

# Let Us Help You Make More

**SHIBAURA MACHINE COMPANY, AMERICA – Chicago Head Office**  
755 Greenleaf Avenue  
Elk Grove Village, IL 60007 USA  
**Ph: 888-593-1616**  
Email: [im-success@shibaura-machine.com](mailto:im-success@shibaura-machine.com)  
Sales, Service, Technical Center and Technical Support

**SHIBAURA MACHINE COMPANY, AMERICA – Los Angeles Office**  
1440 South Balboa Avenue  
Ontario, CA 91761 USA  
**Ph: 888-593-1616**  
Email: [im-success@shibaura-machine.com](mailto:im-success@shibaura-machine.com)  
Sales, Service, Technical Center and Technical Support

**SHIBAURA MACHINE COMPANY, AMERICA – Charlotte Office**  
8307 University Executive Park Drive  
Charlotte, NC 28262 USA  
**Ph: 888-593-1616**  
Email: [im-success@shibaura-machine.com](mailto:im-success@shibaura-machine.com)  
Sales, Service, Technical Center and Technical Support

**Shibaura Machine Company, Canada Ltd – Canada Office**  
6 Shields Court, Suite 101  
Markham, ON L3R 4S1 Canada  
**Ph: 888-593-1616**  
Email: [im-success@shibaura-machine.com](mailto:im-success@shibaura-machine.com)  
Sales, Service, Technical Center and Technical Support



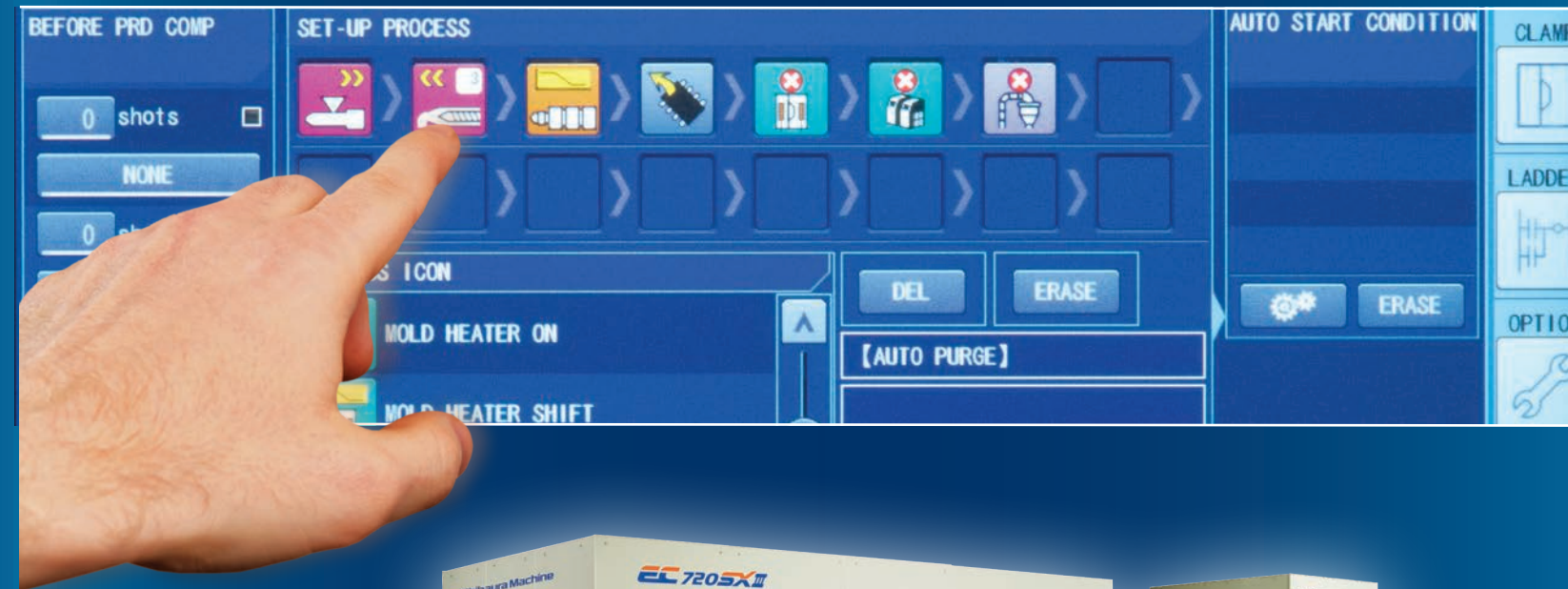
Flexible TMAC  
Financing Available

TM Acceptance Corp.

**Shibaura Machine**  
[www.Shibaura-Machine.com](http://www.Shibaura-Machine.com)

# Shibaura Machine

## Smart, Intuitive Precision At Your Fingertips



**ECSXIII All-Electric  
INJECTION MOLDING**

Watch the ECSXIII video.



Smart Electric Molding Solutions.

Smart Electric Molding Solutions.

U.S.A. Specifications - Catalog #ECSXIII 09-20

# The New ECSXIII



Smart and intuitive, the new, bigger, 19-inch high-resolution V70 touch-screen controller gives you more data and more resource at your fingertips.

If you have a Shibaura machine, programming is easy and familiar. If you are new to Shibaura, this new controller will make you wish you already had one.

The industry's best all-electric injection molding machine just got smarter. Introducing the new ECSXIII from Shibaura Machine. The first all-electric injection molding machine equipped with the V70, Shibaura's most powerful, intelligent, user-friendly controller ever.

With the ECSXIII, molders get a machine that delivers fast injection speeds and dry cycle times, ensures longer mold life and provides more uniform clamping force, for greater productivity, flexibility and versatility, job after job.

With the new V70, you get a controller designed with the smart factory in mind, one that's capable of integrating with auxiliary equipment via OPC-UA communication. Packed with new tools for speeding up mold set ups, optimizing cycle times, analyzing part defects, troubleshooting molding defects and more, giving you a faster payback on your machinery investment.

This all-in-one smart factory system is ideal for virtually any molding application, from automotive and aerospace, to packaging, medical and more.

# Tour the new V70 Controller



Molders who've used Shibaura's V-series controllers will be immediately comfortable with the new V70. Those new to the controller will find it easy to learn and even easier to use. With the V70, you get:

**19" High Resolution Touchscreen** – Twice the size of previous touchscreens, with touch/swipe functionality and greater visibility of data.

**True Split Screen Capability** – View two screens simultaneously and get the information you need to enhance machine operation and productivity.

**Auxiliary equipment integration** – The new V70 is capable of integrating with robots, hot runners, mold temperature controllers and other add-on equipment, providing operators with a single point of control for the entire molding process. (Additional programming required.)

**Clamp Customization** – New graphic interface allows you to drag and drop icons and create a custom clamp open and close sequence. Data is saved and confirmed at set up, resulting in fewer errors, less mold damage and increased productivity.

**Auto Shutdown** – You can also use the V70's graphic interface to drag and drop icons to create a custom sequence to automatically shut down the machine at the end of each production run, saving time and ensuring consistency.

**Onscreen PDF Library** – The new V70 gives you fast, onscreen access to the complete ECSXIII machine manual. You can also add other PDFs -- auxiliary equipment manuals, part quality



documentation, operating procedures – to create a digital library of technical data.

**Onscreen Analysis and Troubleshooting Tools** – New tools on the V70 include a cycle analysis screen with a graphic breakdown showing areas where time can be reduced.

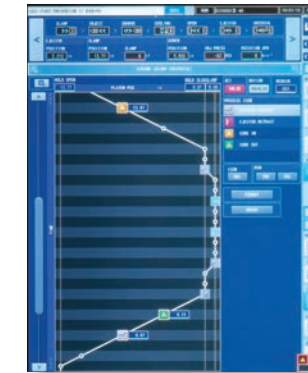
Also new is a Molding Support function providing solutions to common molding



History - Set, Alarm, Stop, Operation



PDF Manual On Board



Drag & Drop Clamp Sequence Setting



Molding & Setup Support



PDF Library



Cycle Time Analysis



Drag & Drop Auto-Shut Down Sequence



Monitor Molding Data

defects, plus troubleshooting tools like a Labeled I/O Checker and Interlock Display with real-time status of inputs, outputs and machine interlocks.

**Expanded capacity** – The new V70 saves monitoring data for the last 100,000 shots – 100 times more than previous controllers. Also expanded are machine alarm, set and stop history, with the V70 saving the last 1,000 of each. Compared to previous units, the new V70 also separates fill time from hold time.

**IPAQET Remote Access and More (Optional)** – Get remote access to the V70 anytime, anywhere with the iPAQET Data Management System. Also included are additional production monitoring, data collection and analysis tools.



I/O Checker & Machine Interlocks



Integrated Hot Runner Control & Robot

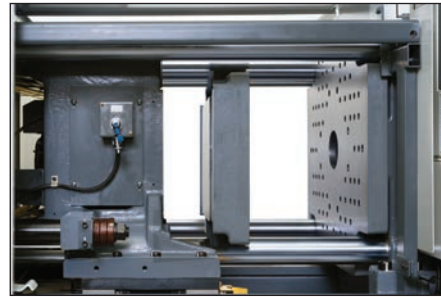
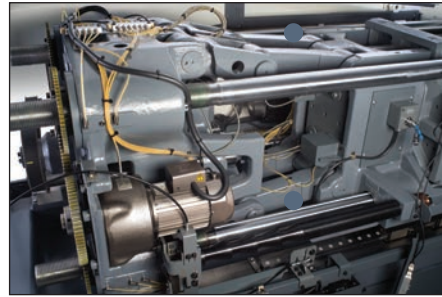
**Industry 4.0** – With its OPC-UA architecture supporting Euromap 63 and Euromap 77 communication, wide range of auto-correcting functions and more, the new V70 is the most powerful, flexible tool on the market for achieving your vision of Industry 4.0.

# Features & Benefits



Video

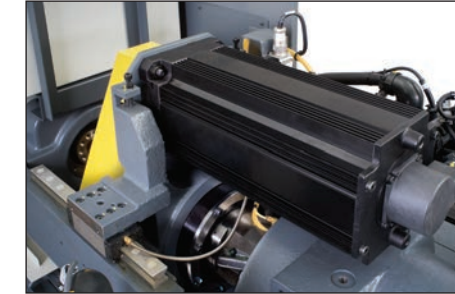
The ECSXIII's 5-point Link-line toggle mechanism is angled to distribute force evenly across the platen, increasing quality and minimizing defects. It has the added benefit of extending mold life and reducing machine maintenance.



On 30 - 390 ton units the two-piece removable platens can be changed out in 15 minutes giving you extraordinary flexibility. On larger units the moving platen is removable.



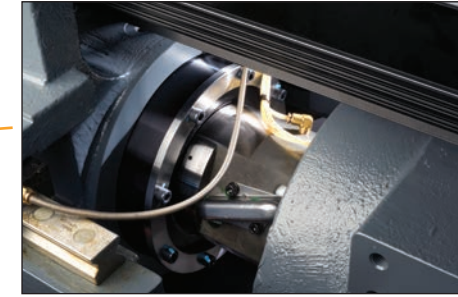
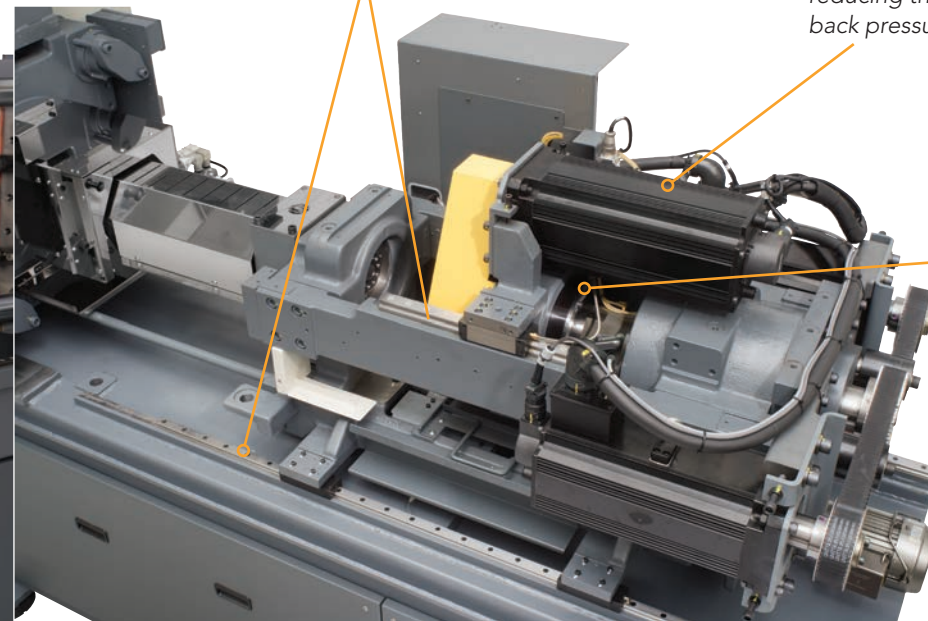
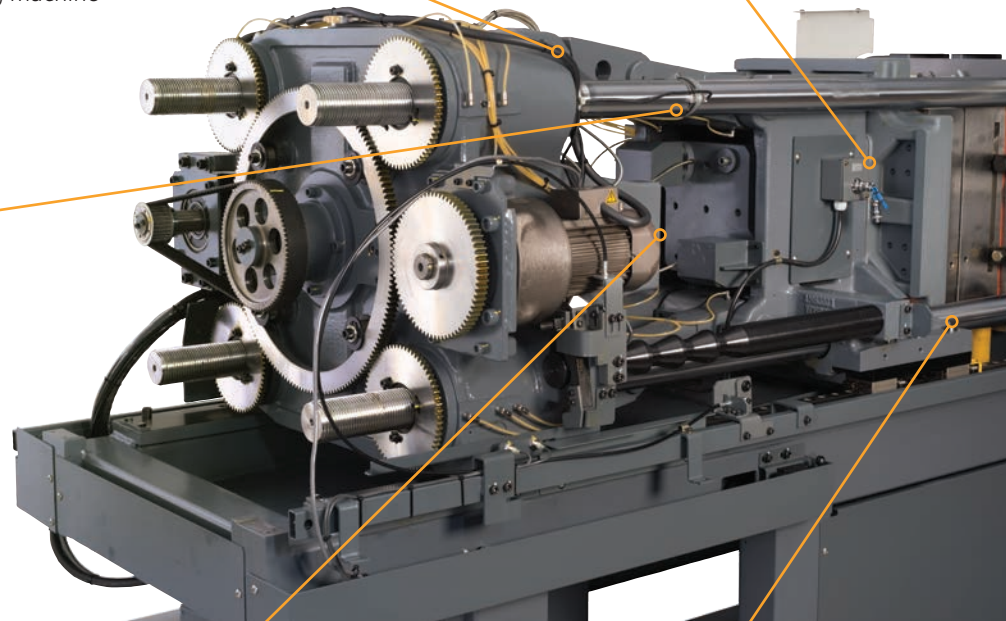
(S3) Simple, Steady, Smooth – Friction free drive system ensures more accurate injection speed and back pressure control, improving shot-to-shot repeatability throughout the processing cycle.



The heavy weight on the injection unit is supported on linear guides, greatly reducing the drag of injection and back pressure.



Strain gauge adjusts tonnage automatically and on the fly during the cycle. This ensures accurate tonnage at all times.



The ECSXIII uses an advance load cell which ensures accurate control of injection pressure. In combination with the V70 controller, this load cell achieves Scientific Molding over the balance of the mold without the use of internal transducers.



Ball screws are designed to push heavier loads, spreading the load across a much larger surface area than conventional ball screws.



With bushing-free, grease-free tie bars, there's less chance of contaminating molded parts, increasing your shop's quality.



Easy access to tie in the ejection plate to the press, for faster, easier mold changes.



You can now fit hydraulic power units directly under the ECSXIII, thanks to the machine's redesigned, space-saving frame (power units not included). Its streamlined design also allows easy access to electrical panels and components. (Note: 55-390 ton only.)

# Shorten Cycle Times with Simultaneous Motion – Standard on the ECSXIII

Simultaneous motion is standard on the new ECSXIII. Cycle times can be improved up to 30% with the combination of simultaneous motion and high speed movement.

## Eject on the fly

Eject parts as the clamp opens, dramatically improving cycle times. In most cases, the mold opens and closes without a pause for ejection.

## Lap sequence

Allows injecting as soon as the mold halves touch. Improves cycle time and venting of the tool.

## Clamp relax

The clamp immediately relaxes during cooling, taking more time off the cycle.

## Additional simultaneous sequences that shrink your cycle times

- Opening the mold while charging.
- Pulling the core in and out on the fly.

## Stress reduction

Coining, which allows the injection to start at lower tonnage and increase to full tonnage during injection, reduces internal stress on the parts.

## Repeatability at high speeds

Even at top speed, with multiple functions working seamlessly in tandem, there is no loss of precision or accuracy.



# Options for Greater Flexibility & Productivity



Integrated control panel up to 390 ton only. Box-style control panel on larger units.



Control on the V70 controller



## Built-in Mold Master Hot Runner

Minimize your footprint by integrating the control panel into the machine, or controlling the Mold Master Hot Runner on the V70 controller.

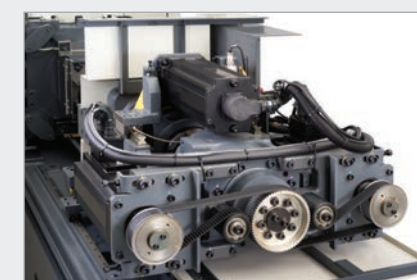
## Add secondary units seamlessly

Easily retrofit the two-shot Mold Master secondary injection unit to any ECSXIII. Use the stand-alone control for the greatest programming flexibility.



## Boost productivity with FIDS

With Shibaura's new FIDS (flexible injection downsize system), you can easily adapt ECSXIII machines down to shot sizes as small as 0.43 oz. (Engineering review required.)



## Speed up injection

Optional twin motors are available to boost the ECSXIII's injection speed up to 500 mm/sec. (Note: i17 injection unit and below.)



## Robot-ready

Installing a 6-axis robot on top of the ECSXIII's stationary platen saves floor space and adds greater flexibility. (Robots sold separately.)

## Optional Shibaura Machine IPAQET3 Remote Monitoring Management Software

As an option, molders can upgrade to the full version of iPAQET, a powerful data management platform enabling you to monitor up to 100 molding machines from

any location in real-time. iPAQET also provides you with production monitoring, data collection and analysis, machine operation status, resin lot monitoring and more.











ECSXII/ECSXIII Specifications

ITEM	UNIT	EC500SXIII									
		Clamp Force	tf	450							
	US Ton	496									
Tie Bar Distance	H x V	mm	870 x 810								
	H x V	in	34.2 x 31.8								
Platen Dimension	H x V	mm	1230 x 1160								
	H x V	in	48.4 x 45.7								
Clamp Stroke		mm	800								
		in	31.5								
Maximum Daylight		mm	1800								
		in	70.9								
Mold Height	Min. - Max	mm	350 - 1000								
	Min. - Max	in	13.8 - 39.4								
Ejector Force		tf	13.0								
		US Ton	14.3								
Ejector Stroke		mm	180								
		in	7.1								

ITEM	UNIT	i17			i26			i36			
		Barrel Code		Y	AT	B	Y	AT	B	Y	AT
Screw Diameter	mm	50	60	70	60	70	80	70	80	90	
	in	1.97	2.36	2.76	2.36	2.76	3.15	2.76	3.15	3.54	
Injection Capacity	cm³	589	848	1155	990	1340	1750	1440	1880	2380	
	in³	35.9	51.8	70.5	60.4	82.2	107.4	87.9	115.3	145.7	
Shot Volume	PS	g	542	780	1063	910	1230	1610	1320	1730	2190
		oz	19.1	27.5	37.5	31.9	43.4	56.8	46.5	61.0	77.3
	PE	g	430	619	843	720	980	1280	1040	1370	1740
		oz	15.2	21.8	29.7	25.4	34.6	45.2	36.7	48.3	61.4
Maximum Injection Pressure	MPa	288	200	147	258	190	145	237	190	150	
	PSI	41700	29000	21300	37400	27500	21000	34300	27600	21800	
Maximum Holding Pressure	MPa	288	200	147	217	160	122	199	160	126	
	PSI	41700	29000	21300	31400	23200	17600	28800	23200	18300	
Injection Velocity	STD	mm/s	160			160			140		
		in/s	6.3			6.3			5.5		
Injection Rate	STD	cm³/s	314	452	616	452	615	804	537	704	891
		in³/s	19.2	27.6	37.6	27.6	37.5	49.1	32.8	43.0	54.4
Injection Velocity	HIGH	mm/s	300			-			-		
		in/s	11.8			-			-		
Injection Rate	HIGH	cm³/s	589	848	1155	-	-	-	-	-	-
		in³/s	35.9	51.7	70.5	-	-	-	-	-	-
Plasticizing Capacity	STD	g/sec	44.4	63.9	75.0	61.2	72.2	94.4	72.2	94.4	111.1
		oz/sec	1.57	2.25	2.65	2.16	2.55	3.33	2.54	3.33	3.92
	HIGH	g/sec	-	52.8	64.6	-	47.2	63.9	-	61.1	77.8
		oz/sec	-	1.86	2.28	-	1.67	2.25	-	2.16	2.74
Screw Speed	STD	rpm	255	220	180	210	180	170	180	170	150
	HIGHTORQUE	rpm	-	180	155	-	120	120	-	115	115
Screw Torque	STD	N•m	1421	2360	2360	2580	2580	2580	3310	3310	3310
		lbf•ft	1048	1746	1746	1900	1900	1900	2440	2440	2440
	HIGHTORQUE	N•m	-	2900	2900	-	3310	3310	-	4610	4610
		lbf•ft	-	2139	2139	-	2440	2440	-	3400	3400
Nozzle Touch Force		kN	29.4			44.1			58.8		
		US Ton	3.3			5.0			6.6		

Note: 1) Due to continuous improvements, specifications are subject to change without notice. 2) Shot weight and Plasticizing capacity vary according to the materials and/or the molding conditions. 3) Max. Injection Pressure and Max. Holding Pressure are power of injection unit, not resin pressure. Max. Injection Pressure and Max. Holding Pressure are limited according to molding conditions. 4) Min. mold dimensions are 12.8in(H) x 11.8in(V), 325mm(H) x 300mm(V). In case of Max. Clamping Force, do not mount smaller mold than described above. 5) High screw torque may be necessary depending on the type of resin and running condition. Please consult us for more details. 6) Values of Apparent Power, Main Breaker Capacities and Heater Power differ when optional equipment is attached.

