

## Offices / Technical Support

### Ask us.

Shibaura Machine brings a depth of experience and expertise to help you create the ideal molding solution. With locations across the country, plus on-site assistance when you need hands-on help, you get the customer assistance and technical support to help you excel.

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# Shibaura Machine

## SERVO HYDRAULICS



Smart Hydraulic Molding Solutions.

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# Meet the Expanded Range of Servo Hydraulics



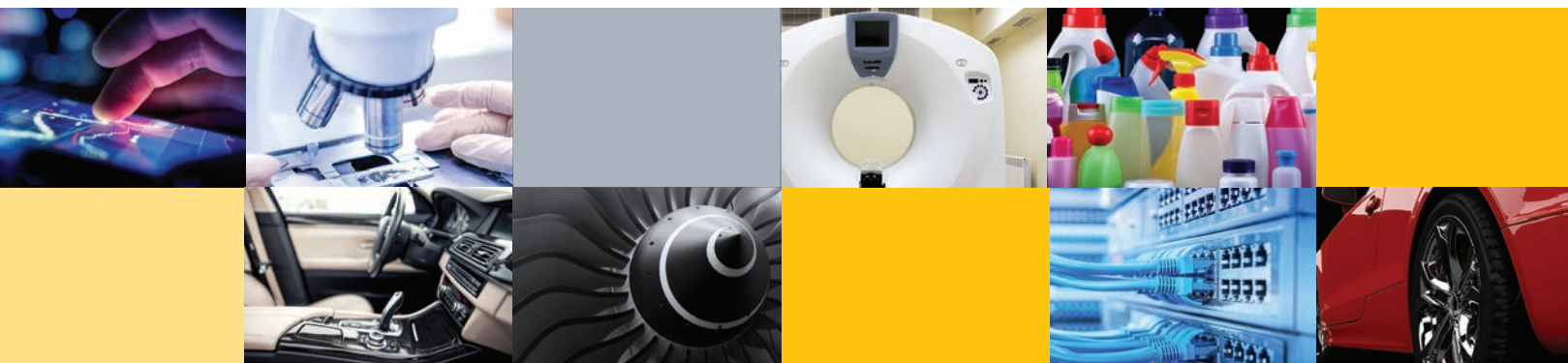
## Servo Hydraulics from Shibaura Machine

Since 1974, Shibaura Machine has taken a leadership role in engineering ultra-fast, high-cycle, advanced hydraulics with the repeatability and performance that molders need. All backed by the service and support that only Shibaura can provide.

Now we're giving molders even more machines to choose from. Introducing the expanded line of TiA, ISG and ISFD series of servo-driven hydraulics ranging from 110 to 3850 tons. Smart molding solutions with the dependability and performance that molders expect from Shibaura, combined with the most innovative, energy-efficient servo technology available. All in a more compact machine size.

Standard on every machine is the advanced, yet user-friendly V50 controller. A dynamic touch screen system that uses real-time input to report molding conditions and make automatic adjustments, resulting in greater part repeatability and fewer rejects.

Shibaura's servo hydraulics are ideal for virtually any job you have, from medium production parts to large and even ultra-large parts.



# Energy-Efficient Hydraulics from Shibaura Machine.

Take your shop to the next level of productivity with the TiA, ISG and ISFD Series of hydraulic molding machines from Shibaura Machine. With clamping capacities ranging from 110 to 3850 tons, these low profile, heavy-duty systems are ideal for molding medium, large and ultra-large parts with precision and ease. What's more, they require less floor space and are easier to operate than traditional hydraulic systems.

## Numerical, closed loop control

Built into each system is a high-speed microprocessor, resulting in extremely stable, consistent and precise molding.

## Eject-on-the-fly operation

ISG/ISFD Hydraulics automatically eject parts during mold opening, reducing cycle times and increasing productivity. Further enhancing productivity are such features as multi-stroke ejection, try-again circuitry, and forward hold capability. (Available on 500 ton and above only.)

