

SPECIFICATIONS
ENGLISH UNITS

 **SUMITOMO**
PLASTICS - MACHINERY

SUMITOMO.

The right machine for your application.

SGM SERIES - Ultra-high speed toggles

Ultra-high speeds and ultra-high precision put the SGM Series in a class by itself in the 55 to 385 ton range.

The SGM's accumulator-driven technology, with its fast response and complete, multi-function simultaneous operation, gives you the consistently high injection speeds, high pressures and uniform filling you need to meet the most demanding molding requirements.

The SGM-S provides specialized process control capabilities with servo-valve, closed-loop hydraulics. The SGM-H is a cost-effective alternative with semi-closed-loop hydraulics. Both the SGM-S and SGM-H feature the N-VII control with a high-intensity, full-color LCD and operator-friendly operation.

Years of trouble-free, high-speed operation are ensured with the SGM's field-proven, double-toggle clamp.

SES SERIES - The new all-electric machines

For ultra-high precision and high-speed operation with significant energy savings, the new SES all-electric sets the standard for machines in the 20 to 605 ton range.

Models up to 198 tons feature four direct-drive (beltless), Sumitomo-built AC servo motors for full closed-loop control for injection, screw rotation, clamping and ejection. Larger models use bolted motors.

With set points and actual values that are virtually indistinguishable from each other, injection precision and repeatability are outstanding on the SES.

Mold open/close is remarkably fast and smooth with a mold open accuracy to within 20 microns. Plus, the SES offers the high-speed reliability of the double-toggle clamp mechanism field proven on over 9000 SG/SGM machines worldwide.

A full-color N-VII control completes this high-productivity package with ease-of-use and QC/SPC features that build operator confidence and optimize machine performance.

iM SERIES & SHC (55-88) - Small tonnage hydraulics

For smaller tonnage, general purpose machines, the iM (20 & 33 tons) and SHC (55 & 88 tons) deliver the flexibility and speed for high yields of small precision parts – even micro-sized parts weighing as little as one gram.

Utilizing pressure and flow feedback technology, the iM and SHC offer closed-loop control of injection for improved shot weight accuracy and repeatability. Closed-loop, electronically controlled, direct hydraulic clamping provides smoother mold O/C, precision positioning and improved cycle times.

The iM's and SHC's full-color controls combine the multi-function capabilities and ease-of-use features that allow molder and machine to operate more efficiently.

SHC (110-385) - Redefining general purpose

For superior ease-of-use, flexibility, precision and performance in a competitively priced, general purpose machine, molders are turning to the SHC Series (110 to 385 tons).

The SHC's hydromechanical clamp gives you the advantages of: the separate mold height adjustment (production flexibility) and faster operation of a toggle; and the precision control of tonnage and low pressure mold protection of a direct hydraulic.

Fully closed-loop, Direct Digital Control electronics, working together with the new, hydromechanical rotary shutter system, deliver faster, smoother, more accurate clamping.

Full closed-loop control of injection, with a higher level of hydraulic system stability, is achieved with the new Triple Pump System with Direct Digital Servo control technology.

Production flexibility features include wider platens, a large capacity injection unit, High-Resolution Low Speed mode and intrusion molding capabilities.

In addition to QC/SPC capabilities, the SHC's easy-to-use N-VII color control helps avoid operator error with Password Protection and Fail Safe Mold Protection features.

