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Sumitomo SHI DEMAG

Packaging Series

Injection Molding Machine

Your total packaging solutions!

www.shi.co.jp/plastics/

Sumitomo Heavy Industries, Ltd.

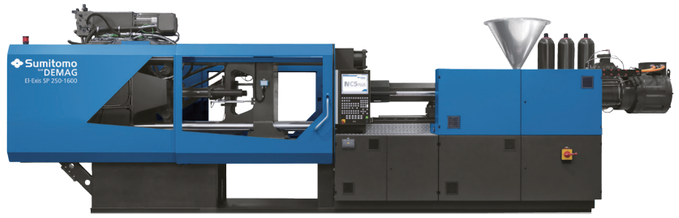
To meet high demand of packaging products.

Fast, precise, reliable
Injection tailored to fit the production environment

By studying of feedback from production-site, We challenged in development of packaging machine that incorporate cutting-edge ideas and highly reliable technology.
Packaging machine developed to ideally suit the production environment.

Cycle Time

Short



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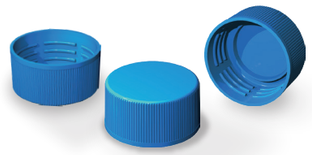


Bottle cap

SE-HSZ2 Packaging spec.

Detailed molds → P08

Drinking cups

SE-HSZ2 Standard spec.

Detailed molds → P10

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

Detailed molds → P12

Thin-walled containers

SE-EV-S-HD Standard spec.

General use and containers · Cutlery

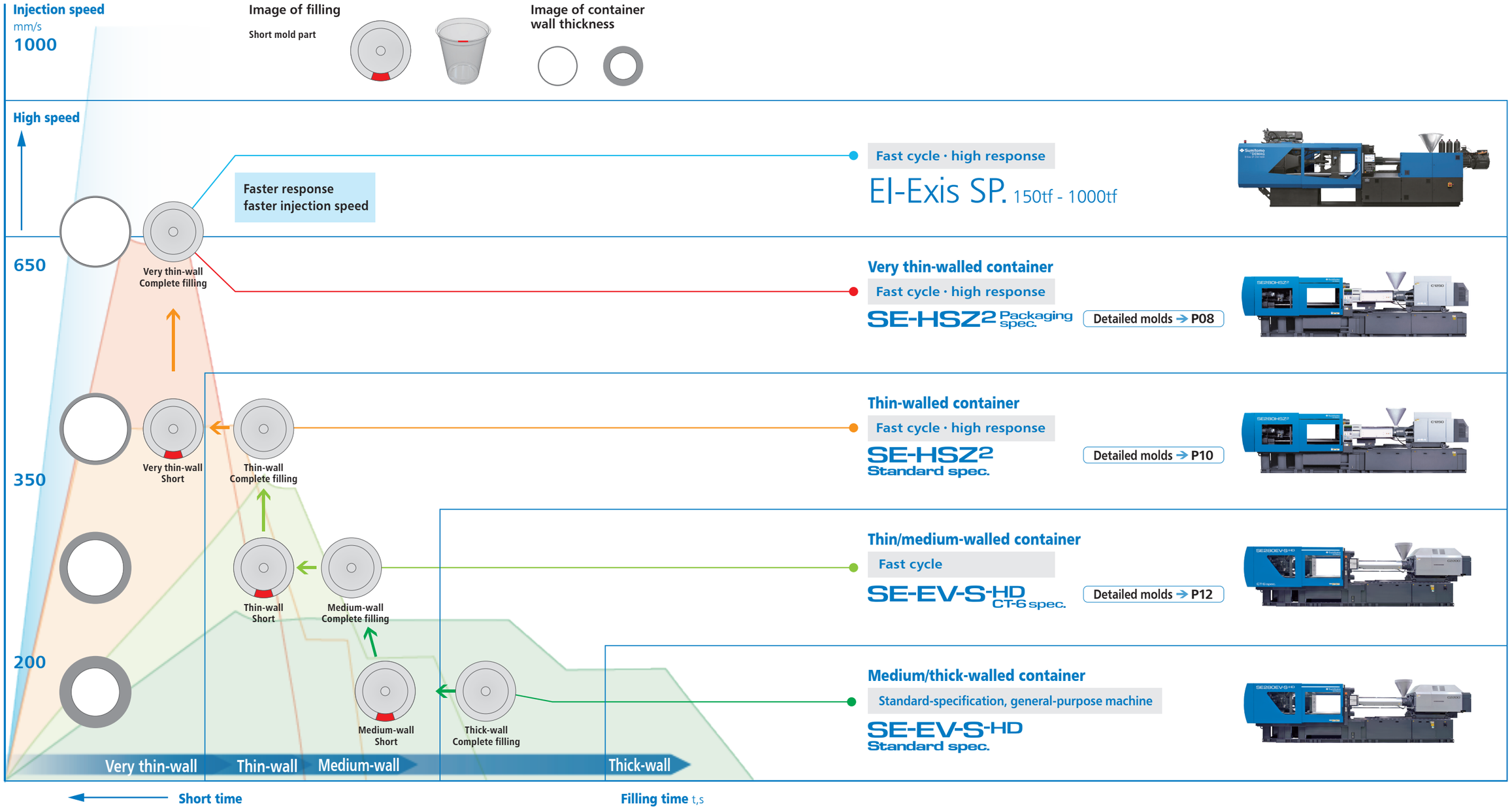
Thick-walled containers
Cosmetic containers