ECSXIII Specifications

ITEM	UNIT	EC610SXIII									
		Clamp Force	tf	550							
	US Ton	606									
Tie Bar Distance	H x V	mm	970 x 910								
	H x V	in	38.1 x 35.8								
Platen Dimension	H x V	mm	1365 x 1300								
	H x V	in	53.7 x 51.2								
Clamp Stroke		mm	900								
		in	35.4								
Maximum Daylight		mm	1900								
		in	74.8								
Mold Height	Min. - Max	mm	400 - 1000								
	Min. - Max	in	15.7 - 39.4								
Ejector Force		tf	13.0								
		US Ton	14.3								
Ejector Stroke		mm	180								
		in	7.1								

ITEM	UNIT	i17			i26			i36			
		Barrel Code		Y	AT	B	Y	AT	B	Y	AT
Screw Diameter	mm	50	60	70	60	70	80	70	80	90	
	in	1.97	2.36	2.76	2.36	2.76	3.15	2.76	3.15	3.54	
Injection Capacity	cm³	589	848	1155	990	1340	1750	1440	1880	2380	
	in³	35.9	51.8	70.5	60.4	82.2	107.4	87.9	115.3	145.7	
Shot Volume	PS	g	542	780	1063	910	1230	1610	1320	1730	2190
		oz	19.1	27.5	37.5	31.9	43.4	56.8	46.5	61.0	77.3
	PE	g	430	619	843	720	980	1280	1040	1370	1740
		oz	15.2	21.8	29.7	25.4	34.6	45.2	36.7	48.3	61.4
Maximum Injection Pressure	MPa	288	200	147	258	190	145	237	190	150	
	PSI	41700	29000	21300	37400	27500	21000	34300	27600	21800	
Maximum Holding Pressure	MPa	288	200	147	217	160	122	199	160	126	
	PSI	41700	29000	21300	31400	23200	17600	28800	23200	18300	
Injection Velocity	STD	mm/s	160			160			140		
		in/s	6.3			6.3			5.5		
Injection Rate	STD	cm³/s	314	452	616	452	615	804	537	704	891
		in³/s	19.2	27.6	37.6	27.6	37.5	49.1	32.8	43.0	54.4
Injection Velocity	HIGH	mm/s	300			-			-		
		in/s	11.8			-			-		
Injection Rate	HIGH	cm³/s	589	848	1155	-	-	-	-	-	-
		in³/s	35.9	51.7	70.5	-	-	-	-	-	-
Plasticizing Capacity	STD	g/sec	44.4	63.9	75.0	61.2	72.2	94.4	72.2	94.4	111.1
		oz/sec	1.57	2.25	2.65	2.16	2.55	3.33	2.54	3.33	3.92
	HIGH	g/sec	-	52.8	64.6	-	47.2	63.9	-	61.1	77.8
		oz/sec	-	1.86	2.28	-	1.67	2.25	-	2.16	2.74
Screw Speed	STD	rpm	255	220	180	210	180	170	180	170	150
	HIGHTORQUE	rpm	-	180	155	-	120	120	-	115	115
Screw Torque	STD	N•m	1421	2360	2360	2580	2580	2580	3310	3310	3310
		lbf•ft	1048	1746	1746	1900	1900	1900	2440	2440	2440
	HIGHTORQUE	N•m	-	2900	2900	-	3310	3310	-	4610	4610
		lbf•ft	-	2139	2139	-	2440	2440	-	3400	3400
Nozzle Touch Force		kN	29.4			44.1			58.8		
		US Ton	3.3			5.0			6.6		

Note: 1) Due to continuous improvements, specifications are subject to change without notice. 2) Shot weight and Plasticizing capacity vary according to the materials and/or the molding conditions. 3) Max. Injection Pressure and Max. Holding Pressure are power of injection unit, not resin pressure. Max. Injection Pressure and Max. Holding Pressure are limited according to molding conditions. 4) Min. mold dimensions are 12.8in(H) x 11.8in(V), 325mm(H) x 300mm(V). In case of Max. Clamping Force, do not mount smaller mold than described above. 5) High screw torque may be necessary depending on the type of resin and running condition. Please consult us for more details. 6) Values of Apparent Power, Main Breaker Capacities and Heater Power differ when optional equipment is attached.

ITEM		UNIT	EC720SXIII				EC950SXIII				EC1100SXIII			
Clamp force		tf	650				850				1000			
		USTon	717				937				1102			
Tie bar distance	H x V	mm	1060 x 960				1320 x 1320				1300 x 1300			
	H x V	in	41.7 x 37.8				51.9 x 51.9				51.1 x 51.1			
Platen dimension	H x V	mm	1500 x 1400				1790 x 1790				1790 x 1790			
	H x V	in	59.0 x 55.1				70.4 x 70.4				70.4 x 70.4			
Clamp Stroke		mm	1000				1200				1200			
		in	39.4				47.2				47.2			
Maximum daylight		mm	2050				2300				2300			
		in	80.7				90.6				90.6			
Mold Height	Min.xMax	mm	450 - 1050				500 - 1100				500 - 1100			
	Min.xMax	in	17.7 - 41.3				19.7 - 43.3				19.7 - 43.3			
Ejector force		tf	18				18.0				18.0			
		USTon	19.8				19.8				19.8			
Ejector Stroke		mm	200				200				200			
		in	7.9				7.9				7.9			

Injection Unit		i61		i78		i61		i78		i61		i78		i120		
Barrel code		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	115	125	
	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	4.52	4.92	
Injection Capacity	cm³	3150	3850	4320	5650	3150	3850	4320	5650	3150	3850	4320	5650	6560	7750	
	in³	192	235	264	345	192	235	264	345	192	235	264	345	401	474	
Shot Volume	PS	g	2900	3540	3980	5200	2900	3540	3980	5200	2900	3540	3980	5200	6040	7130
		oz	102.3	124.9	140.4	183.4	102.3	124.9	140.4	183.4	102.3	124.9	140.4	183.4	213.1	251.5
	PE	g	2300	2810	3160	4120	2300	2810	3160	4120	2300	2810	3160	4120	4790	5660
		oz	81.1	99.1	111.5	145.3	81.1	99.1	111.5	145.3	81.1	99.1	111.5	145.3	169.0	199.7
Maximum Injection Pressure	MPa	180	147	180	138	180	147	180	138	180	147	180	138	180	152	
	PSI	26100	21300	26100	20000	26100	21300	26100	20000	26100	21300	26100	20000	26100	22000	
Maximum Holding Pressure	MPa	150	123	150	115	150	123	150	115	150	123	150	115	150	127	
	PSI	21800	17800	21800	16700	21800	17800	21800	16700	21800	17800	21800	16700	21700	18400	
Injection Velocity	STD	mm/s	150		150		150		150		150		140			
		in/s	5.9		5.9		5.9		5.9		5.9		5.5			
Injection Rate	STD	cm³/s	1063	1299	1299	1696	1063	1299	1299	1696	1063	1299	1299	1696	1450	1710
		in³/s	64.9	79.3	79.3	103.5	64.9	79.3	79.3	103.5	64.9	79.3	79.3	103.5	88.5	104.3
Plasticizing capacity (PS)	STD	g/sec	116.7	136	136.1	161	117	136	136	161	116.7	136.1	136.1	161.1	144.4	161.1
		oz/sec	4.11	4.80	4.80	5.68	4.11	4.80	4.80	5.68	4.11	4.80	4.80	5.68	5.09	5.68
	HIGH TORQUE	g/sec	80.6	103	75.0	103	80.6	103	75.0	103	80.6	102.8	75.0	102.8	102.8	122.2
		oz/sec	2.84	3.62	2.65	3.62	2.84	3.62	2.65	3.62	2.84	3.62	2.65	3.62	3.62	4.31
Screw speed	STD	rpm	140	127	127	110	140	127	127	110	140	127	127	110	110	101
		rpm	95	95	71	71	95	95	71	71	95	95	71	71	78	78
Screw torque	STD	Nm	5500	5500	7090	7090	5500	5500	7090	7090	5500	5500	7090	7090	9150	9150
		ft-lbf	4050	4050	5220	5220	4050	4050	5220	5220	4050	4050	5220	5220	6740	6740
	HIGH TORQUE	Nm	7090	7090	10300	10300	7090	7090	10300	10300	7090	7090	10300	10300	13700	13700
		ft-lbf	5220	5220	7590	7590	5220	5220	7590	7590	5220	5220	7590	7590	10100	10100
Nozzle touch force	kN	58.8		58.8		58.8		58.8		58.8		58.8		92.4		
	USTon	6.6		6.6		6.6		6.6		6.6		6.6		10.4		

Main Breaker Capacity	A	300	350	300	350	300	350	400
Electric Capacity	kVa	121	147	121	147	121	147	166
Heater Capacity	kW	44.4	57.2	44.4	57.2	44.4	57.2	69.4
Machine Dimensions L x W x H	m	9.7 x 2.5 x 2.6	10.3 x 2.5 x 2.7	10.6 x 2.9 x 2.7	10.9 x 2.9 x 2.8	10.6 x 2.9 x 2.7	10.9 x 2.9 x 2.8	11.7 x 2.9 x 2.9
	ft	31.8 x 8.2 x 8.6	33.5 x 8.2 x 8.7	34.8 x 9.5 x 8.9	35.8 x 9.5 x 9.2	34.8 x 9.5 x 8.9	35.8 x 9.5 x 9.2	38.4 x 9.5 x 9.5
Machine Weight	t	40.0	41.5	53.5	55.0	55.0	57.0	67.0
	US Ton	44.1	45.7	59.0	60.6	60.6	62.8	73.9

Note: 1) Due to continuous improvements, specifications are subject to change without notice. 2) Shot weight and Plasticizing capacity vary according to the materials and/or the molding conditions. 3) Max. Injection Pressure and Max. Holding Pressure are power of injection unit, not resin pressure. Max. Injection Pressure and Max. Holding Pressure are limited according to molding conditions. 4) Min. mold dimensions are 12.8in(H) x 11.8in(V), 325mm(H) x 300mm(V). In case of Max. Clamping Force, do not mount smaller mold than described above. 5) High screw torque may be necessary depending on the type of resin and running condition. Please consult us for more details. 6) Values of Apparent Power, Main Breaker Capacities and Heater Power differ when optional equipment is attached.

ITEM		UNIT	EC1450SXIII				EC1950SXIII				EC2750SXIII	
Clamp force		tf	1300				1800				2500	
		USTon	1433				1984				2750	
Tie bar distance	H x V	mm	1400 x 1400				1850 x 1660				2120 x 1820	
	H x V	in	55.1 x 55.1				72.8 x 65.4				83.4 x 71.6	
Platen dimension	H x V	mm	2000 x 2000				2600 x 2350				3000 x 2350	
	H x V	in	78.7 x 78.7				102.4 x 92.5				118.1 x 92.5	
Clamp Stroke		mm	1500				1700				1800	
		in	59.0				66.9				70.8	
Maximum daylight		mm	2800				3200				3500	
		in	110.2				126.0				137.7	
Mold Height	Min.xMax	mm	650 - 1300				800 - 1500				800 - 1700	
	Min.xMax	in	25.6 - 51.2				31.5 - 59.1				31.5 - 66.9	
Ejector force		tf	28.5				44.0				44.0	
		USTon	31.4				48.5				48.5	
Ejector Stroke		mm	250				300				350	
		in	9.8				11.8				13.7	

Injection Unit		i120		i155		i120		i155		i215		
Barrel code		AT	B	A	B	AT	B	A	B	A	AM	
Screw Diameter	mm	115	125	125	140	115	125	125	140	140		
	in	4.52	4.92	4.92	5.51	4.52	4.92	4.92	5.51	5.51		
Injection Capacity	cm³	6560	7750	8430	10570	6560	7750	8430	10570	11840		
	in³	401	474	515	645	401	474	515	645	722.5		
Shot Volume	PS	g	6040	7130	7750	9730	6040	7130	7750	9730	10890	
		oz	213	252	273.5	343.2	213	252	273.5	343.2	384	
	PE	g	4790	5660	6150	7720	4790	5660	6150	7720	8640	
		oz	169	200	216.9	272.3	169	200	216.9	272.3	304	
Maximum Injection Pressure	MPa	180	152	180	143	180	152	180	143	180		
	PSI	26100	22000	26100	20700	26100	22000	26100	20700	26100		
Maximum Holding Pressure	MPa	150	127	150	119	150	127	150	119	150		
	PSI	21700	18400	21700	17200	21700	18400	21700	17200	21700		
Injection Velocity	STD	mm/s	140		135		140		135		130	
		in/s	5.5		5.3		5.5		5.3		5.1	
Injection Rate	STD	cm³/s	1450	1710	1650	2070	1450	1710	1650	2070	2000	
		in³/s	88.5	104	101	126	88.5	104	101	126	122	
Plasticizing capacity (PS)	STD	g/sec	144	161	164	192	144	161	164	192	192	-
		oz/sec	5.09	5.68	5.78	6.75	5.09	5.68	5.78	6.75	6.76	-
	HIGH TORQUE	g/sec	103	122	-	-	103	122	-	-	-	-
		oz/sec	3.62	4.31	-	-	3.62	4.31	-	-	-	-
HIGH PLASTICIZATION	g/sec	-	-	178	222	-	-	178	222	208	250	
	oz/sec	-	-	6.27	7.83	-	-	6.27	7.83	7.35	8.82	
Screw speed	STD	rpm	110	90	101	90	110	101	101	90	90	-
		rpm	78	78	-	-	78	78	-	-	-	-
	HIGH PLASTICIZATION	rpm	-	-	127	114	-	-	127	114	-	114
		rpm	-	-	127	114	-	-	127	114	-	114
Screw torque	STD	Nm	9150	9150	14500	14500	9150	9150	14500	14500	15900	-
		ft-lbf	6750	6750	10690	10690	6750	6750	10690	10690	11720	-
	HIGH TORQUE	Nm	13700	13700	-	-	13700	13700	-	-	-	-
		ft-lbf	10100	10100	-	-	10100	10100	-	-	-	-
HIGH PLASTICIZATION (PP + TALC)	Nm	-	-	9260	11430	-	-	9260	11430	-	12700	
	ft-lbf	-	-	6830	8430	-	-	6830	8430	-	9360	
Nozzle touch force	kN	92.4				92.4				142		
	USTon	10.4				10.4				15.9		

Main Breaker Capacity	A	400	500	500	500	700	
Electric Capacity	kVa	166	185	200	210	275	
Heater Capacity	kW	67.9	67.9	82.6	67.9	85	125
Machine Dimensions L x W x H	m	12.8 x 3.2 x 3.2	13.4 x 3.2 x 3.4	13.8 x 3.8 x 3.5	13.9 x 3.8 x 3.5	14.3 x 3.8 x 3.5	16.3 x 4.6 x 4.0
	ft	41.7 x 10.3 x 10.4	42.9 x 10.5 x 11.2	45.1 x 12.5 x 11.6	45.7 x 12.5 x 11.6		

# Standard Features

## Injection

- ▶ 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
- ▶ ECSXIII 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
- ▶ Quick change heater disconnects



Quick change heater disconnects

## Clamp

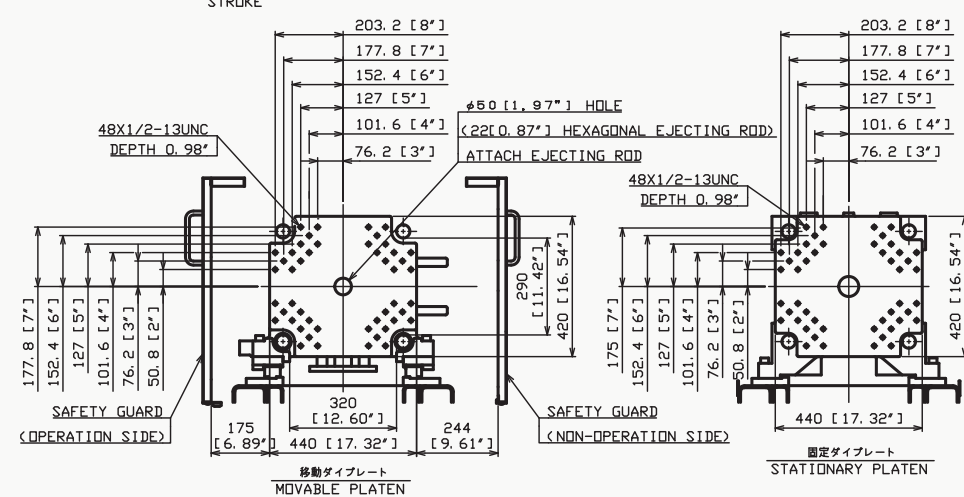
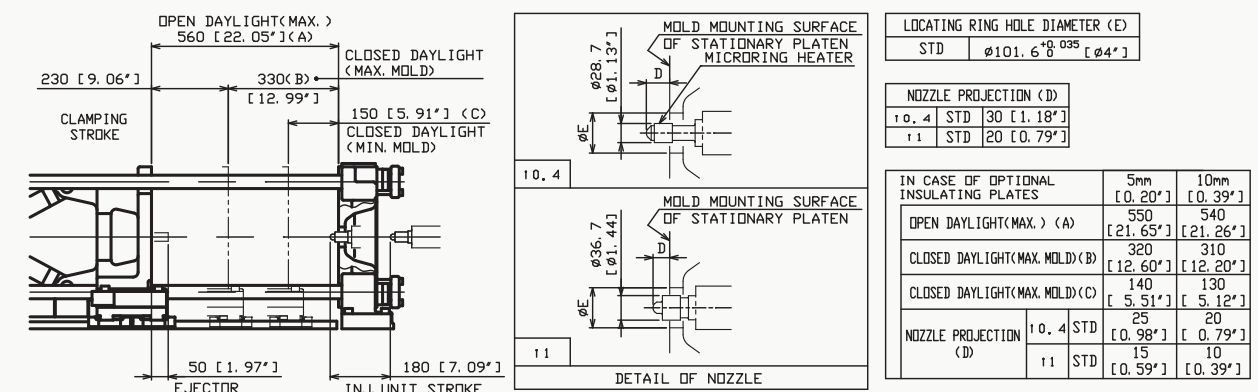
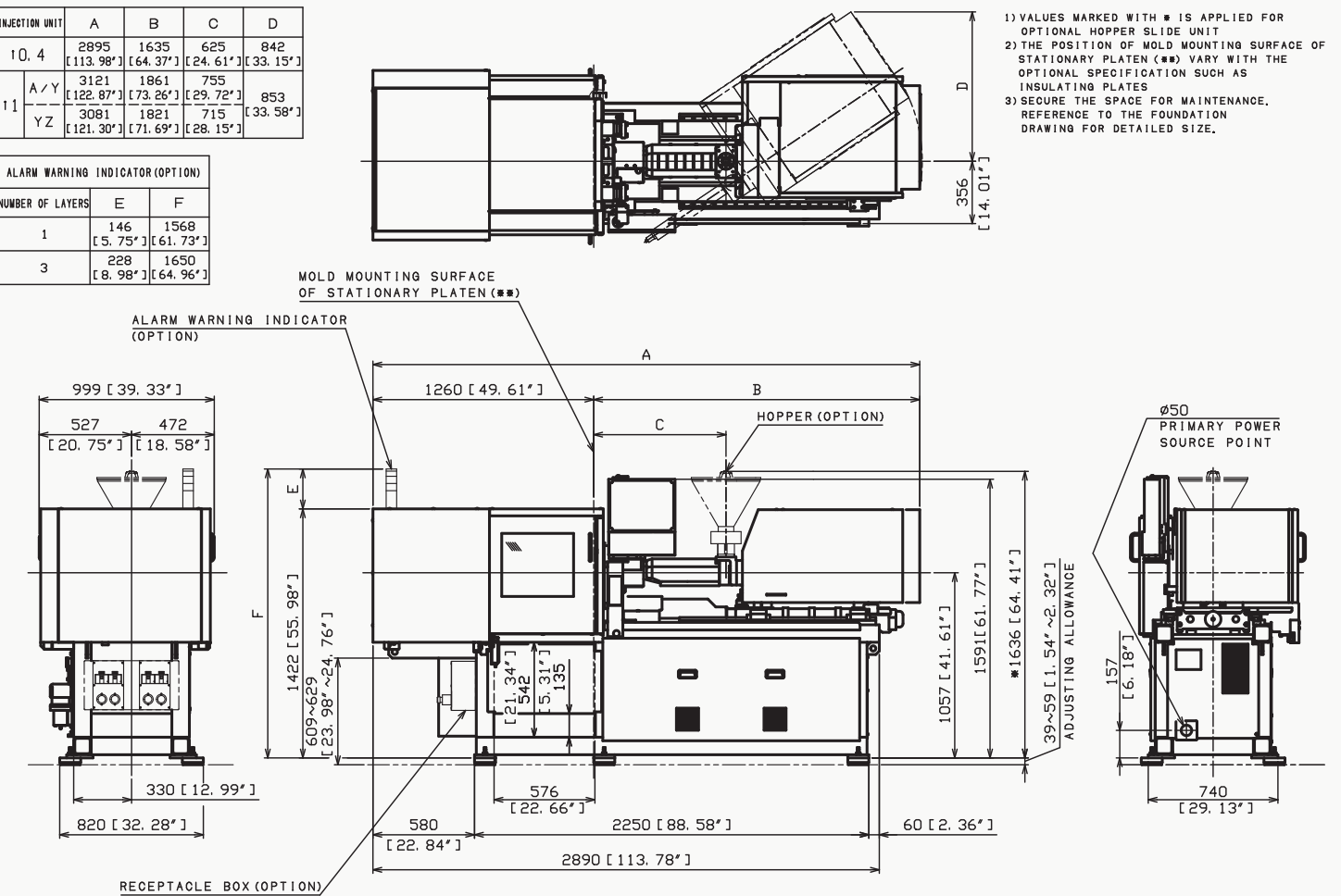
- ▶ Link-line toggle unit
- ▶ Double rigid body platen
- ▶ Mold platen
- ▶ Locating hold
- ▶ Movable platen supporting device
- ▶ Mechanical safety device
- ▶ Interface for dual hydraulic core pulls standard
- ▶ Holes tapped for installation of take-out robot
- ▶ Ejection servo motor with brake
- ▶ Mold open while charging (simultaneous motion)
- ▶ Automatic lubricator
- ▶ Dynamic acceleration/deceleration control
- ▶ DST-Press control
- ▶ 3-step high-speed programmed control
- ▶ Prestrol/Injection Compression software is standard, but additional hardware may be required. Contact factory for details.
- ▶ 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
- ▶ 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
- ▶ Triple core pull interface - 2-hyd. core X 1-Pneumatic (Timer only)
- ▶ Single valve gate
- ▶ Double air blow
- ▶ Dry cycle mode

