WOOJIN PLAIMM

A5 SERIES CATALOG

LEADING THE WORLD'S BEST IMM

WOOJIN PLAIMM

LEADING THE WORLD'S BEST

INJECTION MOLDING MACHINE

· Facility Area: 485,867㎡
· Total Area: 690,506㎡

WOOJIN PLAIMM HISTORY

· 1985.04: Woojin Machinery established
· 1998.04: Developed high-performance small IMM SELEX-ELF
· 1999.11: Developed two-platen IMM SELEX-TM
· 2000.03: Developed all-electric IMM SELEX-EA
· 2001.02: Company name change-Woojin Selex Co., Ltd.
· 2004.06: Developed double IMM SELEX-NC
· 2005.12: Developed the first IMM for PET preforms in Korea
· 2006.03: Korea's first injection speed 1,600mm/sec ultra high speed, ultra precision IMM development
· 2007.05: Developed an IMM for lens only
· 2007.07: Developed a hybrid IMM (NM-130H)
· 2008.01: Developed an IMM for stack & tandem mold
· 2009.05: Developed a new concept IMM (TH, TE, DL, VH Series)
· 2012.01: Company name change-Woojin Plaimm Co., Ltd.
· 2014.07: Established the second research corporation in Austria (WOOJIN PLAIMM GmbH)
· 2014.10: Established the first IMM business site in Korea (Woojin Technovelli) and relocated the business site (Incheon → Boeun)
· 2018.11: Developed the world's first low-pressure physical foam IMM (Super-Foam)
· 2019.11: Launch SPEED CLUB app and opening of the CS center
· 2021.08: Developed Super-Foam vertical (SFV2400) Joint development with CTC
· 2023.03: Developed premium tie-bar less IMM TL-A5
Devleoped premium two-platen hybrid multi IMM (DL-2K-T)

IN-HOUSE PRODUCTION

Frame

Manufacturing the frame

Sheet Metal Block Plant

Platen · Toggle

Foundry Plant

Machining Plant

Painting Plant

Smart Storage

Smart Storage

Plasticization

Screw & Barrel Plant

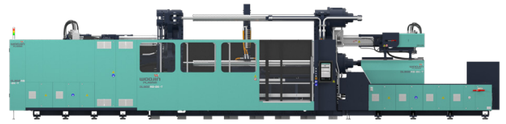
Assembly Plant (Small, Medium, Large)

Woojin Plaimm A5 series is widely used
in automobiles, home appliances and electronics, cosmetics, etc.
We provide optimal solutions **for production in various plastic products.**

A5 Series line-up

DL-A5 - Premium power-saving two platen direct pressure IMM (450~4300 ton)

DL-A5 (Pallet)

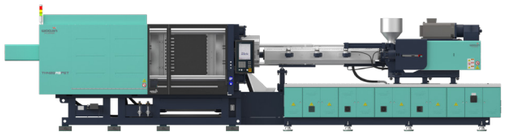


DL-A5-2K-T (Premium TOC multi IMM)

DL-A5-2K-W (Premium W type multi IMM)

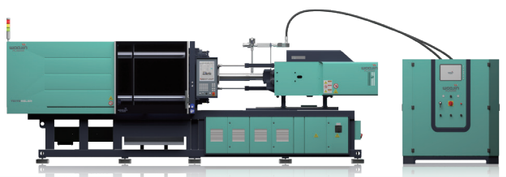
TH-A5 - Premium power-saving hydraulic IMM (130~480 ton)

TH-A5 (Medical Kit)



TH-A5 (Pet Preform)

TE-A5 - Premium power-saving electric IMM (50~850 ton)



TE-A5 (LSR)

TL-A5 - Premium tie-bar less IMM (220~400 ton)

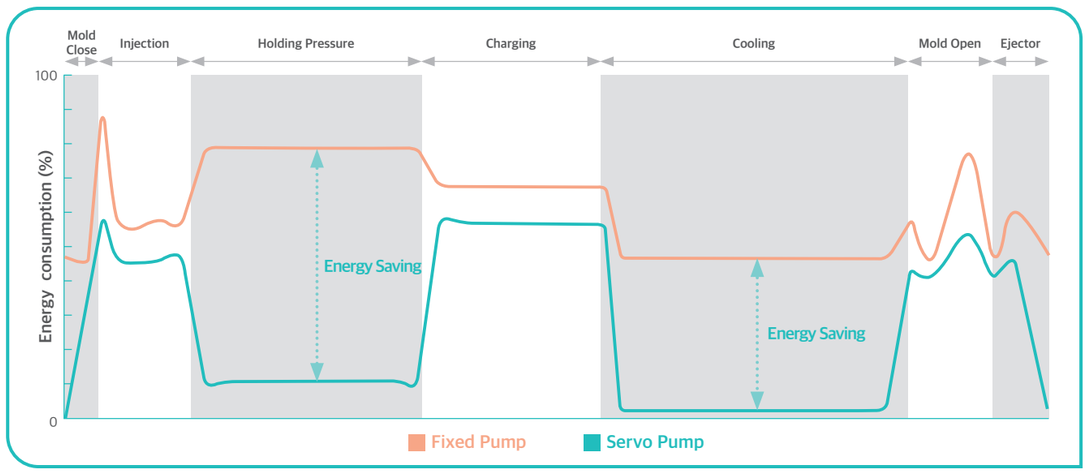
TL-A5-2K-W (Premium tie-bar less multi IMM)

Energy Saving Solution

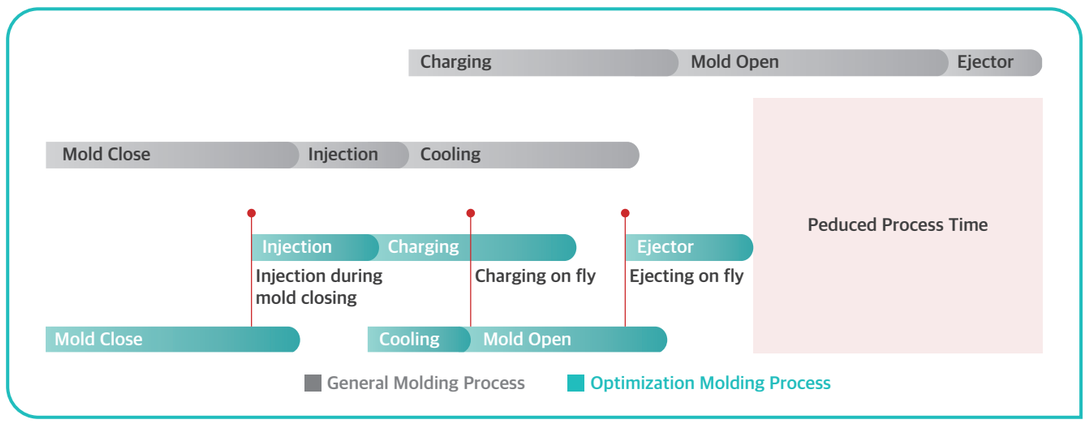
Linear rail system, applied on clamping & Injection unit lead to the minimized friction load.
Servo motor system, calculated and selected based on the optimal machine operation condition helps customers save the energy.

Model	TE170A5	TE350A5
Product	Automotive Part	
Part Weight	58.43g	452g
1Cycle Power Consumption	0.143kWh	0.112kWh
kWh/Kg	0.245	0.249
Rate (EUROMAP 60.1)	10	10

Energy Saving



Production Process Optimization

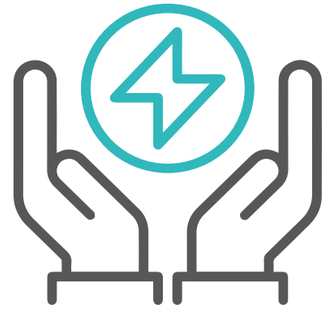


Power Consumption Reduction Effect

* Based on 1 year

Additional savings in Hydraulic oil cost

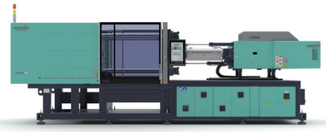
Reduce cooling water plant costs



Additional savings in cooling water and electricity bills

Energy savings based on each model

* Based on daily production of 300kg



Past general hydraulics	Hybrid (TH)	Electric (TE)
191.8 kWh	95.5 kWh	73.5 kWh

TH(Hybrid): Savings of 96.3 kWh compared to general hydraulics
TE(Electric): Savings of 118.3 kWh compared to general hydraulics

Daily savings

* Korean Industrial high-voltage power A selection II rate plan standard

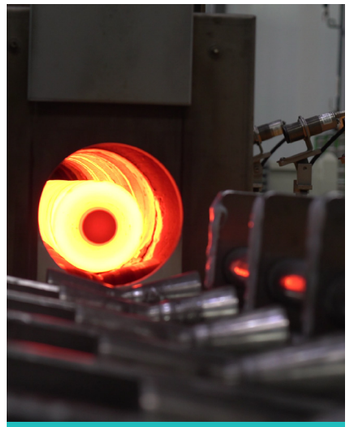
TH(Hybrid) saves $7.3
TE(Electric) saves $8.9

Electricity Savings (1 Year) * Based on TH (Hybrid) 365 days	$2,656
Electricity Savings (1 Year) * Based on TE (Electric) 365 days	$3,527

* This data has been generated according to the theoretical power consumption and it could differ from product specification and operation condition.

Plasticization

Woojin Plaimm Screw & Barrel Production System



Bimetalic Barrel Processing

Screw Processing

Nitrided Barrel

· Materials used from the early days of injection molding
· After deep hole processing in the base material, nitriding is performed to cure the inner diameter surface.

Bimetalic Barrel

· Produced by Woojin Plaimm with its own bimetal fusion equipment.
· All processes, such as deep hole bimetal fusion and honing, are completed in-house.
· Bimetallic Barrel produced by Korea's only injection molding machine manufacturer.
· High hardness and parent material durability compared to other companies. a long-standing.

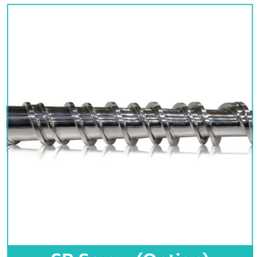
Rate	Composition	Average Hardness
Anit Wear	Fe Base + B	59±3
Aniti Wear & Corrosive	Fe Base + Cr	62±3
Extreme Anti Wear	Ni Base + W	60±3

Screw Processing

· New MCT and CNC introduction to produce more precise screws.
· Inspection of all incoming and outgoing screws.

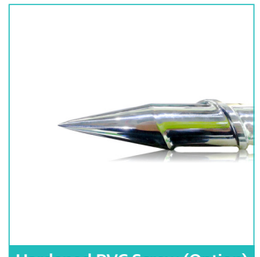
Woojin Plaimm Screw & Barrel

Single Screw (Standard)

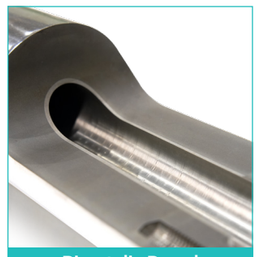


SB Screw (Option)

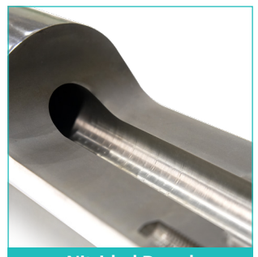
Mixing Screw (Option)



Hardened PVC Screw (Option)



Bimetalic Barrel



Nitrided Barrel

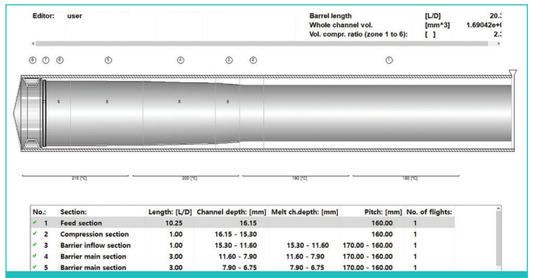
Ring Type Check Ring

Glove type Check Ring

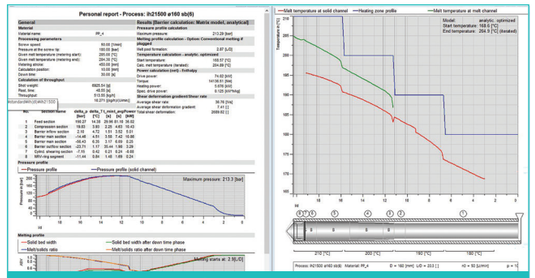
Screw Design Analysis Program (PSI)

Operate a professional screw design analysis program to respond to various types of resins

· Continuous development of screw design with a special analysis program for screw design.
*** PSI program at Paderborn University in Germany.**
· Optimized design of torque required for plasticization capacity by resin.



Screw design, Resin input screen



Simulation results screen

Application for plasticizing parts specifications

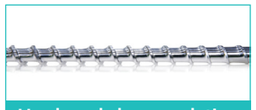
Barrel material	Type	Usage	Anti Wear	Corrosive
B0	Nitrided	Resin without abrasive additives	●◖○○○	●◖○○○
B1	Anti Wear	Resin with up to 15% of abrasive additives.	●●●○○	●●●○○
B2	Anti Wear&Corrosive	Resin with up to 30% of abrasive additives.	●●●◖○	●●●◖○
B4	Extreme Anti Wear&Corrosive	Resin with more than 30% of abrasive additives.	●●●●●	●●●●◖

Screw material	Type	Usage	Anti Wear	Corrosive
S1	General	Resin without abrasive additives	●◖○○○	●●◖○○
S2	Anti Wear	Resin with up to 15% of abrasive additives.	●●●○○	●●●○○
S4	Anti Wear&Corrosive	Resin with up to 30% of abrasive additives.	●●●●○	●●○○○
S6	Extreme Anti Wear&Corrosive	Resin with more than 30% of abrasive additives.	●●●●●	●●●●◖

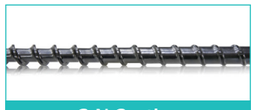
Screw design	Type	Usage	Others
GP	General purpose	Basic general purpose, high G/F content	
GM	Mixing Screw	When using masterbatch or pigment	
G1	SB Screw	High plasticization, improved melt quality	
G3	Hardened PVC screw	Only for hardened PVC	Screw head integrated structure

Screw surface	Type	Usage	Others
HCr	Hardened chrome plating	Screw base plating	
TiN	Titanium plating (PVD)	Increased surface microhardness Improved adhesion resistance	Please inquire
CrN	Chrome plating	Increased surface microhardness Improved adhesion resistance	Please inquire
W/C	Tungsten Carbide plating	Improved anti wear & corrosive	Please inquire

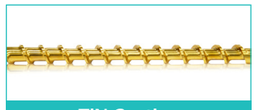
Surface coating options



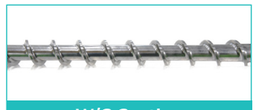
Hardened chrome plating



CrN Coating



TiN Coating



W/C Coating

Controller IMC 400

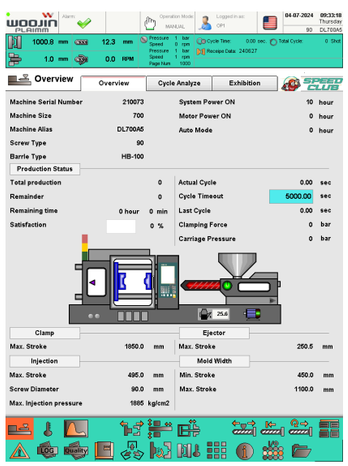
Features

- B&R (Automation leading company) controller
- User interface, specialized in IMM
- The multi stage graph vividly described due to the Full HD screen.
- 15-inch touchscreen with physical button function
- Detailed description navigation at the bottom of the screen
- Provides Cycle Time Analysis Page
- Provides energy monitoring capabilities
- Supporting international language

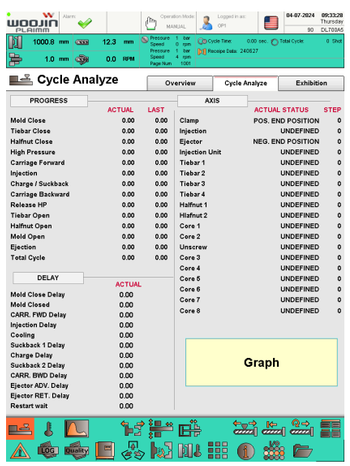
System functions

- Display: 15"
- Resuolution: 768 X 1024
- Touch Screen: TFT color touch screen
- CPU: Intel atom E3815, 1460MHz
- RAM: DDR3, 1GB, SDRAM
- Memory: CompactFlash 32GB
- IP Grade: IP65(Front), IP20(Back)
- Machine: VHA-RS, DL-A5, TH-A5, VHL-RS
- Language: International language

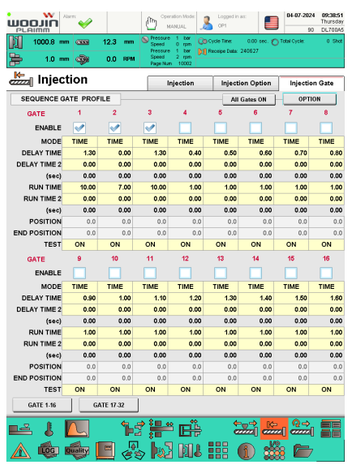
Main Screen



Home



Process Analysis



Mechanical Actions

Controller IMC 500 / 501

reddot winner 2023

* The distinction "Red Dot" has become established internationally as one of the most sought-after seals of quality for good design.

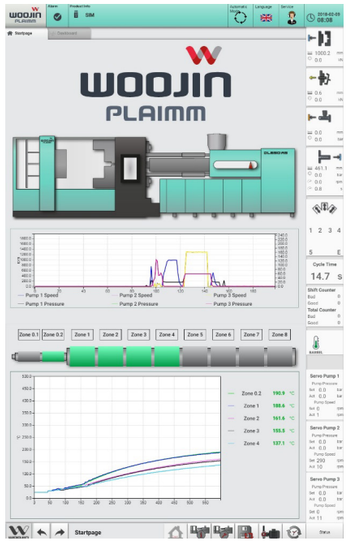
Features

- B&R (Automation leading company) controller
- User interface, specialized in IMM
- 18.5", 24" touch screen
- The multi stage graph vividly described due to the Full HD screen.
- Intuitive screen configuration
- View shape and ejection graph on one page
- Delivering data through SQL or CSV
- Support OPC-UA (Euromap77)
- Remote support available
- Peripheral communication and monitoring
- Process control analysis & energy monitoring

System functions

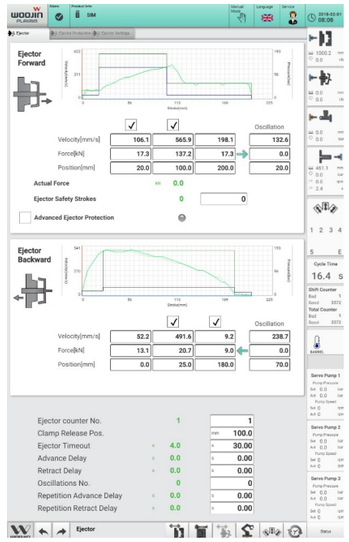
- Display: 18.5" / 24"
- Resolution: 768 x 1366 / 1080 x 1920
- Touch Screen: Projected capacitive
- CPU: Intel Celeron G3900E 1.7GHz
- RAM: SO-DIMM DDR3, 8192 MB
- Memory: Cfast 32Gbyte MLC
- IP Grade: IP65(Front), IP20(Back)
- Machine: TH-A5, TE-A5, DL-A5
- Language: International language

Main Screen



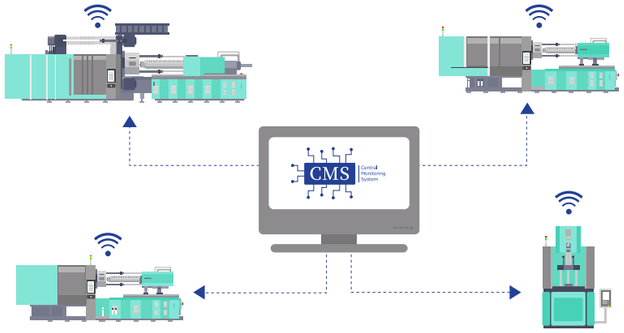
Home

Page Navigation



Mechanical Actions

CMS Central Monitoring System



CMS (Central Monitoring System)

01. Collection data from injection molding machine and factory facilities.
02. Provision of real-time monitoring and visualization of data.
03. Communication synchronization function between injection molding machine and auxiliaries for factory automation.
04. Provision of synchronization function with higher host systems such as EMS and ERP.
05. Provision of remote transmission of molded data.
06. Provision of user manual for easy installation and maintenance.

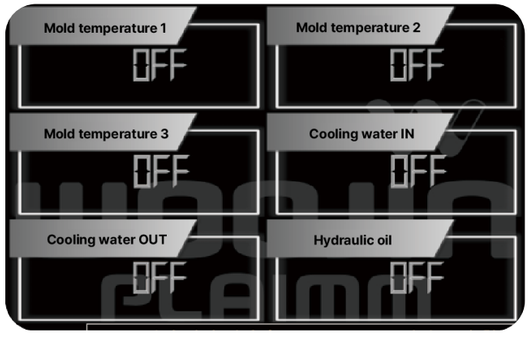
Effectiveness

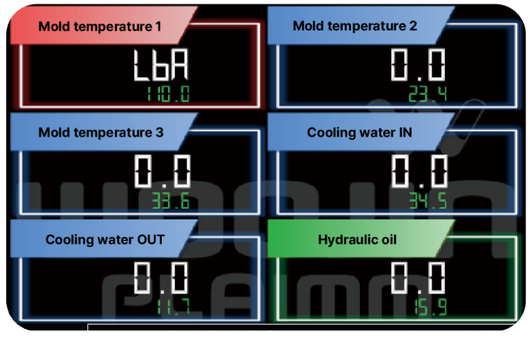
01. Support for productivity improvement through process control and quality control functions.
02. Construction of injection process DB based on universal database.
03. Increase efficiency of injection process management through real-time monitoring.

Software Requirement

01. Windows 2012 server Standard
02. Database: MS SQL Server 2012 Standard

Fool Proof System





Fool Proof System

01. Provides communication linkage function with HMI controller monitor
02. Real-time injection molding machine outputs up to 12 external temperatures
03. Provides the ability to select the external temperature item desired by the user

Effectiveness

01. You can check whether the temperature is normal through upper/lower limit settings.
02. External temperature can be checked for disconnection and on/off.
03. Daily and total production quantity can be checked for each product according to the mold

Hardware

01. Raspberry Pi 4

AI Smart Solution Smart AI Injection Technology

Flash Monitoring

- If the injection pressure applied to the cavity cross-sectional area during the injection process is greater than the mold clamping force, the parting surface of the mold spreads by several μm. This causes burrs to occur in the product (mold flash).
- Detect mold flash that may occur during the injection molding process to improve product quality and ensure uniformity.
- In DL-A5, the set mold strength is applied through increased pressure upon completion of mold closing.
- TE-A5 is equipped with a clamp force sensor as standard and has implemented an automatic clamp force correction function.
- Function can also be implemented in DL-G5 and TE-G5 models

Viscosity Monitoring

- Identify the effects of disturbance by indirectly measuring resin viscosity during the injection process
- Calculation of injection power according to screw position during injection molding
- Indirectly determine changes in resin viscosity through changes in injection power
- Advanced function with Weight Control

Machine Test

- Easily perform machine accuracy inspection
- Periodic equipment management possible by beginners
- Completed implementation of clamp force test, injection pressure test, and injection speed test functions
- Machine test inspection items can be added

Energy Monitoring

- Calculate energy cost per produced part
- Helps reduce power consumption by comparing energy consumption during production and outage times

Check ring predictive maintenance

- Useful for GF resin production customers
- Replacement based on data instead of periodic screw replacement
- Automatic measurement of power factor in actual holding pressure section during mass production
- User can set measurement standard pressure and speed
- Planned to expand to A5 series models after functional verification in DL-G5

Automatic calculation of weighing distance

- Automatic calculation of weighing distance based on resin specific gravity, product weight, and screw diameter
- Save raw materials by reducing trial and error when setting initial conditions
- Functions will be added to the A5 model if customer usage frequency is high

U-BOX

- Peripheral data integration converter
- Integration of various peripheral devices through RS485 4-channel communication
- Peripheral devices such as mold temperature controller, hot runner controller, dryer, and chiller are planned to be expanded.
- Modbus-TCP communication with edge controller

EDGE Controller

- Currently carrying out national projects related to Edge-Cloud based AI technology.
- Establishment of AAS-based data model for OPC-UA communication
- Complete the construction of the data interface of the vision inspection device.
- Complete the construction of the Modbus-TCP communication module

DL-A5

Premium power-saving two platen direct pressure IMM (450~4300 ton)

DL-A5 is a fast and precise premium power-saving two platen direct pressure injection molding machine with excellent space utilization with a beautiful and practical exterior design, and a sturdy mechanism.

