

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.



Large Size die casting machine Lineup



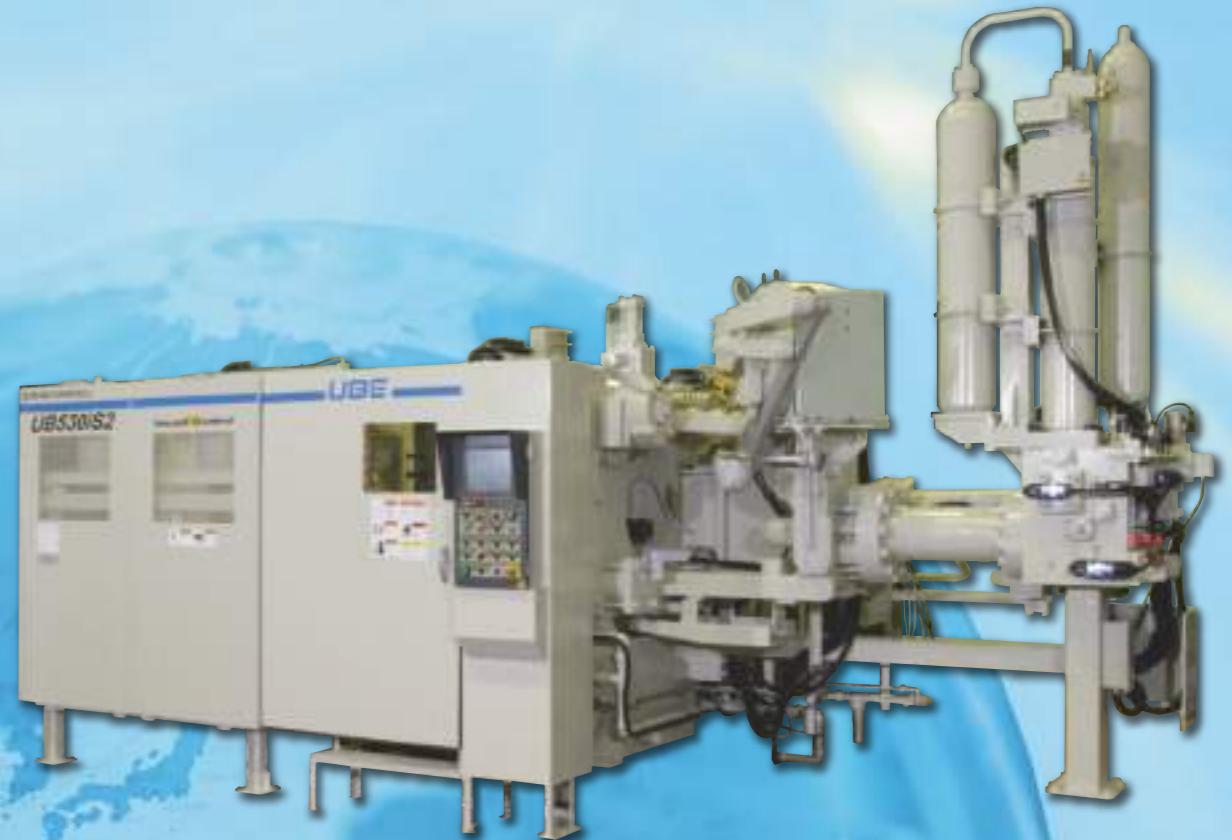
Hydraulic die casting machine : UB-iV Series
(1250, 1650, 2250, 2500, 2800, 3050, 3550, 4000, 4500)



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

Medium Size Die Casting Machine

UB-iS2
Series

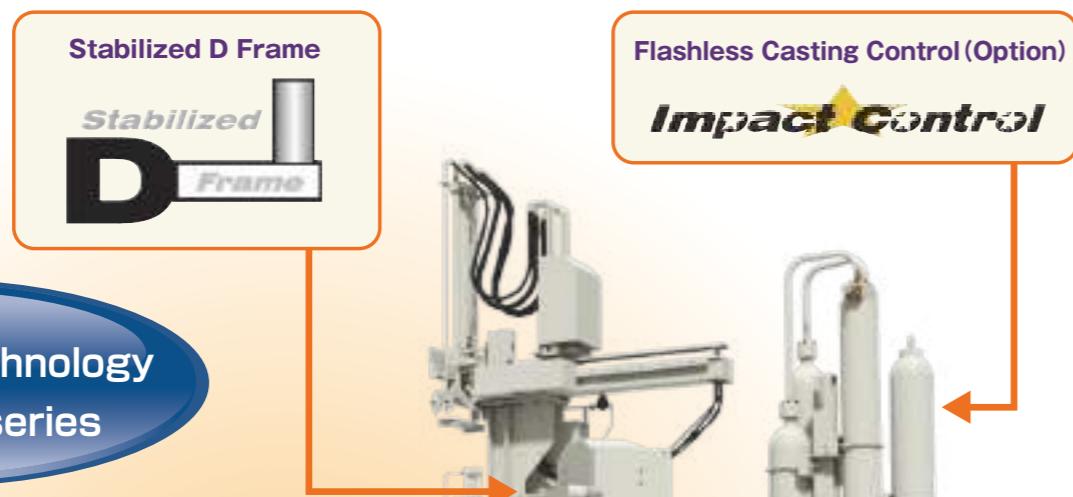


UBE MACHINERY CORPORATION,LTD.

