TOSHIBA MACHINE

IGN
INJECTION MOLDING MACHINE GLOBAL NETWORK

EC-SX

ALL-ELECTRIC INJECTION MOLDING MACHINES

U.S.A. Specifications - Catalog #ECSX 3-15

EC SX

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

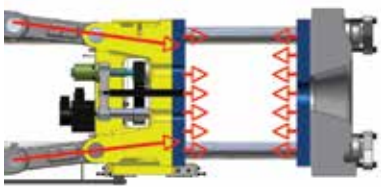
Its shockless acceleration/deceleration programming helps reduce wear and tear on your mold, minimizing mold maintenance and maximizing mold life.

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.

S^3 - Simple, Steady, Smooth

The Friction-Free Drive on the SX injection unit ensures more accurate injection speed and back pressure control, improving shot-to-shot repeatability throughout the processing cycle.

...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 is 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.

EC SX SPECIFICATIONS

	ITEM		UNIT	EC30SX				EC55SX								EC85SX					EC110SX		
CLAMP	Clamp force		tf	30				50								75					100		
			US Ton	33				55.1								82.7					110.2		
	Tie bar distance	H x V	mm	320 x 290				410 x 360								410 x 360					460 x 410		
		H x V	in	12.6 x 11.4				16.1 x 14.2								16.1 x 14.2					18.1 x 16.1		
	Platen dimension	H x V	mm	440 x 420				510 x 460								580 x 530					660 x 610		
		H x V	in	17.3 x 16.5				20.1 x 18.1								22.8 x 20.9					26.0 x 24.0		
	Clamp Stroke		mm	230				300								300					350		
			in	9.06				11.8								11.8					13.8		
	Maximum daylight		mm	560				770								770					900		
			in	22.1				30.3								30.3					35.4		
	Mold Height	Min.xMax	mm	150 ~ 330				150 ~ 470								150 ~ 470					180 ~ 550		
		Min.xMax	in	5.9 x 13.0				5.9 ~ 18.5								5.9 ~ 18.5					7.1 ~ 21.7		
	Ejector force		tf	0.8				2								2					3		
			US Ton	0.88				2.2								2.2					3.3		
	Ejector Stroke		mm	50				70								70					90		
			in	1.97				2.8								2.8					3.5		
INJECTION	Injection Unit			i0.4		i1		U21			U22					U22					U32		
	Barrel code			Y	A	Y	A	(1Y)	(1A)	(1B)	(1Y)	(1.5Y)	(2Y)	(2A)	(2B)	(1Y)	(1.5Y)	(2Y)	(2A)	(2B)	(2Y)	(2A)	(2B)
	Screw Diameter		mm	16	18	22	25	22	25	28	22	25	28	32	36	22	25	28	32	36	28	32	36
			in	0.63	0.71	0.87	0.98	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		cm^3	14	18	38	49	38	49	62	38	55	78	102	130	38	55	78	102	130	78	102	130
			in^3	0.85	1.10	2.32	2.99	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	13	16	35	45	35	45	57	35	51	72	94	120	35	51	72	94	120	72	94	120
			oz	0.46	0.56	1.23	1.59	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	10	13	28	36	28	36	45	28	40	57	74	95	28	40	57	74	95	57	74	95
			oz	0.35	0.46	0.99	1.27	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	278	220	270	220	284	220	175	284	276	287	220	174	284	276	287	220	174	287	220	174
			PSI	40300	31900	39200	31900	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	278	220	270	220	284	220	175	284	276	287	220	174	284	276	287	220	174	287	220	174
			PSI	40300	31900	39200	31900	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	cm^3/s	106	134	76	98	76	98	123	76	98	123	161	204	76	98	123	161	204	123	161	204
			in^3/s	6.47	8.18	4.64	5.98	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	500		200		200			200					200					200		
			in/s	19.7		7.88		7.9			7.9					7.9					7.9		
	Injection Rate	HIGH	cm^3/s	-	-	190	245	190	245	308	190	245	308	402	509	190	245	308	402	509	308	402	509
			in^3/s	-	-	11.6	15.0	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					500		
			in/s	-		19.7		19.7			19.7					19.7					19.7		
	Plasticizing capacity	PS	g/sec	2.2	3.3	6.1	7.8	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	0.08	0.12	0.22	0.27	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	480	480	420	420	420	420	380	420	390	400	390	350	420	390	400	390	350	400	390	350
	Nozzle touch force		kN	5.98		5.98		9.8			9.8					9.8					11.8		
			US Ton	0.66		0.66		1.1			1.1					1.1					1.3		
GENERAL	Heater Capacity		kW	3.4		4.8		4.7		5.4	4.7	5.8	6.8			4.7	5.8	6.8			6.8		
	Machine Dimensions	L x W x H	m	2.9 x 1.0 x 1.6		3.2 x 1.0 x 1.6		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	9.5 x 3.3 x 5.2		10.5 x 3.3 x 5.2		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	2.0		2.0		3.0			3.2					3.3					4.2		
			US Ton	2.2		2.2		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	11.2	6.8	11.2		11.2	11.2	13.6	15.2
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

