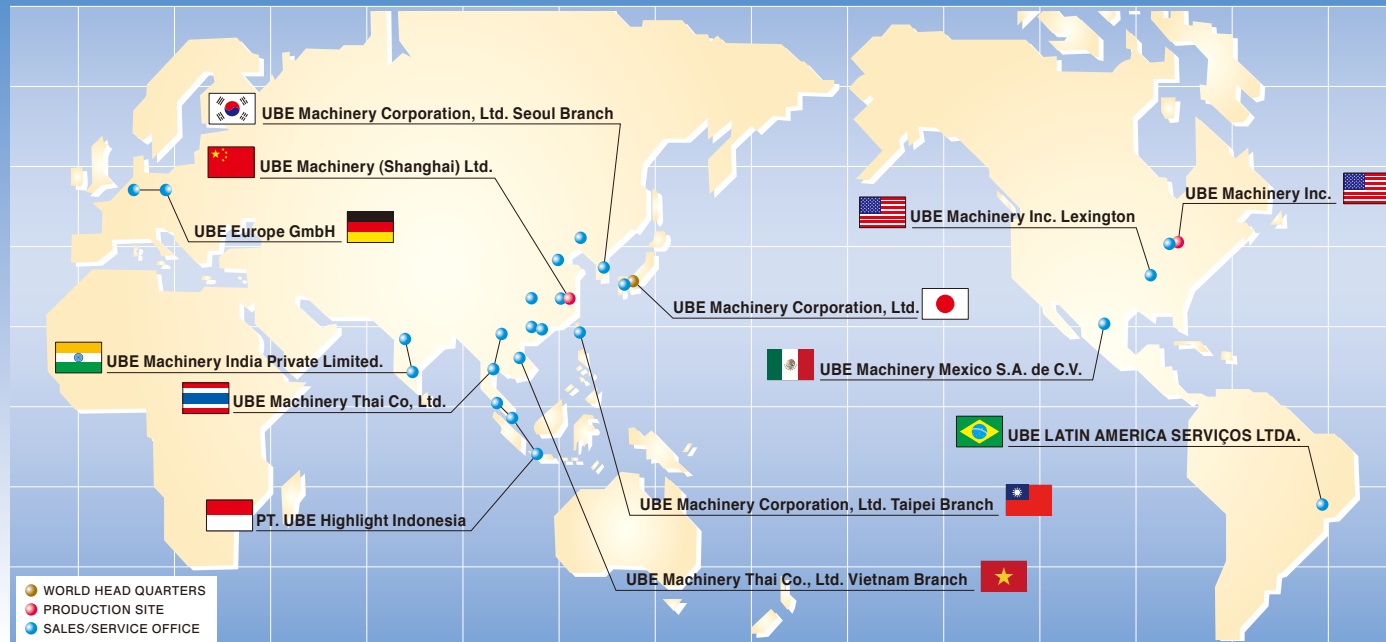


UBE GLOBAL NETWORK

With Japan as our headquarters, we contribute to our customers' globalization with a four-forked system covering Asia, North America and Europe.

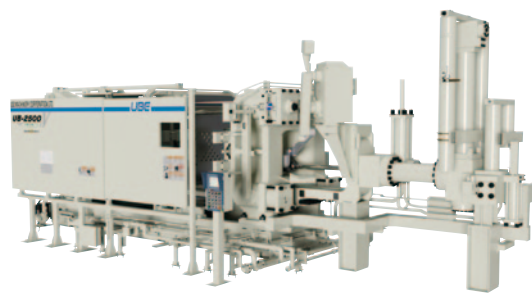


UB-*iS3* Series

Energy Saving Die Casting Machine

UB530iS3
UB670iS3
UB850iS3
UB1100iS3
UB1300iS3

Large Size die casting machine Lineup



Hydraulic die casting machine : UB-IV Series
(1250, 1650, 2250, 2500, 2800, 3050, 3550, 4000, 4500)



Two platen hybrid die casting machine : UH Series
(1250, 1650, 2250, 2500)

High Performance Machine with Servo Pump "UB-iS3" achieve tremendous Energy Saving

Premium New Model UB-iS3



New Technologies



Control & Monitoring

New HMI
Cast Navi 3G
15 inch touch screen



Clamp Unit

Highly Rigid
Die Clamping Unit
New Center Press Platen



Energy Savings

Servo Motor for the main pump with idling stop & Rotation Speed Control



Shot Control

High Performance
Shot Control
(S-DDV II)

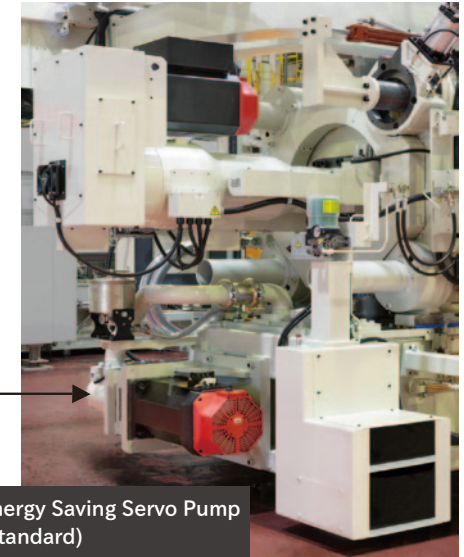
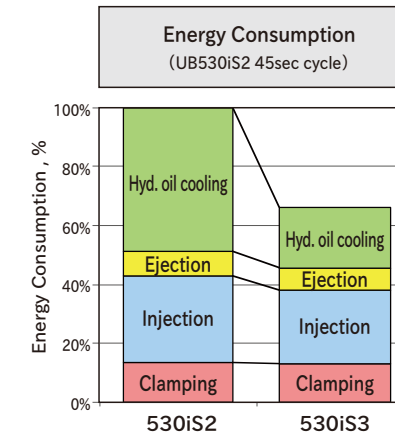
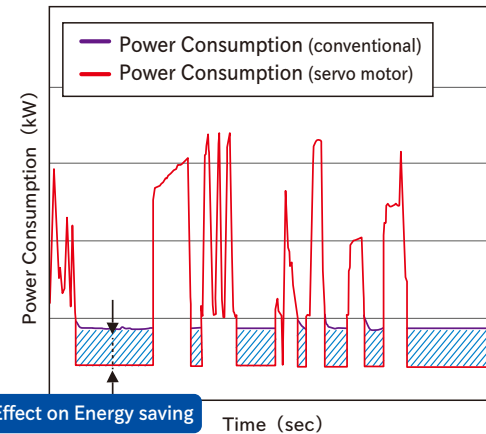


