

TOSHIBA MACHINE



EC-SX

ALL-ELECTRIC INJECTION MOLDING MACHINES



This may look like one machine...

...but it is so versatile, with a greater range of shot sizes, you'll think it was triplets.

It's the new SX all-electric...packed with new and enhanced features that give you extraordinary quality and unsurpassed flexibility.



20% improvement in your dry cycle times

The new SX's friction-reducing linear bearing ways and dynamic acceleration/deceleration control give you significantly faster cycle times.

Extending your mold life

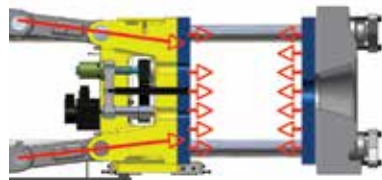
Its shockless acceleration/deceleration programming helps reduce wear and tear on your mold, minimizing mold maintenance and maximizing mold life.

Minimizing part contamination

Bushing-free, grease-free tie bars reduce the possibility of contaminating molded parts.

Uniform clamping force across mold surface

The new SX features a 5-point "Linkline" toggle mechanism that directs pressure to the center of the mold surface. As a result, you achieve uniform clamping force across the entire mold surface, improving quality and minimizing defect rates.



5-point Linkline mechanism for more uniform clamping force.



Left, uneven pressure. Right, improved uniform clamping force.

With uniform mold surface pressure, you can recycle tonnage, enabling you to maximize mold life and minimize machine maintenance.

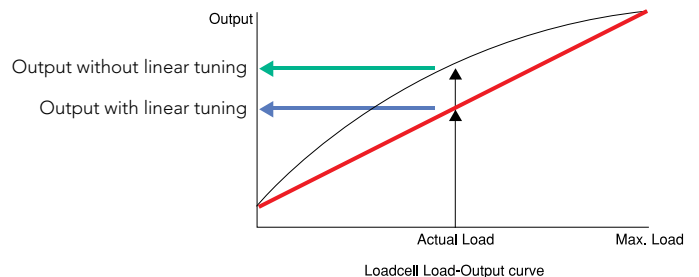
More shot sizes with a single machine

With the SX, you get a wider range of barrel choices from a single machine, enabling you to shorten changeover times and move from project to project, quickly and easily. As a result, you can be more competitive on new jobs and increase your shop's flexibility without investing in new equipment. And with quicker changeovers, you can be online and molding faster than ever before.

S³ - Simple, Steady, Smooth

With its friction-free drive mechanism and faster communications software, the new SX improves high-speed, high-pressure performance, while maintaining greater molding stability.

The new SX's high performance digital loadcell features linear correction, increasing sensitivity while improving



injection accuracy and backpressure. The result is more stabilized processing and screw recovery, and consistent shot-to-shot performance.



...but its shot range says more

V50 Controller uses Real-Time Information

With a 40% improvement in communication speed, the new V50 controller on the SX uses real-time input to report molding conditions and make automatic adjustments to mold settings. This results in greater part repeatability and fewer rejects.

User customization

The V50's intuitive, touch-screen interface enables you to customize machine cells without investing in additional OEM programming. Up to 40 user-programmable outputs are available.

Monitoring and programming are easy, thanks to a large 15-inch touch screen. And since screens look and work the same as previous controllers, there's little or no learning curve for current users. Just a single call to Toshiba gets you answers to your programming questions.

In addition, the V50 includes "iPAQET Lite" data management software. A significant value-added benefit, it enhances your investment by providing you with production monitoring, data collection and analysis, and more.

Note 1: When using iPAQET, an Ethernet interface (standard) is required on the injection molding machine itself.

Note 2: All server, server peripherals and operating systems, and LAN wiring are separately required for iPAQET.



iPAQET Remote Monitoring and Management Software (Optional)

A valuable upgrade to "iPAQET Lite," the full version of "iPAQET" offers a more powerful data management platform. Monitor up to 48 molding machines from anywhere, in REAL TIME. iPaqet provides you with production monitoring, data collection and analysis, machine operation status, resin lot monitoring and more.



Let the machine think for you

Clamping force dynamic self-tuning (DST-PRESS):

As an option setting, you can allow tie-bar strain sensors to automatically adjust clamping force based on direct feedback of changing molding conditions such as increased heat and expansion.) This results in more consistent processing from shot to shot throughout the processing cycle.

Injection process condition dynamic self-tuning (DST-FILL):

You can further increase shot consistency by allowing the machine to automatically change barrel temperatures and transfer points to compensate for material viscosity fluctuations.

Additional molding control software

Virtual Hydraulic Injection (H1) circuit - Replicates the hydraulic cascade effect to create more even flow rates into mold cavities. **High sensitivity 3-stage mold protection** - Puts the machine into mold safety/shut down when torque settings are exceeded during mold clamping. **Ejector torque monitor** - Helps prevent tool and part damage.

Ask your Toshiba representative for a complete list of standard and optional software.

