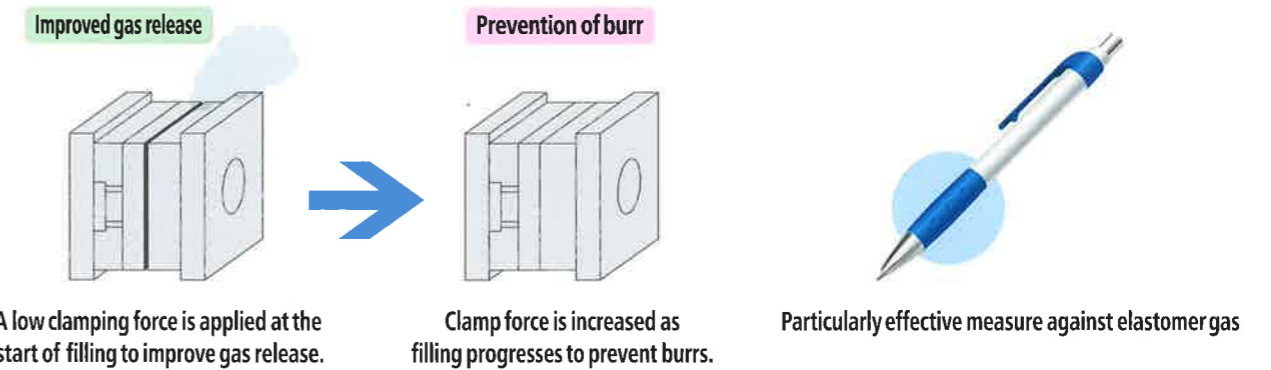
### Single-color molding

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



### Multi-toggle



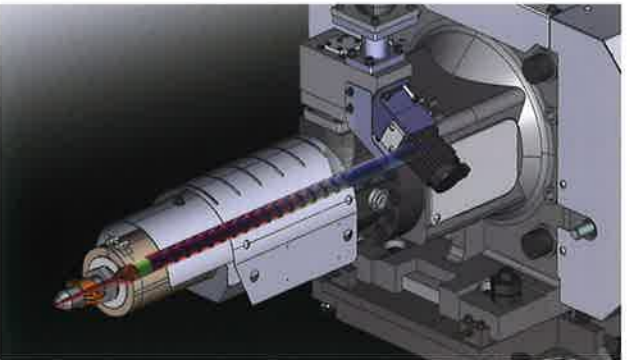

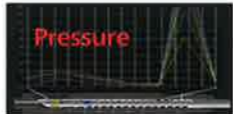
Multi-toggle is a mechanism that applies a low clamp force at the start of filling and then increases pressure as filling progresses. It improves gas release, prevents burrs from forming and lessens the frequency of mold cleaning. These benefits are especially appreciated in two-material molding where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



### SL Screw Option

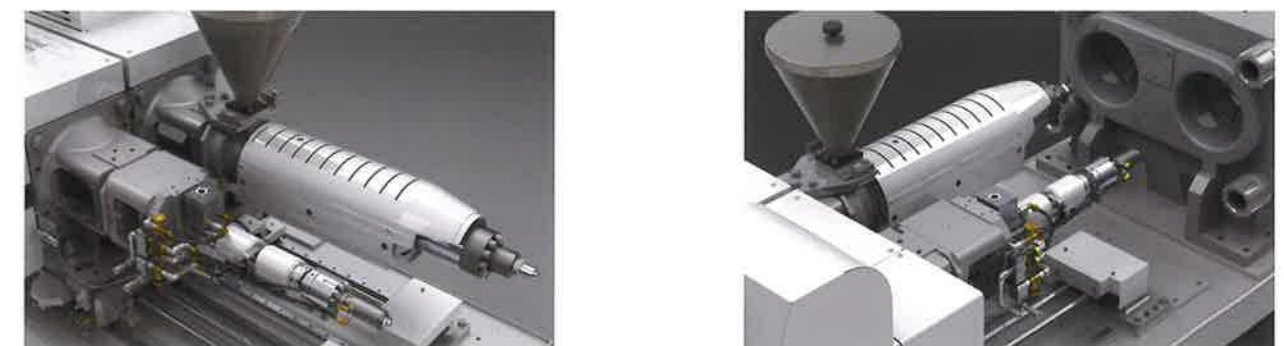
A new plasticizing system with a screw as the core, which was designed after visually analyzing the resin melting behavior against temperature and pressure with previous screws. It prevents melt resin stagnation and subsequent carbonization, and releases gas and moisture to realize stable plasticization.

#### Defects improved or solved by SL Screw

 <b>Black spot, burning and discoloring</b> Increased appearance defects/ screw maintenance	 <b>Gas generation and moisture contamination</b> Increased appearance defects/ mold maintenance	
 <b>Screw, tip or cylinder wear</b> Increased cylinder maintenance	 <b>Unstable plasticization</b> Inconsistent product precision/productivity	

### LSR molding supported Option

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.



## Main Specifications

Item	Unit	SE30DU-CI	SE75DU-CI	SE130DU-CI
<b>■ Mold clamping unit</b>				
Mold clamp system		Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)
Maximum clamping force	kN	290	730	1270
Clearance between tie-bars (WxH)	mm	370 x 290	560 x 360	660 x 360
Dimensions of rotary table (WxH)	mm	280 x 280	560 x 390	660 x 420
Daylight	mm	520	710	825 (800) <sup>*5</sup>
(Mold thickness extension 100 mm selected)	mm	—	—	—
Mold opening stroke	mm	230	300	375 (350) <sup>*5</sup>
Maximum platen speed	mm/s	1200	1300	1200
Mold height (min. - max.)	mm	180~290	160~410	180~450
(Mold thickness extension 100 mm selected)	mm	—	—	—
Locating hole diameter	mm	2-φ60	2-φ60	2-φ120
(Locating ring with inner diameter φ100 selected)	mm	—	—	—
Ejector ejection points		Motor driven type (1 points) 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
(Ejector ejection up selected)	kN	—	—	—
Maximum ejector speed	mm/s	333	333	333
Ejector stroke	mm	70	91	100 (91) <sup>*6</sup>
Ejector rod protrusion amount	mm	-83 (61) <sup>*6</sup>	-62 (82) <sup>*6</sup>	-53 (82) <sup>*6</sup>
Maximum mold weight	kg	50	175 x 2	300 x 2
(Moving side maximum)	kg	(100)	(200 x 2)	(250 x 2)

