INNOVATION
SHAPE THE WORLD

ENERGY SAVING SERVO INJECTION MOLDING MACHINES FROM 50 TON TO 2300 TON

INNOVATION WAY INDUSTRIES L.L.C

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Servo & Advance Injection
MOULDING MACHINES

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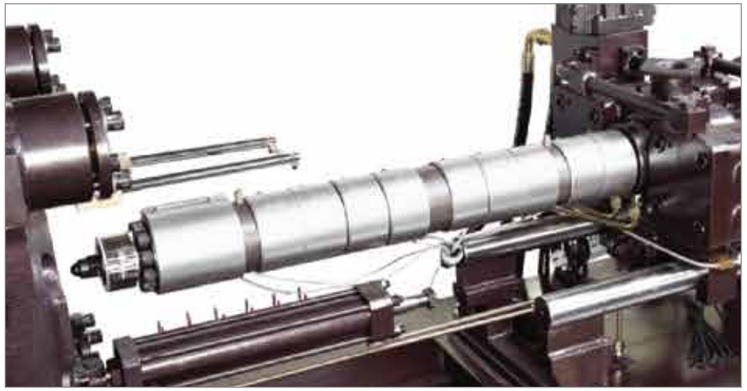
MACHINE FEATURES :

- Robust and Reliable 5 point twin-toggle mechanism
- Rugged clamp mechanism
- Low platen deflection and better mould life.
- Highly energy efficient advanced Servo/DP system
- Better injection performance
- Sub-flighted Screw for better melt homogeneity
- Advanced control system
- Statistical process control
- Highly efficient plate type oil cooler
- Quick response
- Lower dry cycle time
- Low noise and vibration
- Larger daylight and longer opening stroke.
- Wide and rigid clamping platens to accommodate large size moulds.
- Unique mould height adjustment
- Lesser oil requirement

Features & Options

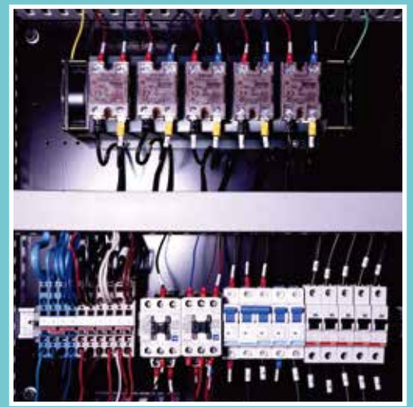


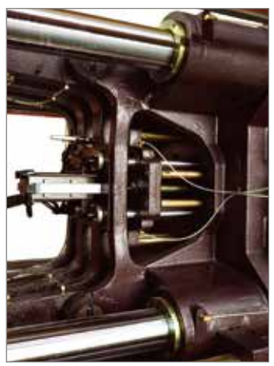
ELECTRIC UNIT :

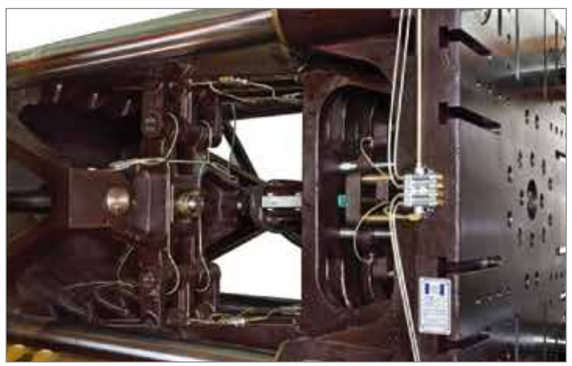
- Pre-setting oftechnical parameters
- Electricinterface or robot
- Protection lockfor parameter resource
- 10inch Large-scale color LCD screen
- The memory of mould in computer can reach 99 groups
- Live detection to show running condition ofeach motion
- Abnormal function alarm system
- Temperature deviation display
- Motor safe protection device
- Systematichardware I/O test function
- 3 Preparatory power plugs for out supply power
- Emergent stop protection function
- Electric appliance and hardware interwire interlock protection function
- Actual Graphics display : injection pressure, back pressure screw speed
- USB Interface
- Digital display (position, speed, pressure, temperature, servo, motor speed, torque & temperature)
- Quality monitoring
- Down time log
- Set of electrical power outlets 3-ph 1x16A, 1-Ph 1x10A
- Processing alarm
- Diagnosticfunction-alarm help menu
- Shift and batch production counters with rejection monitoring with automatic switch off feature
- LAN port for machine networking
- Hourly production data-1 year
- Operation indicator
- LED on solenoid to indicate status of valves
- Energy meter-display on HMI
- Multi-level password function