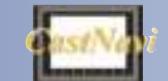
Evolving New Standard

UB-iS2 Series

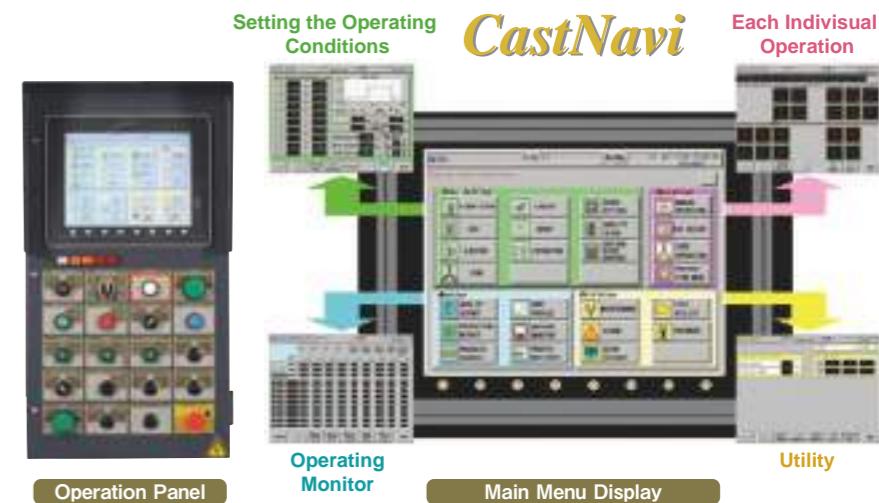
Introducing UB-iS2 series succeeds the long selling UB-iS series



New Human Machine Interface CastNavi



- Adoption of large 12.1 inch color touch panel on operation panel of human machine interface.
- Simplified operation panel reducing hard switches which are shifted to screen panel.
- Achieved visibility and operability by using graphic symbols, being independent from language.
- Identifiable background color by category. Friendly and memorable design of screen.
- History memory feature for operation setting. Easy daily maintenance! Equipped "detection system for gas pressure" for intensification Accumulator.



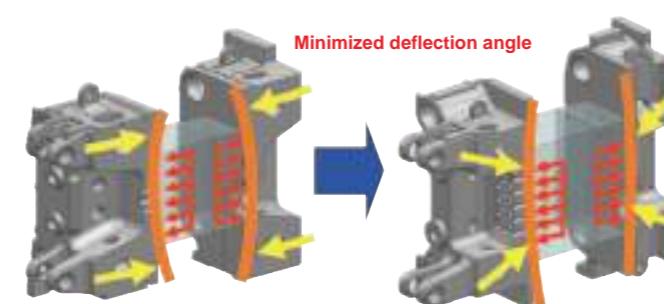
Center Press Platen



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



MUSCLE Design platen structure

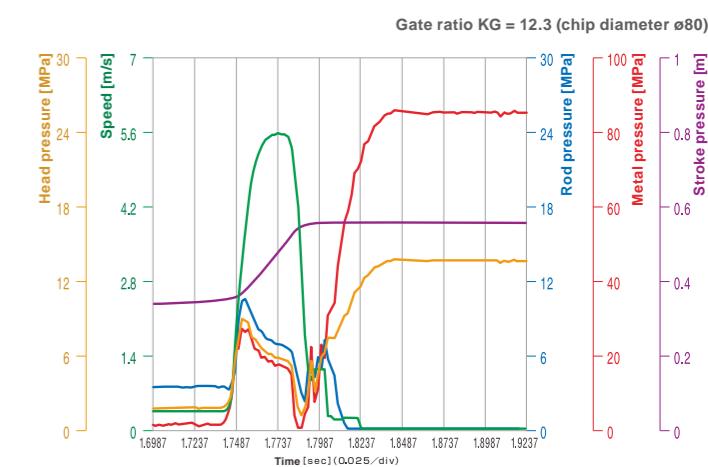


Electric Servo Valve S-DDV Servo Direct Drive Valve



- A servo-controlled direct-drive valve (S-DDV) with servomotor is applied to enable multi speed control (10 point parameter setting). Real time feed back control enables to obtaining accurate shot-speed repeatability and shot stability.

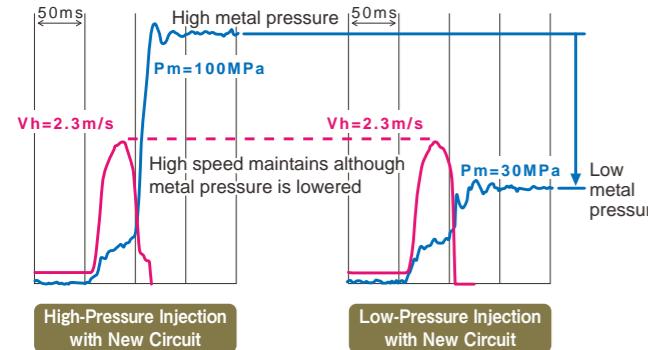
Characteristic by actual shot data (UB670iS2)



Multi 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 without gas discharge or re-charge.
- Low metal pressure injection enables casting in larger sizes, and the reduced metal pressure improves promotes longer die life.