## ■ Injection unit

Plasticizing capacity		C30			C65				C250			
		MN			MN		S		M			
Screw diameter	mm	16	18	20	16	18	20	22	25	28	32	36
Maximum injection pressure <sup>*1,*2</sup>	MPa	266	210	170	266	210	235	194	281	284	217	171
Maximum hold pressure <sup>*1,*2</sup>	MPa	212	168	136	266	210	216	178	225	227	174	137
Theoretical injection capacity	cm <sup>3</sup>	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 capacity <sup>*3</sup>	kg/h	9.5	13	16	8.8	12	13	18	26	37	53	76
Injection rate	cm <sup>3</sup> /s	101	127	157	101	127	157	190	147	185	241	305
Screw stroke	mm	55			55		87		114		140	
Maximum injection speed	mm/s	500			500				300			
Maximum screw rotation speed	min <sup>-1</sup>	430			400				400			
Quantity of temperature control zones		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 pressing force	kN	2.9			5.8				A 11 / B 14 <sup>*7</sup>			
Nozzle protrusion	mm	30 / 50			30 / 45 / 65 / 80				45 / 65 / 85			
Hopper capacity (Standard model hopper selected)	L	(2.5 x 2)			(6.0 x 2)				(15 x 2)			

## ■ Machine dimensions and weight

Machine dimensions (LxWxH) <sup>*4</sup>	mm	3453 x 1079 x 1526	4017 x 1318 x 1658	5508 x 1419 x 1860
(Mold thickness extension 100 mm selected)	mm	—	—	—
Machine weight	t	3.0	5.0	7.6

<sup>\*1</sup> The maximum injection pressure and the maximum holding pressure are calculated values. These values indicate not the resin pressure but the output of the unit.

<sup>\*2</sup> The maximum injection pressure and the maximum holding pressure are not values that can be sustained continuously.

<sup>\*3</sup> The plasticization capacity value indicates the capacity when the SM screw is loading.

<sup>\*4</sup> The full length of the machine is the measurement taken when the smallest screw is loaded at the forward position of the injection unit.

<sup>\*5</sup> When the machine is equipped with an ejector unit with brake, the mold opening-closing stroke is limited to the value in ( ).

<sup>\*6</sup> Values in ( ) are for machines with ejector rods embedded in the rotary table.

<sup>\*7</sup> Selectable between A and B

<sup>\*8</sup> When the C250 plasticization device is selected, it is necessary to select both sides. (This restriction does not apply to the SE400HS-CI.)

Ⓢ We appreciate your kind understanding that as a result of our effort to enhance performance, there may be slight modifications to the specifications.

Ⓢ 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-CI	SE280HS-CI	SE400HS-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) <sup>*5</sup>	1070 (1040) <sup>*5</sup>	1225
—	—	(1325)
510 (480) <sup>*5</sup>	510 (480) <sup>*5</sup>	625
1200	1200	1200
210~560	210~560	250~600
—	—	(250~700)
2-φ120	2-φ120	2-φ120
—	—	(2-φ100)
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 <sup>*8</sup>			C360			C510			C250 <sup>*8</sup>			C360			C510			C250			C560			C900		
M			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	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		
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 <sup>*7</sup>			A 11 / B 14 <sup>*7</sup>			24			A 11 / B 14 <sup>*7</sup>			A 11 / B 14 <sup>*7</sup>			24			A 11 / B 14 <sup>*7</sup>			A 24 / B 29 <sup>*7</sup>			A 29 / B 47 <sup>*7</sup>		
45			45 / 65			45 / 65			45			45 / 65			45 / 65			45 / 65 / 80			45 / 65 / 80			50 / 65 / 85		
(30 x 2)			(30 x 2)			(30 x 2)			(30 x 2)			(30 x 2)			(30 x 2)			(C003:30 x 2)			(C003a:50 x 2)					

6403 x 1854 x 1997	6403 x 1854 x 1997	7533 x 2252 x 2191
—	—	(7633 x 2252 x 2191)
17.0	17.0	25.1
		26.1
		27.5

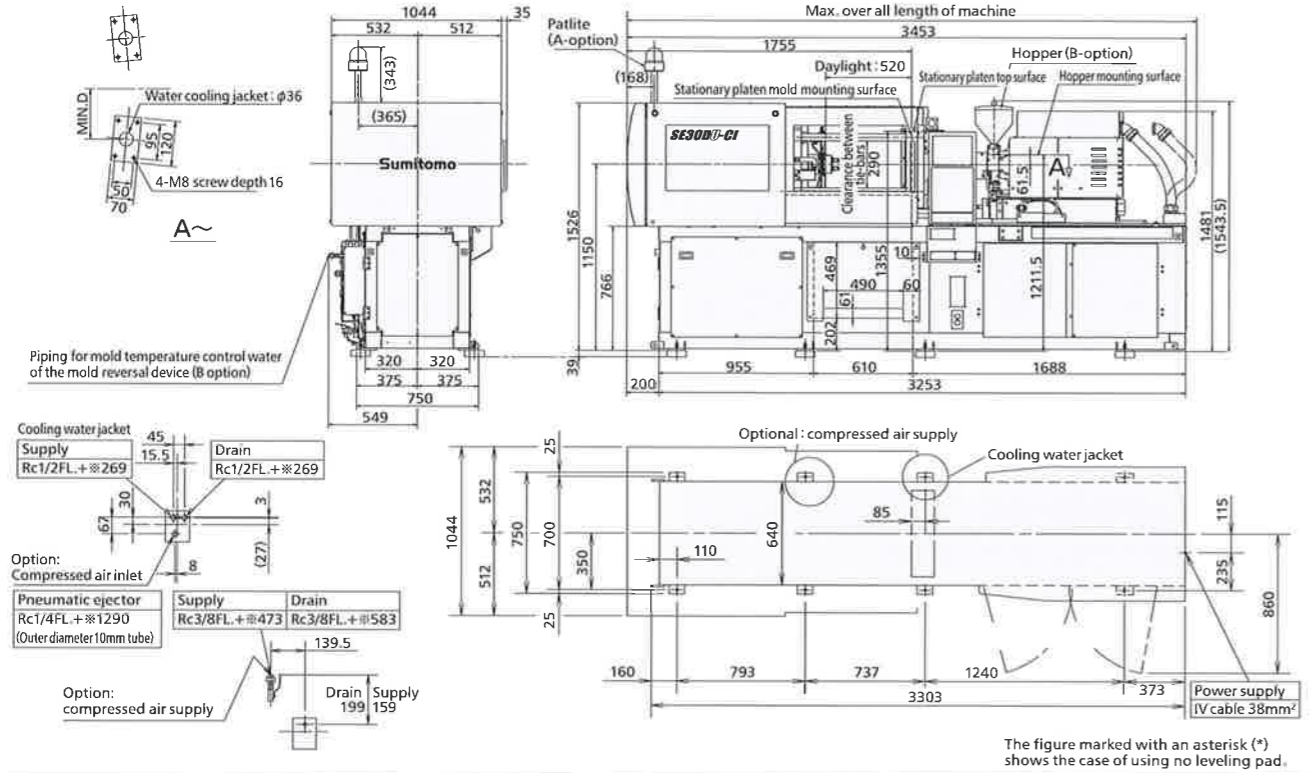
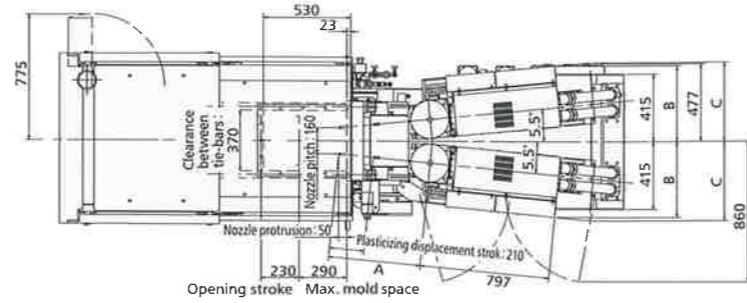


# SE30DU-CI

## Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

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



The figure marked with an asterisk (\*) shows the case of using no leveling pad.