CAE Support

Linkage function with CAE
CastTrend → ADSTEFAN

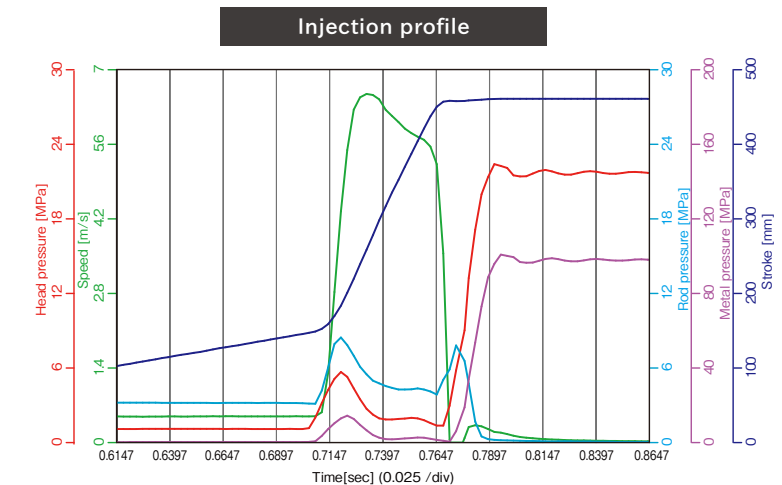
High Performance Machine with Servo Pump as standard feature

- Servo motor for the main pump with "Idling Stop" & "Rotational Speed Control" is equipped as standard and it achieves tremendous energy saving.
- Contribute to production cost reduction by stopping motor during machine idling.



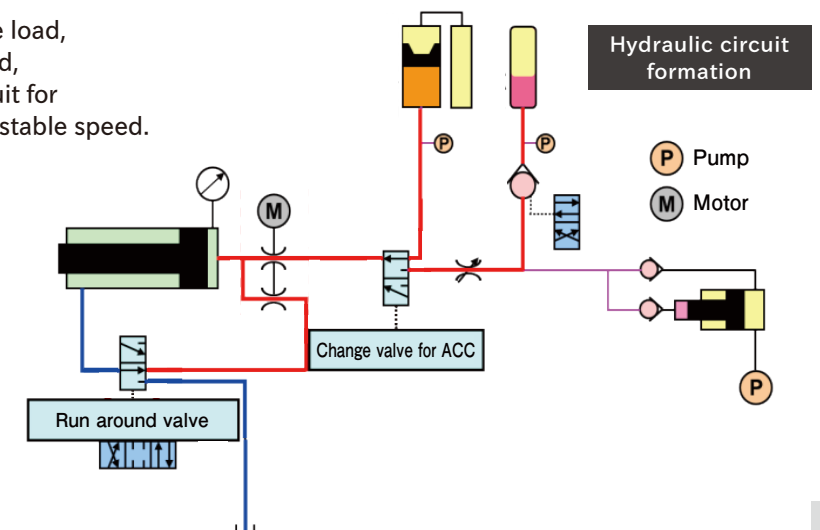
High Performance Injection Unit

- UBE's specialized shot circuit realizes fast shot speed of 8m/sec as standard. (Dry shot 0.02m/s ~ 8m/s)
- Improvement of tracking, acceleration & braking capabilities for shot speed.
- Intensification time: 10msec.
- Setting for the change position for intensification is at any point, or it enables to set automatic by monitoring pressure.



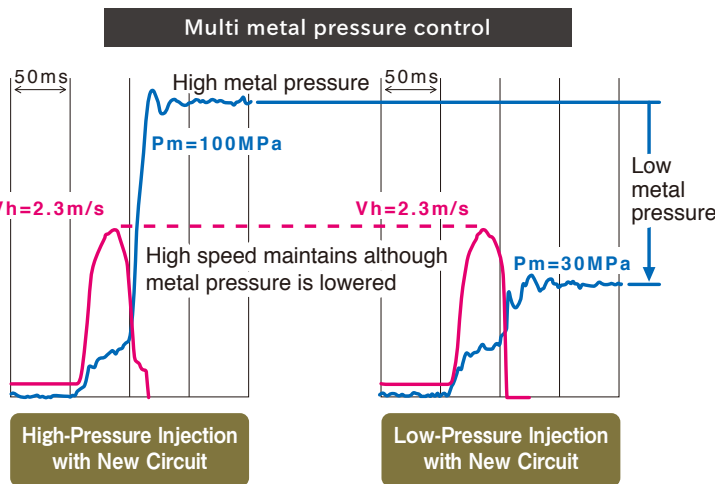
Meter in - Meter out Circuit

- Metre in, which provides pressure equipment to the load, and meter-out, which is effective at stabilizing speed, are both incorporated in a meter-in/meter-out circuit for using the advantages of each mechanism to obtain stable speed.
- Shockless start is also realized to prevent air intake of the molten metal.



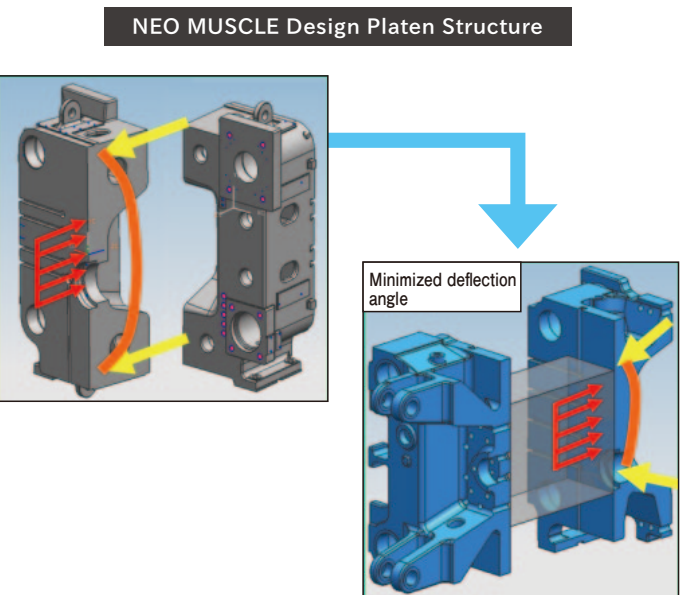
Multi Metal Pressure Control

- UBE developed its own exclusive runaround circuit and double accumulator system(built-in delicate pressurizing accumulator) for maintaining stable and high-speed injection performance while achieving casting pressure control over the wide range from 30% to full gas discharge or re-charge.
- Low metal pressure injection enables casting in larger sizes.
- The reduced metal pressure promotes longer die life.