EC SX SPECIFICATIONS

	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					
INJECTION	Injection Unit			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
		PS	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
		PE	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
		STD	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		
		STD	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
		HIGH	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		
		HIGH	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
		STD	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	–	–	–	–	–	–	–	–	–	–	–	–	–	–
		HIGH TORQUE	oz/sec	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Screw torque	STD	Nm	–	–	–	–	–	–	–	–	–	–	–	–	–	–
		STD	ft-lbf	–	–	–	–	–	–	–	–	–	–	–	–	–	–
		HIGH TORQUE	Nm	–	–	–	–	–	–	–	–	–	–	–	–	–	–
		HIGH TORQUE	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				EC1100SX				EC1450SX					
CLAMP	Clamp force		tf	650				850				1000				1300					
			USTon	716.5				937				1102				1433					
	Tie bar distance	H x V	mm	1060 x 960				1320 x 1320				1300 x 1300				1400 x 1400					
		H x V	in	41.7 x 37.7				51.9 x 51.9				51.2 x 51.2				55.1 x 55.1					
	Platen dimension	H x V	mm	1500 x 1400				1790 x 1790				1790 x 1790				2000 x 2000					
		H x V	in	59.0 x 55.1				70.4 x 70.4				70.5 x 70.5				78.7 x 78.7					
	Clamp Stroke		mm	1000				1200				1200				1500					
			in	39.4				47.2				47.2				59					
	Maximum daylight		mm	2050				2300				2300				2800					
			in	80.7				90.6				90.6				110.2					
	Mold Height	Min.xMax	mm	450 x 1050				500 x 1100				500 x 1100				650 x 1300					
		Min.xMax	in	17.7 x 41.3				19.6 x 43.3				19.7 x 43.3				25.6 x 51.2					
	Ejector force		tf	18				18				18				28.5					
			USTon	19.8				19.8				19.8				31.4					
	Ejector Stroke		mm	200				200				200				250					
			in	7.9				7.9				7.9				9.8					
INJECTION	Injection Unit			i61		i78		i61		i78		i61		i78		i78		i120		i155	
	Barrel code			AT	B	AT	B	AT	B	AT	B	AT	B	AT	B	AT	B	AT	B	AT	B
	Screw Diameter		mm	95	105	105	120	95	105	105	120	95	105	105	120	105	120	115	125	125	140
			in	3.74	4.13	4.13	4.72	3.74	4.13	4.13	4.72	3.74	4.13	4.13	4.72	4.13	4.72	4.53	4.92	4.92	5.51
	Injection Capacity		cm^3	3150	3850	4320	5650	3150	3850	4320	5650	3150	3850	4320	5650	4320	5650	6560	7750	8430	10570
			in^3	192.2	234.9	263.6	344.8	192.2	234.9	263.6	344.8	192.2	234.9	263.6	344.8	263.6	344.8	400.3	472.9	514.4	645.0
	Shot Volume	PS	g	2898	3542	3974	5198	2898	3542	3974	5198	2900	3540	3980	5200	3980	5200	6040	7130	7750	9730
		PS	oz	102.2	124.9	140.2	183.3	102.2	124.9	140.2	183.3	102.3	124.9	140.4	183.4	140.4	183.4	213.1	251.5	273.4	343.2
		PE	g	2300	2811	3154	4125	2300	2811	3154	4125	2300	2810	3160	4120	3160	4120	4790	5660	6150	7720
