

WIZ[⚡]E

18 ~ 850
TON

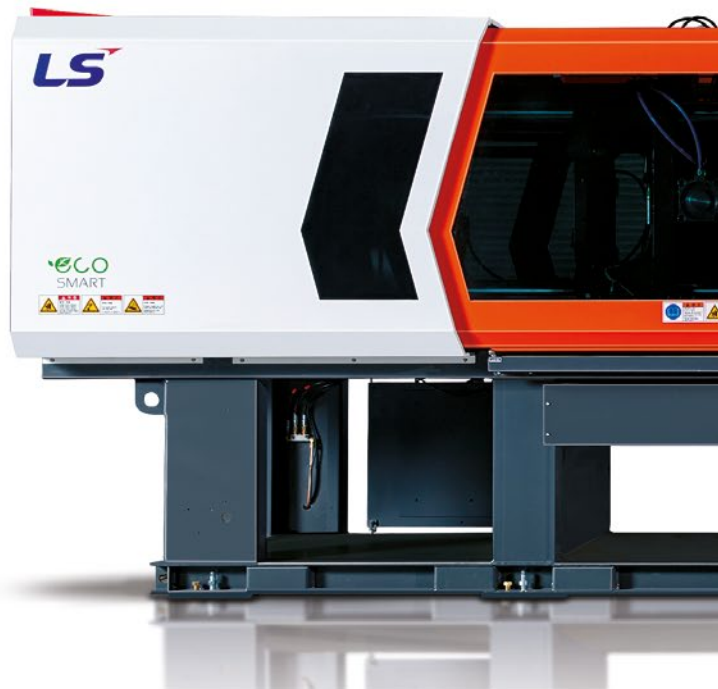
SERIES



**FULL ELECTRIC
INJECTION MOLDING
MACHINES**



www.elver.com.tr



WIZ - E Series

New Wiz - E Series
Overview & Features

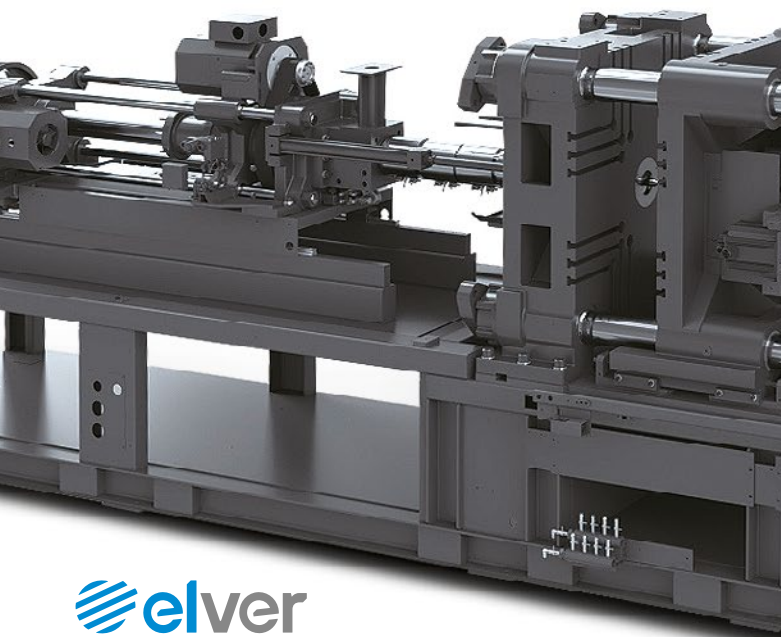
4



HICOM Gamma

New Wiz - E High Speed
Control System

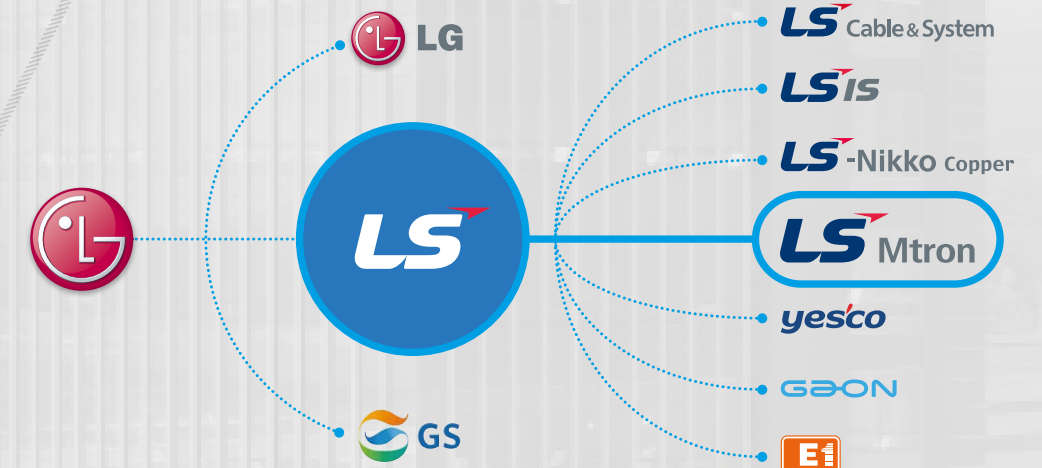
8



Technical Data

New Wiz - E Series
Technical Data & Drawing

12



your
solution
partner

NEW WIZ-E SERIES 18 ~ 850 TON

FULL ELECTRIC INJECTION MOLDING MACHINES

DESIGNED FOR EFFICIENCY

The WIZ-E Series is the result of years of research and experience in the development and manufacture of injection molding machines.

These exceptional machines combine the benefits of servo electric technology, an injection speed/

pressure control algorithm, conformance to safety standards, a 5-point toggle clamping system designed by FEA analysis, and a high speed injection molding mechanism.

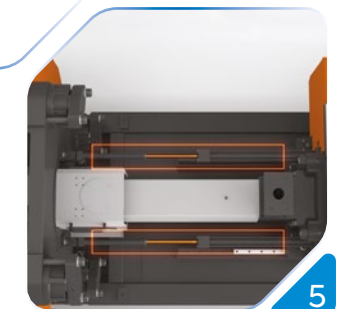
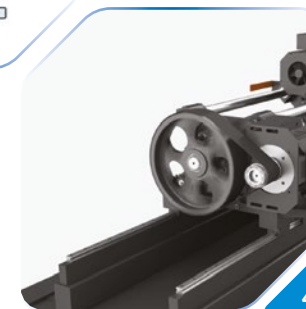
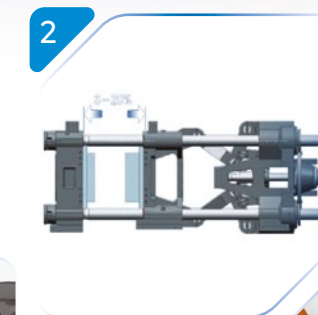
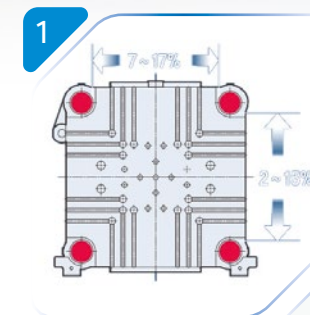


LS Mtron

NEW WIZ-E SERIES ELECTRIC IMM OVERVIEW

- 1 Largest platen within same tonnage
→ New centerpressed rigid platen
→ Extend tie bar distance (80 ~ 400 Ton)
- Horizontal 7% ~ 17% UP x Vertical 2% ~ 15% UP
compare to previous model
- 2 Extended daylight (80 ~ 400 Ton)
→ 3% ~ 20% up compare to previous model
- 3 Increased injection volume (18 ~ 350 Ton)
→ 13% ~ 27% up compare to previous model
- 4 High speed injection 500mm/s 18 ~ 400 Ton (Optional)

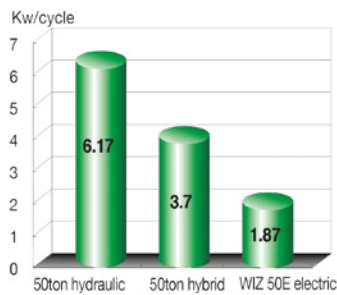
- 5 Major optional fuction applied as standard
→ Air blow off unit, product chute
→ Ejector retreat confirmation
→ Valve gate circuit
- 6 Dual nozzle touch cylinde (Zero moment)
- 7 Quick response load cell (NMB)



ENERGY SAVING, LESS NOISE & CLEAN MOLDING

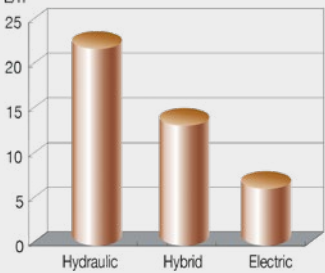
LESS THAN 70DB SOUND-LEVEL

Comparison of power consumption

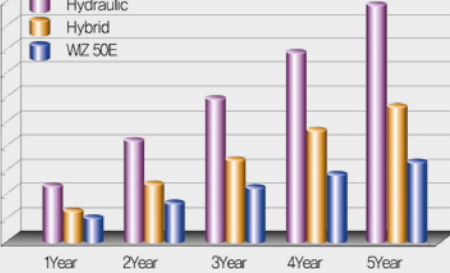


NO OIL USAGE

Comparison of cooling water



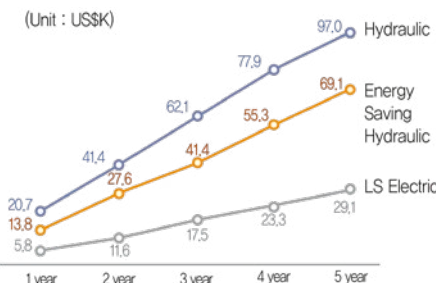
Comparison of annual electricity cost



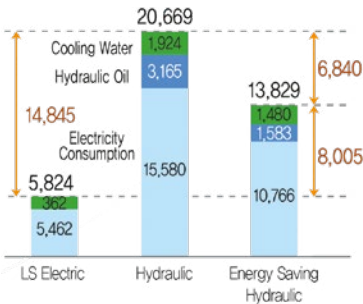
ECONOMIC FEASIBILITY COMPARISON OF 350 TON IMM

Electric IMM can save us 17,000 / 1 year compare to standart hydraulic IMM

Annual comparison



Comparison 1 year



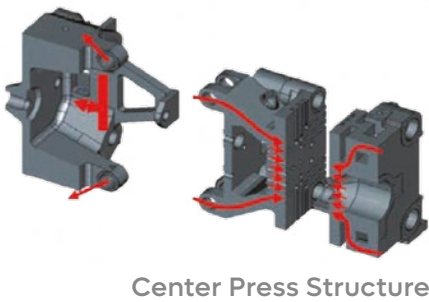
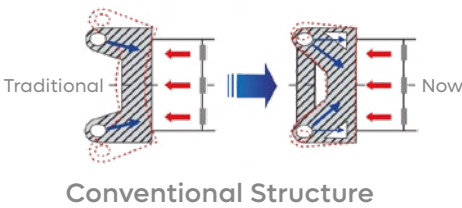
Data comparison