YouTube

Half nut synchronous control device
- Minimize cycle time
- Fast and precise locking action

Fast and dynamic dry cycle
- 5.8 sec 1800ton EUROMAP 6

Controller (IMC 501 / 510)
- B&R(Austria)
- 24", 21" Touch Screen TFT color
- Resolution : 786 x 1024
- Monitoring real-time energy consuption (Option)
- CMS System(Option)

Optimized accessibility to pudging area
- Secure cleaning space
- Minimize design area

Dual-pull nozzle touch cylinder
- Symmetrical nozzle touch cylinders, durable all over the axis
- Secure stable touch pressure even in injection devices

Ball bearing type linear guide
- Reduce friction resistance
- Improved forming precision

DL(D&B) Injection unit
- 2-axis piston inline screw type
- Single screw (Standard)
- Improved injection response
- Back pressure closed-loop control improves injection reproducibility and responsiveness

Hydraulic unit
- High efficiency servo pump system
- Application of Parker valve and Dorninger hydraulic block
- Independent filter & cooling system
- Improved pump cover design: noise reduction

Integral cabinet including inverter
- Reduce machine installation area
- Improved convenience of maintenance management

High-quality implementation with top-of-the-line performance brand components


Controller

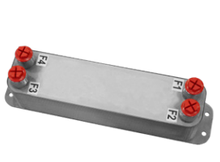

Servo Motor


Drive


Hydraulic Block


Hydraulic Pump


Hydraulic Valve

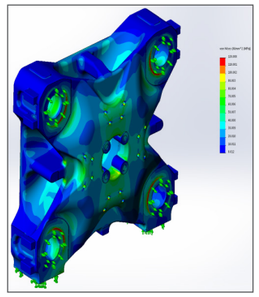

Oil Cooler

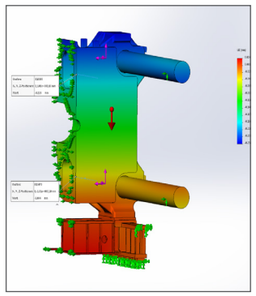

Oil Filter

Clamping Unit

01. X type designed platen

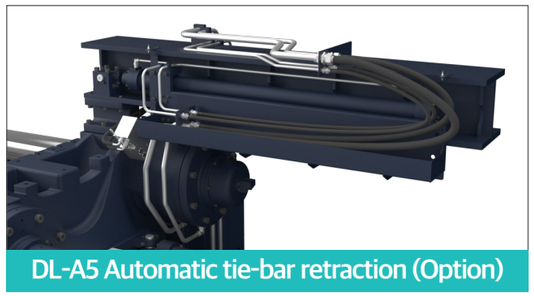
· Simple casting reference point for high platen stiffness
· Separable booster cylinder applied to stationary mold platen and optimized for use with retractable tie bar.





02. Automatic tie-bar retraction (Option)

· Easy & prompt big sized mold installation
· Maximizes available space and ideal for installing large molds



DL-A5 Automatic tie-bar retraction (Option)

03. Fast moving cylinder

· Bilateral symmetry designed for preventing platen's deformation during low pressure mold closing stage.
· Improved structure of moving cylinder for smooth, high-speed movement.

04. Position measurement system

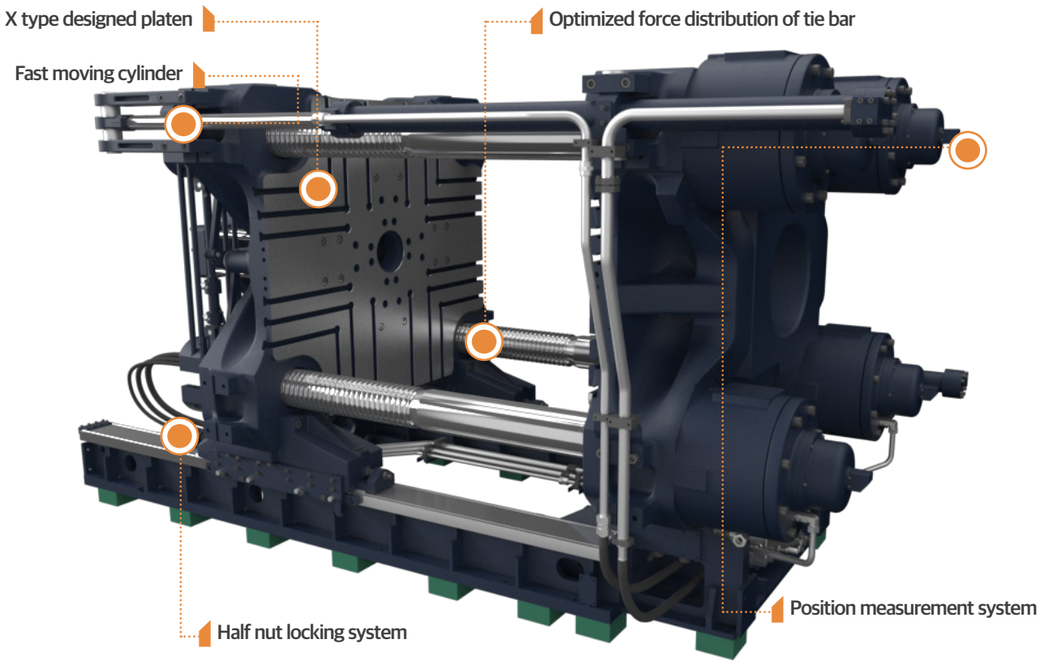
· Tie bar position controlled by stroke transducer.

05. High speed synchronous half nut locking system

· Double acting half nut design for reducing cycle time and fast locking and unlocking.

06. New design for optimized force distribution of tie bar

· Newly designed force distribution of tie bar for improved durability



Injection Unit

* Automatic swiveling function may not be applicable when not using standard injection unit.

01. Closed-loop back pressure control

· A proportional valve control circuit uses pressure sensor feedback to provide responsive

02. Integrated designed inverter box cover

· Improved space availability through integrated inverter box

03. Linear guided injection unit

· Linear guide provides stable, low-friction rails to support precision control of the screw

04. Dual cylinder in-line screw injection unit

· Featuring stable & powerful injection capability

05. Automatic swivelling function of injection unit

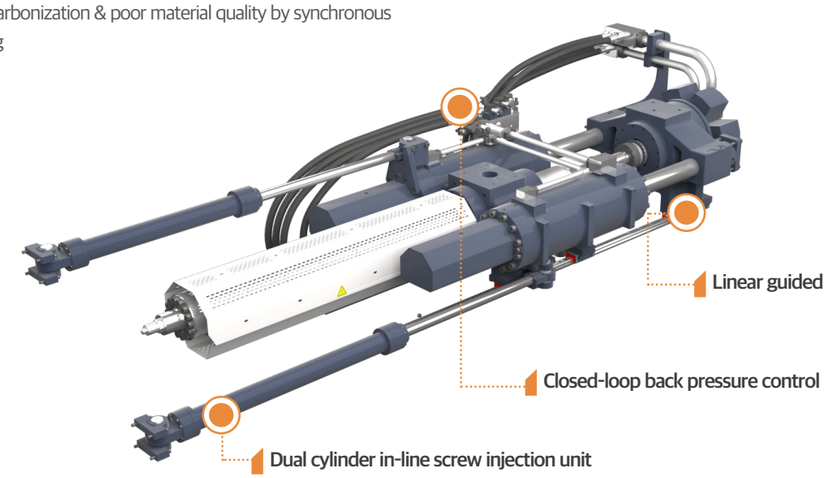
· The injection device can be swivelled with a simple operation, making screw and barrel replacement convenient. (IH2800~IH11900)

06. Pump cover design for low noise

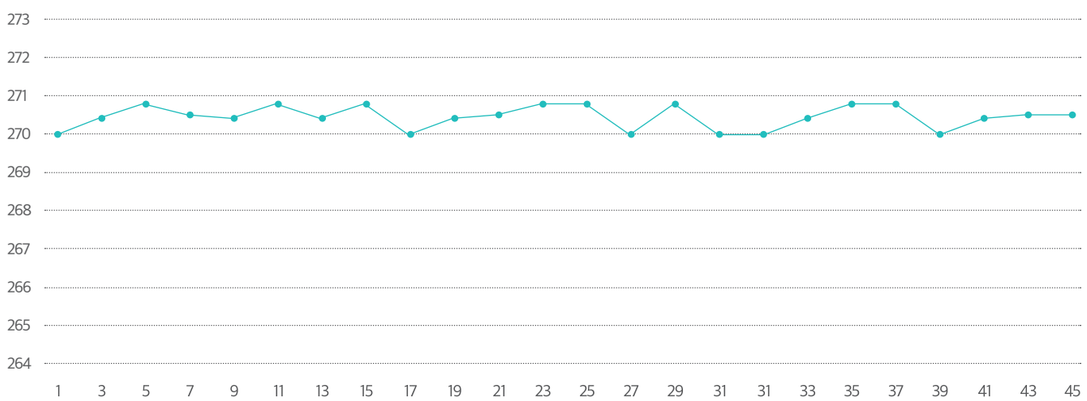
· Low noise & improved space availability by enhanced pump cover design
· Easy to remove the covers by one person

07. PID controlled heating bands

· Minimize the deviation of temperature by constant monitoring & feedback after setting parameters
· Avoid resin carbonization & poor material quality by synchronous barrel heating



Weight deviation test results



* Tested on DL850A5, Test product: Automotive Part, 3 Cavity
* This specification may different depending on mold, raw material, and product specifications.

Hydraulic Unit

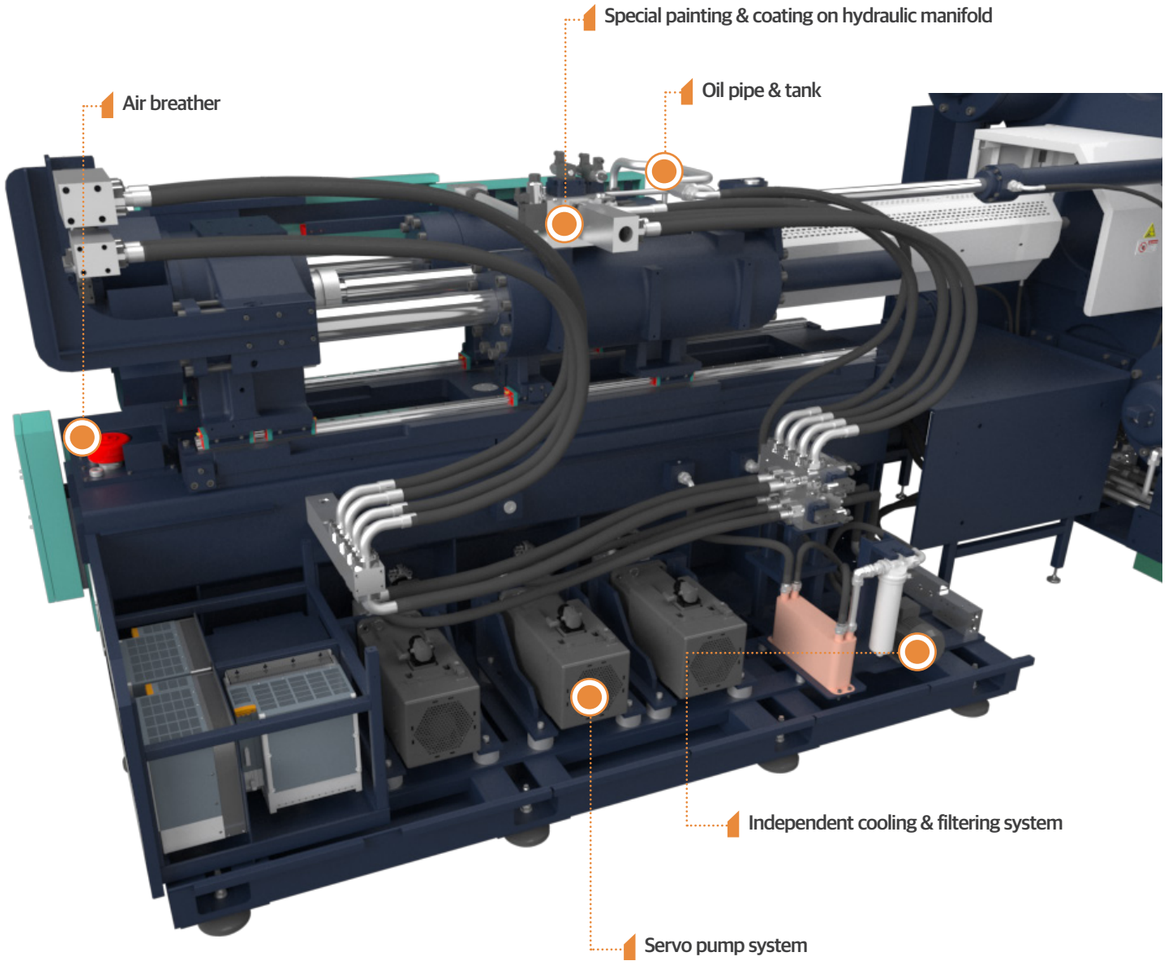
01. Air breather
· Allows air in/out of the oil tank as oil volume changes due to flow
· It maintains atmospheric air pressure and eliminate dust & moisture, steam in the air

02. Oil pipe & tank
· Seamless pipe design is without welds, preventing oil leakage
· Polymer coating inside the oil tank to prevent moisture buildup

03. Independent cooling & filtering system
· It contributes maintaining cleanness of hydraulic oil and its temperature and extend the oil's replacement time as well as improvement of hydraulic parts.

04. Servo pump system
· Reduce power consumption & cooling water by minimizing motor shaft's rotation through application of servo motive technology

05. Special painting & coating on hydraulic manifold
· Improved inner cleanness and anticorrosion



Specification DL-A5 (ver.2)

Model		DL500A5			DL600A5			DL700A5		
		IH2800			IH4200			IH5900		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	65	70	80	70	80	90	80	90	105
Injection pressure	kg/㎠	2191	1889	1446	2465	1887	1491	2386	1885	1385
	Mpa	215	185	142	242	185	146	234	185	136
Theoretical injection volume	㎤	1278	1482	1935	1693	2212	2799	2488	3149	4286
Shot weight (PS)	g	1177	1365	1783	1560	2038	2579	2293	2902	3950
Injection rate	㎤/s	407	472	617	461	602	762	603	763	1039
Screw stroke	mm	385			440			495		
Injection speed	mm/s	123			120			120		
Plasticizing capacity(PS)	kg/h	207	252	358	231	328	449	298	408	619
Screw rotation speed	rpm	180			165			150		
Clamping Unit										
Clamping force	ton(kN)	500(4903)			600(5884)			700(6865)		
Mold opening force	ton(kN)	38(368)			45(441)			53(515)		
Distance between tie-bar(HxV)	mm	920 × 830			1040 × 910			1110 × 1010		
Platen dimension(HxV)	mm	1280 × 1260			1430 × 1370			1520 × 1490		
Daylight	mm	1650			1750			1850		
Min. mold height	mm	350			400			450		
Max. mold height	mm	900			950			950		
Ejector force	ton(kN)	11.1(108.9)			16.6(162.8)			19.8(194.2)		
Ejector stroke	mm	200			220			250		
Dry cycle time	sec	3.3			3.3			3.3		
Max. mold weight (Fixed / Moving / Total)	ton	5.3 / 5.3 / 8			6.7 / 6.7 / 10			7.3 / 7.3 / 11		
General										
Heater capacity	kW	18.4	20.6	24.1	23.0	26.7	30.7	29.4	33.6	39.3
Motor capacity	kW	65.2			87.6			87.6		
Total electric power capacity	kW	83.6	85.8	89.3	110.6	114.3	118.3	117	121.2	126.9
Hydraulic oil tank capacity	L	600			800			800		
Machine weight (Clamping+Injection)	ton	19 (13.5+5.5)			26 (17+9)			32 (21.5+10.5)		
Machine dimension(LxWxH)	m	7.7 × 2.7 × 2.2			7.9 × 2.9 × 2.2			8.4 × 3.1 × 2.4		
Cooling water consumption	L/min	130			130			130		

Specification DL-A5 (ver.2)

Model		DL900A5			DL1100A5			DL1300A5	
		IH8800			IH8800			IH11900	
Injection Unit									
Screw & Barrel		O	A	B	O	A	B	A	B
Screw diameter	mm	95	105	115	95	105	115	115	125
Injection pressure	kg/㎠	2145	1756	1464	2145	1756	1464	1809	1531
	Mpa	210	172	144	210	172	144	177	150
Theoretical injection volume	㎤	4111	5022	6024	4111	5022	6024	6544	7731
Shot weight (PS)	g	3788	4628	5551	3788	4628	5551	6030	7124
Injection rate	㎤/s	852	1041	1248	852	1041	1248	1249	1475
Screw stroke	mm	580			580			630	
Injection speed	mm/s	120			120			120	
Plasticizing capacity(PS)	kg/h	393	515	660	393	515	660	607	757
Screw rotation speed	rpm	125			125			115	
Clamping Unit									
Clamping force	ton(kN)	900(8826)			1100(10787)			1300(12749)	
Mold opening force	ton(kN)	68(662)			83(809)			98(956)	
Distance between tie-bar(HxV)	mm	1200 × 1120			1420 × 1170			1580 × 1280	
Platen dimension(HxV)	mm	1720 × 1610			1870 × 1820			2230 × 1990	
Daylight	mm	2100			2400			3050	
Min. mold height	mm	500			600			700	
Max. mold height	mm	1100			1200			1400	
Ejector force	ton(kN)	26.9(263.8)			26.9(263.8)			34.4(337.3)	
Ejector stroke	mm	250			250			300	
Dry cycle time	sec	4.0			4.4			5.0	
Max. mold weight (Fixed / Moving / Total)	ton	8.6 / 8.6 / 13			14 / 14 / 21			20 / 20 / 30	
General									
Heater capacity	kW	39.7	44.7	49.4	39.7	44.7	49.4	54.7	58.1
Motor capacity	kW	110			110			142.6	
Total electric power capacity	kW	149.7	154.7	159.4	149.7	154.7	159.4	197.3	200.7
Hydraulic oil tank capacity	L	920			920			1150	
Machine weight (Clamping+Injection)	ton	41 (29+12)			50 (37.5+12.5)			72 (55+17)	
Machine dimension(LxWxH)	m	9.5 × 3.4 × 2.5			9.7 × 3.6 × 2.7			11.2×3.9×2.9	
Cooling water consumption	L/min	180			180			180	

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		DL1800A5		DL2000A5		DL2300A5	
		IH15300		IH15300		IH15300	
Injection Unit							
Screw & Barrel		A	B	A	B	A	B
Screw diameter	mm	125	140	125	140	125	140
Injection pressure	kg/㎠	1814	1446	1814	1446	1814	1446
	Mpa	178	142	178	142	178	142
Theoretical injection volume	㎤	8406	10545	8406	10545	8406	10545
Shot weight (PS)	g	7746	9717	7746	9717	7746	9717
Injection rate	㎤/s	1296	1626	1296	1626	1296	1626
Screw stroke	mm	685		685		685	
Injection speed	mm/s	106		106		106	
Plasticizing capacity(PS)	kg/h	692	939	692	939	692	939
Screw rotation speed	rpm	105		105		105	
Clamping Unit							
Clamping force	ton(kN)	1800(17652)		2000(19613)		2300(22555)	
Mold opening force	ton(kN)	135(1324)		150(1471)		173(1692)	
Distance between tie-bar(HxV)	mm	1850 × 1610		2020 × 1610		2020 × 1610	
Platen dimension(HxV)	mm	2450 × 2200		2600 × 2250		2600 × 2250	
Daylight	mm	3400		3600		3600	
Min. mold height	mm	700		800		800	
Max. mold height	mm	1600		1700		1700	
Ejector force	ton(kN)	44.5(436.4)		44.5(436.4)		44.5(436.4)	
Ejector stroke	mm	300		300		300	
Dry cycle time	sec	5.8		5.8		5.8	
Max. mold weight (Fixed / Moving / Total)	ton	30 / 30 / 45		41 / 41 / 62		41 / 41 / 62	
General							
Heater capacity	kW	61.6	70.8	61.6	70.8	61.6	70.8
Motor capacity	kW	142.6		142.6		142.6	
Total electric power capacity	kW	204.2	213.4	204.2	213.4	204.2	213.4
Hydraulic oil tank capacity	L	1450		1450		1450	
Machine weight (Clamping+Injection)	ton	89 (70+19)		115 (96+19)		115 (96+19)	
Machine dimension(LxWxH)	m	12.7X4.2X3.4		12.9X4.5X3.4		12.9X4.5X3.4	
Cooling water consumption	L/min	180		180		180	

Specification DL-A5 (ver.2)

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering is recommended in the range of 1 to 3 times of screw diameter.

Model		DL2500A5		DL2700A5		DL3000A5				
		IH21500		IH21500		IH33000		IH48000		
Injection Unit										
Screw & Barrel		A	B	A	B	A	B	O	A	B
Screw diameter	mm	140	160	140	160	160	180	180	190	200
Injection pressure	kg/㎠	1816	1391	1816	1391	1800	1400	1800	1600	1450
	Mpa	178	136	178	136	177	137	177	157	142
Theoretical injection volume	㎤	11853	15482	11853	15482	16085	20358	22902	25518	28274
Shot weight (PS)	g	10923	14266	10923	14266	14822	18759	21104	23515	26055
Injection rate	㎤/s	1537	2007	1537	2007	1719	2176	2127	2370	2626
Screw stroke	mm	770		770		800		900		
Injection speed	mm/s	100		100		85		84		
Plasticizing capacity(PS)	kg/h	850	1218	850	1218	1000	1378	1325	1528	1533
Screw rotation speed	rpm	95		95		78		75		65
Clamping Unit										
Clamping force	ton(kN)	2500(24517)		2700(26478)		3000(29420)		3000(29420)		
Mold opening force	ton(kN)	188(1839)		203(1986)		225(2206)		225(2206)		
Distance between tie-bar(HxV)	mm	2180 × 1760		2180 × 1760		2260 × 1810		2260 × 1810		
Platen dimension(HxV)	mm	3030 × 2610		3030 × 2610		3140 X 2660		3140 X 2660		
Daylight	mm	3900		3900		4000		4000		
Min. mold height	mm	900		900		1100		1100		
Max. mold height	mm	2000		2000		2000		2000		
Ejector force	ton(kN)	67.8(664.9)		67.8(664.9)		67.8(664.9)		67.8(664.9)		
Ejector stroke	mm	350		350		350		350		
Dry cycle time	sec	8.2		8.2		8.2		8.2		
Max. mold weight (Fixed / Moving / Total)	ton	50 / 50 / 75		50 / 50 / 75		56 / 56 / 85		56 / 56 / 85		
General										
Heater capacity	kW	78.4	93.1	78.4	93.1	149.1	167.1	178.4	183.6	194.3
Motor capacity	kW	165		165		220		275		
Total electric power capacity	kW	243.4	258.1	234.4	258.1	369.1	387.1	453.4	458.6	469.3
Hydraulic oil tank capacity	L	1650		1650		2650		3200		
Machine weight (Clamping+Injection)	ton	143 (121+22)		143 (121+22)		180 (149+31)		194 (149+45)		
Machine dimension(LxWxH)	m	14.6×4.7×3.7		14.6×4.7×3.7		16.3 × 5 × 4		18 × 5 × 4		
Cooling water consumption	L/min	240		240		240		240		

Model		DL3300A5							
		IH33000		IH48000			IH66500		
Injection Unit									
Screw & Barrel		A	B	O	A	B	O	A	B
Screw diameter	mm	160	180	180	190	200	200	215	230
Injection pressure	kg/㎠	1800	1400	1800	1600	1450	1800	1550	1360
	Mpa	177	137	177	157	142	177	152	133
Theoretical injection volume	㎤	16085	20358	22902	25518	28274	34558	39936	45702
Shot weight (PS)	g	14822	18759	21104	23515	26055	31845	36801	42115
Injection rate	㎤/s	1719	2176	2127	2370	2626	2117	2447	2800
Screw stroke	mm	800		900			1100		
Injection speed	mm/s	85		84			67		
Plasticizing capacity(PS)	kg/h	1000	1378	1325	1528	1533	1415	1705	1693
Screw rotation speed	rpm	78		75		65	60		50
Clamping Unit									
Clamping force	ton(kN)	3300(32362)		3300(32362)			3300(32362)		
Mold opening force	ton(kN)	248(2427)		248(2427)			248(2427)		
Distance between tie-bar(HxV)	mm	2260 × 1810		2260 × 1810			2260 × 1810		
Platen dimension(HxV)	mm	3140 X 2660		3140 X 2660			3140 X 2660		
Daylight	mm	4000		4000			4000		
Min. mold height	mm	1100		1100			1100		
Max. mold height	mm	2000		2000			2000		
Ejector force	ton(kN)	67.8(664.9)		67.8(664.9)			67.8(664.9)		
Ejector stroke	mm	350		350			350		
Dry cycle time	sec	8.2		8.2			8.2		
Max. mold weight (Fixed / Moving / Total)	ton	56 / 56 / 85		56 / 56 / 85			56 / 56 / 85		
General									
Heater capacity	kW	149.1	167.1	178.4	183.6	194.3	217.1	231.9	249.8
Motor capacity	kW	220		275			275		
Total electric power capacity	kW	369.1	387.1	453.4	458.6	469.3	492.1	506.9	524.8
Hydraulic oil tank capacity	L	2650		3200			3400		
Machine weight (Clamping+Injection)	ton	180 (149+31)		194 (149+45)			204 (149+55)		
Machine dimension(LxWxH)	m	16.3 × 5 × 4		18 × 5 × 4			18 × 5 × 4		
Cooling water consumption	L/min	240		240			240		

Specification DL-A5 (ver.2)

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		DL4000A5					
		IH66500			IH100000		
Injection Unit							
Screw & Barrel		O	A	B	O	A	B
Screw diameter	mm	200	215	230	230	245	260
Injection pressure	kg/㎠	1800	1550	1360	1600	1400	1220
	Mpa	177	152	133	157	137	120
Theoretical injection volume	㎤	34558	39936	45702	56089	63644	71675
Shot weight (PS)	g	31845	36801	42115	51686	58648	66049
Injection rate	㎤/s	2117	2447	2800	2925	3319	3738
Screw stroke	mm	1100			1350		
Injection speed	mm/s	67			70		
Plasticizing capacity(PS)	kg/h	1415	1705	1693	1693	1998	2102
Screw rotation speed	rpm	60		50	50		45
Clamping Unit							
Clamping force	ton(kN)	4000(39227)			4000(39227)		
Mold opening force	ton(kN)	300(2942)			300(2942)		
Distance between tie-bar(HxV)	mm	2350 × 2050			2350 × 2050		
Platen dimension(HxV)	mm	3400 × 3100			3400 × 3100		
Daylight	mm	4400			4400		
Min. mold height	mm	1100			1100		
Max. mold height	mm	2200			2200		
Ejector force	ton(kN)	67.8(664.9)			67.8(664.9)		
Ejector stroke	mm	400			400		
Dry cycle time	sec	9.2			9.2		
Max. mold weight (Fixed / Moving / Total)	ton	66 / 66 / 100			66 / 66 / 100		
General							
Heater capacity	kW	217.1	231.9	249.8	340.2	357.4	378.0
Motor capacity	kW	275			330		
Total electric power capacity	kW	492.1	506.9	524.8	670.2	687.4	708
Hydraulic oil tank capacity	L	3400			3500		
Machine weight (Clamping+Injection)	ton	246 (191+55)			263 (191+72)		
Machine dimension(LxWxH)	m	19.5 × 5 × 4.3			20.6 X 5.4 X 4.4		
Cooling water consumption	L/min	240			240		