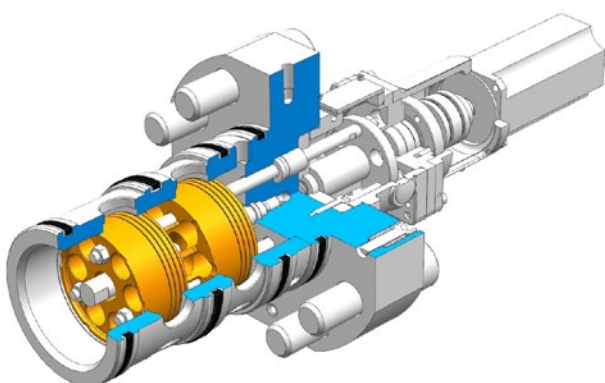
Highly Rigid Clamping Unit

- High level CAE analysis and optimum shape design reduce the unnecessary body and achieve high rigidity.
- With new center press technology, an equal clamping force is distributed through out the die, and it reduces flash, exert an effect on low pressure casting & reducing clamping force.



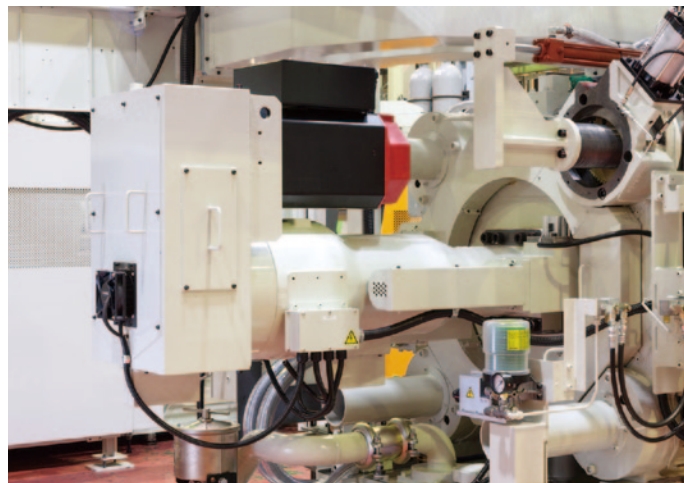
Electric Servo Valve (S-DDV II)

- New servo-controlled direct-drive valve(S-DDV II) enables to control multi shot speed(10 points parameter setting).
- Real time feed back control enables to obtain accurate shot-speed repeatability and shot stability.



Electric Die Clamp Cylinder (Option)

- Electric die clamp cylinder achieves shorten cycle time.
- Improvement of accuracy for die open- close.
- Enable to set die open limit position and open- close speed at any point.
- Contribution to reduce spray time and spray liquid consumption.
- Enables to overlap actions during die open- close.



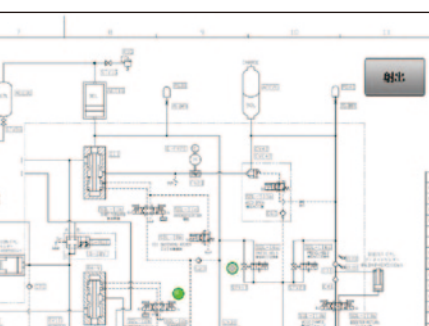
New HMI "CastNavi 3G"

Shot parameter setting screen



- Enables multi speed control with 10-points parameter setting function.
- Enables to indicate actual value displaying setting value.

Built in hydraulic circuit drawing & instruction manual



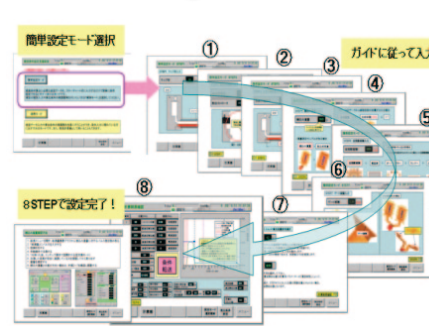
- Hydraulic drawings for injection & clamping and instruction manual are built in the touch monitor.

Machine monitor display



- Displays machine status with graphics and enables to recognize the condition at a glance.

Support function for casting condition



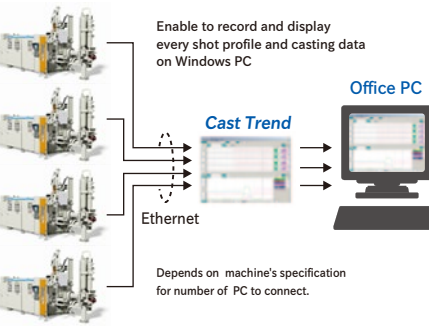
- Equipped with 2 selective modes for standard and easy setting for casting. designed for beginner to set with interactive screen.

Large casting data storage



- Increased casting data memory capacity from 100 shots to 15,000 shots. Saving on USB memory and keeping on PC.

Centralized Monitoring System (Option)

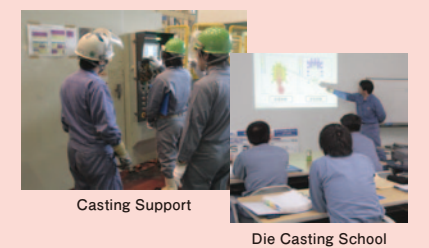


- Monitoring operation on one PC, networking to multiple Die casting machines.
- Enable to manage from any location through customers internal LAN, server.