# Double-shot

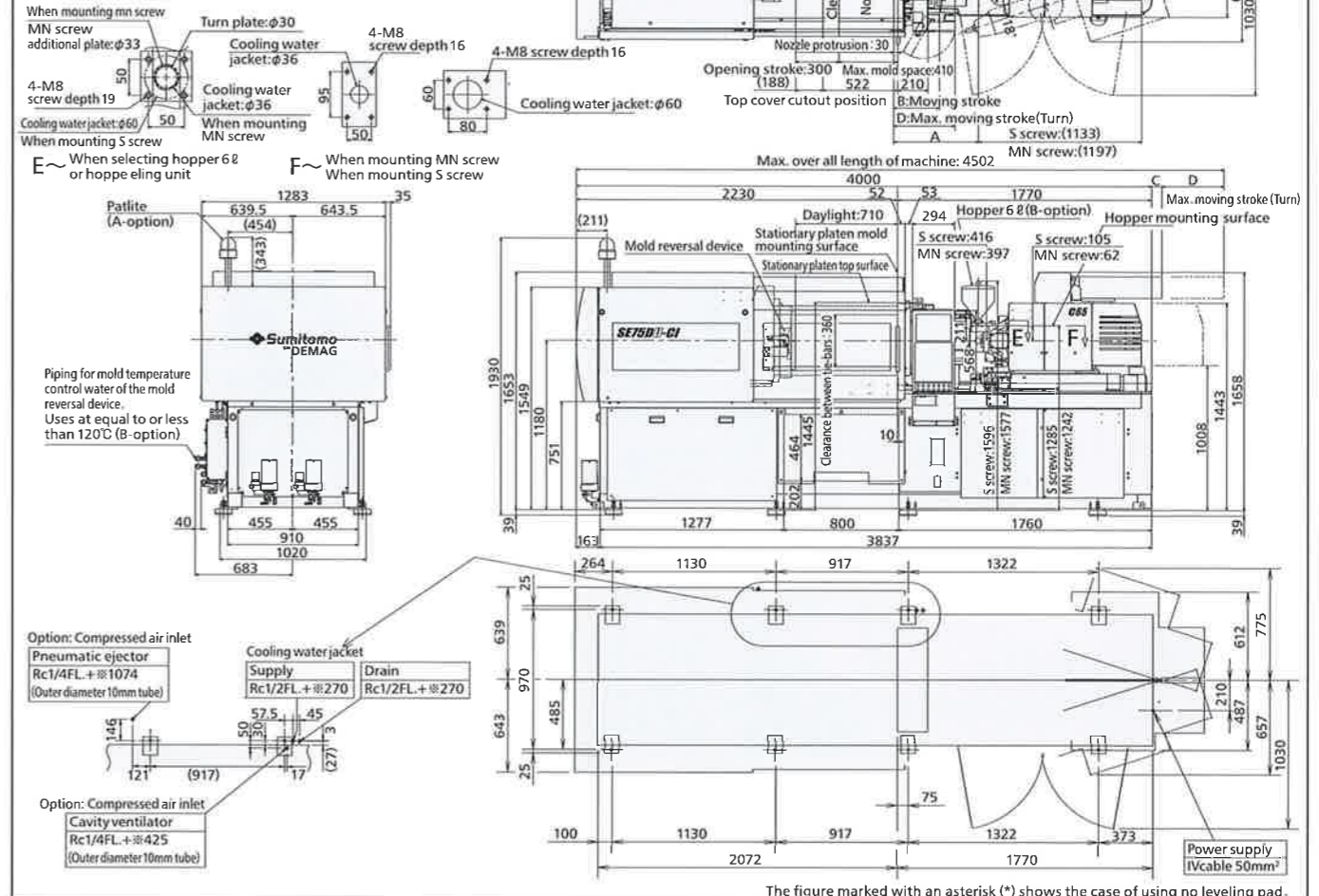
# SE75DU-CI

## Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

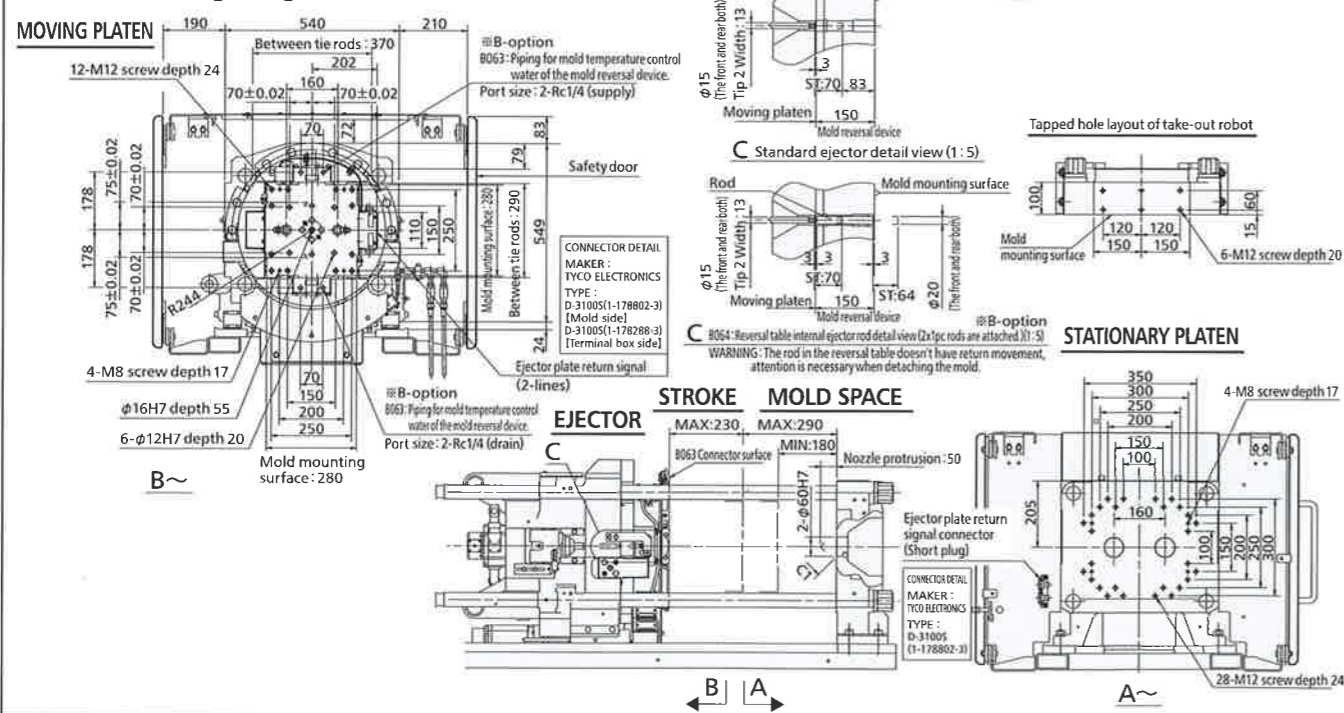
Injection unit	Screw diameter/Type	A B C D			
		OA	OR	NR	
C65	20	476	320	17	485
	22	540	320	17	485
	22	595	320	72	430
	22	650	320	127	375
		705	265	182	320