Machine Series

Injection performance ideal for container molding

Molding machines available to suit product needs

Products that requires fast filling and startup response (high response).
High injection speed and pressure response, allows complete fill before molded parts solidify.
Each model is tailored to work at its ideal injection performance to match each product segment.



Container molding machine specially designed to fulfill customer needs

Fast cycle, high response, stable: the performance demanded by professionals.
A varierty of needs and applications, with provened technology.
A line-up of products to fulfill specific demands.

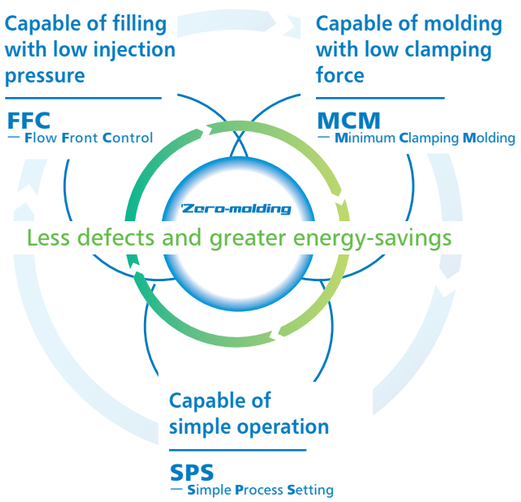
3 key features

1. Productivity (high cycle and high durability)
2. Stability and reproducibility (improved yield)
3. Optimized production costs (line-up of energy-saving models)

Zero-molding function good for container molding

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

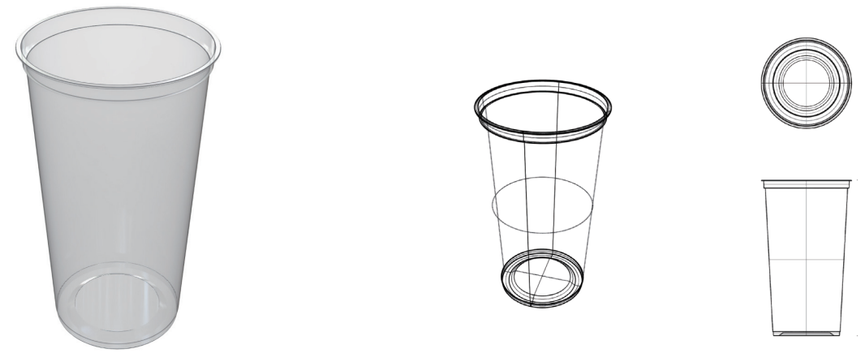
To reduce mold clamping force, technology to reduce injection pressure was developed.