## More efficient clamping design

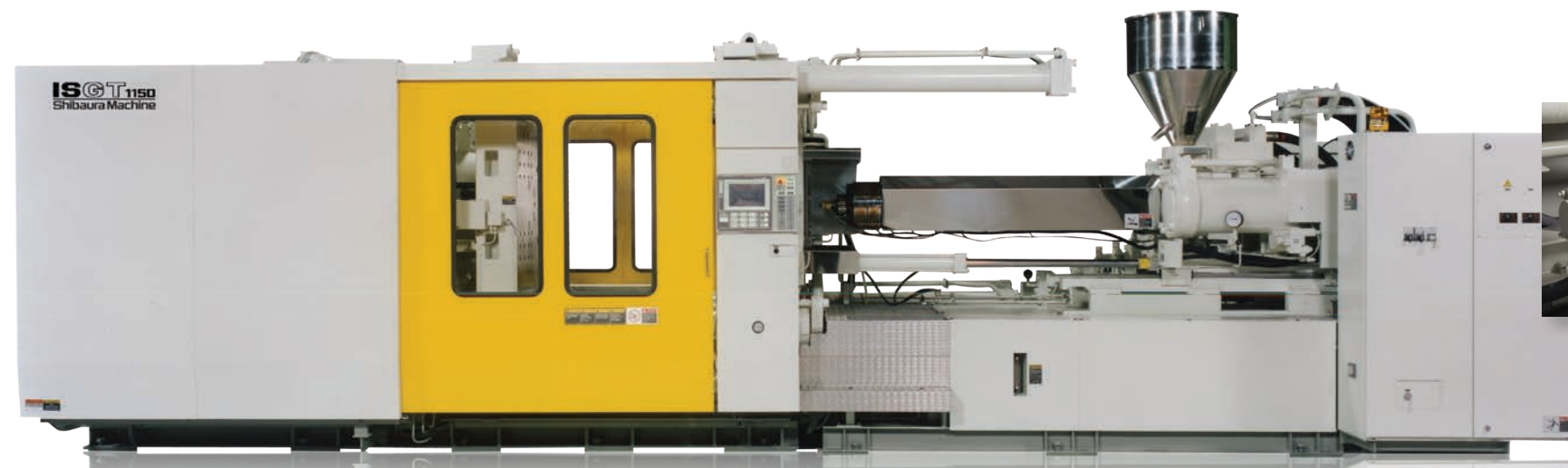
The highly rigid toggle clamping system on the **TiA series** allows for fast, energy efficient operation, exceptionally smooth mold movement, and generous mold mounting space.

The clamping device on the **ISG series** uses leak-less pre-fill valve systems resulting in fast pressure build-up time and reduced energy consumption.

The unique, direct lock clamping unit on **ISFD Series** machines is shorter than conventional devices, yet delivers the same clamping force and faster cycling speeds.

## Smaller footprint

Shibaura Machine's **ISG** requires up to 30% less floor space than comparable hydraulics and are ideal for



Model ISGT1150 for large-size molding

low ceiling production areas. The compactly designed clamping device on the **ISFD Series** significantly reduces machine size and the amount of space needed for installation space required.

## Self-contained oil cleaning system

Hydraulic oil is continuously cycled through three micron filters, increasing oil life while reducing machine malfunctions, maintenance and downtime. That saves you time and money.

## Reduced energy costs

With their faster molding cycles and programmable speed and pressure controls, TiA/ISG/ISFD Hydraulics are extremely energy-efficient, helping you reduce operating costs.

## V50 controller standard on all models

With a 40% improvement in communication speed, the V50 controller on TiA/ISG/ISFD Hydraulics uses real-time input to report molding conditions and make automatic adjustments to mold settings, resulting in greater part repeatability and fewer rejects.

## MOLDLYZER™ Quality Control System

Built into the V50 controller is MOLDLYZER™, an

exclusive, patented quality control program that helps ensure part-to-part repeatability for any size production run. MOLDLYZER continuously samples actual hydraulic pressure at different checkpoints during injection, and compares the data to an injection pressure model curve established by the operator for an acceptable part. Data is displayed on the V50 controller, providing the operator with visual indication of molding performance.

If pressure should exceed preset tolerance levels, the machine signals a defect, ejects the part and notifies the operator to make the necessary adjustments. The monitoring package includes a maximum peak pressure cut-off, protecting molds against over-packing the cavity.

## Customized machine cells

The V50's intuitive, touchscreen interface and up to 40 user-programmable (optional) outputs allow you to customize machine cells without investing in additional OEM programming.

Monitoring and programming are easy, thanks to the controller's large 15-inch touchscreen. And since the screen looks and works the same as previous controllers, there's little or no learning curve for current users. Just call Shibaura whenever you need answers to your programming questions.

Enhancing your machine investment is the V50's iPAQET\* Lite data management system, providing you with production monitoring, data collection and analysis.

\* NOTE: A standard Ethernet interface is required for iPAQET use. Also required are a server, server peripherals, operating system and LAN wiring.



New energy-efficient servo capabilities are now available for all models, helping you reduce power consumption and costs.\*\*



## iPAQET\* remote monitoring and management software (optional)

For a more powerful data management platform, simply upgrade your TiA/ISG/ISFD to the full version of iPAQET. It offers the same benefits as iPAQET Lite, plus enhanced features such as the ability to monitor 48 molding machines in real-time from any location, view machine operation status, monitor resin lots and more.

## Additional features

**Injection Swivel Device**—Power operated device provides easy inspection of screw and barrel. (Not on TiA 110S, 200S & 250S units.)

**Dynamic Barrier (DBG) Screw**—Unique dual barrier screw design helps stabilize melt temperatures and keep productivity at its highest level.

**Stainless Steel Hopper**—Easy to clean, non-corrosive stainless steel hopper.

**Optical Linear Scales**—Accurate to 0.001 mm (0.00004 in), optical scales sense clamp and injection screw positions, increasing molding consistency (fewer rejects) and allowing for tighter tolerances.

\*\* Servo is standard on 110 to 1450 ton machines and available for order on all sizes.

