2017-01

Be the ONE*

Outstanding People, Best-in-Class Product, Winning Partnership

LS ELECTRIC
INJECTION MOLDING MACHINE
WIZ-E Series

20 ~ 950 USton

LS Mtron

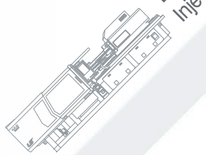
www.lsinjection.com

Be the ONE
Outstanding People, Best-in-Class Product, Winning Partnership

INNOVATIVE TECHNOLOGY PARTNER

Customer Focused Corporation

The goal of LS injection molding machines is to meet and exceed the technology and quality requirements of all customers in the global market. We (in partnership with our customers) will expand entry into advanced markets with continuous technology and quality innovation that consistently creates value for our customers. This will lead to high and consistent earnings growth by anticipating and understanding market needs in advance and leveraging this knowledge and insight as an indicator to drive technology, leadership and innovation within the global market without ceasing.
Beginning with the development of Korea's first direct compression injection molding machines, LS has always put the customer first. From customer focused and dedicated injection molding machine technology such as two-platen injection molding machines for molders of light guide plates and mobile phones to multi-color injection molding and ultimately to all-electric injection molding machines which are the fruit of the most advanced technology.



Electric Injection Molding Machine

About LS Mtron

Management Philosophy

LSpartnership is about achieving exceptional performance based on mutual respect, care and trust by the people of LS who value integrity and who have a sense of ownership resulting in creating a greater value together, both internally as well as externally with our customers, through cooperation and having open minds.
LSpartnership pursues true partnerships based on action.
Together with its global partners around the world, all those at LS will seek greater value for the next generation through collaborative relationships.

Vision

LS Mtron has announced its vision to begin the second act of its new growth story.

Be the ONE*
Outstanding People, Best-in-Class Product, Winning Partnership

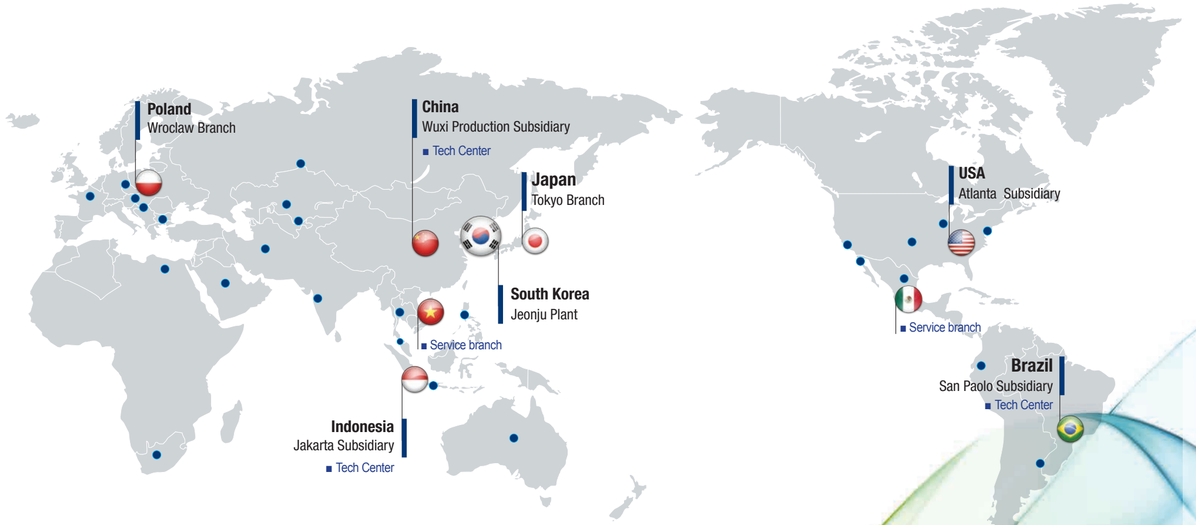
LS Mtron's vision is to "Be the ONE* Outstanding People, Best-in-Class Product, Winning Partnerships".

In "Be the ONE*", "Be" indicates the determination to "accomplish at all costs!", while "ONE*" declares our future state to be the "Top No. 1 and first." "Be the ONE*" signifies LS Mtron's goal in which outstanding people join forces to create best-in-class products that impress customers and drive prosperity for all stakeholders. In addition,"Ownership, New-thinking and Excellence" are the driving forces behind "Be the ONE*" and these core values shall become the basis by which the behaviors of LS Mtron staff are evaluated.

Vision Structure

	Outstanding People	Best-in-Class product	Winning Partnership
Vision	The person with the world-class competences in the area of his or her role and task.	Products and services with excellent quality and value giving satisfaction to customers beyond expectations.	Sharing growth with employees, subcontractors. customers and society.
Core Values	**Ownership** Threw themselves heart and soul into the tasks as if the company and businesses are their own.	**New-thinking** Pursuit of positive changes with enlighten and flexible thinking	**Excellence** Create customer value with its expertise and insights.

Global Networks




Head Quater


LS Mtron Ltd.


Jeonju Plant


US branch


Brazil branch

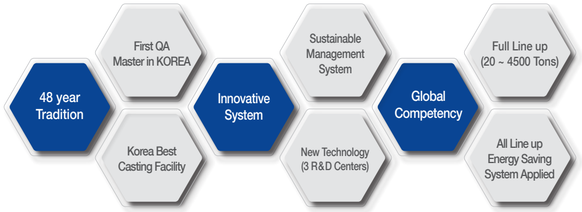

Indonesia branch


China Plant

LS IMM History

Difference in technology is a keyword for success!

LS Mtron is offering various model from 20tons to 4,500tons in Automotive, Home appliances, Medical, Packaging, etc



1947 ~ 1970's

The opening chapter of a great story in the Korean plastic industry with LS

1947 • Established as Lucky Chemical Industrial Corporation (Manufacturing of cosmetics begun)
1951 • Produced Korea's first injection-molded synthetic resin products
1969 • Gold Star started IMM business with Toshiba as T/A at Chang-won plant (Currently LG Electric)
1978 • Gold Star developed own model-vertical IMM 10 ton, horizonal IMM 80 ton.

1990's

Premiere on the export market to worldwide

1985 • Developed LG's own model, ID-EN Series
1987 • Started to export to USA & Southeast Asia
1992 • Developed 1800 ton(1st machine in Korea)
1995 • Developed 3000 ton IMM(1st machine in Korea)

2000's

Opening of a plant in Jeonju in Korea and Wuxi in China, Reinforce the product line up and strong our business

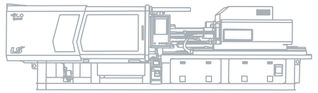
2002 • Developed 8 models of All-Electric machine LGE II-Series (30~300 Ton)
2004 • LG Electric IMM was awarded JYS by Science and Technology Administration
2005 • Developed 4000 ton IMM(4500 Injection unit)
• Established LS Machinery(LSMW) LTD. In CHINA.
2007 • Developed all-electric injection molding machine (450, 550 ton)
2008 • Developed brand-new premium LGH-S Series, 1300, 2000 Ton
• Changed name to LS Mtron from LS Cable
2009 • Developed two color electric molding machine (LGH EC150, 250)
• Developed brand new premium LGH-S Series, 3000 Ton
• Developed the new type of electric molding machine : LGE 180III
• Developed the large & electric injection molding machine, 2000 Ton

2010's

Continuous development of customized injection molding machine will be recognized as a global leader in plastic industry

2010 • Developed super high speed (& hydraulic) injection molding machine : LGH 150 ton
• Developed LGH-S Series : 2500 Ton
• Developed the new type of electri molding machine : LGE 220III, 280III, 330III, 350III, 400III
2011 • Developed all-electric injection molding machine
• Oem toggle injection machine
2012 • Developed IML electric injection molding machine : LGE 280II
• Developed ultra-high speed electric injection molding machine for mold frame
2013 • Completed the construction of the High Tech Center of LS Mtron
• Developed direct high speed injection molding machine (injection speed 1,000mm/s)
• Developed electric injection molding machine for mobile phone (150 ton ~ 650ton)
• Developed Large size electric injection molding machine (LGE 1300HB)
• Developed servo system injection molding machine (150 ton~650ton) : WIZ 500, 600, 700, 900, 1100
2014 • Developed brand-new premium energy-saving WIZ-X Series (1300, 1800, 2000, 2500, 3000ton)
• Developed 8 models of hybrid IMM, LTE model
• Develoled electric injection molding machine for super compact connector
2015 • Developed vertical hybrid IMM (110, 150ton)
• Developed electric IMM for automobile precision parts (650, 850ton)
• Developed all-electric model for Injection Blow : IBM-170Ton
• Developed new model for the plastic palette : 700 ~ 4000Ton
2016 • Developed new model for the cosmetic packaging : CPM - 170, 220, 280, 350Ton
2017 • Developed Premium Hybrid ' the ONE Series ' : 550 ~ 3,600Ton

1947 1951 1969 1978 1985 1987 1992 1995 2004 2005 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017



“LS injection molding machine provides innovated performance and advanced technology!”

Currently all of the accumulated know-how working is for you, the customer, who is the object of all the technology efforts of LS Mtron.
The smallest of defects do not go unattended to as LS is constantly pursuing research and experiments to meet the future expectations of our customers as we move forward together.

Be the ONE*
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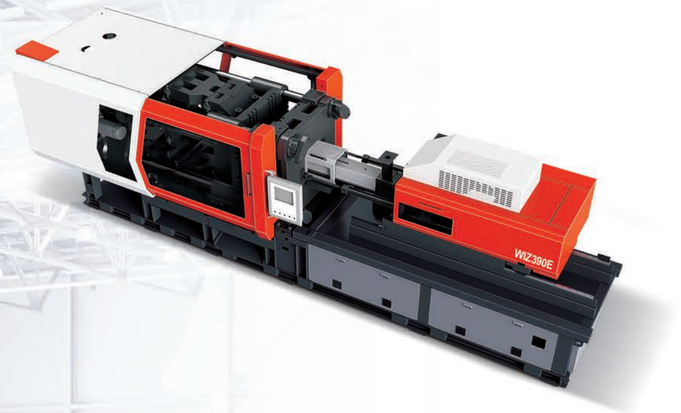
* LS Electric Injection Molding Machine Line-up

WIZ-E Series (STD, Precision, High precision)		20 USton ~ 950 USton
LGE-HB Series (Large tonnage)		1400 USton ~ 2200 USton
Two Color Series (Two color, Dissimilar)		170 USton ~ 280 USton
IBM Series (Injection Blow)		170 USton ~ 390 USton
CPM Series (Cosmetic)		190 USton ~ 390 USton

Electric Injection Molding Machine (20 ~ 950 UStON)

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.