## Controller

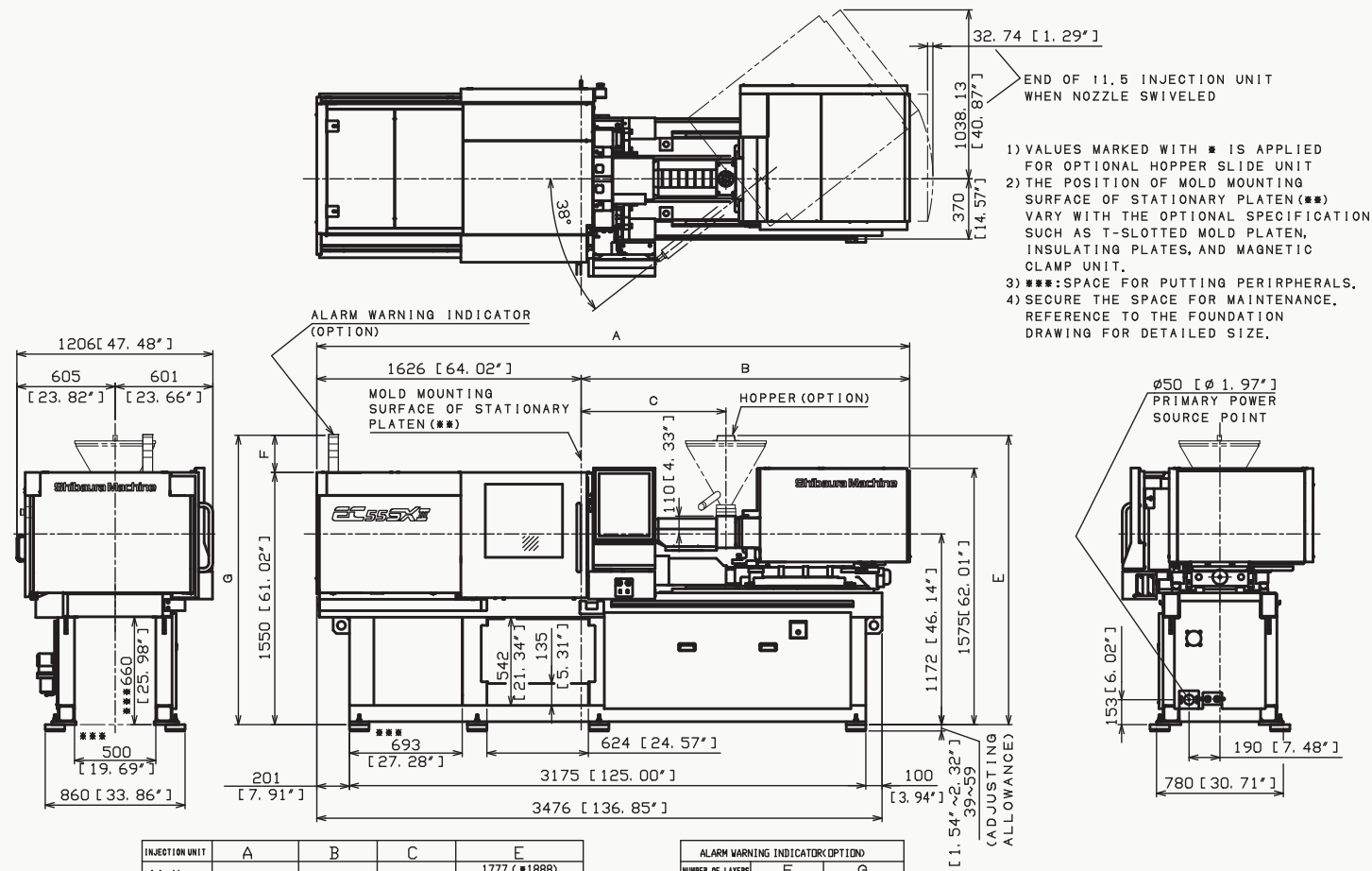
- ▶ Six programmable outputs standard
- ▶ Step switch/ten key input
- ▶ Setting data memory for 300 sets of molds
- ▶ SPI robot interface (50 pin/Euromap 67)
- ▶ Digital display
- ▶ Graphic display
- ▶ Profile display/storing/measure functions
- ▶ Quality monitoring
- ▶ Diagnostic function
- ▶ Operation 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

INJECTION UNIT	A	B	C	D
10.4	2895 [113.98"]	1635 [64.37"]	625 [24.61"]	842 [33.15"]
11	A/Y	3121 [122.87"]	1861 [73.26"]	755 [29.72"]
	YZ	3081 [121.30"]	1821 [71.69"]	715 [28.15"]

ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	E	F
1	146 [5.75"]	1568 [61.73"]
3	228 [8.98"]	1650 [64.96"]



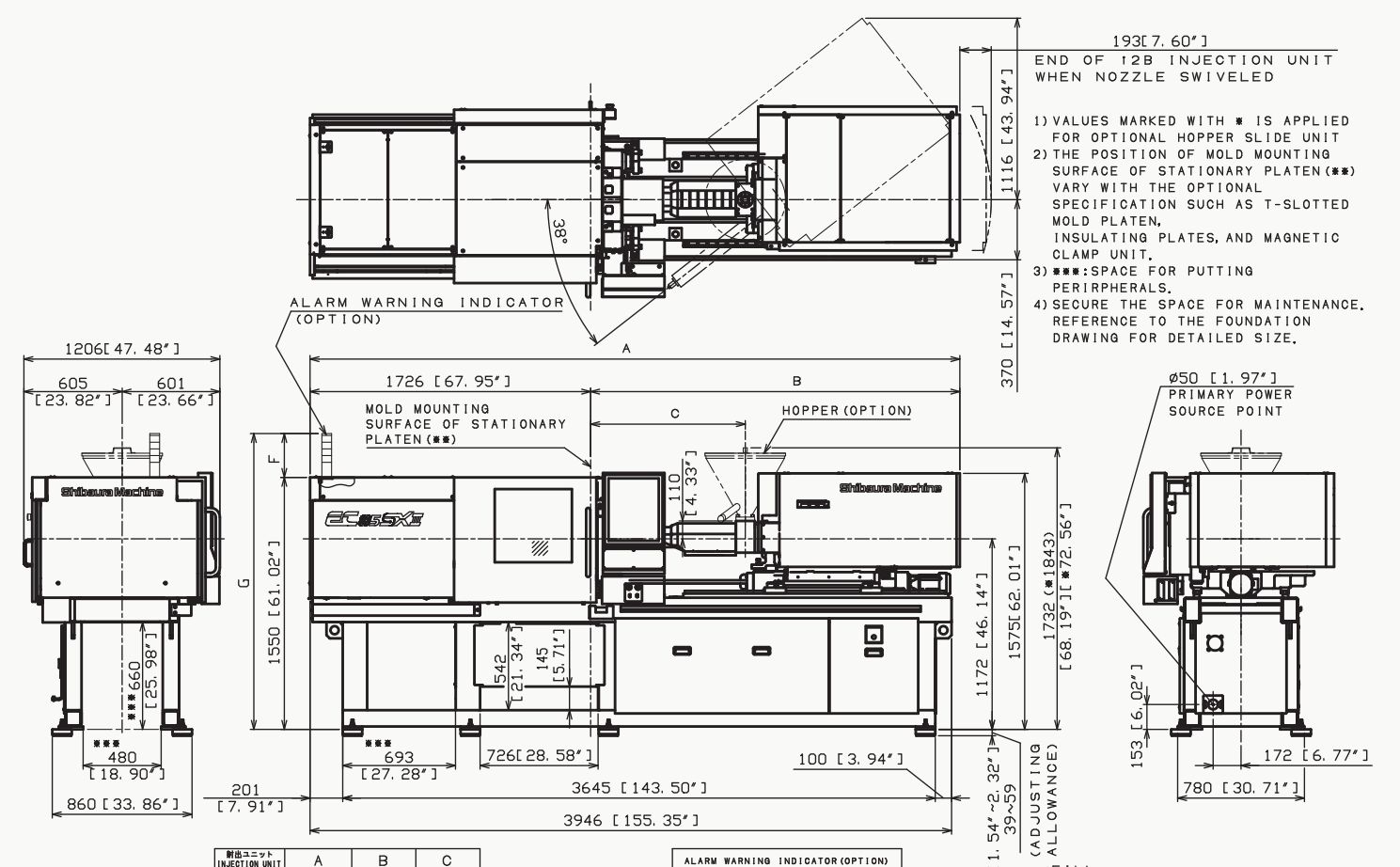
# EC55SXIII



INJECTION UNIT	A	B	C	E
1A, Y	3646 [143.55']	2020 [79.53']	890 [35.04']	1777 [69.96'] (#1888) [74.33']
1YZ	3606 [141.97']	1980 [77.95']	850 [33.46']	1777 [69.96'] (#1888) [74.33']
1, 5A, Y	3817 [150.28']	2191 [86.26']	951 [37.44']	1732 [68.1843'] (#1843) [72.56']

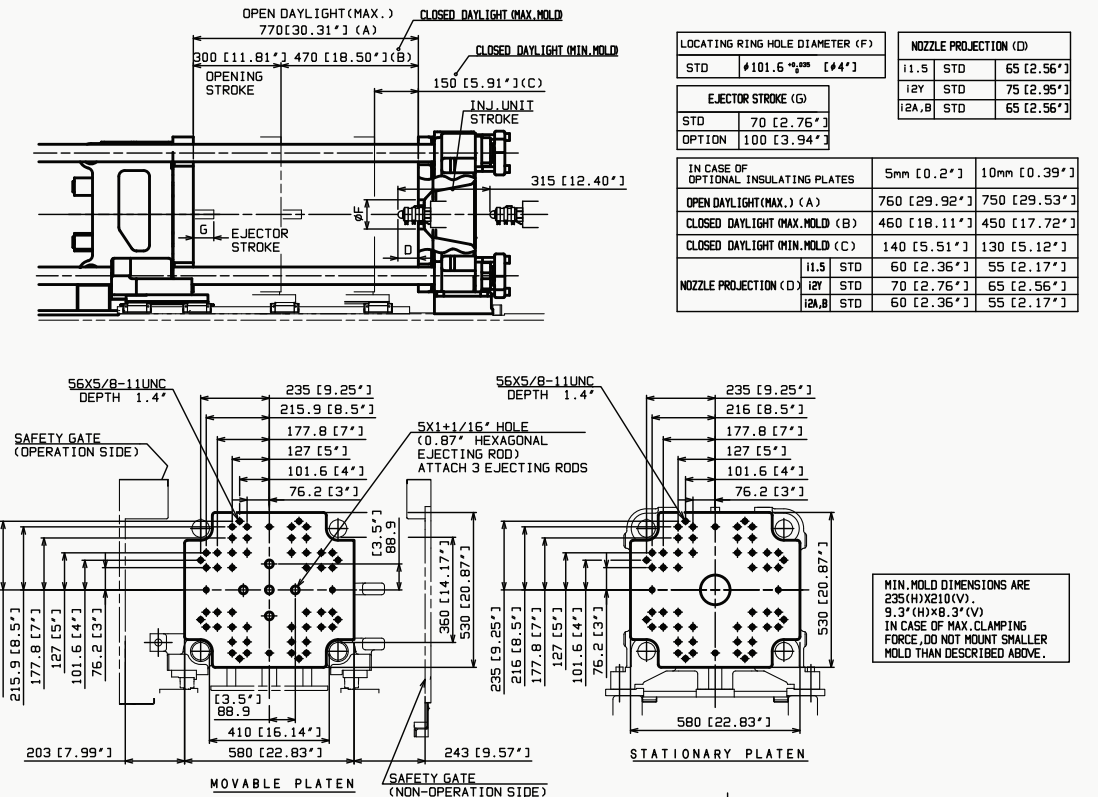
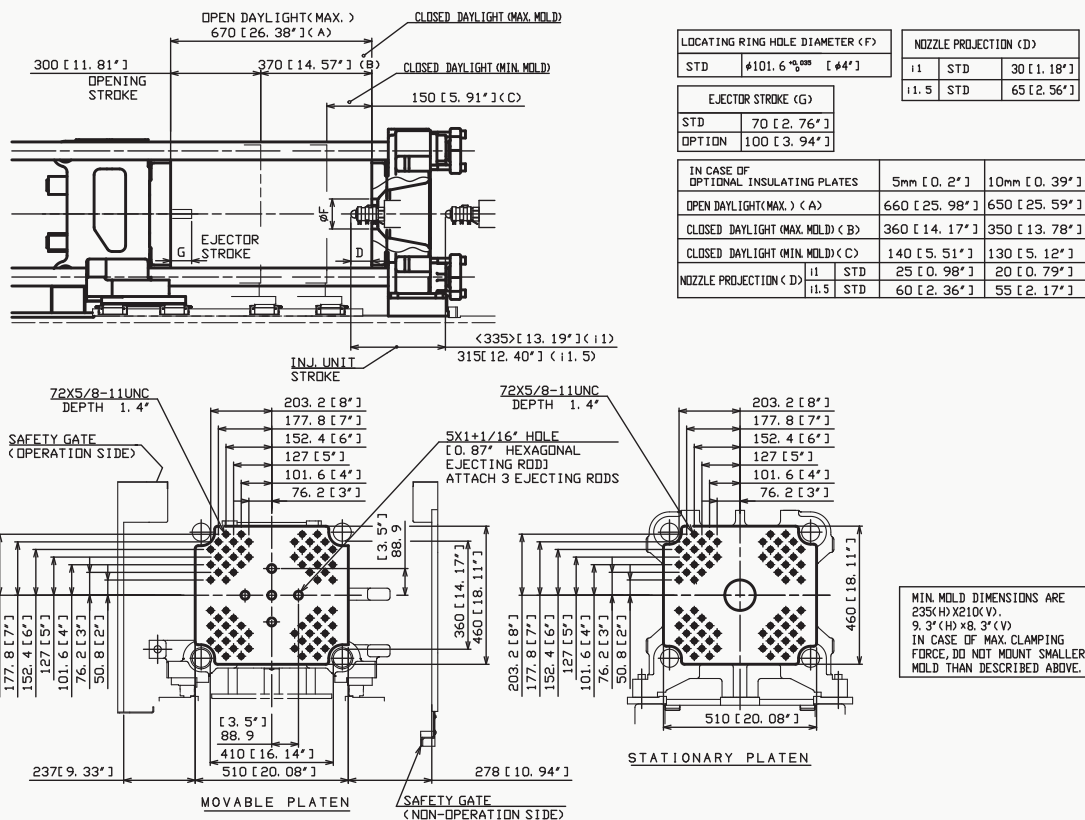
ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	F	G
1	146 [5.75']	1696 [66.77']
2	187 [7.36']	1737 [68.38']
3	228 [8.98']	1778 [70.00']
4	269 [10.59']	1819 [71.61']

# EC85SXIII



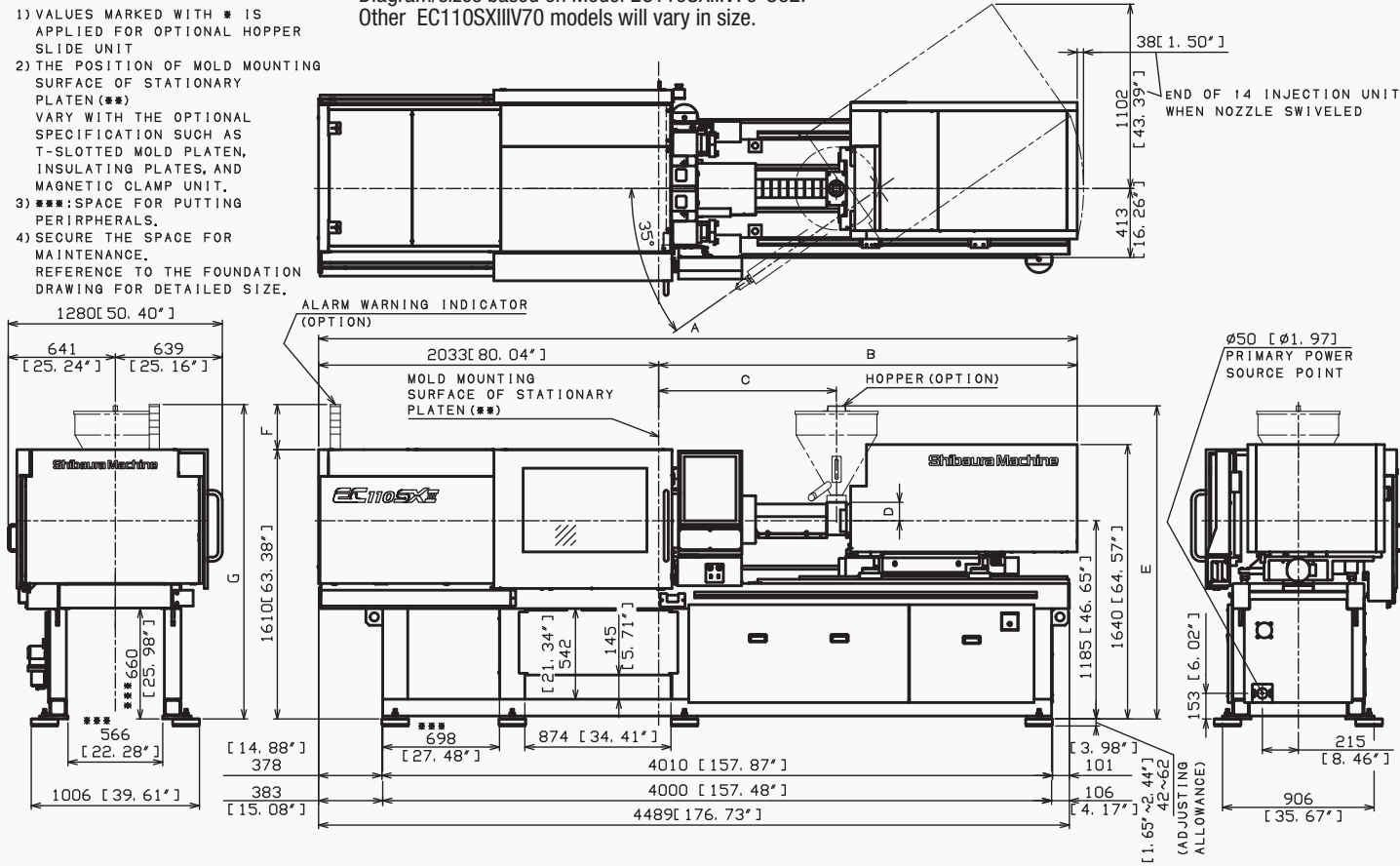
■ ■ ■ : SPACE FOR PUTTING PERIPHERALS			
INJECTION UNIT	A	B	C
1, 5A, Y	3997 [157.36']	2271 [89.41']	951 [37.44']
2A	4079 [160.59']	2353 [92.64']	1033 [40.67']
2B	4159 [163.74']	2433 [95.79']	1113 [43.82']

ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	F	G
1	146 [5.75']	1696 [66.77']
2	187 [7.36']	1737 [68.38']
3	228 [8.98']	1778 [70.00']
4	269 [10.59']	1819 [71.61']



# EC110SXIII

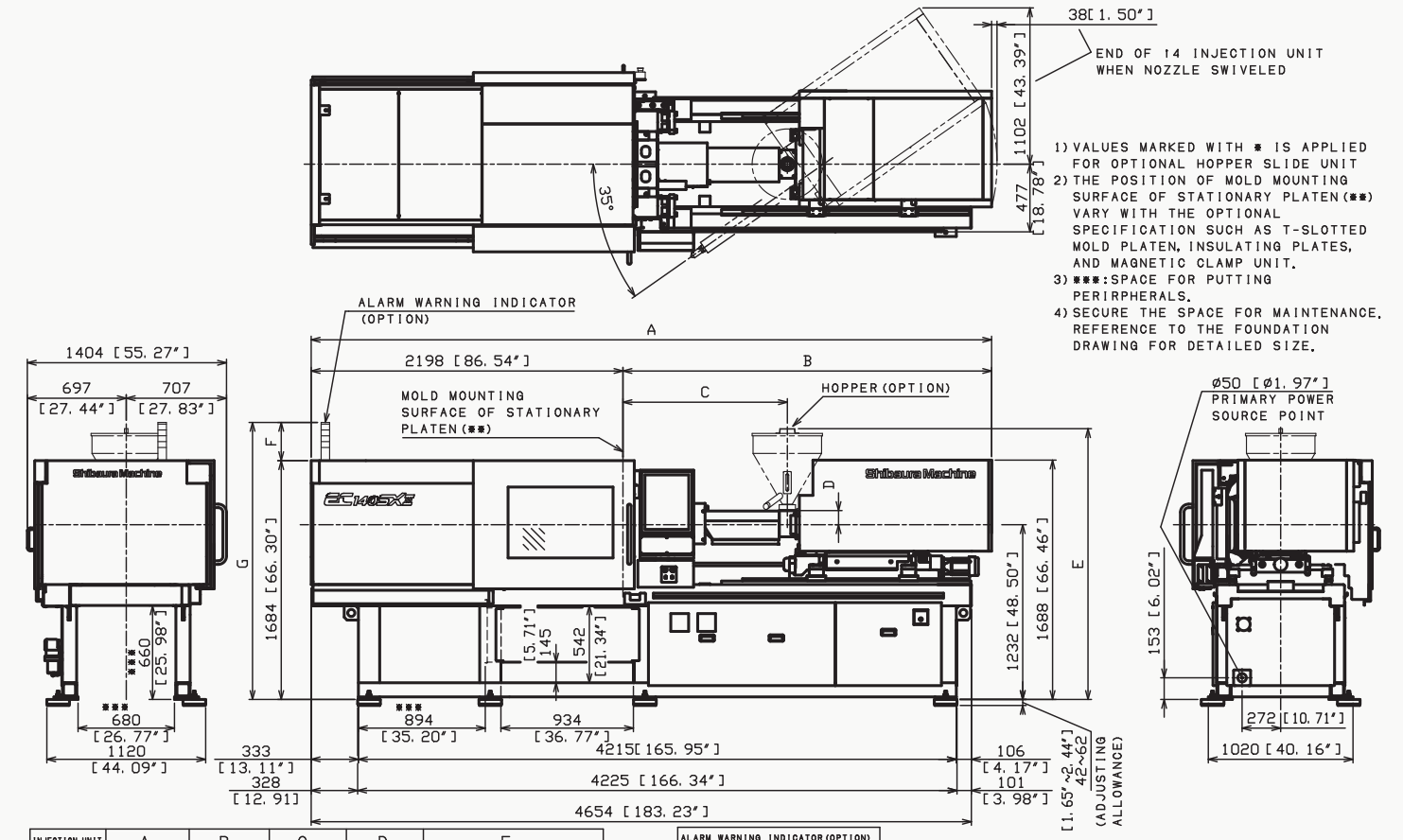
Diagram/sizes based on Model EC110SXIII70-U32.  
Other EC110SXIII70 models will vary in size.



INJECTION UNIT	A	B	C	D	E
2A, Y	4536 [178.58"]	2503 [98.54"]	1063 [41.85"]	110 [4.33"]	1917 [75.47"] *2018 [79.45"]
2B	4616 [181.73"]	2583 [101.69"]	1143 [45.0"]	110 [4.33"]	1917 [75.47"] *2018 [79.45"]
3A, Y	4632 [182.36"]	2599 [102.32"]	1159 [45.63"]	110 [4.33"]	1872 [73.70"] *1973 [77.68"]
4A, Y	4797 [188.86"]	2764 [108.82"]	1249 [49.17"]	100 [3.94"]	1862 [73.31"] *1963 [77.28"]
4B	4901 [192.95"]	2868 [112.91"]	1353 [53.27"]	100 [3.94"]	1862 [73.31"] *1963 [77.28"]

ALARM WARNING INDICATOR (OPTION)	
NUMBER OF LAYERS	F
1	146 [5.75"]
2	187 [7.36"]
3	228 [8.97"]
4	269 [10.59"]

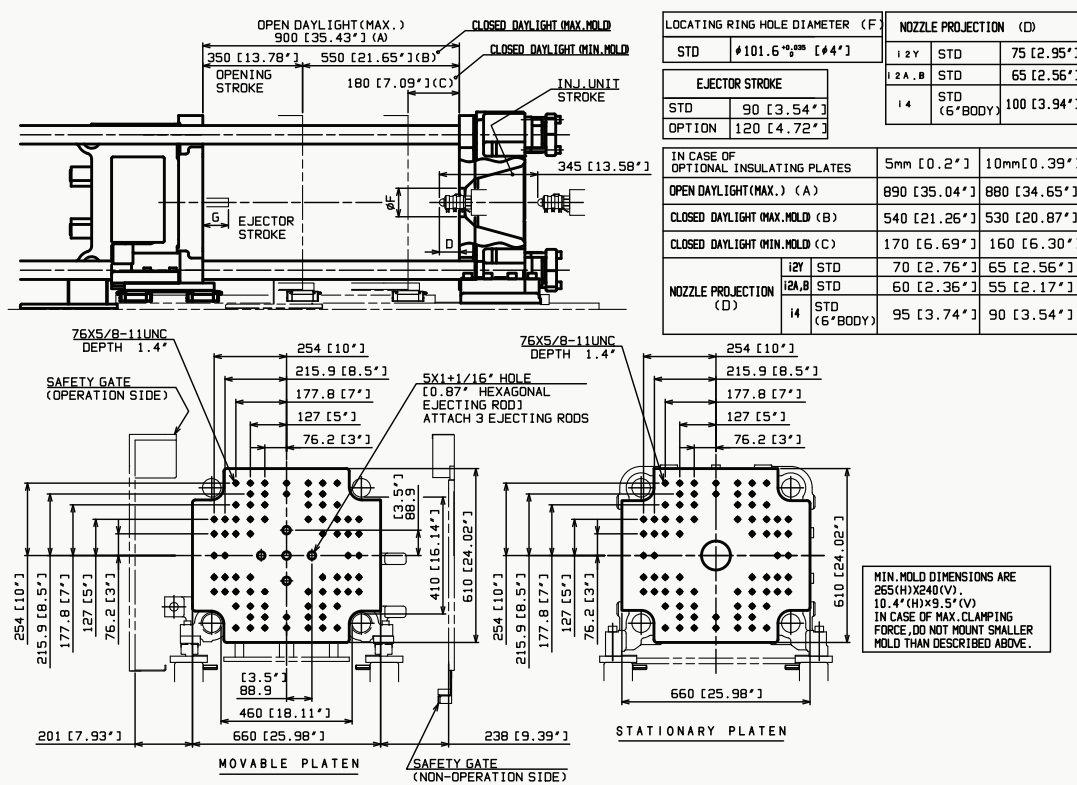
# EC140SXIII



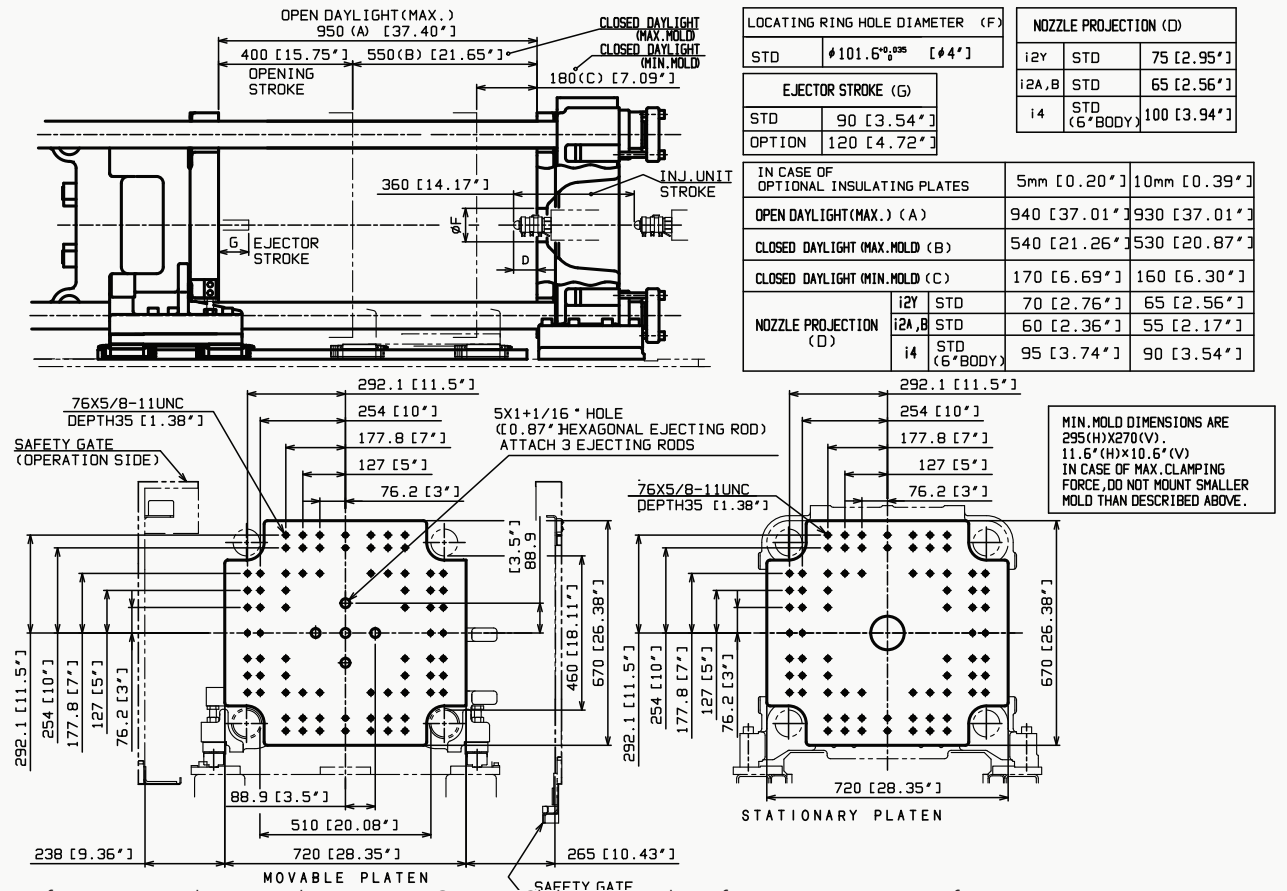
INJECTION UNIT	A	B	C	D	E
2A, Y	4701 [185.08"]	2503 [98.54"]	1063 [41.85"]	110 [4.33"]	1919 [75.55"] *2020 [79.53"]
4A, Y	4977 [195.94"]	2779 [109.40"]	1264 [49.76"]	100 [3.94"]	1909 [75.16"] *2010 [79.13"]
4B	5081 [200.04"]	2883 [113.50"]	1368 [53.86"]	100 [3.94"]	1909 [75.16"] *2010 [79.13"]

ALARM WARNING INDICATOR (OPTION)	
NUMBER OF LAYERS	F
1	146 [5.75"]
2	187 [7.36"]
3	228 [8.97"]
4	269 [10.59"]

① 20-03-13



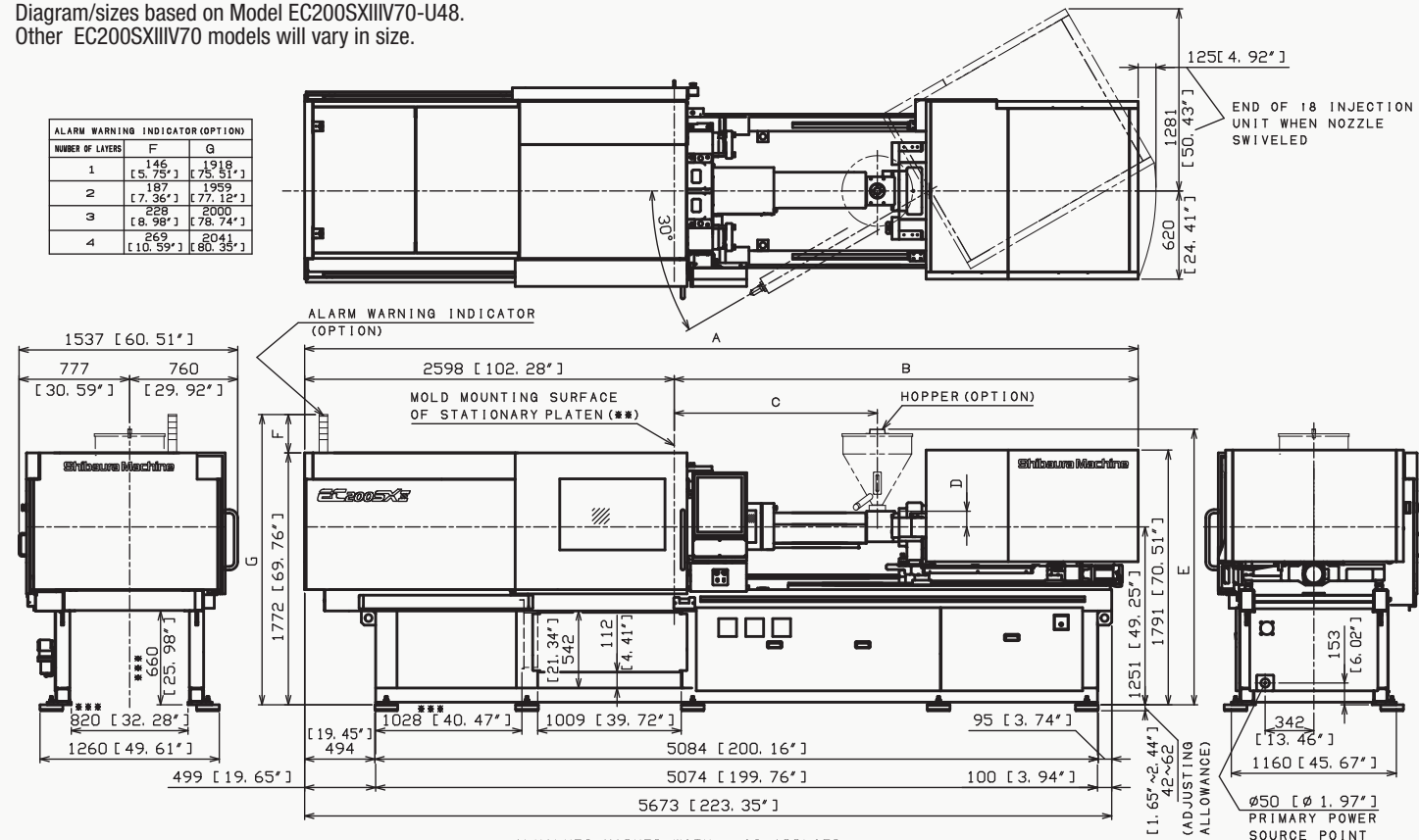
Note: Specifications can change without notice. Contact Shibaura Machine for most current specifications.



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

# EC200SXIII

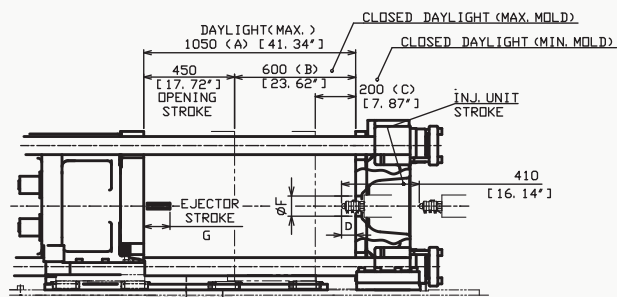
Diagram/sizes based on Model EC200SXIIIIV70-U48.  
Other EC200SXIIIIV70 models will vary in size.



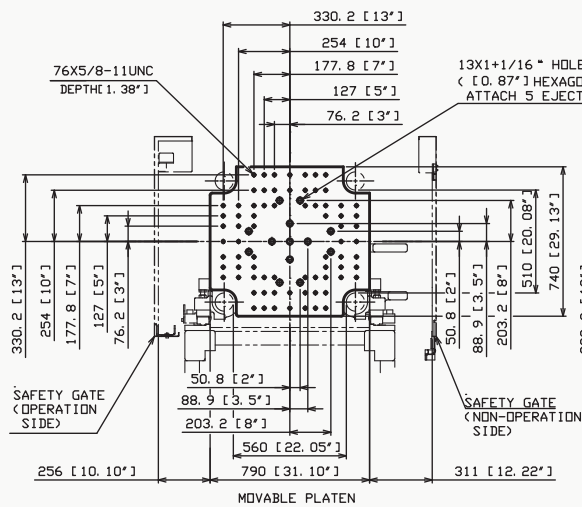
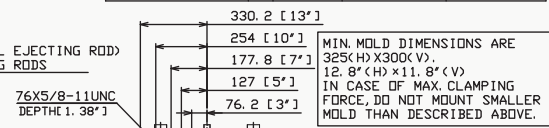
ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	F	G
1	146 [5.75']	1918 [75.51']
2	187 [7.36']	1959 [77.12']
3	228 [8.98']	2000 [78.74']
4	269 [10.59']	2041 [80.35']

INJECTION UNIT	A	B	C	D	E
4A, Y	5672 [223.30']	3074 [121.02']	1914 [75.31']	100 [3.94']	1928 [75.91']
4B	5776 [227.40']	3178 [125.12']	1418 [55.83']	100 [3.94']	1928 [75.91']
6A, Y	5859 [230.67']	3261 [128.39']	1428 [56.22']	110 [4.33']	1938 [76.30']
8A, Y	5958 [234.56']	3360 [132.28']	1527 [60.12']	110 [4.33']	1938 [76.30']
8B	6062 [238.66']	3464 [136.38']	1631 [64.21']	110 [4.33']	1938 [76.30']

- VALUES MARKED WITH \* IS APPLIED FOR OPTIONAL HOPPER SLIDE UNIT
- THE POSITION OF MOLD MOUNTING SURFACE OF STATIONARY PLATEN(\*\*\*) VARY WITH THE OPTIONAL SPECIFICATION SUCH AS T-SLOTTED MOLD PLATEN, INSULATING PLATES, AND MAGNETIC CLAMP UNIT.
- \*\*\*:SPACE FOR PUTTING PERIPHERALS.
- SECURE THE SPACE FOR MAINTENANCE, REFERENCE TO THE FOUNDATION DRAWING FOR DETAILED SIZE.