Molding machine available to best match product design and also capacity of production.

As such, it differs not only based on the wall thickness and shape of the container, but also the production volume and projected cost.
The following is an illustration of an actual recommended molding machine example. We offer the ideal molding machine to fit your specific needs.

Drinking cup —— Example of machine selection with different injection rates

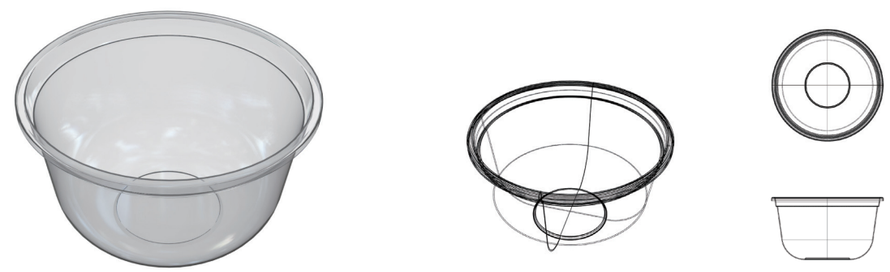


Data

Thickness	0.60mm
Weight	30g
Resin	PP
L/T	225

×8 → SE-HSZ2 Packaging spec.
×6 → SE-HSZ2
×4 → SE-EV-S-HD CT-6 spec.

Dessert cup —— Example of cavity decision by injection rate



Data

Thickness	0.55mm
Weight	5g
Resin	PP
L/T	132
Cavities	8

4.0Sec → SE-HSZ2 Packaging spec.
6.0Sec → SE-EV-S-HD CT-6 spec.

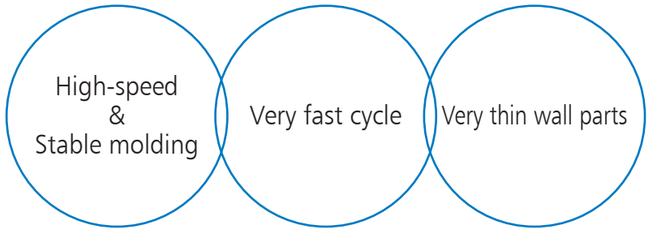
*The yield rate is based on proven performance in injection rate and responsiveness.

SE-HSZ2 Packaging spec.

Dedicated high-performance container molding.

Abundant features good for packaging parts molding performance

SE-HSZ2, with dramatically improved container molding performance. Significantly improved stability and power saving when compared to conventional hybrid and hydraulic models. Also, fast cycle achieved sub 3 seconds for multiple-cavity very thin-walled containers. Important factor of dedicated packaging machines are reliability, and capability to mold thin-wall parts at fast cycle time.



Line up

SE280HSZ2 Packaging spec. (2740kN)

SE350HSZ2 Packaging spec. (3430kN)

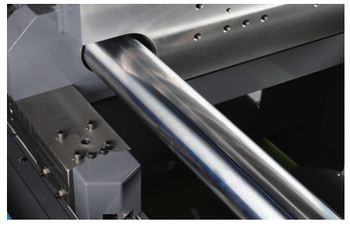
Dedicated equipment ideal for fast-cycle, thin-wall molding

Realizes remarkably high performance thanks to a high-speed, low-vibration clamp unit, a high-speed, high-response injection unit, and a screw with ample plasticizing performance.
Dedicated equipment that not only facilitates fast cycle, but also enables stable and consistent production.

Fast,smooth (high-speed) and safe, high-performance clamp unit

Clamp unit that maintains low vibration even at fast open and close operation.
Realizes uniform and stable clamping force thanks to DCPP (double center press platen) design and mold clamp force feedback control.
The high-rigidity frame designed with Linear-guide specification significantly improves linear movement of mold.
Also, highly sensitive mold protecting mechanism helped to ensure safe and comfortable production.