Item	LS Electric	Hydraulic	Energy Saving Hydraulic
Power consumption (kw)	10.34	25.85	18.1
Operating Oil (litter)	0	1000	500
Quantity of cooling water (l/min)	12.3	65	50

Cooling water for mold has been excluded in calculation

CENTER PRESS STRUCTURE & EUROMAP EJECTOR

- 1 Improve productivity multi cavity
- 2 Unity the Euromap ejector



STRUCTURE & FEATURES

- 1 Precise injection by Synchronous control (2motor / 2axis)
- 2 Advanced %20 of injection capacity comparing with other company's electric model
- 3 Center press type prevents bad molding & provides long mold life cycle
- 4 Recovery the electricity for injection by %13 during injection speed reduction
- 5 Maintaining stable clamping force to adjust Tie - Bar balance in the case of thermal expansion in mold or using small size mold

5 POINT HIGH SPEED CLAMPING SYSTEM & RIGID INJECTION MECHANISM

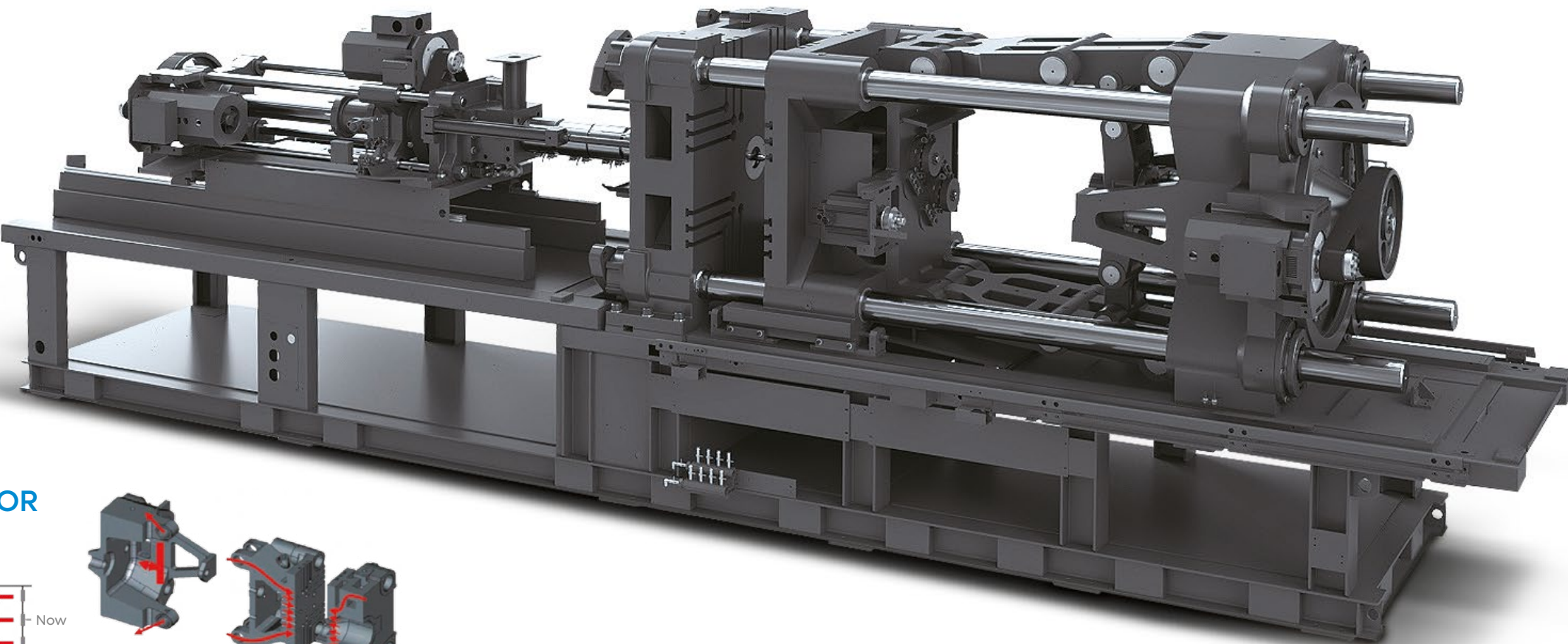
5 point toggle high speed clamping unit and high intensity injection mechanism

High speed injection mechanism by adopting a high response high torque servo motor



STRONG & QUICK RESPONSE AC SERVO MOTOR

Injection speed up to 800mm/s and multi - step injecton speed control produced by a high - output and high response motor.

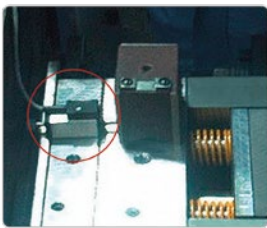


PRECISE INJECTION & COMPRESSION CONDITION CONTROL

Excellent molding repeatability through quick response closed loop control



Parting line open value sensor (Option)



Clamping force sensor (Option)

HICOM - GAMMA

HIGH SPEED CONTROL SYSTEM

USER FRIENDLY OPERATION

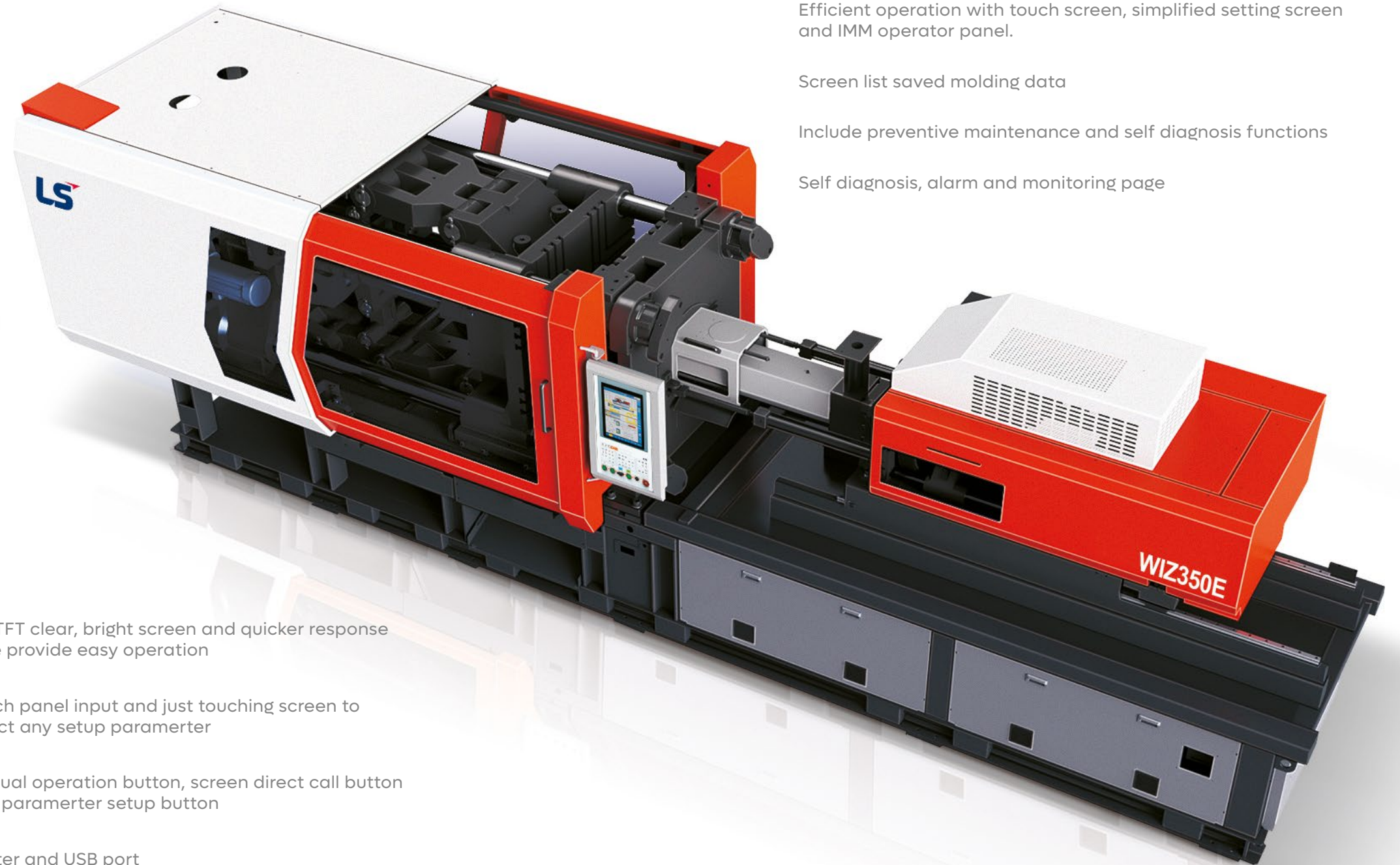
A usb inserted in to a side slot in the monitor panel saves the mold parameters can be copied to other machines

Efficient operation with touch screen, simplified setting screen and IMM operator panel.

Screen list saved molding data

Include preventive maintenance and self diagnosis functions

Self diagnosis, alarm and monitoring page



15,1 TFT clear, bright screen and quicker response time provide easy operation

Touch panel input and just touching screen to select any setup parameter

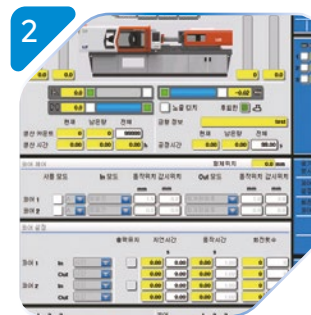
Manual operation button, screen direct call button and parameter setup button

Printer and USB port

HICOM GAMMA MAIN FUNCTION →



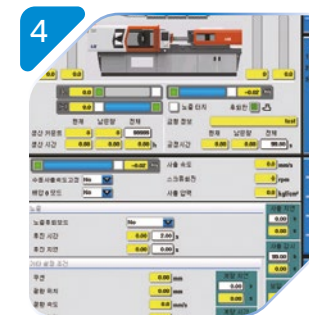
↑ Clamp



↑ Core



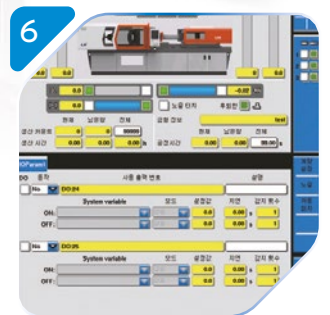
↑ Injection



↑ Charging



↑ Select Function



↑ Setting IO

LS PROCESS MONITORING SYSTEM



3G USIM



Server



Wifi Router



→ Status for each machine

→ Each hourly operating history

→ Productivity status for each machine

→ A graph display for monitoring

OPC VERSION 2.0

LS PROCESS MONITORING SYSTEM FEATURES

Facility layout configuration like customer's factory layout

Production volume and alarm / operation mode display

Managing a molding conditions upload / download between the server and the machine