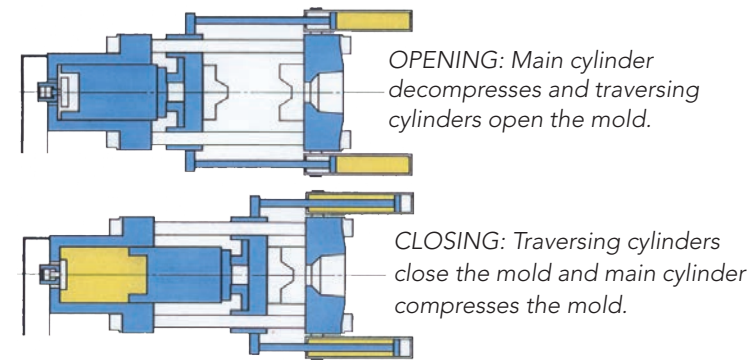
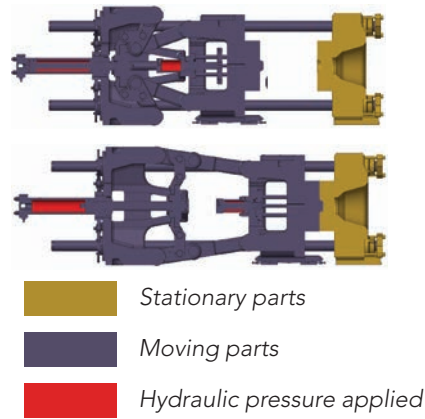
### Mold clamp for TiA 110S, 200S and 250S

Shibaura Machine's highly rigid toggle system is a quiet and smooth performer for high cycle molding applications. Generous mold mounting space, energy saving design, smooth mold movements, and excellent mold safety makes our toggle machine a perfect fit for a wide range of applications.

**OPENING:** Oil supplied to the clamping cylinder's rod side pulls the toggle links along with moving platen to unlock the mold and further movement makes the mold open.

**CLOSING:** Oil supplied to the clamping cylinder's cap side moves the toggle links along with moving platen for mold close.

Mechanical advantages of the toggle system amplify the given small force in the clamping cylinder to a large force at the moving platen, hence tonnage is built.

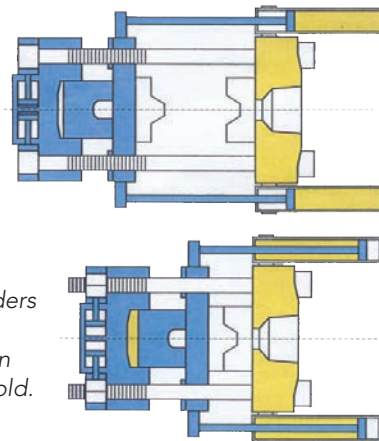


### Mold clamp for ISGS 310N, 390N, 500 & 610

More than 10% shorter than conventional machines, the ISGS clamp incorporates fluted ribbed, highly rigid cast steel platens for extended mold life. It provides hydraulic characteristics such as easy mold change, wider platens, longer stroke and longer daylight. Features include a high response logic cycle prefill valve for faster cycling time, and new style hydraulic block circuit for increased energy savings.

**OPENING:** Main cylinder decompresses, tie bar lock nuts release and traversing cylinders open the mold.

**CLOSING:** Traversing cylinders close the mold, lock nuts close onto tie bars and main cylinder compresses the mold.

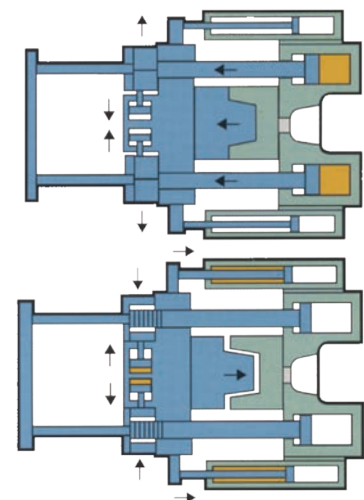


### Mold clamp for ISGT 720, 950 & 1150

The ISGT clamp combines Shibaura's unique tie bar locking system with a direct pressure type mold-clamping cylinder, making it 30% shorter than conventional models. Its main ram contains less than 10% of the oil used by conventional hydraulic clamps, decreasing fluid use by as much as 50%. Less time is required for pressure build up, reducing cycle time. Features include a new style hydraulic block circuit for increased energy savings.

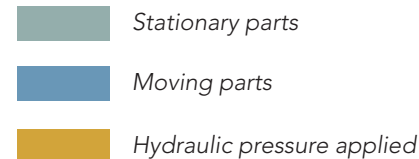
**OPENING:** Half nuts open when the moveable platen retracts at high speed and applies hydraulic pressure to open the mold.

**CLOSING:** Half nuts lock during the slow speed/low pressure closing of the moveable platen, resulting in a time loss prevention system that dramatically reduces dry cycle time.



### 2-platen mold clamp for ISFD 1450, 1750, 1950, 2450, 2750, 3350 & 3850

Shibaura Machine equipped the ISFD Series with a unique, two platen, direct lock clamping device. While the same stroke as conventional devices, this compact design delivers faster cycling speeds and a smaller machine footprint requiring significantly less floor space.