All Electric IMM

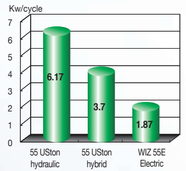


Energy saving, Less noise & clean molding

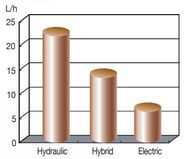
- Less than 70dB sound-level
- No oil usage

Save 50% of electricity charge compare to hydrid hydraulic IMM

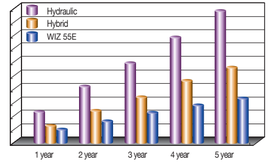
■ Comparison of power consumption



■ Comparison of cooling water



■ Comparison of annual electricity cost



Be the ONE
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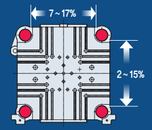
WIZ-E Series
20 ~ 950 UStON

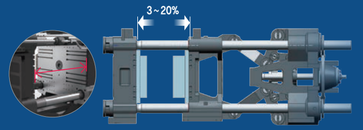
1 Largest platen within same tonnage



- New centerpessed rigid platen
- Extend tie bar distance (90~ 440 UStON)
  - Horizontal 7% ~ 17% UP x Vertical 2% ~ 15% UP compare to previous model

2 Extended daylight (90 ~ 440 UStON)

- 3% ~ 20% up compare to previous model



3 Increased injection volume (20 ~ 390 UStON)

- 13% ~ 27% up compare to previous model

4 High speed injection 500mm/s 20 ~ 440 UStON (Optional)

5 Major optional fuction applied as standard

- Air blow off unit, product chute
- Ejector retreat confirmation circuit
- Valve gate circuit

6 Dual nozzle touch cylinde (Zero moment)

7 Quick response load cell (NMB)

Safety first design

- Developed according to the guidelines of the safety regulations board to conform to safety standards in Korea, Europe & USA.

Economic Feasibility Comparison of 390 UStonIMM

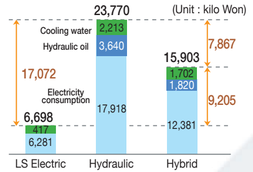
- Electric IMM can save US17,000/1Year compare to standard hydraulic IMM

Data comparison

Item	LS Electric	Hydraulic	Hybrid
Power consumption	10.34	25.85	18.1
Hydraulic oil	0	1000	500
Quantity of cooling water	12.3	65	50

* Cooling water for the mold has been excluded in calculation

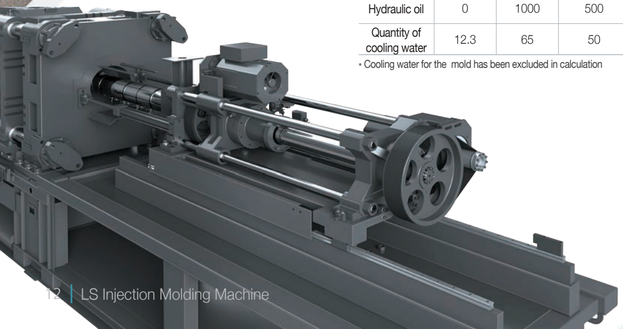
Comparison 1 year



* The result may vary according to products and operating conditions

Annual comparison

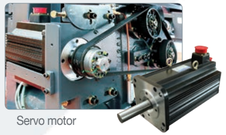
Applied Std.
- Annual operating hours : 7200h/1year (24h/day *25day/month *12month/year)
- Cooling water price : 394 won/ton
- Oil price : 1,820 won/ℓ(Oil changed twice in the first year and once a year afterward.)



Structure & Feature

Applying strong & quick response AC servo motor to realize high injection speed

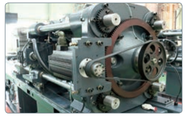
- Injection speed up to 800mm/s and multi-step injection speed control produced by a high-output and high-response servo motor.


Servo motor


Servo drive

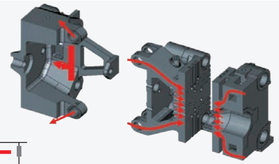
5-point toggle high speed clamping system and highly rigid injection mechanism

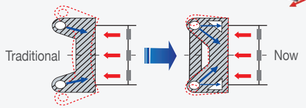
- 5-point toggle high speed clamping unit and high intensity injection mechanism
- High speed injection mechanism by adopting a high-response high-torque servo motor



Center press moving

- Improve productivity multi cavity
- Unity the Euromap ejector (Enhanced modulation)





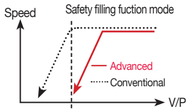
Servo motor controls individually and simultaneously

- Platen open during plasticizing / Ejection durong opening planten / Injection during increasing pressure
- Reduce cycle time (productivity improvement)

High stiffness clamping unit, injection structure (Stable molding)

Safety Filling Function Mode

- Control the peak pressure during Injection by Screw position
- Prevent over-filling by the incorrect setting during High speed injection

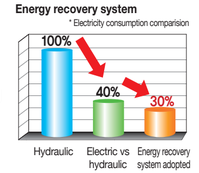


Center press typed moving platen for precision molding

- Center Press type prevents bad molding & provides long mold life cycle.

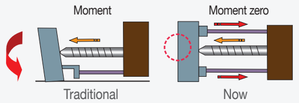
Energy recuperation system, Energy saving

- Recovery the Electricity for Injection by 10% during injection speed reduction

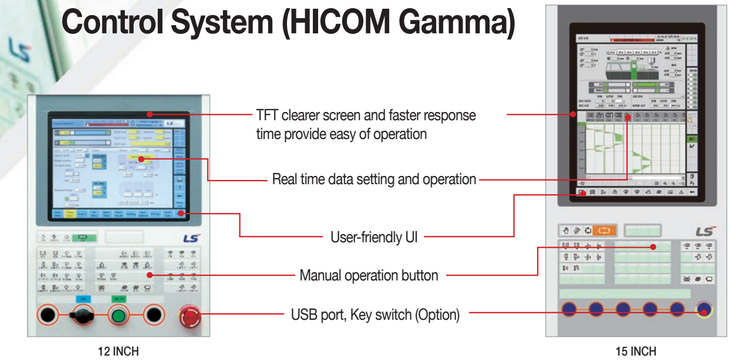


Double shaft nozzle touch structure

- Prevent platen failling : Platen parallelism improvement & prevent resin leacking
- Nozzle forward and backword speed increased
- Increased user convenience : Simplified barrel



Control System (HICOM Gamma)



Overview

- Overview of machine operation
- Set/Monitor clamp/Ejector position
- Monitoring temperature

Injection

- Injection speed - Max 10steps
- Holding pressure - Max 10steps
- Cut over by pressure, time, speed

Clamp

- Mold close speed - Max 5steps
- Mold open speed - 5steps
- Monitoring parameter by graph

Mold protect

- Adjust sensitivity

Unit setup

- Able to set display unit by user

Core

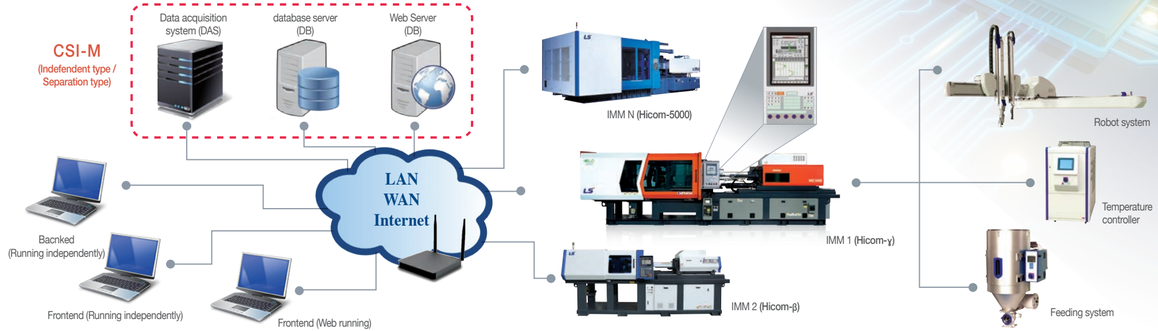
- 2 core (Standard)
- Able to change Core operation by user

Parameter output

- Monitoring digital output (1 zone standard)

LS CSI Solution (CSI-M / CSI-C)

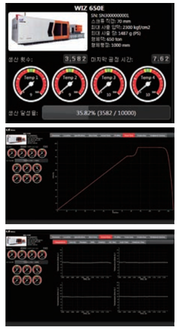
CSI-M & CSI-C system linked LS injection machine and auxiliary equipment to realize smart factory



Production and process monitoring of Injection molding machine system (CSI-M)

Injection system data linkage function for the MES and powerful monitoring solution

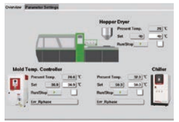
- Mobile device system monitoring
- Provide multiple connections to LS Mtron machines
- Status monitoring and controlling function of every linked device
  - Injection machine information, status and et up function
  - Exception: Machine structure and related system data
  - ⇨ Screw size & maximum stroke remote setting is not provided
- Interlocked with customer MES
  - Injection production information loading function depend on production plan
  - ⇨ Prior consultatioin needed with customer SI team before applying MES interlock system
- Manager Functioin: MBO & production plan comparison mornitoring
  - Information output based on database analysis
  - Production ratio mornitoring (OEE, time / date / monthly)
  - Production information analysis by mode (automatic / preparation / alam / OFF)



Auxiliary equipment control system (CSI-C)

Injection molding machine centered controlling solution system realize convenience and production improvement

- Injection molding machine operation panel controlling
  - Equipment parameter setting : major parameter variable and setting function
  - Controlling 64 units maximum
- Equipment production condition up/down loading system prevent input condition by user
  - Mold bar code scanner linkage to provide injection machine and auxiliary condition loading
- Alarm checking and alarm logging through operation panel