ITEM		UNIT	EC55SX							EC85SX					EC110SX						
CLAMP	Clamp force		tf	50							75					100					
			US Ton	55.1							82.7					110.2					
	Tie bar distance	H x V	mm	410 x 360							410 x 360					460 x 410					
		H x V	in	16.1 x 14.2							16.1 x 14.2					18.1 x 16.1					
	Platen dimension	H x V	mm	510 x 460							580 x 530					660 x 610					
		H x V	in	20.1 x 18.1							22.8 x 20.9					26.0 x 24.0					
	Clamp Stroke		mm	300							300					350					
			in	11.8							11.8					13.8					
	Maximum daylight		mm	770							770					900					
			in	30.3							30.3					35.4					
	Mold Height	Min. x Max	mm	150 ~ 470							150 ~ 470					180 ~ 550					
		Min. x Max	in	5.9 ~ 18.5							5.9 ~ 18.5					7.1 ~ 21.7					
	Ejector force		tf	2							2					3					
			US Ton	2.2							2.2					3.3					
Ejector Stroke		mm	70							70					90						
		in	2.8							2.8					3.5						
			U21			U22					U22					U32					
Barrel code			(1Y)	(1A)	(1B)	(1Y)	(1.5Y)	(2Y)	(2A)	(2B)	(1Y)	(1.5Y)	(2Y)	(2A)	(2B)	(2Y)	(2A)	(2B)			
Screw Diameter		mm	22	25	28	22	25	28	32	36	22	25	28	32	36	28	32	36			
		in	0.87	0.98	1.10	0.87	0.98	1.10	1.26	1.42	0.87	0.98	1.10	1.26	1.42	1.10	1.26	1.42			
Injection Capacity		cm³	38	49	62	38	55	78	102	130	38	55	78	102	130	78	102	130			
		in³	2.3	3.0	3.8	2.3	3.4	4.8	6.2	7.9	2.3	3.4	4.8	6.2	7.9	4.8	6.2	7.9			
Shot Volume	PS	g	35	45	57	35	51	72	94	120	35	51	72	94	120	72	94	120			
		oz	1.2	1.6	2.0	1.2	1.8	2.5	3.3	4.2	1.2	1.8	2.5	3.3	4.2	2.5	3.3	4.2			
	PE	g	28	36	45	28	40	57	74	95	28	40	57	74	95	57	74	95			
		oz	1.0	1.3	1.6	1.0	1.4	2.0	2.6	3.4	1.0	1.4	2.0	2.6	3.4	2.0	2.6	3.4			
Maximum Injection Pressure		MPa	284	220	175	284	276	287	220	174	284	276	287	220	174	287	220	174			
		PSI	41,200	31,900	25,400	41,200	40,000	41,600	31,900	25,200	41,200	40,000	41,600	31,900	25,200	41,600	31,900	25,200			
Maximum Holding Pressure		MPa	284	220	175	284	276	287	220	174	284	276	287	220	174	287	220	174			
		PSI	41,200	31,900	25,400	41,200	40,000	41,600	31,908	25,237	41,200	40,000	41,600	31,900	25,200	41,600	31,900	25,200			
Injection Rate	STD	cm³/s	76	98	123	76	98	123	161	204	76	98	123	161	204	123	161	204			
		in³/s	4.6	6.0	7.5	4.6	6.0	7.5	9.8	12.4	4.6	6.0	7.5	9.8	12.4	7.5	9.8	12.4			
Injection Velocity	STD	mm/s	200			200					200					200					
		in/s	7.9			7.9					7.9					7.9					
Injection Rate	HIGH	cm³/s	190	245	308	190	245	308	402	509	190	245	308	402	509	308	402	509			
		in³/s	11.6	15.0	18.8	11.6	15.0	18.8	24.5	31.1	11.6	15.0	18.8	24.5	31.1	18.8	24.5	31.1			
Injection Velocity	HIGH	mm/s	500			500					500					500					
		in/s	19.7			19.7					19.7					19.7					
Plasticizing capacity	PS	g/sec	6.1	7.8	9.7	6.1	6.9	11.1	16.9	23.1	6.1	6.9	11.1	16.9	23.1	11.1	16.9	23.1			
		oz/sec	0.2	0.3	0.3	0.2	0.2	0.4	0.6	0.8	0.2	0.2	0.4	0.6	0.8	0.4	0.6	0.8			
Screw speed		RPM	420	420	380	420	390	400	390	350	420	390	400	390	350	400	390	350			
Nozzle touch force		kN	9.8			9.8					9.8					11.8					
		US Ton	1.1			1.1					1.1					1.3					
			4.7			5.4		4.7			5.8		6.8			6.8					
GENERAL	Heater Capacity		kW	4.7			5.4		4.7			5.8		6.8			6.8				
	Machine Dimensions	L x W x H	m	4.0 x 1.2 x 1.6			4.0 x 1.2 x 1.6			4.1 x 1.2 x 1.6			4.0 x 1.2 x 1.6			4.1 x 1.2 x 1.6			4.6 x 1.3 x 1.7		
		L x W x H	ft	13.2 x 3.9 x 5.2			13.2 x 3.9 x 5.2			13.5 x 3.9 x 5.2			13.2 x 3.9 x 5.2			13.5 x 3.9 x 5.2			15.1 x 4.3 x 5.6		
	Machine weight		tf	3.0			3.2					3.3					4.2				
US Ton			3.3			3.5					3.6					4.6					