## STANDARD FEATURES SERVO HYDRAULIC INJECTION MOLDING MACHINES

### Injection, Plasticizing V50 Controller

- ▶ Step switch/Ten key input
- ▶ Data setting memory for 300 sets of molds
- ▶ High-speed control cycle
- ▶ Single page setup screen
- ▶ Operation indicator
- ▶ Try again circuit for continuous automatic operation
- ▶ Active matrix full color LCD touchscreen
- ▶ Multilingual operation (English/Spanish)
- ▶ Digital display of injection and clamp pressures; clamp, screw and ejector positions
- ▶ Monitoring of cycle, clamp open-to-close, injection fill and screw recovery times; screw RPM; injection start over position; minimum and final cushions
- ▶ Table and trend displays of monitored data plus SPC
- ▶ Display of table stop, change and alarm histories
- ▶ Production completion signal with auto shutdown control
- ▶ Reduced temperature holding program
- ▶ High oil temperature alarm with auto shutdown
- ▶ Hydraulic oil warm up circuit for quick startup with stable oil temperature
- ▶ Functions for profile display, storing and measurement
- ▶ Functions for checking diagnostics, setting password, customizing external output signal, and selecting operation at production completion
- ▶ LEDs on control panel showing limit switch condition
- ▶ Preventive maintenance schedule with alarm
- ▶ iPAQET Lite data management system
- ▶ MOLDLYZER™ quality control system/injection profile monitor

### Software

- ▶ Numerical closed loop control of injection speeds and pressures
- ▶ 12 speeds and 6 pressures for profile injection control
- ▶ Adjustable injection speed and pressure gradient ramp or point-to-point progressive profile capability for smooth speed transition
- ▶ Injection speed and pressure set point graph with real-time overlay

- ▶ Automatic screw speed deceleration and screw backpressure reduction for accurate screw stopping after recovery
- ▶ Digital setting of screw backpressure
- ▶ Programmable screw speed and backpressure with set point and actual graph
- ▶ Digital display of screw speed and feed throat temperature
- ▶ Digital setting of barrel temperature with set point and actual display
- ▶ High barrel temperature alarm
- ▶ Sprue break (after cure time, screw recovery or injection)
- ▶ Screw cold start protection

### Clamp

- ▶ Digital setting of clamp open and close speeds and positions
- ▶ Automatic deceleration of clamp open and close
- ▶ Mold separation monitor
- ▶ Moveable platen supported on machine base for precision alignment of clamp during mold close
- ▶ Reduced lubrication of platen bushings and support shoes; chrome-plated tie bars for clean molding operation
- ▶ Automatically adjusting clamp pressure switch
- ▶ Long stroke clamping mechanism – ISF1450D - ISF3850D Machines only
- ▶ Automatic lubrication of platen bushings and support shoes – ISGT and ISFT machines only
- ▶ Automatic lubrication of toggle mechanism, platen bushings and support shoes – TiA models only
- ▶ Top of stationary platen pre-drilled for mounting robot

### Eject

- ▶ Two-step programmed ejector speed for soft start ejection
- ▶ Digital setting of ejector speeds and positions
- ▶ Eject-on-the-fly with separate pump (500 ton and above only)
- ▶ Ejector plate holes through drilled for pull back rods

### Hardware

- ▶ Injection plasticizing hardware
- ▶ Continuous oil filtration to three microns to reduce hydraulic component wear
- ▶ Prewired for 460/3/60 power
- ▶ Bimetallic barrel – nickel boron alloy
- ▶ Stainless steel hopper
- ▶ Extension nozzle with replaceable tip

### Other features

- ▶ Ejector forward hold circuit, gate-controlled in semi-auto
- ▶ Automatic oil temperature control valve
- ▶ Robot interlock circuit
- ▶ Machine built to SPI-ANSI machinery safety standards
- ▶ Optical linear scales for precision sensing of clamp and injection position
- ▶ Cycle counter showing number of good, reject and total cycles
- ▶ Binary pump configuration to align energy use with production requirements (500 ton and up)
- ▶ Power swivel of injection unit (Not available for TiA 110S, 200S & 250S units)
- ▶ SPI ejector pattern, mold mounting holes and nozzle