WIZ-E Series

Major Specification

			WIZ 20E		WIZ 35E			WIZ 55E					
INJECTION UNIT													
Injection Unit Code			i0.33 (20t)		i0.33 (20t)		i0.6 (35t)			i1.2 (55t)			i1.7 (90t)	
Screw Type			˙A	B	˙A	B	Y	˙A	B	Y	˙A	B	Y	˙A	B
Screw Diameter		in	0.6	0.7	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.1	1.0	1.1	1.3
		mm	16	18	16	18	18	20	22	22	25	28	25	28	32
Screw Stroke		in	2.4	2.4	2.4	2.4	3.5	3.5	3.5	4.3	4.7	4.7	5.5	5.5	5.5
Injection Capacity Calculated		in^3	0.7	0.9	0.7	0.9	1.4	1.7	2.1	2.6	3.6	4.5	4.2	5.3	6.9
Injection Capacity	PS	oz	0.4	0.5	0.4	0.5	0.7	0.9	1.1	1.3	1.9	2.4	2.2	2.8	3.7
	PE	oz	0.3	0.4	0.3	0.4	0.6	0.7	0.9	1.1	1.5	1.9	1.8	2.2	2.9
Standard	Max. Injection Pressure	Mpa	265	209	265	209				253	196	187	246	196	150
		psi	38,403	30,338	38,403	30,338				36,696	28,447	27,167	35,701	28,447	21,762
	Max. Holding Pressure	Mpa	238	188	238	188				228	177	169	222	177	135
		psi	34,563	27,305	34,563	27,305				33,027	25,602	24,450	32,131	25,602	19,586
	Injection Rate	in^3/sec	3.7	4.7	3.7	4.7				4.6	6.0	7.5	6.0	7.5	9.8
	Injection Speed	in/sec	11.8		11.8						7.9			7.9	
High Speed	Max. Injection Pressure	Mpa	265	209	265	209	242	196	162	253	196	187	246	196	150
		psi	38,403	30,338	38,403	30,338	35,132	28,447	23,469	36,696	28,447	27,167	35,701	28,447	21,762
	Max. Holding Pressure	Mpa	238	188	238	188	218	177	146	228	177	169	222	177	135
		psi	34,563	27,305	34,563	27,305	31,618	25,602	21,122	33,027	25,602	24,450	32,131	25,602	19,586
	Injection Rate	in^3/sec	6.1	7.8	6.1	7.8	4.7	5.8	7.0	7.0	9.0	11.3	9.0	11.3	14.7
	Injection Speed	in/sec	19.7		19.7			11.8			11.8			11.8	
High Speed (Option)	Max. Injection Pressure	Mpa					242	196	162	253	196	187	246	196	150
		kgf/cm^2					35,132	28,447	23,469	36,696	28,447	27,167	35,701	28,447	21,762
	Max. Holding Pressure	Mpa					218	177	146	228	177	169	222	177	135
		kgf/cm^2					31,618	25,602	21,122	33,027	25,602	24,450	32,131	25,602	19,586
	Injection Rate	cm^3/s					7.8	9.6	11.6	11.6	15.0	18.8	15.0	18.8	24.5
	Injection Speed	mm/sec						19.7			19.7			19.7	
Charging	Plasticizing Capacity(PS)	lbs/h	20.9	28.7	20.9	28.7	37.5	50.7	72.8	72.8	99.2	130.1	79.4	103.6	130.1
	Screw Speed	rpm	~ 500		~ 500			~ 500			~ 500			~ 400	
CLAMPING UNIT															
Clamping Force		Uston	19.8		33.1			55.1							
Tie Bar Distance		in	10.2 x 10.2		10.2 x 10.2			13.2 x 13.2							
Clamping Stroke		in	7.9		9.1			10.6							
Daylight		in	17.7		18.9			23.2							
Die Plate Dimension		in	15.0 x 15.7		15.0 x 15.7			18.5 x 18.9							
Mold Thickness		in	4.7 ~ 9.8		4.7 ~ 9.8			5.9 ~ 12.6							
Ejector Force		Uston	0.9		0.9			2.2							
Ejector Stroke		in	2.4		2.4			2.8							
GENERAL															
Electric Heater Capacity		kw	2.3	2.3	2.3	2.3	4.6	5.1	5.6	5.6	8.3	9.7	8.3	9.7	12.3
Machine Dimension : L x W x H		ft	9.7 x 3.1 x 4.5		10.7 x 3.8 x 4.5			12.0 x 3.5 x 4.8					12.8 x 3.5 x 4.8		
Machine Weight		lbs	4,409		4,850			6,173					6,614		

Note 1. Injection capacity calculated : Screw Area x Screw Stroke, 2. Clamping system is double 5-point toggle structures.
3. The maximum injection and holding pressures are maximum pressure that can be set on the machine. Actual setting pressure will be restricted by molding condition and cycle time.
4. The maximum injection rate and speed are calculated values. Actual injection rate and speed will be restricted by an injection pressure.
5. The mold size should be bigger than 60% of the Tie-bar distance. (HxV)
6. Due to continuous improvements, specifications are subject to change without notice.

			WIZ 90E						WIZ 120E								
INJECTION UNIT																	
Injection Unit Code			i1.7 (90t)			i2.4 (120t)			i1.2 (120t)	i1.9 (120t)	i2.4 (120t)			i3.6 (190t)			
Screw Type			Y	˙A	B	Y	˙A	B	YYY	YY	Y	˙A	B	Y	˙A	B	
Screw Diameter		in	1.0	1.1	1.3	1.1	1.3	1.4	0.9	1.0	1.1	1.3	1.4	1.3	1.4	1.6	
		mm	25	28	32	28	32	36	22	25	28	32	36	32	36	40	
Screw Stroke		in	5.5	5.5	5.5	5.5	6.3	6.3	4.3	5.5	5.5	6.3	6.3	6.3	7.1	7.1	
Injection Capacity Calculated		in^3	4.2	5.3	6.9	5.3	7.9	9.9	2.6	4.2	5.3	7.9	9.9	7.9	11.2	13.8	
Injection Capacity	PS	oz	2.2	2.8	3.7	2.8	4.2	5.3	1.3	2.2	2.8	4.2	5.3	4.2	6.0	7.3	
	PE	oz	1.8	2.2	2.9	2.2	3.3	4.2	1.1	1.8	2.2	3.3	4.2	3.3	4.7	5.8	
Standard	Max. Injection Pressure	Mpa	246	196	150	236	181	143	294	275	236	181	143	242	191	155	
		psi	35,701	28,447	21,762	34,278	26,313	20,766	42,670	39,825	34,278	26,313	20,766	35,132	27,736	22,473	
	Max. Holding Pressure	Mpa	222	177	135	213	163	129	265	247	213	163	129	218	172	139	
		psi	32,131	25,602	19,586	30,850	23,682	18,689	38,403	35,843	30,850	23,682	18,689	31,618	24,962	20,226	
	Injection Rate	in^3/sec	6.0	7.5	9.8	7.5	9.8	12.4	4.6	6.0	7.5	9.8	12.4	7.4	9.3	11.5	
	Injection Speed	in/sec		7.9			7.9				7.9				5.9		
High Speed	Max. Injection Pressure	Mpa	246	196	150	236	181	143	294	275	236	181	143	242	191	155	
		psi	35,701	28,447	21,762	34,278	26,313	20,766	42,670	39,825	34,278	26,313	20,766	35,132	27,736	22,473	
	Max. Holding Pressure	Mpa	222	177	135	213	163	129	265	247	213	163	129	218	172	139	
		psi	32,131	25,602	19,586	30,850	23,682	18,689	38,403	35,843	30,850	23,682	18,689	31,618	24,962	20,226	
	Injection Rate	in^3/sec	9.0	11.3	14.7	11.3	14.7	18.6	7.0	9.0	11.3	14.7	18.6	9.8	12.4	15.3	
	Injection Speed	in/sec		11.8			11.8				11.8				7.9		
High Speed (Option)	Max. Injection Pressure	Mpa	246	196	150	236	181	143	294	275	236	181	143	242	191	155	
		kgf/cm^2	35,701	28,447	21,762	34,278	26,313	20,766	42,670	39,825	34,278	26,313	20,766	35,132	27,736	22,473	
	Max. Holding Pressure	Mpa	222	177	135	213	163	129	265	247	213	163	129	218	172	139	
		kgf/cm^2	32,131	25,602	19,586	30,850	23,682	18,689	38,403	35,843	30,850	23,682	18,689	31,618	24,962	20,226	
	Injection Rate	cm^3/s	15.0	18.8	24.5	18.8	24.5	31.1	11.6	15.0	18.8	24.5	31.1	24.5	31.1	38.3	
	Injection Speed	mm/sec		19.7			19.7				19.7				19.7		
Charging	Plasticizing Capacity(PS)	lbs/h	79.4	103.6	130.1	103.6	130.1	187.4	57.3	79.4	103.6	130.1	187.4	114.6	163.1	218.3	
	Screw Speed	rpm		~ 400			~ 400				~ 400				~ 350		
CLAMPING UNIT																	
Clamping Force		Uston	88.2						121.3								
Tie Bar Distance		in	16.4 x 14.6						18.5 x 16.5								
Clamping Stroke		in	12.6						13.8								
Daylight		in	26.4						29.9								
Die Plate Dimension		in	24.2 x 21.9						26.8 x 24.8								
Mold Thickness		in	5.9 ~ 13.8						7.9 ~ 16.1								
Ejector Force		Uston	2.2						2.8								
Ejector Stroke		in	2.8						4.7								
GENERAL																	
Electric Heater Capacity		kw	8.3	9.7	12.3	9.7	12.5	14.5	5.6	8.3	9.7	12.5	14.5	12.5	14.5	14.2	
Machine Dimension : L x W x H		ft	13.7 x 3.9 x 5.5			15.0 x 3.9 x 5.5			16.1 x 4.3 x 5.5					16.8 x 4.3 x 5.5			
Machine Weight		lbs	8,818			9,259			12,125					12,566			