Dry cycle time reduced by 15% compared to SE-HSZ2



Injection unit with high-speed filling and easy to mold

A maximum injection speed of 650 mm/s , thanks to double-axis direct drive design which is essential to fast speed response.
Cavity balance and reduced pressure of filling has been drastically improved through utilization of Zero-molding.

Injection speed
650mm/s C1250 / C1700
550mm/s C2500

Injection unit with high plast rate and precise dosing.

High plasticizing rate and precise dosing performance, enabled least shot-to-shot molding variation.
The dedicated SM screw with low shear, minimize resin-burnt or gas-generation, hence, contamination (foreign materials, carbonization) rate drastically reduced too.

*SD, SF, and Long-L/D screw are available as selective options.

Even at low temperature settings
SM screw design with sub-flight design enable homogeneous melt ,
and also reduce generation of gas.

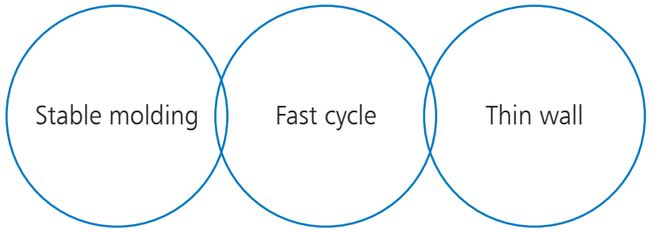
Thorough degassing even without excessive shear.
Improves kneading.

SE-HSZ2

Fast cycle machine for packaging-use.

Zero-molding for fast cycle

Specially equipped with a linear guide and anti-shock leveling pads ideal for fast cycle molding, with a focus on Zero-molding to improve consistency of production.
Thin-wall, fast cycle and stable molding realized.



Line up

SE220HSZ2 (2150kN)
SE280HSZ2 (2740kN)
SE350HSZ2 (3430kN)

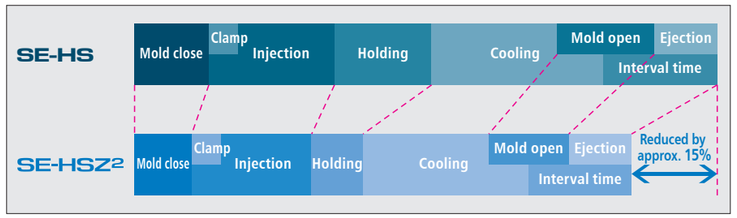
The apex of stable and fast-cycle molding

Fast cycle molding far surpassing the performance of conventional models, thanks to improved injection speed, better responsiveness, shorter process time, and precise control.
Machine high performance enables comfortable, fast cycle production.

Zero-molding, introduced as standard feature, has won "tender and easy" to molds widely.

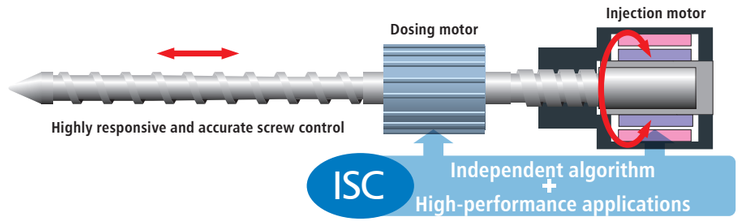
Achieves an average of 15% cycle time reduction when compared to conventional model through improved injection speed, FFC molding, and faster mold open and close via ISC.
For FFC (flow front control) molding, extra holidng time previously required to prevent sink marks can now be reduced to zero, which contributes to productivity.