Multi Pressure Control

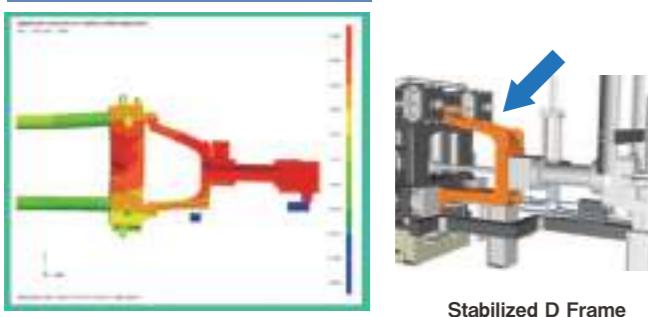


Stabilized D Frame



- Modeling clamp unit and shot unit. Through high level CAE (ADVC), movement of shot unit is quantitatively-analyzed. Optimally-designed injection D shape frame brings longer life of tip & sleeve.

Sample picture by high level analysis

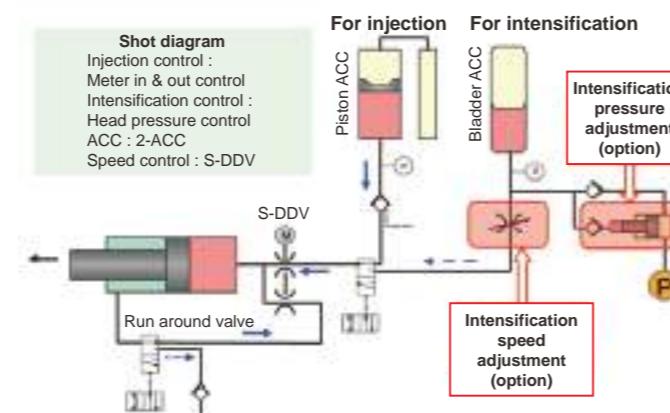


Stabilized D Frame

Meter in - Meter out Circuit

- Meter-in, which provides pressure equivalent 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.

Hydraulic circuit formation



Flashless Casting Control (Option) Impact Control Impact Control

- The first in its class! Flashless casting technology as an option.
- It enables to maintain flashless and good quality by controlling impact pressure without changing speed.
- It controls gas pressure by changing degree of opening of valve which is newly set between accumulator and gas bottle and is remote controlled.
- To achieve further flashless casting incorporated with Center Press Platen.

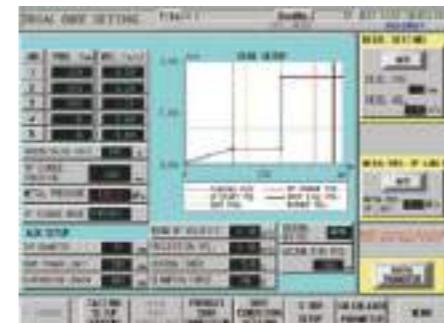


Impact Control Valve

CastNavi

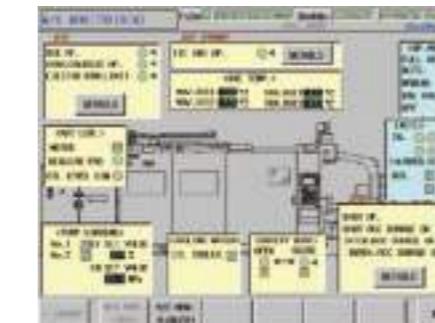
Shot parameter setting screen

Enables multi speed control with 10-points parameter setting function.