WIZ-E Series

Major Specification

			WIZ 190E								WIZ 240E						
INJECTION UNIT																	
Injection Unit Code			i2.4 (190t)	i3.6 (190t)			i4.7 (190t)	i5.8 (240t)			i3.8 (240t)	i5.8 (240t)			i8.6 (310t)		
Screw Type			YY	Y	`A	B	C	Y	`A	B	YY	Y	`A	B	Y	`A	B
Screw Diameter		in	1.1	1.3	1.4	1.6	1.8	1.4	1.6	1.8	1.3	1.4	1.6	1.8	1.6	1.8	2.0
		mm	28	32	36	40	45	36	40	45	32	36	40	45	40	45	50
Screw Stroke		in	6.3	6.3	7.1	7.1	7.1	7.1	8.7	8.7	6.3	7.1	8.7	8.7	9.4	9.4	9.4
Injection Capacity Calculated		in^3	6.0	7.9	11.2	13.8	17.5	11.2	16.9	21.4	7.9	11.2	16.9	21.4	18.4	23.3	28.8
Injection Capacity	PS	oz	3.2	4.2	6.0	7.3	9.3	6.0	9.0	11.4	4.2	6.0	9.0	11.4	9.8	12.4	15.3
	PE	oz	2.5	3.3	4.7	5.8	7.4	4.7	7.1	9.0	3.3	4.7	7.1	9.0	7.8	9.8	12.1
Standard	Max. Injection Pressure	Mpa	242	242	191	155	163	254	206	163	294	254	206	163	275	221	181
		psi	35,132	35,132	27,736	22,473	23,611	36,838	29,869	23,611	42,670	36,838	29,869	23,611	39,825	32,003	26,313
	Max. Holding Pressure	Mpa	218	218	172	139	147	229	185	147	265	229	185	147	247	199	163
		psi	31,618	31,618	24,962	20,226	21,250	33,155	26,882	21,250	38,403	33,155	26,882	21,250	35,843	28,802	23,682
	Injection Rate	in^3/sec	5.6	7.4	9.3	11.5	14.6	9.3	11.5	14.6	7.4	9.3	11.5	14.6	11.5	14.6	18.0
	Injection Speed	in/sec			5.9				5.9			5.9				5.9	
High Speed	Max. Injection Pressure	Mpa	242	242	191	155		270	221	177	294	270	221	177	275	221	181
		psi	35,132	35,132	27,736	22,473		39,114	32,003	25,602	42,670	39,114	32,003	25,602	39,825	32,003	26,313
	Max. Holding Pressure	Mpa	218	218	172	139		243	199	159	265	243	199	159	247	199	163
		psi	31,618	31,618	24,962	20,226		35,203	28,802	23,042	38,403	35,203	28,802	23,042	35,843	28,802	23,682
	Injection Rate	in^3/sec	7.5	9.8	12.4	15.3		12.4	15.3	19.4	14.7	12.4	15.3	19.4	15.3	19.4	24.0
	Injection Speed	in/sec			7.9				7.9		11.8		7.9			7.9	
High Speed (Option)	Max. Injection Pressure	Mpa	242	242	191	155	147	240	191	152	294	240	191	152	275	221	181
		kgf/cm^2	35,132	35,132	27,736	22,473	21,335	34,847	27,736	22,046	42,670	34,847	27,736	22,046	39,825	32,003	26,313
	Max. Holding Pressure	Mpa	218	218	172	139	132	216	172	137	265	216	172	137	247	199	163
		kgf/cm^2	31,618	31,618	24,962	20,226	19,202	31,362	24,962	19,842	38,403	31,362	24,962	19,842	35,843	28,802	23,682
	Injection Rate	cm^3/s	18.8	24.5	31.1	38.3	48.5	31.1	38.3	48.5	24.5	31.1	38.3	48.5	38.3	48.5	59.9
	Injection Speed	mm/sec			19.7				19.7			19.7				19.7	
Charging	Plasticizing Capacity(PS)	lbs/h	90.4	114.6	163.1	218.3	286.6	141.1	187.4	244.7	97.0	141.1	187.4	244.7	156.5	205.0	297.6
	Screw Speed	rpm			~ 350				~ 300				~ 300			~ 250	
CLAMPING UNIT																	
Clamping Force		Uston	187.4								242.5						
Tie Bar Distance		in	22.4 x 20.5								24.4 x 24.4						
Clamping Stroke		in	18.1								22.0						
Daylight		in	37.8								43.7						
Die Plate Dimension		in	33.1 x 31.1								36.2 x 36.2						
Mold Thickness		in	9.8 ~ 19.7								10.6 ~ 21.7						
Ejector Force		Uston	3.9								5.1						
Ejector Stroke		in	4.7								5.1						
GENERAL																	
Electric Heater Capacity		kw	9.7	12.5	14.5	14.2	11.7	14.5	14.0	16.1	12.5	14.5	14.0	16.1	14.2	16.1	17.4
Machine Dimension : L x W x H		ft	17.8 x 4.9 x 6.1					19.1 x 4.9 x 6.1			20.6 x 5.41 x 6.4				21.6 x 5.4 x 6.4		
Machine Weight		lbs	16,535					17,637			23,149				23,810		

Note 1. Injection capacity calculated : Screw Area x Screw Stroke, 2. Clamping system is double 5-point toggle structures.
3. The maximum injection and holding pressures are maximum pressure that can be set on the machine. Actual setting pressure will be restricted by molding condition and cycle time.
4. The maximum injection rate and speed are calculated values. Actual injection rate and speed will be restricted by an injection pressure.
5. The mold size should be bigger than 60% of the Tie-bar distance. (HxV)
6. Due to continuous improvements, specifications are subject to change without notice.

			WIZ 240E			WIZ 310E											
INJECTION UNIT																	
Injection Unit Code			i14 (390t)			i3.6 (190t)			i5.8 (240t)			i8.6 (310t)			i9.4 (310t)	i14 (390t)		
Screw Type			Y	`A	B	Y	`A	B	Y	`A	B	Y	`A	B	C	Y	`A	B
Screw Diameter		in	2.0	2.2	2.4	1.3	1.4	1.6	1.4	1.6	1.8	1.6	1.8	2.0	2.2	2.0	2.2	2.4
		mm	50	55	60	32	36	40	36	40	45	40	45	50	55	50	55	60
Screw Stroke		in	11.0	11.0	11.0	6.3	7.1	7.1	7.1	8.7	8.7	9.4	9.4	9.4	9.4	11.0	11.0	11.0
Injection Capacity Calculated		in^3	33.5	40.6	48.3	7.9	11.2	13.8	11.2	16.9	21.4	18.4	23.3	28.8	34.8	33.5	40.6	48.3
Injection Capacity	PS	oz	17.8	21.6	25.7	4.2	6.0	7.3	6.0	9.0	11.4	9.8	12.4	15.3	18.5	17.8	21.6	25.7
	PE	oz	14.1	17.1	20.4	3.3	4.7	5.8	4.7	7.1	9.0	7.8	9.8	12.1	14.7	14.1	17.1	20.4
Standard	Max. Injection Pressure	Mpa	245	206	172	242	191	155	254	206	163	275	221	181	2301	245	206	172
		psi	35,558	29,869	24,891	35,132	27,736	22,473	36,838	29,869	23,611	39,825	32,003	26,313	23,469	35,558	29,869	24,891
	Max. Holding Pressure	Mpa	221	185	154	218	172	139	229	185	147	247	199	163	2071	221	185	154
		psi	32,003	26,882	22,402	31,618	24,962	20,226	33,155	26,882	21,250	35,843	28,802	23,682	21,122	32,003	26,882	22,402
	Injection Rate	in^3/sec	18.0	21.7	25.9	7.4	9.3	11.5	9.3	11.5	14.6	11.5	14.6	18.0	21.7	18.0	21.7	25.9
	Injection Speed	in/sec		5.9			5.9			5.9			5.9				5.9	
High Speed	Max. Injection Pressure	Mpa	245	206	172	242	191	155	270	221	177	275	221	181	162	245	206	172
		psi	35,558	29,869	24,891	35,132	27,736	22,473	39,114	32,003	25,602	39,825	32,003	26,313	23,469	35,558	29,869	24,891
	Max. Holding Pressure	Mpa	221	185	154	218	172	139	243	199	159	247	199	163	146	221	185	154
		psi	32,003	26,882	22,402	31,618	24,962	20,226	35,203	28,802	23,042	35,843	28,802	23,682	21,122	32,003	26,882	22,402
	Injection Rate	in^3/sec	24.0	29.0	34.5	9.8	12.4	15.3	12.4	15.3	19.4	15.3	19.4	24.0	29.0	24.0	29.0	34.5
	Injection Speed	in/sec		7.9			7.9			7.9			7.9				7.9	
High Speed (Option)	Max. Injection Pressure	Mpa	245	206	172	242	191	155	240	191	152	275	221	181	162	245	206	172
		kgf/cm^2	35,558	29,869	24,891	35,132	27,736	22,473	34,847	27,736	22,046	39,825	32,003	26,313	23,469	35,558	29,869	24,891
	Max. Holding Pressure	Mpa	221	185	154	218	172	139	216	172	137	247	199	163	146	221	185	154
		kgf/cm^2	32,003	26,882	22,402	31,618	24,962	20,226	31,362	24,962	19,842	35,843	28,802	23,682	21,122	32,003	26,882	22,402
	Injection Rate	cm^3/s	59.9	72.5	86.3	24.5	31.1	38.3	31.1	38.3	48.5	38.3	48.5	59.9	72.5	59.9	72.5	86.3
	Injection Speed	mm/sec		19.7			19.7			19.7			19.7				19.7	
Charging	Plasticizing Capacity(PS)	lbs/h	297.6	381.4	480.6	114.6	163.1	218.3	141.1	187.4	244.7	156.5	205.0	297.6	381.4	297.6	381.4	480.6
	Screw Speed	rpm		~ 250			~ 350			~ 300			~ 250				~ 250	
CLAMPING UNIT																	
Clamping Force		Uston	242.5			308.6											
Tie Bar Distance		in	24.4 x 24.4			28.3 x 28.3											
Clamping Stroke		in	22.0			24.4											
Daylight		in	43.7			49.2											
Die Plate Dimension		in	36.2 x 36.2			40.9 x 40.9											
Mold Thickness		in	10.6 ~ 21.7			11.8 ~ 24.8											
Ejector Force		Uston	5.1			5.1											
Ejector Stroke		in	5.1			5.9											
GENERAL																	
Electric Heater Capacity		kw	17.4	20.2	21.4	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 Dimension : L x W x H		ft	22.6 x 5.4 x 6.4			22.6 x 5.9 x 6.7										23.6 x 5.9 x 6.7		
Machine Weight		lbs	24,251			30,865			31,526			31,967				32,628		