MODEL		CLAMPING UNIT									
		Clamping Force (US ton)	Tie Bar Clearance (H x V) (in)	Overall Platen Size (H x V) (in)	Opening Stroke Min-Max (in)	Mold Space Min-Max (in)	Ejector Force/Stroke (T/in)	Dry Cycle (sec)	Plasticizing Unit	Screw Diameter (in)	Injection Weight (oz-PS)
Accumulator-Toggle Series	SG50M	55	12.20 x 12.20	17.91 x 17.91	5.11-9.84	6.3-13.78	2.4/2.76	1.1	C110S	0.87/0.98/1.10	1.3/1.7/2.1
									C160S	0.98/1.10/1.26	1.9/2.4/3.1
	SG75M	83	14.17 x 14.17	20.87 x 20.87	5.12-11.81	6.29-16.14	3.0/3.15	1.2	C160S	0.98/1.10/1.26	1.9/2.4/3.1
									C250M	1.10/1.26/1.42	2.9/3.7/4.8
	SG100M	110	16.14 x 16.14	24.02 x 24.02	5.91-13.78	7.09-16.14	3.6/3.94	1.3	C250M	1.10/1.26/1.42	2.9/3.7/4.8
									C360M	1.26/1.42/1.57	4.3/5.5/6.7
	SG125M	138	18.11 x 18.11	26.38 x 26.38	6.69-14.76	7.09-17.72	3.6/3.94	1.4	C360M	1.26/1.42/1.57	4.3/5.5/6.7
									C450M	1.42/1.57/1.77	5.5/6.7/8.5
	SG180M	198	20.08 x 20.08	29.53 x 29.53	7.48-16.93	7.87-19.69	5.1/4.72	1.5	C450M	1.42/1.57/1.77	5.5/6.7/8.5
									C560M	1.57/1.77/1.97	6.7/8.5/10.5
SG260M	286	22.05 x 22.05	33.07 x 33.07	8.27-20.08	9.06-22.83	6.8/5.91	1.8	C900L	1.77/1.97/2.20	11.0/13.6/17.1	
								C1250L	1.97/2.2/2.48	15.0/18.8/23.8	
SG350M	385	27.95 x 27.95	40.55 x 40.55	10.24-24.02	11.81-25.59	8.7/6.89	2.3	C1700L	2.48/2.80	25.8/32.9	
								C2500L	2.80/3.15	38.4/48.8	

MODEL		CLAMPING UNIT										
		Clamping Force (US ton)	Tie Bar Clearance (H x V) (in)	Overall Platen Size (H x V) (in)	Opening Stroke Max (in)	Mold Space Min-Max (in)	Ejector Force/Stroke (T/in)	Mold O/C Speed (in/sec)	Plasticizing Unit	Screw Diameter (in)	Injection Weight (oz-PS)	
All-Electric Series	SE10S	20	9.25 x 9.25	12.99 x 12.99	6.30	5.12-9.84	0.9/1.95	51.2	C26S	0.55/0.63	0.2/0.4	
										0.71/0.79	0.5/0.6	
	SE30S	33	11.41 x 11.41	16.53 x 16.53	9.05	5.90-11.81	0.9/1.95	39.4	C50S	0.55/0.63/0.71	0.18/0.38/0.53	
										0.79/0.87/0.96	0.8/0.9/1.2	
	SE50S	55	12.20 x 12.20	17.68 x 17.68	9.84	6.30-13.78	2.4/2.76	31.5	C110S	0.87/0.98/1.10/1.26	1.3/1.7/2.2/2.8	
	SE75S	83	14.17 x 14.17	20.47 x 20.47	11.81	6.30-16.14	3.6/3.15	31.5	C160M	0.98/1.10/1.26/1.42	1.9/2.4/3.1/3.9	
	SE100S	110	16.14 x 16.14	23.62 x 23.62	13.78	7.09-16.14	3.6/3.94	31.5		C250M	1.10/1.26/1.42/1.57	2.9/3.8/4.8/5.0
										C320M	1.26/1.42/1.57	3.8/4.8/6.0
	SE180S	198	20.08 x 20.08	29.53 x 29.53	16.93	7.87-19.68	5.1/4.72	31.5		C410M	1.42/1.57/1.77/1.97	5.5/6.8/8.7/10.7
										C510M	1.57/1.77/1.97	6.8/8.7/10.7
	SE230S	253	23.23 x 23.23	34.25 x 34.25	20.08	10.24-22.83	6.8/5.91	51.2		C900L	1.77/1.97/2.20	11.2/13.8/17.3
										C900L	1.77/1.97/2.20	11.2/13.8/17.3
	SE280S	308	24.80 x 24.80	35.43 x 35.43	23.62	9.84-24.41	6.8/5.91	30.3	C1250L	1.97/2.20/2.48	15.2/19.1/24.2	
SE350S	385	28.74 x 28.74	41.34 x 41.34	27.56	12.60-26.38	8.3/6.89	31.5		C1250L	1.97/2.20/2.48	15.2/19.1/24.2	
									C1700L	2.48/2.80	25.3/33.4	
SE550S	605	38.19 x 38.19	55.51 x 55.00	35.43	15.75-31.50	14.3/7.87	39.4		C2170L	2.30/3.15	38.8/49.2	
									C3750L	3.15/3.54	61.5/77.9	