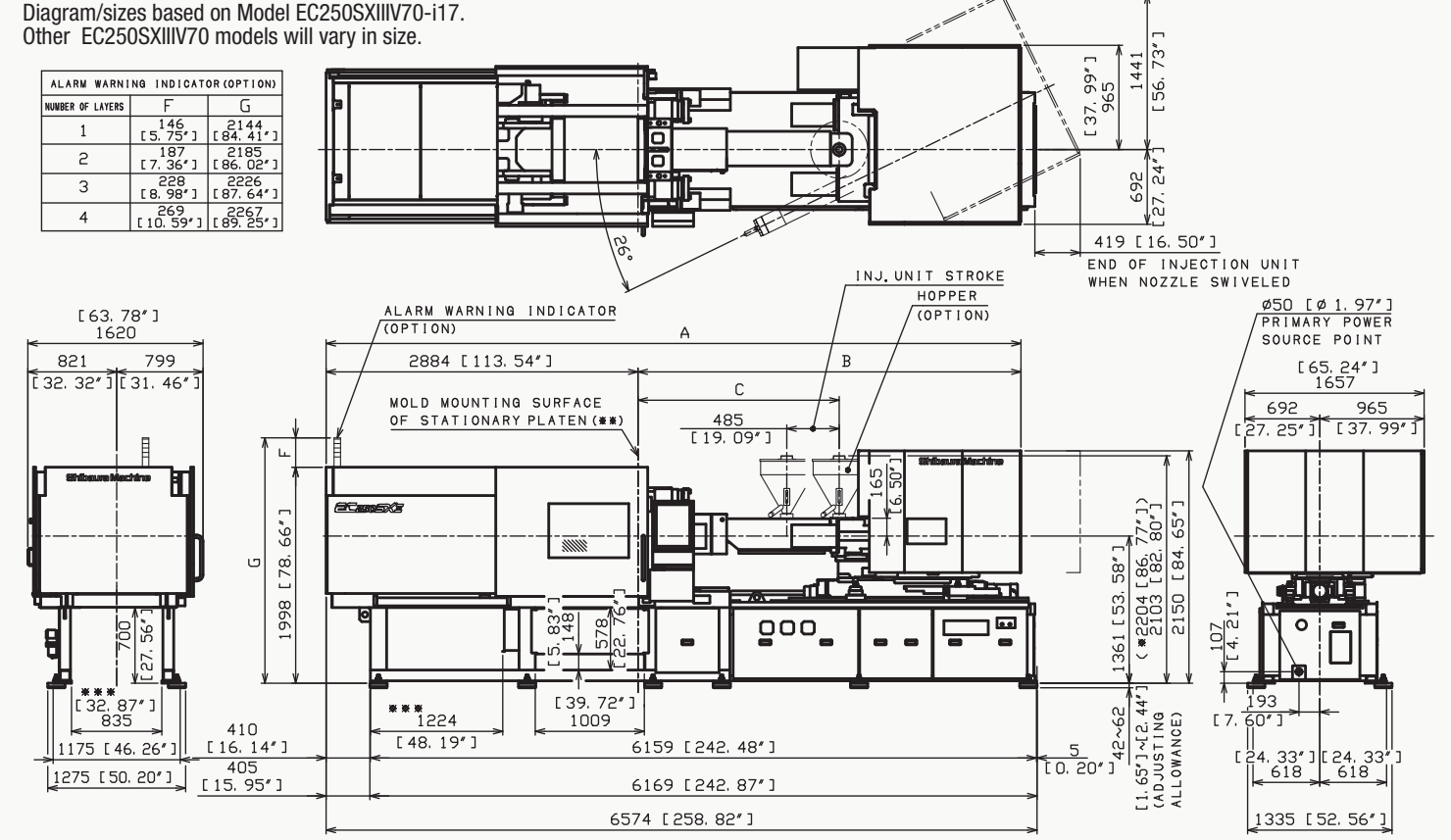
LOCATING RING HOLE DIAMETER (F)		NOZZLE PROJECTION (D)	
STD	Ø101.6 <sup>±0.03</sup> [4"]	14 STD (6" BODY)	100 [3.94']
EJECTOR STROKE (G)		16 STD (6" BODY)	90 [3.54']
STD	130 [5.12']	18 STD (6" BODY)	90 [3.54']
OPTION	180 [7.09']	IN CASE OF OPTIONAL INSULATING PLATES 5mm [0.20'] 10mm [0.39']	
OPEN DAYLIGHT (MAX.) (A)		1040 [40.94']	1030 [40.55']
CLOSED DAYLIGHT (MAX. MOLD) (B)		590 [23.23']	580 [22.83']
CLOSED DAYLIGHT (MIN. MOLD) (C)		190 [7.48']	180 [7.09']
NOZZLE PROJECTION (D)	14 STD (6" BODY)	95 [3.74']	90 [3.54']
	16 STD (6" BODY)	85 [3.35']	80 [3.15']
	18 STD (6" BODY)	85 [3.35']	80 [3.15']



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

# EC250SXIII

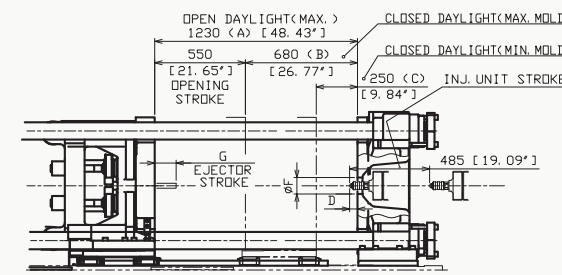
Diagram/sizes based on Model EC250SXIIIIV70-i17.  
Other EC250SXIIIIV70 models will vary in size.



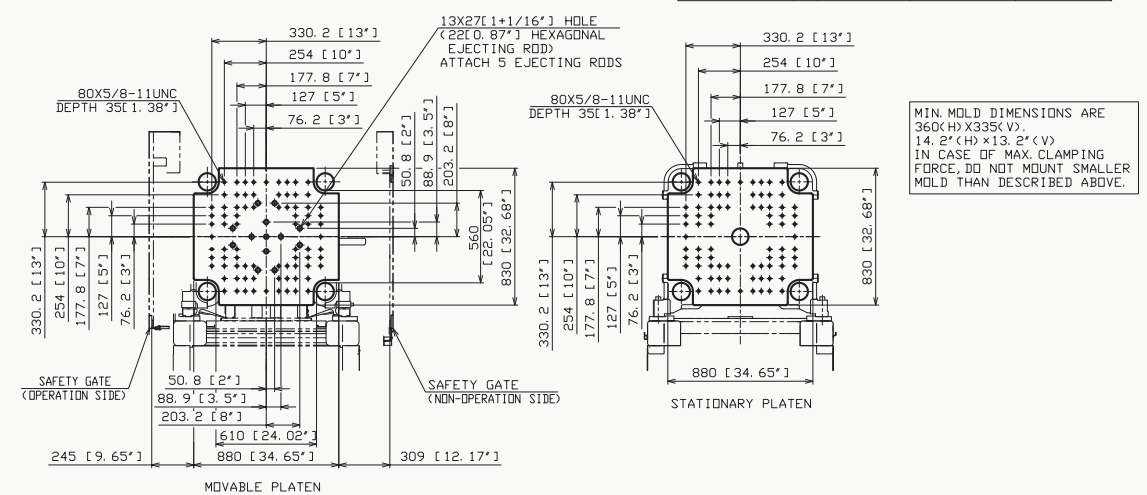
ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	F	G
1	146 [5.75']	2144 [84.41']
2	187 [7.36']	2185 [86.02']
3	228 [8.98']	2226 [87.64']
4	269 [10.59']	2267 [89.25']

INJECTION UNIT	A	B	C
17Y	6426 [252.99']	3542 [139.45']	1861 [73.27']
17B, BH, AT	6631 [261.06']	3747 [147.52']	2066 [81.34']

- VALUES MARKED WITH \* IS APPLIED FOR OPTIONAL HOPPER SLIDE UNIT
- THE POSITION OF MOLD MOUNTING SURFACE OF STATIONARY PLATEN(\*\*\*) VARY WITH THE OPTIONAL SPECIFICATION SUCH AS T-SLOTTED MOLD PLATEN, INSULATING PLATES, AND MAGNETIC CLAMP UNIT.
- \*\*\*:SPACE FOR PUTTING PERIPHERALS.
- SECURE THE SPACE FOR MAINTENANCE, REFERENCE TO THE FOUNDATION DRAWING FOR DETAILED SIZE.



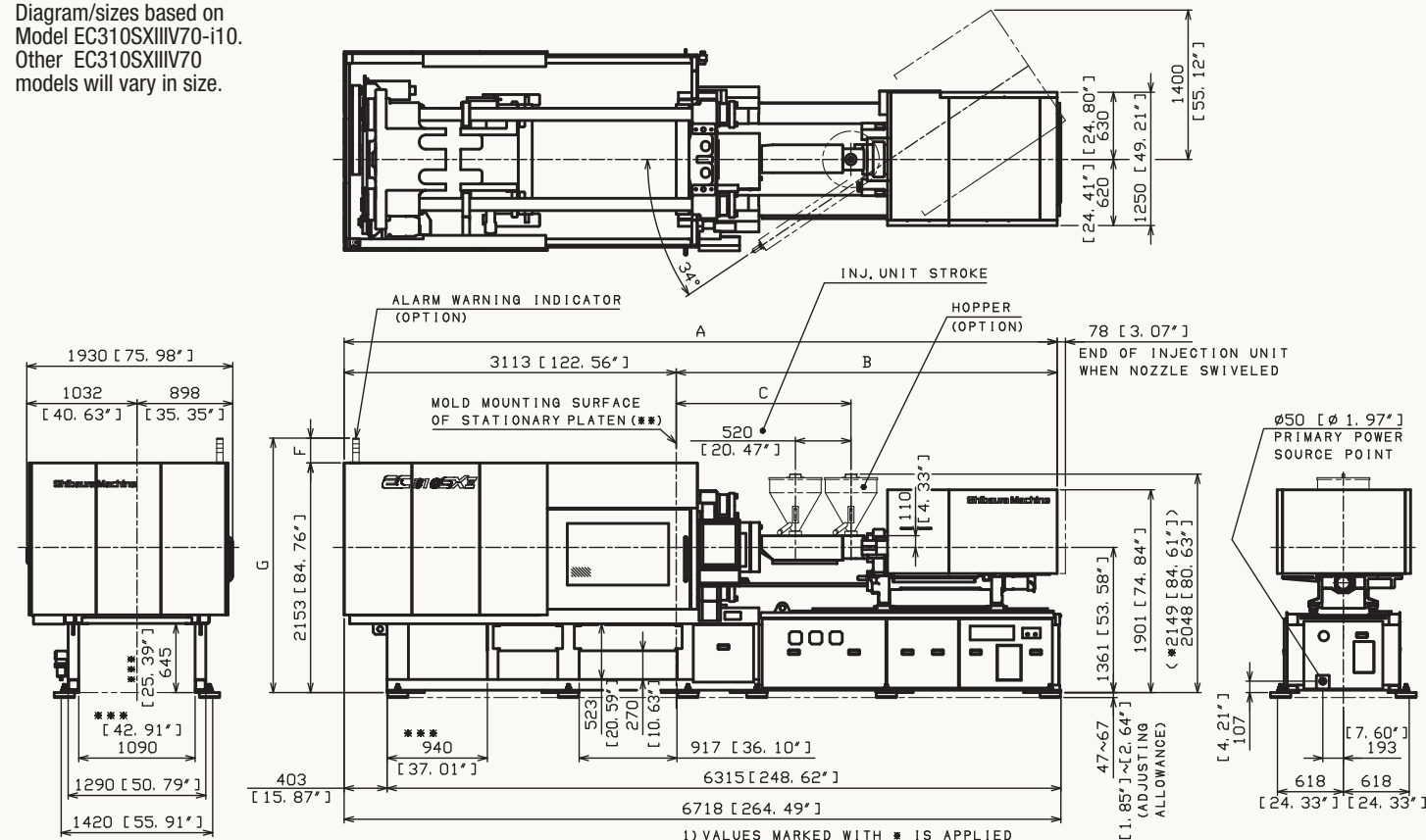
LOCATING RING HOLE DIAMETER (F)		NOZZLE PROJECTION (D)	
STD	Ø101.6 <sup>±0.03</sup> [4"]	17 STD (6" BODY)	48 [1.89']
EJECTOR STROKE (G)		17 STD (6" BODY)	48 [1.89']
STD	130 [5.12']	IN CASE OF OPTIONAL INSULATING PLATES 5mm [0.20'] 10mm [0.39']	
OPTION	180 [7.09']	1220 [48.03']	1210 [47.64']
CLOSED DAYLIGHT (MAX. MOLD) (B)		670 [26.38']	660 [25.98']
CLOSED DAYLIGHT (MIN. MOLD) (C)		240 [9.45']	230 [9.06']
NOZZLE PROJECTION (D)		43 [1.69']	38 [1.5']



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

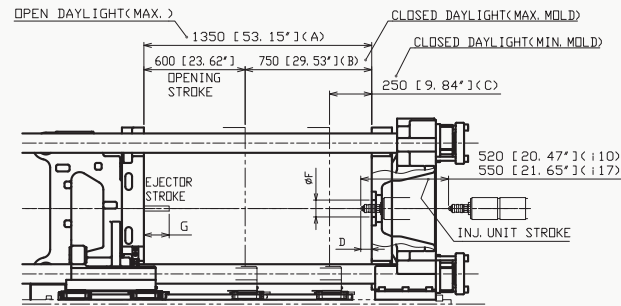
# EC310SXIII

Diagram/sizes based on Model EC310SXIIIIV70-i10. Other EC310SXIIIIV70 models will vary in size.

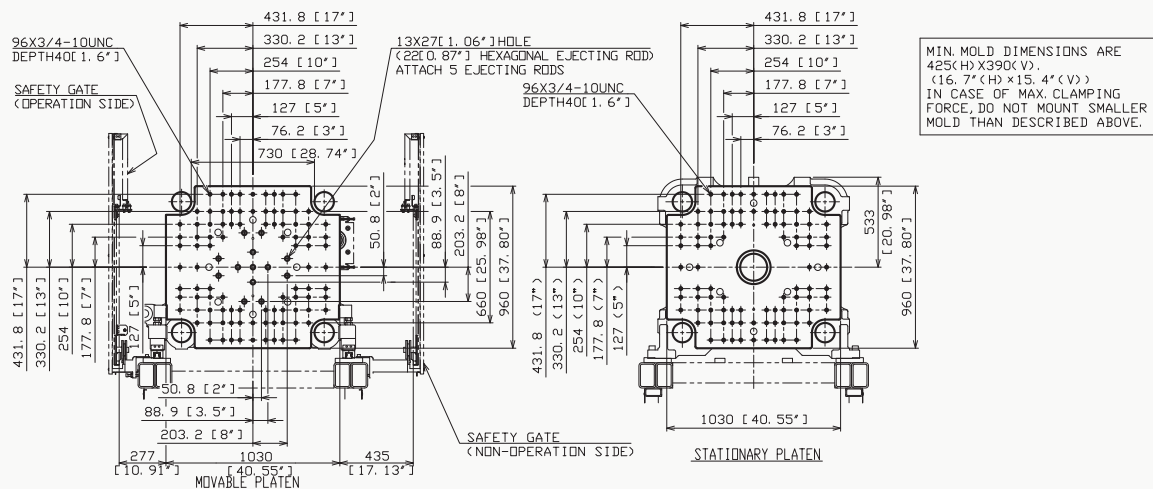


- VALUES MARKED WITH \* IS APPLIED FOR OPTIONAL HOPPER SLIDE UNIT.
- THE POSITION OF MOLD MOUNTING SURFACE OF STATIONARY PLATEN(\*\*) VARY WITH THE OPTIONAL SPECIFICATION SUCH AS INSULATING PLATES, AND MAGNETIC CLAMP UNIT.
- \*\*\*:SPACE FOR PUTTING PERIPHERALS.
- SECURE THE SPACE FOR MAINTENANCE. REFERENCE TO THE FOUNDATION DRAWING FOR DETAILED SIZE.

INJECTION UNIT	A	B	C	ALARM WARNING INDICATOR (OPTION)		
				NUMBER OF LAYERS	F	G
10A, Y	6683 [263.11']	3570 [140.55']	1637 [64.45']	1	151 [5.94']	2304 [90.71']
10B	6787 [267.20']	3674 [144.64']	1741 [68.54']	3	233 [9.17']	2386 [93.94']



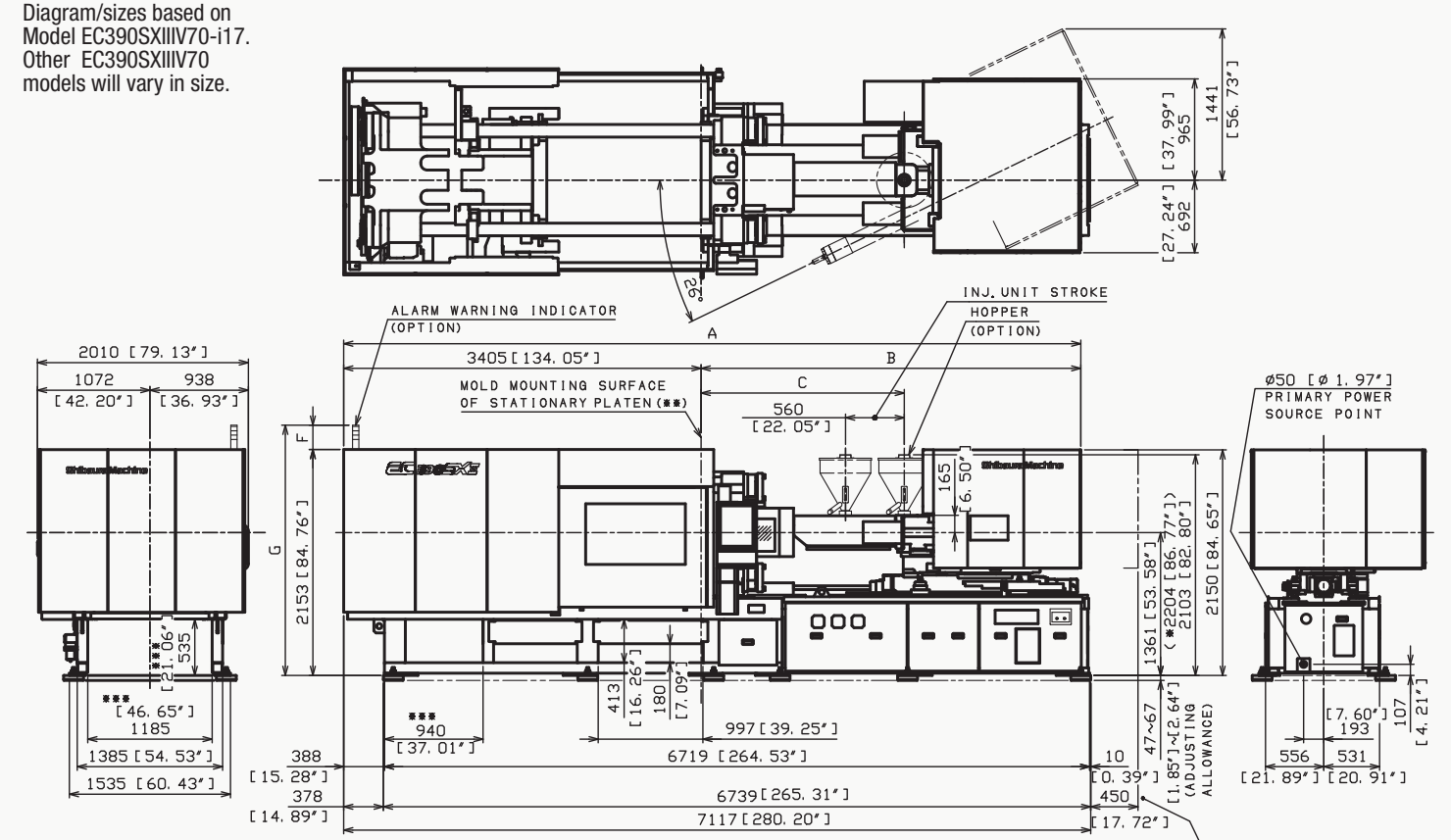
LOCATING RING HOLE DIAMETER (F)	NOZZLE PROJECTION (D)
STD #101.6 <sup>±0.08</sup> [Ø4"]	110 STD<6" BODY> 86 [3.39']
	117 STD<6" BODY> 48 [1.89']
EJECTOR STROKE (G)	
STD 150 [5.9']	
IN CASE OF OPTIONAL INSULATING PLATES	
	5mm [0.20']
	10mm [0.39']
OPEN DAYLIGHT (MAX.) (A)	1340 [52.76']
CLOSED DAYLIGHT (MAX. MOLD) (B)	740 [29.13']
CLOSED DAYLIGHT (MIN. MOLD) (C)	240 [9.45']
NOZZLE PROJECTION (D)	110 STD<6" BODY> 81 [3.19']
	117 STD<6" BODY> 43 [1.69']



MIN. MOLD DIMENSIONS ARE 425(H)X390(V) (16.7"(H)X15.4"(V)) IN CASE OF MAX. CLAMPING FORCE, DO NOT MOUNT SMALLER MOLD THAN DESCRIBED ABOVE.

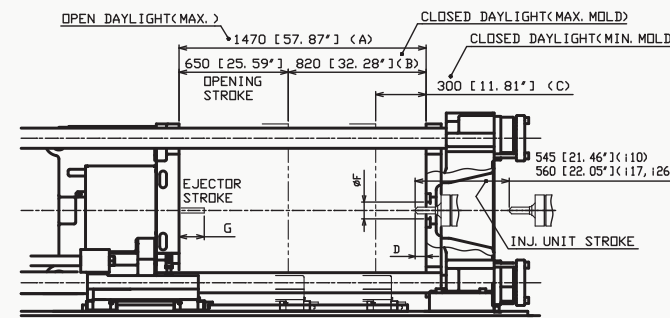
# EC390SXIII

Diagram/sizes based on Model EC390SXIIIIV70-i17. Other EC390SXIIIIV70 models will vary in size.