The graph display item (cycle time, temperature, cushions, etc)

Component; Server (Windows XP or later) S/W CD, Licenses for each machines

Supporting a Real - Time operating information of injection molding machine

Introducing a professional development companies when customer request suitable OPC client function

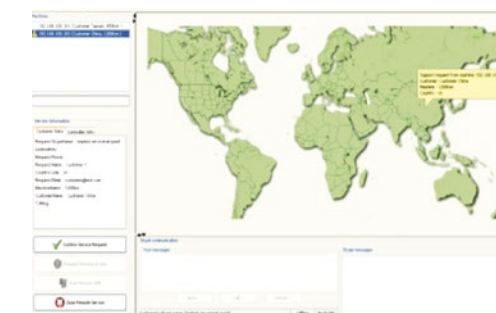
LSPMS - G / OPC

LSPMS - G / OPC interface to work with customer ERP

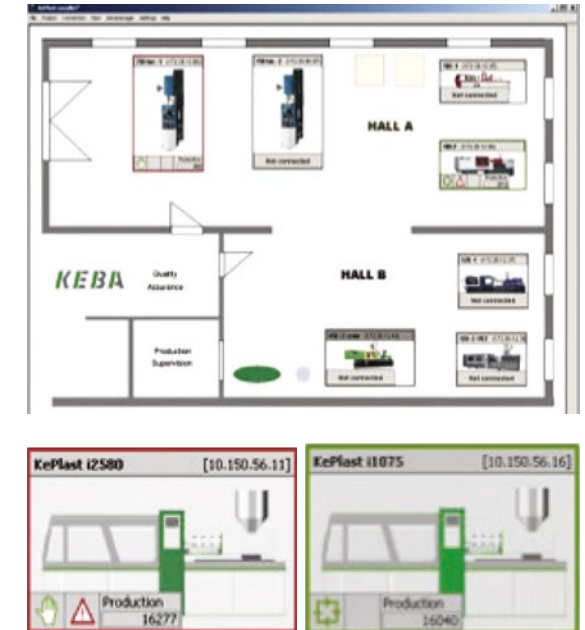
Remote Office Internet Connection



Office Wifi / Internet



Factory layout design by monitoring PC



WIZ 80E SERIES TECHNICAL DATA

INJECTION UNIT

Injection Unit Code		i1.7(80t)			i2.4(110t)		
Screw Type		Y	A	B	Y	A	B
Screw Diameter		mm	25	28	32	28	32
Screw Stroke		mm	140	140	140	140	160
Injection Capacity Calculated		cm³	69	86	113	86	129
Injection Capacity	PS	g	63	79	104	79	118
	PE	g	50	63	82	63	94
Standard	Max. Injection Pressure		Mpa	246	196	150	236
			kgf/cm²	2.510	2.000	1.530	2.410
	Max. Holding Pressure		Mpa	222	177	135	213
			kgf/cm²	2.259	1.800	1.377	2.169
	Injection Rate		cm³/s	98	123	161	123
High Speed	Injection Speed		mm/sec	200		200	
	Max. Injection Pressure		Mpa	246	196	150	236
			kgf/cm²	2.510	2.000	1.530	2.410
	Max. Holding Pressure		Mpa	222	177	135	213
			kgf/cm²	2.259	1.800	1.377	2.169
Super High Speed	Injection Rate		cm³/s	147	185	241	185
	Injection Speed		mm/sec	300		300	
	Max. Injection Pressure		Mpa	246	196	150	236
			kgf/cm²	2.510	2.000	1.530	2.410
	Max. Holding Pressure		Mpa	222	177	135	213
Charging			kgf/cm²	2.259	1.800	1.377	2.169
	Injection Rate		cm³/s	245	308	402	308
	Injection Speed		mm/sec	500		500	
	Plasticizing Capacity(PS)		kg/h	36	47	59	47
	Screw Speed		rpm	400		400	

CLAMPING UNIT

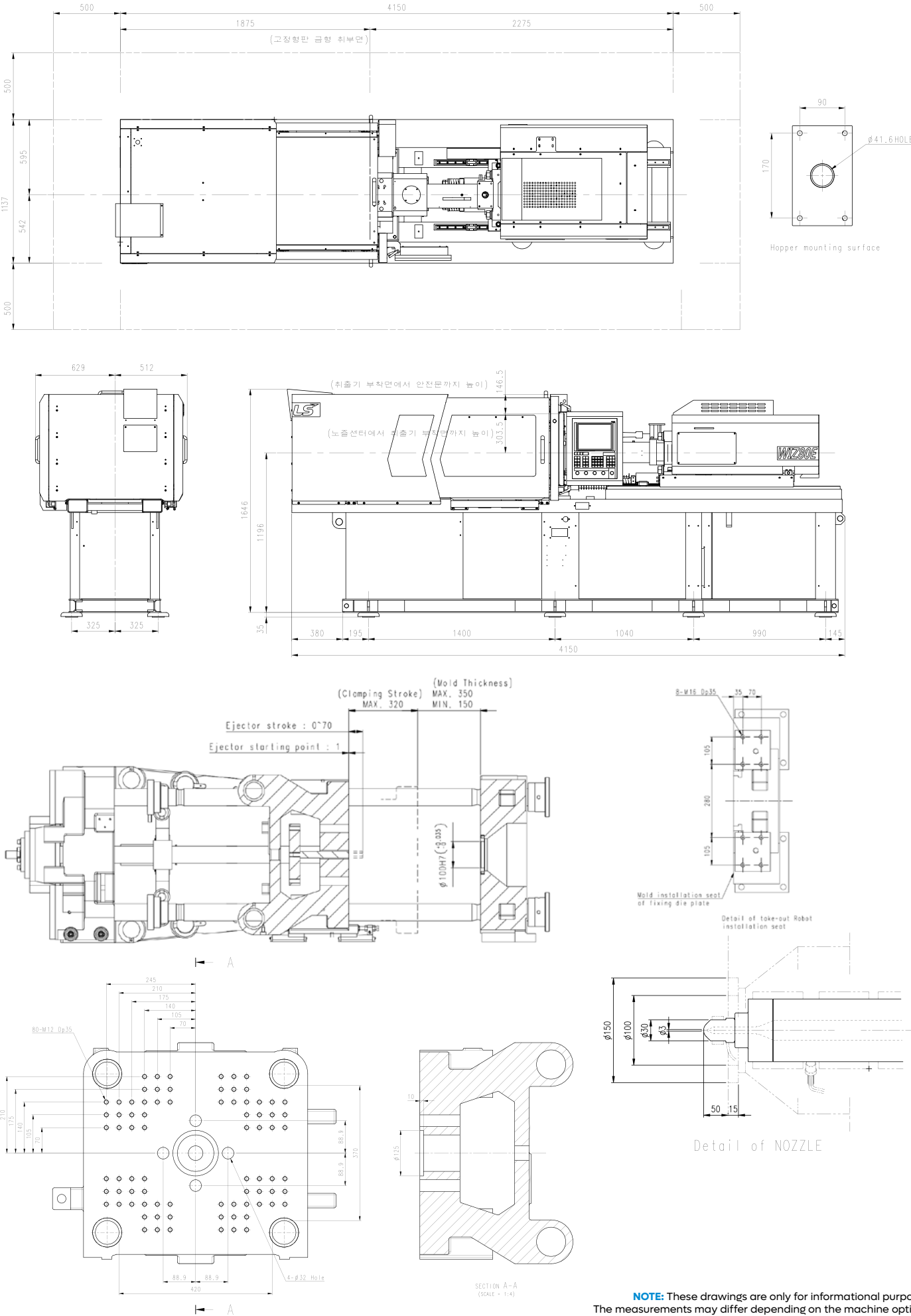
Clamping Unit		ton(kN)	80 (784)
Tie Bar Distance	HxV	mm	420 x 370
Clamping Stroke		mm	320
Daylight	max.	mm	670
Die Plate Dimension	HxV	mm	615 x 555
Mold Thickness		mm	150 x 350
Ejector Force		ton	2
Ejector Stroke		mm	70

GENERAL

Heater	kw	8,3	9,7	12,3	9,7	12,5	14,5
Machine Demension : L x W x H		m	4.15 x 1.20 x 1.65		4.55 x 1.20 x 1.65		
Machine Weight		ton	4,0		4,2		

- NOTE:
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
 - 5) Mold size must be over 60% of tie bar distance
 - 6) This specification can be modified without notice in order to development of machine quality