Casting Solution Service

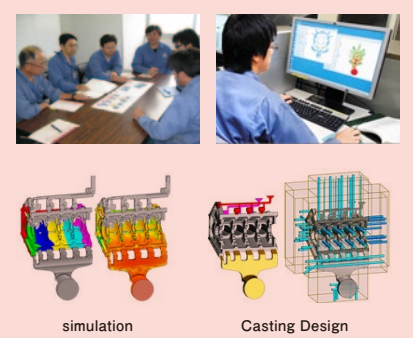
Casting Support / School

UBE performs operation training and instructs optimal shot parameter setting towards production. Also, operation of die casting machine and casting technology are deeply learned through the school.



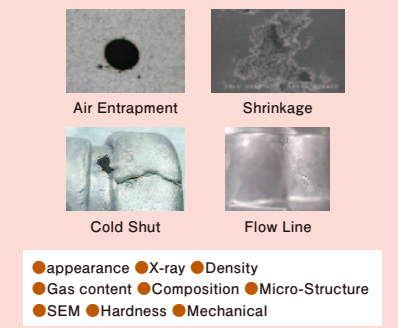
Study of Casting Design and Shot Parameter

UBE propose optimal gating system, shot parameter utilizing CAE.



Investigation of Casting defects

Casting solution service specifies the casting defects by various analysis and offers best solution.



UB—iS3 Series Main Specifications

仕様項目		単位	UB530iS3	UB670iS3	UB850iS3	UB1100iS3	UB1300iS3
Clamping	Clamping force	kN	5300	6700	8500	11000	13000
	Dimension of die plate (L x W)	mm	1070×1172	1200×1302	1400×1452	1660×1660	1930×1800
	Read between tie bars (L x W)	mm	751×751	850×850	931×931	1100×1100	1250×1120
	Die stroke	mm	560	660	760	830	900
	Die thickness (min. to max.)	mm	350~850	350~900	400~950	600~1200	750~1500
Injection	Nominal maximum injection force	kN	511	605	707	895	1061
	Nominal minimum injection force	kN	162	186	225	282	330
	Nominal filling force	kN	216	247	299	318	440
	Plunger stroke	mm	580	670	750	820	950
	Tip projection stroke	mm	230	300	355	355	375
	Shot position	mm	−175	−175	−250	−300	−300
	Injection speed	m/sec	0.02~8	0.02~8	0.02~8	0.02~8	0.02~8
	Applicable Plunger tip diameter	mm	70, 80, 90	75, 85, 95	80, 90, 100	90, 110, 120	90, 110, 130
	Plunger tip diameter (Standard)	mm	80	85	90	110	110
	Nominal Metal pressure (Standard Tip diameter)	MPa	32~102	33~107	35~111	30~94	35~112
	Deceleration adjustment	mm	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
Ejection	Ejector force	kN	235	286	343	539	588
	Ejector stroke	mm	0~110	0~125	0~125	0~150	0~150
	Distance from moving platen to ejection plate	mm	540	590	646	820	865
General	Motor for hydraulic pump	—	Servo Motor (Option: Induction Motor)				
	Oil tank capacity	L	1000	1030	1300	1420	1490
	Cooling water flow rate for oil cooler	L/min	100 (water temp at 30℃ or below)	100 (water temp at 30℃ or below)	100 (water temp at 30℃ or below)	100 (water temp at 30℃ or below)	100 (water temp at 30℃ or below)
	Oil pressure	MPa	16.2	16.2	16.2	16.2	16.2
	Machine weight	ton	22	25	38	60	63

Note: Appearance, Specifications, Numerical Data of die casting machine may change for improvement without notice

UB—iS3 Series Specification (Standard and Optional Items)