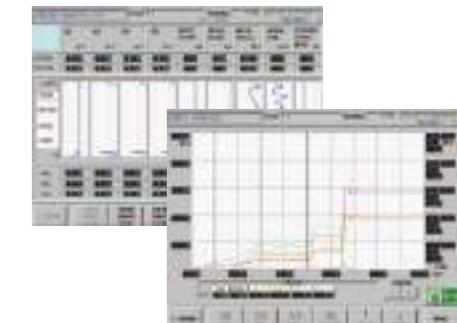
Machine monitor display

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



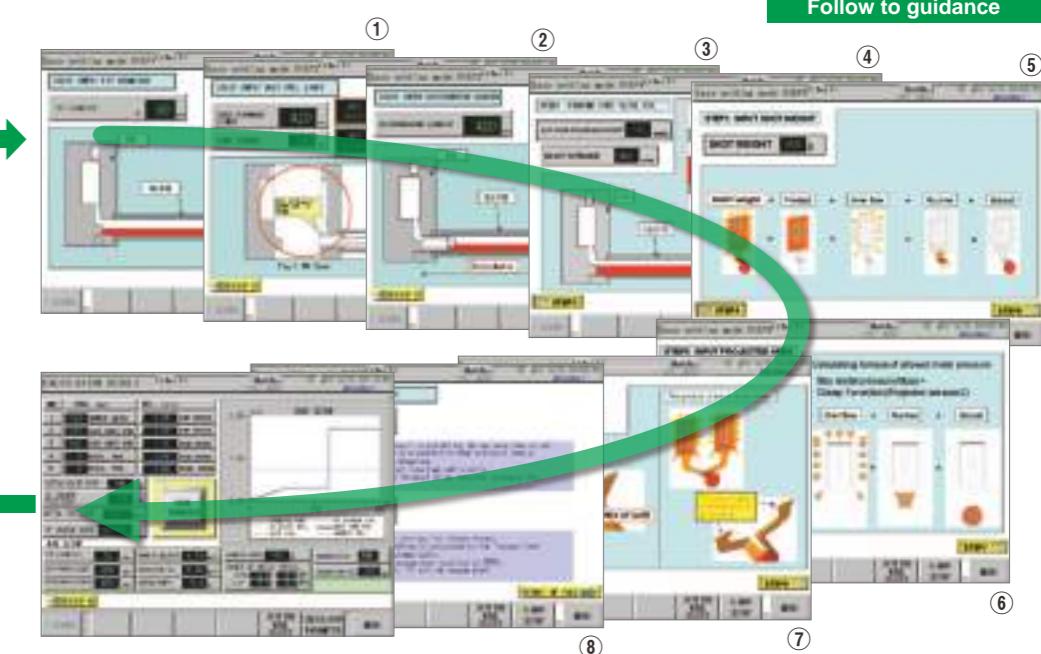
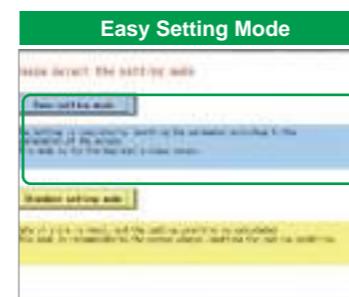
Graphic trend display

Displays each shot trend and enables to retrieve the graphic shot profiles for the previous 100 shots.



Casting Support Function (Interactive Easy Setting Mode)

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



Multi Language (Japanese, English, Chinese, Korean)

Japanese, English, Chinese, Korean can be displayed. * Vietnamese and Thai will be ready soon.



UB-iS2 Series Main Specifications

Items	Units	UB375iS2	UB530iS2	UB670iS2	UB850iS2	UB1100iS2	
Clamping	Clamping force	kN	3750	5300	6700	8500	11000
	Dimension of die plate (L x W)	mm	940x940	1070x1172	1200x1302	1400x1452	1660x1660
	Read between tie bars (L x W)	mm	667x667	751x751	850x850	931x931	1100x1100
	Die stroke	mm	420	560	660	760	830
	Die thickness (min. to max.)	mm	300~700	350~850	350~900	400~950	600~1200
	Die height adjustment speed	mm/min	50~200	50~200	50~200	50~200	50~200
Injection	Nominal maximum injection force <Option>	kN	340 <420>	425 <525>	471 <581>	570 <703>	623 <769>
	Nominal minimum injection force <Option>	kN	238 <129>	298 <162>	330 <186>	399 <225>	436 <238>
	Plunger stroke	mm	480	580	670	750	820
	Tip projection stroke	mm	165	230	300	355	355
	Shot position	mm	-125	-175	-175	-250	-300
	Injection speed	m/sec	0.02~7	0.02~6	0.02~7	0.02~7	0.02~6
	Plunger tip diameter (Standard)	mm	70	80	85	90	110
	Applicable tip diameter	mm	60,70,80	70,80,90	75,85,95	80,90,100	90,110,120
	Deceleration adjustment	mm	Adjustable	Adjustable	Adjustable	Adjustable	Adjustable
	Ejector force	kN	186	235	304	343	539
Ejection	Ejector stroke	mm	0~90	0~110	0~125	0~125	0~150
	Distance from moving platen to ejection plate	mm	466	535	606	646	820
	Motor for hydraulic pump	kW	22/6P	37/6P	37/6P	45/6P	55/6P
General	Motor for lubrication	kW	0.06	0.09	0.09	0.09	0.09
	Oil tank capacity	L	540	1000	1030	1300	1420
	Cooling water flow rate for oil cooler	L/min	50 (water temp at 30°C or below)				
	Oil pressure	MPa	16.18	16.18	16.18	16.18	16.18
	Machine weight	ton	11.5	21	24	35	60