Specifications subject to change without notice. English units derived from metric.

Metric specifications available on request.

SHI Plastics Machinery Division worldwide offices located in: Tokyo and Chiba, Japan, The Netherlands, Singapore, Taiwan, Thailand, Hong Kong, China, Philippines, Malaysia and Indonesia. Sales and service agents in several European countries, in India, Australia, New Zealand and Brazil.

INJECTION UNIT				MISCELLANEOUS				MODEL
Injection Capacity (in ³)	Injection Pressure (Max psi)	Injection Rate* (Max in ³ /sec)	Plasticizing Capacity (Max lb/hr)	Machine Dimensions (L x W x H) (in)	Machine Weight (lbs)	Drive Motor (hp)	Oil Reservoir Capacity (gal)	
2.4/3.1/3.9	39,820/30,860/24,600	7.0/9.0/11.3	40/55/77	151 x 40 x 66	5,200	15/20	24	SG50M
3.4/4.3/5.6	39,820/31,710/24,320	9.0/11.3/14.7	40/57/79					
3.4/4.3/5.6	39,820/31,710/24,320	9.0/11.3/14.7	53/77/108	178 x 45 x 71	6,600	20/25	40	SG75M
5.3/6.9/8.7	41,950/32,140/25,310	11.3/14.7/18.6	81/117/139					
5.3/6.9/8.7	41,950/32,140/25,310	11.3/14.7/18.6	81/117/139	194 x 50 x 76	9,700	25/30	58	SG100M
7.9/9.9/12.3	39,670/31,280/25,450	14.7/18.6/23.0	117/167/200					
7.9/9.9/12.3	39,670/31,280/25,450	14.7/18.6/23.0	117/167/200	206 x 52 x 76	11,600	30/40	66	SG125M
9.9/12.3/15.5	37,680/30,430/24,030	18.6/23.0/29.1	167/222/194					
9.9/12.3/15.5	37,680/30,430/24,030	18.6/23.0/29.1	167/222/240	223 x 55 x 80	14,300	40/50	80	SG180M
12.3/15.5/19.2	39,820/31,430/25,450	23.0/29.1/35.9	224/299/330					
20.1/24.8/31.1	39,820/32,280/25,740	29.1/35.9/45.1	240/339/411	277 x 65 x 89	23,400	50/60	106	SG260M
27.3/34.3/43.4	39,820/31,710/25,030	35.9/45.1/57.1	275/378/526					
47.2/59.9	31,280/24,600	57.1/72.5	405/415	323 x 74 x 88	35,200	60/75	132	SG350M
69.5/88.3	29,860/23,460	72.5/92.0	363/488					

*S-type only.