WIZ-E Series

Major Specification

			WIZ 390E							WIZ 440E					
INJECTION UNIT															
Injection Unit Code			i14 (390t)			i16.7 (440t)			i15.6 (440t)	i14 (390t)			i16.7 (440t)		
Screw Type			Y	`A	B	Y	`A	B	C	Y	`A	B	Y	`A	B
Screw Diameter		in	2.0	2.2	2.4	2.2	2.4	2.6	2.8	2.0	2.2	2.4	2.2	2.4	2.6
		mm	50	55	60	55	60	65	70	50	55	60	55	60	65
Screw Stroke		in	11.0	11.0	11.0	10.6	10.6	10.6	10.6	11.0	11.0	11.0	10.6	10.6	10.6
Injection Capacity Calculated		in^3	33.5	40.6	48.3	39.1	46.6	54.7	63.4	33.5	40.6	48.3	39.1	46.6	54.7
Injection Capacity	PS	oz	17.8	21.6	25.7	20.8	24.8	29.1	33.7	17.8	21.6	25.7	20.8	24.8	29.1
	PE	oz	14.1	17.1	20.4	16.5	19.6	23.1	26.8	14.1	17.1	20.4	16.5	19.6	23.1
Standard	Max. Injection Pressure	Mpa	245	206	172	255	216	181	147	245	206	172	255	216	181
		psi	35,558	29,869	24,891	36,981	31,291	26,313	21,335	35,558	29,869	24,891	36,981	31,291	26,313
	Max. Holding Pressure	Mpa	221	185	154	229	194	163	132	221	185	154	229	194	163
		psi	32,003	26,882	22,402	33,283	28,162	23,682	19,202	32,003	26,882	22,402	33,283	28,162	23,682
	Injection Rate	in^3/sec	18.0	21.7	25.9	24.6	29.3	34.4	39.9	18.0	21.7	25.9	24.6	29.3	34.4
	Injection Speed	in/sec		5.9			6.7				5.9			6.7	
High Speed	Max. Injection Pressure	Mpa	245	206	172	255	216	181		245	206	172	255	216	181
		psi	35,558	29,869	24,891	36,981	31,291	26,313		35,558	29,869	24,891	36,981	31,291	26,313
	Max. Holding Pressure	Mpa	221	185	154	229	194	163		221	185	154	229	194	163
		psi	32,003	26,882	22,402	33,283	28,162	23,682		32,003	26,882	22,402	33,283	28,162	23,682
	Injection Rate	in^3/sec	24.0	29.0	34.5	29.0	34.5	40.5		24.0	29.0	34.5	29.0	34.5	40.5
	Injection Speed	in/sec		7.9			7.9				7.9			7.9	
High Speed (Option)	Max. Injection Pressure	Mpa	245	206	172	255	216	181		245	206	172	255	216	181
		kgf/cm^2	35,558	29,869	24,891	36,981	31,291	26,313		35,558	29,869	24,891	36,981	31,291	26,313
	Max. Holding Pressure	Mpa	221	185	154	229	194	163		221	185	154	229	194	163
		kgf/cm^2	32,003	26,882	22,402	33,283	28,162	23,682		32,003	26,882	22,402	33,283	28,162	23,682
	Injection Rate	cm^3/s	59.9	72.5	86.3	72.5	86.3	101.2		59.9	72.5	86.3	72.5	86.3	101.2
	Injection Speed	mm/sec		19.7			19.7				19.7			19.7	
Charging	Plasticizing Capacity(PS)	lbs/h	297.6	381.4	480.6	335.1	423.3	522.5	535.7	297.6	381.4	480.6	335.1	423.3	522.5
	Screw Speed	rpm		~ 250			~ 220				~ 250			~ 220	
CLAMPING UNIT															
Clamping Force		Uston	385.8							440.9					
Tie Bar Distance		in	32.3 x 32.3							32.3 x 32.3					
Clamping Stroke		in	28.3							30.3					
Daylight		in	55.9							59.8					
Die Plate Dimension		in	45.3 x 45.3							45.3 x 45.3					
Mold Thickness		in	13.8 ~ 27.6							13.8 ~ 29.5					
Ejector Force		Uston	6.8							8.8					
Ejector Stroke		in	5.9							5.9					
GENERAL															
Electric Heater Capacity		kw	17.4	20.2	21.4	24.1			28.8	17.4	20.2	21.4	24.1		
Machine Dimension : L x W x H		ft	24.5 x 6.4 x 7.3			25.5 x 6.4 x 7.3			26.8 x 6.4 x 7.3	25.9 x 6.9 x 7.5					
Machine Weight		lbs	38,581			39,242				39,022			39,683		

Note 1. Injection capacity calculated : Screw Area x Screw Stroke, 2. Clamping system is double 5-point toggle structures.
3. The maximum injection and holding pressures are maximum pressure that can be set on the machine. Actual setting pressure will be restricted by molding condition and cycle time.
4. The maximum injection rate and speed are calculated values. Actual injection rate and speed will be restricted by an injection pressure.
5. The mold size should be bigger than 60% of the Tie-bar distance. (HxV)
6. Due to continuous improvements, specifications are subject to change without notice.

			WIZ 440E	WIZ 500E									
INJECTION UNIT													
Injection Unit Code			i15.6 (440t)	i16.7 (440t)			i15.6 (440t)	i24.8 (500t)			i37 (610t)			i45 (610t)
Screw Type			C	Y	`A	B	C	Y	`A	B	Y	`A	B	C
Screw Diameter		in	2.8	2.2	2.4	2.6	2.8	2.6	2.8	3.0	2.8	3.0	3.3	3.5
		mm	70	55	60	65	70	65	70	75	70	75	85	90
Screw Stroke		in	10.6	10.6	10.6	10.6	10.6	13.6	13.6	13.6	16.5	16.5	16.5	16.5
Injection Capacity Calculated		in^3	63.4	39.1	46.6	54.7	63.4	69.9	81.0	93.0	98.6	113.2	145.4	163.1
Injection Capacity	PS	oz	33.7	20.8	24.8	29.1	33.7	37.1	43.1	49.5	52.5	60.2	77.4	87.7
	PE	oz	26.8	16.5	19.6	23.1	26.8	29.5	34.2	39.3	41.6	47.8	61.4	68.8
Standard	Max. Injection Pressure	Mpa	147	255	216	181	147	226	196	172	226	196	157	167
		psi	21,335	36,981	31,291	26,313	21,335	32,714	28,447	24,891	32,714	28,447	22,757	24,180
	Max. Holding Pressure	Mpa	132	229	194	163	132	203	177	154	203	177	141	150
		psi	19,202	33,283	28,162	23,682	19,202	29,442	25,602	22,402	29,442	25,602	20,482	21,762
	Injection Rate	in^3/sec	39.9	24.6	29.3	34.4	39.9	32.4	37.6	43.1	37.6	43.1	55.4	62.1
	Injection Speed	in/sec	6.7			6.7			6.3			6.3		
High Speed	Max. Injection Pressure	Mpa		255	216	181		226	196	172	226	196	157	
		psi		36,981	31,291	26,313		32,714	28,447	24,891	32,714	28,447	22,757	
	Max. Holding Pressure	Mpa		229	194	163		203	177	154	203	177	141	
		psi		33,283	28,162	23,682		29,442	25,602	22,402	29,442	25,602	20,482	
	Injection Rate	in^3/sec		29.0	34.5	40.5		40.5	47.0	53.9	47.0	53.9	69.3	
	Injection Speed	in/sec			7.9				7.9			7.9		
High Speed (Option)	Max. Injection Pressure	Mpa		255	216	181		201	172	152	226	196	157	
		kgf/cm^2		36,981	31,291	26,313		29,158	24,891	22,046	32,714	28,447	22,757	
	Max. Holding Pressure	Mpa		229	194	163		181	154	137	203	177	141	
		kgf/cm^2		33,283	28,162	23,682		26,242	22,402	19,842	29,442	25,602	20,482	
	Injection Rate	cm^3/s		72.5	86.3	101.2		50.6	58.7	67.4	58.7	67.4	86.6	
	Injection Speed	mm/sec			19.7				9.87			9.8		
Charging	Plasticizing Capacity(PS)	lbs/h	535.7	335.1	423.3	522.5	535.7	474.0	564.4	681.2	564.4	681.2	914.9	1,073.7
	Screw Speed	rpm	~ 220			~ 220			~ 200			~ 200		
CLAMPING UNIT														
Clamping Force		Uston	440.9						496.0					
Tie Bar Distance		in	32.3 x 32.3						32.7 x 32.7					
Clamping Stroke		in	30.3						31.5					
Daylight		in	59.8						61.0					
Die Plate Dimension		in	45.3 x 45.3						47.2 x 47.2					
Mold Thickness		in	13.8 ~ 29.5						13.8 ~ 29.5					
Ejector Force		Uston	8.8						11.0					
Ejector Stroke		in	5.9						7.1					
GENERAL														
Electric Heater Capacity		kw	28.8		24.1		28.8		23.3			26.6		38.2
Machine Dimension : L x W x H		ft	27.2 x 6.9 x 7.5		30.5 x 7.2 x 7.1		31.8 x 7.2 x 7.1			32.1 x 7.2 x 7.1				
Machine Weight		lbs	39,683		59,525				61,729			62,832		63,493

WIZ-E Series

Major Specification

Note 1. Injection capacity calculated : Screw Area x Screw Stroke, 2. Clamping system is double 5-point toggle structures.
3. The maximum injection and holding pressures are maximum pressure that can be set on the machine. Actual setting pressure will be restricted by molding condition and cycle time.
4. The maximum injection rate and speed are calculated values. Actual injection rate and speed will be restricted by an injection pressure.
5. The mold size should be bigger than 60% of the Tie-bar distance. (HxV)
6. Due to continuous improvements, specifications are subject to change without notice.