		PE	oz	81.1	99.2	111.3	145.5	81.1	99.2	111.3	145.5	81.1	99.1	111.5	145.3	111.5	145.3	167.0	199.6	216.9	272.3
	Maximum Injection Pressure		MPa	180	147	180	138	180	147	180	138	180	147	180	138	180	138	180	152	180	143
			PSI	26,100	21,300	26,100	20,000	26,100	21,300	26,100	20,000	26100	21300	26100	20000	26100	20000	26100	22000	26100	20700
	Maximum Holding Pressure		MPa	150	123	150	115	150	123	150	115	150	123	150	115	150	115	150	127	150	119
			PSI	21,800	17,800	21,800	16,700	21,800	17,800	21,800	16,700	21800	17800	21800	16700	21800	16700	21800	18400	21800	17300
	Injection Rate	STD	cm^3/s	1063	1299	1299	1696	1063	1299	1299	1696	1060	1290	1290	1690	1290	1690	1450	1710	1470	1840
		STD	in^3/s	64.9	79.3	79.3	103.5	64.9	79.3	79.3	103.5	64.7	78.7	78.7	103.1	78.7	103.1	88.5	104.3	89.7	112.3
	Injection Velocity	STD	mm/s	150		150		150		150		150		150		150		140		120	
		STD	in/s	5.9		5.9		5.9		5.9		5.9		5.9		5.9		5.5		4.7	
	Plasticizing capacity (PS)	STD	g/sec	116.7	136.1	136.1	161.1	116.7	136.1	136.1	161.1	116.7	136.1	136.1	161.1	136.1	161.1	144.4	161.1	163.9	191.7
		STD	oz/sec	4.1	4.8	4.8	5.7	4.1	4.8	4.8	5.7	4.1	4.8	4.8	5.7	4.8	5.7	5.1	5.7	5.8	6.8
		HIGH TORQUE	g/sec	80.6	102.8	75	102.8	80.6	102.8	75	102.8	80.6	102.8	75	102.8	75.0	102.8	102.8	122.2	116.7	152.8
		HIGH TORQUE	oz/sec	2.8	3.6	2.6	3.6	2.8	3.6	2.6	3.6	2.8	3.6	2.6	3.6	2.6	3.6	3.6	4.3	4.1	5.4
	Screw torque	STD	Nm	5500	5500	7090	7090	5500	5500	7090	7090	5500	5500	7090	7090	7090	7090	9150	9150	14500	14500
		STD	ft-lbf	4057	4057	5229	5229	4057	4057	5229	5229	4057	4057	5229	5229	5229	5229	6749	6749	10695	10695
		HIGH TORQUE	Nm	7090	7090	10300	10300	7090	7090	10300	10300	7090	7090	10300	10300	10300	10300	13700	13700	17300	17300
		HIGH TORQUE	ft-lbf	5229	5229	7597	7597	5229	5229	7597	7597	5229	5229	7597	7597	7597	7597	10105	10105	12760	12760
	Screw speed	STD	RPM	140	127	127	110	140	127	127	110	140	127	127	110	127	110	110	101	101	90
		HIGH TORQUE	RPM	95	95	71	71	95	95	71	71	95	95	71	71	71		78	78	72	
	Nozzle touch force		kN	6				6				6				64.72		101		101	
			USTon	6.6				6.6				6.6				6.6		10.3		10.3	
GENERAL	Heater Capacity		kW	44.0		57.2		44.0		57.2		44.4		57.2		57.2		69.4		84.1	
	Machine Dim.	L x W x H	m	9.8x2.6x2.7		10.1x2.6x2.7	10.4x2.6x2.7	10.6x2.9x2.7		10.6x2.9x2.7	10.9x2.9x2.7	10.6x2.9x2.7		10.9x2.9x2.7	10.9x2.9x2.7	12.8x3.2x3.2		12.8x3.2x3.2		13.5x3.5x3.2	
		L x W x H	ft	32.1x8.6x8.9		33.2x8.6x8.9	34.1x8.6x8.9	34.8x9.5x8.9		34.8x9.5x8.9	35.8x9.5x8.9	34.8x9.5x8.9		35.8x9.5x8.9	35.8x9.5x8.9	42.0x10.5x10.5		42.0x10.5x10.5		44.3x11.5x10.5	
	Machine weight		tf	40.0		41.5		53.5		55.0		55		57		82		89		99	
			USTon	44.1		45.7		59.0		60.6		60.6		62.8		90.4		98.1		109.1	