EC110SX					EC140SX					EC200SX				
100					130					180				
110.2					143.3					198.4				
460 x 410					510 x 460					560 x 510				
18.1 x 16.1					20.1 x 18.1					22.0 x 20.1				
660 x 610					720 x 670					790 x 740				
26.0 x 24.0					28.3 x 26.4					31.1 x 29.1				
350					400					450				
13.8					15.7					17.7				
900					950					1050				
35.4					37.4					41.3				
180 ~ 550					180 ~ 550					200 ~ 600				
7.1 ~ 21.7					7.0 ~ 21.7					7.9 ~ 23.6				
3					3					5				
3.3					3.3					5.5				
90					90					130				
3.5					3.5					5.1				

U34					U34					U44			U48																	
(2Y)	(2A)	(4Y)	(4A)	(4B)	(2Y)	(2A)	(4Y)	(4A)	(4B)	(4Y)	(4A)	(4B)	(4Y)	(6Y)	(8Y)	(8A)	(8B)													
28	32	36	40	45	28	32	36	40	45	36	40	45	36	40	45	50	55													
1.10	1.26	1.42	1.57	1.77	1.10	1.26	1.42	1.57	1.77	1.42	1.57	1.77	1.42	1.57	1.77	1.97	2.17													
78	102	162	201	254	78	102	162	201	254	162	201	254	162	226	318	392	475													
4.8	6.2	9.9	12.3	15.5	4.8	6.2	9.9	12.3	15.5	9.9	12.3	15.5	9.9	13.8	19.4	23.9	29.0													
72	94	149	185	234	72	94	149	185	234	149	185	234	149	208	293	361	437													
2.5	3.3	5.3	6.5	8.3	2.5	3.3	5.3	6.5	8.3	5.3	6.5	8.3	5.3	7.3	10.3	12.7	15.4													
57	74	118	147	185	57	74	118	147	185	118	147	185	118	165	232	286	347													
2.0	2.6	4.2	5.2	6.5	2.0	2.6	4.2	5.2	6.5	4.2	5.2	6.5	4.2	5.8	8.2	10.1	12.2													
287	220	247	200	158	287	220	247	200	158	247	200	158	247	253	247	200	165													
41,600	31,900	35,800	29,000	22,900	41,600	31,900	35,800	29,000	22,900	35,800	29,000	22,900	35,800	36,700	35,800	29,000	23,900													
287	220	247	200	158	287	220	247	200	158	247	200	158	247	253	247	200	165													
41,600	31,900	35,800	29,000	22,900	41,600	31,900	35,800	29,000	22,900	35,800	29,000	22,900	35,800	36,700	35,800	29,000	23,900													
123	161	204	251	318	123	161	204	251	318	204	251	318	163	201	254	314	380													
7.5	9.8	12.4	15.3	19.4	7.5	9.8	12.4	15.3	19.4	12.4	15.3	19.4	9.9	12.3	15.5	19.2	23.2													
200					200					200			160																	
7.9					7.9					7.9			6.3																	
216	281	356	440	557	216	281	356	440	557	356	440	557	305	377	477	589	713													
13.2	17.1	21.7	26.8	34.0	13.2	17.1	21.7	26.8	34.0	21.7	26.8	34.0	18.6	23.0	29.1	35.9	43.5													
350					350					350			300																	
13.8					13.8					13.8			11.8																	
11.1	16.9	23.1	30.6	33.3	11.1	16.9	23.1	30.6	33.3	23.1	30.6	33.3	18.9	27.2	33.3	44.4	52.8													
0.4	0.6	0.8	1.1	1.2	0.4	0.6	0.8	1.1	1.2	0.8	1.1	1.2	0.7	1.0	1.2	1.6	1.9													
400	390	350	320	285	400	390	350	320	285	350	320	285	285	285	285	255	230													
11.8					11.8					29.4			29.4																	
1.3					1.3					3.3			3.3																	
6.8					6.8					11.2			11.2																	
11.2					11.2					11.2			11.2																	
4.6 x 1.3 x 1.7					4.9 x 1.3 x 1.7					4.8 x 1.4 x 1.8			4.9 x 1.3 x 1.7			5.2 x 1.4 x 1.8			5.7 x 1.5 x 1.9			5.7 x 1.5 x 1.9			5.9 x 1.5 x 1.9			6.0 x 1.5 x 1.9		
15.1 x 4.3 x 5.6					16.1 x 4.3 x 5.6					15.7 x 4.6 x 5.9			16.7 x 4.6 x 5.9			17.1 x 4.6 x 5.9			18.7 x 4.9 x 6.2			18.7 x 4.9 x 6.2			19.4 x 4.9 x 6.2			19.7 x 4.9 x 6.2		
4.2					4.3					5.2			5.3			7.0			7.0			7.3								
4.6					4.7					5.7			5.8			7.7			7.7			8.0								