Specification item		Std.	Opt.	Specification item		Std.	Opt.	Specification item		Std.	Opt.			
Die clamping	1	Die plate (Fixed, Moving) with T-Slot machining	●		Control	2	Pump driving force : Servo motor (I-Stop Servo)	●		Hydraulic cooling	11	Oil cleaner		○
	2	Toggle unit automatic lubrication device	●			3	Rotating red light on top of control panel	●			12	Magnetic separator (one pc)	●	
	3	Electrical die height adjustment	●			4	LS error display	●			13	Size up of oil-cooler		○
	4	Die height automatic setting	●			5	Symbolic operation nameplate	●			14	Line filter	●	
	5	Platen Ni welding (Die mounting surface)		○		6	Pump driving force : Induction motor		○		15	Hydraulic fluid preheating circuit		○
	6	Digital load meter(lower tie bar on helper side)	●			7	Interface for automatic devices of other manufacturers		○		16	Hydraulic oil level alarm (one junction)	●	
	7	Die clamping force automatic adjustment	●			8	Interface for robotic system		○	17	Additional hydraulic oil level alarm junction		○	
	8	Die clamping force automatic compensation control	●			9	Outlet (100V) on control panel		○	18	Die cooling water, main stop valve (manual)	●		
	9	Automatic tie bar pull-out device		○		10	Electric cable protection		○	19	Line filter clogging detection		○	
	10	Tie bar and guide rod chrome planting	●			11	Earthing interrupter		○	20	Suction filter clogging detection		○	
	11	Die support		○		12	Die temperature monitor		○	Safety	1	Manual safety door on operator side	●	
	12	Ejection plate clamp (C plate clamp)		○		13	Control panel cooler		○		2	Toggle cover (operator side, helper side)	●	
	13	Hydraulic die clamping device		○		14	Lighting in control panel		○		3	Injection unit cover on helper side	●	
	14	Provisional pouring start signal (for UBE ladler)	●			15	Added a touch panel on control panel (15 inch)	●			4	Safety fence on helper side		○
	15	Drain port beneath die clamp at machine base	●			16	PC programmer		○		5	Die open limit safety hook (stopper type)	●	
	16	Slide type oil pan at under tie bar pull-out device		○		17	CastNavi 3G / Japanese, English, Chinese, Korean-languages selectable	●			6	Emergency stop button (2 locations)	●	
Ejection	1	Ejector speed digital setting	●		18	Casting quality report (15,000shots memory)	●		7		Control panel door with interlock	●		
	2	Ejector forward limit digital setting	●		19	Memory utility function USB port on operation panel for datas out-put Monitor, Quality -production report, Machine setting with CSV file.	●		8		Control panel handle enable securing of padlock	●		
	3	Ejection pressure-reducing circuit		○	20	Maintenance guide monitor	●		9		Automatic safety door on operator side		○	
Injection	1	Injection speed multi speed setting (S-DDV) Real time feed back control	●		21	Hydraulic flow guide monitor	●		10		Manual safety door on helper side		○	
	2	Multi metal pressure control	●		22	Returning original position function	●		11		Automatic safety door on helper side		○	
	3	Intencification time control valve		○	23	Voltage adapt (Standard:200V)		○	12		Photoelectric tube safety device		○	
	4	Short sleeve specification (Automatic ladler slide specification)		○	24	Voltmeter installed		○	13		Latchet-type safety hook		○	
	5	Casting parameter load for 100 dies conditions	●		25	Ammeter installed		○	Others		1	Foundation channel system (H-shape steel embedded in the foundation)	●	
	6	Injection digital setting	●		26	Integrating wattmeter		○		2	Machine color (UBE standard)	●		
	7	Piston type accumulator (for injection forward)	●		Timer / Counter	1	Lot counter	●			3	Customer specified machine color		○
	8	Bladder type accumulator (for intensification)	●			2	Product (shot) counter	●			4	Tools (with tool box)		○
	9	Interface for vacuum device		○		3	Tip lubrication timer	●			5	Nitrogen gas filling hose		○
	10	Pressure guages on Injection unit		○		4	Cumulative shot counter	●			6	Automatic ladler with thermal-insulated cover Molten metal level lower signal output (hot charge)	●	
	11	Accumulator automatic pressure-release circuit	●			5	Total maintenance counter	●			7	Following molten metal surface (Automatic ladler 3 poles metal detector)		○
	12	Oil pan under injection unit	●			6	Maintenance counter by dies	●			8	Tip lubricator dropping type		○
Die core	1	Core sequence-selection circuit	●		Hydraulic cooling	1	Nonflammable hydraulic fluid specification (Water Glycol Fluid applicable)			○	9	Tip lubricator mixing type		○
	2	Core spray circuit (for UBE automatic sprayer)		○		2	Mineral type of hydraulic oil applicable	●			10	Adjustable tip lubricating volume		○
	3	Core on moving platen (#1~#3)		○		3	Die cooling water flow control ball valves (fixed side)	●			11	Automatic sprayer with forward and backward spray movement		○
	4	Core on fixed platen (#1~#2)		○		4	Die cooling water flow control ball valves (moving side)	●			12	Tank (volume:200L)		○
	5	Additional core port on moving platen		○		5	Die cooling water drain box	●			13	Die lubrication mixing and boosting device photoelectric product detector (2 PCs)		○
	6	Additional core port on fixed platen		○		6	Glycerin filled pressure gauges	●			14	GF (Gass Free) device		○
	7	Core pressure release circuit		○		7	Oil temperature gauge (with 1 upper limit junction)	●			15	CastTrend (software)		○
	8	Local squeeze circuit(Fixed-Moving side)		○		8	Oil cooler cooling water ON-OFF circuit	●			16	Automatic trimming press		○
	9	Core pressure reducing circuit		○		9	Hydraulic hose with wire-blade			○	17	Compliance of North America, European, and Chinese standards and requirements		○
	10	Double pilot check valve in core line		○		10	Hydraulic hose with plastic cover			○	18	IoT applicable (data out-put, net work devices connection, etc.)		○
	1	Programmable controller (Mitsubishi Q series)	●											

Note: Specification item ma change for improvement without notice

Peripheral Equipment

UBE’s proud Peripheral equipment with long-time performance at field.
High Reliability supports stable production and high cycle.



Automatic Ladler



Automatic Sprayer



Automatic Extractor

Automatic Ladler

Adopting inverter control with arm and ladle drive enables smooth movement.
Improves accuracy of ladling by refined control method.

No.	Items	USL-03	USL-04	USL-05	USL-05L	USL-06
1	Applicable die casting machine	US530iS3	UB670iS3	UB850iS3	UB1100iS3	UB1300iS3
2	Maximum pouring weight	4.0kg	5.6kg	8.0kg (Option 10kg・12kg)	15kg	20kg
3	Accuracy ladling	±1.5% (with the Max. ladling weight)				
4	Power drive	・Arm driving motor : 0.75kw AC motor (Inverter control) ・Ladle driving motor : 0.2kw AC motor (Inverter control)				
		・Arm driving motor : 1.5kw AC motor (Inverter control) ・Ladle driving motor : 0.4kw AC motor (Inverter control)				
		・Arm driving motor:3.7kw AC motor (Inverter control) ・Ladle driving motor:0.4kw AC motor (Inverter control)				

Automatic Sprayer

Standard feature for forward movement of spray cassette in the dies, which is effective for casting for deeper shaped product. Descent position of spray cassette and forward stroke in the die can be set on the screen in each die.

No.	Items	Model USP-31	Model USP-51	Model USP-61
1	Applicable die casting machine	US530iS3 / UB670iS3	UB850iS3	UB1100iS3
2	Number of air blow nozzle (Standard)	20pcs	20pcs	30pcs
3	Number of spray nozzle (Standard)	Fixed platen side : 26pcs	Fixed platen side : 31pcs	Fixed platen side : 40pcs
		Moving platen side : 26pcs	Moving platen side : 31pcs	Moving platen side : 40pcs
4	Air pressure	0.5MPa~0.7MPa		
5	Liquid supply port diameter	Rc 1/2 B	Rc 3/4 B	
6	Power drive	Y-axis up and down : Air cylinder, X-axis slide : AC motor (Inverter control)		