INJECTION UNIT :

- Double cylinder balance for injection structure insures the injection base moves in parallel
- Four-stage setting for injection speed, pressure and screw speed
- Three-stage setting for pressure holding/material charging speed, pressure and position
- Injection position monitoring function
- Injection position scale control
- Automatic material cleaning function
- Three option mode for suck back
- Anti skid aluminum patterned cover
- The temperature of barrel is controlled by computer PID
- Ceramic heating device of barrel
- Cooling temperature control system for barrel outlet
- Micro adjusting device of nozzle aiming
- Screw speed detection
- Modular selection of injection units
- Screw speed input in %
- Injection speed input in mm/s
- Nozzle guard with electrical interlock for operator safety







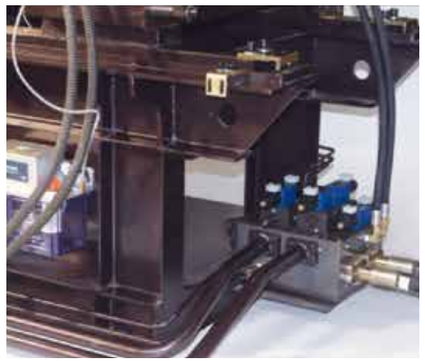
CLAMPING UNIT :

- Digital four-stage control for pressure, speed, position of mould opening and closing
- Water manifold
- Automatic centralized lubrication system
- High speed mould clamping function
- Special treated tie bar with reliable strength
- Opening/closing mould, injection position controlled by scale
- Automatic mould adjustment
- Computer optimised 5-Point twin toggle system, for fast, smooth platen movement and even distribution of clamp force
- Chrome plated tie bars
- Toggle bushing grease lubricated automatically: lubrication signals computer optimised under adaptive control
- Motorised mould height adjustment through sun & planetary gear mechanism
- Low pressure mould safety
- Low pressure and slow speed circuit for mould setup
- Central hydraulic ejector with multiple stroke feature
- Pressure speed programmable in 2 stage
- Central ejector rod
- Hydraulic and electrical interlocks for safety gates
- Mechanical drop bar for safety

Features & Options

OPTIONAL SETTING:

- Special screw for special material
- Mould temperature controller
- Ejection during mould opening device
- Multi-group core-pulling deviceInsulation board of platen
- Glass tube flow meter
- Auto loader
- Automatic safe door device
- High precision by pass filter system
- Proportional back pressure adjusting device
- PQ closed-loop control
- GSM connectivity for remote monitoring of machine status
- Robotinterface as perJIS

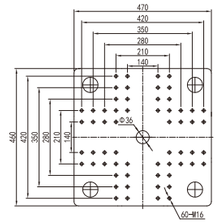
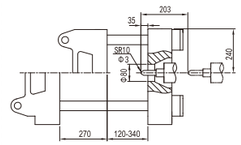
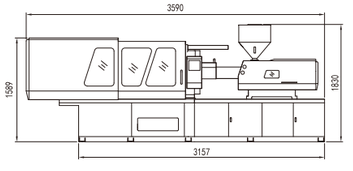
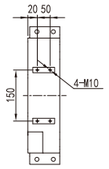
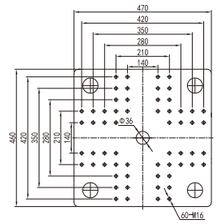
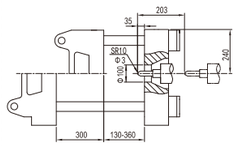
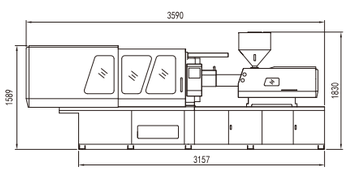
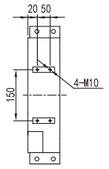
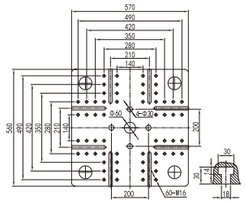
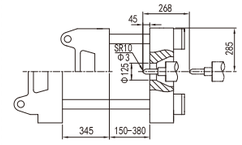
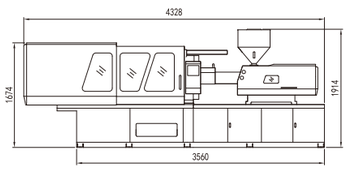
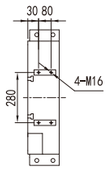


HYDRAULIC UNIT :

- Servo Pump system ofhigh-performance
- Low noise hydraulic control system
- Oil temperature deviation alarm system
- Oil temperature pre-heating function
- Tank oil level indicator
- Oil filter core jam alarm function
- Hydraulic oil cooling device
- Self-sealing oil filter oftank