**Shibaura Machine**

## TiA Specifications

ITEM	UNIT	TiA110S-5			TiA200S-7			TiA250S-10		
Injection Unit Code		i5			i7			i10		
Barrel Code		Y	A	B	Y	A	B	Y	A	B
Screw Diameter	in	1.42	1.57	1.77	1.57	1.77	1.97	1.77	1.97	2.17
	mm	36	40	45	40	45	50	45	50	55
Injection Volume	in <sup>3</sup>	11.2	13.8	17.5	17.1	21.7	26.9	24.3	30.0	36.2
	cm <sup>3</sup>	184	226	287	280	356	441	398	492	593
Injection Capacity (PS)	oz	6.3	7.7	9.8	9.1	11.5	14.0	12.8	15.8	19.2
	g	167	206	261	255	324	401	362	447	540
Injection Pressure	PSI	35060	28400	22450	36697	29003	23528	36694	29728	24566
	bar	2417	1958	1548	2530	1999	1622	2530	2049	1694
Injection Rate	in <sup>3</sup> /s	7.3	9.0	11.4	9.3	11.7	14.5	12.3	15.3	18.4
	cm <sup>3</sup> /sec	119	147	186	152	192	238	202	250	302
Plasticizing Capacity	lbs/h	137	198	213	243	265	353	265	353	419
	Kg/h	62	90	97	110	120	160	120	160	190
Screw Speed	RPM	260	260	230	320	285	255	285	255	230
	RPM	260	260	230	320	285	255	285	255	230
Clamping Force	tons-US	112			198			254		
	tons-m	101			180			230		
Distance Between Tie Bar (HxV)	in	18.1 x 16.1			22.0 x 20.1			24.0 x 22.0		
	mm	460 x 410			560 x 510			610 x 560		
Platen Dimensions (HxV)	in	26 x 24			31.10 x 29.13			34.6 x 32.6		
	mm	660 x 610			790 x 740			880 x 830		
Clamp Stroke	in	13.8			17.7			21.7		
	mm	350			450			550		
Open Daylight (Max.)	in	31.5			39.4			45.3		
	mm	800			1000			1150		
Min. Mold Thickness	in	7.1			7.9			9.8		
	mm	180			200			250		
Max. Mold Thickness	in	17.7			21.7			23.6		
	mm	450			550			600		
Ejector Stroke	in	4.7			6.3			7.1		
	mm	120			160			180		
Ejector Force	tons-US	5.0			5.4			7.7		
	tons-m	4.5			4.9			7		
Oil Tank Capacity	gal	79.25			86.64			132		
	l	300			328			500		
Pump Motor	HP	32			40			50		
	kw	22			30			37		
Heater Band Capacity	kw	11.2			13.6			15.2		
	kw	11.2			13.6			15.2		
Dimensions (L x W x H)	in	190x58x76.5*			234x66x79*			260x71x85.4*		
	mm	4826x1473x1943*			5944x1676x2007*			6604x1803x2169*		
Machine Weight	tons-US	4.9			7.7			11.6		
	kg	4350			6985			10700		

\* Up to Hopper lid

Injection capacity, injection rate and plasticizing capacity vary depending on the type of utilized resin and molding conditions.

Note: Specifications can change without notice. Contact Shibaura Machine for most current specifications.

## ISGSN Specifications

ITEM	UNIT	ISGS310N-19		ISGS390N-27	
Injection Unit Code		i19		i27	
Barrel Code		AT	B	AT	B
Screw Diameter	in	2.36	2.76	2.76	3.15
	mm	60	70	70	80
Injection Volume	in <sup>3</sup>	56.8	76.9	90.0	118.0
	cm <sup>3</sup>	934	1262	1475	1934
Injection Capacity (PS)	oz	29.8	40.5	48.0	63.0
	g	850	1148	1361	1786
Injection Pressure	PSI	28000	20500	25800	19800
	bar	1931	1413	1779	1365
Injection Rate	in <sup>3</sup> /s	18.4	25.0	25.0	32.0
	cm <sup>3</sup> /sec	302	410	410	524
Plasticizing Capacity	lb/h	425	575	517	714
	g/s	54	72	65	90
Screw Speed	RPM	184	180	162	162
	RPM	184	180	162	162
Clamping Force	tons-US	309		386	
	tons-m	280		350	
Distance Between Tie Rods (H X V)	in	28.7 x 28.7		31.9 x 31.9	
	mm	730 x 730		810 x 810	
Platen Dimensions (H X V)	in	40.2 x 40.2		43.3 x 43.3	
	mm	1020 x 1020		1100 x 1100	
Clamp Stroke	in	29.9		37.0	
	mm	760		940	
Open Daylight (Maximum)	in	41.7		49.2	
	mm	1060		1250	
Min. Mold Thickness	in	11.8		11.8	
	mm	300		300	
Mold Opening Force	tons-US	17.0		22.0	
	tons-m	15.5		20	
Ejector Stroke	in	4.9		4.9	
	mm	125		125	
Ejection Force	tons-US	7.8		11	
	tons-m	7		10	
Oil Tank Capacity	gal	225		320	
	l	850		1210	
Pump Motor	HP	56		60	
	kw	37		45	
Heater Band Capacity	kw	22		22.3	
	kw	22		22.3	
Dimensions (L x W x H)	in	240x79x87		296x87x93	
	mm	6096x2006x2210		7518x2235x2362	
Machine Weight	tons-US	~17.0		20.6	
	kg	15422		18688	

Injection capacity, injection rate and plasticizing capacity vary depending on the type of utilized resin and molding conditions.