WIZ 80E SERIES TECHNICAL DRAWING



NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

WIZ 110E SERIES TECHNICAL DATA

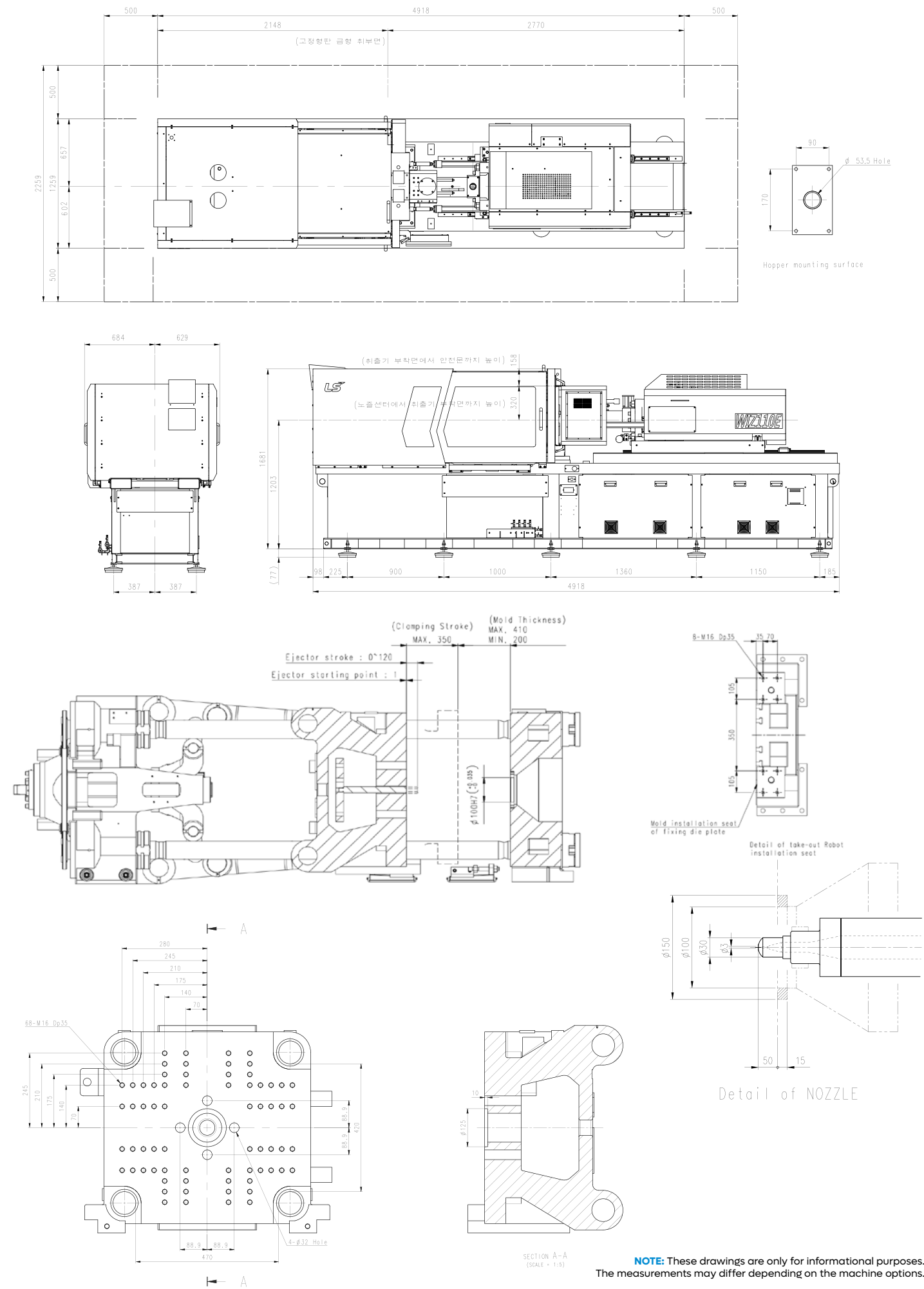
INJECTION UNIT											
Injection Unit Code			i1.2(110t)	i1.9(110t)	i2.4(110t)			i3.6(170t)			
Screw Type			YYY	YY	Y	A	B	Y	A	B	
Screw Diameter		mm	22	25	28	32	36	32	36	40	
Screw Stroke		mm	110	140	140	160	160	160	180	180	
Injection Capacity Calculated		cm³	42	69	86	129	163	129	183	226	
Injection Capacity		PS	g	38	63	79	118	150	118	169	208
		PE	g	31	50	63	94	119	94	134	165
Standard	Max. Injection Pressure		Mpa	294	275	236	181	143	242	191	155
			kgf/cm²	3.000	2.800	2.410	1.850	1.460	2.470	1.950	1.580
	Max. Holding Pressure		Mpa	265	247	213	163	129	218	172	139
			kgf/cm²	2.700	2.520	2.169	1.665	1.314	2.223	1.755	1.422
	Injection Rate		cm³/s	76	98	123	161	204	121	153	188
Injection Speed		mm/sec	200					150			
High Speed	Max. Injection Pressure		Mpa	294	275	236	181	143	242	191	155
			kgf/cm²	3.000	2.800	2.410	1.850	1.460	2.470	1.950	1.580
	Max. Holding Pressure		Mpa	265	247	213	163	129	218	172	139
			kgf/cm²	2.700	2.520	2.169	1.665	1.314	2.223	1.755	1.422
	Injection Rate		cm³/s	114	147	185	241	305	241	305	377
Injection Speed		mm/sec	300					300			
Super High Speed	Max. Injection Pressure		Mpa	294	275	236	181	143	242	191	155
			kgf/cm²	3.000	2.800	2.410	1.850	1.460	2.470	1.950	1.580
	Max. Holding Pressure		Mpa	265	247	213	163	129	218	172	139
			kgf/cm²	2.700	2.520	2.169	1.665	1.314	2.223	1.755	1.422
	Injection Rate		cm³/s	190	245	308	402	509	402	509	628
Injection Speed		mm/sec	500					500			
Charging	Plasticizing Capacity(PS)		kg/h	26	36	47	59	85	52	74	99
	Screw Speed		rpm	400					350		

CLAMPING UNIT									
Clamping Unit	Clamping Force	ton(kN)	110 (1,080)						
	Tie Bar Distance	HxV	mm	470 x 420					
	Clamping Stroke		mm	350					
	Daylight	max.	mm	760					
	Die Plate Dimension	HxV	mm	680 x 630					
	Mold Thickness		mm	200 x 410					
	Ejector Force		ton	2,5					
	Ejector Stroke		mm	120					

GENERAL									
Heater	kw	5,6	8,3	9,7	12,5	14,5	12,5	14,5	14,2
Machine Demension : L x W x H	m	4.92 x 1.31 x 1.68					5.12 x 1.31 x 1.68		
Machine Weight	ton	5,5					5,7		

- NOTE:
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
 - 5) Mold size must be over 60% of tie bar distance
 - 6) This specification can be modified without notice in order to development of machine quality

WIZ 110E SERIES TECHNICAL DRAWING



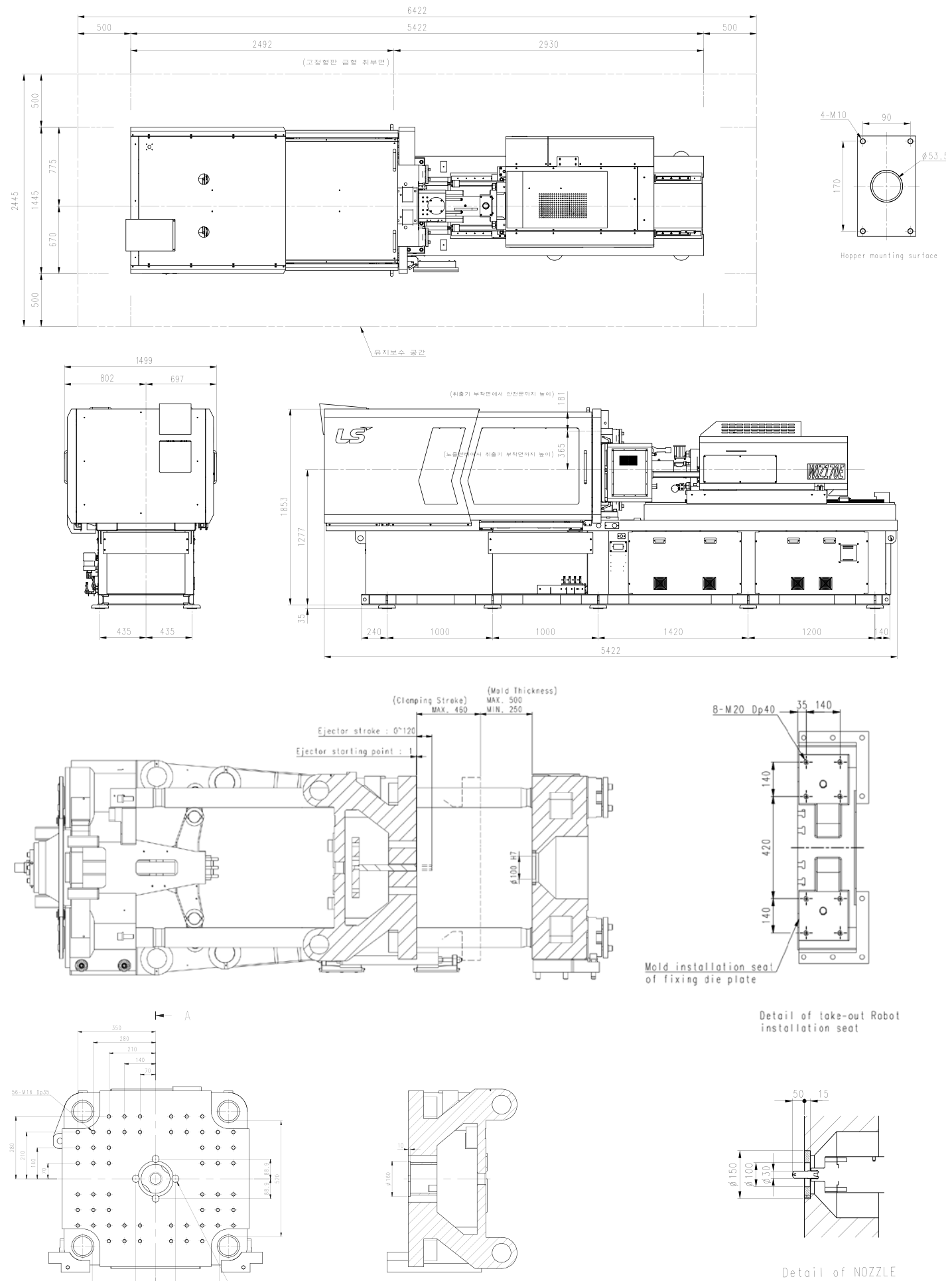
NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

INJECTION UNIT											
Injection Unit Code			i2.4(170t)	i3.6(170t)			i4.7(170t)	i5.8(220t)			
Screw Type			YY	Y	A	B	C	Y	A	B	
Screw Diameter		mm	28	32	36	40	45	36	40	45	
Screw Stroke		mm	160	160	180	180	180	180	220	220	
Injection Capacity Calculated		cm³	99	129	183	226	286	183	276	350	
Injection Capacity		PS	g	91	118	169	208	263	169	254	322
		PE	g	72	94	134	165	209	134	202	255
Standard	Max. Injection Pressure		Mpa	242	242	191	155	163	254	206	163
			kgf/cm²	2.470	2.470	1.950	1.580	1.660	2.590	2.100	1.660
	Max. Holding Pressure		Mpa	218	218	172	139	147	229	185	147
			kgf/cm²	2.223	2.223	1.755	1.422	1.494	2.331	1.890	1.494
	Injection Rate		cm³/s	92	121	153	188	239	153	188	239
Injection Speed		mm/sec	150					150			
High Speed	Max. Injection Pressure		Mpa	242	242	191	155		270	221	177
			kgf/cm²	2.470	2.470	1.950	1.580		2.750	2.250	1.800
	Max. Holding Pressure		Mpa	218	218	172	139		243	199	159
			kgf/cm²	2.223	2.223	1.755	1.422		2.475	2.025	1.620
	Injection Rate		cm³/s	185	241	305	377		305	377	477
Injection Speed		mm/sec	300					300			
Super High Speed	Max. Injection Pressure		Mpa	242	242	191	155	147	240	191	152
			kgf/cm²	2.470	2.470	1.950	1.580	1.500	2.450	1.950	1.550
	Max. Holding Pressure		Mpa	218	218	172	139	132	216	172	137
			kgf/cm²	2.223	2.223	1.755	1.422	1.350	2.205	1.755	1.395
	Injection Rate		cm³/s	308	402	509	628	795	509	628	795
Injection Speed		mm/sec	500					500			
Charging	Plasticizing Capacity(PS)		kg/h	41	52	74	99	130	64	85	111
	Screw Speed		rpm	350					300		

CLAMPING UNIT				
Clamping Unit	Clamping Force		ton(kN)	170 (1,666)
	Tie Bar Distance	HxV	mm	570 x 520
	Clamping Stroke		mm	460
	Daylight	max.	mm	960
	Die Plate Dimension	HxV	mm	840 x 790
	Mold Thickness		mm	250 x 500
	Ejector Force		ton	3,5
	Ejector Stroke		mm	120

GENERAL									
Heater	kw	9,7	12,5	14,5	14,2	11,7	14,5	14,0	16,1
Machine Demension : L x W x H	m	5.42 x 1.50 x 1.85					5.82 x 1.50 x 1.85		
Machine Weight	ton	7,5					8,0		

- NOTE:**
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
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NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

INJECTION UNIT

CLAMPING UNIT

GENERAL

NOTE:

- NOTE:** These drawings are only for informational purposes. The measurements may differ depending on the machine options.