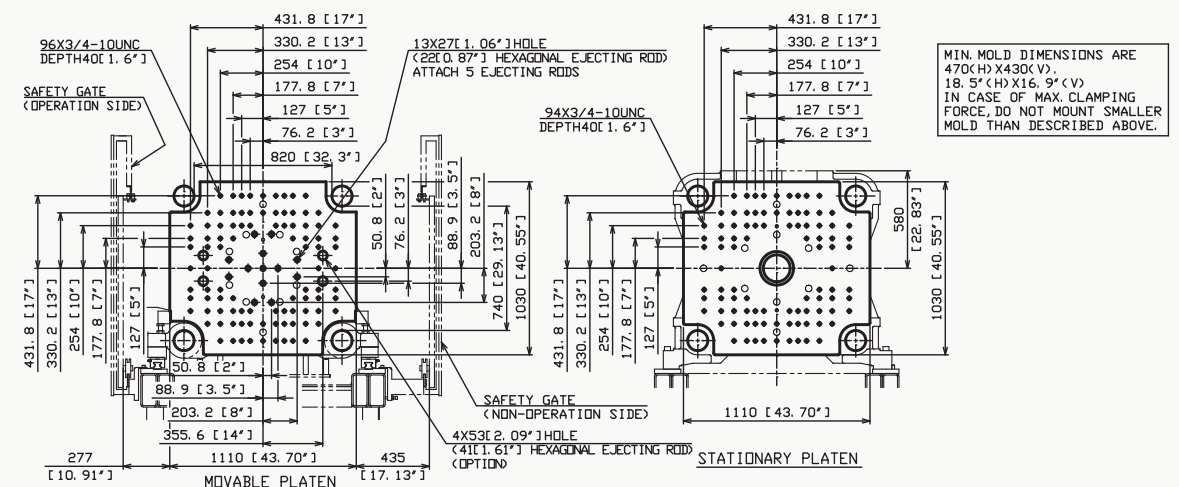


- VALUES MARKED WITH \* IS APPLIED FOR OPTIONAL HOPPER SLIDE UNIT.
- THE POSITION OF MOLD MOUNTING SURFACE OF STATIONARY PLATEN(\*\*) VARY WITH THE OPTIONAL SPECIFICATION SUCH AS INSULATING PLATES, AND MAGNETIC CLAMP UNIT.
- \*\*\*:SPACE FOR PUTTING PERIPHERALS.
- SECURE THE SPACE FOR MAINTENANCE. REFERENCE TO THE FOUNDATION DRAWING FOR DETAILED SIZE.

INJECTION UNIT	A	B	C	ALARM WARNING INDICATOR (OPTION)		
				NUMBER OF LAYERS	F	G
17Y	7022 [276.45']	3617 [142.40']	1936 [76.22']	1	150 [5.91']	2303 [90.67']
17B, BH, AT	7227 [284.52']	3822 [150.47']	2141 [84.29']	3	232 [9.13']	2385 [93.89']



LOCATING RING HOLE DIAMETER (F)	NOZZLE PROJECTION (D)
STD #101.6 <sup>±0.08</sup> [Ø4"]	110 STD<6" BODY> 86 [3.39']
	117 STD<6" BODY> 48 [1.89']
EJECTOR STROKE (G)	
STD 150 [5.91']	
IN CASE OF OPTIONAL INSULATING PLATES	
	5mm [0.20']
	10mm [0.39']
OPEN DAYLIGHT (MAX.) (A)	1460 [57.48']
CLOSED DAYLIGHT (MAX. MOLD) (B)	810 [31.89']
CLOSED DAYLIGHT (MIN. MOLD) (C)	290 [11.42']
NOZZLE PROJECTION (D)	110 STD<6" BODY> 81 [3.19']
	117 STD<6" BODY> 43 [1.69']
	126 STD<6" BODY> 50 [1.97']
	45 [1.77']

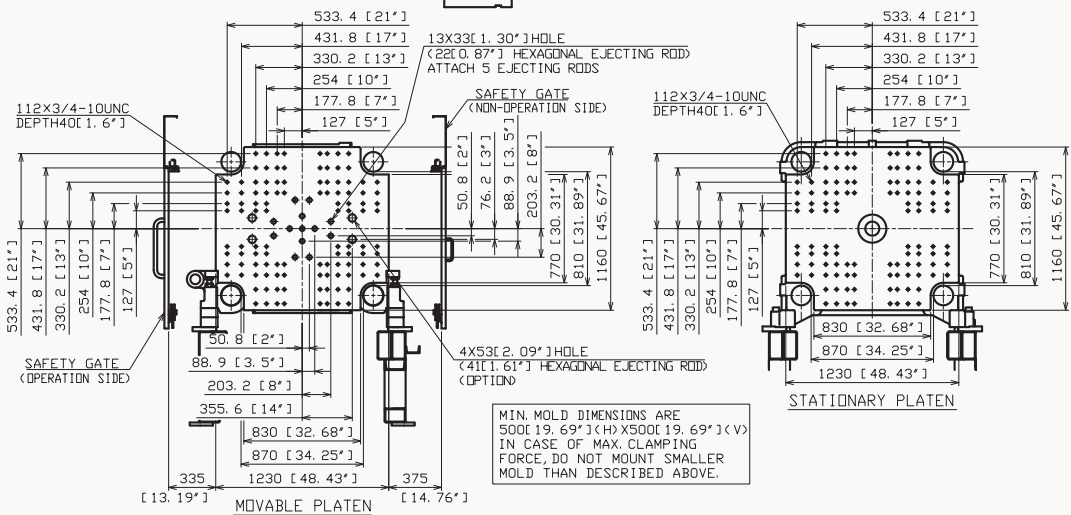
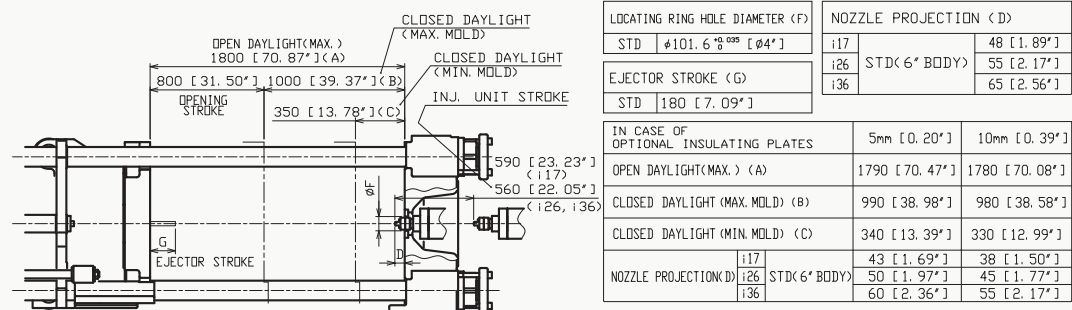
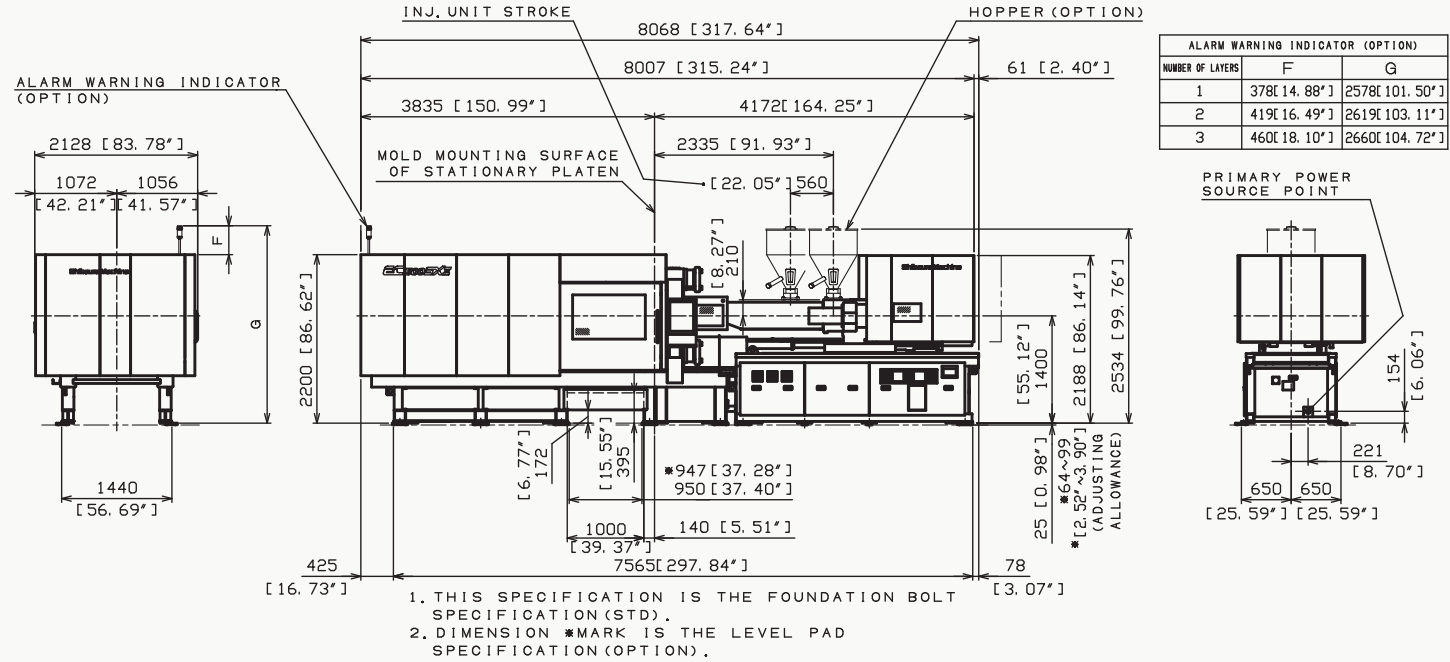
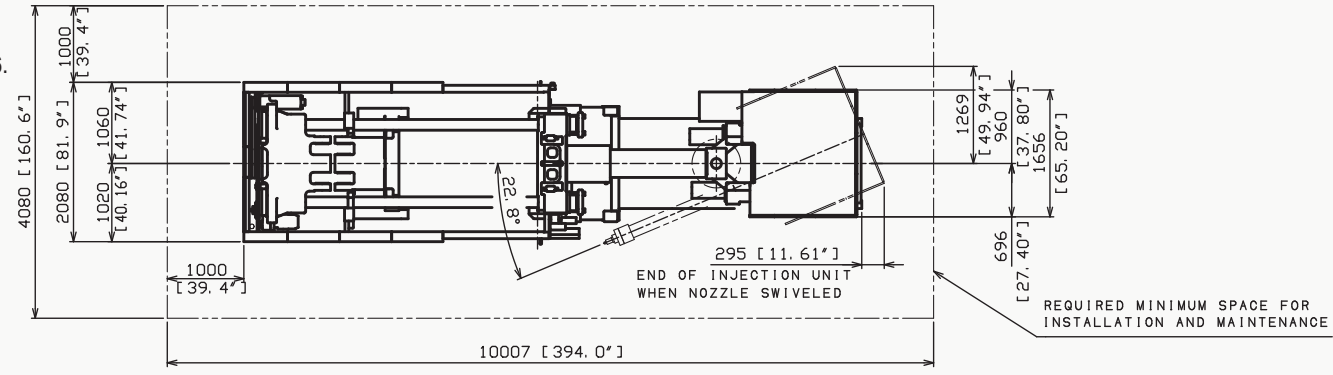


MIN. MOLD DIMENSIONS ARE 470(H)X430(V) (18.5"(H)X16.9"(V)) IN CASE OF MAX. CLAMPING FORCE, DO NOT MOUNT SMALLER MOLD THAN DESCRIBED ABOVE.

# EC500SXIII

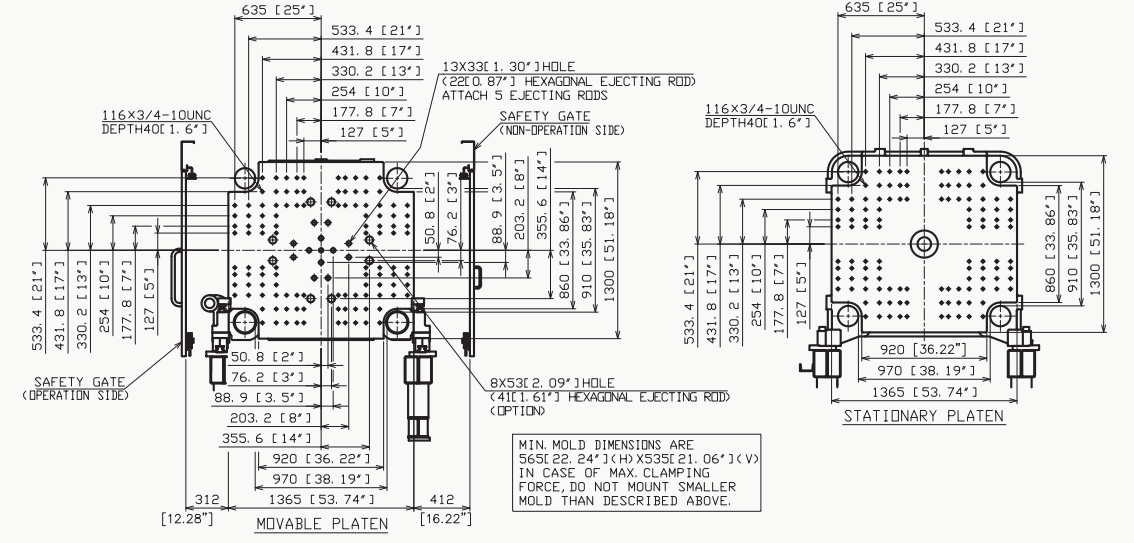
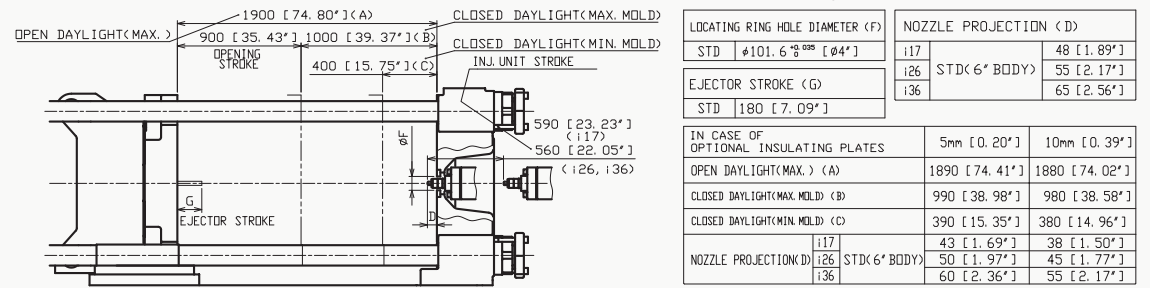
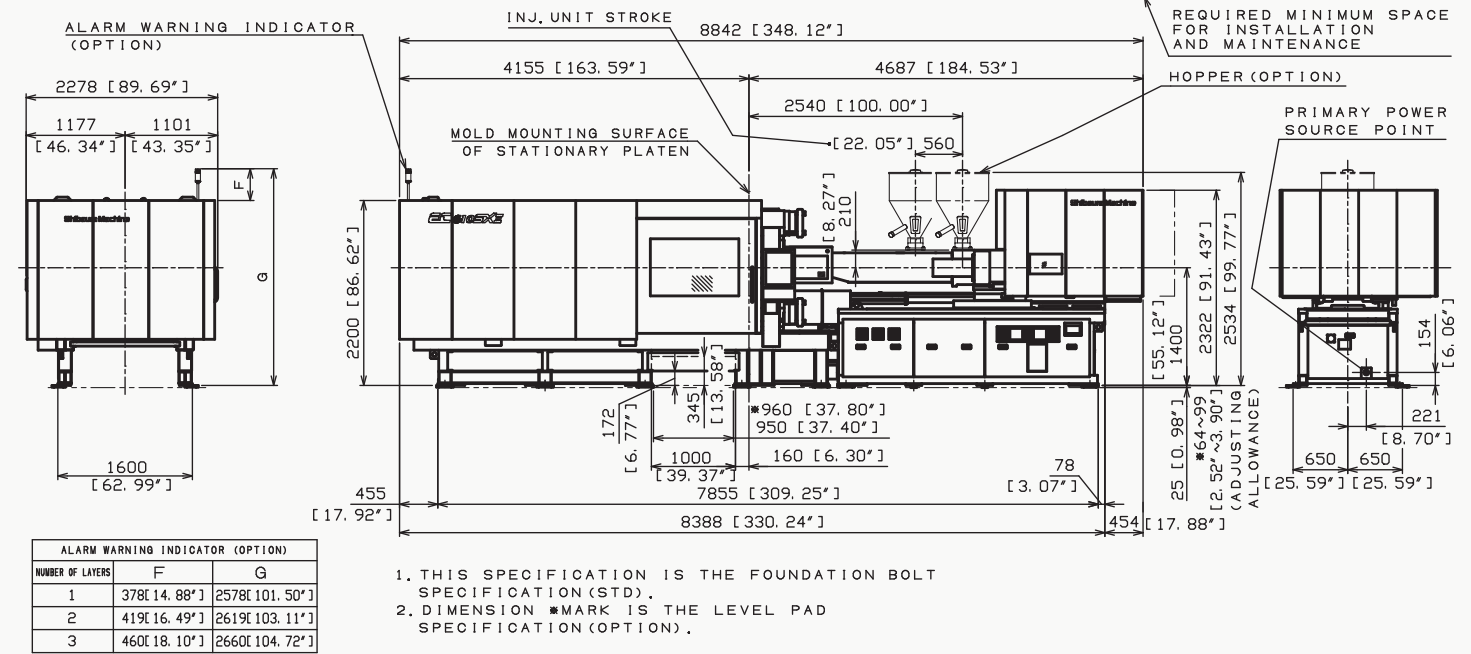
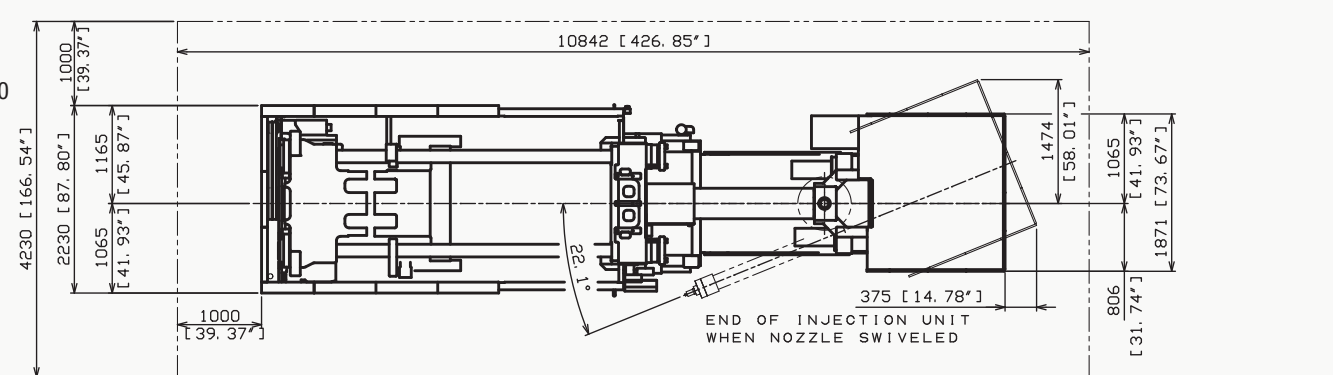
# EC610SXIII

Diagram/sizes based on Model EC500SXIII V70-i26. Other EC500SXIII V70 models will vary in size.



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

Diagram/sizes based on Model EC610SXIII V70-i36. Other EC610SXIII V70 models will vary in size.