ISG/FD Specifications

	ITEM	UNIT	MODEL ISGS500				MODEL ISGS610-WP				MODEL ISGT720-WP			
CLAMP	Clamp Closing Force	tons-US	495				605				715			
		tons-m	450				550				650			
	Clamp Opening Force	tons-US	27				33				44			
		tons-m	24.5				30				40			
	Tie Bar Spacing (H x V)	in	34.2 x 34.2				38 x 38				42.5 x 42.5			
		mm	870 x 870				965 x 965				1080 x 1080			
	Platen Dimension (H x V)	in	48.4 x 48.4				55.1 x 55.1				60.2 x 60.2			
		mm	1230 x 1230				1400 x 1400				1530 x 1530			
	Clamp Stroke	in	41.3				47				53			
		mm	1050				1200				1350			
	Daylight (Open/Close)	in	55.1 / 13.8				63 / 15.8				70.8 / 17.7~41.3			
		mm	1400 / 350				1600 / 400				1800 / 450~1050			
	Clamp Speed (Close/Open)	in/sec	30 / 30				31 / 30				29 / 29			
		mm/sec	760 / 760				800 / 760				750 / 750			
Ejector Force	tons-US	13.5				16				23				
	tons-m	12				14.5				21				
Ejector Stroke	in	6.3				6.3				7.9				
	mm	160				160				200				
INJECTION	Injection Unit		27AT	27B	34AT	34B	34AT	34B	59AT	59B	59AT	59B	81AT	81B
	Injection Capacity (GPPS)	oz	48	63	61	77	61	77	104	126	104	126	142	186
		g	1360	1780	1730	2190	1730	2190	2900	3540	2900	3540	3980	5200
	Screw Diameter	in	2.8	3.2	3.2	3.5	3.2	3.5	3.7	4.1	3.7	4.1	4.1	4.7
		mm	70	80	80	90	80	90	95	105	95	105	105	120
	Injection Volume	in <sup>3</sup>	90	118	115	145	115	145	192	235	192	235	263	345
		cm <sup>3</sup>	1480	1930	1880	2380	1880	2380	3150	3850	3150	3850	4320	5650
	Injection Pressure	PSI	25900	19800	26500	21000	26500	21000	26800	21900	26800	21900	26500	20300
		kgf/cm <sup>2</sup>	1810	1380	1860	1470	1860	1470	1890	1540	1890	1540	1870	1430
	Injection Rate	in <sup>3</sup> /sec	32	41	31	39	31	39	38	47	48	58	48	63
		cm <sup>3</sup> /sec	520	680	505	640	505	640	625	765	784	955	790	1035
	Max Screw Speed	RPM	180	170	170	150	170	150	140	127	140	127	127	110
		RPM	180	170	170	150	170	150	140	127	140	127	127	110
	Plasticizing Rate (GPPS)	oz/sec	2.5	3.3	3.3	3.9	3.3	3.9	4.2	4.9	4.2	4.9	4.9	5.8
g/sec		72	94	95	111	95	111	117	136	117	136	136	161	
GENERAL	*Core Volume Clamp Stop	gpm	60				57				50			
		L	227				215				190			
	*Core Volume On The Fly	gpm	30				19				21			
		L	113				72				79			
	Running Load @ 460V	amps	129				163 & 179				206 & 223			
		amps	129				163 & 179				206 & 223			
	Cooling Water Required	gal	13				13				13			
		L	49				49				49			
	Motor	HP	75				100				120			
		kw	55				74				90			
	Oil Reservoir Capacity	gal	343				450				264			
		l	1300				1700				1000			
	Shipping Weight (Est.)	Lbs	46,200		48,400		59,400		61,600		67,100		71,500	
		kg	21,000		22,000		27,000		28,000		30,500		32,500	
Dimensions (L x W x H)	ft	23.6x7x7		23.6x7x7		26.6x7.5x6.9		28.6x7.5x6.9		27.3x8.5x8.2		28.7x8.5x8.2		
	m	7.2x2.1x2.1		7.6x2.1x2.1		8.1x2.3x2.1		8.7x2.3x2.1		8.3x2.6x2.5		8.7x2.6x2.5		

Note: Specifications can change without notice. Contact Shibaura Machine for most current specifications.