			WIZ 610E										WIZ 720E			
INJECTION UNIT																
Injection Unit Code			i24.8 (500t)			i37 (610t)			i45 (610t)	i63.6 (720t)			i37 (610t)			i45 (610t)
Screw Type			Y	`A	B	Y	`A	B	C	Y	`A	A	Y	`A	B	C
Screw Diameter		in	2.6	2.8	3.0	2.8	3.0	3.3	3.5	3.3	3.5	3.9	2.8	3.0	3.3	3.5
		mm	65	70	75	70	75	85	90	85	90	100	70	75	85	90
Screw Stroke		in	13.6	13.6	13.6	16.5	16.5	16.5	16.5	19.7	19.7	19.7	16.5	16.5	16.5	16.5
Injection Capacity Calculated		in^3	69.9	81.0	93.0	98.6	113.2	145.4	163.1	173.1	194.1	239.6	98.6	113.2	145.4	163.1
Injection Capacity	PS	oz	37.1	43.1	49.5	52.5	60.2	77.4	87.7	92.1	103.2	127.4	52.5	60.2	77.4	87.7
	PE	oz	29.5	34.2	39.3	41.6	47.8	61.4	68.8	73.1	81.9	101.1	41.6	47.8	61.4	68.8
Standard	Max. Injection Pressure	Mpa	226	196	172	226	196	157	167	226	196	157	226	196	157	167
		psi	32,714	28,447	24,891	32,714	28,447	22,757	24,180	32,714	28,447	22,757	32,714	28,447	22,757	24,180
	Max. Holding Pressure	Mpa	203	177	154	203	177	141	150	203	177	141	203	177	141	150
		psi	29,442	25,602	22,402	29,442	25,602	20,482	21,762	29,442	25,602	20,482	29,442	25,602	20,482	21,762
	Injection Rate	in^3/sec	32.4	37.6	43.1	37.6	43.1	55.4	62.1	55.4	62.1	76.7	37.6	43.1	55.4	62.1
	Injection Speed	in/sec		6.3			6.3				6.3			6.3		
High Speed	Max. Injection Pressure	Mpa	226	196	172	226	196	157		226	196	157	226	196	157	
		psi	32,714	28,447	24,891	32,714	28,447	22,757		32,714	28,447	22,757	32,714	28,447	22,757	
	Max. Holding Pressure	Mpa	203	177	154	203	177	141		203	177	141	203	177	141	
		psi	29,442	25,602	22,402	29,442	25,602	20,482		29,442	25,602	20,482	29,442	25,602	20,482	
	Injection Rate	in^3/sec	40.5	47.0	53.9	47.0	53.9	69.3		69.3	77.6	95.9	47.0	53.9	69.3	
	Injection Speed	in/sec		7.9			7.9				7.9			7.9		
High Speed (Option)	Max. Injection Pressure	Mpa	201	172	152	226	196	157					226	196	157	
		kgf/cm^2	29,158	24,891	22,046	32,714	28,447	22,757					32,714	28,447	22,757	
	Max. Holding Pressure	Mpa	181	154	137	203	177	141					203	177	141	
		kgf/cm^2	26,242	22,402	19,842	29,442	25,602	20,482					29,442	25,602	20,482	
	Injection Rate	cm^3/s	50.6	58.7	67.4	58.7	67.4	86.6					58.7	67.4	86.6	
	Injection Speed	mm/sec		9.8			9.8							9.8		
Charging	Plasticizing Capacity(PS)	lbs/h	474.0	564.4	681.2	564.4	681.2	914.9	1,073.7	685.6	804.7	1,080.3	564.4	681.2	914.9	1,073.7
	Screw Speed	rpm		~ 200			~ 200				~ 150			~ 200		
CLAMPING UNIT																
Clamping Force		Uston	606.3										716.5			
Tie Bar Distance		in	35.4 x 35.4										41.7 x 37.8			
Clamping Stroke		in	35.4										39.4			
Daylight		in	67.0										82.7			
Die Plate Dimension		in	52.6 x 52.6										59.1 x 55.1			
Mold Thickness		in	15.7 ~ 31.5										17.7 ~ 43.3			
Ejector Force		Uston	14.3										19.8			
Ejector Stroke		in	7.9										8.7			
GENERAL																
Electric Heater Capacity		kw	23.3			26.6			38.2	47.4			26.6			38.2
Machine Dimension : L x W x H		ft	32.8 x 7.8 x 7.1							33.8 x 7.8 x 7.1			35.1 x 8.1 x 7.2			
Machine Weight		lbs	68,343			69,446			70,107	72,753			88,185			88,846

			WIZ 720E						WIZ 950E									
INJECTION UNIT																		
Injection Unit Code			i63.6 (720t)			i82.6 (950t)			i37 (610t)			i45 (610t)	i63.6 (720t)			i82.6 (950t)		
Screw Type			Y	`A	B	Y	`A	B	Y	`A	B	C	Y	`A	B	Y	`A	B
Screw Diameter		in	3.3	3.5	3.9	3.9	4.1	4.5	2.8	3.0	3.3	3.5	3.3	3.5	3.9	3.9	4.1	4.5
		mm	85	90	100	100	105	115	70	75	85	90	85	90	100	100	10 5	115
Screw Stroke		in	19.7	19.7	19.7	20.9	20.9	20.9	16.5	16.5	16.5	16.5	19.7	19.7	19.7	20.9	20.9	20.9
Injection Capacity Calculated		in^3	173.1	194.1	239.6	254.0	280.1	335.9	98.6	113.2	145.4	163.1	173.1	194.1	239.6	254.0	280.1	335.9
Injection Capacity	PS	oz	92.1	103.2	127.4	135.1	148.9	178.7	52.5	60.2	77.4	87.7	92.1	103.2	127.4	135.1	148.9	178.7
	PE	oz	73.1	81.9	101.1	107.2	118.2	141.8	41.6	47.8	61.4	68.8	73.1	81.9	101.1	107.2	118.2	141.8
Standard	Max. Injection Pressure	Mpa	226	196	157	196	177	147	226	196	157	167	226	196	157	196	177	147
		psi	32,714	28,447	22,757	28,447	25,602	21,335	32,714	28,447	22,757	24,180	32,714	28,447	22,757	28,447	25,602	21,335
	Max. Holding Pressure	Mpa	203	177	141	177	159	132	203	177	141	150	203	177	141	177	159	132
		psi	29,442	25,602	20,482	25,602	23,042	19,202	29,442	25,602	20,482	21,762	29,442	25,602	20,482	25,602	23,042	19,202
	Injection Rate	in^3/sec	55.4	62.1	76.7	76.7	84.5	101.4	37.6	43.1	55.4	62.1	55.4	62.1	76.7	76.7	84.5	101.4
	Injection Speed	in/sec		6.3			6.3			6.3				6.3			6.3	
High Speed	Max. Injection Pressure	Mpa	226	196	157	196	177	147	226	196	157		226	196	157	196	177	147
		psi	32,714	28,447	22,757	28,447	25,602	21,335	32,714	28,447	22,757		32,714	28,447	22,757	28,447	25,602	21,335
	Max. Holding Pressure	Mpa	203	177	141	177	159	132	203	177	141		203	177	141	177	159	132
		psi	29,442	25,602	20,482	25,602	23,042	19,202	29,442	25,602	20,482		29,442	25,602	20,482	25,602	23,042	19,202
	Injection Rate	in^3/sec	69.3	77.6	95.9	95.9	105.7	126.8	47.0	53.9	69.3		69.3	77.6	95.9	95.9	105.7	126.8
	Injection Speed	in/sec		7.9			7.9			7.9				7.9			7.9	
High Speed (Option)	Max. Injection Pressure	Mpa							226	196	157							
		kgf/cm^2							32,714	28,447	22,757							
	Max. Holding Pressure	Mpa							203	177	141							
		kgf/cm^2							29,442	25,602	20,482							
	Injection Rate	cm^3/s							58.7	67.4	86.6							
	Injection Speed	mm/sec								9.8								
Charging	Plasticizing Capacity(PS)	lbs/h	685.6	804.7	1,080.3	1,080.3	1,214.7	1,514.6	564.4	681.2	914.9	1,073.7	685.6	804.7	1,080.3	1,080.3	1,214.7	1,514.6
	Screw Speed	rpm		~ 150			~ 150			~ 200				~ 150			~ 150	
CLAMPING UNIT																		
Clamping Force		Uston	716.5						937.0									
Tie Bar Distance		in	41.7 x 37.8						52.0 x 44.1									
Clamping Stroke		in	39.4						47.2									
Daylight		in	82.7						98.4									
Die Plate Dimension		in	59.1 x 55.1						73.6 x 65.7									
Mold Thickness		in	17.8 ~ 43.3						19.7 ~ 51.2									
Ejector Force		Uston	19.8						26.5									
Ejector Stroke		in	8.7						9.4									
GENERAL																		
Electric Heater Capacity		kw	47.4			65.3			26.6			38.2	47.4			65.3		
Machine Dimension : L x W x H		ft	35.1 x 8.1 x 7.2										36.8 x 9.6 x 7.9					
Machine Weight		lbs	91,492			92,153			127,868			128,529	131,175			131,836		

Electric Injection Molding Machine

WIZ-E Series

Standard Equipment

Clamping Unit
- ▶ Auto Lubrication Device
- ▶ Tab Hole For Robot Installation
- ▶ Hydraulic Ejector(A-Circuit)
- ▶ Hydraulic Ejector(B-Circuit)
- ▶ Ejector Preserve Circuit
- ▶ Reducing Speed & Pressure for Mold Set-up
- ▶ Trying to Close the Mold Again with Mold Protection
- ▶ Automatic Mold Set-up Advice
- ▶ Support for Moving Platen
- ▶ Multi-ejection & Vibrating Ejection
- ▶ Mold Clamp(Manual)
- ▶ Product Receiver
- ▶ Air Blow off Unit
- ▶ T-slot Platen

Injection Unit
- ▶ Wear Resistant Bimetallic Barrel
- ▶ Screw for General Purpose
- ▶ Cable Heater for Nozzle Zone
- ▶ Heater Cover
- ▶ Pre-Heating Temperature Control
- ▶ Injection Ram Advance and Retract Device
- ▶ Injection Unit Swiveling Device
- ▶ Nozzle-Open Type
- ▶ Nozzle Retract Timing Selector
- ▶ Screw Back Pressure Regulator
- ▶ Screw Cold start Prevention Device
- ▶ Screw Suck Back
- ▶ Screw Tip (for General Resins, Non-return Valve)
- ▶ Nozzle Safety Cover With Interlock
- ▶ Back Pressure Relieving Circuit

General
- ▶ Instruction Manual
- ▶ Standard Machine Color
- ▶ Level Pad

Electric System
- ▶ Abnormal Operation Warning Device (Buzzer)
- ▶ Abnormal Operation Indicating Device
- ▶ Emergency Stop Push Button
- ▶ Automatic Barrel Heat-up Control Device
- ▶ Safety Gates With Interlocks
- ▶ Shot Counter and Count up Detection for Target Production
- ▶ Nozzle Temperature Control by SSR
- ▶ Alarm Light
- ▶ Automatic Purge Circuit
- ▶ Ethernet Port for Remote Monitoring System
- ▶ Heater Band Failure Indicator
- ▶ Automatic Power Shut-Down Circuit
- ▶ Safety Door Open Interlock Circuit
- ▶ Valve Gate Circuit
- ▶ Eject Retract Circuit
- ▶ Robot Interlock Circuit

Control Unit
- ▶ Injection Control
  - • 9 Stage Speed & 9 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
- ▶ Heater Control
  - • Heater Band Failure Indicator
- ▶ Clamping Unit High Speed 4 Stages Control
- ▶ Ejector Control
- ▶ Monitoring
  - • Quality Monitoring / Alarm
  - - Cycle Time / Ejecting Time / ChargingTime / Plasticizing Time / Injection Start Position / Holding Pressure Shifting Position / Cushion Position / Max. Injection Position
  - • Process Warning
  - - Overrunning Abnormal / Charging Time Abnormal / Plasticizing Time Abnormal
  - • Digital Indicates
  - - Screw Position / Rpm / Back Pressure / Injection Pressure / Clamping Open & Close Position / Ejector Position / Nozzle Barrel Temperature
- ▶ Data Management
  - • Save Mold Data Up to 100 Molds
  - • Mold Card Interface / Inner Memory Editing
- ▶ Digital Setting
  - • Injection Speed / Pressure / Position, Screw Back Pressure / rpm / Nozzle, Barrel Temperature / Open & Closing Time / Position / Clamping Force / Ejector Forward / Back Speed / Position / Ejector Force