Injection speed
350mm/s



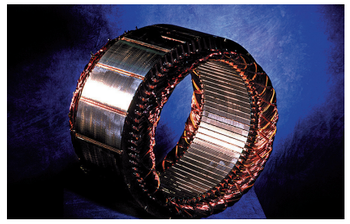
ISC (intelligent servo control) system for improving productivity

Faster mold open/close realized, reduced machine vibration, and improved molding stability through use of a new control algorithm.
Improved servo control performance reduces variation in cushion position and peak pressure, enabling precise plasticizing, filling, and holding process.



Direct drive that realizes precise fast cycle molding

The injection unit utilizes a unique direct drive mechanism.
Approx. 2.5 times faster injection velocity response than belt driven type.
Enables more precise fast cycle molding, as high speed and pressure can be controlled instantaneously.
Injection unit from C1250 to C1700 utilized a double-axis synchronized direct drive mechanism with compact design, in order to achieve higher response performance.



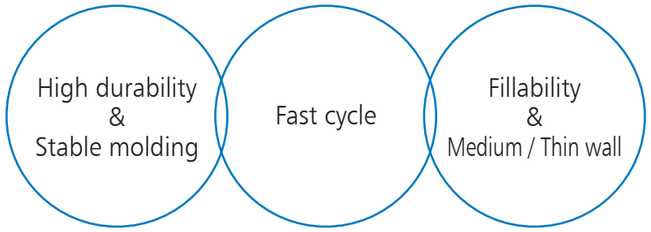
First-generation servo motor (stator)

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

High cost performance fast cycle machine

Fast cycle machine based on SE-EV-S-HD

The highly rated SE-EV-S-HD series has been enhanced with high-cycle features for packaging use.
It improves filling and plasticization capacity without sacrificing the small footprint and expandability of the base model.
New proposal to high cost performance fast cycle molding.



Line up

SE220EV-S-HD CT-6 spec.	(2200kN)	SE350EV-S-HD CT-6 spec.	(3500kN)
SE250EV-S-HD CT-6 spec.	(2500kN)	SE385EV-S-HD CT-6 spec.	(3850kN)
SE280EV-S-HD CT-6 spec.	(2800kN)	SE450EV-S-HD CT-6 spec.	(4500kN)
SE315EV-S-HD CT-6 spec.	(3150kN)	SE500EV-S-HD CT-6 spec.	(5000kN)

Two modes to meet the needs

High-rotation mode Recommended for fast cycle ※CT-6 shipped with high-rotation mode as standard setting

High-capacity mode Recommended for products with large shot volume

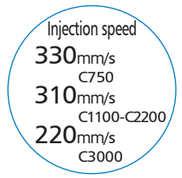
※High-rotation mode and high-capacity mode are inter-switchable.

Fast cycle design based on established technology

Injection functionality has been strengthened to facilitate filling performance.
The highly reliable direct-drive enables high-speed mold open/close, while the dedicated screw assembly allow fast cycle, and abundant space for mold installation allow flexibility to production array.

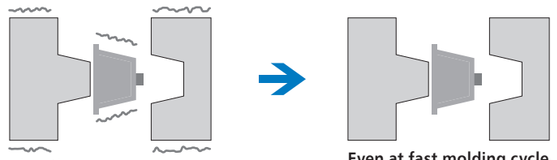
Fast cycle design with improved reliability

Improves on the injection speed and responsiveness of the base machine.
Direct-drive design enables high-speed mold open/close which successfully shorten cycle time.
Toggle support rigidity has been improved to ensure reliability even at faster cycle.
Toggle cross-head linearity displacement has been improved too to extend toggle push lifespan,
these enhancement features, has lead to machine reliability even at fast cycle.



Rigid design with low vibration that minimized effects to auxiliary equipment,

which is essential to fast cycle molding.



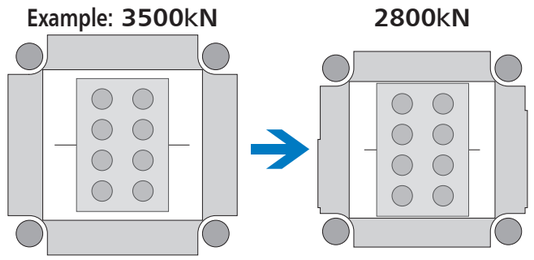
Vibration severe → Take-out robot accuracy drops

Even at fast molding cycle, take-out robot accuracy can be secured.