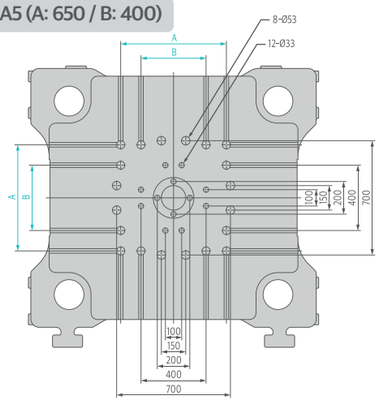
Model		DL4300A5					
		IH66500			IH100000		
Injection Unit							
Screw & Barrel		O	A	B	O	A	B
Screw diameter	mm	200	215	230	230	245	260
Injection pressure	kg/㎠	1800	1550	1360	1600	1400	1220
	Mpa	177	152	133	157	137	120
Theoretical injection volume	㎤	34558	39936	45702	56089	63644	71675
Shot weight (PS)	g	31845	36801	42115	51686	58648	66049
Injection rate	㎤/s	2117	2447	2800	2925	3319	3738
Screw stroke	mm	1100			1350		
Injection speed	mm/s	67			70		
Plasticizing capacity(PS)	kg/h	1415	1705	1693	1693	1998	2102
Screw rotation speed	rpm	60		50	50		45
Clamping Unit							
Clamping force	ton(kN)	4300(42169)			4300(42169)		
Mold opening force	ton(kN)	323(3163)			323(3163)		
Distance between tie-bar(HxV)	mm	2350 × 2050			2350 × 2050		
Platen dimension(HxV)	mm	3400 × 3100			3400 × 3100		
Daylight	mm	4400			4400		
Min. mold height	mm	1100			1100		
Max. mold height	mm	2200			2200		
Ejector force	ton(kN)	67.8(664.9)			67.8(664.9)		
Ejector stroke	mm	400			400		
Dry cycle time	sec	9.2			9.2		
Max. mold weight (Fixed / Moving / Total)	ton	66 / 66 / 100			66 / 66 / 100		
General							
Heater capacity	kW	217.1	231.9	249.8	340.2	357.4	378.0
Motor capacity	kW	275			330		
Total electric power capacity	kW	492.1	506.9	524.8	670.2	687.4	708
Hydraulic oil tank capacity	L	3400			3500		
Machine weight (Clamping+Injection)	ton	246 (191+55)			263 (191+72)		
Machine dimension(LxWxH)	m	19.5 × 5 × 4.3			20.6 X 5.4 X 4.4		
Cooling water consumption	L/min	240			240		

Platen Dimension

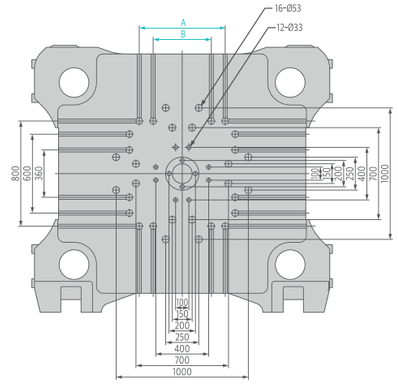
DL-A5 (ver.2)

Unit: mm

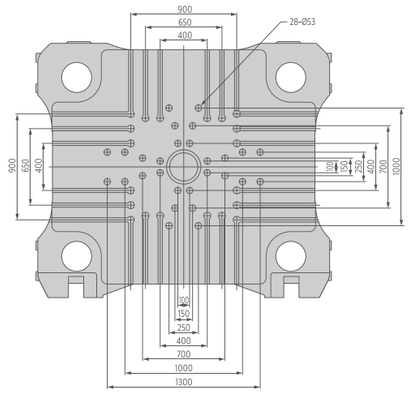
DL500A5 (A: 500 / B: 250) DL600A5 (A: 560 / B: 280) DL700A5 (A: 650 / B: 400)



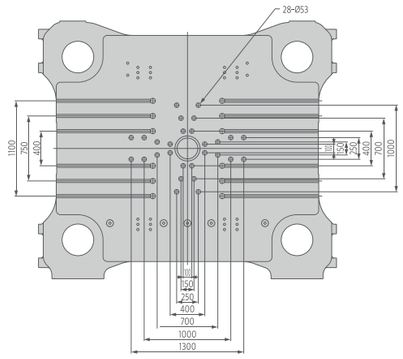
DL900A5 (A: 650 / B: 400) DL1100A5 (A: 650 / B: 440)



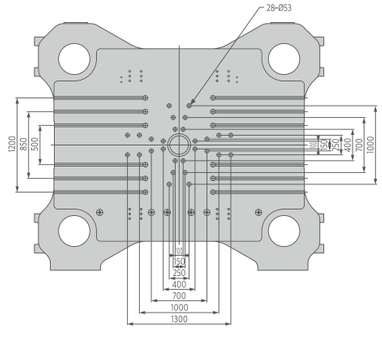
DL1300A5



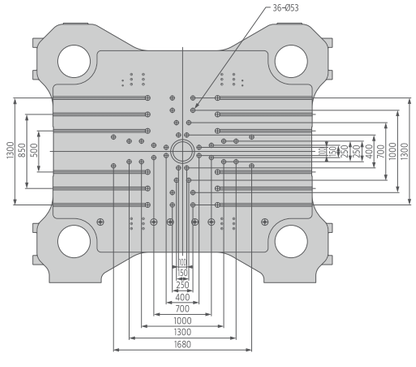
DL1800A5 DL2000A5 DL2300A5 DL2500A5 DL2700A5



DL3000A5 DL3300A5



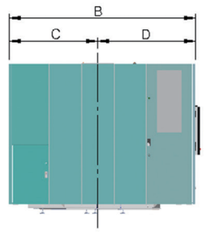
DL4000A5 DL4300A5

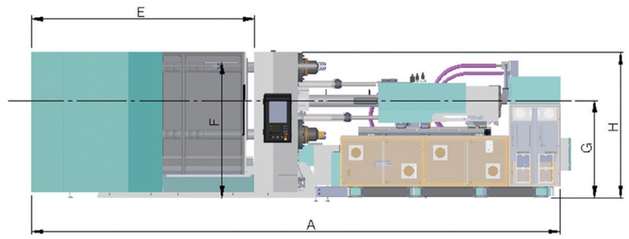


* The images and specifications might be changed without any prior notice.

Machine Dimension

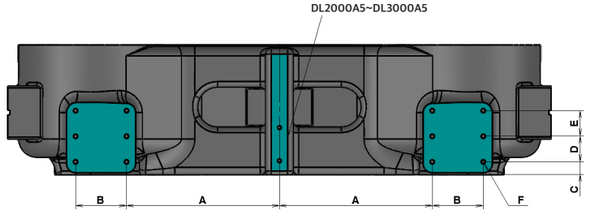
DL-A5 (ver.2)

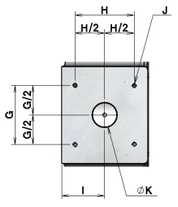


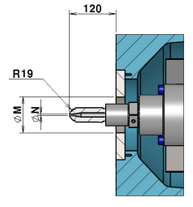


Unit: mm

Machine Dimension	A	B	C	D	E	F	G	H
DL500A5	7852	2713	1452	1261	3247	1970	1410	2144
DL600A5	8057	2939	1530	1409	3341	2025	1410	2202
DL700A5	8372	3052	1564	1488	3494	2130	1450	2350
DL900A5	9681	3319	1700	1619	4016	2245	1490	2461
DL1100A5	9885	3586	1820	1766	4347	2400	1600	2665
DL1300A5	11335	3815	1935	1880	5088	2586	1725	2839
DL1800A5	12768	4123	2109	2104	5716	3035	1969	3340
DL2000A5	13054	4423	2284	2139	6083	3064	1969	3364
DL2300A5	13054	4423	2284	2139	6083	3064	1969	3364
DL2500A5	14852	4623	2394	2229	6767	3344	2135	3669
DL2700A5	14852	4623	2394	2229	6767	3344	2135	3669
DL3000A5	16437	6973	2599	2374	6917	3607	2335	3977
DL3300A5	16437	6973	2599	2374	6917	3607	2335	3977
DL4000A5	19758	5373	2574	2787	7449	4050	2595	4455
DL4300A5	19758	5373	2574	2787	7449	4050	2595	4455







Unit: mm

	Robot installation position dimension						Hopper installation position dimension					Nozzle dimension	
	A	B	C	D	E	F	G	H	I	J	ØK	ØM	ØN
DL500A5	210	-	85	195	-	6-M20	165	165	120	4-M12	68	100	4
DL600A5	195	-	85	245	-	6-M20	165	165	130	4-M12	78	100	5
DL700A5	235	-	80	300	-	6-M24	165	165	140	4-M12	88	100	5
DL900A5	235	-	85	330	-	6-M24	165	165	170	4-M12	103	100	6
DL1100A5	335	-	85	375	-	6-M30	165	165	170	4-M12	103	100	6
DL1300A5	335	-	120	345	-	6-M30	280	200	190	4-M16	113	120	6
DL1800A5	495	-	115	485	-	6-M30	280	200	112	4-M16	123	120	7
DL2000A5	500	-	140	575	-	6-M24	280	200	112	4-M16	123	120	7
DL2300A5	500	-	140	575	-	6-M24	280	200	112	4-M16	123	120	7
DL2500A5	625	-	155	600	-	6-M36	280	200	132	4-M16	138	120	7
DL2700A5	625	-	155	600	-	6-M36	280	200	132	4-M16	138	120	7
DL3000A5	625	-	150	630	-	6-M36	280	200	218	4-M16	172	120	8
DL3300A5	625	-	150	630	-	6-M36	280	200	218	4-M16	172	120	8
DL4000A5	625	-	150	630	-	6-M36	280	200	218	4-M16	172	120	8
DL4300A5	625	-	150	630	-	6-M36	280	200	218	4-M16	172	120	8

* The images and specifications might be changed without any prior notice.

Specification DL-A5 (ver.1)

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		DL450A5			DL550A5			DL650A5			DL850A5		
		IH2800			IH4200			IH5900			IH8800		
Injection Unit													
Screw & Barrel		O	A	B	O	A	B	O	A	B	O	A	B
Screw diameter	mm	65	70	80	70	80	90	80	90	105	95	105	115
Injection pressure	kg/㎠	2191	1889	1446	2465	1887	1491	2386	1885	1385	2145	1756	1464
	Mpa	215	185	142	242	185	146	234	185	136	210	172	144
Theoretical injection volume	㎤	1278	1482	1935	1693	2212	2799	2488	3149	4286	4111	5022	6024
Shot weight (PS)	g	1177	1365	1783	1560	2038	2579	2293	2902	3950	3788	4628	5551
Injection rate	㎤/s	407	472	617	461	602	762	603	763	1039	852	1041	1248
Screw stroke	mm	385			440			495			580		
Injection speed	mm/s	123			120			120			120		
Plasticizing capacity(PS)	kg/h	207	252	358	231	328	449	298	408	619	393	515	660
Screw rotation speed	rpm	180			165			150			125		
Clamping Unit													
Clamping force	ton(kN)	450(4413)			550(5394)			650(6374)			850(8336)		
Mold opening force	ton(kN)	34(331)			41(405)			49(478)			64(625)		
Distance between tie-bar(HxV)	mm	860 × 810			915 × 915			1010 × 1010			1110 × 1110		
Platen dimension(HxV)	mm	1240 × 1190			1330 × 1330			1460 × 1460			1610 × 1610		
Daylight	mm	1450			1600			1800			2300		
Min. mold height	mm	350			400			450			500		
Max. mold height	mm	800			950			1100			1200		
Ejector force	ton(kN)	11.1(108.9)			16.6(162.8)			19.8(194.2)			26.9(263.8)		
Ejector stroke	mm	200			220			250			250		
Dry cycle time	sec	3.3			3.3			3.3			4.0		
Max. mold weight (Fixed / Moving / Total)	ton	3.5 / 3.5 / 5			4 / 4 / 6			5.5 / 5.5 / 8			7 / 7 / 10.5		
General													
Heater capacity	kW	18.4	20.6	24.1	23.0	26.7	30.7	29.4	33.6	39.3	39.7	44.7	49.4
Motor capacity	kW	65.2			87.6			87.6			110		
Total electric power capacity	kW	83.6	85.8	89.3	110.6	114.3	118.3	117	121.2	126.9	149.7	154.7	159.4
Hydraulic oil tank capacity	L	600			800			800			920		
Machine weight (Clamping+Injection)	ton	19 (13.5+5.5)			26 (17+9)			32 (21.5+10.5)			41 (29+12)		
Machine dimension(LxWxH)	m	7.4 × 2.4 × 2.1			7.5 × 2.8 × 2.3			8.1 X 2.9 X 2.2			9.5 × 3.2 × 2.5		
Cooling water consumption	L/min	130			130			130			180		

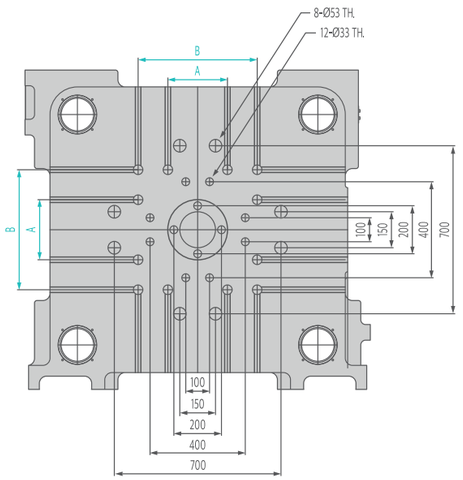
Model		DL1050A5			DL1300A5		DL1800A5	
		IH8800			IH11900		IH15300	
Injection Unit								
Screw & Barrel		O	A	B	A	B	A	B
Screw diameter	mm	95	105	115	115	125	125	140
Injection pressure	kg/㎠	2145	1756	1464	1809	1531	1814	1446
	Mpa	210	172	144	177	150	178	142
Theoretical injection volume	㎤	4111	5022	6024	6544	7731	8382	10514
Shot weight (PS)	g	3788	4628	5551	6030	7124	7724	9689
Injection rate	㎤/s	852	1041	1248	1249	1475	1296	1626
Screw stroke	mm	580			630		683	
Injection speed	mm/s	120			120		106	
Plasticizing capacity(PS)	kg/h	393	515	660	607	757	692	939
Screw rotation speed	rpm	125			115		105	
Clamping Unit								
Clamping force	ton(kN)	1050(10297)			1300(12749)		1800(17652)	
Mold opening force	ton(kN)	79(772)			98(956)		135(1324)	
Distance between tie-bar(HxV)	mm	1410 × 1110			1410 × 1410		1810 × 1610	
Platen dimension(HxV)	mm	1950 × 1650			1950 × 1950		2450 × 2180	
Daylight	mm	2400			2500		3200	
Min. mold height	mm	600			700		700	
Max. mold height	mm	1200			1200		1600	
Ejector force	ton(kN)	26.9(263.8)			34.4(337.3)		44.5(436.4)	
Ejector stroke	mm	250			300		300	
Dry cycle time	sec	4.4			5.0		5.8	
Max. mold weight (Fixed / Moving / Total)	ton	8.5 / 8.5 / 13			12 / 12 / 17		16 / 16 / 24	
General								
Heater capacity	kW	39.7	44.7	49.4	54.7	58.1	61.6	70.8
Motor capacity	kW	110			142.6		142.6	
Total electric power capacity	kW	149.7	154.7	159.4	197.3	200.7	204.2	213.4
Hydraulic oil tank capacity	L	920			1150		1450	
Machine weight (Clamping+Injection)	ton	50 (37.5+12.5)			67 (50+17)		89 (70+19)	
Machine dimension(LxWxH)	m	10 × 3.5 × 2.5			10.8 × 3.6 × 2.9		12.7 × 4.1 × 3.4	
Cooling water consumption	L/min	180			180		180	

Platen Dimension

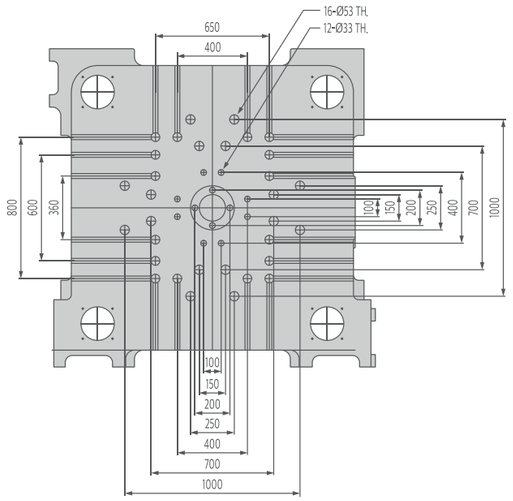
DL-A5 (ver.1)

Unit: mm

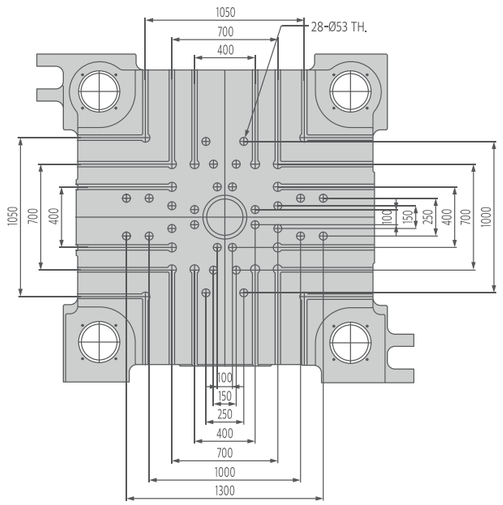
DL450A5 (A: 250 / B: 500) | DL550A5 (A: 280 / B: 560) | DL650A5 (A: 400 / B: 650)



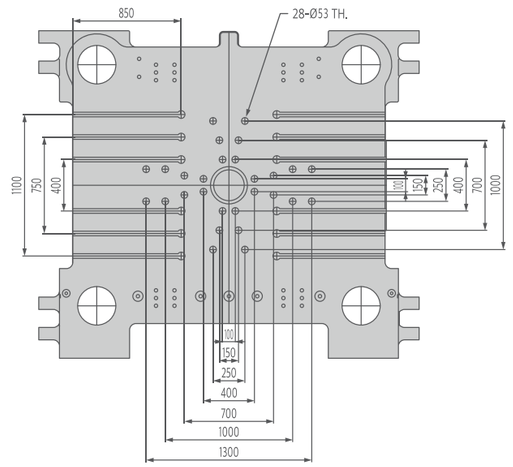
DL850A5 | DL1050A5



DL1300A5



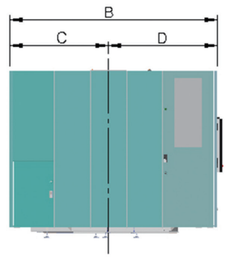
DL1800A5

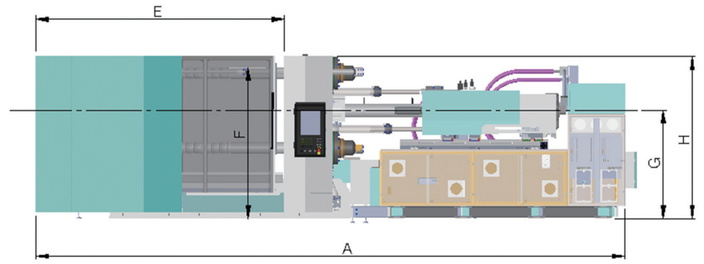


* The images and specifications might be changed without any prior notice.

Machine Dimension

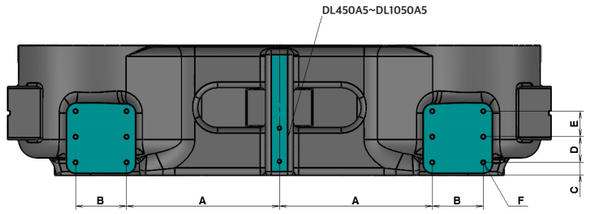
DL-A5 (ver.1)

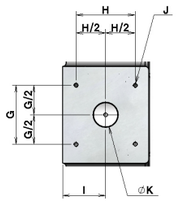


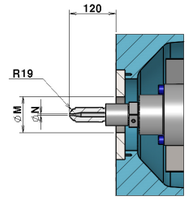


Unit: mm

Machine Dimension								
	A	B	C	D	E	F	G	H
DL450A5	7537	2340	1225	1115	2893	1985	1410	2145
DL550A5	7636	2808	1500	1308	3009	2050	1410	2190
DL650A5	8186	2907	1550	1357	3334	2170	1450	2305
DL850A5	9598	3158	1640	1518	3919	2285	1490	2435
DL1050A5	9984	3499	1789	1710	4305	2310	1490	2475
DL1300A5	10761	3545	1800	1745	4513	2696	1725	2901
DL1800A5	12388	4098	2096	2002	5330	3052	1969	3310







Unit: mm

	Robot installation position dimension						Hopper installation position dimension					Nozzle dimension	
	A	B	C	D	E	F	G	H	I	J	K	M	ØN
DL450A5	210	-	105	185	-	4-M20	165	165	120	4-M12	68	100	4
DL550A5	195	-	105	245	-	4-M20	165	165	130	4-M12	78	100	5
DL650A5	235	-	110	265	-	4-M24	165	165	140	4-M12	88	100	5
DL850A5	235	-	115	330	-	4-M24	165	165	170	4-M12	103	100	6
DL1050A5	335	-	125	375	-	4-M30	165	165	170	4-M12	103	100	6
DL1300A5	560	280	70	140	140	12-M24	280	200	190	4-M16	113	120	6
DL1800A5	840	280	70	140	140	12-M24	280	200	112	4-M16	123	120	7

* The images and specifications might be changed without any prior notice.

TH-A5

Premium power-saving hydraulic IMM (130~480 ton)

Premium power-saving hydraulic injection molding machine that pursues highest efficiency with ergonomic design, fast and stable operation and user convenience.

YouTube

Mold adjustment brake motor
· Maintains constant clamping force by preventing mold slipping

Clean Tie bar
· Improved tie bar cleanliness, reduced grease usage

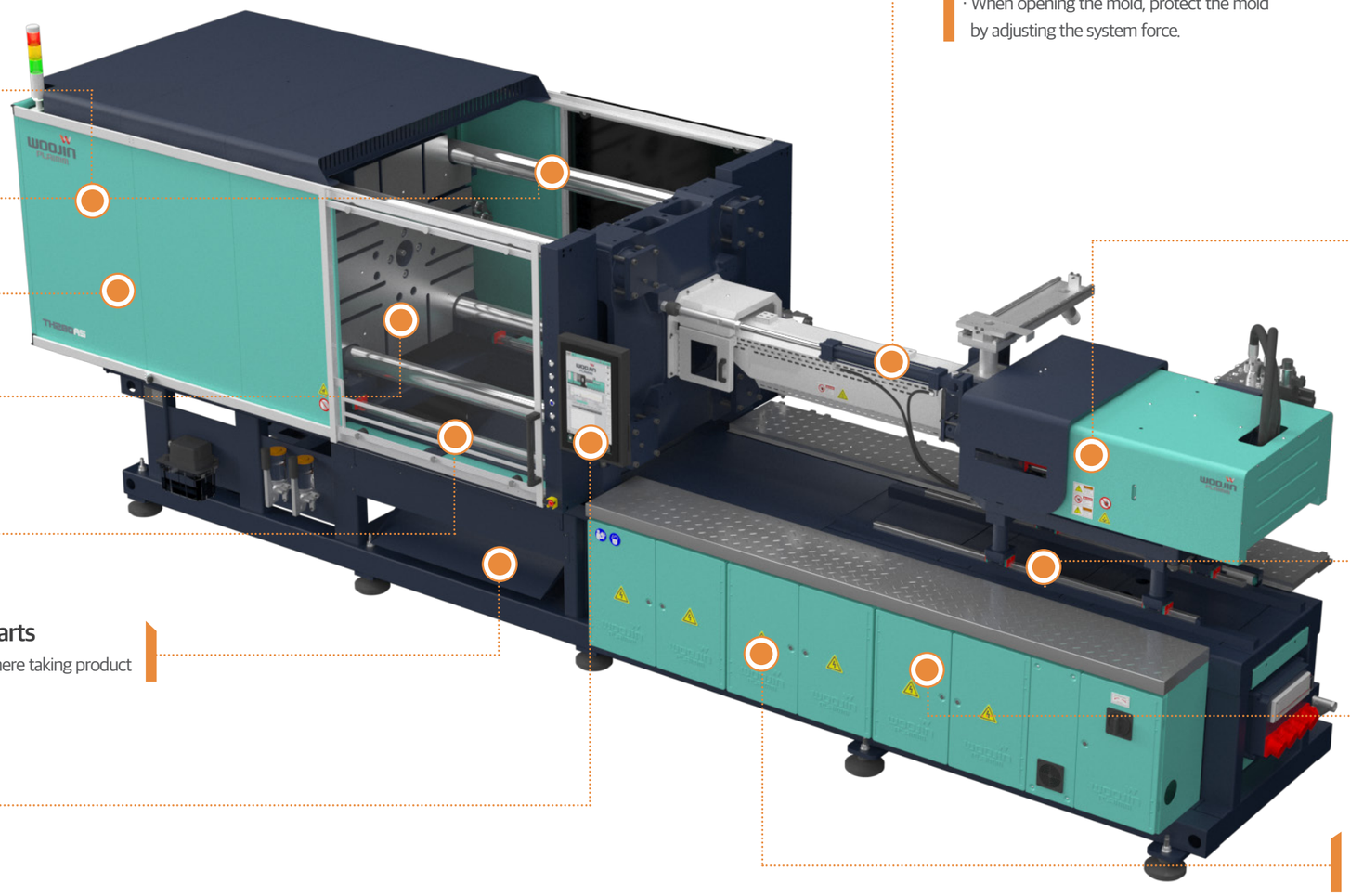
Proportional valve on clamping unit
· Enhanced high precision & position repeatability

Application of double center press integrated movable platen
· Evenly marvelous distributed mold pressure and achievement of mold protection

Application of LM guide on movable plate
· Maintain plate parallelism and improve plate straightness

Three side open architecture for ejected parts
· Customers have wide range of choice in terms of space, where taking product

Controller (IMC 400, 510)
· B&R(Austria)
· 15", 21" Touch Screen TFT color
· Resolution : 786 x 1024
· Monitoring real-time energy consuption (Option)
· CMS System(Option)



Dual pull nozzle touch cylinder
· Improved nozzle touch precision
· When opening the mold, protect the mold by adjusting the system force.