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

UB-iS2 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	●			1	Programmable controller (Mitsubishi Q series)	●
	2	Toggle unit automatic lubrication device	●			2	Fully-enclosed outer fan motor (hydraulic pump motor)	●
	3	Die height adjustment (2 speed control)	●			3	Pilot light tower mounted on top of control panel	●
	4	Die height automatic setting	●			4	LS error display	●
	5	Platen Ni welding (Die mounting surface)		○		5	Symbolic operation nameplate	●
	6	Moving platen shoe adjustment mechanism (Shim type)	●			6	Interface for automatic devices by other manufacturers	○
	7	Digital load meter (on the fixed platen helper side tie bar)	●			7	Robot interface for automatic devices by other manufacturers	○
	8	Die clamping force automatic adjustment	●			8	Outlet (100V) in control panel	○
	9	Die clamping force automatic compensation control	●			9	Electric cable protection	○
	10	Automatic tie bar pull-out device		○		10	Earthing interrupter	○
	11	Tie bar and guide rod chrome planting		○		11	Temperature monitor	○
	12	Die support		○		12	Control panel cooler	○
	13	Ejection plate clamp (C plate clamp)		○		13	Lighting in control panel	○
	14	Hydraulic die clamping device		○		14	Added a touch panel on control panel (12.1 inch)	●
	15	"Provisional pouring start signal (for UBE ladler)"	●			15	PC programmer	○
	16	Drain port beneath die clamp at machine base	●			16	CastNavi language options (Japanese, English, Chinese, Korean) 2-language selectable	●
Ejection	1	Ejector speed digital setting	●			1	Ejector speed digital setting	●
	2	Ejector forward limit digital setting	●			2	Voltage adapt (Standard:200V)	○
	3	Ejecting pressure-reducing circuit		○		3	Voltmeter installed	○
Injection	1	Multi speed setting (S-DDV) Real time feed back	●			1	Ammeter installed	○
	2	Low casting pressure injection		○		2	Intercification time adjusting valve	○
	3	Product (shot) counter		○		3	Short sleeve specifications	○
	4	Lot counter	●			4	Casting parameter down-loading for 100 dies conditions	●
	5	Product (shot) counter	●			5	Integrating wattmeter	○
	6	Total maintenance counter	●			6	Short sleeve specifications	●
	7	Maintenance counter by die	●			7	Low casting pressure injection	●
	8	Molten metal surface level drop signal output (hot charge)	●			8	Product (shot) counter	●
	9	Tip lubricator		○		9	Casting parameter down-loading for 100 dies conditions	●
	10	Tip lubricator mixing system		○		10	Intercification time adjusting valve	●
	11	Adjustable tip lubricating volume		○		11	Lot counter	●
Die core	1	Automatic sprayer		○		1	Product (shot) counter	●
	2	Forward/backward movement in die spraying		○		2	Total maintenance counter	●
	3	Automatic parts extractor		○		3	Maintenance counter by die	●
	4	Photoelectric product detection sensor (2 sensors)		○		4	Intercification time adjusting valve	●
	5	CASTTREND (software)		○		5	Low casting pressure injection	●
	6	Automatic trimming press		○		6	Product (shot) counter	●
	7	Compliance with North America, European, and Chinese standards and requirements		○		7	Total maintenance counter	●
	8	Impact Control Valve		○		8	Maintenance counter by die	●
	9	Die release agent mixing and boosting device		○		9	Intercification time adjusting valve	●
	10	Die cooling water drain box		○		10	Low casting pressure injection	●
	11	Glycerin filled pressure gauge on injection unit		○		11	Product (shot) counter	●
	12	Wire-braided hydraulic hose		○		12	Total maintenance counter	●
	13	Hydraulic hose with plastic cover		○		13	Maintenance counter by die	●
Hydraulic cooling	1	Oil temperature gauge (with 1 upper limit contact point)		○		14	Intercification time adjusting valve	●
	2	Oil cooler cooling water ON-OFF circuit		○		15	Low casting pressure injection	●
	3	Oil cleaner		○		16	Product (shot) counter	●
	4	Magnetic separator (one pc)		○		17	Total maintenance counter	●
	5	Size up of oil-cooler		○		18	Maintenance counter by die	●
	6	Line filter		○		19	Intercification time adjusting valve	●
	7	Local squeeze circuit(Fix-Moving side)		○		20	Low casting pressure injection	●
	8	Impact Control Valve		○		21	Product (shot) counter	●
	9	Compliance with North America, European, and Chinese standards and requirements		○		22	Total maintenance counter	●
	10	Impact Control Valve		○		23	Maintenance counter by die	●
Safety	11	Impact Control Valve		○		12	Intercification time adjusting valve	●
	13	Impact Control Valve		○		13	Low casting pressure injection	●
Others	14	Impact Control Valve		○		14	Product (shot) counter	●
	15	Impact Control Valve		○		15	Total maintenance counter	●
	16	Impact Control Valve		○		16	Maintenance counter by die	●
	17	Impact Control Valve		○		17	Intercification time adjusting valve	●
	18	Impact Control Valve		○		18	Low casting pressure injection	●
	19	Impact Control Valve		○		19	Product (shot) counter	●
	20	Impact Control Valve		○		20	Total maintenance counter	●
	21	Impact Control Valve		○		21	Maintenance counter by die	●
	22	Impact Control Valve		○		22	Intercification time adjusting valve	●
	23	Impact Control Valve		○		23	Low casting pressure injection	●

Peripheral Equipment

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



Automatic Ladler

Automatic Ladler

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

No.	Items	USL-02	USL-03	USL-04	USL-05	USL-05L
1	Applicable die casting machine	UB375iS2	US530iS2	UB670iS2	UB850iS2	UB1100iS2
2	Maximum pouring weight	2.8kg	4.0kg	5.6kg	8.0kg (Option 10kg-12kg)	15.0kg
3	Accuracy ladling	$\pm 1.5\%$ (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)			