ISG/FD Specifications

MODEL ISGT950-WP				MODEL ISGT950-WII				MODEL ISGT1150				MODEL ISGT1150-WII			
935				935				1155				1155			
850				850				1050				1050			
71				82				71				71			
65				74				65				65			
49.8 x 49.8				61.0 x 49.8				49 x 49				60.2 x 49			
1260 x 1260				1550 x 1265				1250 x 1250				1530 x 1250			
68.3 x 68.3				79.5 x 68.3				68.3 x 68.3				79.5 x 68.3			
1730 x 1730				2020 x 1735				1735 x 1735				2020 x 1735			
69				80.7				69				80.7			
1750				2050				1750				2050			
88.5/19.7~43.3				100.4/19.7~55.1				88.5/19.7~43.3				100.4/19.7~55.1			
2250 / 500~1100				2550 / 800~1400				2250 / 500~1100				2550 / 800~1400			
28 / 27				28 / 27				1.6-28/1.6-27				1.6-28/1.6-27			
715 / 690				715 / 690				715 / 690				715 / 690			
27				27				27				27			
24.5				24.5				24.5				24.5			
7.8				7.8				7.8				7.8			
200				200				200				200			
81AT	81B	110A	110B	81AT	81B	110A	110B	81AT	81B	110A	110B	81AT	81B	110A	110B
142	186	213	250	142	186	213	250	142	186	213	250	142	186	213	250
3980	5200	6040	7140	3980	5200	6040	7140	3980	5200	6040	7140	3980	5200	6040	7140
4.1	4.7	4.5	4.9	4.1	4.7	4.5	4.9	4.1	4.7	4.5	4.9	4.1	4.7	4.5	4.9
105	120	115	125	105	120	115	125	105	120	115	125	105	120	115	125
263	345	400	473	263	345	400	473	263	345	400	473	263	345	400	473
4320	5650	6560	7760	4320	5650	6560	7760	4320	5650	6560	7760	4320	5650	6560	7760
26500	20300	25100	21200	26500	20300	25100	21200	26500	20300	25100	21200	26500	20300	25100	21200
1870	1430	1760	1490	1870	1430	1760	1490	1870	1430	1760	1490	1870	1430	1760	1490
62	80	65	77	62	80	65	77	62	80	65	77	62	80	65	77
1010	1320	1070	1260	1010	1320	1070	1260	1010	1320	1070	1260	1010	1320	1070	1260
127	110	110	101	127	110	110	101	127	110	110	101	127	110	110	101
127	110	110	101	127	110	110	101	127	110	110	101	127	110	110	101
4.9	5.8	5.3	5.9	4.9	5.8	5.3	5.9	4.9	5.8	5.3	5.9	4.9	5.8	5.3	5.9
136	161	147	164	136	161	147	164	136	161	147	164	136	161	147	164
60				60				60				60			
227				227				227				227			
30				30				30				30			
113				113				113				113			
259				259				259				259			
259				259				259				259			
21				21				21				21			
80				80				80				80			
150				150				150				150			
110				110				110				110			
357				357				357				357			
1350				1350				1350				1350			
85,800		92,400		94,600		96,800		85,800		92,400		105,600		107,800	
39,000		42,000		43,000		44,000		39,000		42,000		48,000		49,000	
29.3x9.3x8.3		32.8x9.3x8.3		31.8x10.4x8.3		33.7x10.4x8.3		31x10x8.2		32.6x10x8.2		31.8x10.4x8.8		33.7x10.4x8.8	
8.9x2.8x2.5		10x2.8x2.5		9.7x3.2x2.7		10.3x3.2x2.7		9.4x3x2.5		9.9x3x2.5		9.7x3.2x2.7		10.3x3.2x2.7	

ISG/FD Specifications

	ITEM	UNIT	MODEL ISG1450D				MODEL ISD1450D-WP				MODEL ISF1750D			
CLAMP	Clamp Closing Force	tons-US	1430				1430				1760			
		tons-m	1300				1300				1600			
	Clamp Opening Force	tons-US	105				105				132			
		tons-m	95				95				120			
	Tie Bar Spacing (H x V)	in	52.1 x 50.4				55.1 x 55.1				59.8 x 49.8			
		mm	1325 x 1280				1415 x 1415				1520 x 1265			
	Platen Dimension (H x V)	in	74.8 x 72.8				78.3 x 78.1				84.6 x 72.8			
		mm	1900 x 1850				1990 x 1985				2150 x 1850			
	Clamp Stroke	in	51.2~70.9				51.2~70.9				66.9~94.5			
		mm	1300~1800				1300~1800				1700~2400			
	Daylight Open/Close)	in	78.7~98.4 / 27.5~47.2				78.7~98.4 / 27.5~47.2				98.4~126 / 31.5~59.1			
		mm	2000~2500 / 700~1200				2000~2500 / 700~1200				2500~3200 / 800~1500			
	Clamp Speed (Close/Open)	in/sec	29 / 31				29 / 31				29 / 31			
		mm/sec	745 / 775				745 / 775				745 / 775			
Ejector Force	tons-US	33				31				49				
	tons-m	30				28				44				
Ejector Stroke	in	9.8				9.8				9.8				
	mm	250				250				250				

INJECTION	Injection Unit	110A				110B				150A				150B			
		oz	213	250	277	348	213	250	277	348	213	250	277	348	213	250	277
	g	6040	7140	7750	9730	6040	7140	7750	9730	6040	7140	7750	9730	6040	7140	7750	9730
Screw Diameter	in	4.5	4.9	4.9	5.5	4.5	4.9	4.9	5.5	4.5	4.9	4.9	5.5	4.5	4.9	4.9	5.5
	mm	115	125	125	140	115	125	125	140	115	125	125	140	115	125	125	140
Injection Volume	in³	400	473	514	645	400	473	514	645	400	473	514	645	400	473	514	645
	cm³	6560	7760	8430	10570	6560	7760	8430	10570	6560	7760	8430	10570	6560	7760	8430	10570
Injection Pressure	PSI	25100	21200	24900	19900	25100	21200	24900	19900	25100	21200	24900	19900	25100	21200	24900	19900
	kgf/cm²	1760	1490	1750	1400	1760	1490	1750	1400	1760	1490	1750	1400	1760	1490	1750	1400
Injection Rate	in³/sec	65	77	65	81	65	77	65	80	65	77	65	81	65	77	65	81
	cm³/sec	1070	1260	1060	1330	1070	1260	1060	1300	1070	1260	1060	1330	1070	1260	1060	1330
Max Screw Speed	RPM	110	101	101	90	110	101	101	90	110	101	101	90	110	101	101	90
	RPM	110	101	101	90	110	101	101	90	110	101	101	90	110	101	101	90
Plasticizing Rate (GPPS)	oz/sec	5	6	6.7	7.5	5.3	5.9	6.7	7.5	5.3	5.9	6.7	7.5	5.3	5.9	6.7	7.5
	g/sec	147	164	164	150	147	164	164	150	147	164	164	150	147	164	164	150