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

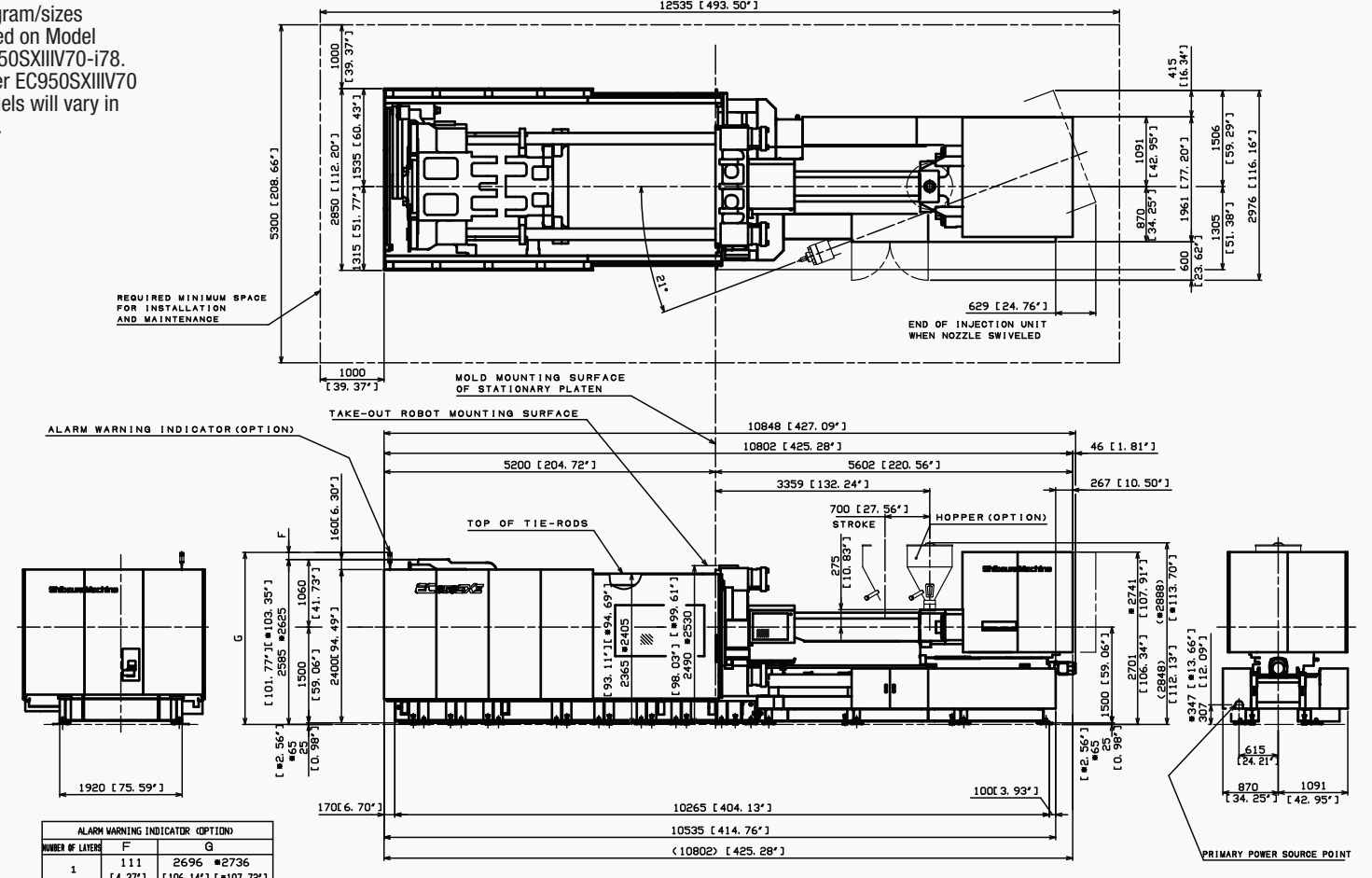
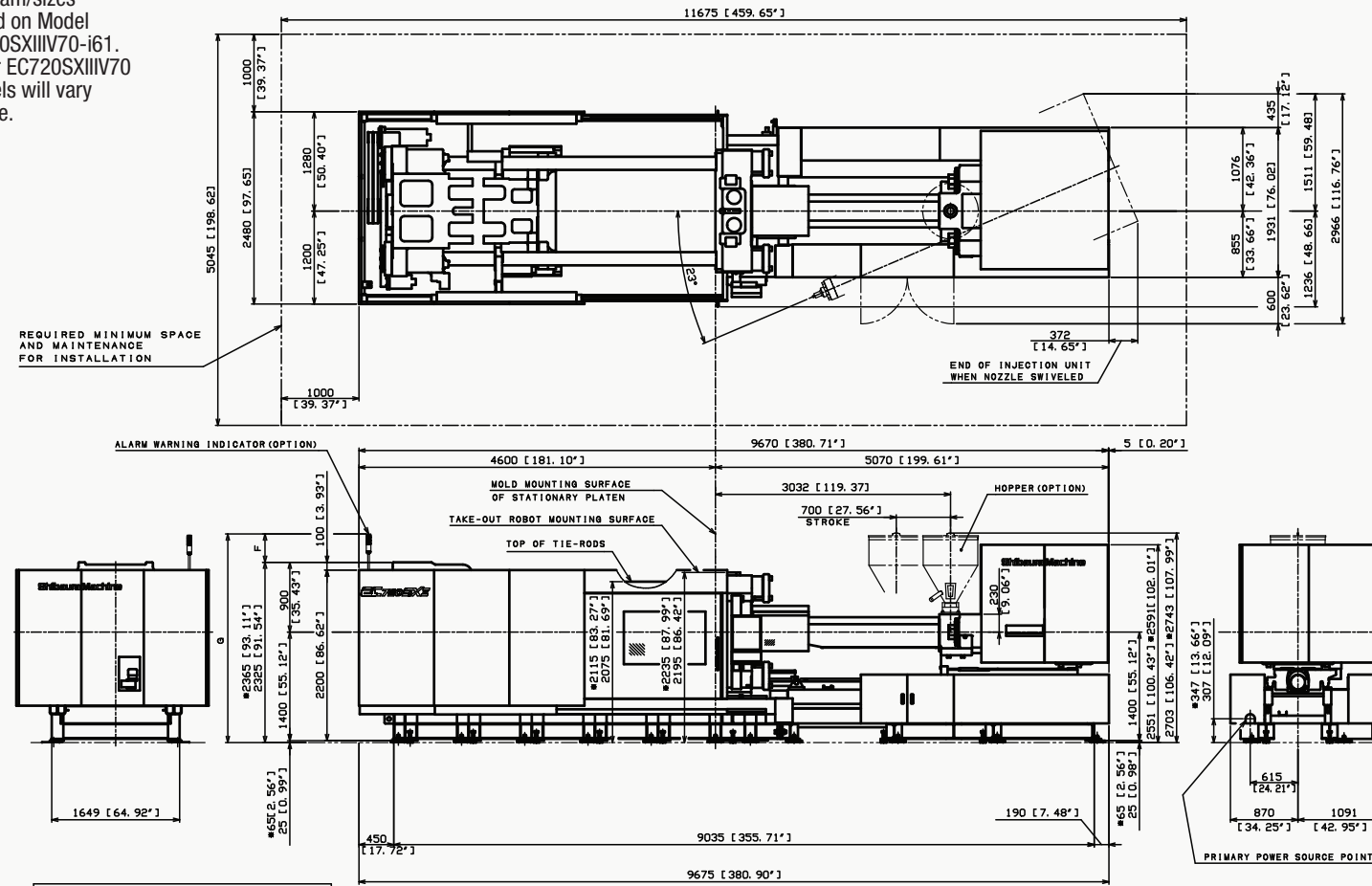


# EC720SXIII

# EC950SXIII

Diagram/sizes based on Model EC720SXIII V70-i61. Other EC720SXIII V70 models will vary in size.

Diagram/sizes based on Model EC950SXIII V70-i78. Other EC950SXIII V70 models will vary in size.

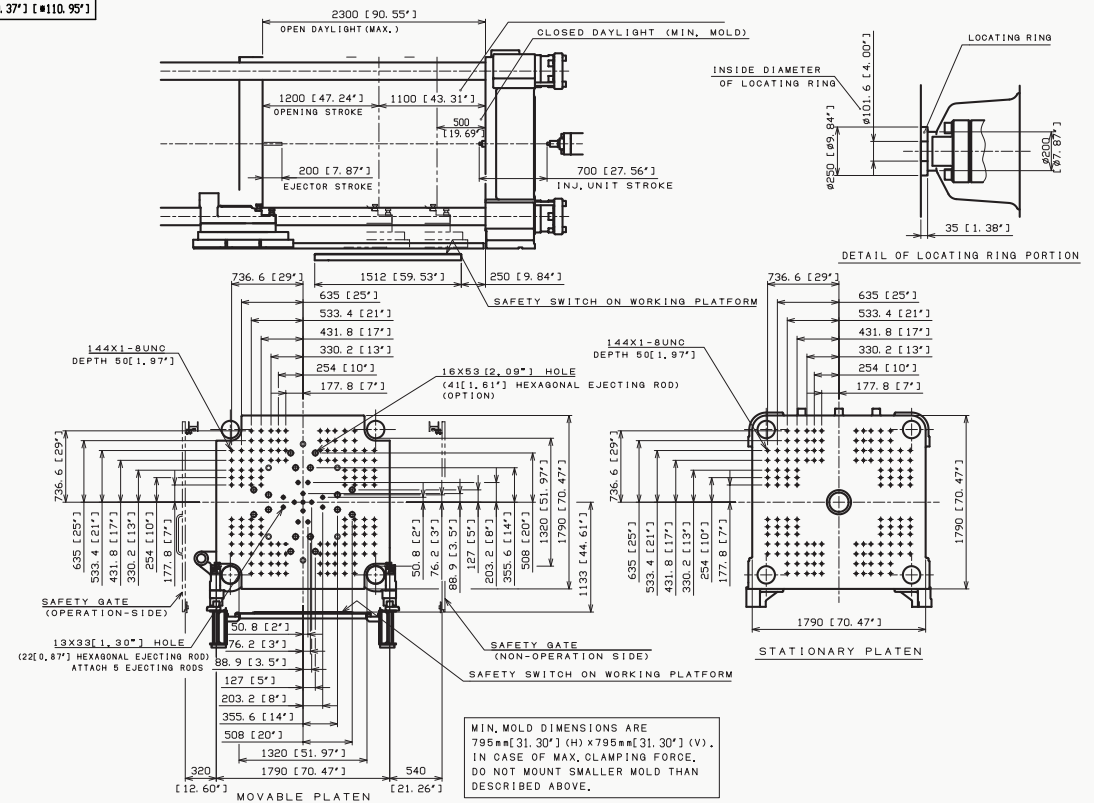
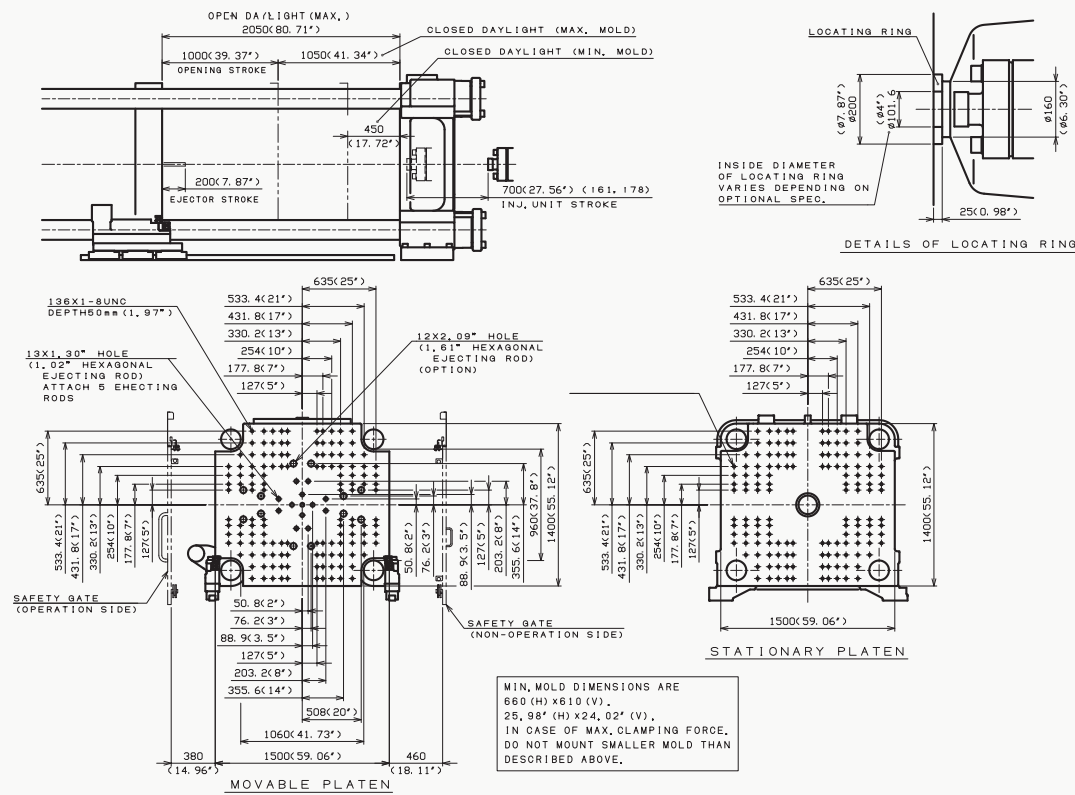


ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	F	G
1	365 [14.37"]	2690 [105.91"] #2730 [107.48"]
2	405 [15.94"]	2730 [107.48"] #2770 [109.06"]
3	450 [17.72"]	2775 [109.25"] #2815 [110.89"]

ALARM WARNING INDICATOR (OPTION)		
NUMBER OF LAYERS	F	G
1	111 [4.37"]	2696 #2736 [106.14"] #107.72"]
2	152 [5.98"]	2737 #2777 [107.76"] #109.33"]
3	193 [7.60"]	2778 #2818 [109.37"] #110.99"]

1. THIS SPECIFICATION IS THE FOUNDATION BOLT SPECIFICATION (STD).  
2. DIMENSION #MARK IS THE LEVELING PAD SPECIFICATION (OPTION).

1. THIS SPECIFICATION IS THE FOUNDATION BOLT SPECIFICATION (STD).  
2. DIMENSIONS #MARK IS THE LEVELING PAD SPECIFICATION (OPTION).



MIN. MOLD DIMENSIONS ARE 660 (H) X 610 (V).  
25, 98" (H) X 24, 02" (V).  
IN CASE OF MAX. CLAMPING FORCE, DO NOT MOUNT SMALLER MOLD THAN DESCRIBED ABOVE.

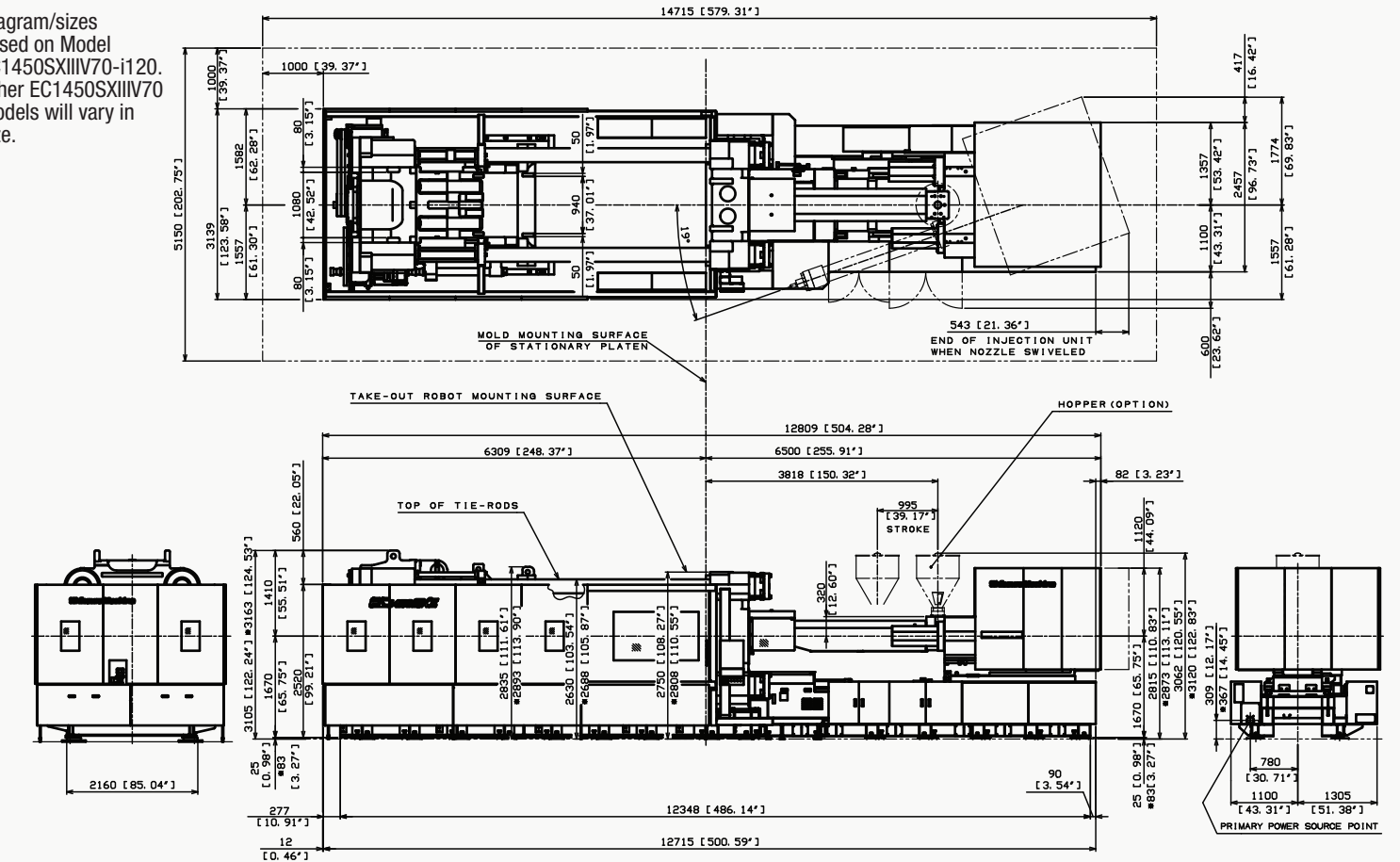
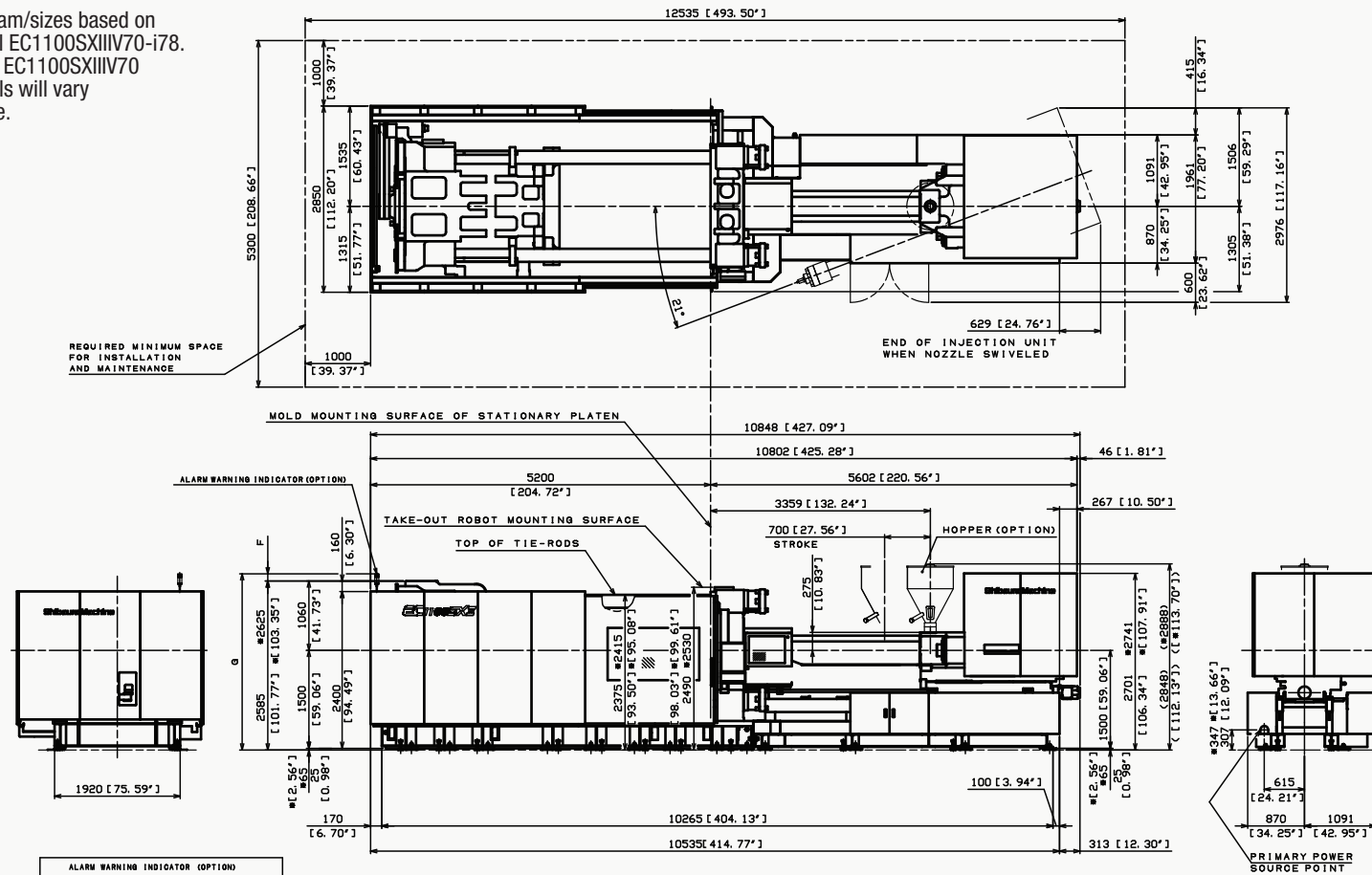
MIN. MOLD DIMENSIONS ARE 795#=[31.30"] (H) X 795#=[31.30"] (V).  
IN CASE OF MAX. CLAMPING FORCE, DO NOT MOUNT SMALLER MOLD THAN DESCRIBED ABOVE.