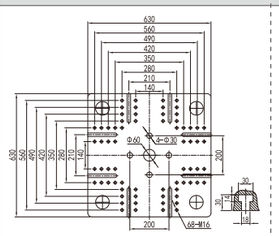
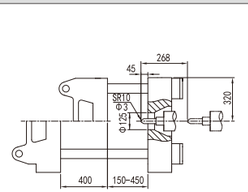
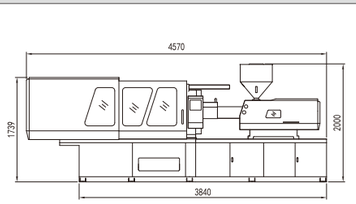
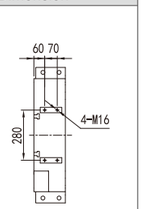
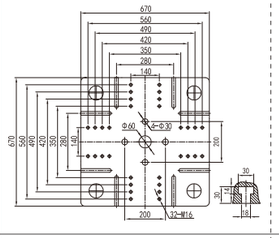
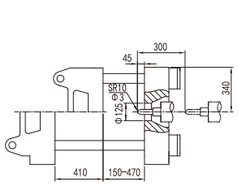
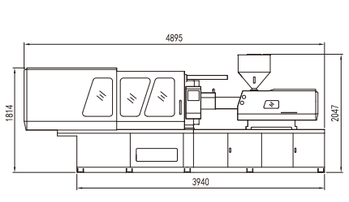
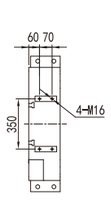
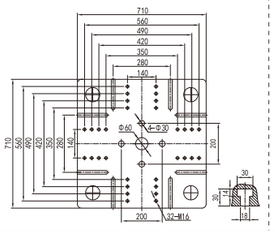
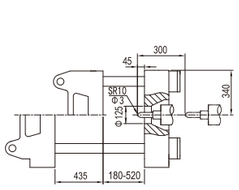
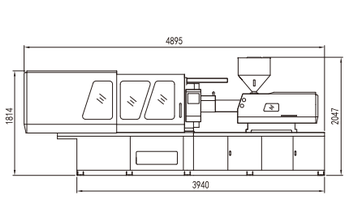
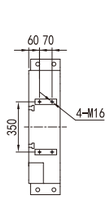
TECHNICAL PARAMETERS

MODEL		GX-50		GX-70			GX-90		
INJECTION UNIT		A	B	A	B	C	A	B	C
Screw Diameter	mm	28	32	32	34	36	35	38	36
Screw L/D Ratio	L/D	22	19	22.2	20.9	19.7	22.8	21	19.7
Injection Capacity	cm^3	67.5	88	112.6	127	142.5	152	179	142.5
Shot Weight (Ps)	g	61.5	80	102	115.6	129.7	138	163	129.7
Injection Rate	g/s	50	60	62	74	82	88	104	82
Injection Pressure	Mpa	207.5	168	215	190	170	219	186	170
Screw Stroke	mm	110		140			158		
Screw Speed	rpm	200		200			224		
Sphere Diameter of Nozzle	mm	SR10		SR10			SR10		
CLAMPING UNIT									
Clamping Force	KN	500		700			980		
Opening Stroke	mm	270		300			345		
Space Between Tie–Bars (WxH)	mm	280 x 280		330 x 330			380 x 370		
Platen Size	mm	430 x 430		470 x 470			570 x 560		
Max. Day Light Between Plates	mm	610		660			725		
Min.–Max. Mould Height	mm	120-340		130-360			150-380		
Ejector Stroke	mm	70		80			100		
Ejector Force	KN	25		31			48		
Ejector Number	Pcs	1		5			5		
Hole Diameter	mm	80H7		100H7			125H7		
OTHERS									
Max. Pump Pressure	Mpa	14		14			16		
Pump Motor Power (VDP)	KW	5.5		7.5			9		
Pump Motor Power (Servo)	KW	7.5		9			12		
Heating Power	KW	4.0		6			7.6		
Heating Section		4		4			3+1		
Oil Tank Capacity	L	100		130			170		
Machine Dimension (LxWxH)	m	3.2 x 1.15 x 1.7		3.6 x 1.15 x 1.7			4.33 x 1.16 x 1.92		
Machine Weight	t	2.2		2.5			3.8		