High rigidity injection unit
· Maintain stability during high-speed injection

The independent suck-back cylinder
· The separated injection and suck-back cylinders increase injection force, response, and the system control.

Back pressure closed-loop control
· Excellent back-pressure adjustment through the closed-loop control.
· The exact amount of resin input, Injection with high precision, repeatability and high response are all achieved.

Application of LM guide to injection unit
· Enhance the parallelism and straightness on the injection unit.

Hydraulic oil independent circulation system
· Improved filtering and cooling capabilities
· Increased hydraulic oil lifespan

High efficiency servo pump system
· Increased energy efficiency by applying servo motors

High-quality implementation with top-of-the-line performance brand components


Controller


Servo Motor


Drive


Proportional Valve


Hydraulic Motor


Pressure Sensor


Tube Heat Exchanger


Oil Filter

Clamping Unit

01. Low vibration new-toggle mechanism
· Application of new-toggle for speedy opening and closing stroke and clamped-type toggle pin fixation to increase durability

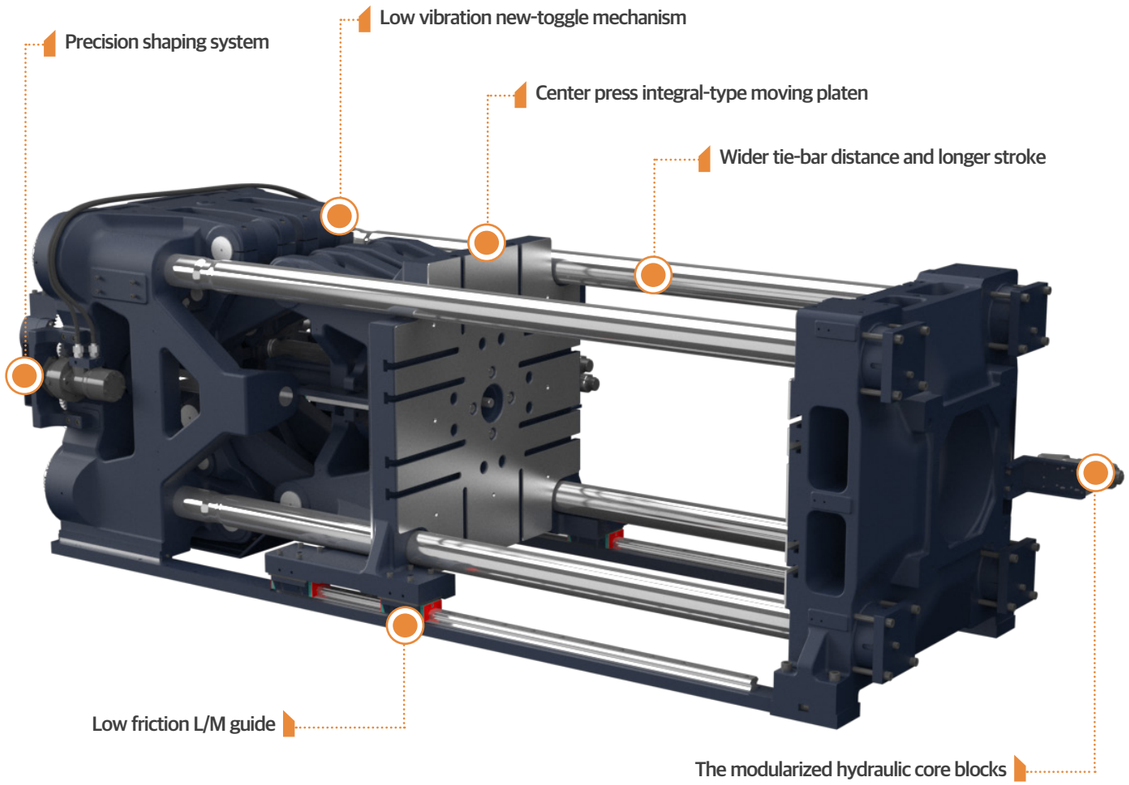
02. Low friction L/M guide
· Able to maintain a constant level level of parallel plates even in high speed opening and closing.
· High energy efficiency with little movement friction during forward and backward movement

03. The modularized hydraulic core blocks
· It provides customers with better use of a space.

04. Wider tie-bar distance and longer stroke
· Wider tie-bar distance and longer stroke comparing with other similar tonnage machines to accommodate lager molds.

05. Precision shaping system
· Precise adjustment of stroke by encoder control

06. Center press integral-type moving platen
· Able to transfer uniform clamping force to the mold



Injection Unit

01. High-rigidity bi-axial injection device
· With two axis injection rod, based on high rigidity(SCM440 + Q/T) the high injection pressure is stably delivered

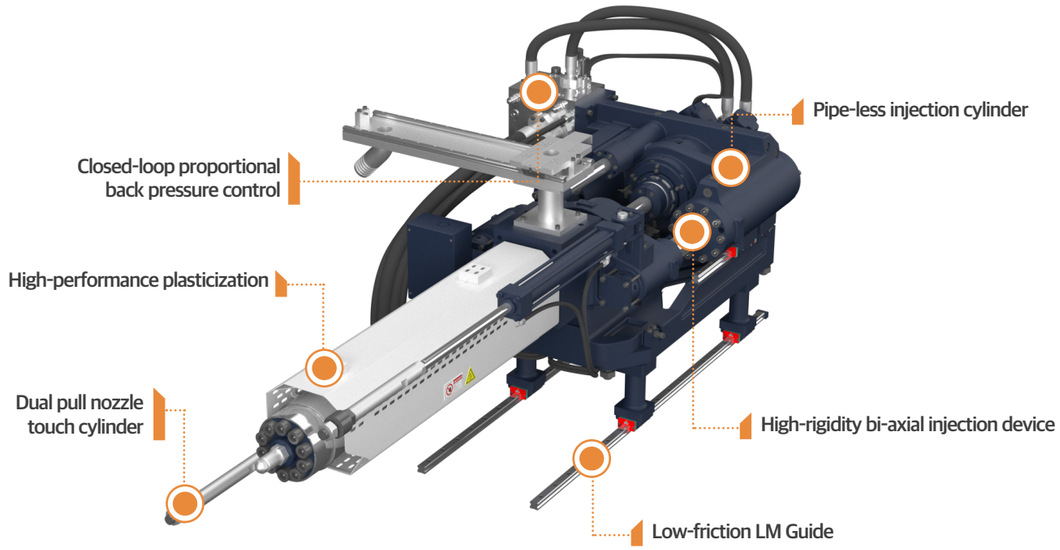
02. High-performance plasticization
· 10% more plasticizing capacity than previous models and precision temperature control with PID synchronized heating control

03. Pipe-less injection cylinder
· Improved responsiveness by internally embedding hydraulic lines

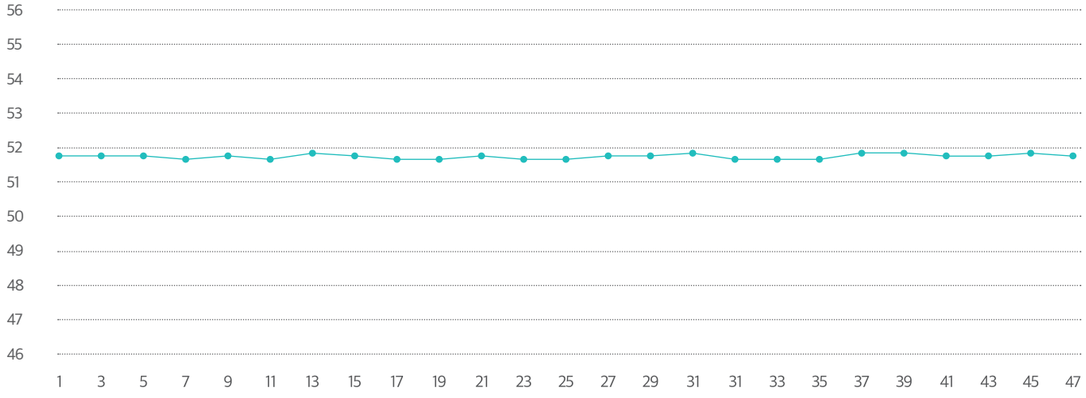
04. Dual pull nozzle touch cylinder
· stability when the nozzle touches platen

05. Low-friction LM Guide
· Keeping parallelism and reducing friction by adopting injection bed and injection part L/M guide

06. Closed-loop proportional back pressure control
· The system accurately detects and compares the pressure set by the user to maintain a stable value



Weight deviation test results



* Tested on TH380A5, Test product: Battery parts, 4 Cavity
* This specification may different depending on mold, raw material, and product specifications.

Hydraulic Unit

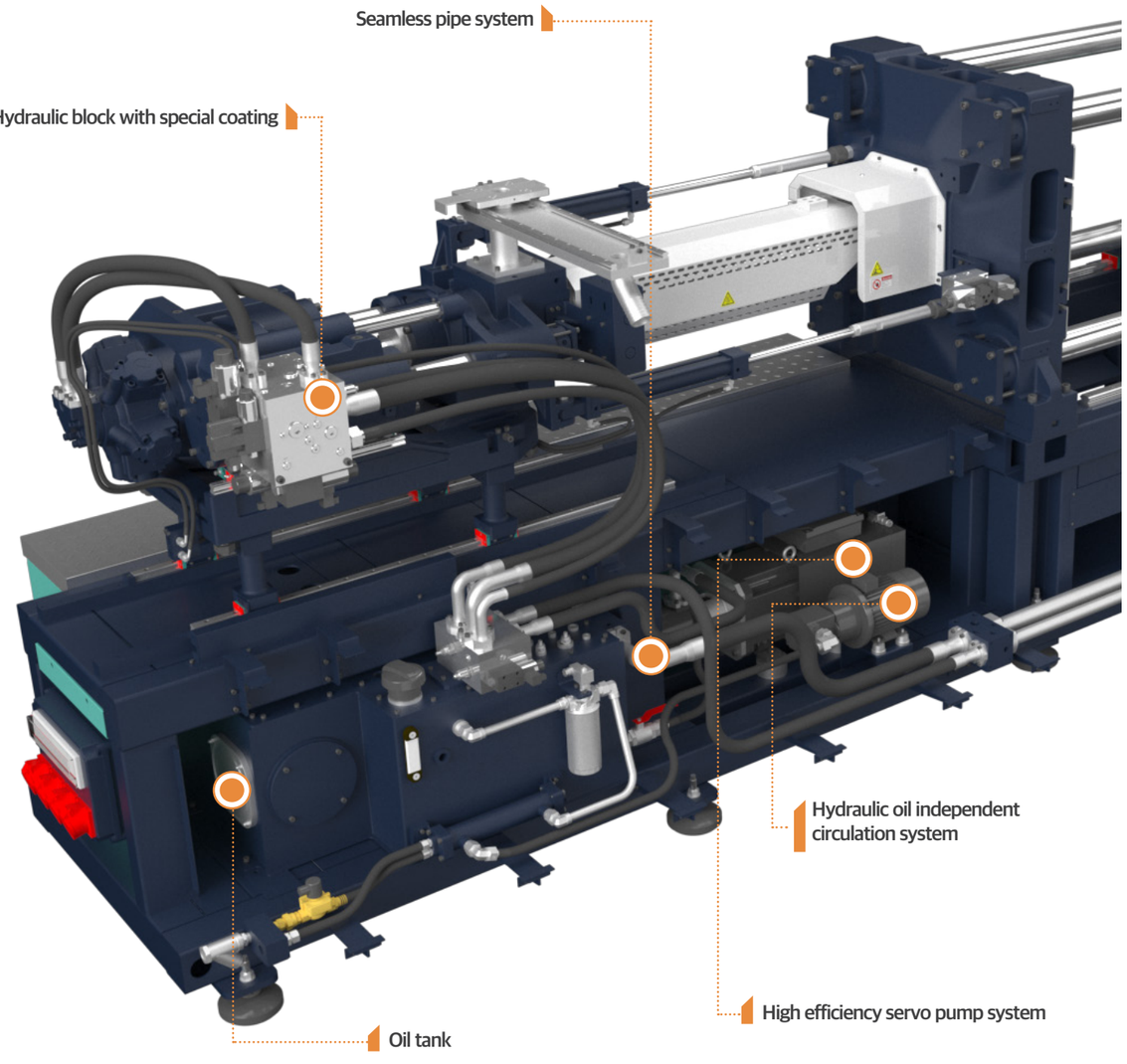
01. Hydraulic block with special coating
· Anti-corrosion and cleanliness with nickel coating inside and outside the block

02. Seamless pipe system
· Durable seamless pipe is long-lasting, easy to maintain

03. Hydraulic oil independent circulation system
· Stable and high reproducibility due to constant flow of hydarulic oil, and extends oil life by 3 times due to increased filtering and cooling capability

04. High efficiency servo pump system
· Application of high efficiency pumps and motors reduces energy and hydraulic oil consumption

05. Oil tank
· Special painting inside the tank prevents oil vapor and rust and stays clean



Specification TH-A5

Model		TH130A5								
		IH190			IH300			IH600		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	25	28	32	28	32	36	36	40	45
Injection pressure	kg/㎠	2688	2363	1809	2686	2450	1936	2690	2431	1920
	Mpa	264	232	177	263	240	190	264	238	188
Theoretical injection volume	㎤	64	80	105	92	121	153	153	188	239
Shot weight (PS)	g	59	74	96	85	111	141	141	174	220
Injection rate	㎤/s	62	77	101	74	97	122	122	151	191
Screw stroke	mm	130			150			150		
Injection speed	mm/s	125			120			120		
Plasticizing capacity	kg/h	31	41	58	41	58	82	69	94	127
Screw rotation speed	rpm	360			360			300		
Clamping Unit										
Clamping force	ton(kN)	130(1275)								
Distance between tie-bar (H×V)	mm	470 x 470								
Platen dimension (H×V)	mm	680 x 680								
Daylight	mm	400								
Max. Daylight	mm	850								
Min. Mold height	mm	150								
Max. Mold height	mm	450								
Ejector force	ton(kN)	3.7(36.3)								
Ejector stroke	mm	130								
General										
Heater capacity	kW	6.1	7.0	7.8	7.0	7.8	9.1	9.9	11.2	12.6
Motor capacity	kW	7.7			9.1			15.7		
Total electric power capacity	kW	13.8	14.7	15.5	16.1	16.9	18.2	25.6	26.9	28.3
Hydraulic oil tank capacity	L	190			190			190		
Machine weight	ton	4.5			5.0			5.5		
Machine dimension (L×W×H)	m	5.0 x 1.5 x 2.0			5.0 x 1.5 x 2.0			5.0 x 1.5 x 2.0		
Cooling water consumption	L/min	40			40			40		

Specification TH-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TH190A5								
		IH300			IH600			IH1000		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	28	32	36	36	40	45	45	50	55
Injection pressure	kg/㎠	2686	2450	1936	2690	2431	1920	2600	2258	1866
	Mpa	263	240	190	264	238	188	255	221	183
Theoretical injection volume	㎤	92	121	153	204	251	318	366	452	546
Shot weight (PS)	g	85	111	141	188	232	293	337	416	504
Injection rate	㎤/s	74	97	122	122	151	191	175	217	262
Screw stroke	mm	150			200			230		
Injection speed	mm/s	120			120			110		
Plasticizing capacity	kg/h	41	58	82	69	94	127	110	148	189
Screw rotation speed	rpm	360			300			260		
Clamping Unit										
Clamping force	ton(kN)	190(1863)								
Distance between tie-bar (H×V)	mm	570 x 570								
Platen dimension (H×V)	mm	840 x 810								
Daylight	mm	500								
Max. Daylight	mm	1000								
Min. Mold height	mm	180								
Max. Mold height	mm	500								
Ejector force	ton(kN)	4.5(44.1)								
Ejector stroke	mm	160								
General										
Heater capacity	kW	7.0	7.8	9.1	9.9	11.2	12.6	14.6	17.1	18.7
Motor capacity	kW	9.1			15.7			19.8		
Total electric power capacity	kW	16.1	16.9	18.2	25.6	26.9	28.3	34.4	36.9	38.5
Hydraulic oil tank capacity	L	300			300			300		
Machine weight	ton	6.5			7.0			7.5		
Machine dimension (L×W×H)	m	5.7 x 1.6 x 2.0			5.7 x 1.6 x 2.0			5.7 x 1.6 x 2.0		
Cooling water consumption	L/min	40			40			40		

Model		TH240A5								
		IH600			IH1000			IH1250		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	36	40	45	45	50	55	50	55	60
Injection pressure	kg/㎠	2690	2431	1920	2600	2258	1866	2594	2144	1801
	Mpa	264	238	188	255	221	183	254	210	177
Theoretical injection volume	㎤	204	251	318	366	452	546	452	546	650
Shot weight (PS)	g	188	232	293	337	416	504	416	504	599
Injection rate	㎤/s	122	151	191	175	217	262	217	262	312
Screw stroke	mm	200			230			230		
Injection speed	mm/s	120			110			110		
Plasticizing capacity	kg/h	69	94	127	110	148	189	142	182	233
Screw rotation speed	rpm	300			260			250		
Clamping Unit										
Clamping force	ton(kN)	240(2354)								
Distance between tie-bar (H×V)	mm	625 x 625								
Platen dimension (H×V)	mm	900 x 870								
Daylight	mm	550								
Max. Daylight	mm	1150								
Min. Mold height	mm	200								
Max. Mold height	mm	600								
Ejector force	ton(kN)	6.3(61.8)								
Ejector stroke	mm	180								
General										
Heater capacity	kW	9.9	11.2	12.6	14.6	17.1	18.7	19.1	21.0	23.8
Motor capacity	kW	15.7			19.8			25.1		
Total electric power capacity	kW	25.6	26.9	28.3	34.4	36.9	38.5	44.2	46.1	48.9
Hydraulic oil tank capacity	L	340			340			340		
Machine weight	ton	9.3			9.8			10.3		
Machine dimension (L×W×H)	m	6.4 x 1.7 x 2.0			6.4 x 1.7 x 2.0			6.4 x 1.7 x 2.0		
Cooling water consumption	L/min	40			40			40		

Specification TH-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TH280A5								
		IH1000			IH1250			IH1800		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	45	50	55	50	55	60	55	60	65
Injection pressure	kg/㎠	2600	2258	1866	2594	2144	1801	2494	2257	2008
	Mpa	255	221	183	254	210	177	245	221	197
Theoretical injection volume	㎤	366	452	546	481	582	693	677	806	946
Shot weight (PS)	g	337	416	504	443	536	638	624	743	871
Injection rate	㎤/s	175	217	262	217	262	312	249	296	347
Screw stroke	mm	230			245			285		
Injection speed	mm/s	110			110			105		
Plasticizing capacity	kg/h	110	148	189	142	182	233	160	205	253
Screw rotation speed	rpm	260			250			220		
Clamping Unit										
Clamping force	ton(kN)	280(2746)								
Distance between tie-bar (H×V)	mm	670 x 670								
Platen dimension (H×V)	mm	990 x 980								
Daylight	mm	600								
Max. Daylight	mm	1250								
Min. Mold height	mm	250								
Max. Mold height	mm	650								
Ejector force	ton(kN)	6.3(61.8)								
Ejector stroke	mm	200								
General										
Heater capacity	kW	14.6	17.1	18.7	19.1	21.0	23.8	21.0	23.8	25.7
Motor capacity	kW	19.8			25.1			32.7		
Total electric power capacity	kW	34.4	36.9	38.5	44.2	46.1	48.9	53.7	56.5	58.4
Hydraulic oil tank capacity	L	340			340			340		
Machine weight	ton	11.8			12.3			12.8		
Machine dimension (L×W×H)	m	6.8 x 1.8 x 2.0			6.8 x 1.8 x 2.0			6.8 x 1.8 x 2.0		
Cooling water consumption	L/min	40			40			40		

Model		TH380A5								
		IH1250			IH1800			IH2800		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	50	55	60	55	60	65	65	70	80
Injection pressure	kg/㎠	2594	2144	1801	2494	2257	2008	2375	2048	1568
	Mpa	254	210	177	245	221	197	233	201	154
Theoretical injection volume	㎤	481	582	693	677	806	946	1161	1347	1759
Shot weight (PS)	g	443	536	638	624	743	871	1070	1241	1621
Injection rate	㎤/s	217	262	312	249	296	347	313	363	474
Screw stroke	mm	245			285			350		
Injection speed	mm/s	110			105			94		
Plasticizing capacity	kg/h	142	182	233	160	205	253	201	244	347
Screw rotation speed	rpm	250			220			175		
Clamping Unit										
Clamping force	ton(kN)	380(3727)								
Distance between tie-bar (H×V)	mm	770 x 770								
Platen dimension (H×V)	mm	1160 x 1090								
Daylight	mm	700								
Max. Daylight	mm	1450								
Min. Mold height	mm	300								
Max. Mold height	mm	750								
Ejector force	ton(kN)	9.6(94.2)								
Ejector stroke	mm	210								
General										
Heater capacity	kW	19.1	21.0	23.8	21.0	23.8	25.7	18.4	20.6	24.1
Motor capacity	kW	25.1			32.7			32.7		
Total electric power capacity	kW	44.2	46.1	48.9	53.7	56.5	58.4	51.1	53.3	56.8
Hydraulic oil tank capacity	L	450			450			450		
Machine weight	ton	15.5			16.0			17.0		
Machine dimension (L×W×H)	m	7.5 x 2.0 x 2.0			7.5 x 2.0 x 2.0			7.5 x 2.0 x 2.0		
Cooling water consumption	L/min	65			65			65		

Specification TH-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

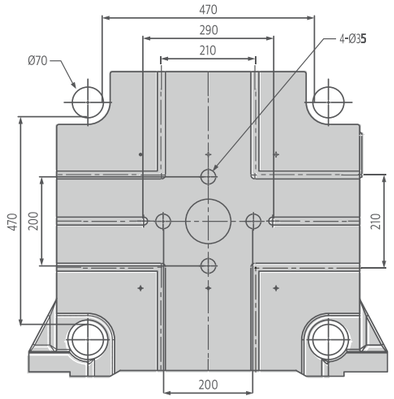
Model		TH420A5								
		IH1250			IH1800			IH2800		
Injection Unit										
Screw & Barrel		O	A	B	O	A	B	O	A	B
Screw diameter	mm	50	55	60	55	60	65	65	70	80
Injection pressure	kg/㎠	2594	2144	1801	2494	2257	2008	2375	2048	1568
	Mpa	254	210	177	245	221	197	233	201	154
Theoretical injection volume	㎤	481	582	693	677	806	946	1161	1347	1759
Shot weight (PS)	g	443	536	638	624	743	871	1070	1241	1621
Injection rate	㎤/s	217	262	312	249	296	347	313	363	474
Screw stroke	mm	245			285			350		
Injection speed	mm/s	110			105			94		
Plasticizing capacity	kg/h	142	182	233	160	205	253	201	244	347
Screw rotation speed	rpm	250			220			175		
Clamping Unit										
Clamping force	ton(kN)	420(4119)								
Distance between tie-bar (H×V)	mm	820 x 820								
Platen dimension (H×V)	mm	1210 x 1150								
Daylight	mm	750								
Max. Daylight	mm	1550								
Min. Mold height	mm	350								
Max. Mold height	mm	800								
Ejector force	ton(kN)	9.6(94.2)								
Ejector stroke	mm	210								
General										
Heater capacity	kW	19.1	21.0	23.8	21.0	23.8	25.7	18.4	20.6	24.1
Motor capacity	kW	25.1			32.7			32.7		
Total electric power capacity	kW	44.2	46.1	48.9	53.7	56.5	58.4	51.1	53.3	56.8
Hydraulic oil tank capacity	L	450			450			450		
Machine weight	ton	16.5			17.0			18.0		
Machine dimension (L×W×H)	m	7.6 x 2.1 x 2.1			7.6 x 2.1 x 2.1			7.6 x 2.1 x 2.1		
Cooling water consumption	L/min	65			65			65		

Model		TH480A5					
		IH1800			IH2800		
Injection Unit							
Screw & Barrel		O	A	B	O	A	B
Screw diameter	mm	55	60	65	65	70	80
Injection pressure	kg/㎠	2494	2257	2008	2375	2048	1568
	Mpa	245	221	197	233	201	154
Theoretical injection volume	㎤	677	806	946	1161	1347	1759
Shot weight (PS)	g	624	743	871	1070	1241	1621
Injection rate	㎤/s	249	296	347	313	363	474
Screw stroke	mm	285			350		
Injection speed	mm/s	105			94		
Plasticizing capacity	kg/h	160	205	253	201	244	347
Screw rotation speed	rpm	220			175		
Clamping Unit							
Clamping force	ton(kN)	480(4707)					
Distance between tie-bar (H×V)	mm	870 x 870					
Platen dimension (H×V)	mm	1270 x 1190					
Daylight	mm	800					
Max. Daylight	mm	1600					
Min. Mold height	mm	350					
Max. Mold height	mm	800					
Ejector force	ton(kN)	14.9(146.2)					
Ejector stroke	mm	230					
General							
Heater capacity	kW	21.0	23.8	25.7	18.4	20.6	24.1
Motor capacity	kW	32.7			32.7		
Total electric power capacity	kW	53.7	56.5	58.4	51.1	53.3	56.8
Hydraulic oil tank capacity	L	500			500		
Machine weight	ton	24.0			25.0		
Machine dimension (L×W×H)	m	8.5 x 2.1 x 2.2			8.5 x 2.1 x 2.2		
Cooling water consumption	L/min	65			65		

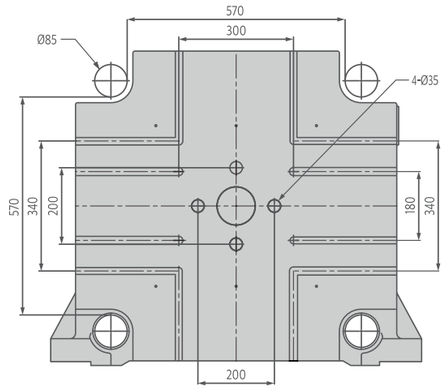
Platen Dimension TH-A5

Unit: mm

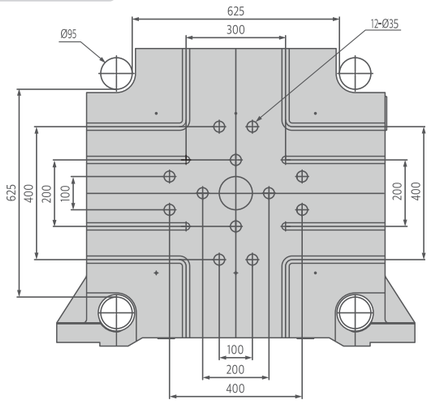
TH130A5



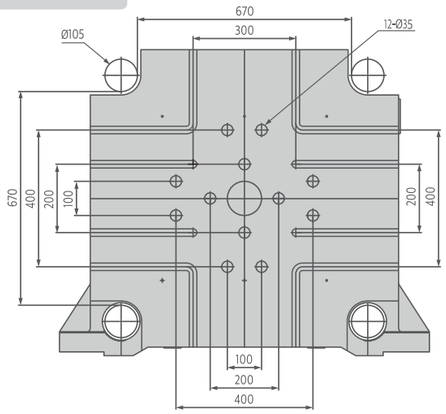
TH190A5



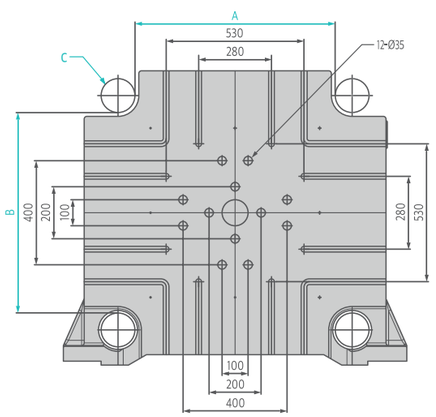
TH240A5



TH280A5

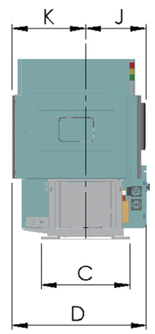


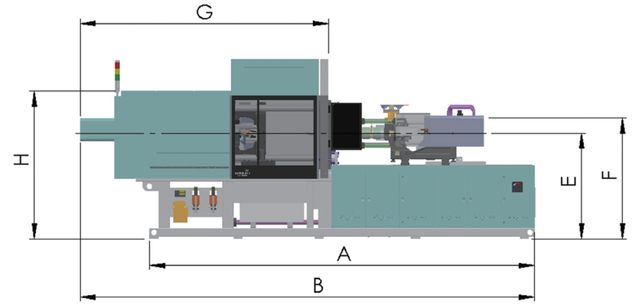
TH380A5 (A: 770 / B: 770 / C: Ø130)
TH420A5 (A: 820 / B: 820 / C: Ø130)
TH480A5 (A: 870 / B: 870 / C: Ø140)



* The images and specifications might be changed without any prior notice.