INJECTION UNIT				MISCELLANEOUS			MODEL
Injection Capacity (in ³)	Injection Pressure (Max psi)	Injection Rate (Max in ³ /sec)	Plasticizing Capacity (Max lb/hr)	Machine Dimensions (L x W x H) (in)	Machine Weight (lbs)	Capacity of Two Main Breakers (amps)	
0.38/0.67	32,420/34,130	2.8/3.7	11/21	90 x 24 x 57	2,400	10 @ 200V/50 @ 480V	SE18S
0.85/1.04	26,880/21,760	4.6/5.7	28/35				
0.3/0.6/1.2	32,420/34,130/38,110	2.8/3.7/4.6	10/17/22	118 x 34 x 65	4,400	20 @ 200V/50 @ 480V	SE30S
1.4/1.7/2.2	30,860/25,450/19,770	5.7/7.0/9.0	29/40/57				
2.4/3.1/3.9/5.1	39,250/30,430/24,170/18,490	4.6/6.0/7.5/9.8	40/57/81/117	143 x 37 x 65	6,400	25 @ 200V/50 @ 480V	SE50S
3.4/4.3/5.6/7.1	40,810/32,560/24,890/19,520	6.0/7.5/9.8/12.4	57/81/117/167	167 x 40 x 70	7,100	35 @ 200V/70 @ 480V	SE75S
5.3/6.9/8.7/10.7	41,240/31,570/24,890/20,190	7.5/9.8/12.4/15.3	81/117/167/222	177 x 44 x 73	9,500	45 @ 200V/70 @ 480V	SE100S
6.9/8.7/10.7	39,250/30,430/24,170	9.8/12.4/15.3	117/167/222				
9.9/12.3/15.5/19.2	35,120/28,440/22,750/18,490	12.4/15.3/19.4/24.0	167/222/299/425	211 x 51 x 80	14,600	70 @ 200V/70 @ 480V	SE180S
12.3/15.5/19.2	35,550/28,010/22,750	15.3/19.4/24.0	222/299/425				
20.1/24.8/31.1	38,820/31,430/25,030	19.4/24.0/30.1	328/444/541	239 x 64 x 87	24,200	125 @ 200V/90 @ 480V	SE230S
20.1/24.8/31.1	38,820/31,430/25,030	29.1/35.9/45.1	328/444/541				
27.3/34.3/43.4	39,820/31,710/25,030	24.0/30.0/38.0	444/541/638	261 x 66 x 88	28,200	125 @ 200V/100 @ 480V	SE280S
27.3/34.3/43.4	39,820/31,710/25,030	24.0/30.0/38.0	444/541/638	287 x 72 x 88	35,500	150 @ 200V/100 @ 480V	SE350S
47.2/59.9	31,280/24,600	38.0/48.3	638/708				
69.5/88.3	24,600/21,330	48.3/55.2	578/818	319 x 91 x 91	66,000	300 @ 200V/150 @ 480V	SE550S
110.4/139.7	29,150/23,030	39.8/50.4	818/992	339 x 91 x 95	79,200		

MODEL		CLAMPING UNIT								
		Clamping Force (US ton)	Tie Bar Clearance (H x V) (in)	Overall Platen Size (H x V) (in)	Opening Stroke Min-Max (in)	Mold Space Min-Max (in)	Ejector Force/Stroke (T/in)	Plasti-cizing Unit	Screw Diameter (in)	Injection Weight (oz-PS)
Hydraulic Series	iM18	20	9.25 x 9.25	13.00 x 13.00	0-8.27	5.91-N.A.	1.2/1.97	C26S	0.55/0.63/0.71/0.79	0.22/0.36/0.46/0.57
	iM30	33	10.24 x 10.24	15.35 x 15.35	0-12.20	7.87-N.A.	1.9/1.97	C26S	0.55/0.63/0.71/.079	0.22/0.36/0.46/0.57
								C50S	0.71/0.79/0.87	0.8/0.9/1.1
								C75S	0.79/0.87/0.98	0.9/1.1/1.4
								C75S	0.79/0.87/0.98	0.9/1.1/1.4
	SH50C	55	12.80 x 12.80	18.50 x 18.39	0-17.32	6.30-N.A.	2.4/2.76	C110S	0.87/0.98/1.10	1.3/1.7/2.2
								C160S	0.98/1.10/1.26	1.9/2.4/3.1
	SH80C	88	14.76 x 14.76	21.46 x 21.46	0-21.65	6.30-N.A.	3.0/3.15	C160S	0.98/1.10/1.26	1.9/2.4/3.1
								C250M	1.10/1.26/1.42	2.9/3.8/4.8