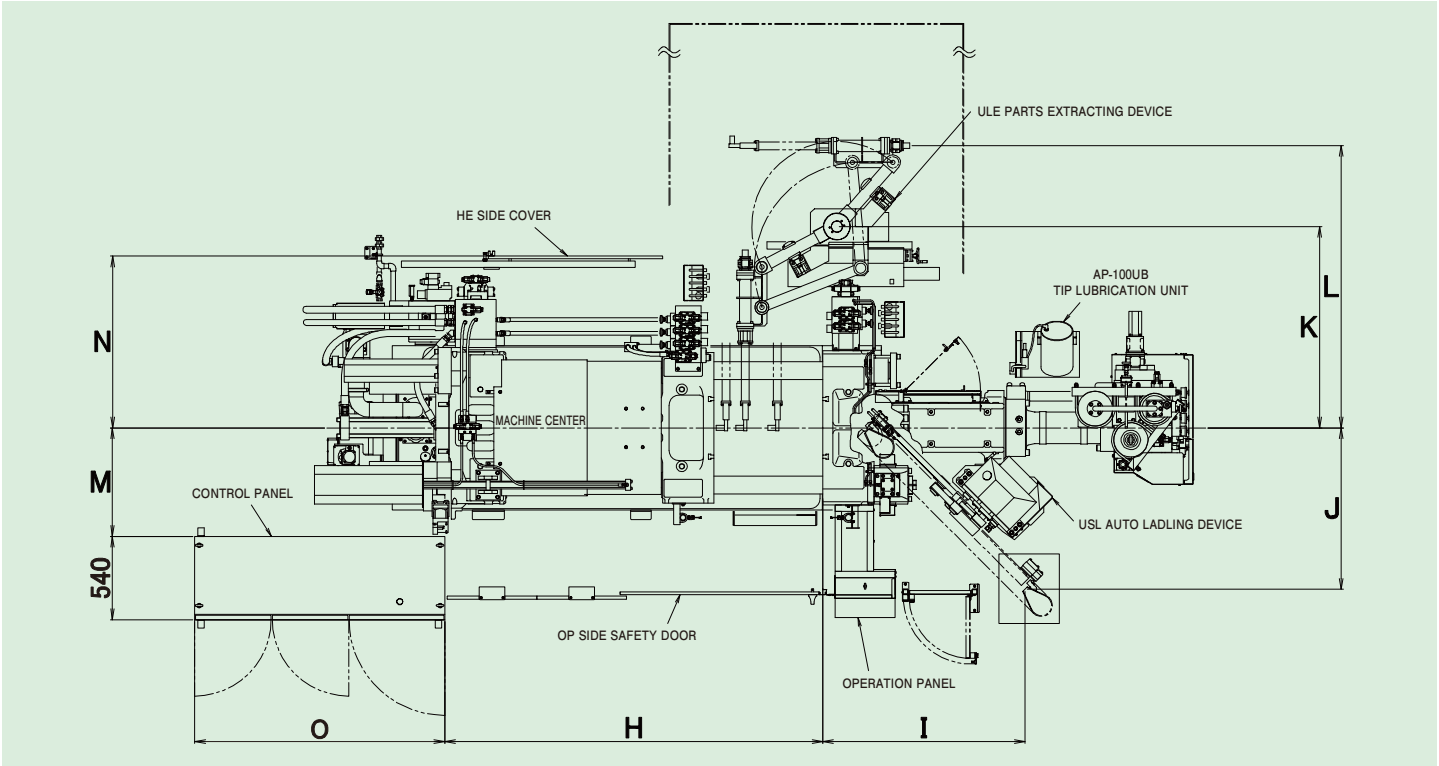
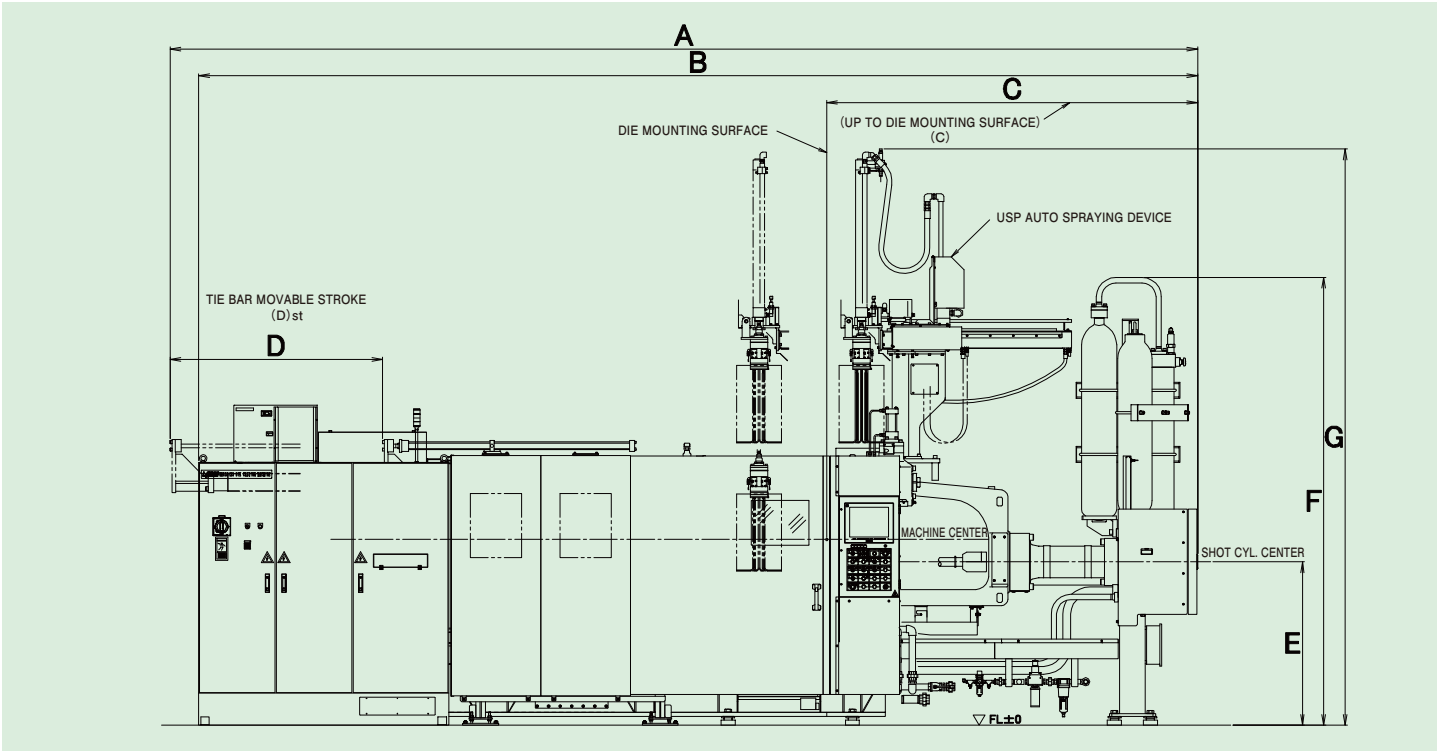
※Enable to supply Dual axis servo driven link type spray device (SAV-S model)

Automatic Extractor

Adopting inverter control with arm drive enables smooth movement.