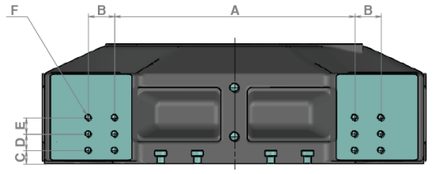
Machine Dimension TH-A5

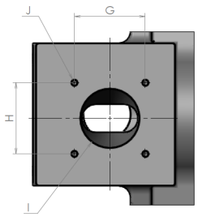


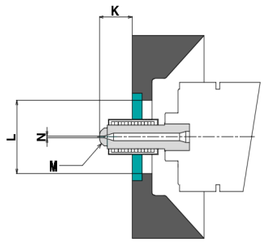


Unit: mm

Machine Dimension											
	A	B	C	D	E	F	G	H	I	J	K
TH130A5	4190	4884	965	1473	1145	1300	2646	1613	1505	615	814
TH190A5	4750	5775	1100	1544	1245	1405	3117	1818	1685	632	822
TH240A5	5595	6405	1180	1649	1349	1529	3511	2057	1829	727	922
TH280A5	5912	6749	1240	1733	1402	1562	3721	1966	1917	772	962
TH380A5	6560	7514	1450	1883	1425	1600	4258	2086	2025	852	1032
TH420A5	6790	7739	1500	1948	1450	1625	4466	2077	2075	878	1072
TH480A5	7537	8693	1390	2008	1500	1690	4760	2142	2140	912	1097







Unit: mm

	Robot installation position dimension						Hopper installation position dimension				Nozzle dimension			
	A	B	C	D	E	F	G	H	I	J	K	Ø L	M	Ø N
TH130A5	455	85	35	70	-	8-M16 TAP DP32	100	100	85	4-M12 TAP	50	100	R9	2.5
TH190A5	420	140	35	70	70	12-M20 TAP DP40	120	120	90	4-M12 TAP	50	100	R9	3
TH240A5	560	140	35	70	70	12-M20 TAP DP40	120	120	100	4-M12 TAP	50	100	R14	3.5
TH280A5	560	140	35	140	-	8-M20 TAP DP40	120	120	100	4-M12 TAP	50	100	R14	3.5
TH380A5	760	150	40	150	-	8-M20 TAP DP40	127	127	115	4-M12 TAP	50	100	R14	3.5
TH420A5	850	100	50	60	60	12-M24 TAP DP40	127	127	115	4-M12 TAP	50	100	R14	3.5
TH480A5	980	100	45	60	60	12-M24 TAP DP40	127	127	115	4-M12 TAP	120	100	R19	4

* The images and specifications might be changed without any prior notice.

TE-A5

Premium power-saving electric IMM (50~850 ton)

Premium power-saving electric injection molding machine that ensures precision of operation by applying high performance AC servo motor and enables rapid processing with independent control for moving part.

YouTube

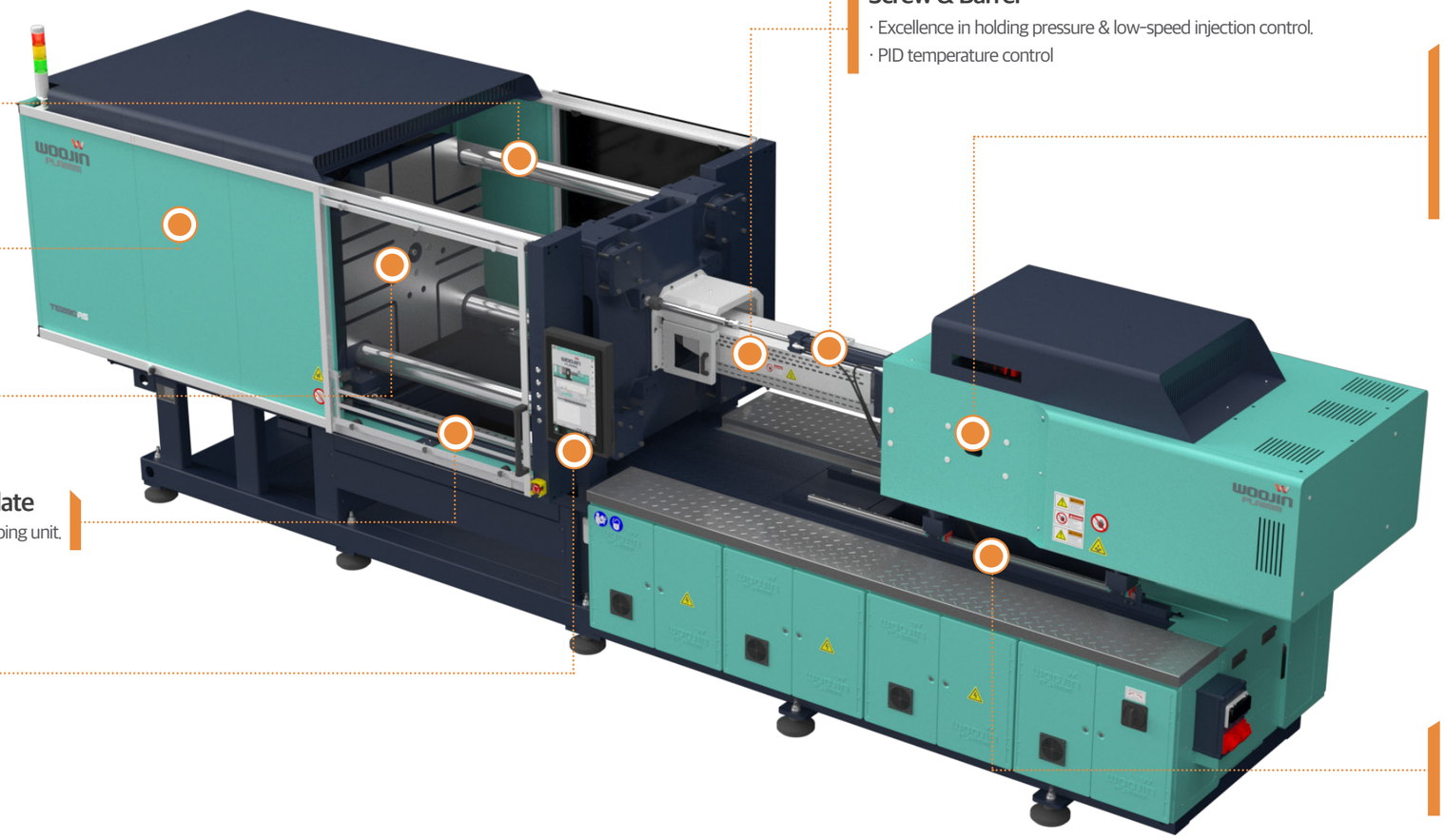
Clean Tie bar
· Improved tie bar cleanliness, reduced grease usage

Automatic clamp force adjustment motor
· Maintain constant clamping force

Application of double center press integrated movable platen
· Evenly marvelous distributed mold pressure and achievement of mold protection

Application of LM guide on movable plate
· Enhance the parallelism and straightness on the clamping unit.

Controller (IMC 400 / 510)
· B&R(Austria)
· 15", 21" Touch Screen TFT color
· Resolution : 786 x 1024
· Monitoring real-time energy consuption (Option)
· CMS System(Option)



Dual pull nozzle touch cylinder
· Symmetric dual pull nozzle touch cylinder application

Screw & Barrel
· Excellence in holding pressure & low-speed injection control.
· PID temperature control

High rigidity injection unit
· Maintain stability during high-speed injection

High-precision injection pressure detection device (load cell)
· Maintain stability during high-speed injection

Application of LM guide to injection ram box part
· Reduced moving friction, improved reproducibility

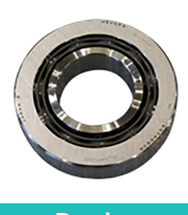
High-quality implementation with top-of-the-line performance brand components

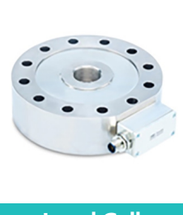

Controller


Servo Motor

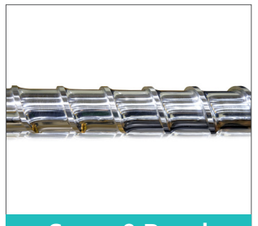

Drive


Ball Screw


Bearing


Load Cell


Geared Motor


Screw & Barrel

Clamping Unit

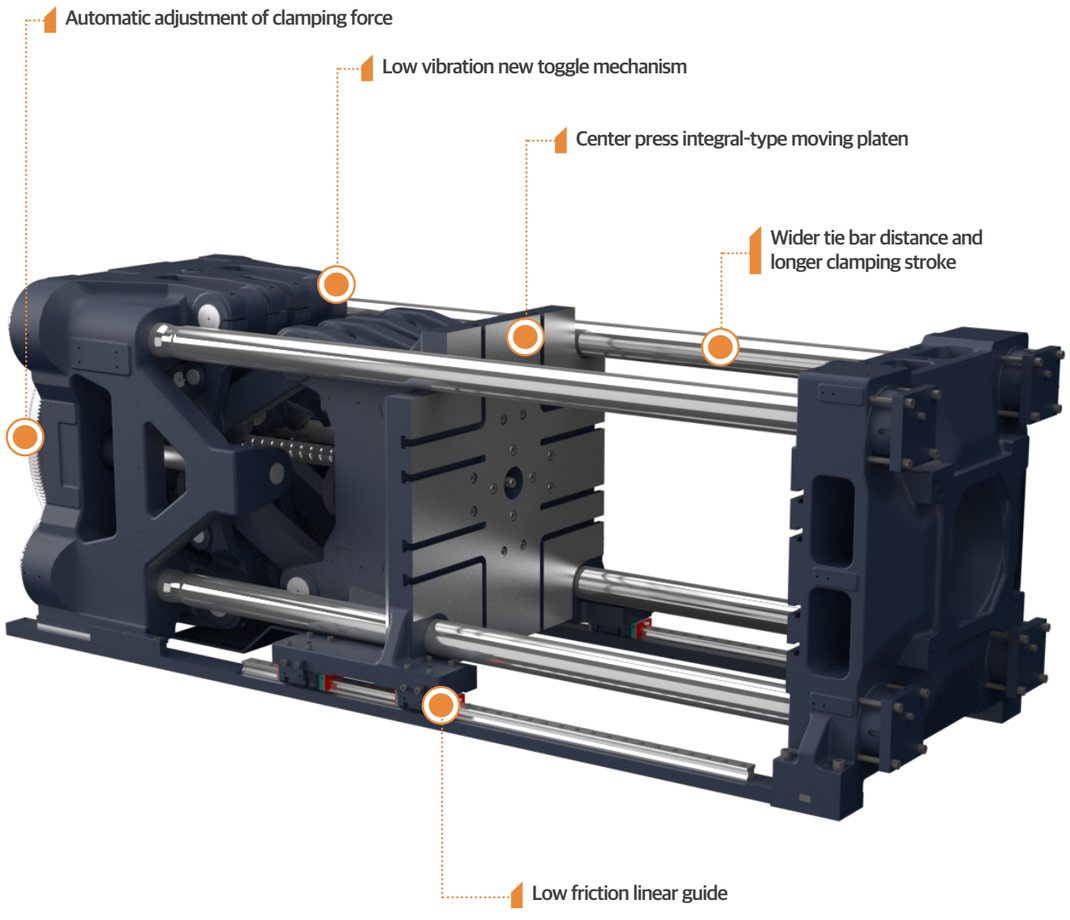
01. Low vibration new toggle mechanism
· Adopting new toggle for high-speed mold opening and closing. Assuring durability by fixing clamp type toggle pin

02. Low friction linear guide
· Large power savings by keeping stable platen parallelism and no moving friction during high speed mold opening and closing.

03. Wider tie bar distance and longer clamping stroke
· Wide tie-bar distance and stroke range of clamping unit for adopting various molds

04. Center press integral-type moving platen
· High-stiffness platen is able to transfer uniform clamping force to the mold

05. Automatic adjustment of clamping force
· Real time clamping force change sensing by geared motor and clmaping sensor



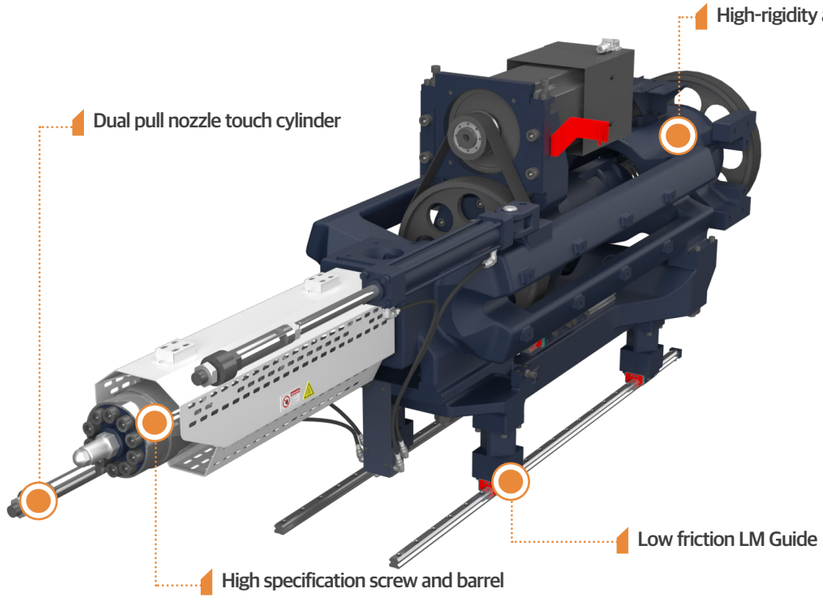
Injection Unit

01. High-rigidity axis injection unit
· In-line injection structure ensures fast response and precise molding

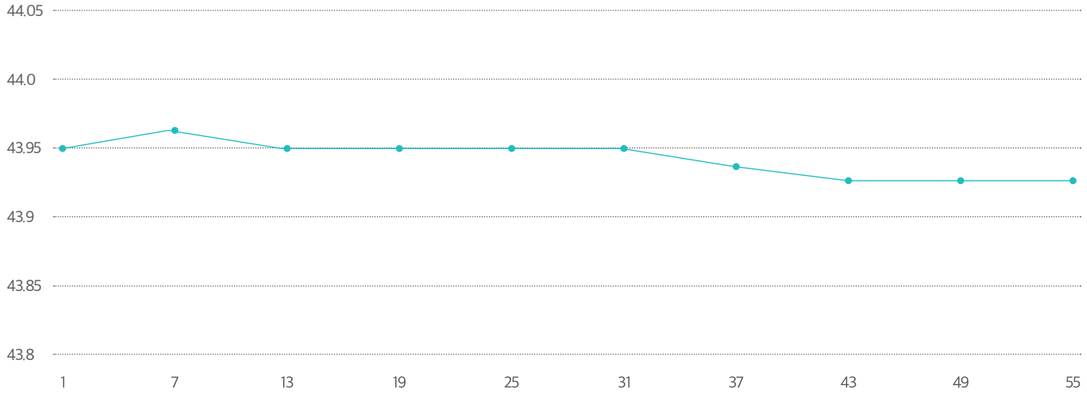
02. Dual pull nozzle touch cylinder
· Prevents platen imbalance and improves molding precision by repeaetd nozzle touch

03. High specification screw and barrel
· Fast and stable material for improved plasticization pefromance

04. Low friction LM Guide
· Smooth movement and friction reduction provisioning by adopting injection bed and injection part L/M guide



Weight deviation test results



* Tested on TE110A5, Test product: Automobile parts, 1 Cavity
* This specification may different depending on mold, raw material, and product specifications.

Specification TE-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TE50A5									
		IE70				IE125			IE260		
Injection Unit											
Screw & Barrel type		S	O	A	B	O	A	B	O	A	B
Screw diameter	mm	16	18	20	22	22	25	28	28	32	36
Injection pressure	kg/㎠	2800	2597	2103	1738	2610	2021	1612	2644	2024	1599
	Mpa	275	255	206	170	256	198	158	259	198	157
Injection holding pressure	kg/㎠	2520	2337	1893	1564	2349	1819	1451	2380	1822	1439
	Mpa	247	229	186	153	230	178	142	233	179	141
Theoretical injection volume	㎤	20	25	31	38	48	61	77	99	129	163
Shot weight (PS)	g	18	23	28	35	44	56	70	90	117	148
Injection rate (Standard)	㎤/s	70	89	110	133	95	123	154	132	173	219
Injection rate (Option)	㎤/s	141	178	220	266	190	245	308	265	346	438
Screw stroke	mm	100				125			160		
Injection speed (Standard)	mm/s	350				250			215		
Injection speed (Option)	mm/s	700				500			430		
Plasticizing capacity	kg/h	12	17	24	29	29	41	54	45	64	92
Screw rotation speed	rpm	470				470			400		
Clamping Unit											
Clamping force	ton(kN)	50(498)									
Distance between tie-bar (H×V)	mm	370 x 370									
Platen dimension (H×V)	mm	550 x 550									
Daylight	mm	300									
Max. Daylight	mm	700									
Min. Mold height	mm	140									
Max. Mold height	mm	400									
Ejector force	ton(kN)	1.9(19)									
Ejector stroke	mm	80									
General											
Motor capacity (Standard)	kW	11							15.1		
Motor capacity (Option)	kW	22							30.2		
Heater capacity	kW	3.6	3.9	4.3	4.7	4.5	5.1	5.9	7.0	7.8	9.1
Total electric power capacity (Normal)	kW	14.6	14.9	15.3	15.7	15.5	16.1	16.9	22.1	22.9	24.2
Total electric power capacity (High)	kW	25.6	25.9	26.3	26.7	26.5	27.1	27.9	37.2	38.0	39.3
Machine weight	ton	3.9							4.2		
Machine dimension (L×W×H)	m	4.2x1.2x1.5							4.2x1.2x.1.5		

Model		TE110A5								
		IE125			IE260			IE370		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	22	25	28	28	32	36	32	36	40
Injection pressure	kg/㎠	2610	2021	1612	2644	2024	1599	2573	2033	1647
	Mpa	256	198	158	259	198	157	252	199	162
Injection holding pressure	kg/㎠	2349	1819	1451	2380	1822	1439	2316	1830	1482
	Mpa	230	178	142	233	179	141	227	179	145
Theoretical injection volume	㎤	48	61	77	99	129	163	145	183	226
Shot weight (PS)	g	44	56	70	90	117	148	132	167	206
Injection rate (Standard)	㎤/s	95	123	154	132	173	219	161	204	251
Injection rate (Option)	㎤/s	190	245	308	265	346	438	322	407	503
Screw stroke	mm	125			160			180		
Injection speed (Standard)	mm/s	250			215			200		
Injection speed (Option)	mm/s	500			430			400		
Plasticizing capacity	kg/h	29	41	54	45	64	92	60	86	117
Screw rotation speed	rpm	470			400			375		
Clamping Unit										
Clamping force	ton(kN)	110(1096)								
Distance between tie-bar (H×V)	mm	470x470								
Platen dimension (H×V)	mm	680x680								
Daylight	mm	400								
Max. Daylight	mm	850								
Min. Mold height	mm	150								
Max. Mold height	mm	450								
Ejector force	ton(kN)	3.1(31)								
Ejector stroke	mm	120								
General										
Motor capacity (Standard)	kW	11			15.1			17.8		
Motor capacity (Option)	kW	22			30.2			35.6		
Heater capacity	kW	4.5	5.1	5.9	7.0	7.8	9.1	8.5	9.9	11.2
Total electric power capacity (Normal)	kW	15.5	16.1	16.9	22.1	22.9	24.2	26.3	27.7	29.0
Total electric power capacity (High)	kW	26.5	27.1	27.9	37.2	38.0	39.3	44.1	45.5	46.8
Machine weight	ton	4.5			4.7			5.2		
Machine dimension (L×W×H)	m	4.9x1.3x2.0			4.9x1.3x2.0			4.9x1.3x2.0		

Specification TE-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TE170A5								
		IE260			IE370			IE520		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	28	32	36	32	36	40	36	40	45
Injection pressure	kg/㎠	2644	2024	1599	2573	2033	1647	2541	2059	1627
	Mpa	259	198	157	252	199	162	249	202	160
Injection holding pressure	kg/㎠	2380	1822	1439	2316	1830	1482	2287	1853	1464
	Mpa	233	179	141	227	179	145	224	182	144
Theoretical injection volume	㎤	99	129	163	145	183	226	204	251	318
Shot weight (PS)	g	90	117	148	132	167	206	186	228	289
Injection rate (Standard)	㎤/s	132	173	219	161	204	251	163	201	254
Injection rate (Option)	㎤/s	265	346	438	322	407	503	326	402	509
Screw stroke	mm	160			180			200		
Injection speed (Standard)	mm/s	215			200			160		
Injection speed (Option)	mm/s	430			400			320		
Plasticizing capacity	kg/h	45	64	92	60	86	117	86	117	158
Screw rotation speed	rpm	400			375			375		
Clamping Unit										
Clamping force	ton(kN)	170(1694)								
Distance between tie-bar (H×V)	mm	570x570								
Platen dimension (H×V)	mm	840x810								
Daylight	mm	500								
Max. Daylight	mm	1000								
Min. Mold height	mm	180								
Max. Mold height	mm	500								
Ejector force	ton(kN)	3.4(34)								
Ejector stroke	mm	150								
General										
Motor capacity (Standard)	kW	15.1			17.8			17.8		
Motor capacity (Option)	kW	30.2			35.6			35.6		
Heater capacity	kW	7.0	7.8	9.1	8.5	9.9	11.2	9.9	11.2	12.6
Total electric power capacity (Normal)	kW	22.1	22.9	24.2	26.3	27.7	29.0	27.7	29.0	30.4
Total electric power capacity (High)	kW	37.2	38.0	39.3	44.1	45.5	46.8	45.5	46.8	48.2
Machine weight	ton	7			7.5			8		
Machine dimension (L×W×H)	m	5.7x1.6x2.0			5.7x1.6x2.0			5.7x1.6x2.0		