ITEM		UNIT	EC250SX					EC310SX								
CLAMP	Clamp force	tf	230					280								
		US Ton	253.5					308.6								
	Tie bar distance	H x V	mm	610 x 560					730 x 660							
		H x V	in	24.0 x 22.0					28.7 x 25.9							
	Platen dimension	H x V	mm	880 x 830					1030 x 960							
		H x V	in	34.6 x 32.7					40.5 x 37.7							
	Clamp Stroke		mm	550					600							
			in	21.7					23.6							
	Maximum daylight		mm	1230					1350							
			in	48.4					53.1							
	Mold Height	Min. x Max	mm	250 ~ 680					250 ~ 750							
		Min. x Max	in	9.8 ~ 26.8					9.8 ~ 29.5							
	Ejector force		tf	5					6							
			US Ton	5.5					6.6							
Ejector Stroke		mm	130					150								
		in	5.1					5.9								
			U48					i17			i8			i17		
Barrel code			(4Y)	(6Y)	(8Y)	(8A)	(8B)	Y	AT	B	Y	A	B	Y	AT	B
Screw Diameter		mm	36	40	45	50	55	50	60	70	45	50	55	50	60	70
		in	1.42	1.57	1.77	1.97	2.17	1.97	2.36	2.76	1.77	1.97	2.17	1.97	2.36	2.76
Injection Capacity		cm ³	162	226	318	392	475	589	848	1155	318	392	475	589	848	1155
		in ³	9.9	13.8	19.4	23.9	29.0	35.9	51.7	70.5	19.4	23.9	29.0	35.9	51.7	70.5
Shot Volume	PS	g	149	208	293	361	437	542	780	1062	293	361	437	542	780	1063
		oz	5.3	7.3	10.3	12.7	15.4	19.1	27.5	37.5	10.3	12.7	15.4	19.1	27.5	37.5
	PE	g	118	165	232	286	347	430	619	843	232	286	347	430	619	843
		oz	4.2	5.8	8.2	10.1	12.2	15.2	21.8	29.7	8.2	10.1	12.2	15.2	21.8	29.7
Maximum Injection Pressure		MPa	247	253	247	200	165	288	200	147	247	200	165	288	200	147
		PSI	35,800	36,700	35,800	29,000	23,900	41,800	29,000	21,300	35,800	29,000	23,900	41,800	29,000	21,300
Maximum Holding Pressure		MPa	247	253	247	200	165	288	200	147	247	200	165	288	200	147
		PSI	35,800	36,700	35,800	29,000	23,900	41,800	29,000	21,300	35,800	29,000	23,900	41,800	29,000	21,300
Injection Rate	STD	cm ³ /s	163	201	254	314	380	314	452	616	254	314	380	314	452	616
		in ³ /s	9.9	12.3	15.5	19.2	23.2	19.2	27.6	37.6	15.5	19.2	23.2	19.2	27.6	37.6
Injection Velocity	STD	mm/s	160					160			160			160		
		in/s	6.3					6.3			6.3			6.3		
Injection Rate	HIGH	cm ³ /s	305	377	477	589	713	589	848	1155	477	589	713	589	848	1155
		in ³ /s	18.6	23.0	29.1	35.9	43.5	35.9	51.7	70.5	29.1	35.9	43.5	35.9	51.7	70.5
Injection Velocity	HIGH	mm/s	300					300			300			300		
		in/s	11.8					11.8			11.8			11.8		
Plasticizing capacity (PS)	STD	g/sec	18.9	27.2	33.3	44.4	52.8	35.8	64.4	75.8	33.3	44.4	52.8	44.4	64.4	75.8
		oz/sec	0.7	1.0	1.2	1.6	1.9	1.3	2.3	2.7	1.2	1.6	1.9	1.6	2.3	2.7
	HIGH TORQUE	g/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		oz/sec	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Screw torque	STD	Nm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ft-lbf	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	HIGH TORQUE	Nm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		ft-lbf	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Screw speed	STD	RPM	285	285	285	255	230	255	220	180	285	255	230	255	220	180
	HIGH TORQUE	RPM	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nozzle touch force		kN	29.4					29.4			29.4			29.4		
		US Ton	3.3					3.3			3.3			3.3		
GENERAL	Heater Capacity		kW	11.2	13.6	15.2		21.6			15.2			15.2		
	Machine Dim.	L x W x H	m	6.0 x 1.6 x 2.0	6.2 x 1.6 x 2.0	6.3 x 1.6 x 2.0		6.8 x 1.8 x 2.2			6.7 x 2.0 x 2.1			7.0 x 2.0 x 2.1		
		L x W x H	ft	19.6 x 5.2 x 6.6	20.3 x 5.2 x 6.6	20.7 x 5.2 x 6.6		21.7 x 5.6 x 7.2			22.0 x 6.6 x 6.9			23.0 x 6.6 x 6.9		
	Machine weight		tf	9.2		9.3		12.4			13.5			14.7		
		US Ton	10.1		10.3		13.6			14.9			16.2			