Technical drawing of the WZ220C die casting machine, showing various views and dimensions:

- Top View:** Shows the overall dimensions of the machine. Key dimensions include 500, 2765, 7280, 6280, 3515, and 500. A note indicates "(고장판 금형 위부분)" (Top of mold plate). A detail view shows a 4-M10 Top, 90, and a $\phi 62.3$ Hole. A note indicates "Hopper mounting surface".
- Front View:** Shows the machine's profile. Key dimensions include 1591, 843, 748, and 500. A note indicates "유지 보수 공간" (Maintenance space).
- Side View:** Shows the machine's side profile. Key dimensions include 1635, 865, 770, 505, and 505. A note indicates "(최종기 부직면에서 안전판까지 높이)" (Height from final die face to safety plate).
- Bottom View:** Shows the machine's base. Key dimensions include 1935, 1324, 140, 1170, 1145, 1595, 1370, and 140. A note indicates "(노출면에서 최종기 부직면까지 높이)" (Height from exposed surface to final die face).
- Section A-A:** Shows a cross-section of the machine. Key dimensions include 1000 $\pm$ 7 (ϕ 353). A note indicates "(Clamping Stroke) (Mold Thickness) MAX. 550 MIN. 270". A note indicates "Ejector stroke : 0~130". A note indicates "Ejector starting point : 1".
- Detail of take-out Robot installation seat:** Shows a detail view of the robot installation seat. Key dimensions include 8-M20 Dp40, 35, 140, 140, 560, and 140. A note indicates "Mold installation seat of fixing die plate".
- Detail of NOZZLE:** Shows a detail view of the nozzle. Key dimensions include 50, 15, $\phi 150$, $\phi 100$, and $\phi 50$.

NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

WIZ 280E SERIES TECHNICAL DATA

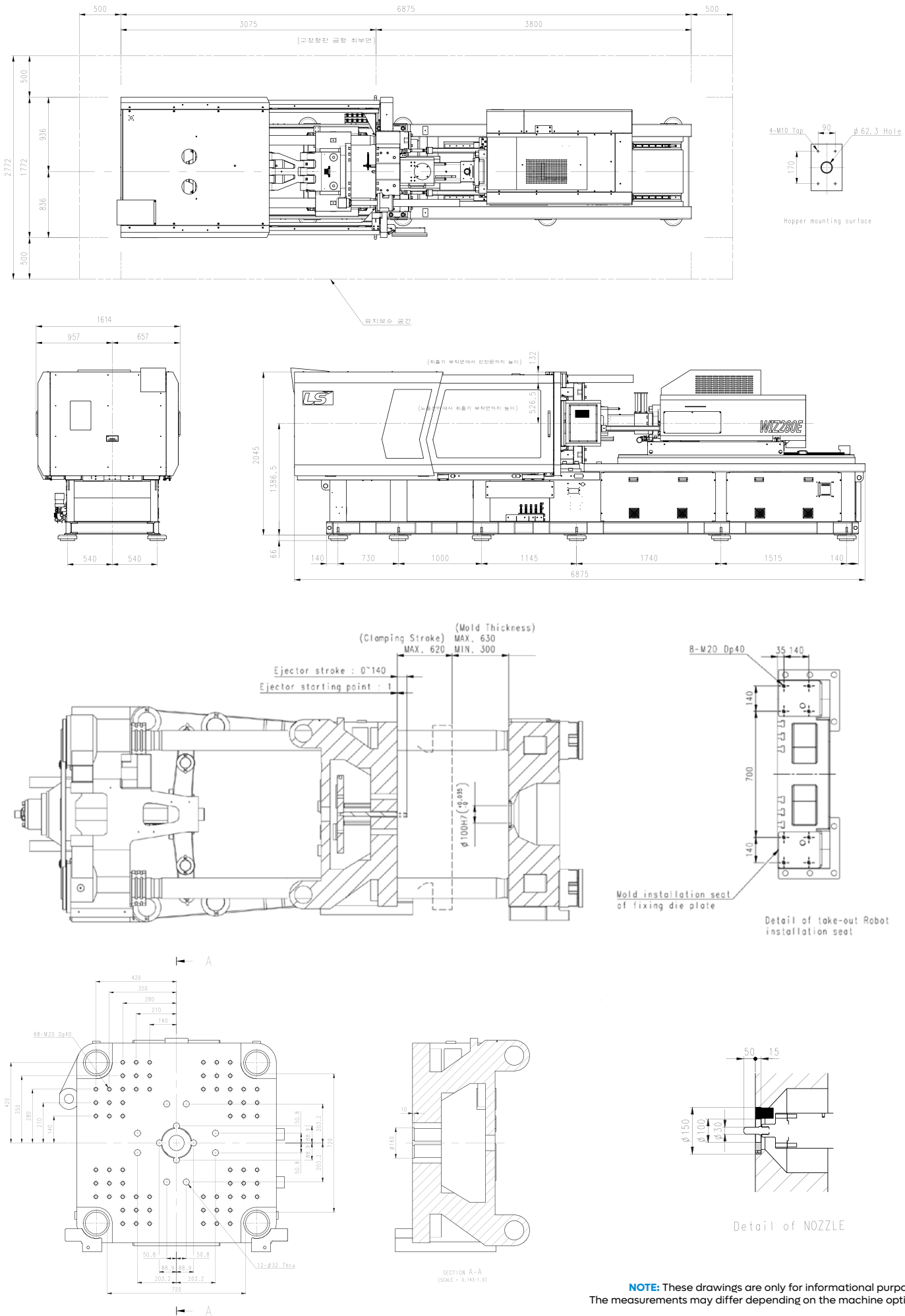
INJECTION UNIT																
Injection Unit Code			i3.6(170t)			i5.8(220t)			i8.6(280t)			i9.4(280t)		i14(350t)		
Screw Type			Y	A	B	Y	A	B	Y	A	B	C	Y	A	B	
Screw Diameter		mm	32	36	40	36	40	45	40	45	50	55	50	55	60	
Screw Stroke		mm	160	180	180	180	220	220	240	240	240	240	280	280	280	
Injection Capacity Calculated		cm³	129	183	226	183	276	350	302	382	471	570	550	665	792	
Injection Capacity		PS	g	118	169	208	169	254	322	277	351	434	525	506	612	728
		PE	g	94	134	165	134	202	255	220	279	344	416	401	486	578
Standard	Max. Injection Pressure		Mpa	242	191	155	254	206	163	275	221	181	162	245	206	172
			kgf/cm²	2.470	1.950	1.580	2.590	2.100	1.660	2.800	2.250	1.850	1.650	2.500	2.100	1.750
	Max. Holding Pressure		Mpa	218	172	139	229	185	147	247	199	163	146	221	185	154
			kgf/cm²	2.223	1.755	1.422	2.331	1.890	1.494	2.520	2.025	1.665	1.485	2.250	1.890	1.575
	Injection Rate		cm³/s	121	153	188	153	188	239	188	239	295	356	295	356	424
Injection Speed		mm/sec	150			150			150			150				
High Speed	Max. Injection Pressure		Mpa	242	191	155	270	221	177	275	221	181	162	245	206	172
			kgf/cm²	2.470	1.950	1.580	2.750	2.250	1.800	2.800	2.250	1.850	1.650	2.500	2.100	1.750
	Max. Holding Pressure		Mpa	218	172	139	243	199	159	247	199	163	146	221	185	154
			kgf/cm²	2.223	1.755	1.422	2.475	2.025	1.620	2.520	2.025	1.665	1.485	2.250	1.890	1.575
	Injection Rate		cm³/s	241	305	377	305	377	477	377	477	589	713	491	594	707
Injection Speed		mm/sec	300			300			300			250				
Super High Speed	Max. Injection Pressure		Mpa	242	191	155	240	191	152	275	221	181	162	245	206	172
			kgf/cm²	2.470	1.950	1.580	2.450	1.950	1.550	2.800	2.250	1.850	1.650	2.500	2.100	1.750
	Max. Holding Pressure		Mpa	218	172	139	216	172	137	247	199	163	146	221	185	154
			kgf/cm²	2.223	1.755	1.422	2.205	1.755	1.395	2.520	2.025	1.665	1.485	2.250	1.890	1.575
	Injection Rate		cm³/s	402	509	628	509	628	795	628	795	982	1188	982	1188	1.414
Injection Speed		mm/sec	500			500			500			500				
Charging	Plasticizing Capacity(PS)		kg/h	52	74	99	64	85	111	71	93	135	173	135	173	218
	Screw Speed		rpm	350			300			250			250			

CLAMPING UNIT														
Clamping Unit	Clamping Force		ton(kN)	280 (2,744)										
	Tie Bar Distance		HxV mm	720 x 720										
	Clamping Stroke		mm	620										
	Daylight		max. mm	1.250										
	Die Plate Dimension		HxV mm	1,040 x 1,040										
	Mold Thickness		mm	300 x 630										
	Ejector Force		ton	4,6										
	Ejector Stroke		mm	140										

GENERAL														
Heater	kw	12,5	14,5	14,2	14,5	14,0	16,1	14,2	16,1	17,4	20,2	17,4	20,2	21,4
Machine Demension : L x W x H	m	6.88 x 1.81 x 2.05										7.18 x 1.81 x 2.05		
Machine Weight	ton	14,0						14,5				14,8		

- NOTE:
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
 - 5) Mold size must be over 60% of tie bar distance
 - 6) This specification can be modified without notice in order to development of machine quality