No.	Items	Model ULE-04	Model ULE-05	Model ULE-05L
1	Applicable die casting machine	US530iS3 / UB670iS3	UB850iS3	UB1100iS3
2	Location of installation	Standing on floor at machine helper side		
3	Chuck type	Biscuit chuck type		
4	Number of product sensors	2pcs (Photoelectric sensor)		
5	Die thickness adjustment stroke	150mm	220mm	
6	Travelling stroke	2200mm	2525mm	
7	Removal stroke	250mm	250mm	
8	Chuck rotaing angle	90°		
9	Power drive	Taking out : AC motor (Inverter control), Others : Air actuator		
10	Air supply port diameter	Rc 1/2 B		

Dimensional Diagram



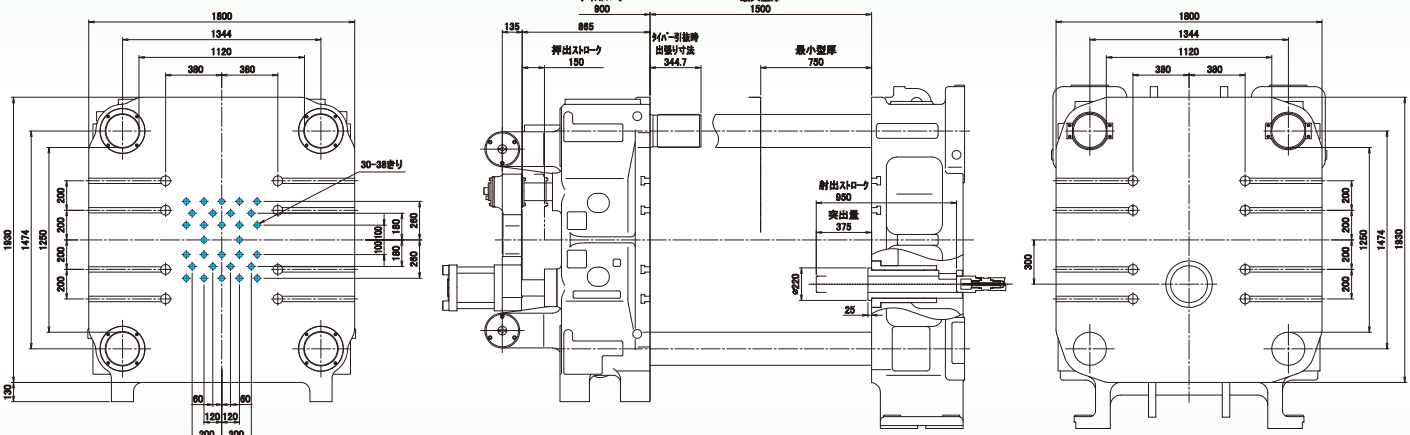
Dimension Table (mm)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
UB530iS3	8017	7794	2894	1657	1275	3493	4495	2950	1610	1255	1570	2201	846	1340	1950
UB670iS3	8915	8427	3192	1869	1365	3638	4650	3284	1645	1295	1570	2201	910	1440	1950
UB850iS3	9597	8991	3394	2078	1400	3944	5120	3647	1780	1410	1800	2528	1020	1490	1950
UB1100iS3	11382	10476	4006	2490	1540	3950	5678	4120	2060	1655	1800	2553	1190	1714	2350
UB1300iS3	13135	11401	4451	2950	1737	4270	—	4600	2824	2075	—	—	1197	1745	2350

Die Mounting Dimensional Diagram

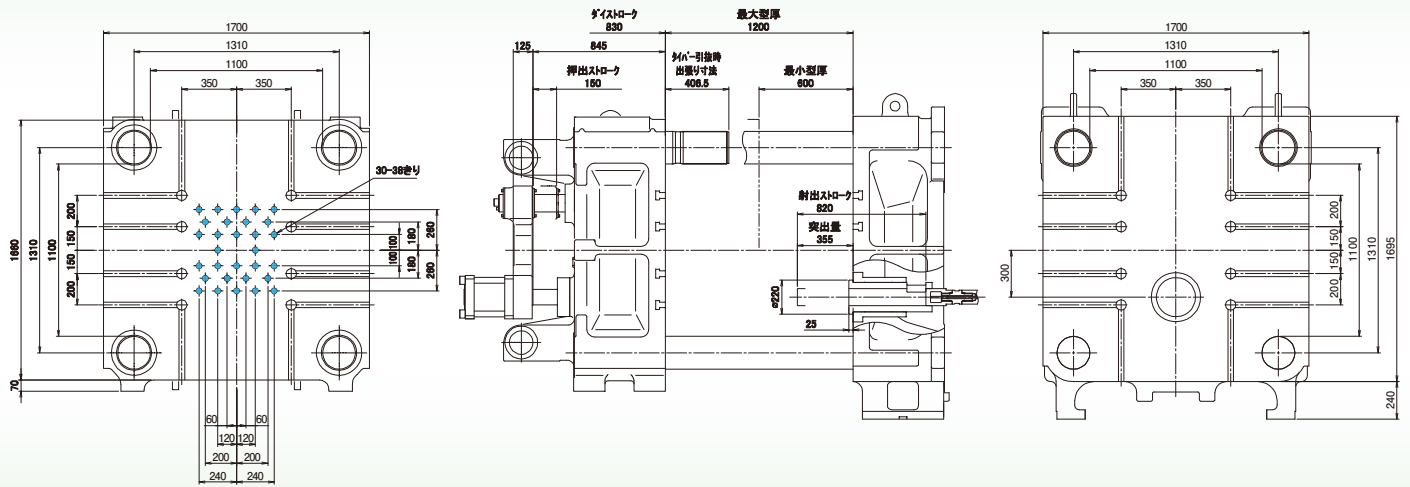
1300 t · 1100 t

UB1300iS3



1. Blue Holes are for ejection rods directly linked to the ejection plate. (30 locations)
2. Minimum size of dies : 840mm×773mm