Automatic Sprayer

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-21	Model USP-31	Model USP-51	Model USP-61	
1	Applicable die casting machine	UB375iS2	US530iS2 UB670iS2	UB850iS2	UB1100iS2	
2	Number of air blow nozzle (Standard)	10pcs	20pcs	20pcs	30pcs	
3	Number of spray nozzle (Standard)	20pcs	Fixed platen side : 26pcs Moving platen side : 26pcs	Fixed platen side : 31pcs Moving platen side : 31pcs	Fixed platen side : 40pcs 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)				



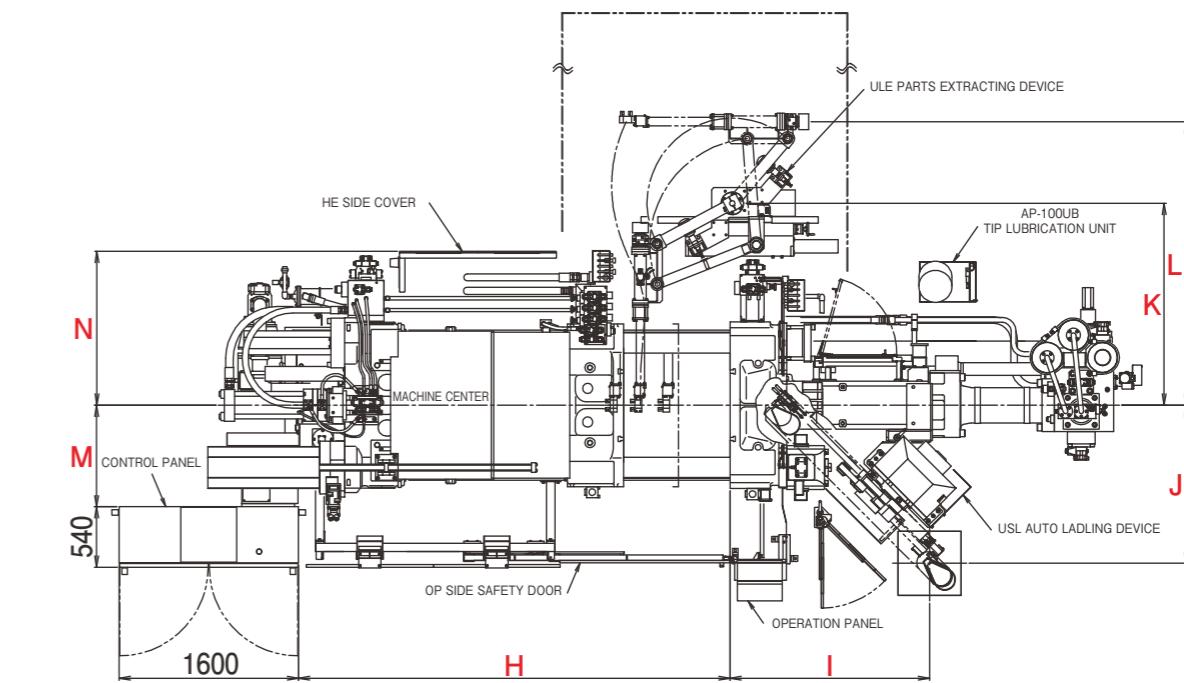
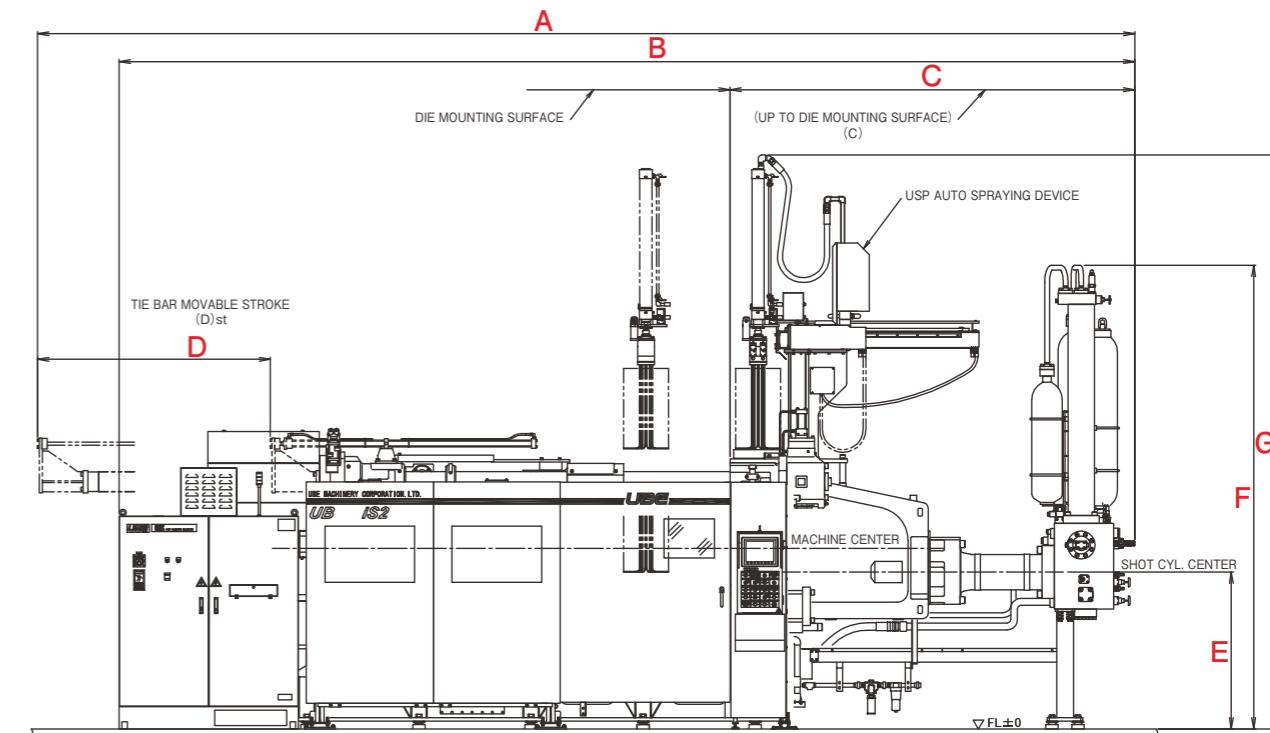
Automatic Extractor