WIZ 280E SERIES TECHNICAL DRAWING



NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

INJECTION UNIT

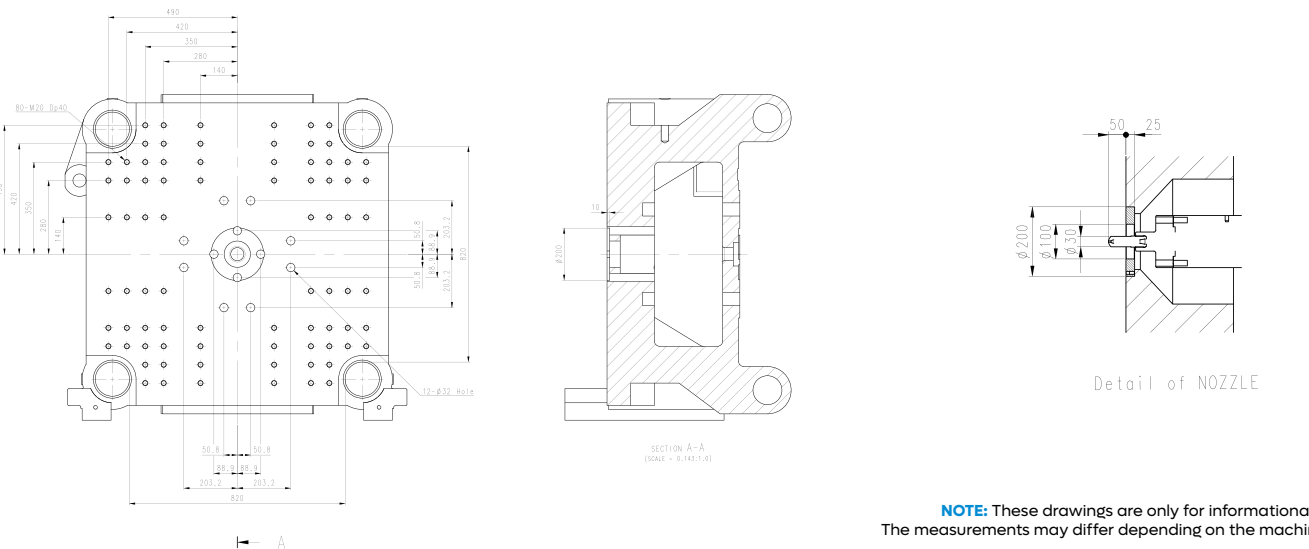
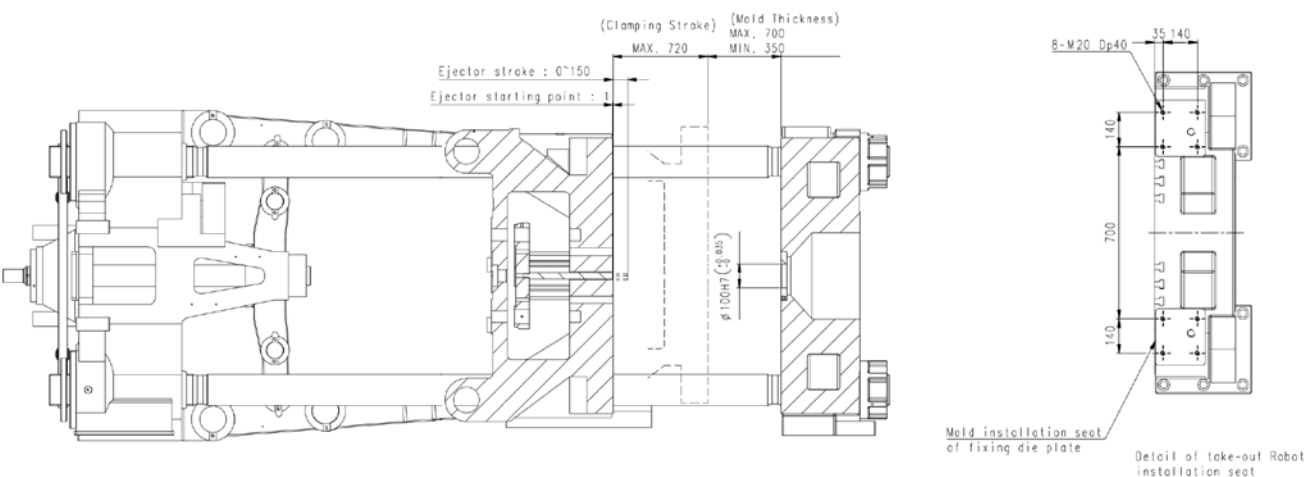
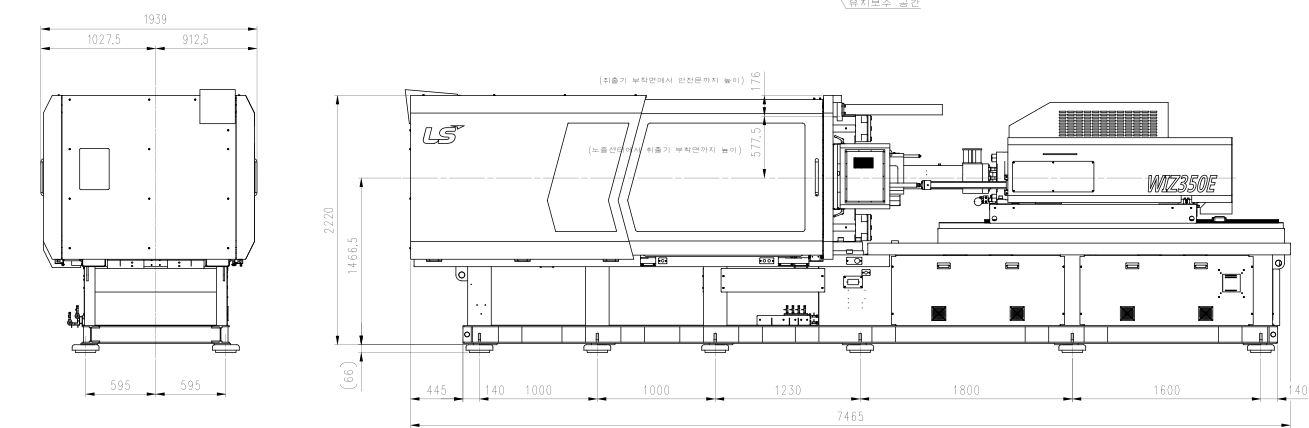
CLAMPING UNIT

GENERAL

NOTE:

- 1) Injection capacity = screw diameter * screw stroke
- 2) Clamping type is double toggle 5 points type
- 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
- 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
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- 6) This specification can be modified without notice in order to development of machine quality

Technical drawing of the Hopper Mounting Surface (Top View). The drawing shows a rectangular assembly with various components and dimensions. The overall width is 8465 mm, divided into sections of 500 mm, 3465 mm, 7465 mm, 4000 mm, and 500 mm. The overall height is 1896 mm, divided into sections of 500 mm, 890.5 mm, and 1005.5 mm. A central section is labeled "(고정할만 글꼴 외부면)". A detail view on the right shows a 4-M10 Top mounting hole with a diameter of $\phi 5.3$ and a distance of 90 mm from the edge, and a distance of 170 mm between the mounting holes.



NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

INJECTION UNIT

Injection Unit Code			i14(350t)			i16.7(400t)			i15.6(400t)	
Screw Type			Y	A	B	Y	A	B	C	
Screw Diameter		mm	50	55	60	55	60	65	70	
Screw Stroke		mm	280	280	280	270	270	270	270	
Injection Capacity Calculated		cm³	550	665	792	641	763	896	1.039	
Injection Capacity	PS	g	506	612	728	590	702	824	956	
	PE	g	401	486	578	468	557	654	759	
Standard	Max. Injection Pressure		Mpa	245	206	172	255	216	181	147
			kgf/cm²	2.500	2.100	1.750	2.600	2.200	1.850	1.500
	Max. Holding Pressure		Mpa	221	185	154	229	194	163	132
			kgf/cm²	2.250	1.890	1.575	2.340	1.980	1.665	1.350
	Injection Rate		cm³/s	295	356	424	404	481	564	654
	Injection Speed		mm/sec	150			170			
High Speed	Max. Injection Pressure		Mpa	245	206	172	236	196	167	
			kgf/cm²	2.500	2.100	1.750	2.400	2.000	1.700	
	Max. Holding Pressure		Mpa	221	185	154	213	177	150	
			kgf/cm²	2.250	1.890	1.575	2.169	1.800	1.530	
	Injection Rate		cm³/s	589	713	848	713	848	995	
	Injection Speed		mm/sec	300			300			
Super High Speed	Max. Injection Pressure		Mpa	245	206	172	255	216	181	
			kgf/cm²	2.500	2.100	1.750	2.600	2.200	1.850	
	Max. Holding Pressure		Mpa	221	185	154	229	194	163	
			kgf/cm²	2.250	1.890	1.575	2.340	1.980	1.665	
	Injection Rate		cm³/s	982	1.188	1.414	950	1.131	1.327	
	Injection Speed		mm/sec	500			400			
Charging	Plasticizing Capacity(PS)		kg/h	135	173	218	152	192	237	243
	Screw Speed		rpm	250			220			

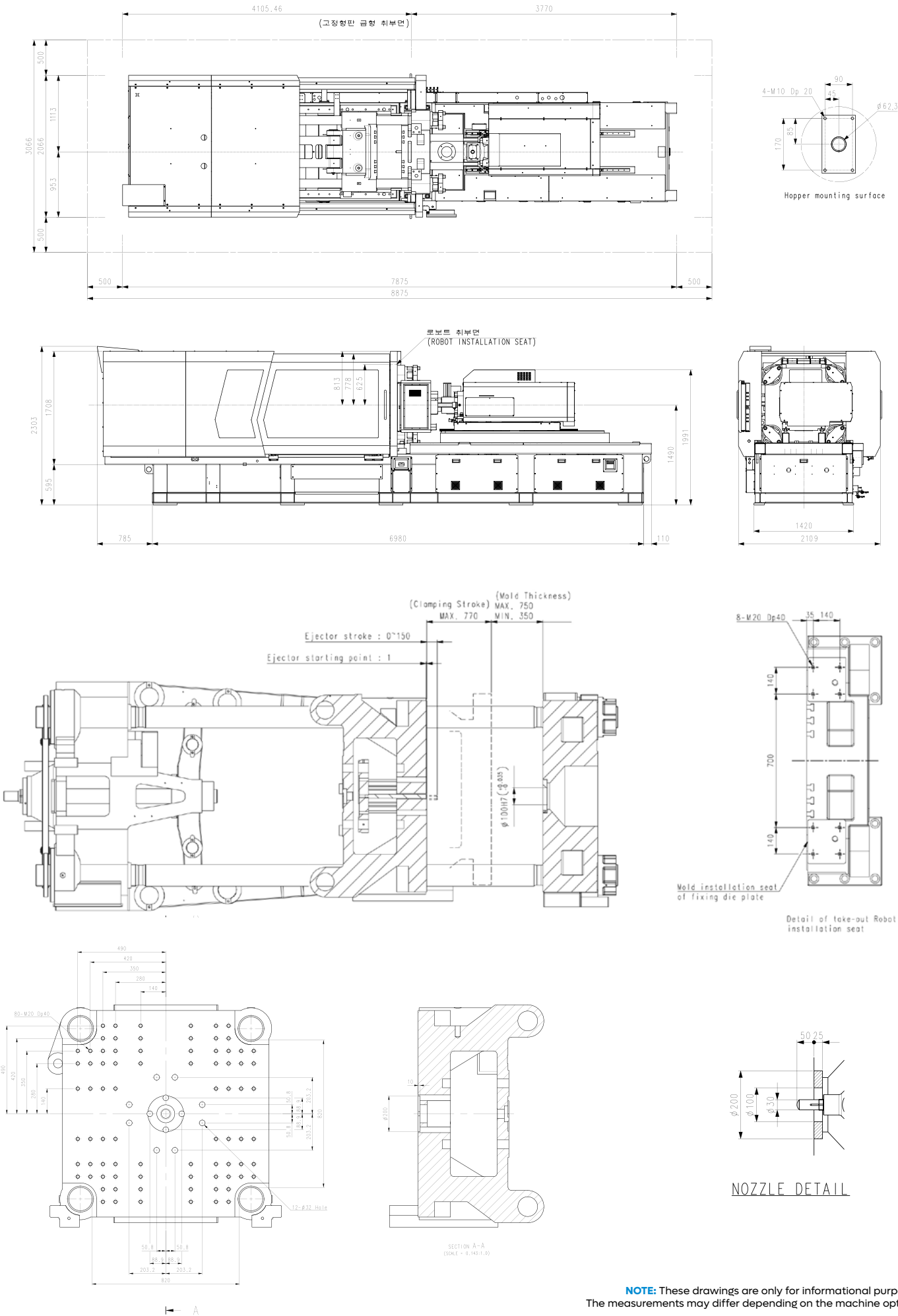
CLAMPING UNIT

Clamping Unit	Clamping Force		ton(kN)	400 (3,927)
	Tie Bar Distance	HxV	mm	820 x 820
	Clamping Stroke		mm	770
	Daylight	max.	mm	1.520
	Die Plate Dimension	HxV	mm	1,150 x 1,150
	Mold Thickness		mm	350 x 750
	Ejector Force		ton	8
	Ejector Stroke		mm	150