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-50				
GX-70				
GX-90				

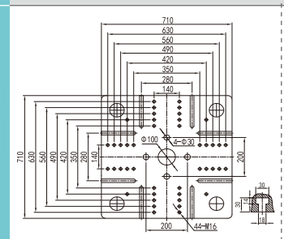
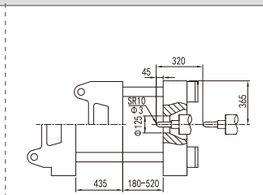
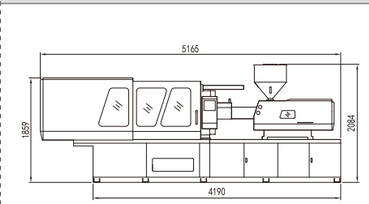
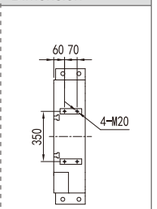
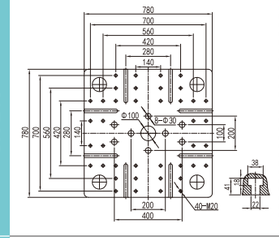
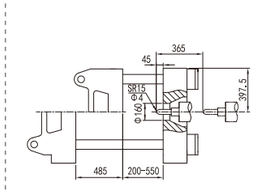
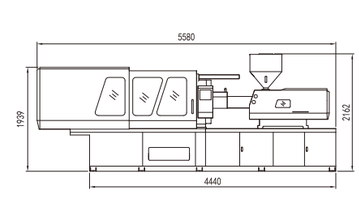
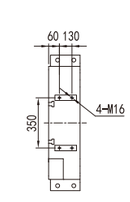
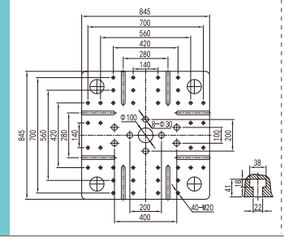
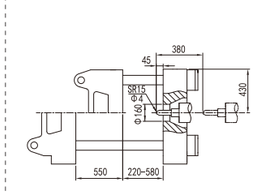
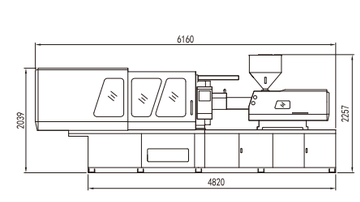
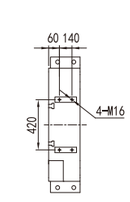
TECHNICAL PARAMETERS

MODEL		GX-110			GX-140			GX-160		
INJECTION UNIT		**A**	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**
Screw Diameter	mm	36	40	43	42	45	50	42	45	50
Screw L/D Ratio	L/D	23.3	21	19.5	22.5	21	18.9	22.5	21	18.9
Injection Capacity	cm^3	179	221	255	263	302	373	263	302	373
Shot Weight (Ps)	g	163	201	232	239	275	339	239	275	339
Injection Rate	g/s	87	108	125	125	143	177	125	143	177
Injection Pressure	Mpa	222	180	156	195	169	137	195	169	137
Screw Stroke	mm		176			190			190	
Screw Speed	rpm		224			200			200	
Sphere Diameter of Nozzle	mm		SR10			SR10			SR10	
CLAMPING UNIT										
Clamping Force	KN		1280			1580			1780	
Opening Stroke	mm		400			410			435	
Space Between Tie–Bars (WxH)	mm		410 x 410			440 x 440			470 x 470	
Platen Size	mm		630 x 630			670 x 670			710 x 710	
Max. Day Light Between Plates	mm		850			880			955	
Min.–Max. Mould Height	mm		150-450			150-470			180-520	
Ejector Stroke	mm		100			120			140	
Ejector Force	KN		48			38			53	
Ejector Number	Pcs		5			5			5	
Hole Diameter	mm		125H7			125H7			125H7	
OTHERS										
Max. Pump Pressure	Mpa		16			16			16	
Pump Motor Power (VDP)	KW		9			15			18.5	
Pump Motor Power (Servo)	KW		14			17.7			18.7	
Heating Power	KW		7.75			10.1			10.1	
Heating Section			3+1			3+1			3+1	
Oil Tank Capacity	L		200			232			250	
Machine Dimension (LxWxH)	m		4.57 x 1.20 x 2.00			4.90 x 1.26 x 2.05			5.17 x 1.31 x 2.09	
Machine Weight	t		4.3			5.0			5.4	