Space-saving concepts with easy mold installation

With large space between tie bars, and rigid frame, larger mold can be installed.
With square and large tie-bar space, and clamp force reduction features, downsized can be realized, thus, reducing installation space at site.
Facilitates effective use of space.

For example, with the SE-EV-S-HD CT-6 spec., mold that was previously installed on 3500 kN, can be installed in a 2800 kN machine.
As tie-bar space is square, freedom of mold installation and take-out has been improved.



Packaging-use SM screw assembly is available to comply with fast cycle molding

SM screw assembly equipped as standard.
SM screw prevents resin-burnt and generation of gas due to lower shear and hence suppress contamination (foreign materials, carbonization).

Screw assembly

Injection unit	Screw diameter
C750	ϕ36 ϕ40 ϕ45 ϕ50
C1100	ϕ45 ϕ50 ϕ56 ϕ63
C1600	ϕ45 ϕ50 ϕ56 ϕ63 ϕ71
C2200	ϕ50 ϕ56 ϕ63 ϕ71 ϕ80
C3000	ϕ63 ϕ71 ϕ80

Top: SD screw
Bottom: SM screw

Main Specifications SE-HSZ2

Model		SE280HSZ2	SE350HSZ2	SE220HSZ2	SE280HSZ2	SE350HSZ2
Use application		Packaging spec.	Packaging spec.	Standard spec.	Standard spec.	Standard spec.
■Clamping unit						
Clamping system		Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)	Double toggle (5 points)
Clamp drive type		Direct drive	Direct drive	Direct drive	Direct drive	Direct drive
Clamping force (max.)	kN {tf}	2740 {280}	3430 {350}	2150 {220}	2740 {280}	3430 {350}
Clearance between tie bars (HxV)	mm	685 x 635	760 x 710	610 x 560	685 x 635	760 x 710
Platen dimensions (HxV)	mm	950 x 885	1070 x 1020	880 x 830	950 x 885	1070 x 1020
Daylight	mm	1320	1470	1130	1220	1370
Mold opening stroke	mm	600	700	550	600	700
Mold height (min. - max.)	mm	350～720	400～770	300～580	350～620	400～670
Locating hole diameter	mm	ϕ100	ϕ100	ϕ120	ϕ150	ϕ150
Ejector system (ejecting points)		Electric (13 points)	Electric (13 points)	Electric (13 points)	Electric (13 points)	Electric (13 points)
Ejector ejection force	kN {tf}	98 {10}	98 {10}	58 {6.0}	58 {6.0}	58 {6.0}
Ejector stroke	mm	150	150	150	150	150
Ejector drive type		Belt drive	Belt drive	Belt drive	Belt drive	Belt drive