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
- Interface for dual hydraulic core pulls standard
- Holes tapped for installation of take-out robot
- Ejection servo motor with brake
- Mold open while charging (simultaneous motion)
- Automatic lubricator
- Dynamic acceleration/deceleration control
- DST-Press control
- 3-step high-speed programmed control
- Plestrol control (coining for clamp)
- Clamp pressure digital display in two steps
- Sensitive mold protection control - provides torque monitor and limiter in two 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

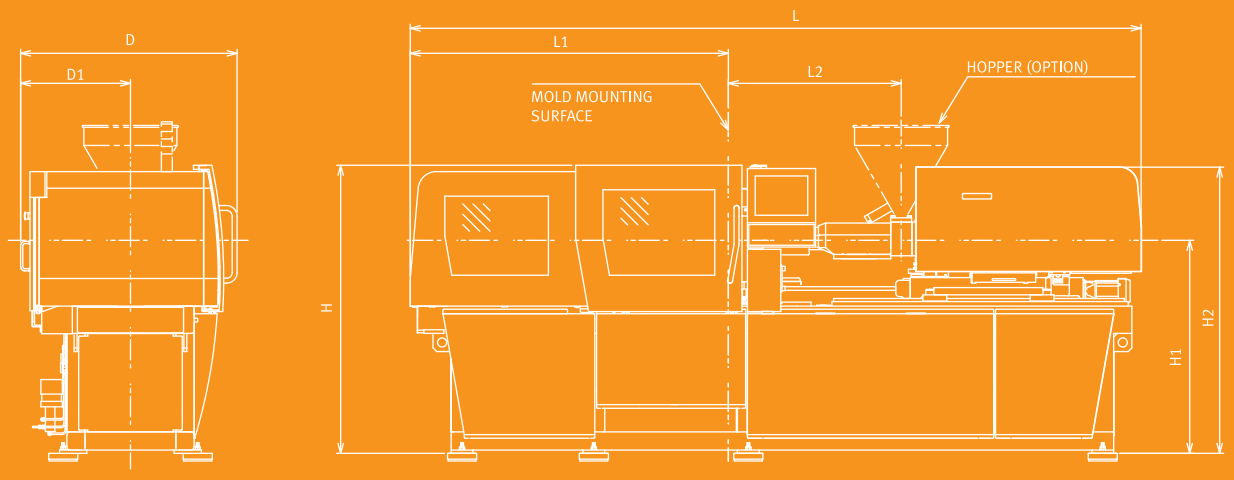
- Ejector retraction check circuit
- Ejector plate, ejecting rod
- Gate cut circuit
- Ejection force digital setting
- Ejection hold time setting
- Ejection during mold opening
- Ejection torque monitor
- Mold open halt - Enables mold opening at an arbitrary position

Controller (EC-SX Series)

- Six programmable outputs standard
- Step switch/ten key input
- Setting data memory for 300 sets of molds
- External interface SPI
- Digital display
- Graphic display
- Profile display/storing/measure functions
- Quality monitoring
- Diagnostic function
- Operation select function at production 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