MODEL		CLAMPING UNIT								
		Clamping Force (US ton)	Tie Bar Clearance (H x V) (in)	Overall Platen Size (H x V) (in)	Opening Stroke Min-Max (in)	Mold Space Min-Max (in)	Ejector Force/Stroke (T/in)	Plasti-cizing Unit	Screw Diameter (in)	Injection Weight (oz-PS)
Hydromechanical Series	SH100C	110	18.11 x 16.14	25.98 x 24.02	0 - 13.78	7.87-16.14	3.6/3.94	C360M	1.26/1.42/1.57	4.3/5.5/6.7
	SH130C	143	20.08 x 18.11	28.35 x 26.38	0 - 14.76	7.87-17.72	3.6/3.94	C450M	1.42/1.57/1.77	5.5/6.7/8.5
	SH160C	176	22.05 x 20.08	31.50 x 29.53	0 - 16.93	7.87-19.69	5.1/4.72	C560M	1.57/1.77/1.97	6.7/8.5/10.5
	SH220C	242	24.02 x 22.05	35.04 x 33.07	0 - 20.08	9.84-22.83	6.8/5.91	C1250L	1.97/2.20/2.48	15.0/18.8/23.8
	SH280C	308	26.97 x 25.00	38.19 x 36.22	0 - 22.83	11.81-24.41	6.8/5.91	C1700L	2.20/2.48/2.80	20.5/25.9/32.9
	SH350C	385	29.92 x 27.95	42.13 x 40.55	0 - 27.56	12.60-26.38	8.7/6.89	C2500L	2.48/2.80/3.15	30.0/38.2/48.5
	SH450A	496	32.28 x 32.28	48.03 x 47.24	0-31.50	13.78-31.50	14.6/7.87	C2500L	2.80/3.15	38.2/48.5
								C3750U	3.15/3.54/3.94	61/77/95
	SH550A	606	35.43 x 35.43	52.76 x 52.36	0-35.43	15.75-31.50	14.6/7.87	C3750U	3.15/3.54/3.94	61/77/95
								C5300U	3.54/3.94/4.41	87/107/134
SH650A	716	37.40 x 37.40	56.30 x 56.10	0-39.37	17.72-39.37	22.0/7.87	C3750U	3.15/3.54/3.94	61/77/95	
							C5300U	3.54/3.94/4.41	87/107/134	

SHA SERIES - Large tonnage general purpose machines

In the 496 to 716 ton range, the SHA offers the advantages of Sumitomo engineering at a general purpose price.

This affordable series uses the platen-mounted, N-IV control and the same advanced technology as the M and SHM for closed-loop control of injection and clamping.

The SHA's field-proven, hydromechanical clamp shortens the time to increase/decrease clamp pressure and reduces energy consumption compared with direct hydraulic clamp machines.

The result is excellent shot weight repeatability, dimensional precision, fast cycle times and energy efficiency for reliable productivity over the long run.