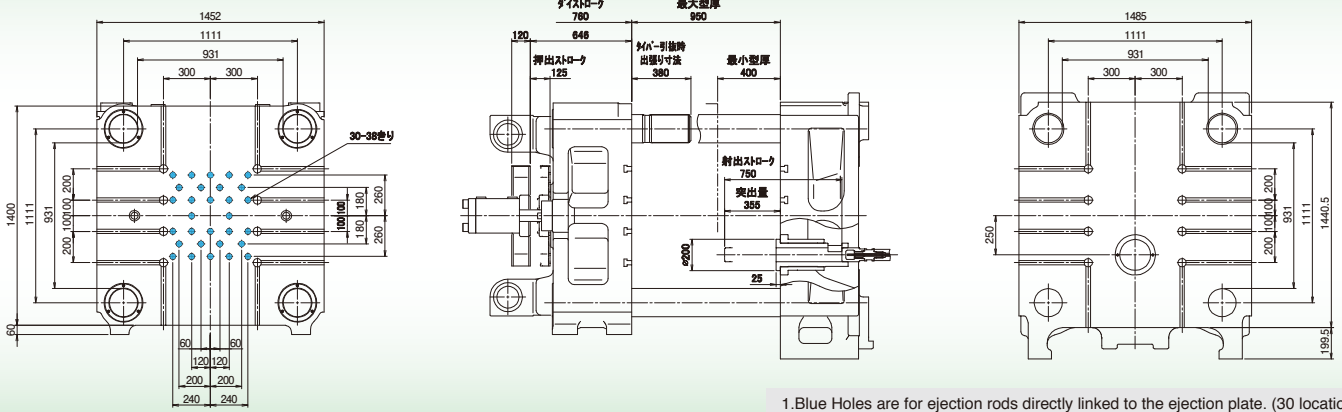
UB1100iS3



1. Blue Holes are for ejection rods directly linked to the ejection plate. (30 locations)
2. Minimum size of dies : 733mm×733mm

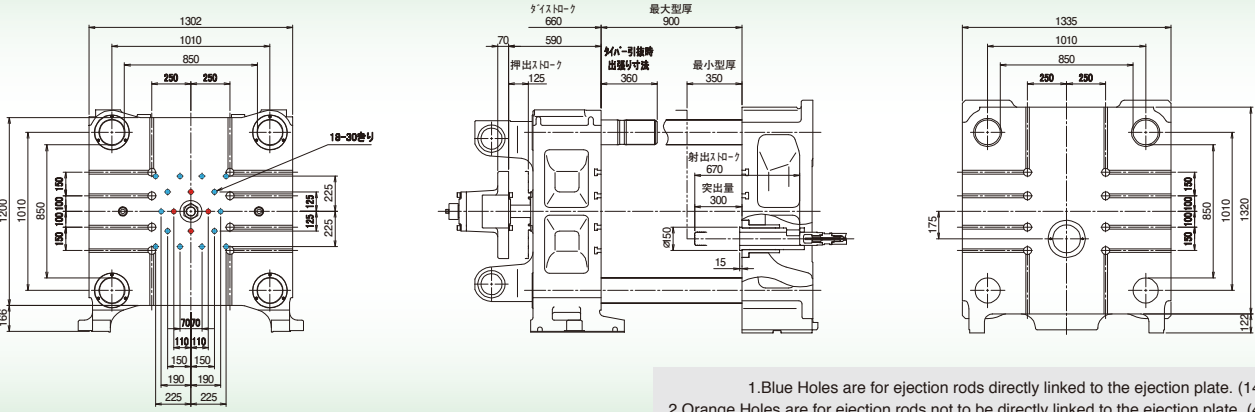
850 t · 670 t · 530 t

UB850iS3



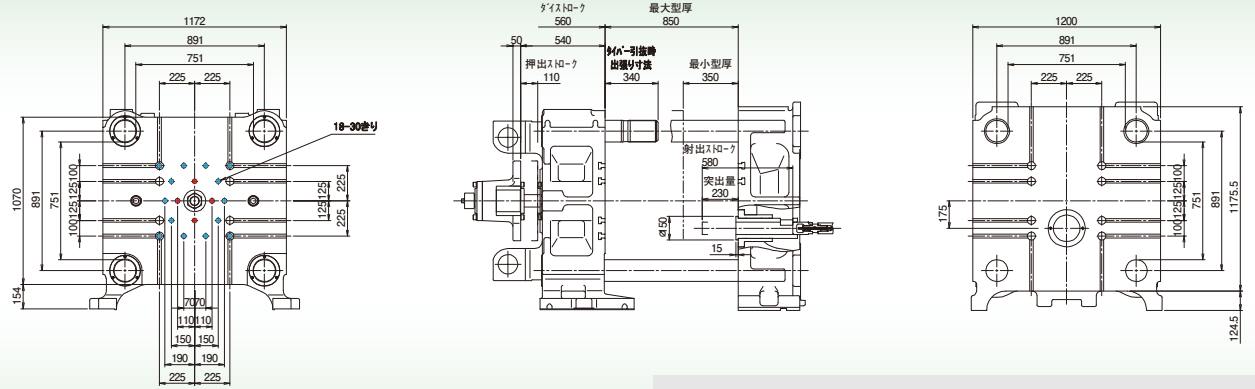
1. Blue Holes are for ejection rods directly linked to the ejection plate. (30 locations)
2. Minimum size of dies : 620mm×620mm

UB670iS3



1. Blue Holes are for ejection rods directly linked to the ejection plate. (14 locations)
2. Orange Holes are for ejection rods not to be directly linked to the ejection plate. (4 locations)
3. Minimum size of dies : 567mm×567mm (Center arrangement)

UB530iS3



1. Blue Holes are for ejection rods directly linked to the ejection plate. (14 locations)
2. Orange Holes are for ejection rods not to be directly linked to the ejection plate. (4 locations)
3. Minimum size of dies : 500mm×500mm (Center arrangement)