EC390SX			EC500SX			EC610SX		
350			450			550		
385.8			496			606.3		
810 x 730			870 x 810			960 x 900		
31.9 x 28.7			34.3 x 31.9			37.8 x 35.4		
1110 x 1030			1230 x 1160			1365 x 1300		
43.7 x 40.6			48.4 x 45.7			53.7 x 51.2		
650			800			900		
25.6			31.5			35.4		
1420			1600			1700		
55.9			63.0			66.9		
300 ~ 770			350 x 800			400 x 800		
11.8 ~ 30.3			13.8 x 31.5			15.7 x 31.5		
6			13			13		
6.6			14.3			14.3		
150			180			180		
5.9			7.1			7.1		

i8			i17			i26		i26		i36		i26		i36					
Y	A	B	Y	AT	B	AT	B	AT	B	AT	B	AT	B	AT	B				
45	50	55	50	60	70	70	80	70	80	80	90	70	80	80	90				
1.77	1.97	2.17	1.97	2.36	2.76	2.76	3.15	2.76	3.15	3.15	3.54	2.76	3.15	3.15	3.54				
318	392	475	589	848	1155	1340	1750	1340	1750	1880	2380	1340	1750	1880	2380				
19.4	23.9	29.0	35.9	51.7	70.5	81.8	106.8	81.8	106.8	114.7	145.2	81.8	106.8	114.7	145.2				
293	361	437	542	780	1063	1233	1610	1233	1610	1730	2190	1233	1610	1730	2190				
10.3	12.7	15.4	19.1	27.5	37.5	43.5	56.8	43.5	56.8	61.0	77.2	43.5	56.8	61.0	77.2				
232	286	347	430	619	843	978	1278	978	1278	1372	1737	978	1278	1372	1737				
8.2	10.1	12.2	15.2	21.8	29.7	34.5	45.1	34.5	45.1	48.4	61.3	34.5	45.1	48.4	61.3				
247	200	165	288	200	147	190	145	190	145	190	150	190	145	190	150				
35,800	29,000	23,900	41,800	29,000	21,300	27,600	21,000	27,600	21,000	27,600	21,800	27,600	21,000	27,600	21,800				
247	200	165	288	200	147	160	122	160	122	160	126	160	122	160	126				
35,800	29,000	23,900	41,800	29,000	21,300	23,200	17,700	23,200	17,700	23,200	18,300	23,200	17,700	23,200	18,300				
254	314	380	314	452	616	616	804	616	804	704	891	616	804	704	891				
15.5	19.2	23.2	19.2	27.6	37.6	37.6	49.1	37.6	49.1	43.0	54.4	37.6	49.1	43.0	54.4				
160			160			160		160		140		160		140					
6.3			6.3			6.3		6.3		5.5		6.3		5.5					
477	589	713	589	848	1155	-	-	-	-	-	-	-	-	-	-				
29.1	35.9	43.5	35.9	51.7	70.5	-	-	-	-	-	-	-	-	-	-				
300			300			-	-	-	-	-	-	-	-	-	-				
11.8			11.8			-	-	-	-	-	-	-	-	-	-				
33.3	44.4	52.8	35.8	64.4	75.8	72.2	94.4	72.2	94.4	94.4	111.1	72.2	94.4	94.4	111.1				
1.2	1.6	1.9	1.3	2.3	2.7	2.5	3.3	2.5	3.3	3.3	3.9	2.5	3.3	3.3	3.9				
-	-	-	-	-	-	47.2	63.9	47.2	63.9	61.1	77.8	47.2	63.9	61.1	77.8				
-	-	-	-	-	-	1.7	2.3	1.7	2.3	2.2	2.7	1.7	2.3	2.2	2.7				
-	-	-	-	-	-	2580	2580	2580	2580	3310	3310	2580	2580	3310	3310				
-	-	-	-	-	-	1903	1903	1903	1903	2441	2441	1903	1903	2441	2441				
-	-	-	-	-	-	3310	3310	3310	3310	4610	4610	3310	3310	4610	4610				
-	-	-	-	-	-	2441	2441	2441	2441	3400	3400	2441	2441	3400	3400				
285	255	230	255	220	180	180	170	180	170	170	150	180	170	170	150				
-	-	-	-	-	-	120	120	120	120	115	115	120	120	115	115				
29.4			29.4			4.5		4.5		6		4.5		6					
3.3			3.3			5.0		5.0		6.6		5.0		6.6					
21.6			21.6			22.3		22.3		29.5		22.3		29.5					
7.0 x 2.1 x 2.2			7.3 x 2.1 x 2.2			7.9 x 2.1 x 2.2		8.0 x 2.2 x 2.3		8.4 x 2.3 x 2.3		8.5 x 2.3 x 2.3		8.3 x 2.3 x 2.3		8.7 x 2.4 x 2.3		8.8 x 2.4 x 2.3	
23.0 x 6.9 x 7.2			24.0 x 6.9 x 7.2			25.9 x 6.9 x 7.5		26.2 x 7.2 x 7.5		27.6 x 7.5 x 7.5		27.9 x 7.5 x 7.5		27.2 x 7.5 x 7.5		28.5 x 7.9 x 7.5		28.9 x 7.9 x 7.5	
17.2			17.2			18.7		25.5		26.7		30.2		31.4					
19.0			19.0			20.6		28.1		29.4		33.3		34.6					