Automatic Extractor

Adopting inverter control with arm drive enables smooth movement.

No.	項目	Model ULE-03	Model ULE-04	Model ULE-05	Model ULE-05L				
1	Applicable die casting machine	UB375iS2	US530iS2 UB670iS2	UB850iS2	UB1100iS2				
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	1840mm	2200mm	2525mm	2553mm				
7	Removal stroke	150mm	250mm						
8	Chuck rotaing angle	90°							
9	Power drive	Taking out : AC motor (Inverter control), Others : Air actuator							
10	Air supply port diameter	Rc 1/4 B	Rc 1/2 B						

Dimensional Diagram



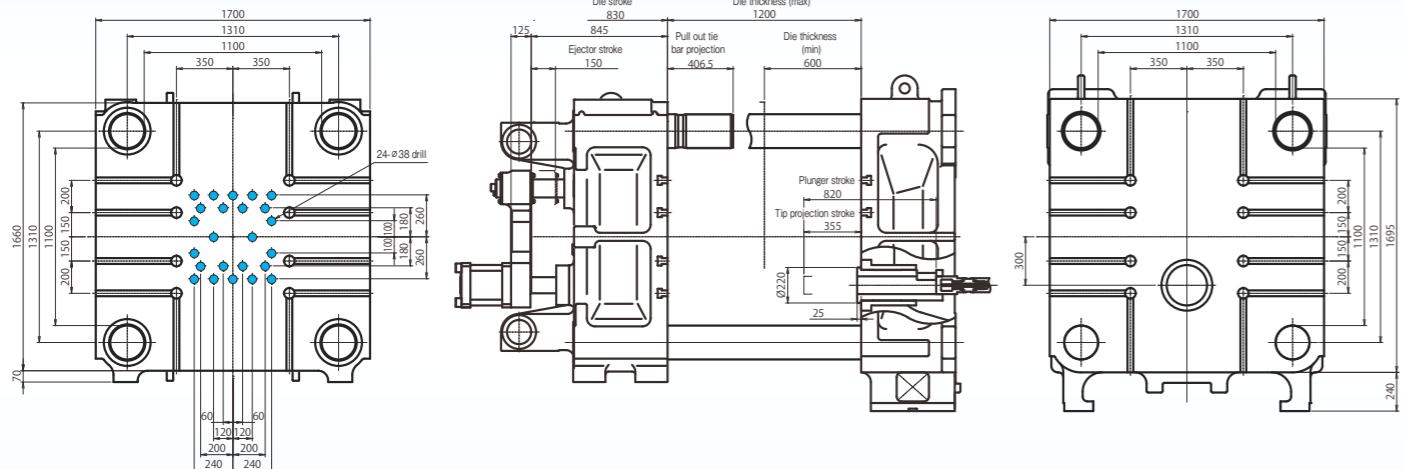
Dimension Table (mm)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
UB375iS2	6760	6740	2695	1322	1230	3239	3898	2445	1538	1221	1360	1837	803	962
UB530iS2	8100	7843	3063	1657	1275	3706	4470	3180	1600	1250	1570	2201	796	1262
UB670iS2	8969	8462	3362	1869	1365	3796	4650	3500	1683	1285	1570	2201	855	1321
UB850iS2	9786	9059	3609	2076	1400	4135	5120	3850	1785	1418	1800	2528	906	1372
UB1100iS2	11335	9678	3958	2490	1540	4060	5678	4120	2060	1655	1800	2553	1190	1714