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

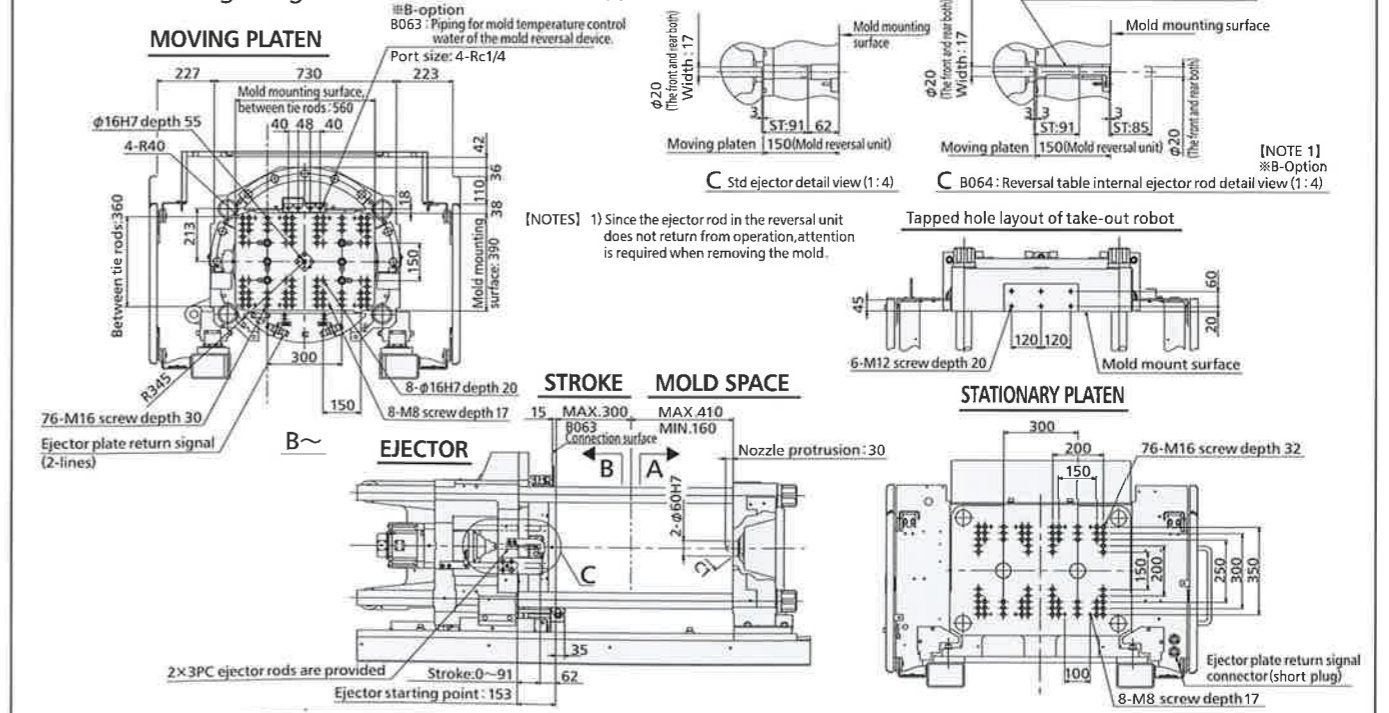


The figure marked with an asterisk (\*) shows the case of using no leveling pad.