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-110				
GX-140				
GX-160				

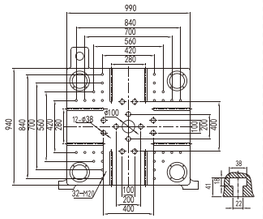
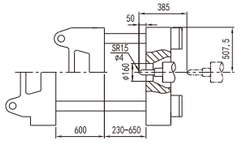
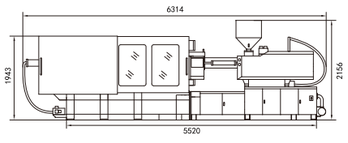
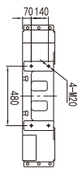
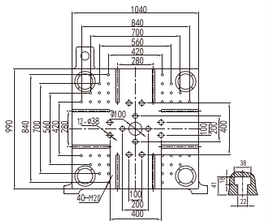
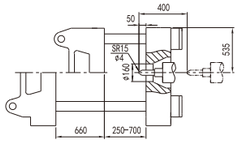
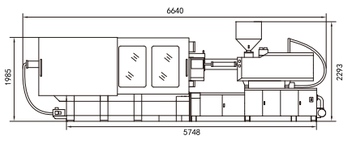
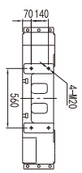
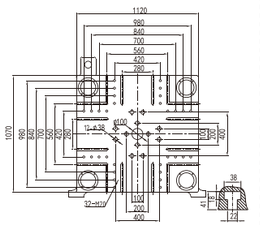
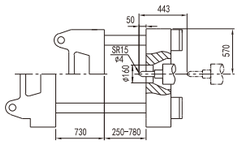
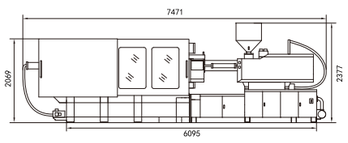
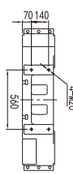
TECHNICAL PARAMETERS

MODEL		GX-180			GX-210			GX-260		
INJECTION UNIT		**A**	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**
Screw Diameter	mm	42	45	50	45	50	55	55	60	64
Screw L/D Ratio	L/D	22.2	20	23.3	23.3	21	19.1	22.9	21	19.7
Injection Capacity	cm^3	291	334	412	350	432	522	641	763	868
Shot Weight (Ps)	g	265	304	375	318	393	475	583	694	790
Injection Rate	g/s	141	162	200	145	180	217	190	226	257
Injection Pressure	Mpa	206	180	146	210	170	141	193	162.4	143
Screw Stroke	mm		210			220			270	
Screw Speed	rpm		200			180			189	
Sphere Diameter of Nozzle	mm		SR10			SR15			SR15	
CLAMPING UNIT										
Clamping Force	KN		1880			2180			2680	
Opening Stroke	mm		435			480			550	
Space Between Tie–Bars (WxH)	mm		470 x 470			520 x 520			580 x 580	
Platen Size	mm		710 x 710			780 x 780			845 x 845	
Max. Day Light Between Plates	mm		955			1035			1130	
Min.–Max. Mould Height	mm		180-520			200-550			220-580	
Ejector Stroke	mm		140			140			150	
Ejector Force	KN		53			70			70	
Ejector Number	Pcs		9			9			9	
Hole Diameter	mm		125H7			160H7			160H7	
OTHERS										
Max. Pump Pressure	Mpa		16			16			16	
Pump Motor Power (VDP)	KW		18.5			18.5			22	
Pump Motor Power (Servo)	KW		18.7			23			31	
Heating Power	KW		10.5			13.3			16.9	
Heating Section			4+1			4+1			4+1	
Oil Tank Capacity	L		250			300			400	
Machine Dimension (LxWxH)	m		5.17 x 1.31 x 2.09			5.58 x 1.39 x 2.17			6.16 x 1.47 x 2.26	
Machine Weight	t		5.9			6.8			7.9	

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-180				
GX-210				
GX-260				

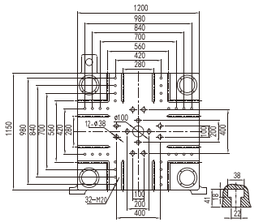
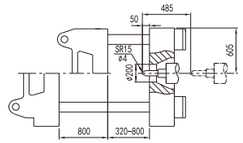
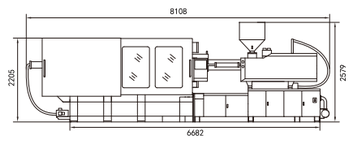
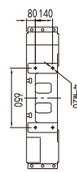
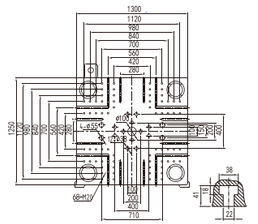
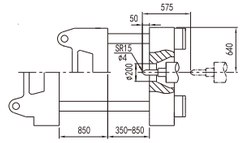
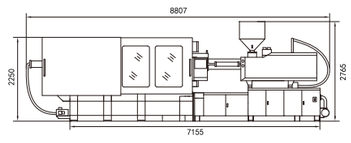
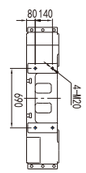
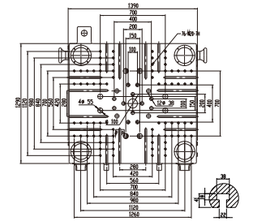
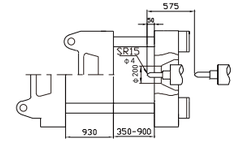
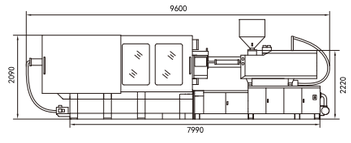
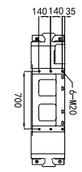
TECHNICAL PARAMETERS