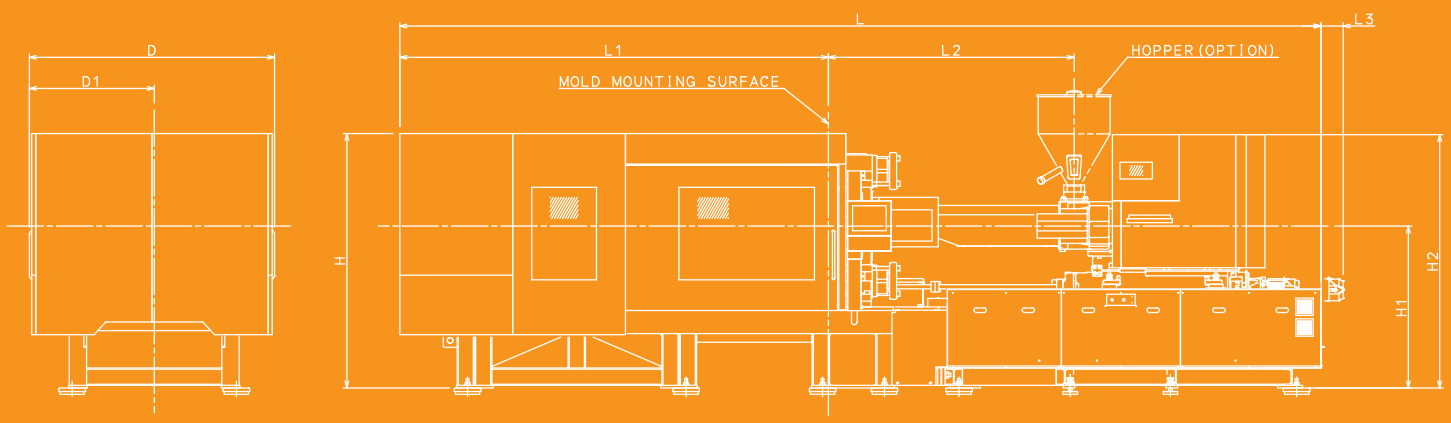
EC-SX Dimensions



MODEL	INJ. UNIT	SCREW DIA	L	L1	L2	D	D1	H	H1	H2
		mm	Inch							
EC30SX	i 0.4	16 /18	113.9	49.6	24.6	39.3	20.7	55.8	41.6	62.6
	i 1	22/25	122.8		29.7					
		20	121.3		28.1					
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					
EC140SX	U34	28/32	187.7	89.2	41.9	54.7	27.4	67.7	48.5	66.5
		36/40	198.6		49.8					
		36	202.7		53.9					
EC200SX	U44	36/40	223.3	102.3	51.7	60.2	30.6	71.0	49.3	70.5
		45	227.4		55.8					
	U48	36	223.3		51.7					
		40	230.7		56.2					
		45/50	234.6		60.1					
		55	238.7		64.2					
EC250SX	U48	36	237.0	114.2	53.5	63.9	32.4	76.6	52.0	73.3
		40	244.3		58.0					
		45/50	248.2		61.9					
		55	252.3		66.0					
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	6.9					
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	6.9					
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			127.2	22.5					101.4
		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			120.4	14.4					105.4
		120			132.2	26.3					
EC1100SX	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			120.4	14.4					105.4
		120			132.2	26.3					
EC1450SX	i-120 A	115	495.9	247.91	142.4	4.6	123.5	62.28	121.2	65.7	109.8
	i120 B	125	503.8		150.3	-3.6					

NOTES

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

Reach for the impossible. Achieve the incredible.

Your investment in Toshiba Machine molding machines and equipment brings with it our comprehensive committment to service and support. It gives you access to assistance and technical help in locations across the country, plus on-site assistance when you need a hands-on solution.

We appreciate the opportunity to become part of your company and look forward to providing solutions that help you "achieve the incredible."

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ISO 9001 JQA-0848 INJECTION MOLDING MACHINE

ISO 14001 JACO EC 99J2024 UKAS

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