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



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





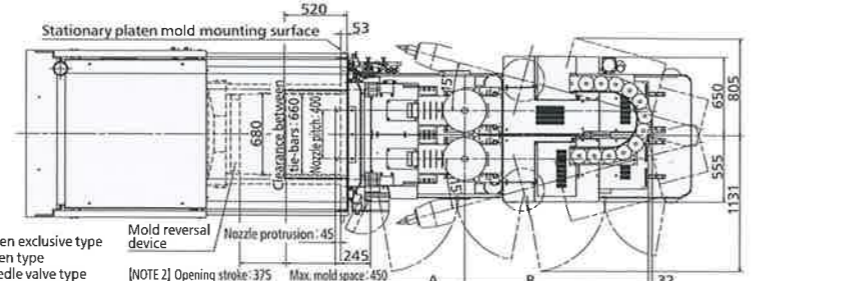
# SE130DU-CI

## Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

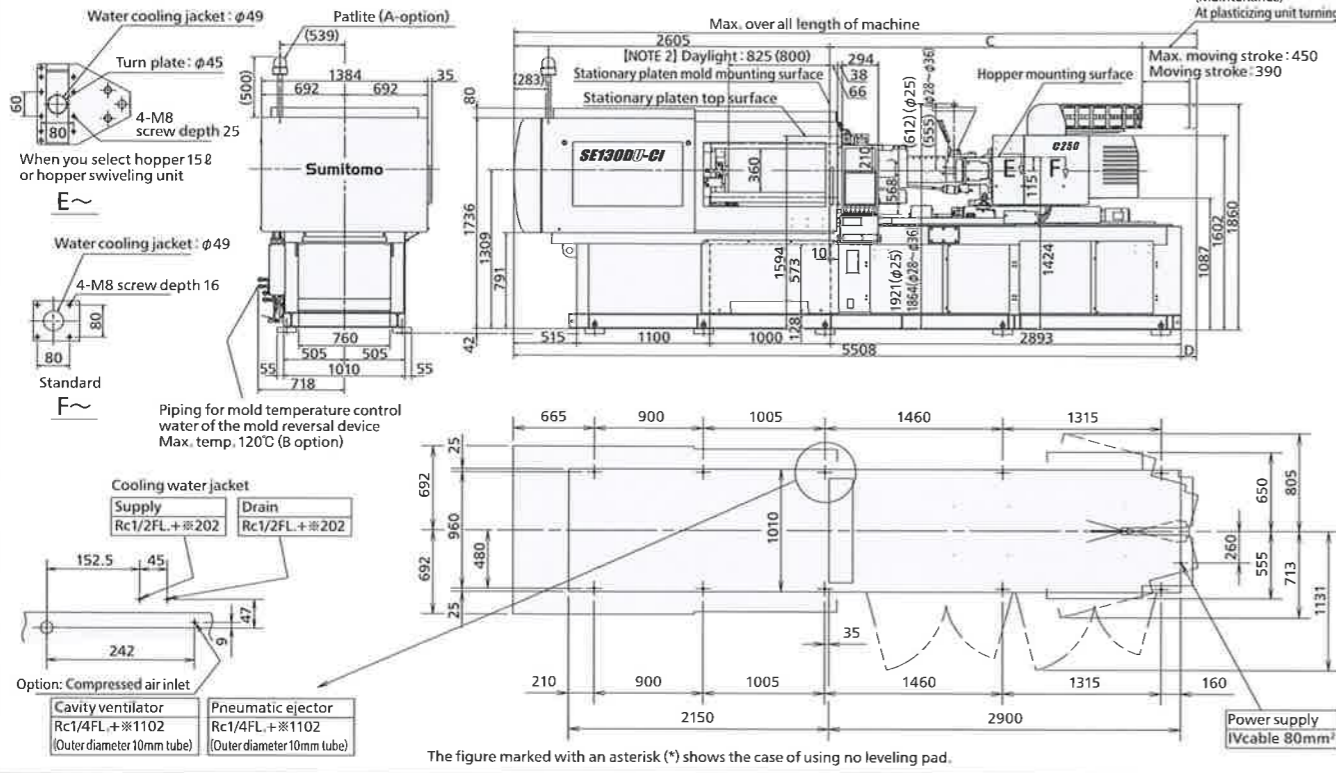
Injection unit	Screw diameter/type	Screw / type				Max. over all length of machine
		OA	OR	NR		
C250	M	25	654	2259	-194	5508
		25	704	2309	-144	5508
		25	794	2399	-54	5508
		28	744	2259	-194	5508
		28	794	2309	-144	5508
		32	834	2349	-104	5508
		32	884	2399	-54	5508
		36	924	2439	-14	5508
		36	974	2489	36	5544
		36	1064	2579	126	5634

(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 350mm and daylight changes into 800mm when B088 ejector unit with brake is selected.



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

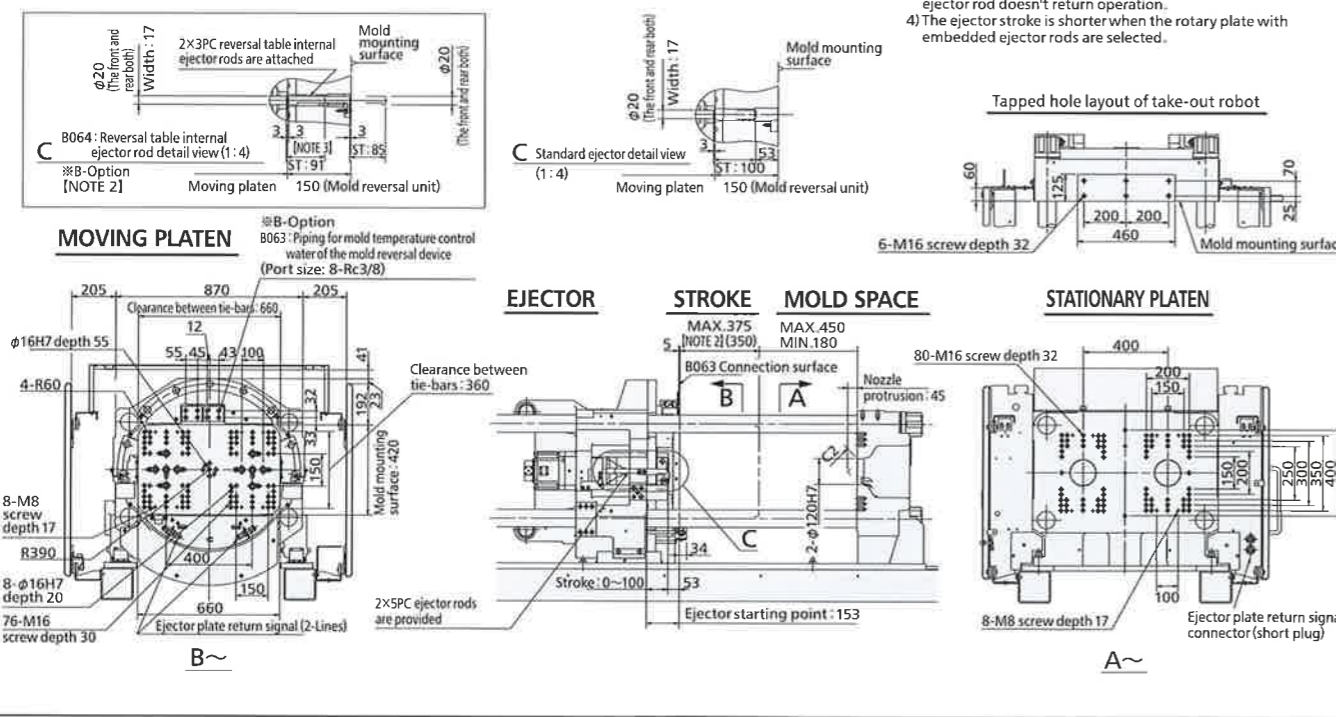
[NOTE 2] Opening stroke: 375 (350) Max. mold space: 450



The figure marked with an asterisk (\*) shows the case of using no leveling pad.

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

(NOTES) 3) When removing a mold, because reversal table internal ejector rod doesn't return operation.  
4) The ejector stroke is shorter when the rotary plate with embedded ejector rods are selected.



# SE230HS-CI

# Double-shot

## Dimension & Foundation Plan

The following drawing's dimensions are Japanese specification.

Plasticizing unit	Screw / type	Screw / type				Max. over all length of machine	
		OA	OR	NR			
C250	M	28				2527 -69	6403
		28				2537 -59	6403
		32				2617 21	6424
		32	28	390	450	2627 31	6434
		36				2707 111	6514
		36	32			2717 121	6524
					2807 211	6614	