Model		TE220A5								
		IE370			IE520			IE720		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	32	36	40	36	40	45	40	45	50
Injection pressure	kg/㎠	2573	2033	1647	2541	2059	1627	2605	2058	1667
	Mpa	252	199	162	249	202	160	255	202	163
Injection holding pressure	kg/㎠	2316	1830	1482	2287	1853	1464	2345	1852	1500
	Mpa	227	179	145	224	182	144	230	182	147
Theoretical injection volume	㎤	145	183	226	204	251	318	276	350	432
Shot weight (PS)	g	132	167	206	186	228	289	251	319	393
Injection rate (Standard)	㎤/s	161	204	251	163	201	254	188	239	295
Injection rate (Option)	㎤/s	322	407	503	326	402	509	377	477	589
Screw stroke	mm	180			200			220		
Injection speed (Standard)	mm/s	200			160			150		
Injection speed (Option)	mm/s	400			320			300		
Plasticizing capacity	kg/h	60	86	117	86	117	158	117	158	213
Screw rotation speed	rpm	375			375			375		
Clamping Unit										
Clamping force	ton(kN)	220(2192)								
Distance between tie-bar (H×V)	mm	625x625								
Platen dimension (H×V)	mm	900x870								
Daylight	mm	550								
Max. Daylight	mm	1150								
Min. Mold height	mm	200								
Max. Mold height	mm	600								
Ejector force	ton(kN)	3.4(34)								
Ejector stroke	mm	180								
General										
Motor capacity (Standard)	kW	17.8			17.8			23.1		
Motor capacity (Option)	kW	35.6			35.6			46.2		
Heater capacity	kW	8.5	9.9	11.2	9.9	11.2	12.6	13.6	14.6	17.1
Total electric power capacity (Normal)	kW	26.3	27.7	29.0	27.7	29.0	30.4	36.7	37.7	40.2
Total electric power capacity (High)	kW	44.1	45.5	46.8	45.5	46.8	48.2	59.8	60.8	63.3
Machine weight	ton	9.7			10.3			10.8		
Machine dimension (L×W×H)	m	6.2x1.7x2.0			6.2x1.7x2.0			6.2x1.7x2.0		

Specification TE-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TE280A5								
		IE520			IE720			IE1000		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	36	40	45	40	45	50	45	50	55
Injection pressure	kg/㎠	2541	2059	1627	2605	2058	1667	2525	2045	1690
	Mpa	249	202	160	255	202	163	248	201	166
Injection holding pressure	kg/㎠	2287	1853	1464	2345	1852	1500	2273	1841	1521
	Mpa	224	182	144	230	182	147	223	180	149
Theoretical injection volume	㎤	204	251	318	276	350	432	398	491	594
Shot weight (PS)	g	186	228	289	251	319	393	362	447	541
Injection rate (Standard)	㎤/s	163	201	254	188	239	295	239	295	356
Injection rate (Option)	㎤/s	326	402	509	377	477	589	477	589	713
Screw stroke	mm	200			220			250		
Injection speed (Standard)	mm/s	160			150			150		
Injection speed (Option)	mm/s	320			300			300		
Plasticizing capacity	kg/h	86	117	158	117	158	213	158	213	273
Screw rotation speed	rpm	375			375			300		
Clamping Unit										
Clamping force	ton(kN)	280(2790)								
Distance between tie-bar (H×V)	mm	670x670								
Platen dimension (H×V)	mm	990x980								
Daylight	mm	600								
Max. Daylight	mm	1250								
Min. Mold height	mm	250								
Max. Mold height	mm	650								
Ejector force	ton(kN)	4.3(43)								
Ejector stroke	mm	200								
General										
Motor capacity (Standard)	kW	17.8			23.1			32.7		
Motor capacity (Option)	kW	35.6			46.2			65.4		
Heater capacity	kW	9.9	11.2	12.6	13.6	14.6	17.1	14.6	17.1	18.7
Total electric power capacity (Normal)	kW	27.7	29.0	30.4	36.7	37.7	40.2	47.3	49.8	51.4
Total electric power capacity (High)	kW	45.5	46.8	48.2	59.8	60.8	63.3	80.0	82.5	84.1
Machine weight	ton	14			14.5			15		
Machine dimension (L×W×H)	m	6.9x1.9x2.0			6.9x1.9x2.0			6.9x1.9x2.0		

Model		TE280WA5								
		IE720			IE1000			IE1360		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	40	45	50	45	50	55	50	55	60
Injection pressure	kg/㎠	2605	2058	1667	2525	2045	1690	2472	2043	1716
	Mpa	255	202	163	248	201	166	242	200	168
Injection holding pressure	kg/㎠	2345	1852	1500	2273	1841	1521	2225	1839	1544
	Mpa	230	182	147	223	180	149	218	180	151
Theoretical injection volume	㎤	276	350	432	398	491	594	530	641	763
Shot weight (PS)	g	251	319	393	362	447	541	482	583	694
Injection rate (Standard)	㎤/s	188	239	295	239	295	356	295	356	424
Injection rate (Option)	㎤/s	377	477	589	477	589	713	589	713	848
Screw stroke	mm	220			250			270		
Injection speed (Standard)	mm/s	150			150			150		
Injection speed (Option)	mm/s	300			300			300		
Plasticizing capacity	kg/h	117	158	213	158	213	273	142	182	233
Screw rotation speed	rpm	375			300			250		
Clamping Unit										
Clamping force	ton(kN)	280(2790)								
Distance between tie-bar (H×V)	mm	720x720								
Platen dimension (H×V)	mm	1020x1020								
Daylight	mm	650								
Max. Daylight	mm	1350								
Min. Mold height	mm	300								
Max. Mold height	mm	700								
Ejector force	ton(kN)	4.3(43)								
Ejector stroke	mm	200								
General										
Motor capacity (Standard)	kW	23.1			32.7			32.7		
Motor capacity (Option)	kW	46.2			65.4			65.4		
Heater capacity	kW	13.6	14.6	17.1	14.6	17.1	18.7	19.1	21.0	23.8
Total electric power capacity (Normal)	kW	36.7	37.7	40.2	47.3	49.8	51.4	51.8	53.7	56.5
Total electric power capacity (High)	kW	59.8	60.8	63.3	80.0	82.5	84.1	84.5	86.4	89.2
Machine weight	ton	15.5			16			16.5		
Machine dimension (L×W×H)	m	7.4x1.9x2.0			7.4x1.9x2.0			7.4x1.9x2.0		

Specification TE-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TE350A5								
		IE1000			IE1360			IE1700		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	45	50	55	50	55	60	55	60	65
Injection pressure	kg/㎠	2525	2045	1690	2472	2043	1716	2391	2017	1712
	Mpa	248	201	166	242	200	168	234	198	168
Injection holding pressure	kg/㎠	2273	1841	1521	2225	1839	1544	2152	1815	1541
	Mpa	223	180	149	218	180	151	211	178	151
Theoretical injection volume	㎤	398	491	594	530	641	763	713	848	995
Shot weight (PS)	g	362	447	541	482	583	694	649	772	905
Injection rate (Standard)	㎤/s	239	295	356	295	356	424	356	424	498
Injection rate (Option)	㎤/s	477	589	713	589	713	848	713	848	995
Screw stroke	mm	250			270			300		
Injection speed (Standard)	mm/s	150			150			150		
Injection speed (Option)	mm/s	300			300			300		
Plasticizing capacity	kg/h	158	213	273	142	182	233	163	210	259
Screw rotation speed	rpm	300			250			225		
Clamping Unit										
Clamping force	ton(kN)	350(3487)								
Distance between tie-bar (H×V)	mm	770x770								
Platen dimension (H×V)	mm	1160x1090								
Daylight	mm	700								
Max. Daylight	mm	1450								
Min. Mold height	mm	300								
Max. Mold height	mm	750								
Ejector force	ton(kN)	5.7(57)								
Ejector stroke	mm	210								
General										
Motor capacity (Standard)	kW	32.7			32.7			44.0		
Motor capacity (Option)	kW	65.4			65.4			88.0		
Heater capacity	kW	14.6	17.1	18.7	19.1	21.0	23.8	21.0	23.8	25.7
Total electric power capacity (Normal)	kW	47.3	49.8	51.4	51.8	53.7	56.5	65.0	67.8	69.7
Total electric power capacity (High)	kW	80.0	82.5	84.1	84.5	86.4	89.2	109.0	111.8	113.7
Machine weight	ton	16.8			17.3			17.8		
Machine dimension (L×W×H)	m	8.0x2.0x2.1			8.0x2.0x2.1			8.0x2.0x2.1		

Model		TE400A5								
		IE1360			IE1700			IE2800		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	50	55	60	55	60	65	65	70	80
Injection pressure	kg/㎠	2472	2043	1716	2391	2017	1712	2416	2083	1595
	Mpa	242	200	168	234	198	168	237	204	156
Injection holding pressure	kg/㎠	2225	1839	1544	2152	1815	1541	2174	1875	1436
	Mpa	218	180	151	211	178	151	213	184	141
Theoretical injection volume	㎤	530	641	763	713	848	995	1161	1347	1759
Shot weight (PS)	g	482	583	694	649	772	905	1057	1226	1601
Injection rate (Standard)	㎤/s	295	356	424	356	424	498	498	577	754
Injection rate (Option)	㎤/s	589	713	848	713	848	995			
Screw stroke	mm	270			300			350		
Injection speed (Standard)	mm/s	150			150			150		
Injection speed (Option)	mm/s	300			300					
Plasticizing capacity	kg/h	142	182	233	163	210	259	230	279	397
Screw rotation speed	rpm	250			225			200		
Clamping Unit										
Clamping force	ton(kN)	400(3986)								
Distance between tie-bar (H×V)	mm	820x820								
Platen dimension (H×V)	mm	1210x1140								
Daylight	mm	750								
Max. Daylight	mm	1550								
Min. Mold height	mm	350								
Max. Mold height	mm	800								
Ejector force	ton(kN)	5.7(57)								
Ejector stroke	mm	210								
General										
Motor capacity (Standard)	kW	32.7			44.0			65.4		
Motor capacity (Option)	kW	65.4			88.0					
Heater capacity	kW	19.1	21.0	23.8	21.0	23.8	25.7	18.4	20.6	24.1
Total electric power capacity (Normal)	kW	51.8	53.7	56.5	65.0	67.8	69.7	83.8	86.0	89.5
Total electric power capacity (High)	kW	84.5	86.4	89.2	109.0	111.8	113.7			
Machine weight	ton	21.5			22.0			22.5		
Machine dimension (L×W×H)	m	8.3x2.1x2.2			8.3x2.1x2.2			8.3x2.1x2.2		

Specification TE-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

Model		TE450A5								
		IE1700			IE2800			IE4000		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	55	60	65	65	70	80	70	80	90
Injection pressure	kg/㎠	2391	2017	1712	2416	2083	1595	2657	2034	1607
	Mpa	234	198	168	237	204	156	261	199	158
Injection holding pressure	kg/㎠	2152	1815	1541	2174	1875	1436	2391	1831	1446
	Mpa	211	178	151	213	184	141	235	180	142
Theoretical injection volume	㎤	713	848	995	1161	1347	1759	1539	2011	2316
Shot weight (PS)	g	649	772	905	1057	1226	1601	1400	1830	2108
Injection rate (Standard)	㎤/s	356	424	498	498	577	754	577	754	954
Injection rate (Option)	㎤/s	713	848	995						
Screw stroke	mm	300			350			400		
Injection speed (Standard)	mm/s	150			150			150		
Injection speed (Option)	mm/s	300								
Plasticizing capacity	kg/h	163	210	259	230	279	397	244	347	458
Screw rotation speed	rpm	225			200			175		
Clamping Unit										
Clamping force	ton(kN)	450(4484)								
Distance between tie-bar (H×V)	mm	870x870								
Platen dimension (H×V)	mm	1270x1190								
Daylight	mm	800								
Max. Daylight	mm	1600								
Min. Mold height	mm	350								
Max. Mold height	mm	800								
Ejector force	ton(kN)	10(100)								
Ejector stroke	mm	220								
General										
Motor capacity (Standard)	kW	44.0			65.4			88.0		
Motor capacity (Option)	kW	88.0								
Heater capacity	kW	21.0	23.8	25.7	18.4	20.6	24.1	23.0	26.7	30.7
Total electric power capacity (Normal)	kW	65.0	67.8	69.7	83.8	86.0	89.5	111.0	114.7	118.7
Total electric power capacity (High)	kW	109.0	111.8	113.7						
Machine weight	ton	26.2			26.7			27.2		
Machine dimension (L×W×H)	m	8.9x2.2x2.2			8.9x2.2x2.2			8.9x2.2x2.2		

Model		TE550A5								
		IE2800			IE4000			IE5700		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	65	70	80	70	80	90	80	90	105
Injection pressure	kg/㎠	2416	2083	1595	2657	2034	1607	2543	2009	1476
	Mpa	237	204	156	261	199	158	249	197	145
Injection holding pressure	kg/㎠	2174	1875	1436	2391	1831	1446	2289	1808	1328
	Mpa	213	184	141	235	180	142	224	177	130
Theoretical injection volume	㎤	1161	1347	1759	1539	2011	2316	2262	2863	3897
Shot weight (PS)	g	1057	1226	1601	1400	1830	2108	2058	2605	3546
Injection rate (Standard)	㎤/s	498	577	754	577	754	954	754	954	1299
Injection rate (Option)	㎤/s									
Screw stroke	mm	350			400			450		
Injection speed (Standard)	mm/s	150			150			150		
Injection speed (Option)	mm/s									
Plasticizing capacity	kg/h	230	279	397	244	347	458	298	408	618
Screw rotation speed	rpm	200			175			150		
Clamping Unit										
Clamping force	ton(kN)	550(5480)								
Distance between tie-bar (H×V)	mm	980x980								
Platen dimension (H×V)	mm	1435x1365								
Daylight	mm	900								
Max. Daylight	mm	1850								
Min. Mold height	mm	400								
Max. Mold height	mm	950								
Ejector force	ton(kN)	14.6(145)								
Ejector stroke	mm	220								
General										
Motor capacity (Standard)	kW	65.4			88.0			110.0		
Motor capacity (Option)	kW									
Heater capacity	kW	18.4	20.6	24.1	23.0	26.7	30.7	29.4	33.6	39.3
Total electric power capacity (Normal)	kW	83.8	86.0	89.5	111.0	114.7	118.7	139.4	143.6	149.3
Total electric power capacity (High)	kW									
Machine weight	ton	35.7			36.2			36.7		
Machine dimension (L×W×H)	m	9.4x2.6x2.2			9.4x2.6x2.2			9.4x2.6x2.2		

Specification TE-A5

01. Theoretical injection volume: cross section of screw*screw stroke.
02. The minimum mold size must be at least 70% of the maximum mold size.
03. The specifications might be changed without any prior notice
04. The metering distance is recommended in the range of 1 to 3 times of screw diameter.

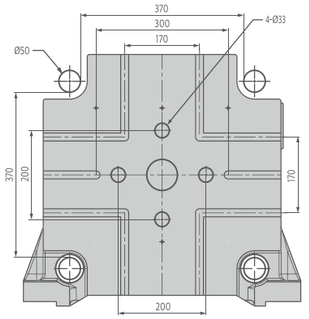
Model		TE650A5							
		IE4000			IE5700			IE8000	
Injection Unit									
Screw & Barrel type		O	A	B	O	A	B	O	A
Screw diameter	mm	70	80	90	80	90	105	95	105
Injection pressure	kg/㎠	2657	2034	1607	2543	2009	1476	2118	1734
	Mpa	261	199	158	249	197	145	208	170
Injection holding pressure	kg/㎠	2391	1831	1446	2289	1808	1328	1906	1561
	Mpa	235	180	142	224	177	130	187	153
Theoretical injection volume	㎤	1539	2011	2316	2262	2863	3897	3509	4286
Shot weight (PS)	g	1400	1830	2108	2058	2605	3546	3193	3900
Injection rate (Standard)	㎤/s	577	754	954	754	954	1299	1063	1299
Injection rate (Option)	㎤/s								
Screw stroke	mm	400			450			495	
Injection speed (Standard)	mm/s	150			150			150	
Injection speed (Option)	mm/s								
Plasticizing capacity	kg/h	244	347	458	298	408	618	393	515
Screw rotation speed	rpm	175			150			125	
Clamping Unit									
Clamping force	ton(kN)	650(6477)							
Distance between tie-bar (H×V)	mm	1080x1080							
Platen dimension (H×V)	mm	1550x1480							
Daylight	mm	1000							
Max. Daylight	mm	2100							
Min. Mold height	mm	450							
Max. Mold height	mm	1100							
Ejector force	ton(kN)	14.6(145)							
Ejector stroke	mm	230							
General									
Motor capacity (Standard)	kW	88.0			110.0			125.6	
Motor capacity (Option)	kW								
Heater capacity	kW	23.0	26.7	30.7	29.4	33.6	39.3	52.7	55.9
Total electric power capacity (Normal)	kW	111.0	114.7	118.7	139.4	143.6	149.3	178.3	181.50
Total electric power capacity (High)	kW								
Machine weight	ton	44			44.5			45	
Machine dimension (L×W×H)	m	9.9x2.5x2.4			9.9x2.5x2.4			9.9x2.5x2.4	

Model		TE850A5				
		IE5700			IE8000	
Injection Unit						
Screw & Barrel type		O	A	B	O	A
Screw diameter	mm	80	90	105	95	105
Injection pressure	kg/㎠	2543	2009	1476	2118	1734
	Mpa	249	197	145	208	170
Injection holding pressure	kg/㎠	2289	1808	1328	1906	1561
	Mpa	224	177	130	187	153
Theoretical injection volume	㎤	2262	2863	3897	3509	4286
Shot weight (PS)	g	2058	2605	3546	3193	3900
Injection rate (Standard)	㎤/s	754	954	1299	1063	1299
Injection rate (Option)	㎤/s					
Screw stroke	mm	450			495	
Injection speed (Standard)	mm/s	150			150	
Injection speed (Option)	mm/s					
Plasticizing capacity	kg/h	298	408	618	393	515
Screw rotation speed	rpm	150			125	
Clamping Unit						
Clamping force	ton(kN)	850(8469)				
Distance between tie-bar (H×V)	mm	1180x1180				
Platen dimension (H×V)	mm	1710x1650				
Daylight	mm	1200				
Max. Daylight	mm	2400				
Min. Mold height	mm	500				
Max. Mold height	mm	1200				
Ejector force	ton(kN)	20(199)				
Ejector stroke	mm	230				
General						
Motor capacity (Standard)	kW	110.0			125.6	
Motor capacity (Option)	kW					
Heater capacity	kW	29.4	33.6	39.3	52.7	55.9
Total electric power capacity (Normal)	kW	139.4	143.6	149.3	178.3	181.50
Total electric power capacity (High)	kW					
Machine weight	ton	64.5			65	
Machine dimension (L×W×H)	m	11.5x2.7x2.5			11.5x2.7x2.5	

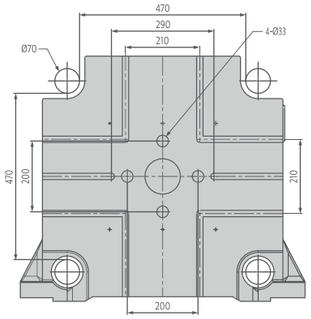
Platen Dimension TE-A5

Unit: mm

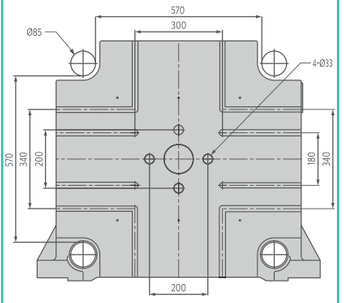
TE50A5



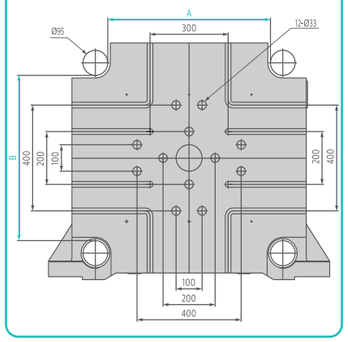
TE110A5



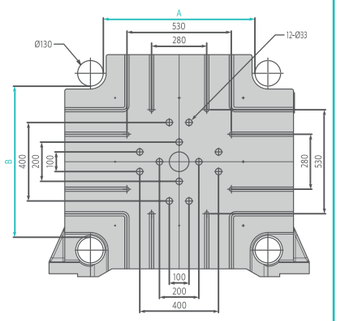
TE170A5



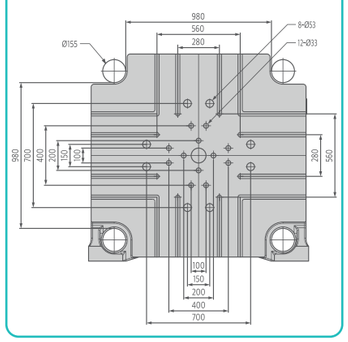
TE220A5 (A: 625 / B: 625)
TE280A5 (A: 670 / B: 670)
TE280WA5 (A: 720 / B: 720)



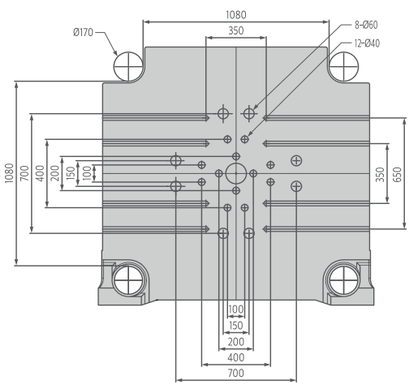
TE350A5 (A: 770 / B: 770)
TE400A5 (A: 820 / B: 820)
TE450A5 (A: 870 / B: 870)



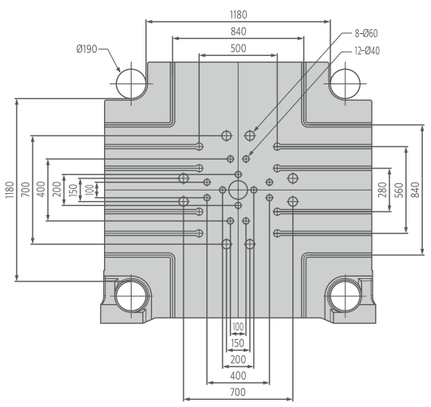
TE550A5



TE650A5

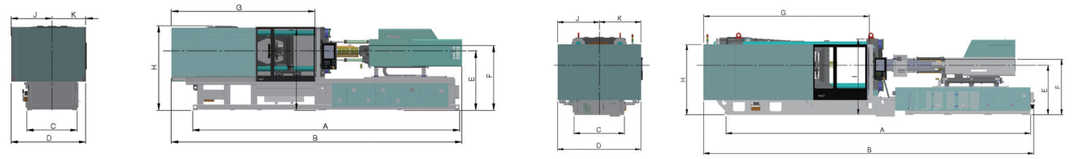


TE850A5



* The images and specifications might be changed without any prior notice.

Machine Dimension TE-A5

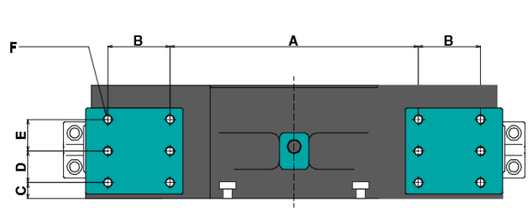


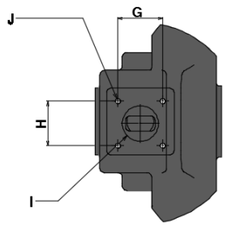
Unit: mm

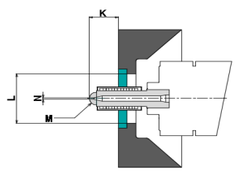
Machine Dimension (50~400ton)	A	B	C	D	E	F	G	H	I	J	K
TE50A5	3855	4105	780	1136	1100	1190	1806	1454	1385	568	568
TE110A5	4270	4846	950	1237	1170	1270	2209	1962	1530	592	645
TE170A5	4965	5687	1100	1586	1240	1355	2549	1914	1680	870	716
TE220A5	5400	6157	1180	1634	1319	1434	2913	1915	1799	907	727
TE280A5	5635	6830	1240	1817	1372	1502	3144	1922	1887	1010	807
TE280WA5	6410	7308	1240	1841	1397	1527	3288	1972	1942	1013	828
TE350A5	6735	7995	1410	1926	1465	1605	3610	2100	2065	1047	879
TE400A5	7050	8293	1460	2008	1490	1630	3801	2155	2115	1053	955

Unit: mm

Machine Dimension (450~850ton)	A	B	C	D	E	F	G	H	I	J	K
TE450A5	8165	8873	1410	2160	1505	1645	4061	2200	2145	1090	970
TE550A5	8515	9343	1473	2512	1405	1560	4521	2173	2132	1234	1278
TE650A5	9100	9886	1500	2494	1480	1660	4871	2320	2270	1247	1247
TE850A5	10350	11476	1660	2684	1460	1695	5575	2450	2325	1342	1342







Unit: mm

	Robot installation position dimension						Hopper installation position dimension				Nozzle dimension			
	A	B	C	D	E	F	G	H	I	J	K	Ø L	M	Ø N
TE50A5	340	85	30	75	x	8-M16 TAP DP32	80	80	Ø70	4-M8 TAP	30	Ø100	R9	Ø2.5
TE110A5	455	85	35	70	x	8-M16 TAP DP32	100	100	Ø80	4-M12 TAP	50	Ø100	R9	Ø2.5
TE170A5	420	140	35	70	70	12-M20 TAP DP40	100	100	Ø80	4-M12 TAP	50	Ø100	R9	Ø3
TE220A5	560	140	35	70	70	12-M20 TAP DP40	100	100	Ø80	4-M12 TAP	50	Ø100	R9	Ø3
TE280A5	560	140	35	140	x	8-M20 TAP DP40	120	120	Ø100	4-M12 TAP	50	Ø100	R14	Ø3.5
TE280WA5	700	140	35	140	x	8-M20 TAP DP40	120	120	Ø100	4-M12 TAP	50	Ø100	R14	Ø3.5
TE350A5	760	150	40	150	x	8-M20 TAP DP40	120	120	Ø120	4-M12 TAP	50	Ø100	R14	Ø3.5
TE400A5	850	100	50	60	60	12-M24 TAP DP40	120	120	Ø120	4-M12 TAP	50	Ø100	R14	Ø3.5
TE450A5	980	100	45	60	60	12-M24 TAP DP40	165	165	Ø120	4-M12 TAP	130	Ø100	R19	Ø4
TE550A5	915	100	50	60	60	12-M24 TAP DP48	165	165	Ø120	4-M12 TAP	130	Ø100	R19	Ø5
TE650A5	1000	240	70	105	105	12-M24 TAP DP48	165	165	Ø88	4-M12 TAP	130	Ø100	R19	Ø5
TE850A5	1120	240	70	105	105	12-M24 TAP DP48	165	165	Ø103	4-M12 TAP	130	Ø100	R19	Ø6

* The images and specifications might be changed without any prior notice.