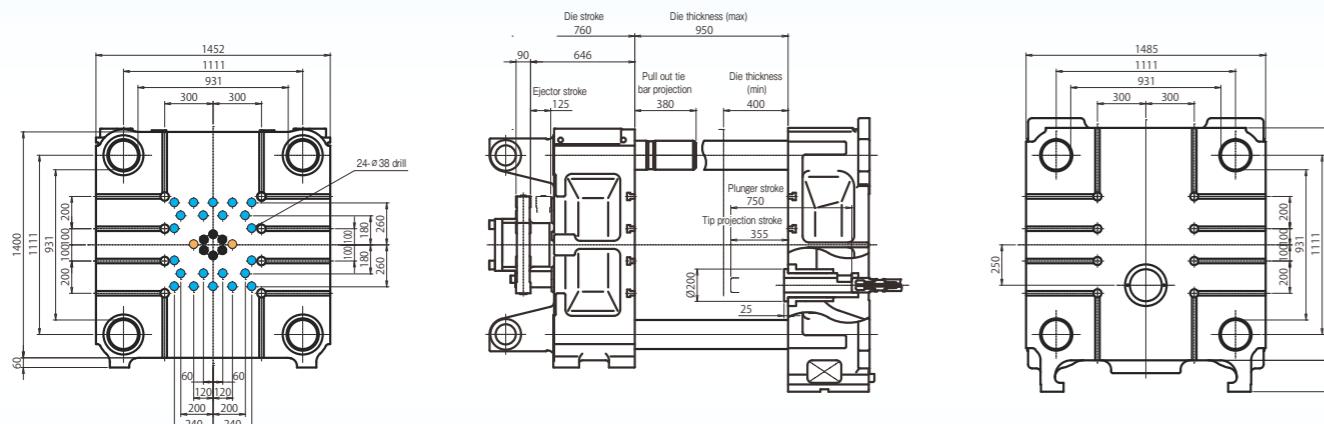
Die Mounting Dimensional Diagram

1100t • 850t

UB1100iS2

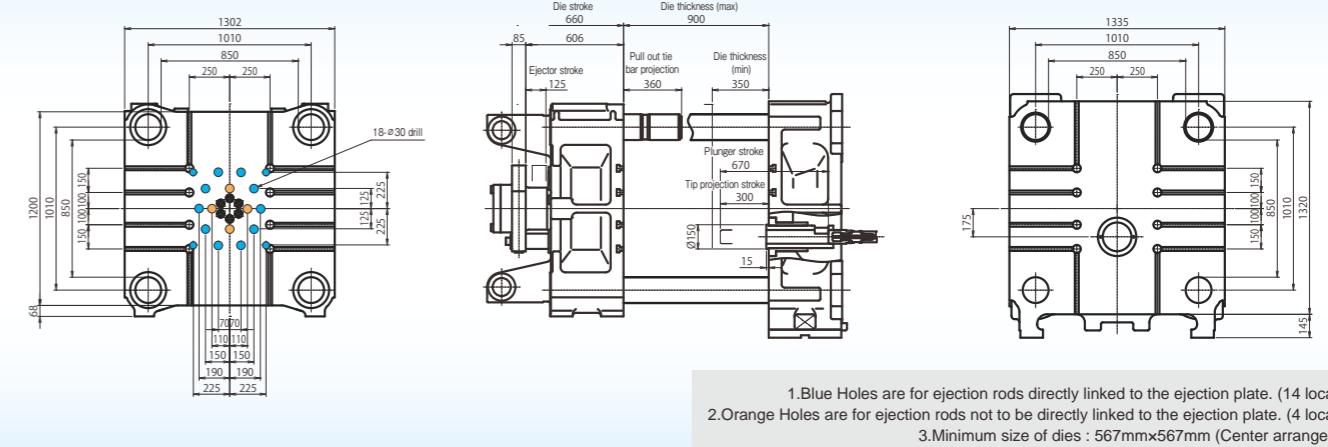


UB850iS2

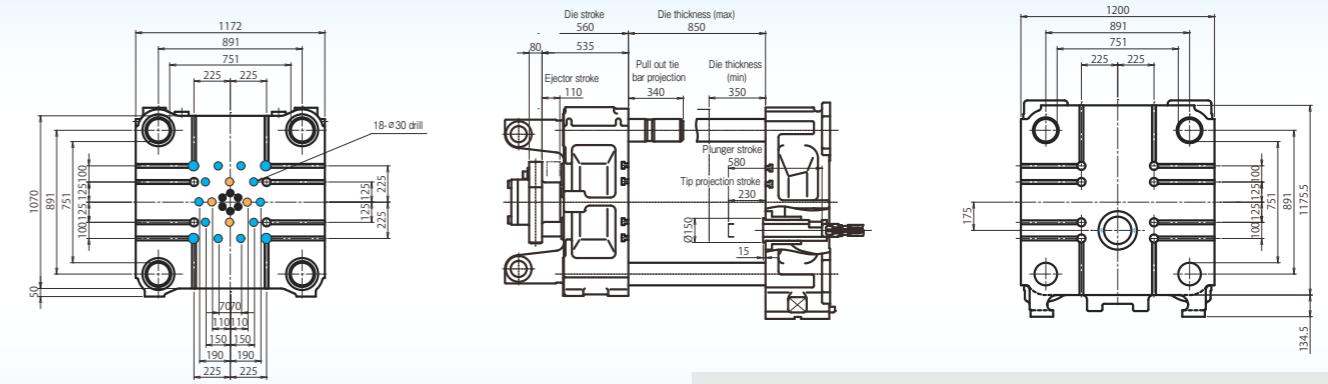


670t • 530t • 375t

UB670iS2



UB530iS2



UB375iS2