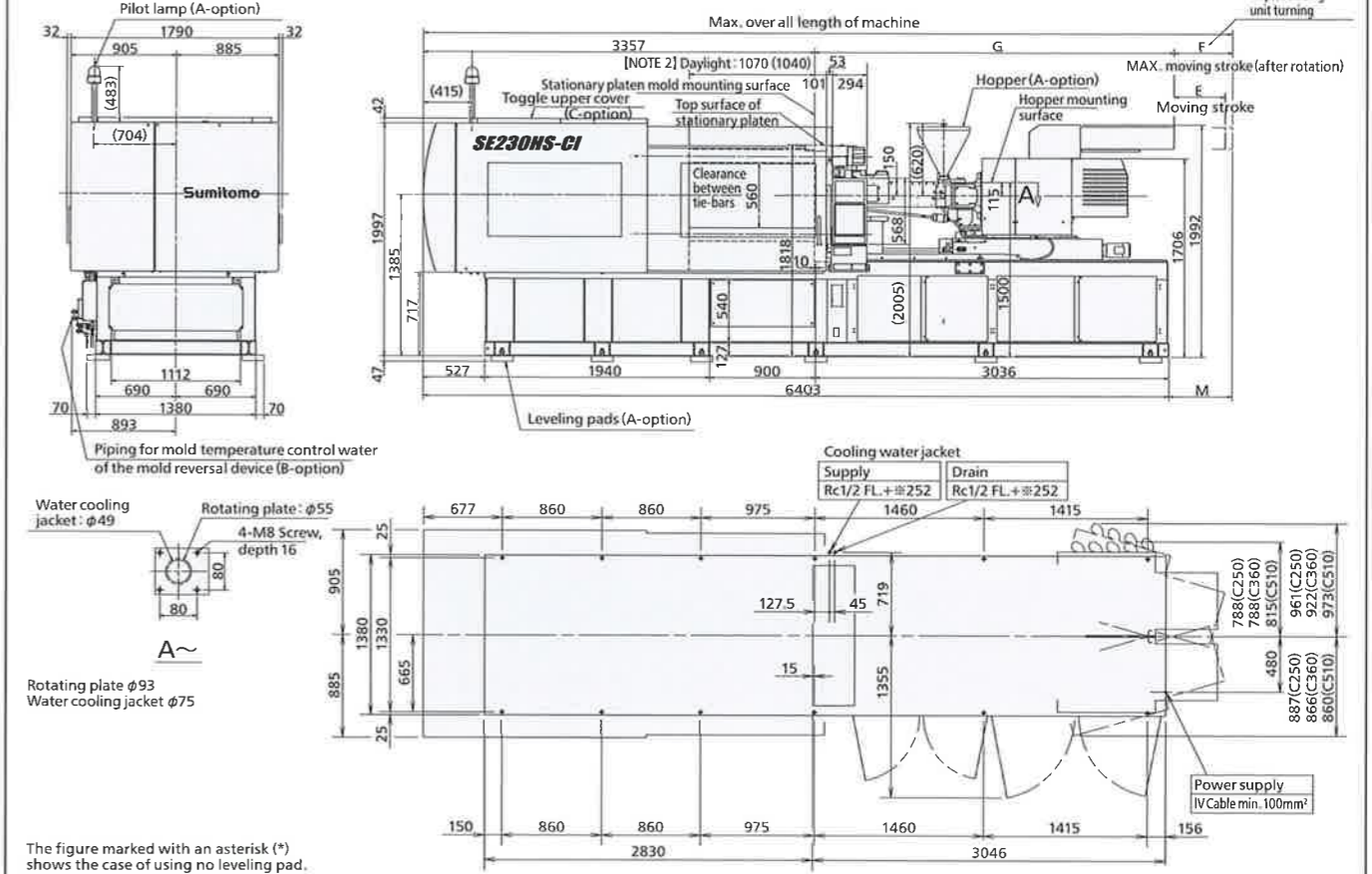
Plasticizing unit	Screw / type	Screw / type				Max. over all length of machine	
		OA	OR	NR			
C360	M	32				655 2772	6784
		32				645 2782	6784
		32				555 2872	6784
		36	440			655 2772	381 6784
		36				645 2782	6784
		40				565 2862	6784
					555 2872	6784	
					500 2962	416 6819	

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

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

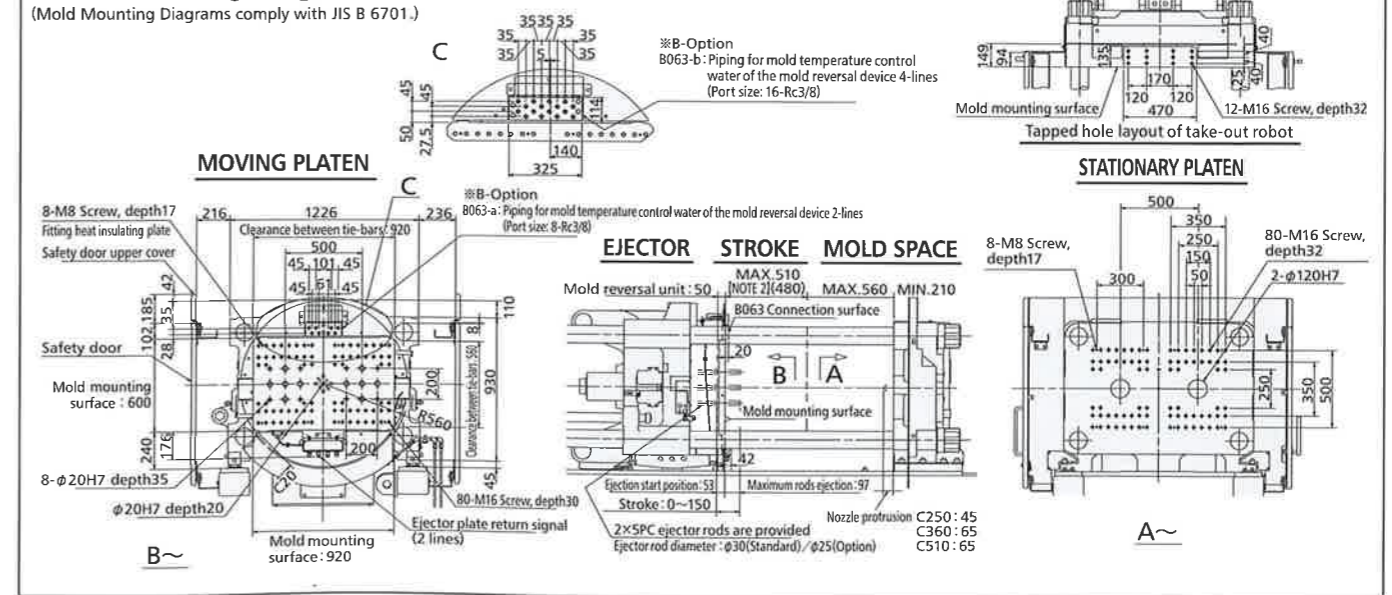
## Dimension & Foundation Plan

(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.



The figure marked with an asterisk (\*) shows the case of using no leveling pad.