EC SX SPECIFICATIONS

ITEM		UNIT	EC720SX				EC950SX				
CLAMP	Clamp force		tf	650				850			
			US Ton	716.5				937			
	Tie bar distance	H x V	mm	1060 x 960				1320 x 1320			
		H x V	in	41.7 x 37.7				51.9 x 51.9			
	Platen dimension	H x V	mm	1500 x 1400				1790 x 1790			
		H x V	in	59.0 x 55.1				70.4 x 70.4			
	Clamp Stroke		mm	1000				1200			
			in	39.4				47.2			
	Maximum daylight		mm	2050				2300			
			in	80.7				90.6			
	Mold Height	Min. x Max	mm	450 x 1050				500 x 1100			
		Min. x Max	in	17.7 x 41.3				19.6 x 43.3			
	Ejector force		tf	18				18			
			US Ton	19.8				19.8			
Ejector Stroke		mm	200				200				
		in	7.9				7.9				
Injection Unit			i61		i78		i61		i78		
Barrel code			AT	B	AT	B	AT	B	AT	B	
Screw Diameter		mm	95	105	105	120	95	105	105	120	
		in	3.74	4.13	4.13	4.72	3.74	4.13	4.13	4.72	
Injection Capacity		cm ³	3150	3850	4320	5650	3150	3850	4320	5650	
		in ³	192.2	234.9	263.6	344.8	192.2	234.9	263.6	344.8	
Shot Volume	PS	g	2898	3542	3974	5198	2898	3542	3974	5198	
		oz	102.2	124.9	140.2	183.3	102.2	124.9	140.2	183.3	
	PE	g	2300	2811	3154	4125	2300	2811	3154	4125	
		oz	81.1	99.2	111.3	145.5	81.1	99.2	111.3	145.5	
Maximum Injection Pressure		MPa	180	147	180	138	180	147	180	138	
		PSI	26,100	21,300	26,100	20,000	26,100	21,300	26,100	20,000	
Maximum Holding Pressure		MPa	150	123	150	115	150	123	150	115	
		PSI	21,800	17,800	21,800	16,700	21,800	17,800	21,800	16,700	
Injection Rate	STD	cm ³ /s	1063	1299	1299	1696	1063	1299	1299	1696	
		in ³ /s	64.9	79.3	79.3	103.5	64.9	79.3	79.3	103.5	
Injection Velocity	STD	mm/s	150		150		150		150		
		in/s	5.9		5.9		5.9		5.9		
Injection Rate	HIGH	cm ³ /s	-	-	-	-	-	-	-	-	
		in ³ /s	-	-	-	-	-	-	-	-	
Injection Velocity	HIGH	mm/s	-	-	-	-	-	-	-	-	
		in/s	-	-	-	-	-	-	-	-	
Plasticizing capacity (PS)	STD	g/sec	116.7	136.1	136.1	161.1	116.7	136.1	136.1	161.1	
		oz/sec	4.1	4.8	4.8	5.7	4.1	4.8	4.8	5.7	
	HIGH TORQUE	g/sec	80.6	102.8	75	102.8	80.6	102.8	75	102.8	
		oz/sec	2.8	3.6	2.6	3.6	2.8	3.6	2.6	3.6	
Screw torque	STD	Nm	5500	5500	7090	7090	5500	5500	7090	7090	
		ft-lbf	4057	4057	5229	5229	4057	4057	5229	5229	
	HIGH TORQUE	Nm	7090	7090	10300	10300	7090	7090	10300	10300	
		ft-lbf	5229	5229	7597	7597	5229	5229	7597	7597	
Screw speed	STD	RPM	140	127	127	110	140	127	127	110	
	HIGH TORQUE	RPM	95	95	71	71	95	95	71	71	
Nozzle touch force		kN	6				6				
		US Ton	6.6				6.6				
GENERAL	Heater Capacity		kW	44.0	57.2		44.0	57.2			
	Machine Dim.	L x W x H	m	9.8 x 2.6 x 2.7	10.1 x 2.6 x 2.7	10.4 x 2.6 x 2.7	10.6 x 2.9 x 2.7	10.6 x 2.9 x 2.7	10.9 x 2.9 x 2.7		
		L x W x H	ft	32.1 x 8.6 x 8.9	33.2 x 8.6 x 8.9	34.1 x 8.6 x 8.9	34.8 x 9.5 x 8.9	34.8 x 9.5 x 8.9	35.8 x 9.5 x 8.9		
	Machine weight		tf	40.0	41.5		53.5	55.0			
US Ton			44.1	45.7		59.0	60.6				