MODEL		GX-310			GX-360			GX-410		
INJECTION UNIT		**A**	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**
Screw Diameter	mm	55	60	64	60	65	70	70	75	80
Screw L/D Ratio	L/D	22.9	21	19.7	22.8	21	19.5	22.5	21	19.7
Injection Capacity	cm^3	648	771	878	814	955	1108	1335	1532	1743
Shot Weight (Ps)	g	590	702	799	741	869	1008	1215	1394	1586
Injection Rate	g/s	211	251	285	245	287	333	305	350	398
Injection Pressure	Mpa	219	184	162	198	169	146	199	173	152
Screw Stroke	mm		273			288			347	
Screw Speed	rpm		238			167			179	
Sphere Diameter of Nozzle	mm		SR15			SR15			SR15	
CLAMPING UNIT										
Clamping Force	KN		3180			3680			4180	
Opening Stroke	mm		600			660			730	
Space Between Tie-Bars (WxH)	mm		680 x 630			730 x 680			780 x 730	
Platen Size	mm		990 x 940			1040 x 990			1120 x 1070	
Max. Day Light Between Plates	mm		1250			1360			1510	
Min.-Max. Mould Height	mm		230-650			250-700			250-780	
Ejector Stroke	mm		170			180			200	
Ejector Force	KN		70			70			110	
Ejector Number	Pcs		13			13			13	
Hole Diameter	mm		160H7			160H7			160H7	
OTHERS										
Max. Pump Pressure	Mpa		16			16			16	
Pump Motor Power (VDP)	KW		30			30			37	
Pump Motor Power (Servo)	KW		40.9			40.9			50.7	
Heating Power	KW		19.6			18.6			26	
Heating Section			4+1			4+1			4+1	
Oil Tank Capacity	L		600			640			720	
Machine Dimension (LxWxH)	m		6.32 x 2.03 x 2.16			6.64 x 2.09 x 2.30			7.48 x 2.17 x 2.38	
Machine Weight	t		11			13.4			15.5	

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-310				
GX-360				
GX-410				

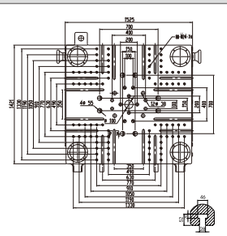
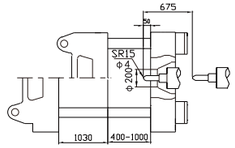
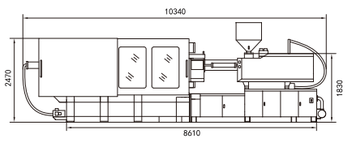
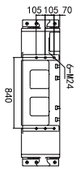
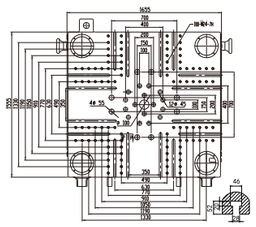
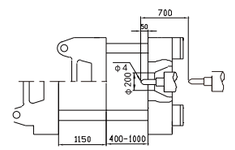
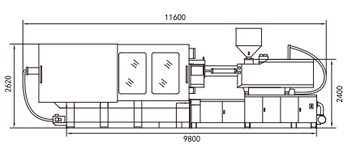
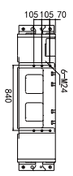
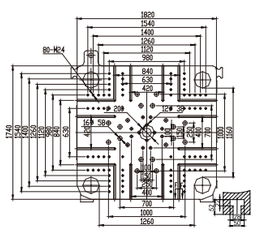
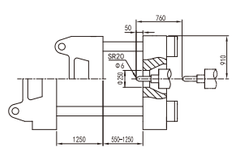
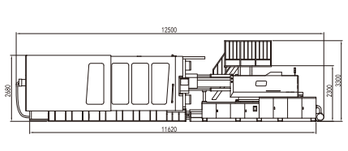
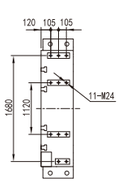
TECHNICAL PARAMETERS