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



# SE280HS-CI

Plasticizing 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				2617	21	6424
		32	28	390	450	2627	31	6434
		36				2707	111	6514
		36	32			2717	121	6524
			36			2807	211	6614

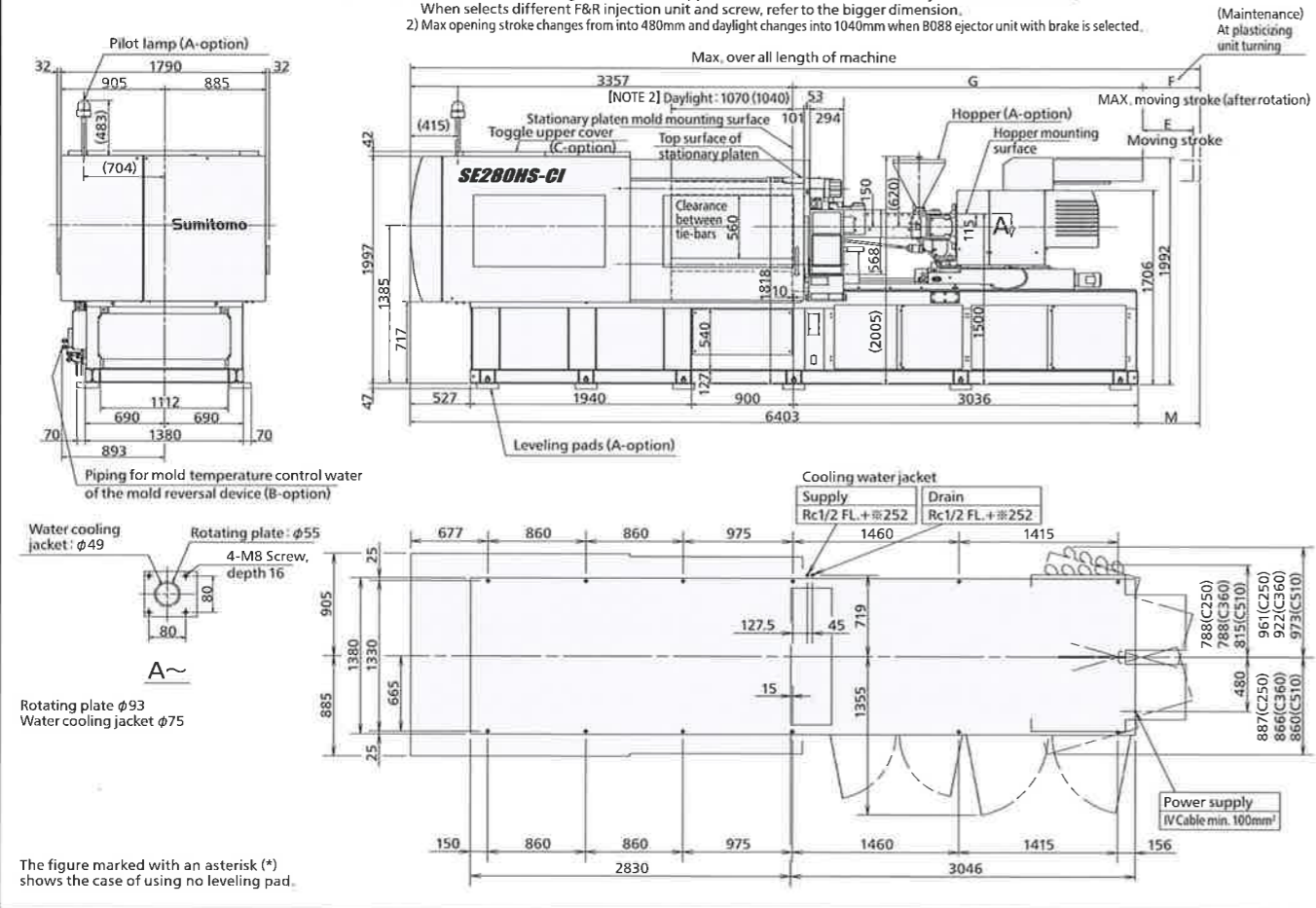
Plasticizing unit	Screw / type			E	F	G	M	Max. over all length of machine	
	OA	OR	NR						
C360	M	32				655	2772		
		32				645	2782		
		32	32			555	2872		
		36			440	655	2772	381	6784
		36				645	2782		
		40	36			565	2862		
			40	36		555	2872		
			40			500	2962	416	6819

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

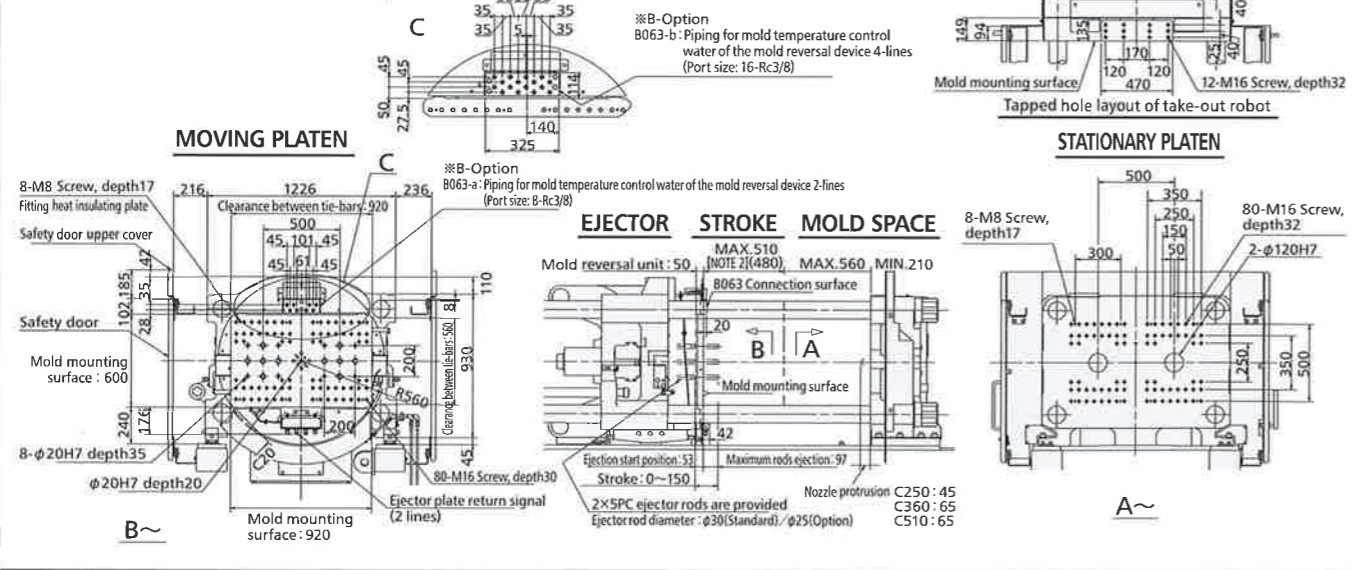
Dimension & Foundation Plan The following drawing's dimensions are Japanese specification.

- [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.)