TL-A5

Premium tie-bar less IMM (220~400 ton)

TL-A5 is a premium tie-bar less IMM that offers freedom of mold and core pool size selection, freedom of multi-cavity use, freedom of automation system advancement, and freedom from spatial fabrication.

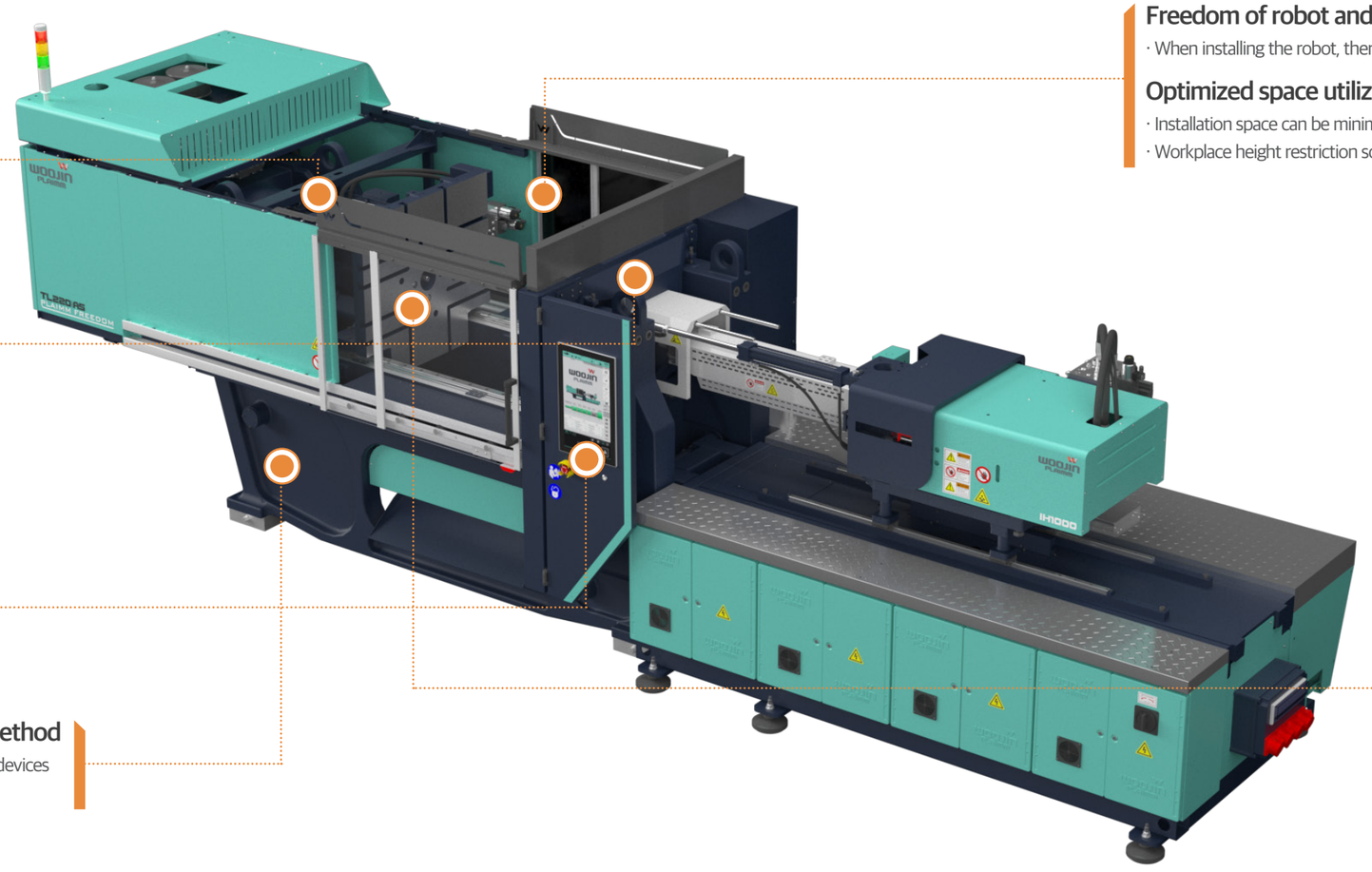
YouTube

Design for Mold Protection
· Centrally distributed clamping force protects the mold by minimizing platen bending

Two-stage reinforcement structure
· When increasing pressure, the middle and upper parts of the fixed plate are supported through the frame structure.
· Supports the middle and lower parts of the fixed plate through Woojin Plaimm's proprietary 'Flex Plate' technology

Controller (IMC 510)
· B&R(Austria)
· 21 inch Touch Screen TFT color
· Resolution : 786 x 1024
· Real-time energy consumption monitoring (Option)
· CMS installation (Option)

Elegant frame design based on casting method
· 'Unrivaled' cast-based frame in the history of tie-bar less devices
· Efficient design through finite element analysis



Freedom of robot and core positioning
· When installing the robot, there is no need to jump over the tie bar.

Optimized space utilization
· Installation space can be minimized
· Workplace height restriction solution

Larger mold installation area
· Large mold plate area advantageous for turntable, automation equipment, multi-stage injection, and multi-cavity installation
· Contributes to ejecting good products and extending mold life through uniform mold surface pressure

Perfect alignment
· Stress distribution rail system
· Self-developed reinforcement system

High-quality implementation with top-of-the-line performance brand components


Controller


Servo Motor


KEB


Proportional Valve


Hydraulic Motor


Pressure Sensor


Tube Heat Exchanger


Oil Filter

Clamping Unit

01. Optimization of mold installation space

· Since there is no tie bar, the entire “plate area” can be used as a “mold installation space”
· Flexible response to multi-cavity and turntable options
· Space utilization increases by approximately 30% compared to tie bar-based machines
· Product size increase effect due to increase in attachable mold size

02. Reduce cycle time

· Take-out robot and peripheral devices can enter the mold directly
· Dramatically shortens the cycle time previously consumed by going over the tie bar.
· Can be installed and operated in workplaces with low floor height

03. Center press integrated mold plate structure

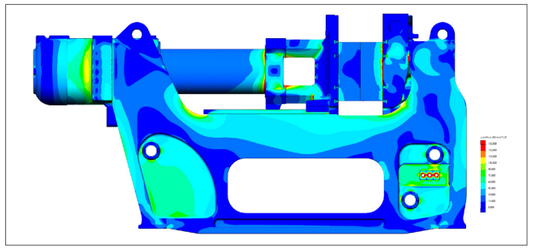
· Center press integrated mold plate designed to ensure uniform transfer of clamping force to the mold plate
· Evenly transmits pressure within the mold to prevent damage to the mold plate due to pressure and extend the life of the mold
· Prevent flash of molded products by maintaining uniform surface pressure stress inside the mold

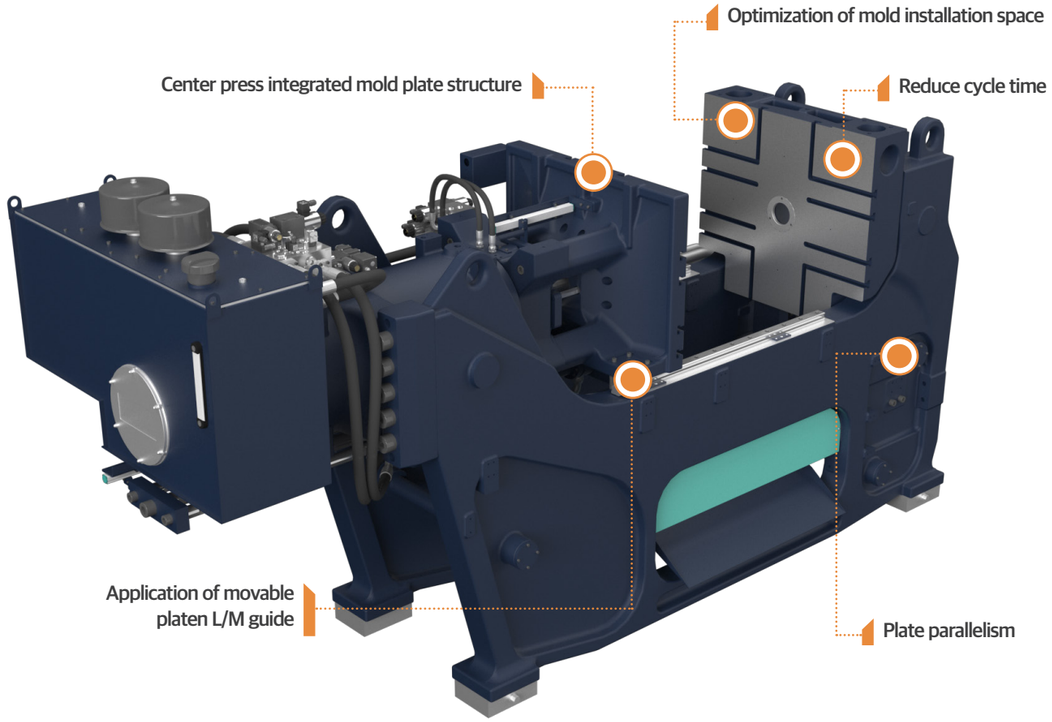
04. Plate parallelism

· Use of “Flex-Plate”, a 2nd stage (Double stage) plate parallelism maintenance technique
· Maintain ideal plate parallelism in any environment and conditions (EM.09 Satisfies less than half of the suggested value)
· Developed & patented at Woojin Plaim headquarters and Austrian corporation

05. Application of movable platen L/M guide

· Improved parallelism between fixed and movable platens by processing the LM guide reference surface
· Clean with less grease than existing roller types
· Improved precision when driving the shape by applying a high-load LM guide
· Increased durability extends the lifespan of parts and saves energy by reducing friction





Injection Unit

01. High-rigidity bi-axial injection device

· With two axis injection rod, based on high rigidity(SCM440 + Q/T) the high injection pressure is stably delivered

02. High-performance plasticization

· 10% more plasticizing capacity than previous models and precision temperature control with PID synchronized heating control

03. Pipe-less injection cylinder

· Improved responsiveness by internally embedding hydraulic lines

04. Dual pull nozzle touch cylinder

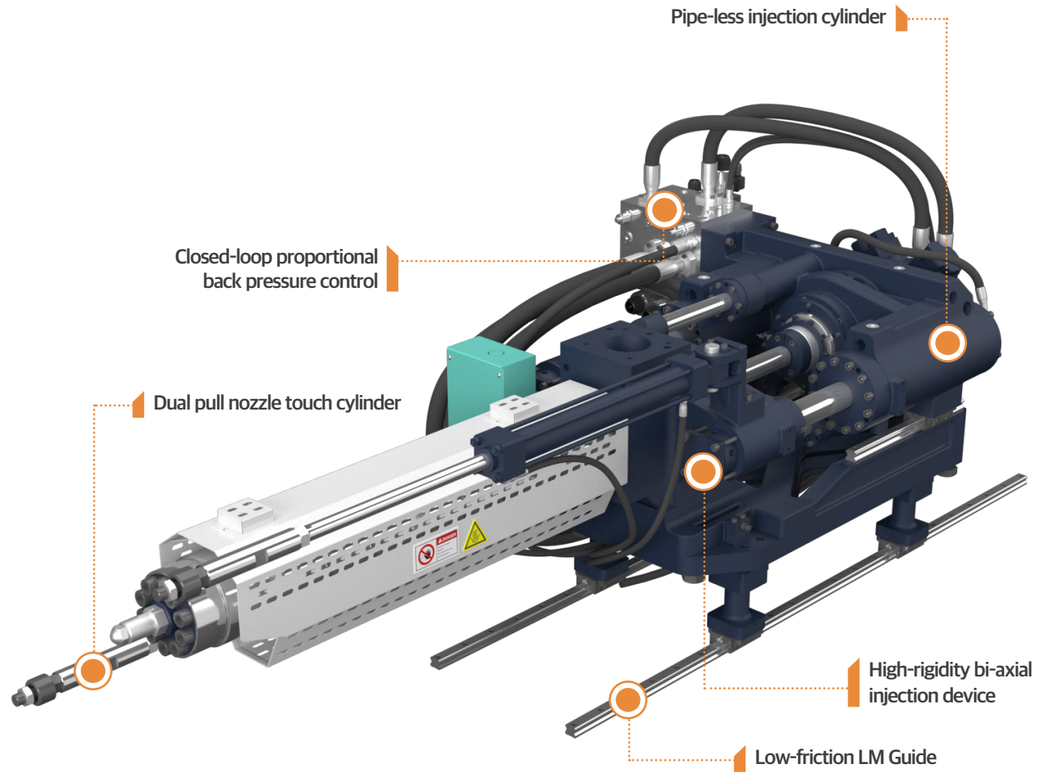
· Stability when the nozzle touches platen

05. Low-friction LM Guide

· Keeping parallelism and reducing friction by adopting injection bed and injection part L/M guide

06. Closed-loop proportional back pressure control

· Maintaining stable value by accurately detecting and comparing the pressure set by the user



Hydraulic Unit

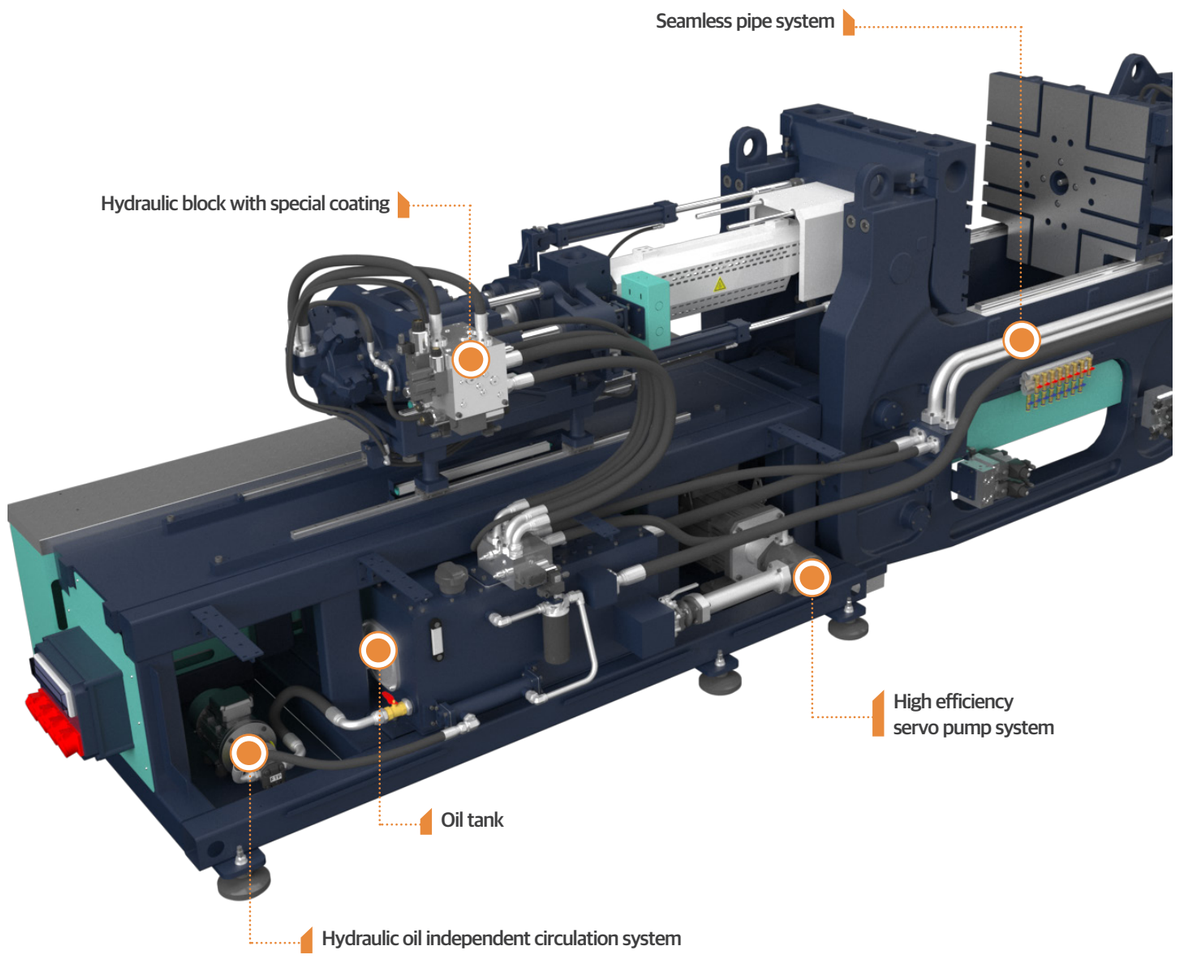
01. Hydraulic block with special coating
· Anti-corrosion and cleanliness with nickel coating inside and outside the block

02. Seamless pipe system
· Durable seamless pipe is long-lasting, easy to maintain

03. Hydraulic oil independent circulation system
· Stable and high reproducibility due to constant flow of hydarulic oil, and extends oil life by 3 times due to increased filtering and cooling capability

04. High efficiency servo pump system
· Application of high efficiency pumps and motors reduces energy and hydraulic oil consumption

05. Oil tank
· Special painting inside the tank prevents oil vapor and rust and stays clean



Specification TL-A5

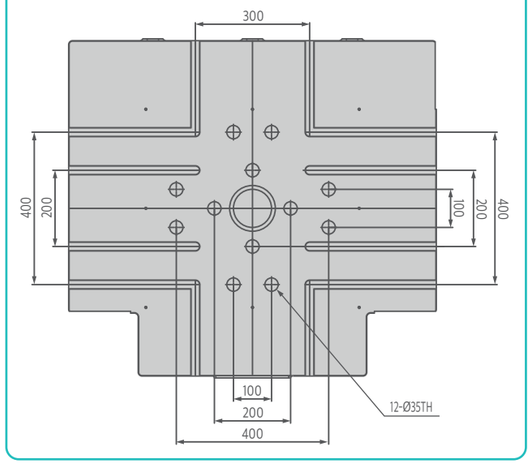
Model		TL220A5			TL300A5			TL400A5		
		IH1000			IH1800			IH2800		
Injection Unit										
Screw & Barrel type		O	A	B	O	A	B	O	A	B
Screw diameter	mm	45	50	55	55	60	65	65	70	80
Injection pressure	kg/㎠	2600	2258	1866	2494	2257	2008	2375	2048	1568
	Mpa	255	221	183	245	221	197	233	201	154
Teheoretical injection volume	㎤	366	452	546	677	806	946	1161	1347	1759
Shot weight(PS)	g	337	416	504	624	743	871	1070	1241	1621
Injection rate	㎤/s	175	217	262	249	296	347	313	363	474
Screw stroke	mm	230			285			350		
Injection speed	mm/s	110			105			94		
Plasticizing capacity(PS)	kg/h	110	148	189	160	205	253	201	244	347
Screw rotation speed	rpm	260			220			175		
Clamping Unit										
Clamping force	ton(kN)	220(2157)			300(2941)			400(3922)		
Platen dimension(H×V)	mm	960 x 880			1120 x 1000			1250 x 1100		
Daylight	mm	800			900			1000		
Max. mold height	mm	1100			1300			1450		
Min. mold height	mm	300			400			450		
Ejector force	ton(kN)	7.6(74.5)			9.1(89.2)			11.3(110.8)		
Ejector stroke	mm	180			200			250		
General										
Heater capacity	kw	14.6	17.1	18.7	21.0	23.8	25.7	18.4	20.6	24.1
Motor capacity	kw	30.0			55.0			55.0		
Total electric power capacity	kw	44.6	47.1	48.7	76.0	78.8	80.7	73.4	75.6	79.1
Main hydraulic oil tank capacity	L	370			480			525		
Sub. hydraulic oil tank capacity	L	225			380			440		
Total hydraulic oil tank capacity	L	595			860			965		
Machine weight (Clamping + Injection)	ton	14			19.5			25.5		
Machine dimension(L*W*H)	m	7.0 x 1.8 x 2.2			7.5 x 2.1 x 2.2			8.6 x 2.3 x 2.4		
Cooling water consumption	l/min	40			65			65		

* The hydraulic oil capacity of the auxiliary tank changes depending on the position of the booster cylinder, so refueling must take the position of the booster cylinder into consideration.

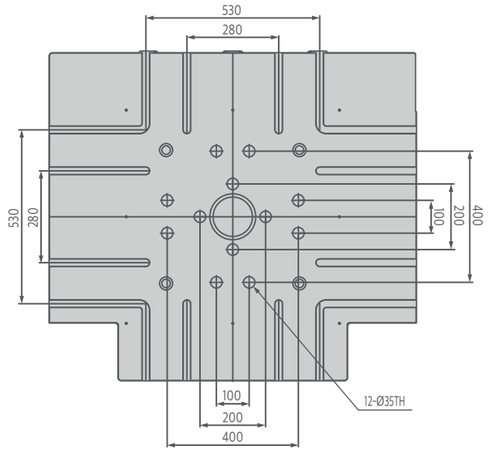
Platen Dimension TL-A5

Unit: mm

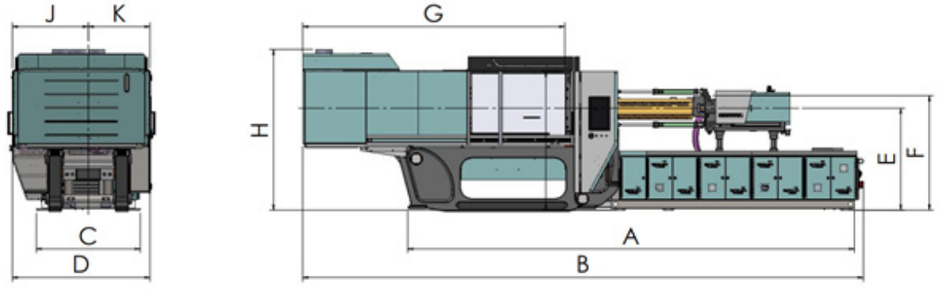
TL200A5



TL300A5 TL400A5

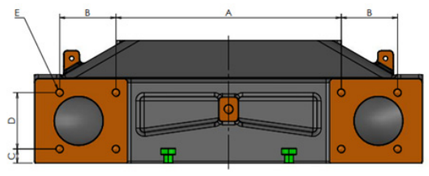


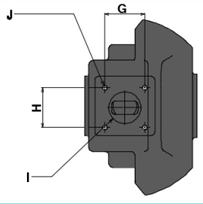
Machine Dimension TL-A5

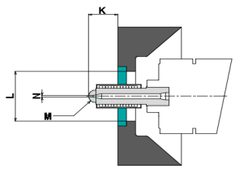


Machine Dimension

Unit: mm	A	B	C	D	E	F	G	H	I	J	K
TL220A5	5710	7093	1450	1730	1349	1530	3271	2063.5	1794	962	768
TL300A5	6230	7823	1450	1923	1425	1600	3658	2246	1940	1060	863
TL400A5	6900	8560	1450	2167	1440	1630	4113	2250	1995	1212	955







	Robot installation position dimension					Hopper installation position dimension				Nozzle dimension			
Unit: mm	A	B	C	D	E	F	G	ØH	I	J	ØK	L	ØN
TL220A5	560	140	35	140	8-M20 TAP DP40	120	120	100	4-M12TAP	50	100	R14	3.5
TL300A5	700	140	35	140	8-M20 TAP DP40	127	127	115	4-M12TAP	50	100	R14	3.5
TL400A5	840	140	45	140	8-M24 TAP DP48	127	127	115	4-M12TAP	120	100	R19	4

* The images and specifications might be changed without any prior notice.

Option List DL-A5 (ver.2)

* This page is provided for customer's better understanding.
* Automatic swiveling function may not be applicable when not using standard injection unit.