GENERAL

Heater	kw	17,4	20,2	21,4	24,1	28,8
Machine Demension : L x W x H	m	7.88 x 2.11 x 2.30				8.28 x 2.11 x 2.30
Machine Weight	ton	17,7			18,0	

- NOTE:
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
 - 5) Mold size must be over 60% of tie bar distance
 - 6) This specification can be modified without notice in order to development of machine quality



NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

INJECTION UNIT

Injection Unit Code			i24.8(450t)			i37(550t)			i45(550t)	i63.6(650t)		
Screw Type			Y	A	B	Y	A	B	C	Y	A	A
Screw Diameter		mm	65	70	75	70	75	85	90	85	90	100
Screw Stroke		mm	345	345	345	420	420	420	420	500	500	500
Injection Capacity Calculated		cm³	1.145	1.328	1.524	1.616	1.856	2.383	2.672	2.837	3.181	3.927
Injection Capacity	PS	g	1.053	1.221	1.402	1.487	1.707	2.193	2.458	2.610	2.926	3.613
	PE	g	836	969	1.113	1.180	1.355	1.740	1.951	2.071	2.322	2.867
Standard	Max. Injection Pressure	Mpa	226	196	172	226	196	157	167	226	196	157
		kgf/cm²	2.300	2.000	1.750	2.300	2.000	1.600	1.700	2.300	2.000	1.600
	Max. Holding Pressure	Mpa	203	177	154	203	177	141	150	203	177	141
		kgf/cm²	2.070	1.800	1.575	2.070	1.800	1.440	1.530	2.070	1.800	1.440
	Injection Rate	cm³/s	531	616	707	616	707	908	1.018	908	1.018	1.257
	Injection Speed	mm/sec	160			160			160			
High Speed	Max. Injection Pressure	Mpa	226	196	172	226	196	157		226	196	157
		kgf/cm²	2.300	2.000	1.750	2.300	2.000	1.600		2.300	2.000	1.600
	Max. Holding Pressure	Mpa	203	177	154	203	177	141		203	177	141
		kgf/cm²	2.070	1.800	1.575	2.070	1.800	1.440		2.070	1.800	1.440
	Injection Rate	cm³/s	664	770	884	770	884	1.135		1.135	1.272	1.571
	Injection Speed	mm/sec	200			200				200		
Super High Speed	Max. Injection Pressure	Mpa	201	172	152	226	196	157				
		kgf/cm²	2.050	1.750	1.550	2.300	2.000	1.600				
	Max. Holding Pressure	Mpa	181	154	137	203	177	141				
		kgf/cm²	1.845	1.575	1.395	2.070	1.800	1.440				
	Injection Rate	cm³/s	830	962	1.104	962	1.104	1.419				
	Injection Speed	mm/sec	250			250						
Charging	Plasticizing Capacity(PS)	kg/h	215	256	309	256	309	415	487	311	365	490
	Screw Speed	rpm	200			200			150			

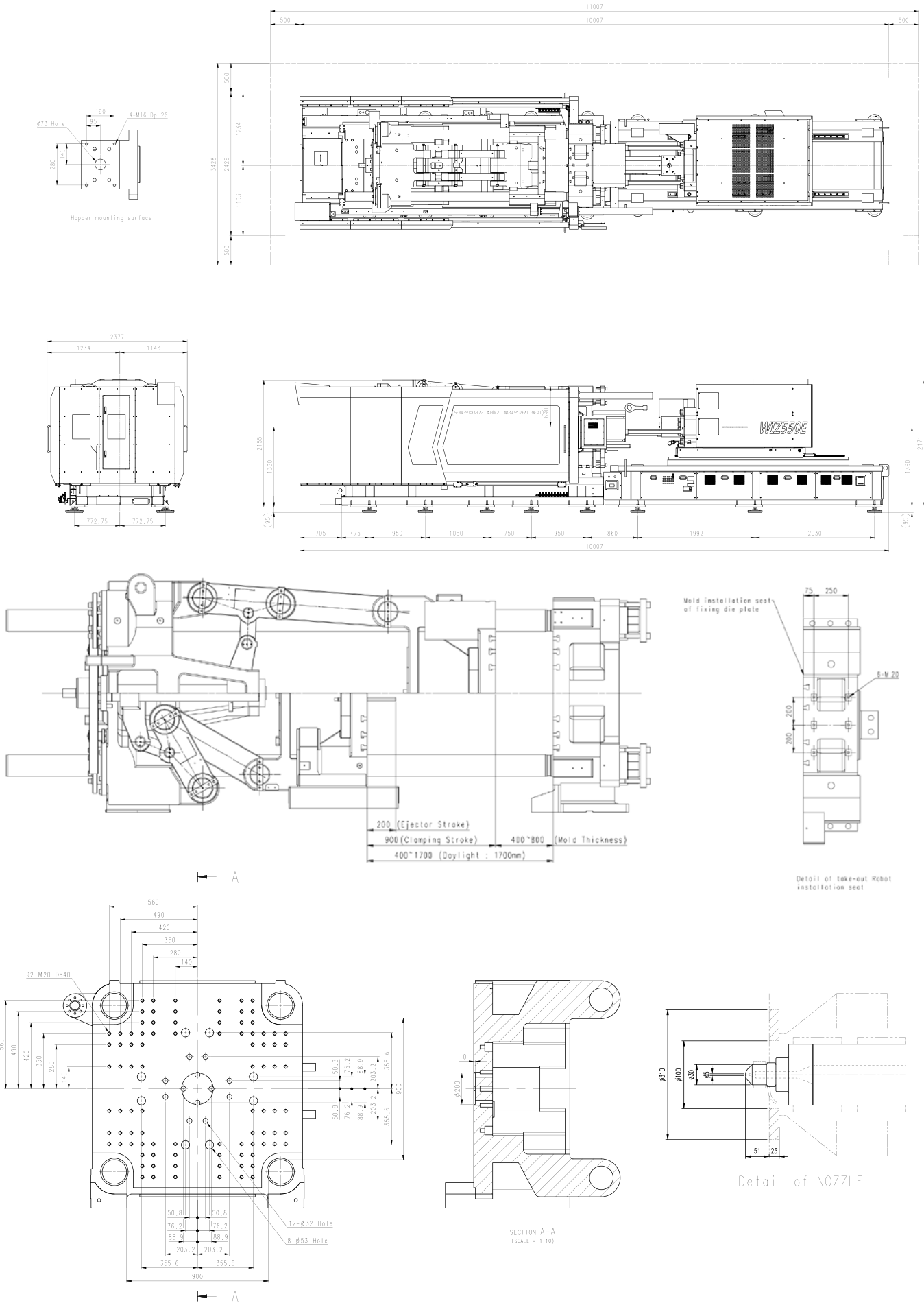
CLAMPING UNIT

Clamping Unit	Clamping Force		ton(kN)	550 (5,390)	
	Tie Bar Distance	HxV	mm	900 x 900	
	Clamping Stroke		mm	900	
	Daylight	max.	mm	1.700	
	Die Plate Dimension	HxV	mm	1,335 x 1,335	
	Mold Thickness		mm	400 x 800	
	Ejector Force		ton	13	
	Ejector Stroke		mm	200	

GENERAL

Heater	kw	23,3	26,6	38,2	47,4
Machine Demension : L x W x H	m	10.01 x 2.38 x 2.17			10.31 x 2.38 x 2.17
Machine Weight	ton	31,0	31,5	31,8	33,0

- NOTE:
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
 - 5) Mold size must be over 60% of tie bar distance
 - 6) This specification can be modified without notice in order to development of machine quality