Optional Equipment

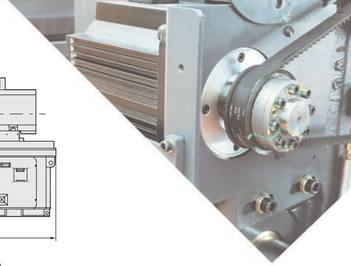
Clamping Unit
- ▶ Tab Hole Platen
- ▶ Automatic Mold Clamp
- ▶ Single Hydraulic Core Puller
- ▶ Dual Hydraulic Core Puller
- ▶ Screw Ejector
- ▶ Pneumatic safety door open
- ▶ T-slot Platen
- ▶ Gate Cut Circuit
- ▶ Injection Compression Device

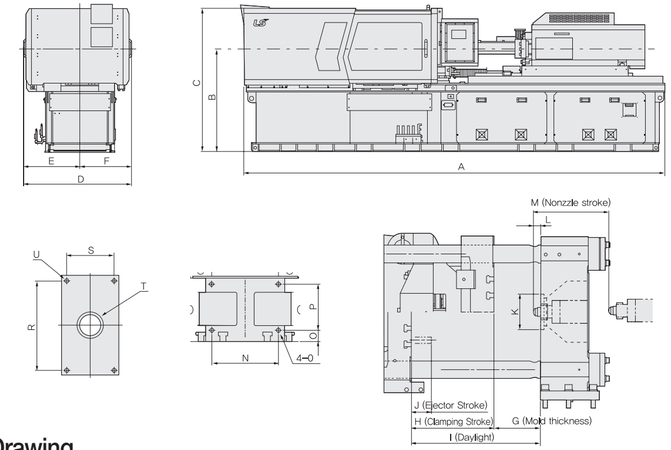
Injection Unit
- ▶ Anti-Wear & Corrosion Barrel and Screw
- ▶ Extension Nozzle (50, 100mm)
- ▶ Temperature Controller for Extension Nozzle Heat
- ▶ Fan Blower
- ▶ Shut Off Nozzle
- ▶ Specialized Screw for Each Resin

General
- ▶ Chiller
- ▶ Crusher
- ▶ General Hopper
- ▶ Hopper Dryer
- ▶ Hopper Loader
- ▶ Hopper Ladder
- ▶ Mixer
- ▶ Conveyer
- ▶ Hot Runner Controller
- ▶ Take- Out Robot
- ▶ Maintenance Tools
- ▶ Spare Parts

Electric System
- ▶ PID Temperature Control
- ▶ Automatic Voltage Regulator(AVR)
- ▶ Air Conditioning Unit on Control Cabinet
- ▶ Auxiliary Consent
- ▶ Gas Injection Interlock Circuit
- ▶ Gate Cut Circuit
- ▶ Centralized Network System
- ▶ UPS

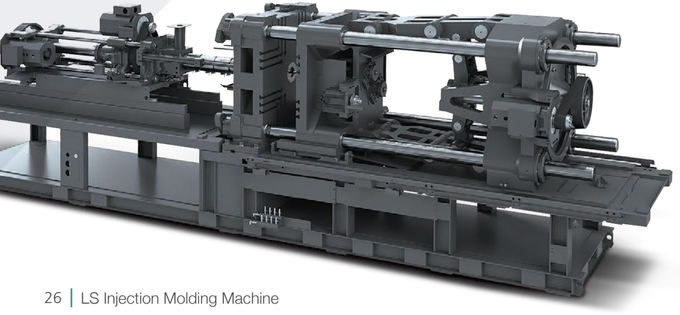
Control Unit
- ▶ Injection Control
  - • Auxiliary Pressure Response Control
  - - Position, Resin Pressure, Mold internal Signal
- ▶ Mold Temperature Control
- ▶ Analog Output of Injection Position, Speed and Pressure
- ▶ Product Completed Signal
- ▶ USB
- ▶ Printer
- ▶ PC Interface
- ▶ Hopper Block Temperature Control





External Form Drawing

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
WIZ 20E	114.2	43.3	53.7	38.4	20.6	17.8	4.7 ~ 9.8	7.9	17.7	2.4	Ø4	2.0	9.1	3.9	1.8	1.6	M10	6.7	3.5	Ø1.6	M10
WIZ 35E	128.0	43.3	53.7	37.1	19.9	17.2	4.7 ~ 9.8	9.1	18.9	2.4	Ø4	2.0	9.1	3.9	1.8	1.6	M10	6.7	3.5	Ø1.6	M10
WIZ 55E	145.5	44.8	57.6	40.4	22.1	18.3	5.9 ~ 12.6	10.6	23.2	2.8	Ø4	2.0	9.8	3.9	2.2	1.6	M10	6.7	3.5	Ø1.6	M10
WIZ 90E	164.3	47.2	65.7	43.6	22.9	20.7	5.9 ~ 13.8	11.8	25.6	2.8	Ø4	2.0	13.8	3.9	2.6	1.6	M10	6.7	3.5	Ø1.6	M10
WIZ 120E	193.6	47.4	66.2	48.5	25.3	23.1	7.9 ~ 16.1	13.8	29.9	3.1	Ø4	2.0	15.7	8.3	1.4	5.7	M12	6.7	3.5	Ø2.1	M10
WIZ 190E	213.5	50.3	73.5	55.4	29.8	25.6	9.8 ~ 19.7	15.7	35.4	3.9	Ø4	2.0	17.7	8.3	0.6	2.2	M16	6.7	3.5	Ø2.1	M10
WIZ 240E	247.2	51.3	74.6	68.7	37.6	31.1	10.6 ~ 21.7	19.7	41.3	4.7	Ø4	2.0	19.7	13.8	2.4	3.1	M16	6.7	3.5	Ø2.5	M10
WIZ 310E	270.7	54.6	77.4	73.9	39.6	31.5	11.8 ~ 24.8	21.7	46.5	5.5	Ø4	2.0	23.6	17.7	2.4	3.1	M20	6.7	3.5	Ø2.5	M10
WIZ 390E	297	56.7	88.7	78	42	35.9	13.8 ~ 27.6	23.6	51.2	5.9	Ø4	2.0	23.6	20.9	2.4	3.1	M20	6.7	3.5	Ø2.5	M10
WIZ 440E	306.7	56.9	88.7	98	42	35.9	13.8 ~ 29.5	27.6	57.1	5.9	Ø4	2.0	23.6	22.0	6.7	3.1	M20	6.7	3.5	Ø2.5	M10
WIZ 500E	381.8	53.5	78.5	84.6	44.1	40.5	13.8 ~ 29.5	31.5	61.0	7.1	Ø4	2.0	35.4	15.7	2.8	9.8	M20	11.0	7.5	Ø2.5	M16
WIZ 610E	394.0	53.5	80.2	92.0	47.8	44.2	15.7 ~ 31.5	35.4	66.9	7.9	Ø4	2.0	35.4	15.7	3.0	9.8	M20	11.0	7.5	Ø2.7	M16
WIZ 720E	420.2	53.5	86.1	97.8	48.3	48.2	17.7 ~ 43.3	39.4	78.7	7.9	Ø5	2.0	31.5	44.1	2.8	6.9	M24	11.0	7.5	Ø2.9	M16
WIZ 950E	441.3	58.3	95.1	115.9	57.9	57.9	19.7 ~ 51.2	47.2	98.4	9.4	Ø5	2.0	31.5	44.1	2.8	8.3	M24	11.0	7.5	Ø2.9	M16

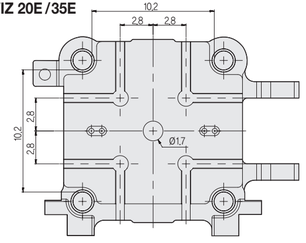


Electric Injection Molding Machine

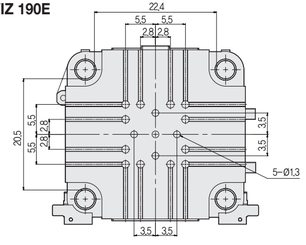
WIZ-E Series

Moving Platen Drawing

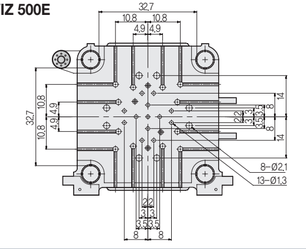
WIZ 20E /35E



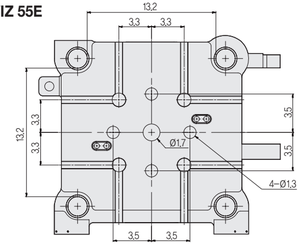
WIZ 190E



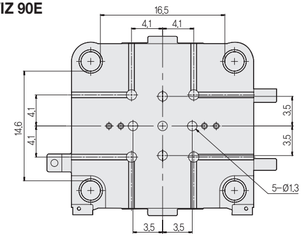
WIZ 500E



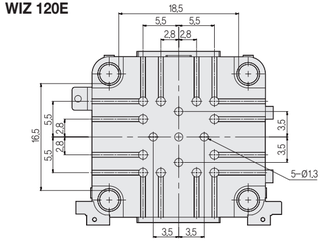
WIZ 55E



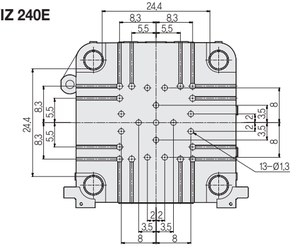
WIZ 90E



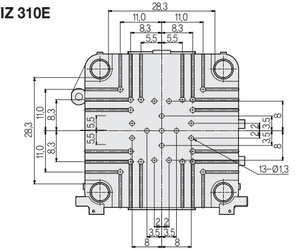
WIZ 120E



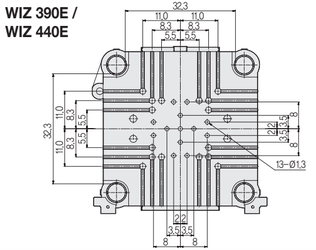
WIZ 240E



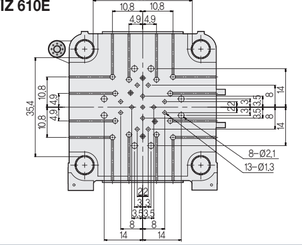
WIZ 310E



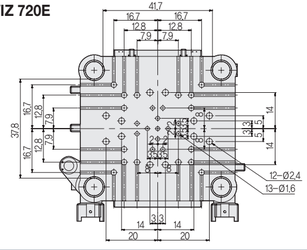
WIZ 390E / WIZ 440E



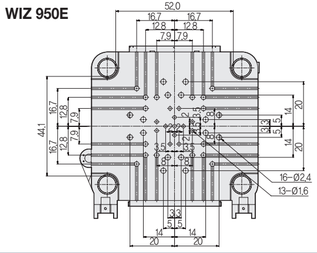
WIZ 610E



WIZ 720E



WIZ 950E



Two Color / Dissimilar Material Electric Machine

Developed two color electric machine in Korea equal performance & quality with Japanese and European two color / dissimilar injection molding machine