INJECTION UNIT				MISCELLANEOUS				MODEL
Injection Capacity (in ³)	Injection Pressure (Max psi)	Injection Rate (Max in ³ /sec)	Plasticizing Capacity (Max lb/hr)	Machine Dimensions (L x W x H) (in)	Machine Weight (lbs)	Drive Motor (hp)	Oil Reservoir Capacity (gal)	
0.38/0.67/0.85/1.04	32,420/34,130/26,880/21,760	2.0/2.6/3.2/4.0	11/21/29/35	81 x 28 x 57	2,000	7.5	15	IM18
0.38/0.67/0.85/1.04	32,420/34,130/26,880/21,760	2.0/2.6/3.2/4.0	11/21/29/35	115 x 30 x 65	2,650	10	20	IM30
1.34/1.65/2.01	38,390/31,140/25,740	4.0/5.0/6.0	22/29/40		2,900			
1.65/2.01/2.62	39,250/32,420/25,030	3.8/4.6/6.0	29/40/57					
1.65/2.01/2.62	39,250/32,420/25,030	2.7/3.2/4.2	29/40/57					
2.4/3.1/3.9	39,820/30,860/24,600	4.4/5.7/7.1	40/57/81	138 x 37 x 65	4,600	15	36	SH50C
3.4/4.3/5.6	39,820/31,710/24,320	4.8/6.0/7.9	57/81/117	148 x 37 x 65	4,900			
3.4/4.3/5.6	39,820/31,710/24,320	5.7/7.1/9.3	57/81/117	160 x 40 x 66	6,400			
5.2/6.8/8.5	41,950/32,140/25,310	5.6/7.4/9.3	81/117/167	175 x 40 x 69	6,600			

INJECTION UNIT				MISCELLANEOUS				MODEL
Injection Capacity (in ³)	Injection Pressure (Max psi)	Injection Rate (Max in ³ /sec)	Plasticizing Capacity (Max lb/hr)	Machine Dimensions (L x W x H) (in)	Machine Weight (lbs)	Drive Motor (hp)	Oil Reservoir Capacity (gal)	
7.9/9.9/12.3	36,400/28,720/23,320	7.9/9.9/12.3	117/167/222	174 x 54 x 81	8,600	25/30	45	SH100C
9.9/12.3/15.5	37,970/30,720/24,320	9.3/11.5/14.6	167/222/301	183 x 57 x 84	10,000	30/40	53	SH130C
12.3/15.5/19.6	35,830/28,300/22,890	11.9/15.1/18.6	224/299/427	204 x 58 x 85	12,000	40/50	64	SH160C
27.3/34.3/43.4	34,270/27,300/21,470	17.4/21.8/27.6	310/427/585	256 x 66 x 95	17,800	50/60	80	SH220C
37.3/47.2/59.9	34,980/27,590/21,760	17.3/21.9/27.8	264/361/464	274 x 70 x 95	21,800	50/60	93	SH280C
54.8/69.5/88.3	34,560/27,160/21,330	17.1/21.7/27.6	264/337/455	296 x 76 x 95	25,300	60	106	SH350C
69.5/88.3	29,860/23,460	22.4/28.5	427/579	321 x 78 x 86	39,600	75	132	SH450A
110/140/172	29,290/23,180/18,770	22.1/28.1/35.4	482/667/898					
110/140/172	29,290/23,180/18,770	33.7/42.7/52.7	669/893/790	344 x 82 x 86	49,700	50+50 60+60	198	SH550A
157/194/243	29,290/23,750/18,910	35.0/43.1/54.1	587/790/1144					
110/140/172	29,290/23,180/18,770	33.7/42.7/52.7	669/893/790	366 x 87 x 87	59,600	60+60	238	SH650A
157/194/243	29,290/23,750/18,910	35.0/43.1/54.1	587/790/1144					

Metric specifications available on request.

CUSTOMER SERVICE - Total service. Total support.

It's a Customer Satisfaction Program as advanced as Sumitomo's technology.

That means end-to-end warranties, comprehensive training programs and manuals, process engineering assistance, professionally trained and certified field service, parts availability and financing.

Sumitomo's Customer Satisfaction Program is what makes your Sumitomo machine a total productivity package. It's a program designed to meet cost/performance requirements and ensure a solid return on your investment.

Call today to find out how Sumitomo's machines and customer service can improve your productivity and ROI.