MODEL		GX-460			GX-560			GX-660		
INJECTION UNIT		**A**	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**
Screw Diameter	mm	75	80	85	80	85	90	95	100	105
Screw L/D Ratio	L/D	22.4	21	10.8	22.3	21	19.8	19.9	18.9	18.0
Injection Capacity	cm^3	1722	1959	2212	2185	2467	2766	3294	3650	4327
Shot Weight (Ps)	g	1567	1783	2013	1989	2245	2517	2998	3322	3938
Injection Rate	g/s	397	452	510	412	465	521	658	729	804
Injection Pressure	Mpa	196	172	152	189	167	149	161	146	138
Screw Stroke	mm		390			435			465	
Screw Speed	rpm		178			150			143	
Sphere Diameter of Nozzle	mm		SR15			SR15			SR15	
CLAMPING UNIT										
Clamping Force	KN		4880			5880			6680	
Opening Stroke	mm		800			850			930	
Space Between Tie-Bars (WxH)	mm		830 x 780			880 x 830			960 x 880	
Platen Size	mm		1200 x 1150			1300 x 1250			1390 x 1290	
Max. Day Light Between Plates	mm		1600			1700			1830	
Min.-Max. Mould Height	mm		320-800			350-850			350-900	
Ejector Stroke	mm		220			240			250	
Ejector Force	KN		110			158			158	
Ejector Number	Pcs		13			17			21	
Hole Diameter	mm		200H7			200H7			200H7	
OTHERS										
Max. Pump Pressure	Mpa		16			16			17.5	
Pump Motor Power (VDP)	KW		45			55			30+30	
Pump Motor Power (Servo)	KW		26.7+26.7			26.7+26.7			40.9+40.9	
Heating Power	KW		31			34.6			41	
Heating Section			4+1			4+1			5+1	
Oil Tank Capacity	L		850			950			1000	
Machine Dimension (LxWxH)	m		8.11 x 2.18 x 2.58			8.81 x 2.26 x 2.77			9.80 x 2.38 x 2.35	
Machine Weight	t		19.6			22.4			29.5	

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-460				
GX-560				
GX-660				

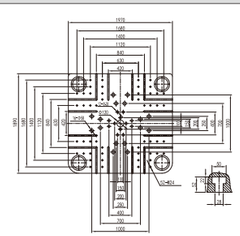
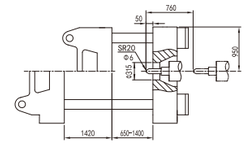
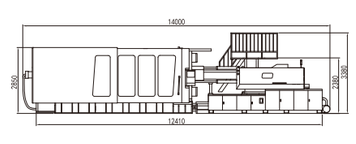
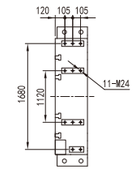
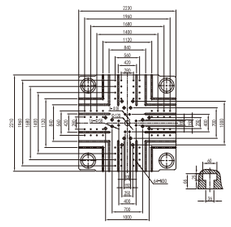
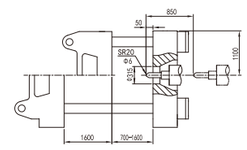
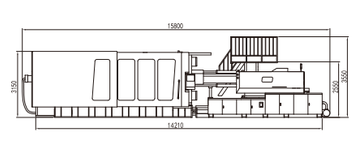
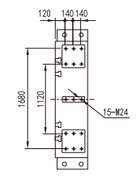
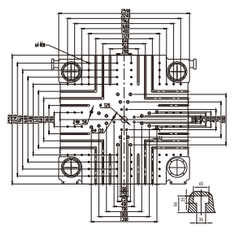
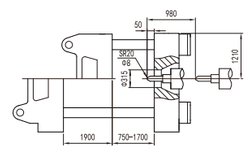
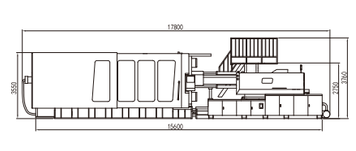
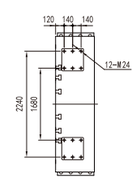
TECHNICAL PARAMETERS