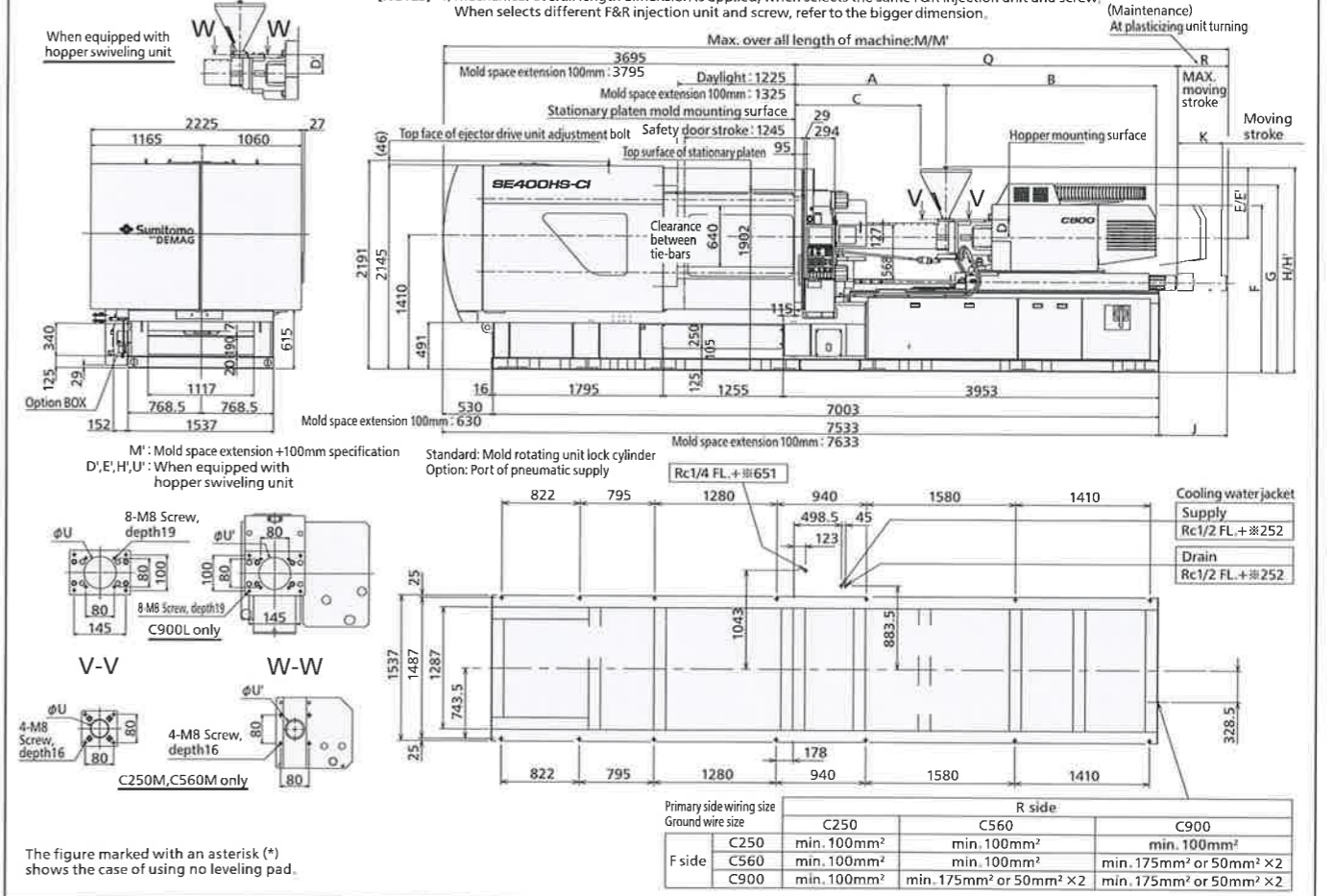
# Double-shot

# SE400HS-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																						
C250M	28	28	729		462													2320						
	32	32	819	1459	522	155	140	711	696	1701	1978	2121	2106	-698	470	7533	7633	2320	530	20'	52	56		
	36	36	909		612													2320						
	40	40	999		702													2320						
	45	45	1089		792													2320						
C560M	45	45	1089	1723	822	155	140	711	696	1746	1977	2121	2106	-237	470	7533	7633	2320	530	20'	52	56		
	50	45	1179		912													2320						
	50	50	1269		1002													2320						
	50	45	1267		1092													2320						
	56	50	1357		1182													2320						
C900L	45	45	1267	2212	1000	189	202	745	777	1758	1977	2155	2187	717	470	7800	7900	2320	530	14'	56	93		
	50	45	1357		1090													2320						
	50	50	1447		1180													2320						
	56	50	1537		1270													2320						
	56	56	1587		1320													2320						

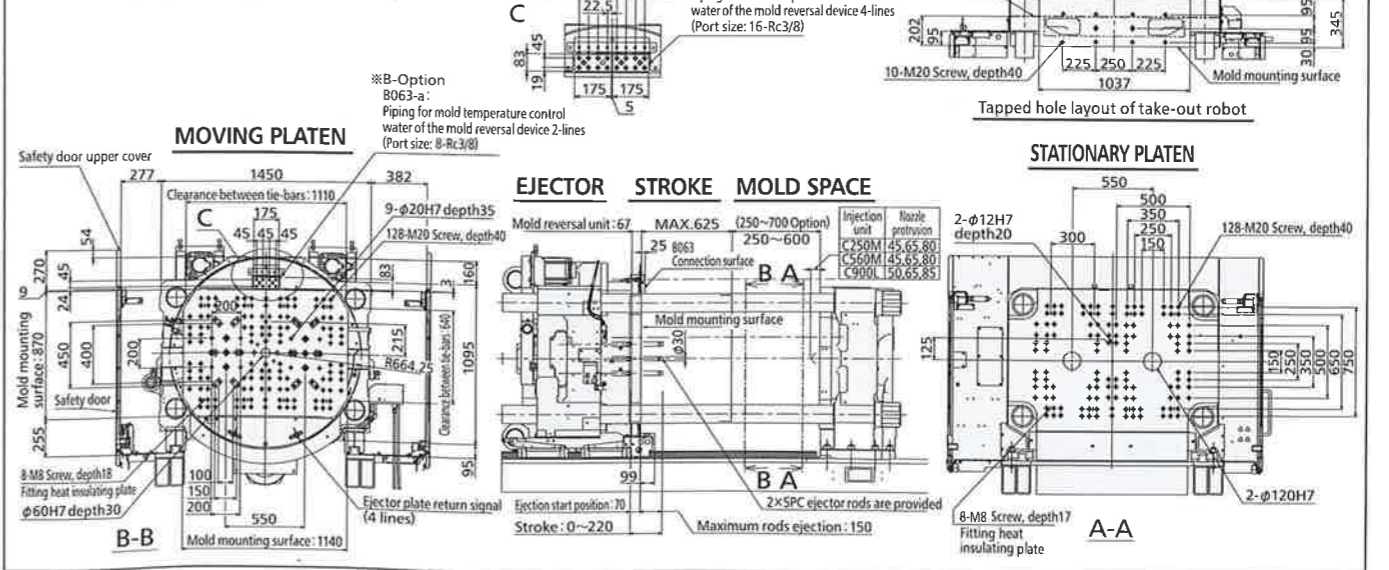
Dimension & Foundation Plan The following drawing's dimensions are Japanese specification.

- [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.)





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