Standard

Injection Unit	Clamping Unit	General
01. Automatic Injection unit swiveling (Below IH 11900)	01. Safety Foot-board (Above 900ton)	01. Standard Maintenance tools
02. Single Flight Screw	02. Automatic safety Door open/close (Above 500ton)	02. Standard spare part
03. Injection valve gate circuit (AC 1 + DC 1)	03. Clamping area Curtain sensor	03. Leveling pad
04. Back-Pressure Closed-loop system	04. Hydraulic Core puller (Moving platen side, 1 stage)	04. Cooling water distributor
05. PID Heating Control	05. Air blow-off unit (Fixed side 1 + Moving side 1)	05. Automatic grease lubrication (Clamping)
06. Weekly Heating Timer	06. Safety device(for electric & hydraulic)	06. Robot interface (Standard)
07. Cold screw start protection mode	07. Spring mold mode	07. 3 Phase electric outlet (2 ea)
08. Temperature display & Alarm in abnormal Temp.	08. Automatic Mold thickness adjust mode	08. Single Phase electric outlet (1 ea)
09. Auto Purging	09. Mold-Open Speed & Pressure step (5 step)	09. Steel tray for resin leakage
10. Injection Speed & Pressure step (10 step)	10. Ejector Speed & Pressure step (3 step)	10. Hopper throat temperature control device
11. Holding Speed & Pressure step (5 step)		11. Hydraulic oil purification device
12. Charging Speed & Pressure step (3 step)		12. Hydraulic oil temperature control deivce
13. Back Pressure control step (3 step)		13. Hydraulic oil level alarm
14. Injection Pressure Graph Display		14. Hydraulic oil temperature check & alarm
15. Injection Speed Graph Display		15. Hydraulic oil heating mode
16. Screw RPM Display		16. 3 color alarm light
17. Cushion Display & Alarm		17. Shot data saving by external way
18. Charging time count & alarm		18. Production data statistics
19. Screw & Barrel (Anti Wear)		19. Alarming & History save
		20. Log history save
		21. I/O circuit display
		22. Shot data save (Internal 1,000 / External device)

Option

Injection Unit	Clamping Unit	General
01. Heater Disconnection check device	01. Rotating Core Circuit	01. Hydraulic Auto-Clamp unit
02. Hopper Slide (L/M)	02. Safety Foot-board (Below 700ton)	02. Anchor-bolt set (Clamping unit)
03. Hopper Ladder & Stand	03. Core & Ejector on Fly	03. Heater Insulation Band
04. Screw & Barrel (Nitrided barrel)	04. Daylight Extension	04. Automatic Grease Lubrication (Injection unit)
05. Screw & Barrel (Anti Wear & Corrosive)	05. Core-Back Mode	05. Robot Interface (EM12, EM 67, EM67.1, SPI)
06. Valve Gate Circuit & Connector (Interior type)	06. Core Pressure release Circuit (Automatic)	06. CMS (Central Monitoring System)
07. Hydraulic Valve Gate Block (Interior type)	07. Core Pressure release Circuit (Manual)	07. AVR (Automatic Voltage Regulator) on Electric Panel
08. Pneumatic Valve Gate Block (Interior type)	08. Product Chute	08. UPS (Uninterrentable Power Supply) on Electric Panel
09. Hydraulic Valve Gate Device (External device)	09. Automatic Tie-bar Retraction	09. Dosing unit Interface (for Masterbatch)
10. Nozzle cylinders equipped with Potentiometers	10. Hydraulic Core Check Valve	10. Gas Injection Interface
11. Charging on Fly (Pump type)	11. Hydraulic Core Interlock Connector (EM13, WJ Standard)	11. Steam Injection Interface
12. Charging on Fly (AC Motor)	12. Hydraulic Core Puller (2~8 Stages)	12. External Temperature Display (F/P)
13. Shut-off Nozzle (Pneumatic, Hydraulic, Spring)	13. Mold ring on Moving-Platen	13. Interior type Hot Runner Controller (EM13, WJ Standard)
14. Customized Design Screw (SB, Mixing, Coating)	14. Spring type Ejector retraction	
	15. Ejector Check Valve	
	16. Ejector Interlock Connector (WJ Standard, EM13)	
	17. Ejector Forward / Backward External switch	
	18. Mold Insulation Plate	
	19. Pneumatic Core Puller (1~7 Stages)	

Option List DL-A5 (ver.1)

* This page is provided for customer's better understanding.
* Automatic swiveling function may not be applicable when not using standard injection unit.

Injection Unit	Clamping Unit	General
Standard		
01. Automatic Injection unit swiveling (Below IH 11900)	01. Safety Foot-board (Above 1050ton)	01. Standard Maintenance tools
02. Single Flight Screw	02. Automatic safety Door open/close (Above 450ton)	02. Standard spare part
03. Injection valve gate circuit (AC 1 + DC 1)	03. Clamping area Curtain sensor (Above 550ton)	03. Leveling pad
04. Back-Pressure Closed-loop system	04. Hydraulic Core puller (Moving platen side, 1 stage)	04. Cooling water distributor
05. PID Heating Control	05. Air blow-off unit (Fixed side 1 + Moving side 1)	05. Automatic grease lubrication (Clamping)
06. Weekly Heating Timer	06. Safety device(for electric & hydraulic)	06. Robot interface (Standard)
07. Cold screw start protection mode	07. Spring mold mode	07. 3 Phase electric outlet (2 ea)
08. Temperature display & Alarm in abnormal Temp.	08. Automatic Mold thickness adjust mode	08. Single Phase electric outlet (1 ea)
09. Auto Purging	09. Mold-Open Speed & Pressure step (5 step)	09. Steel tray for resin leakage
10. Injection Speed & Pressure step (10 step)	10. Ejector Speed & Pressure step (3 step)	10. Hopper throat temperature control device
11. Holding Speed & Pressure step (5 step)		11. Hydraulic oil purification device
12. Charging Speed & Pressure step (3 step)		12. Hydraulic oil temperature control deivce
13. Back Pressure control step (3 step)		13. Hydraulic oil level alarm
14. Injection Pressure Graph Display		14. Hydraulic oil temperature check & alarm
15. Injection Speed Graph Display		15. Hydraulic oil heating mode
16. Screw RPM Display		16. 3 color alarm light
17. Cushion Display & Alarm		17. Shot data saving by external way
18. Charging time count & alarm		18. Production data statistics
19. Screw & Barrel (Anti Wear)		19. Alarming & History save
		20. Log history save
		21. I/O circuit display
		22. Shot data save (Internal 1,000 / External device)
Option		
01. Heater Disconnection check device	01. Rotating Core Circuit	01. Hydraulic Auto-Clamp unit
02. Hopper Slide (L/M)	02. Safety Foot-board (Below 850ton)	02. Anchor-bolt set (Clamping unit)
03. Hopper Ladder & Stand	03. Core & Ejector on Fly	03. Heater Insulation Band
04. Screw & Barrel (Nitrided barrel)	04. Daylight Extension	04. Automatic Grease Lubrication (Injection unit)
05. Screw & Barrel (Anti Wear & Corrosive)	05. Core-Back Mode	05. Robot Interface (EM12, EM 67, EM67.1, SPI)
06. Valve Gate Circuit & Connector (Interior type)	06. Core Pressure release Circuit (Automatic)	06. CMS (Central Monitoring System)
07. Hydraulic Valve Gate Block (Interior type)	07. Core Pressure release Circuit (Manual)	07. AVR (Automatic Voltage Regulator) on Electric Panel
08. Pneumatic Valve Gate Block (Interior type)	08. Product Chute	08. UPS (Uninterrentable Power Supply) on Electric Panel
09. Hydraulic Valve Gate Device (External device)	09. Hydraulic Core Check Valve	09. Dosing unit Interface (for Masterbatch)
10. Nozzle cylinders equipped with Potentiometers	10. Hydraulic Core Interlock Connector (EM13, WJ Standard)	10. Gas Injection Interface
11. Charging on Fly (Pump type)	11. Hydraulic Core Puller (2~8 Stages)	11. Steam Injection Interface
12. Charging on Fly (AC Motor)	12. Mold ring on Moving-Platen	12. External Temperature Display (F/P)
13. Shut-off Nozzle (Pneumatic, Hydraulic, Spring)	13. Spring type Ejector retraction	13. Interior type Hot Runner Controller (EM13, WJ Standard)
14. Customized Design Screw (SB, Mixing, Coating)	14. Ejector Check Valve	
	15. Ejector Interlock Connector (WJ Standard, EM13)	
	16. Ejector Forward / Backward External switch	
	17. Mold Insulation Platen	
	18. Pneumatic Core Puller (1-7 Stages)	

Option List TH-A5

* This page is provided for customer's better understanding.

Injection Unit	Clamping Unit	General
Standard		
01. Single Flight Screw	01. Mold thickness adjusting break unit	01. Standard Maintenance tools
02. Injection valve gate circuit (AC 1 + DC 1)	02. Hydraulic Core puller (Moving platen side, 1 stage)	02. Standard spare part
03. Back-Pressure Closed-loop system	03. Air blow-off unit (Fixed side 1 + Moving side 1)	03. Leveling pad
04. PID Heating Control	04. Safety device(for electric & hydraulic)	04. Cooling water distributor
05. Weekly Heating Timer	05. Automatic Mold thickness adjust mode	05. Automatic oil lubrication (Toggle)
06. Cold screw start protection mode	06. Mold-Open Speed & Pressure step (4 step)	06. Robot interface (Standard)
07. Temperature display & Alarm in abnormal Temp.	07. Mold-Close Speed & Pressure step (5 step)	07. 3 Phase electric outlet (2 ea)
08. Auto Purging	08. Ejector Speed & Pressure step (2 step)	08. Single Phase electric outlet (1 ea)
09. Injection Speed & Pressure step (10 step)		09. Hopper throat temperature control device
10. Holding Speed & Pressure step (5 step)		10. Hydraulic oil purification device
11. Charging Speed & Pressure step (3 step)		11. Hydraulic oil temperature control deivce
12. Back Pressure control step (3 step)		12. Hydraulic oil level alarm
13. Injection Pressure Graph Display		13. Hydraulic oil temperature check & alarm
14. Injection Speed Graph Display		14. Hydraulic oil heating mode
15. Screw RPM Display		15. 3 color alarm light
16. Cushion Display & Alarm		16. Shot data saving by external way
17. Charging time count & alarm		17. Production data statistics
18. Screw & Barrel (Anti Wear)		18. Alarming & History save
		19. Log history save
		20. I/O circuit display
		21. Shot data save (Internal 1,000 / External device)
Option		
01. Heater Disconnection check device	01. Rotating Core Circuit	01. Lubricating oil Recycling device
02. Hopper Slide (L/M)	02. Core & Ejector on Fly	02. Product drop check device
03. Screw & Barrel (Nitrided barrel)	03. Daylight Extension	03. Product quality sorting device (Below 280ton)
04. Screw & Barrel (Anti Wear & Corrosive)	04. Automatic safety Door open/close	04. Hydraulic Auto-Clamp unit
05. Fast Injection Circuit (ACC)	05. Core Pressure release Circuit (Automatic)	05. Steel tray for resin leakage
06. Valve Gate Circuit & Connector (Interior type)	06. Product Chute	06. Heater Insulation Band
07. Hydraulic Valve Gate Block (Interior type)	07. Hydraulic Core Check Valve	07. Automatic Grease Lubrication (Clamping unit)
08. Pneumatic Valve Gate Block (Interior type)	08. Hydraulic Core Interlock Connector (EM13, WJ Standard)	08. Robot Interface (EM12, EM67, EM67.1, SPI)
09. Hydraulic Valve Gate Device (External device)	09. Hydraulic Core Puller (Fixed, 1~4 Stages)	09. CMS (Central Monitoring System)
10. Charging on Fly (AC Motor)	10. Hydraulic Core Puller (Moving 2~4 Stages)	10. AVR (Automatic Voltage Regulator) on Electric Panel
11. Shut-off Nozzle (Hydraulic)	11. Mold ring on Moving-Platen	11. UPS (Uninterrentable Power Supply) on Electric Panel
12. Customized Design Screw (SB, Mixing, Coating)	12. Ejector Check Valve	12. Dosing unit Interface (for Masterbatch)
	13. Ejector Interlock Connector (WJ Standard, EM13)	13. Gas Injection Interface
	14. Ejector Forward/Backward External switch	14. Steam Injection Interface
	15. Mold Insulation Platen	15. External Temperature Display (F/P)
	16. Pneumatic Core Puller (1-3 Stages)	16. Interior type Hot Runner Controller (EM13, WJ Standard)

Option List TE-A5

* This page is provided for customer's better understanding.

Standard

Injection Unit	Clamping Unit	General
01. Single Flight Screw	01. Ejecting on fly	01. Standard Maintenance tools
02. Injection valve gate circuit (AC 1 + DC 1)	02. Air blow-off unit (Fixed side 1 + Moving side 1)	02. Standard spare part
03. Back-Pressure Closed-loop system	03. Safety device(for electric & hydraulic)	03. Leveling pad
04. PID Heating Control	04. Automatic clamp force measurement mode	04. Cooling water distribution
05. Weekly Heating Timer	05. Automatic Mold thickness adjust mode	05. Automatic Ball-screw grease lubrication (All parts)
06. Cold screw protection mode	06. Mold-Open Speed & Pressure step (5 step)	06. Automatic oil lubrication (Toggle)
07. Temperature display & Alarm in abnormal Temp.	07. Mold-Close Speed & Pressure step (5 step)	07. Robot interface (Standard)
08. Auto Purging	08. Ejector Speed & Pressure step (3 step)	08. 3 Phase electric outlet (2 ea)
09. Injection Speed & Pressure step (10 step)		09. Single Phase electric outlet (1 ea)
10. Holding Speed & Pressure step (5 step)		10. Hopper throat temperature control device
11. Charging Speed & Pressure step (3 step)		11. 3 color alarm light
12. Back Pressure control step (3 step)		12. Shot data saving by external way
13. Injection Pressure Graph Display		13. Production data statistics
14. Injection Speed Graph Display		14. Alarming & History save
15. Screw RPM Display		15. Log history save
16. Cushion Display & Alarm		16. I/O circuit display
17. Charging time count & alarm		17. Shot data save (Internal 1,000 / External device)
18. Screw & Barrel (Anti Wear)		

Option

01. Heater Disconnection check device	01. Rotating Core Circuit	01. Lubricating oil Recycling device
02. Hopper Slide (L/M)	02. Safety Foot-board (Above 650ton)	02. Product drop check device
03. Long-holding pressure type upgrade	03. Core on Fly	03. Product quality sorting device (Below 280ton)
04. Screw & Barrel (Nitrided barrel)	04. Daylight Extension	04. Hydraulic Auto-Clamp unit
05. Screw & Barrel (Anti Wear & Corrosive)	05. Automatic safety Door open/close	05. Steel tray for resin leakage
06. Valve Gate Circuit & Connector (Interior type)	06. Product Chute	06. Heater Insulation Band
07. Pneumatic Valve Gate Block (Interior type)	07. Hydraulic Core Interlock Connector (EM13, WJ Standard)	07. Robot Interface (EM12, EM67, EM67.1, SPI)
08. Nozzle cylinders equipped with Potentiometers	08. Hydraulic Core Device (Fixed : 170~400ton / Moving / 1or2 stage)	08. CMS (Central Monitoring System)
09. Shut-off Nozzle (Pneumatic, Hydraulic, Spring)	09. Mold ring on Moving-Platen	09. AVR (Automatic Voltage Regulator) on Electric Panel
10. Customized Design Screw (SB, Mixing, Coating)	10. Ejector Interlock Connector (WJ Standard, EM13)	10. UPS (Uninterrentable Power Supply) on Electric Panel
	11. Ejector Forward/Backward External switch	11. Dosing unit Interface (for Masterbatch)
	12. Mold Insulation Platen	12. Gas Injection Interface
	13. Pneumatic Core Puller (1-3 Stages)	13. Steam Injection Interface
		14. External Temperature Display (F/P)
		15. Interior type Hot Runner Controller (EM13, WJ Standard)

Option List TL-A5

* This page is provided for customer's better understanding.

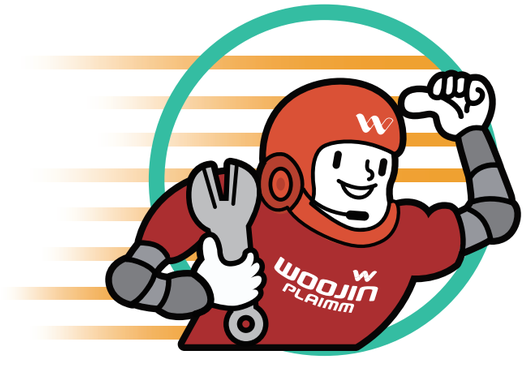
Standard

Injection Unit	Clamping Unit	General
01. Single Flight Screw	01. Mold thickness adjusting break unit	01. Standard Maintenance tools
02. Injection valve gate circuit (AC 1 + DC 1)	02. Hydraulic Core puller (Moving platen side, 1 stage)	02. Standard spare part
03. Back-Pressure Closed-loop system	03. Air blow-off unit (Fixed side 1 + Moving side 1)	03. Leveling pad
04. PID Heating Control	04. Safety device(for electric & hydraulic)	04. Cooling water distributor
05. Weekly Heating Timer	05. Automatic Mold thickness adjust mode	05. Automatic oil lubrication (Toggle)
06. Cold screw start protection mode	06. Mold-Open Speed & Pressure step (4 step)	06. Robot interface (Standard)
07. Temperature display & Alarm in abnormal Temp.	07. Mold-Close Speed & Pressure step (5 step)	07. 3 Phase electric outlet (2 ea)
08. Auto Purging	08. Ejector Speed & Pressure step (2 step)	08. Single Phase electric outlet (1 ea)
09. Injection Speed & Pressure step (10 step)		09. Hopper throat temperature control device
10. Holding Speed & Pressure step (5 step)		10. Hydraulic oil purification device
11. Charging Speed & Pressure step (3 step)		11. Hydraulic oil temperature control deivce
12. Back Pressure control step (3 step)		12. Hydraulic oil level alarm
13. Injection Pressure Graph Display		13. Hydraulic oil temperature check & alarm
14. Injection Speed Graph Display		14. Hydraulic oil heating mode
15. Screw RPM Display		15. 3 color alarm light
16. Cushion Display & Alarm		16. Shot data saving by external way
17. Charging time count & alarm		17. Production data statistics
18. Screw & Barrel (Anti Wear)		18. Alarming & History save
		19. Log history save
		20. I/O circuit display
		21. Shot data save (Internal 1,000 / External device)
		22. Steel tray for resin leakage

Option

01. Heater Disconnection check device	01. Rotating Core Circuit	01. Lubricating oil Recycling device
02. Hopper Slide (L/M)	02. Core & Ejector on Fly	02. Product drop check device
03. Screw & Barrel (Nitrided barrel)	03. Daylight Extension	03. Product quality sorting device (Below 280ton)
04. Screw & Barrel (Anti Wear & Corrosive)	04. Automatic safety Door open/close	04. Hydraulic Auto-Clamp unit
05. Fast Injection Circuit (ACC)	05. Core Pressure release Circuit (Automatic)	05. Heater Insulation Band
06. Valve Gate Circuit & Connector (Interior type)	06. Product Chute	06. Automatic Grease Lubrication (Clamping unit)
07. Hydraulic Valve Gate Block (Interior type)	07. Hydraulic Core Check Valve	07. Robot Interface (EM12, EM67, EM67.1, SPI)
08. Pneumatic Valve Gate Block (Interior type)	08. Hydraulic Core Interlock Connector (EM13, WJ Standard)	08. CMS (Central Monitoring System)
09. Hydraulic Valve Gate Device (External device)	09. Hydraulic Core Puller (Fixed, 1~4 Stages)	09. AVR (Automatic Voltage Regulator) on Electric Panel
10. Charging on Fly (AC Motor)	10. Hydraulic Core Puller (Moving 2~4 Stages)	10. UPS (Uninterrentable Power Supply) on Electric Panel
11. Shut-off Nozzle	11. Mold ring on Moving-Platen	11. Dosing unit Interface (for Masterbatch)
12. Customized Design Screw (SB, Mixing, Coating)	12. Ejector Check Valve	12. Gas Injection Interface
	13. Ejector Interlock Connector (WJ Standard, EM13)	13. Steam Injection Interface
	14. Ejector Forward/Backward External switch	14. External Temperature Display (F/P)
	15. Mold Insulation Platen	15. Interior type Hot Runner Controller (EM13, WJ Standard)
	16. Pneumatic Core Puller (1-3 Stages)	

SPEED CLUB Customer Service



Dispatches A/S team within 24 hours

Our A/S experts will immediately diagnose the issue by the APP and reach your place within 24 hours.

Dedicated B/S(Before service) team

Our B/S experts routinely visit customers to check condition of machine and to provide them with technical advice, so that we can ensure maximized productivity of the machines we supplied.

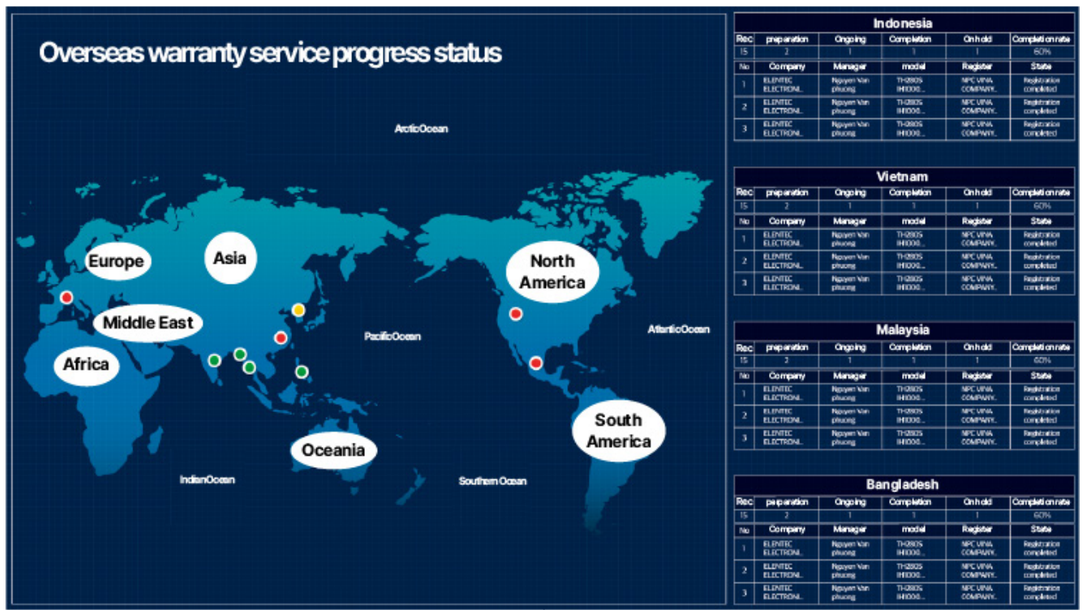
Mobile phone based APP support

Customers can review A/S progress in real time and manage the process.

Warranty extension

We insure quality of main parts.

CS center process screen



We operate an integrated CS control tower for real-time monitoring of SPEED CLUB mobile application and efficient service.
Experts from each field are always on standby to assign technically qualified engineers through real-time meetings.

SPEED CLUB customer care service

01. What is SPEED CLUB application?

You can experience a variety of convenient services, from technical consultation and A/S reception to injection molding experts, real-time status check, and service result history inquiry, available anytime, anywhere.

SPEED CLUB App service process

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5
SPEED CLUB App download and register	Technical consultation with IMM technical experts	Assigning an engineer in charge	On-site diagnosis and repair by the engineer in charge	Speed service complete

Application main functions

Register
· Function for register service

Status
· Page for service result report

Notice
· Notice confirmation function

Call
· Function for direct call button

Status
· Function for view, edit, and cancel service receipt status

Process Info.
· Function for check service application history progress status and notifications
* Can be checked through service app

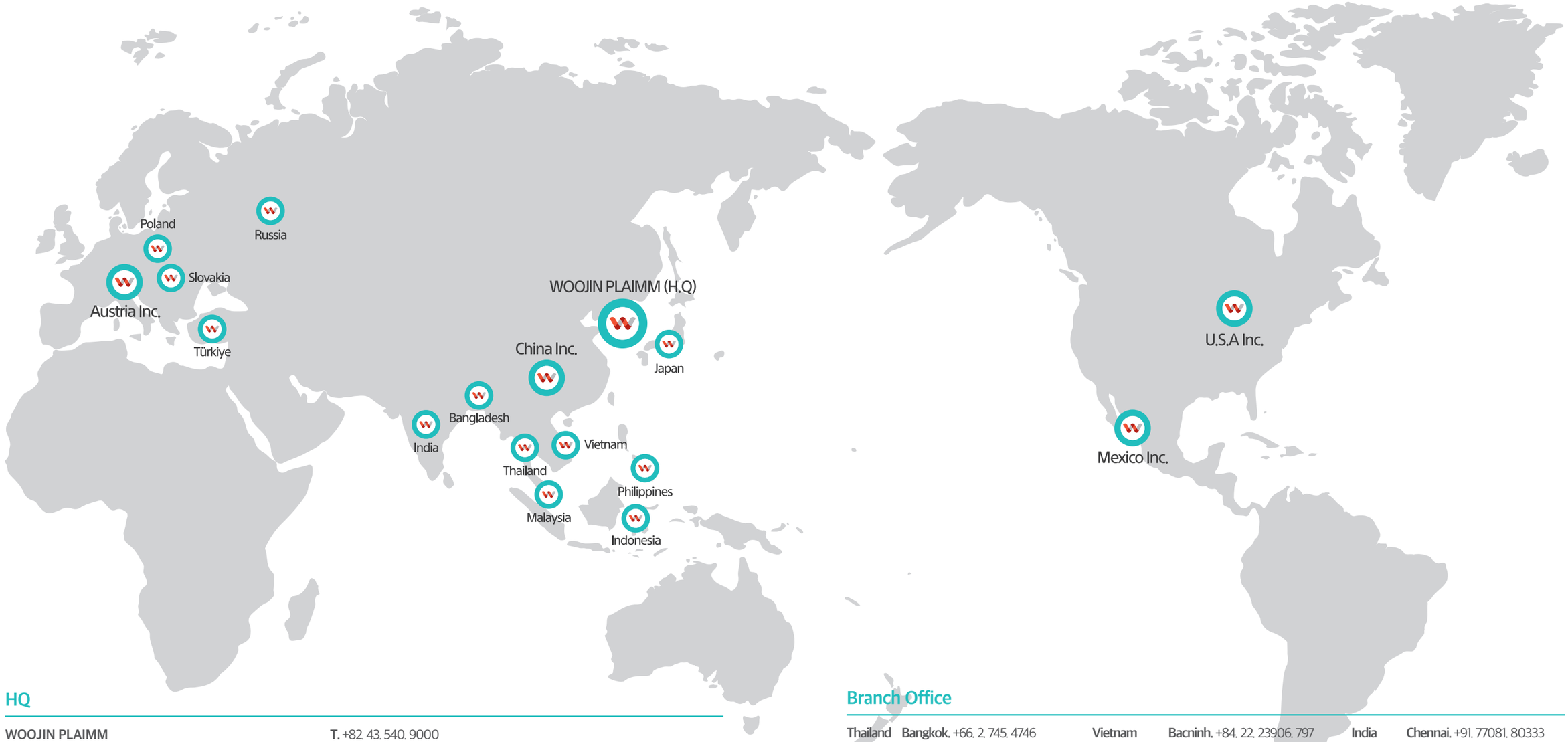
Data
· Function for check other data and user manual

FAQ
· Function for frequently asked questions

SPEED CLUB

Global Network

Woojin Plaimm Sales & Service Network



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* This is an updated content as of August 1st, 2024. (The specifications may differ from the actual selling device.)