MODEL		GX-800			GX-980			GX-1200			
INJECTION UNIT		**A**	**B**	**C**	**A**	**B**	**C**	**A**	**B**	**C**	**D**
Screw Diameter	mm	105	110	115	110	120	125	100	110	120	130
Screw L/D Ratio	L/D	19.9	19.0	21	20.0	18.3	20	24.2	22	20.2	20
Injection Capacity	cm^3	4154	4939	5502	4752	6217	8340	4318	5224	6217	9419
Shot Weight (Ps)	g	3780	4495	5007	4324	5658	6088	3929	4754	5658	8571
Injection Rate	g/s	827	908	1080	910	1083	1061	754	912	1086	1208
Injection Pressure	Mpa	150	140	130	152	144	135	211	175	147	132
Screw Stroke	mm	520			500			550			
Screw Speed	rpm	129			100			111			
Sphere Diameter of Nozzle	mm	SR20			SR200			SR20			
CLAMPING UNIT											
Clamping Force	KN	8000			9800			12000			
Opening Stroke	mm	1030			1150			1250			
Space Between Tie-Bars (WxH)	mm	1060 x 980			1160 x 1080			1260 x 1180			
Platen Size	mm	1525 x 1421			1655 x 1555			1820 x 1740			
Max. Day Light Between Plates	mm	2030			2250			2500			
Min.-Max. Mould Height	mm	400-1000			400-1100			550-1250			
Ejector Stroke	mm	280			300			350			
Ejector Force	KN	215			215			269			
Ejector Number	Pcs	21			21			29			
Hole Diameter	mm	200H7			200H7			250H7			
OTHERS											
Max. Pump Pressure	Mpa	17.5			17.5			17.5			
Pump Motor Power (VDP)	KW	30+37			45+45			——			
Pump Motor Power (Servo)	KW	40.9+50.7			50.7+50.7			40.9+40.9+40.9			
Heating Power	KW	45.1			55.2			65.5			
Heating Section		5+1			5+1			5+1			
Oil Tank Capacity	L	1100			1250			1450			
Machine Dimension (LxWxH)	m	10.6 x 2.6 x 3.22			11.6 x 2.78 x 3.4			12.5 x 2.85 x 3.3			
Machine Weight	t	39.2			51.4			65.4			

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-800				
GX-980				
GX-1200				

TECHNICAL PARAMETERS

MODEL		GX-1400				GX-1700				GX-2300			
INJECTION UNIT		**A**	**B**	**C**	**D**	**A**	**B**	**C**	**D**	**A**	**B**	**C**	**D**
Screw Diameter	mm	110	120	130	140	130	140	150	160	150	160	170	180
Screw L/D Ratio	L/D	24	22	20.3	20	23.7	22	20.4	20	23.5	22	20.7	19.6
Injection Capacity	cm^3	5702	6785	7963	11231	9158	10621	12193	16600	14130	16077	18149	24925
Shot Weight (Ps)	g	5189	6174	7246	10220	8333	9665	11095	15178	12858	14630	16516	22681
Injection Rate	g/s	938	1116	1310	1331	1148	1332	1529	1647	1533	1744	1969	2084
Injection Pressure	Mpa	198	167	142	135	185	160	139	132	173	152	135	131
Screw Stroke	mm	600				690				800			
Screw Speed	rpm	103				98				100			
Sphere Diameter of Nozzle	mm	SR20				SR20				SR20			
CLAMPING UNIT													
Clamping Force	KN	14000				17000				23000			
Opening Stroke	mm	1420				1600				1900			
Space Between Tie-Bars (WxH)	mm	1360 x 1280				1560 x 1480				1820 x 1620			
Platen Size	mm	1970 x 1890				2230 x 2210				2590 x 2550			
Max. Day Light Between Plates	mm	2820				3200				3600			
Min.-Max. Mould Height	mm	650-1400				700-1600				750-1700			
Ejector Stroke	mm	350				400				400			
Ejector Force	KN	269				350				430			
Ejector Number	Pcs	29				25				29			
Hole Diameter	mm	315H7				315H7				315H7			
OTHERS													
Max. Pump Pressure	Mpa	17.5				17.5				17.5			
Pump Motor Power (VDP)	KW	——				——				——			
Pump Motor Power (Servo)	KW	40.9+50.7+50.7				41+41+41+41				50.7+50.7+50.7+50.7			
Heating Power	KW	77.5				98.4				133			
Heating Section		5+1				6+1				6+2			
Oil Tank Capacity	L	1700				2500				2000			
Machine Dimension (LxWxH)	m	14 x 2.95 x 3.38				15.8 x 3.3 x 3.6				16.8 x 4.7 x 5.3			
Machine Weight	t	75				109				147			

	Platen Dimension	Mould Space Dimension	Machine Dimension	Robot Installation Dimension
GX-1400				
GX-1700				
GX-2300				

MEMORANDUM