# EC1100SXIII

# EC1450SXIII

Diagram/sizes based on Model EC1100SXIII V70-i78. Other EC1100SXIII V70 models will vary in size.

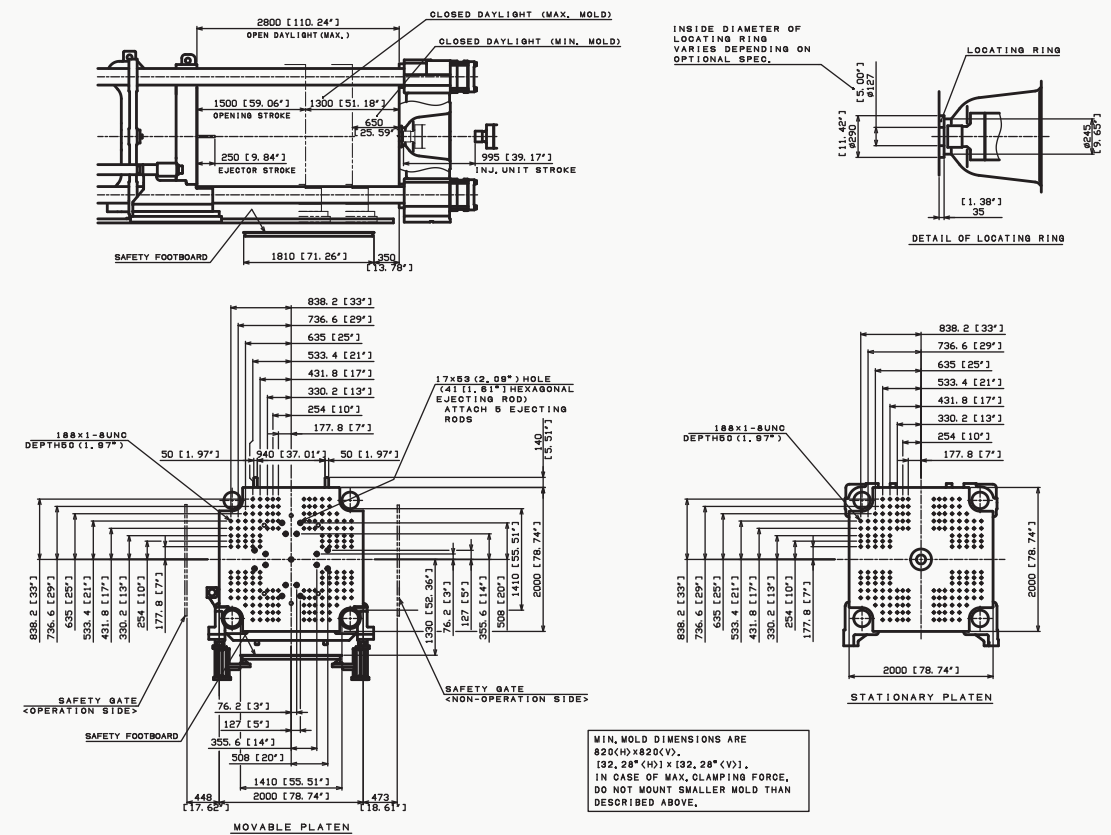
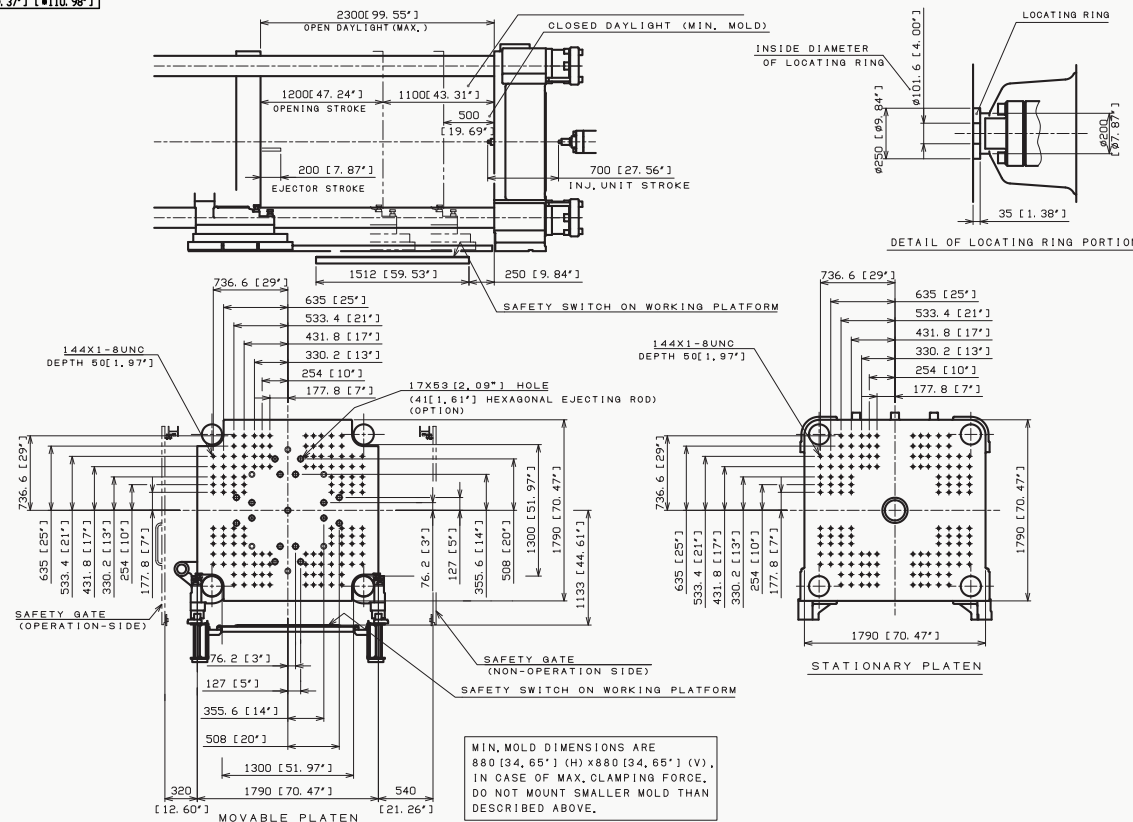
Diagram/sizes based on Model EC1450SXIII V70-i120. Other EC1450SXIII V70 models will vary in size.



NUMBER OF LAYERS	ALARM WARNING INDICATOR (OPTION)	
	F	G
1	111 [4.37"]	2696 [106.14"] [2737 [107.75"]]
2	152 [5.98"]	2737 [107.76"] [2778 [109.37"]]
3	193 [7.60"]	2778 [109.37"] [2819 [111.98"]]

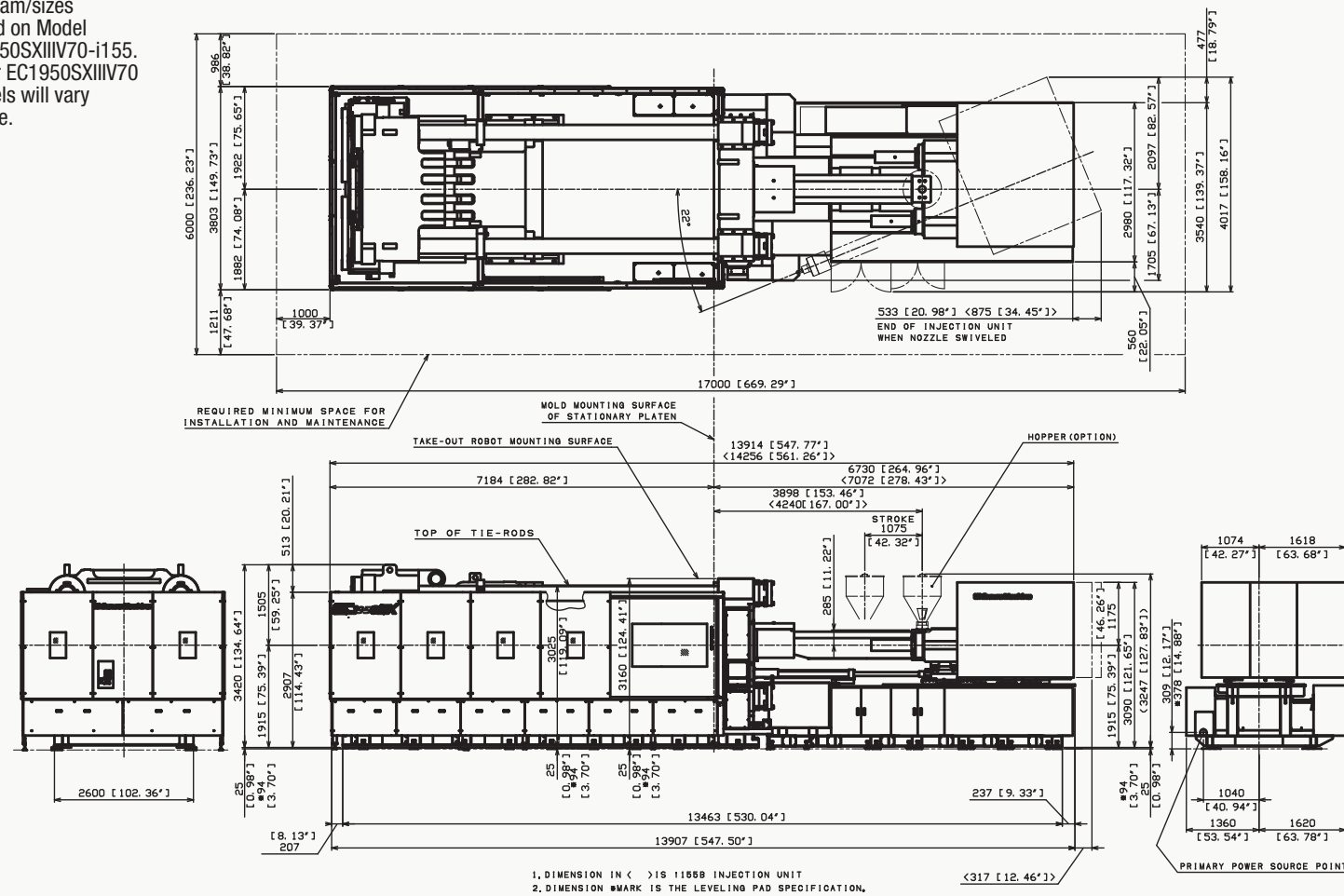
- THIS SPECIFICATION IS THE FOUNDATION BOLT SPECIFICATION (STD).
- DIMENSION #MARK IS THE LEVEL PAD SPECIFICATION (OPTION).

1. DIMENSIONS #MARK ARE LEVELING PAD SPECIFICATION.



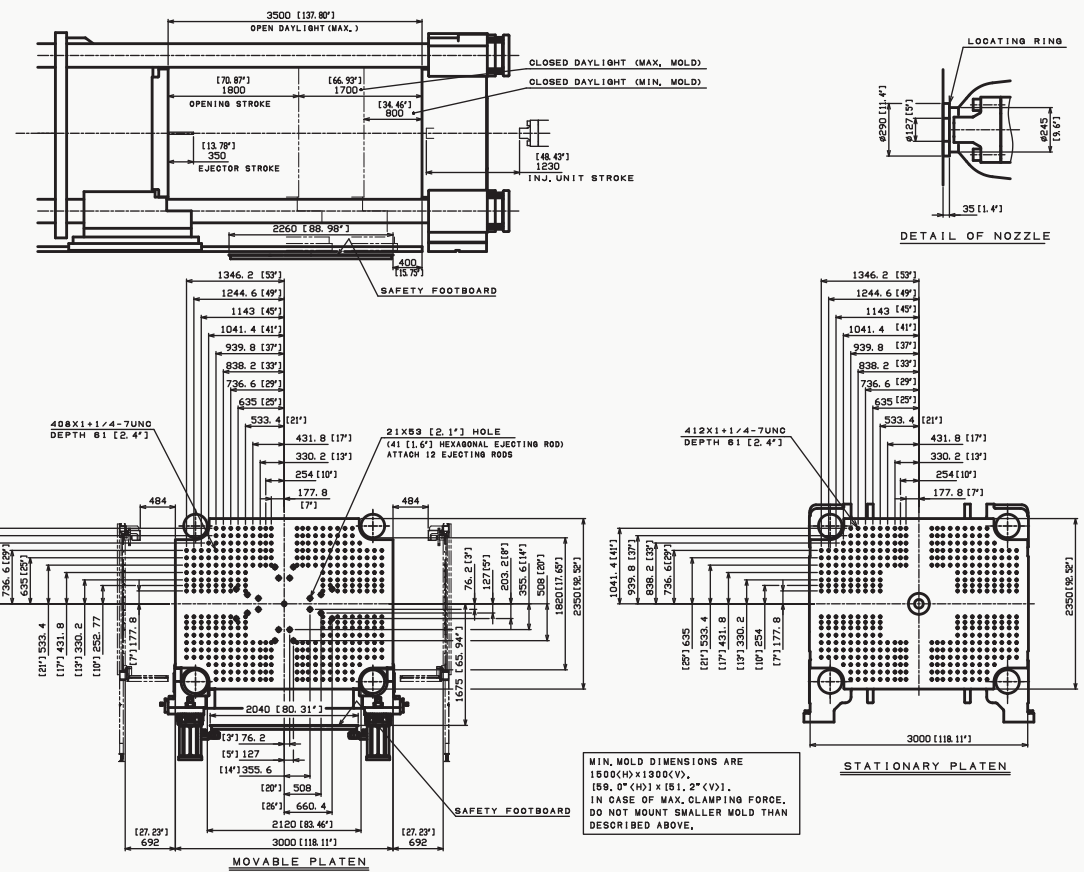
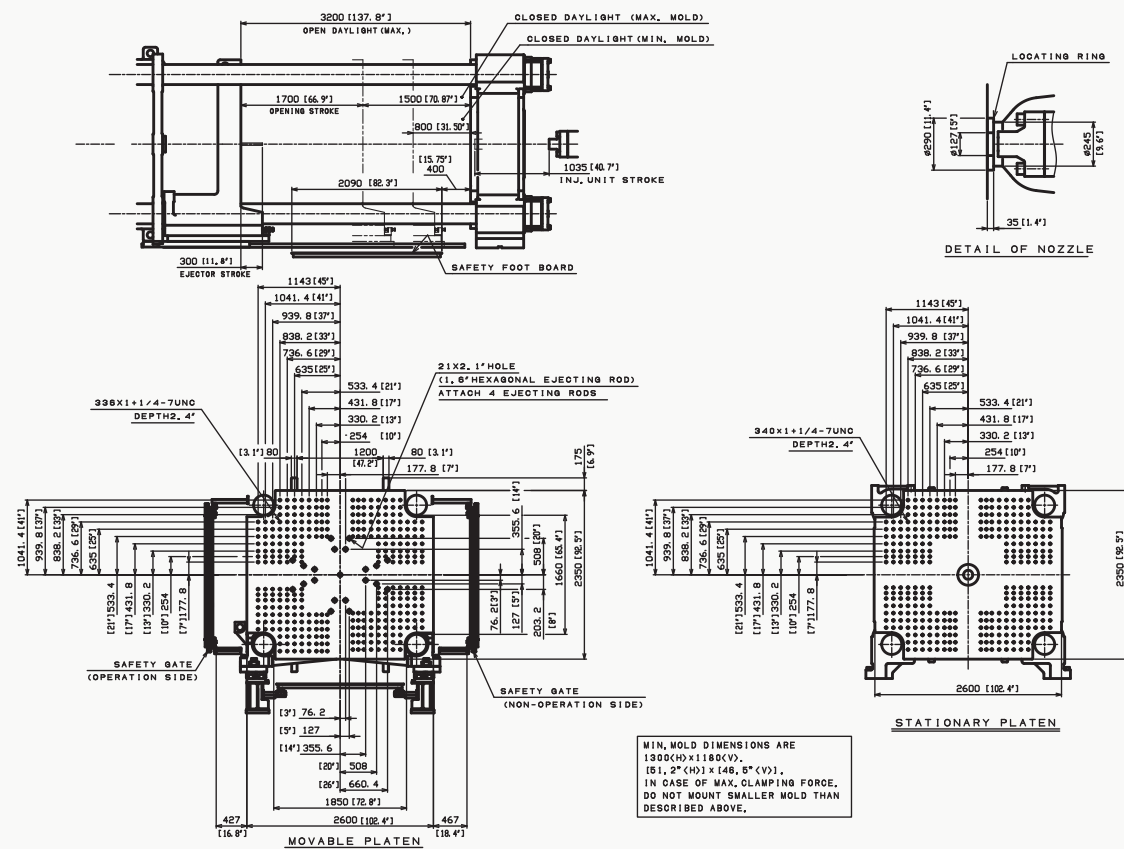
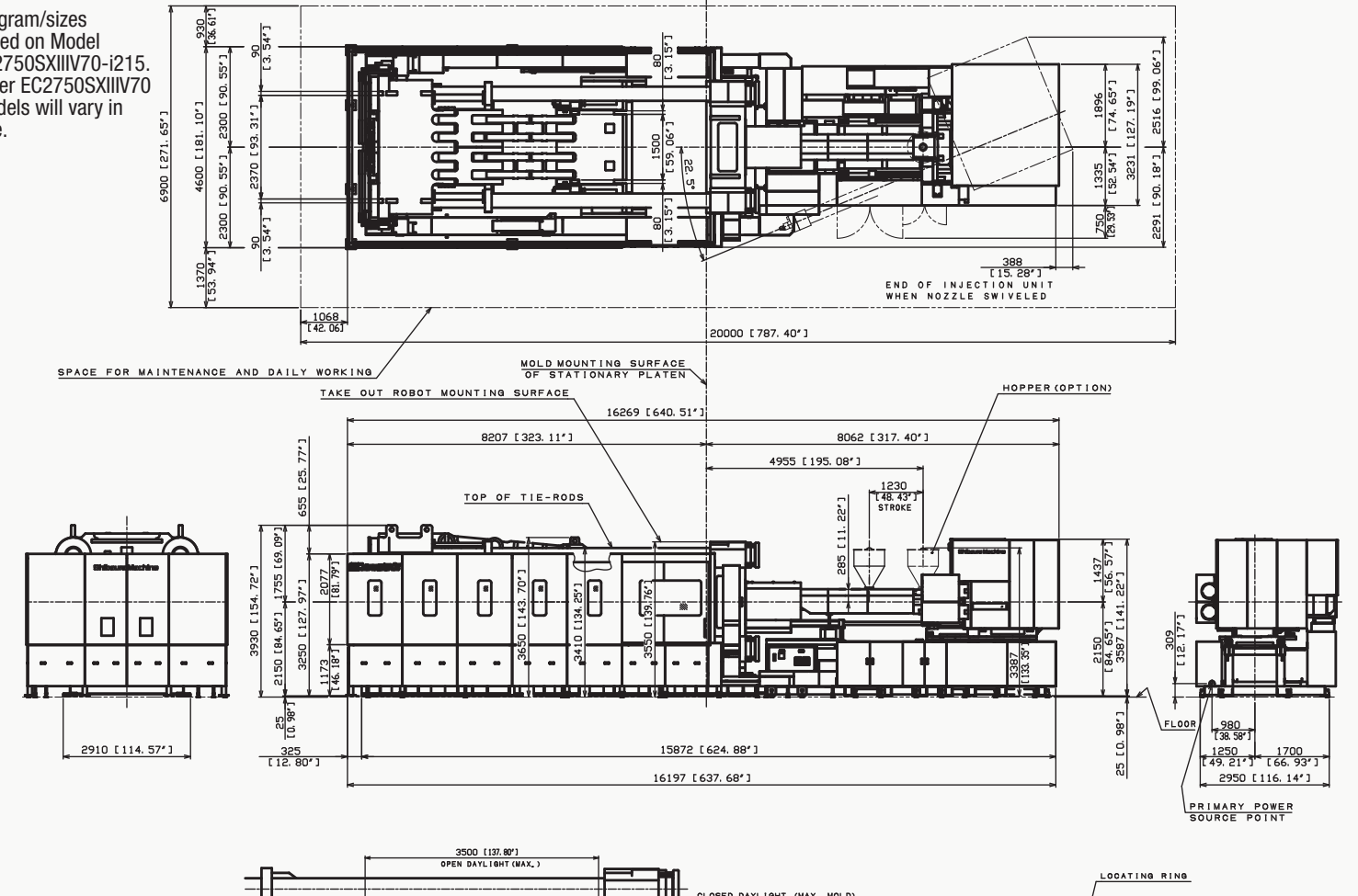
# EC1950SXIII

Diagram/sizes based on Model EC1950SXIIIIV70-i155. Other EC1950SXIIIIV70 models will vary in size.



# EC2750SXIII

Diagram/sizes based on Model EC2750SXIIIIV70-i215. Other EC2750SXIIIIV70 models will vary in size.



NOTES

NOTES

The image shows a sheet of white paper with horizontal ruling lines. At the top, the word 'NOTES' is printed in a bold, orange, sans-serif font on both the left and right sides. The rest of the page is filled with evenly spaced, thin black horizontal lines, providing a template for writing.