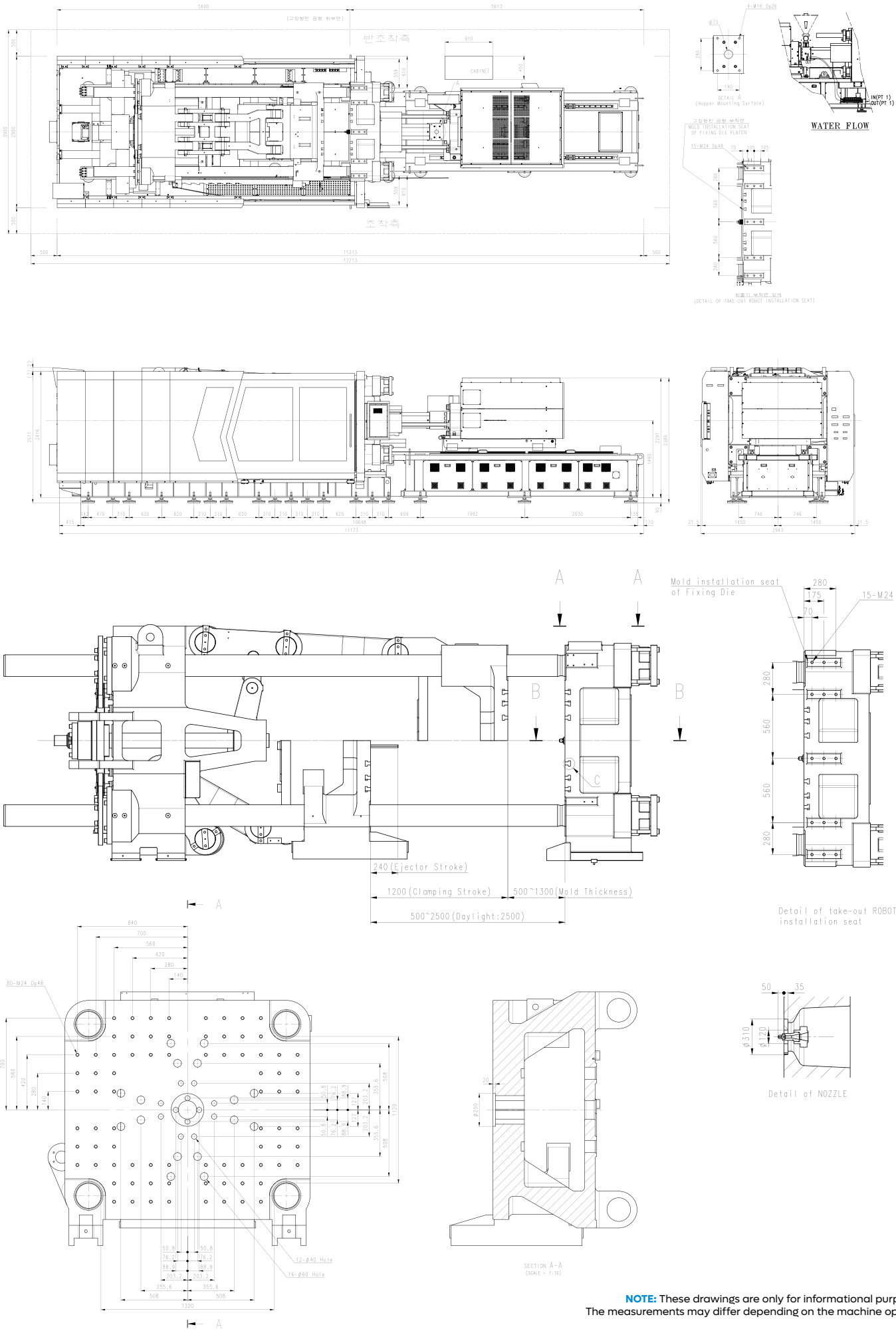
NOTE: These drawings are only for informational purposes. The measurements may differ depending on the machine options.

INJECTION UNIT												
Injection Unit Code		i37(550t)			i45(550t)	i63.6(650t)			i82.6(850t)			
Screw Type			Y	A	B	C	Y	A	A	Y	A	A
Screw Diameter		mm	70	75	85	90	85	90	100	100	105	115
Screw Stroke		mm	420	420	420	420	500	500	500	530	530	530
Injection Capacity Calculated		cm³	1.616	1.856	2.383	2.672	2.837	3.181	3.927	4.163	4.589	5.505
Injection Capacity	PS	g	1.487	1.707	2.193	2.458	2.610	2.926	3.613	3.830	4.222	5.065
	PE	g	1.180	1.355	1.740	1.951	2.071	2.322	2.867	3.039	3.350	4.019
Standard	Max. Injection Pressure	Mpa	226	196	157	167	226	196	157	196	177	147
		kgf/cm²	2.300	2.000	1.600	1.700	2.300	2.000	1.600	2.000	1.800	1.500
	Max. Holding Pressure	Mpa	203	177	141	150	203	177	141	177	159	132
		kgf/cm²	2.070	1.800	1.440	1.530	2.070	1.800	1.440	1.800	1.620	1.350
	Injection Rate	cm³/s	616	707	908	1.018	908	1.018	1.257	1.257	1.385	1.662
Injection Speed		mm/sec	160				160			160		
High Speed	Max. Injection Pressure	Mpa	226	196	157		226	196	157	196	177	147
		kgf/cm²	2.300	2.000	1.600		2.300	2.000	1.600	2.000	1.800	1.500
	Max. Holding Pressure	Mpa	203	177	141		203	177	141	177	159	132
		kgf/cm²	2.070	1.800	1.440		2.070	1.800	1.440	1.800	1.620	1.350
	Injection Rate	cm³/s	770	884	1.135		1.135	1.272	1.571	1.571	1.732	2.077
	Injection Speed	mm/sec	200					200			200	
Super High Speed	Max. Injection Pressure	Mpa	226	196	157							
		kgf/cm²	2.300	2.000	1.600							
	Max. Holding Pressure	Mpa	203	177	141							
		kgf/cm²	2.070	1.800	1.440							
	Injection Rate	cm³/s	962	1.104	1.419							
	Injection Speed	mm/sec	250									
Charging	Plasticizing Capacity(PS)	kg/h	256	309	415	487	311	365	490	490	551	687
	Screw Speed	rpm	200				150			150		

CLAMPING UNIT											
Clamping Unit	Clamping Force		ton(kN)	850 (8,336)							
	Tie Bar Distance	HxV	mm	1,320 x 1,120							
	Clamping Stroke		mm	1.200							
	Daylight	max.	mm	2.500							
	Die Plate Dimension	HxV	mm	1,870 x 1,670							
	Mold Thickness		mm	500 x 1,300							
	Ejector Force		ton	24							
	Ejector Stroke		mm	240							

GENERAL					
Heater	kw	26,6	38,2	47,4	65,3
Machine Demension : L x W x H	m	11.21 x 2.94 x 2.42			
Machine Weight	ton	58,0	58,3	59,5	59,8

- NOTE:
- 1) Injection capacity = screw diameter * screw stroke
 - 2) Clamping type is double toggle 5 points type
 - 3) Max injection pressure and max holding pressure are maximum condition which can be set by machine, Actual pressure is set up by injection condition and cycle time
 - 4) Injection rate and injection speed are calculated figure. Actual Injection rate and injection speed is set up by injection condition and cycle time
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STANDART & OPTIONAL EQUIPMENT

↓ Clamping Unit Item

1	Auto Lubrication Device	✓
2	Tab Hole For Robot Installation	✓
3	Ejector (A-Circuit)	✓
4	Ejector (B-Circuit)	✓
5	Ejector Preserve Circuit	✓
6	Reducing Speed & Pressure for Mold Set-up	✓
7	Trying to Close the Mold again with Mold Protection	✓
8	Automatic Mold Set-up Advice	✓
9	Support for Moving Platen	✓
10	Tab Hole Platen	OP
11	Multi-ejection & Vibrating Ejection	✓
12	Mold Clamp (Manual)	✓
13	Product Receiver	✓
14	Air Blow off Unit	✓
15	Automatic Mold Clamp	OP
16	Single Hydraulic Core Puller	OP
17	Dual Hydraulic Core Puller	OP
18	Screw Ejector	OP
19	Pneumatic Safety Door Open	OP
20	T-slot Platen	✓
21	T-slot Sub-Platen	OP
22	Gate Cut Circuit	OP
23	Injection Compression Device	OP

↓ Injection Unit Item

1	Auto Lubrication Device	✓
2	Tab Hole For Robot Installation	✓
3	Ejector (A-Circuit)	✓
4	Ejector (B-Circuit)	✓
5	Ejector Preserve Circuit	✓
6	Reducing Speed & Pressure for Mold Set-up	✓
7	Trying to Close the Mold Again With Mold Protection	✓
8	Automatic Mold Set-up Advice	✓
9	Support for Moving Platen	✓

↓ Injection Unit Item

10	Screw Back Pressure Regulator	✓
11	Screw Cold Start Prevention Device	✓
12	Screw Suck Back	✓
13	Screw Tip (for general resins, non-return valve)	✓
14	Nozzle Safety Cover With Interlock	✓
15	Back Pressure Relieving Circuit	✓
16	Anti - Wear & Corrosion Barrel and Screw	OP
17	Extension Nozzle (50, 100mm)	OP
18	Temperature Controller for Extension Nozzle Heat	OP
19	Fan Blower	OP
20	Shut Off Nozzle	OP
21	Specialized Screw for Each Resin	OP

↓ General Item

1	Instruction Manual	✓
2	Standard Machine Color	✓
3	Level Pad	✓
4	Chiller	OP
5	Crusher	OP
6	General Hopper	OP
7	Hopper Dryer	OP
8	Hopper Loader	OP
9	Hopper Ladder	OP
10	Mixer	OP
11	Conveyer	OP
12	Hot Runner Controller	OP
13	Take - Out Robot	OP
14	Maintenance Tools	OP
15	Spare Parts	OP

↓ Electric System Item

1	Abnormal Operation Warning Device (Buzzer)	✓
2	Abnormal Operation Indicating Device	✓
3	Emergency Stop Push Button	✓
4	Automatic Barrel Heat - Up Control Device	✓
5	Safety Gates With Interlocks	✓
6	Shot Counter and Count Up Detection for Target Production	✓
7	PID Temperature Control	OP
8	Nozzle Temperature Control by SSR	✓
9	Alarm Light	✓
10	Automatic Purge Circuit	✓
11	Ethernet Port for Remote Monitoring System	✓
12	Heater Band Failure Indicator	✓
13	Automatic Voltage Regulator (AVR)	OP
14	Air Conditioning Unit on Control Cabinet	OP
15	Auxiliary Consent	OP
16	Automatic Power Shut - Down Circuit	✓
17	Safety Door Open Interlock Circuit	✓
18	Gas Injection Interlock Circuit	OP
19	Valve Gate Circuit	✓
20	Eject Retract Circuit	✓
21	Robot Interlock Circuit	✓
22	Centralized Network System	OP

↓ Control Unit Item

1	Injection Control	✓
5	Stage Speed & 3 Stage Pressure Control	✓
	Closed Loop	✓
	Automatic Reducing Back Pressure Control	✓
	Injection Pressure Restriction Control	✓
	Screw RPM Control	✓
	Screw Back Pressure Control	✓
	Auxiliary Pressure Response Control	✓
	Position, Resin Pressure, Mold Internal Signal	OP
	Auxiliary Pressure Response Control	✓

↓ Control System Item

2	Heater Control - Heater Band Failure Indicator	✓
3	Clamping Unit High Speed 4 Stages Control	✓
4	Ejector Control	✓
5	Monitoring - Quality Monitoring / Alarm - Cycle Time / Ejecting Time / Charging Time / Plasticizing Time / Injection Start Position / Holding Pressure Shifting Position / Cushion Position / Max. Injection Position	✓
6	Proses Warning - Overrunning Abnormal / Charging Time Abnormal / Plasticizing Time Abnormal	✓
7	Dijital Indicates - Screw Position / RPM / Back Pressure / Injection Pressure / Clamping Open & Close Position / Ejector Position / Nozzle & Barrel Temperature	✓
8	Dijital Setting - Injection Speed / Pressure / Position, Screw Back Pressure / RPM / Nozzle, Barrel Temperature / Open & Closeing Time / Position / Clamping Force / Ejector Forward / Back Speed / Position / Ejector Force	✓
9	Data - Save Mold Data Up To 100 Molds - Mold Card Interface / Inner Memory Editing	✓
10	Mold Temperature Control	OP
11	Analog Output of Injection Position, Speed and Pressure	OP
12	Product Completed Signal	OP
13	USB	OP
15	Printer	OP
16	PC Interface	OP
17	Hopper Block Temperature Control	OP



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