WIZ 170EC / WIZ 280EC

WIZ-EC Series

Structure & Feature

- Developed first two color / dissimilar material electric machine in KOREA.
- Adopting AC servo motor realizes faster mold rotating time & more precise position control
  - Improving high speed mold rotating time within 0.9sec in 170 USton machine.
  - Improving high speed mold rotating time within 1.2sec in 280 USton machine.
- Enable high speed injection(300mm/sec) comparing to hydraulic two color/dissimilar material machine.
- Applying high intensity clamping unit by optimized design through CAE analysis. Applying center press type for precise molding
- Enable using variable size mold by longest tie bar distance and longest adjusting distance of mold in Korea.
  - Index UNIT size Ø805 (170 USton)
  - Index UNIT size Ø1100 (280 USton)

Index unit

Applying Servo motor

- Reduce rotation time by half comparing with hydraulic type(0.86 sec)
- Improving position control & precise molding

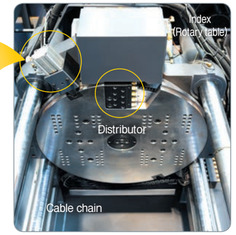
External distributor

- Easy replacement of distributor → additional installation of cooling port
- Removing internal cooling line in rotating plate → easy for maintenance due to prevention of oil & water leakage, heat loss

Easy replacement of Stopper

- In the case of wear and breakage, users can easily replace cap and stopper head → reduce maintenance cost
- Tapper type → easy to revise correct position

Locking cylinder



Injection unit

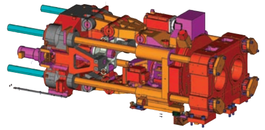
- High speed injection mechanism equipped high response & high torque servo motor

Appearance

- All cover box type design for better safety and appearance

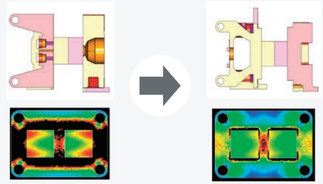
Clamping unit

- Wide platen 700mm x 410mm
- Adopting stress diversification type in moving platen for mold protection
- Stabilizing in clamping unit via installation of rear platen
- Reducing cycle time by high speed of clamping unit
- Improvement on wiring through equipping cable chain in servo motor



Analyzing mold platen

- High rigid, low distortion clamping unit (center press type)

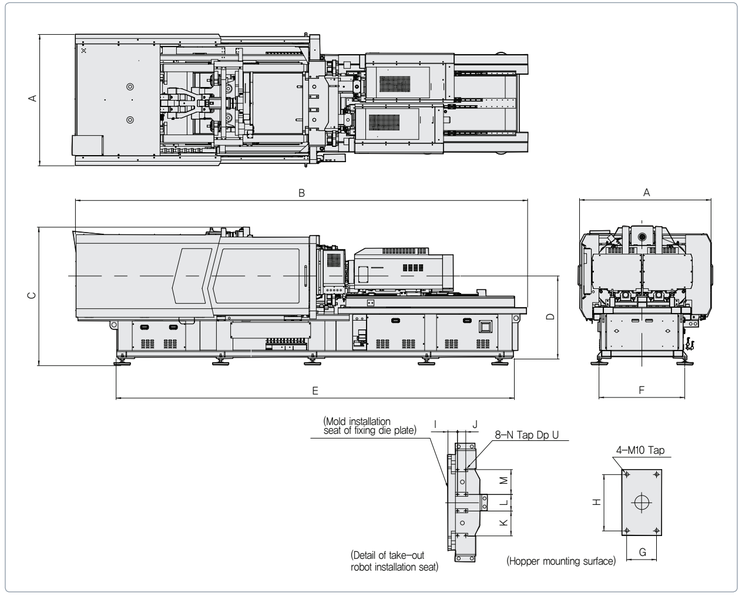


Stable control system with convenient handling

HICOM-Y

- TFT clear screen and quicker response time provide easy operation
- Real time data setting and operation
- User-friendly UI
- Manual operation button
- USB port, key switch (Option)

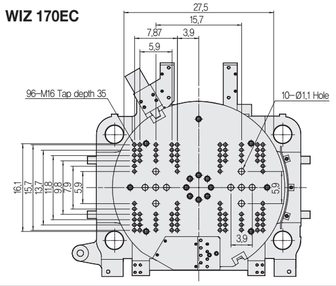
External Form Drawing



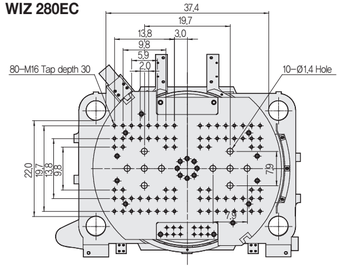
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
WIZ 170EC	66.9	224.4	78.7	49.2	200.8	41.3	3.5	6.7	2.4	3.9	7.9	7.9	7.9	M0.6	1.2
WIZ 280EC	78.0	267.7	82.7	49.2	236.2	50.9	3.5	6.7	4.5	3.9	11.8	7.9	11.8	M0.8	1.6

Moving Platen Drawing

WIZ 170EC



WIZ 280EC



Major Specification

			WIZ 170EC						WIZ 280EC					
INJECTION UNIT														
Injection Unit Code			1st Injection Unit (80T)			2nd Injection Unit (80T)			1st Injection Unit (150T)			2nd Injection Unit (150T)		
Screw Type			0.15			0.15			0.28			0.28		
Screw Diameter		in	1.0	1.1	1.3	1.0	1.1	1.3	1.3	1.4	1.6	1.3	1.4	1.6
		mm	25	28	32	25	28	32	32	36	40	32	36	40
Injection Capacity Calculated		in³	3.6	4.5	5.9	3.6	4.5	5.9	7.9	9.9	12.3	7.9	9.9	12.3
Injection Capacity	PS	oz	1.9	2.4	3.1	1.9	2.4	3.1	4.2	5.3	6.5	4.2	5.3	6.5
	PE	oz	1.5	1.9	2.5	1.5	1.9	2.5	3.3	4.2	5.2	3.3	4.2	5.2
Standard	Max. Injection Pressure	Mpa	246	196	150	246	196	150	242	191	155	242	191	155
		Psi	35,701	28,447	21,762	35,701	28,447	21,762	35,132	27,736	22,473	35,132	27,736	22,473
	Max. Holding Pressure	Mpa	222	177	135	222	177	135	218	172	139	218	172	139
		Psi	32,131	25,602	19,586	32,131	25,602	19,586	31,619	24,962	20,226	31,619	24,962	20,226
	Injection Rate	in³/s	0.4	0.5	0.6	0.4	0.5	0.6	0.5	0.6	0.7	0.5	0.6	0.7
	Injection Speed	in/sec		0.3			0.3			0.2			0.2	
High Speed (Option)	Max. Injection Pressure	Mpa	246	196	150	246	196	150	242	191	155	242	191	155
		Psi	35,701	28,447	21,762	35,701	28,447	21,762	35,132	27,736	22,473	35,132	27,736	22,473
	Max. Holding Pressure	Mpa	222	177	135	222	177	135	218	172	140	218	172	140
		Psi	32,131	25,602	19,586	32,131	25,602	19,586	31,619	24,962	20,226	31,619	24,962	20,226
	Injection Rate	in³/s	9.0	11.3	14.7	9.0	11.3	14.7	9.8	12.4	15.3	9.8	12.4	15.3
	Injection Speed	in/sec		11.8			11.8			12.2			12.2	
Charging	Plasticizing Capacity(PS)	lbs/h	79.4	103.6	130.1	79.4	103.6	130.1	114.6	163.1	218.3	114.6	163.1	218.3
	Screw Speed	rpm		~ 400			~ 400			~ 350			~ 350	
CLAMPING UNIT														
Clamping Force		Uston	165.3						275.6					
Tie Bar Distance : H x V		in	27.6 x 16.1						37.4 x 22.0					
Clamping Stroke		in	15.7						21.7					
Daylight		in	41.3						51.2					
Mold Thickness		in	5.9 ~ 25.6						7.9 ~ 29.5					
Ejector Force		Uston	2.8						5.0					
Ejector Stroke		in	7.9						5.9					
Ejector Rod Protrusion		in	3.9						3.9					
Rotary Table Diameter		in	31.7						43.3					
Rotary Table Positioning			180°, Servomotor Drive						180°, Servomotor Drive					
Max. Mold Size		in	(9.4 x 3.9) 2EA						(17.7 x 21.7) 2EA					
Max. Mold Weight on Moving Platen		kg	250 x 2EA						500 x 2EA					
GENERAL														
Heater		kW	8.4	10.1	12.8	8.4	10.1	12.8	12.8	14.6	14.3	12.8	14.6	14.3
Machine Dimension : L x W x H		ft	18.7 x 5.6 x 6.6						22.3 x 6.5 x 6.9					
Machine Weight		lbs	23,148.5						33,069.3					

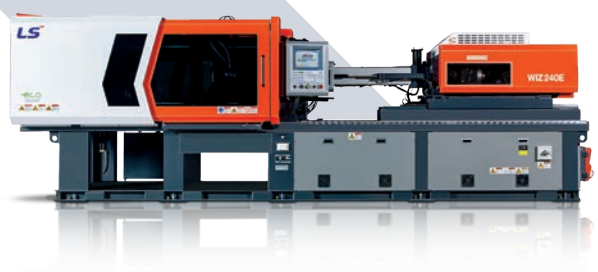
Note
1. Injection capacity calculated : Screw Area x Screw Stroke.
2. Actual injection capacity output may vary from calculated injection capacity
3. Clamping system is double 5-point toggle structures.
4. The maximum injection and holding pressures are maximum pressure that can be set on the machine. Actual setting pressure will be restricted by molding condition and cycle time.
5. The maximum injection rate and speed are calculated values. Actual injection rate and speed will be restricted by an injection pressure.
6. The mold size should be bigger than 60% of the Tie-bar distance. (HxV)
7. Due to continuous improvements, specifications are subject to change without notice.

International Quality, Environment, Safety, Health Certification

KCS Mark CE ISO9001: 2008 ISO14001 OHSAS18001

Be the ONE*

Outstanding People, Best-in-Class Product, Winning Partnership



LS Mtron

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