STANDARD FEATURES

EC-SX SERIES - AC SERVO ELECTRIC INJECTION MOLDING MACHINES

Injection/Plasticization

- ▶ Open Nozzle
- ▶ Barrel - anti-corrosion/wear
- ▶ Standard Screw assembly- high kneading DBG design
- ▶ Hopper inlet rust-preventive sleeve
- ▶ Barrel Heater
- ▶ Friction Free Drive
- ▶ Digital Load Cell
- ▶ Purge shield
- ▶ Double heater cover
- ▶ DST-Fill
- ▶ Pressure linear correction
- ▶ Programmed purge circuit
- ▶ VHI control
- ▶ FIT Control
- ▶ Laminar control
- ▶ EC-SX 12-Speed/8-pressure injection programmed control
- ▶ Shift to hold mode selection
- ▶ Shift to hold correction control
- ▶ Injection speed FF Control
- ▶ Screw speed/back pressure programmed control
- ▶ Automatic screw back pressure reduction control
- ▶ Automatic charging deceleration control
- ▶ Decompress before/after charge
- ▶ Charge delay timer
- ▶ Screw cold start prevention device
- ▶ Heater SSR Control
- ▶ Heater band failure indicating circuit
- ▶ Hopper Throat temperature controller
- ▶ Barrel temperature FF Control
- ▶ Programmed Heat-Up circuit
- ▶ Simultaneous barrel heat-up control
- ▶ Barrel Temperature shift circuit
- ▶ Retention resin overheat prevention circuit
- ▶ Manual back pressure setting

Clamp unit/ejector and functions

- ▶ Link Line Toggle Unit
- ▶ Double rigid body platen
- ▶ Mold Platen
- ▶ Locating Hold
- ▶ Movable Platen supporting device
- ▶ Mechanical safety device
- ▶ Holes tapped for installation of take-out robot
- ▶ Ejection servo motor with brake
- ▶ Automatic lubricator
- ▶ Dynamic acceleration/deceleration control
- ▶ DST-Press Control
- ▶ 3-Step high-speed programmed control
- ▶ Clamp pressure digital display in two (2) steps
- ▶ Sensitive mold protection control - Provides torque monitor and limiter in 2-high-speed ranges, and torque/time limiter in low-pressure clamp range
- ▶ Automatic mold thickness adjust circuit
- ▶ Low pressure and slow speed circuit for mold set-up mode
- ▶ Lock-Up Delay Timer
- ▶ Lock-Up Speed digital setting
- ▶ Setting of number of repeated ejections
- ▶ 3-Step ejection speed programmed control
- ▶ Repeated ejection control
- ▶ RA ejection control

Clamp unit/ejector and functions continued

- ▶ Ejector retraction check circuit
- ▶ Ejector plate, ejecting rod
- ▶ Gate cut circuit
- ▶ Ejection force digital setting
- ▶ Ejection hold time setting
- ▶ Ejection during mold opening
- ▶ Ejection torque monitor
- ▶ Mold open halt - Enables mold opening at an arbitrary position

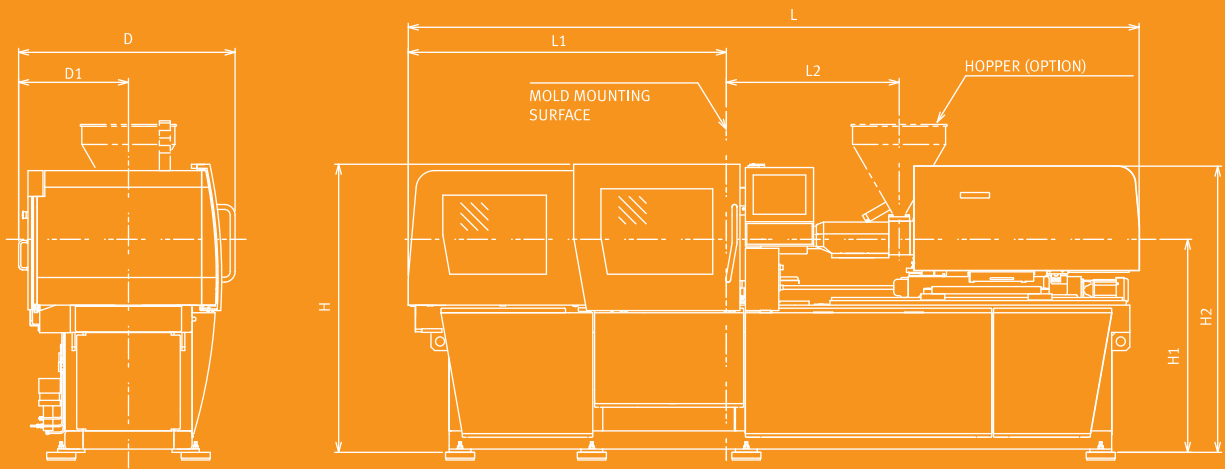
Controller (EC-SX Series)

- ▶ Step switch/Ten key input
- ▶ Setting data memory for 300 sets of molds
- ▶ External interface
- ▶ Digital display
- ▶ Graphic display
- ▶ Profile display/storing/measure functions
- ▶ Quality monitoring
- ▶ Diagnostic function
- ▶ Operation select function at productions completion
- ▶ MOLDLYZER
- ▶ iPAQET LITE
- ▶ LCD Touch Panel
- ▶ High-Speed control cycle
- ▶ List setting screen
- ▶ Operation indicator
- ▶ External output signal customize function
- ▶ Password function