■Injection unit

		C1250			C1700		C1700		C2500		C560						C900			C900			C1250			C1250			C1700	
		L			L		L		L		M						L			L			L			L			L	
Injection drive type		Direct drive			Direct drive		Direct drive		Direct drive		Direct drive						Direct drive			Direct drive			Direct drive			Direct drive			Direct drive	
Screw diameter	mm	50	56	63	63	71	63	71	71	80	28	32	36	40	45	50	45	50	56	45	50	56	50	56	63	50	56	63	63	71
Injection pressure (max.) *1,*2	MPa	274	218	172	215	169	215	169	229	180	289	275	272	274	215	174	267	216	172	267	216	172	274	218	172	274	218	172	215	169
	{kgf/cm²}	{2800}	{2230}	{1760}	{2200}	{1730}	{2200}	{1730}	{2340}	{1840}	{2950}	{2810}	{2770}	{2800}	{2200}	{1780}	{2730}	{2210}	{1760}	{2730}	{2210}	{1760}	{2800}	{2230}	{1760}	{2800}	{2230}	{1760}	{2200}	{1730}
Holding pressure (max.) *1,*2	MPa	219	174	137	172	135	172	135	183	144	289	275	272	220	172	139	213	172	137	213	172	137	219	174	137	219	174	137	172	135
	{kgf/cm²}	{2240}	{1780}	{1400}	{1760}	{1380}	{1760}	{1380}	{1870}	{1470}	{2950}	{2810}	{2770}	{2240}	{1760}	{1424}	{2180}	{1760}	{1400}	{2180}	{1760}	{1400}	{2240}	{1780}	{1400}	{2240}	{1780}	{1400}	{1760}	{1380}
Theoretical injection capacity	cm³	448	562	711	773	982	773	982	1140	1448	86	129	163	201	254	314	329	406	510	329	406	510	448	562	711	448	562	711	773	982
Injection weight (GPPS)	g	430	539	682	742	943	742	943	1095	1390	83	124	156	193	244	302	316	390	489	316	390	489	430	539	682	430	539	682	742	943
	OZ	15.2	19.1	24.2	26.3	33.4	26.3	33.4	38.8	49.2	2.9	4.4	5.5	6.8	8.7	10.7	11.2	13.8	17.3	11.2	13.8	17.3	15.2	19.1	24.2	15.2	19.1	24.2	26.3	33.4
Plasticizing rate (GPPS) *3	kg/h	202	273	290	290	374	290	374	374	440	37	53	76	101	136	193	149	202	246	149	202	246	202	246	290	202	246	290	290	327
( ) Denotes screw rotation speed	(rpm)	(400)	(400)	(320)	(320)	(320)	(320)	(320)	(320)	(320)	(400)	(400)	(400)	(400)	(400)	(400)	(400)	(400)	(360)	(400)	(400)	(360)	(400)	(360)	(320)	(400)	(360)	(320)	(320)	(280)
Injection rate	cm³/s	1276	1601	2026	2026	2573	2026	2573	2178	2765	216	281	356	440	557	687	557	687	862	557	687	862	687	862	1091	687	862	1091	1091	1386
Screw stroke	mm	228			248		248		288		140	160	160	160	160	160	207			207			228			228			248	
Injection speed (max.)	mm/s	650					650		550		350									350						350				
Screw speed (max.)	min-1	400		320	320		320				400						400	400	360	400	400	360	400	360	320	400	360	320	320	280
Number of temperature control zone		6					6				5						6			6						6				
Heater capacity	kW	27	31	37	37	43	37	43	43	44	6.6	7.6	8.5	10.4	11.1	11.3	23.3	26.8	31.2	23.3	26.8	31.2	26.8	31.2	37.1	26.8	31.2	37.1	37.1	42.7
Nozzle contact force	kN	58 {6.0}					58 {6.0}				58 {6.0}									58 {6.0}						58 {6.0}				
Injection unit moving stroke	mm	450					450				390						450			450						450				
Nozzle protrusion	mm	65					65				65						65			65						65				
Hopper capacity	L	(100)					(100)				(50)						(100)			(100)						(100)				

■Machine dimensions and weight

Machine dimensions (LxWxH) *4	mm	7851 x 1680 x 2304					8236 x 1770 x 2254				6436 x 1580 x 2065						6436 x 1580 x 2254			7217 x 1680 x 2254						7511 x 1770 x 2254			7522 x 1770 x 2254	
Machine weight	t	17.3			17.5		20.6			20.7	10.1						10.9			13.0			13.7			17.9			18.1	

*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. (SD screw only for C560)
*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 values within { } brackets are only reference figures.
● 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 SE-EV-S-HD

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
	High-capacity mode		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
	High-capacity mode		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
	High-capacity mode		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		
	High-capacity mode		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
	High-capacity mode		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
	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	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	15.3	15.4

● 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 SE-EV-S-HD

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.