GENERAL	*Core Volume Clamp Stop	gpm	38				38				38			
		L	144				144				144			
	*Core Volume On The Fly	gpm	38				38				38			
		L	144				144				144			
	Running Load @ 460V	amps												
		amps												
	Cooling Water Required	gal	28				28				28			
		L	105				105				105			
	Motor	HP	180				180				180			
		kw	135				135				135			
	Oil Reservoir Capacity	gal	555				430				845			
		l	2101				1600				3199			
	Shipping Weight (Est.)	Lbs	140,800		145,200		140,000		141,000		171,600		176,000	
		kg	64,000		66,000		62,000		64,000		78,000		80,000	
Dimensions (L x W x H)	ft	33.5x10x8.8		35.5x10x8.8		35.1x10.5x9.2		37.9x10.5x10.4		38.4x10.8x9.5		39.4x10.8x9.5		
	m	10.2x3x2.7		10.8x3x2.7		10.7x3.2x2.8		11.6x3.2x3.2		11.7x3.3x2.9		12x3.3x2.9		

Note: Specifications can change without notice. Contact Shibaura Machine for most current specifications.

ISG/FD Specifications

MODEL ISF1750D-WP				MODEL ISF1950D				MODEL ISF2450D			
1760				1980				2420			
1600				1800				2200			
132				154				182			
120				140				165			
70.8 X 59.0				70.3 x 58.5				70.8 x 63.0			
1800 X 1500				1785 X 1485				1800 x 1600			
96.4 X 84.6				96.5 x 84.6				96.5 x 88.6			
2450 X 2150				2450 X 2150				2450 x 2250			
66.9~94.5				66.9~94.5				70.9~102.4			
1700~2400				1700~2400				1800~2600			
98.4~126 / 31.5~59.1				98.4~126 / 31.5~59.1				106.3~137.8 / 35.4~66.9			
2500~3200 / 800~1500				2500~3200 / 800~1500				2700~3500 / 900~1700			
29 / 31				29 / 31				31 / 32			
745 / 775				745 / 775				775 / 810			
49				49				76			
44				44				69			
9.8				9.8				13.8			
250				250				350			

INJECTION	Injection Unit	110A				110B				150A				150B			
		oz	213	250	277	348	213	250	277	348	213	250	277	348	213	250	277
	g	6040	7140	7750	9730	6040	7140	7750	9730	6040	7140	7750	9730	6040	7140	7750	9730
Screw Diameter	in	4.5	4.9	4.9	5.5	4.5	4.9	4.9	5.5	4.5	4.9	4.9	5.5	4.5	4.9	4.9	5.5
	mm	115	125	125	140	115	125	125	140	115	125	125	140	115	125	125	140
Injection Volume	in³	400	473	514	645	400	473	514	645	400	473	514	645	400	473	514	645
	cm³	6560	7760	8430	10570	6560	7760	8430	10570	6560	7760	8430	10570	6560	7760	8430	10570
Injection Pressure	PSI	25100	21200	24900	19900	25100	21200	24900	19900	25100	21200	24900	19900	25100	21200	24900	19900
	kgf/cm²	1760	1490	1750	1400	1760	1490	1750	1400	1760	1490	1750	1400	1760	1490	1750	1400
Injection Rate	in³/sec	65	77	65	81	65	77	65	80	65	77	65	81	65	77	65	81
	cm³/sec	1070	1260	1060	1330	1070	1260	1060	1300	1070	1260	1060	1330	1070	1260	1060	1330
Max Screw Speed	RPM	110	101	101	90	110	101	101	90	110	101	101	90	110	101	101	90
	RPM	110	101	101	90	110	101	101	90	110	101	101	90	110	101	101	90
Plasticizing Rate (GPPS)	oz/sec	5	6	6.7	7.5	5.3	5.9	6.7	7.5	5.3	5.9	6.7	7.5	5.3	5.9	6.7	7.5
	g/sec	147	164	164	150	147	164	164	150	147	164	164	150	147	164	164	150

GENERAL	*Core Volume Clamp Stop	gpm	38				38				38							
		L	144				144				144							
	*Core Volume On The Fly	gpm	38				38				38							
		L	144				144				144							
	Running Load @ 460V	amps																
		amps																
	Cooling Water Required	gal	28				28				28							
		L	105				105				105							
	Motor	HP	180				180				180							
		kw	135				135				135							
	Oil Reservoir Capacity	gal	555				430				845							
		l	2101				1600				3199							
	Shipping Weight (Est.)	Lbs	209,000		209,000		215,600		220,000		226,600		319,000		330,000		345,400	
		kg	95,000		95,000		98,000		100,000		103,000		145,000		150,000		157,000	
Dimensions (L x W x H)	ft	38.4x12x10.5		39.4x12x10.5		38.4x12x12		39.4x12x10.5		40x12x10.5		44x13x12		44.3x13x12		44x13x12		
	m	11.7x3.7x3.2		12x3.7x3.2		11.7x3.7x3.2		12x3.7x3.2		12.2x3.7x3.2		13.4x4x3.6		13.5x4x3.6		14.5x4x3.6		

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