TOSHIBA MACHINE

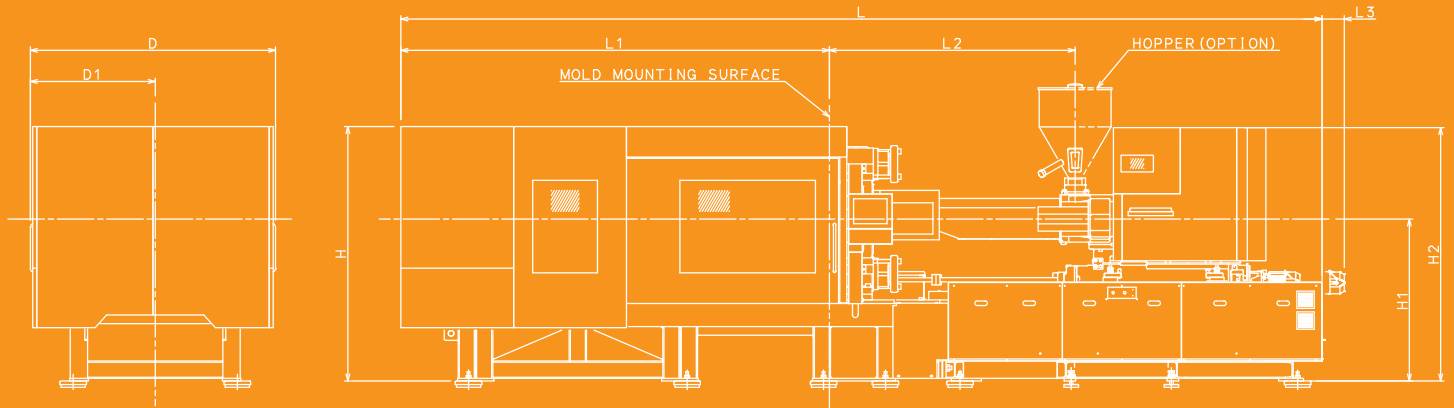
EC-SX Dimensions



MODEL	INJ. UNIT	SCREW DIA	L	L1	L2	D	D1	H	H1	H2
		mm								
EC55SX EC85SX	U21	22/25	155.1	68.9	35.0	46.9	23.8	62.4	46.1	62.0
		28	158.3		37.4					
	U22	22	155.1		35.0					
		25	158.3		37.4					
		28/32	161.5		40.7					
		36	164.7		43.8					
EC110SX	U32	28/32	180.8	82.3	41.9	49.8	25.2	64.8	46.7	64.6
		36	184.0		45.0					
	U34	28/32	180.8		41.9					
		36/40	191.1		49.2					
		45	195.2		53.3					
		28/32	187.7		41.9					
EC140SX	U34	36/40	198.6	89.2	49.8	54.7	27.4	67.7	48.5	66.5
		36	202.7		53.9					
		36/40	223.3		51.7					
EC200SX	U44	45	227.4	102.3	55.8	60.2	30.6	71.0	49.3	70.5
		36	223.3		51.7					
	U48	40	230.7		56.2					
		45/50	234.6		60.1					
		55	238.7		64.2					
		36	237.0		53.5					
EC250SX	U48	40	244.3	114.2	58.0	63.9	32.4	76.6	52.0	73.3
		45/50	248.2		61.9					
		55	252.3		66.0					
		50/60/70	284.3		85.3					
EC390SX	U5	50/60/70	284.3	132.8	85.3	82.1	44.2	84.1	53.6	84.6

Note: This is the real height without mounting pads.
All dimensions subject to change without notice.

EC-SX Dimensions



MODEL	INJ. UNIT	SCREW DIA	L	L1	L2	L3	D	D1	H	H1	H2							
		mm										Inch						
EC500SX	i26	70	313.6	145.9	83.7	7.6	81.9	41.7	86.6	55.1	86.2							
		80			91.5													
	i36	80	324.8		91.7	6.9						87.8						
		90			99.6													
EC610SX	i26	70	326.6	157.3	85.2	7.6	87.8	45.9	86.6	55.1	86.2							
		80			93.1													
	i36	80	337.8		93.3	14.8						87.8						
		90			101.2													
EC720SX	i61	95	380.9	181.1	111.5	6.8	97.6	50.4	86.6	55.1	99.4							
		105			119.4								14.6					
	i78	105			414.8	204.7						127.2		22.5	112.2	60.4	94.5	59.1
		120										139.1						
EC950SX	i61	95	414.8	204.7	104.7		0	112.2	60.4	94.5	59.1	103.4						
		105			112.6								6.6					
	i78	105			414.8	204.7	120.4							14.4	112.2	60.4	94.5	59.1
		120					132.2						26.3					

NOTES

Note: This is the real height without mounting pads.
All dimensions subject to change without notice.

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