

# LH-HPDC140T-3000T

LONGHUA HIGH PRESSURE DIE CASTING SERIES



 **蚌埠隆华压铸机有限公司**  
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Longhua official website



“Jointly developed with the Chinese Academy of Sciences”

# 1982





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Bengbu Longhua Die Casting Machine Co., Ltd is a company based in Bengbu City, Anhui Province, China. It specializes in the manufacturing of die casting machines and related equipment.

Established in 1982, Longhua Die Casting Machine Co., Ltd has been involved in the die casting industry for several decades. The company focuses on research, development, production, and sales of various types of die casting machines. The company's product range covers cold chamber die-casting machines, hot chamber die-casting machines, die-casting manipulators, industrial robots and peripheral equipment of die-casting machines to meet the needs of different customers.

Longhua emphasizes quality control and customer service, maintaining a comprehensive quality management system and an extensive after-sales service network. At present, the products have been exported to more than 50 countries and regions in the world, and are widely used in various industries such as automotive, aerospace, electronics, etc., and have won unanimous praise from multinational customers for its stability and efficiency.

As a professional die casting machine manufacturer, Longhua constantly strives to pursue technological innovation and product optimization to meet the needs of customers and contribute to the development of the global die casting industry.

1982

公司成立

160+

公司员工



公司体系

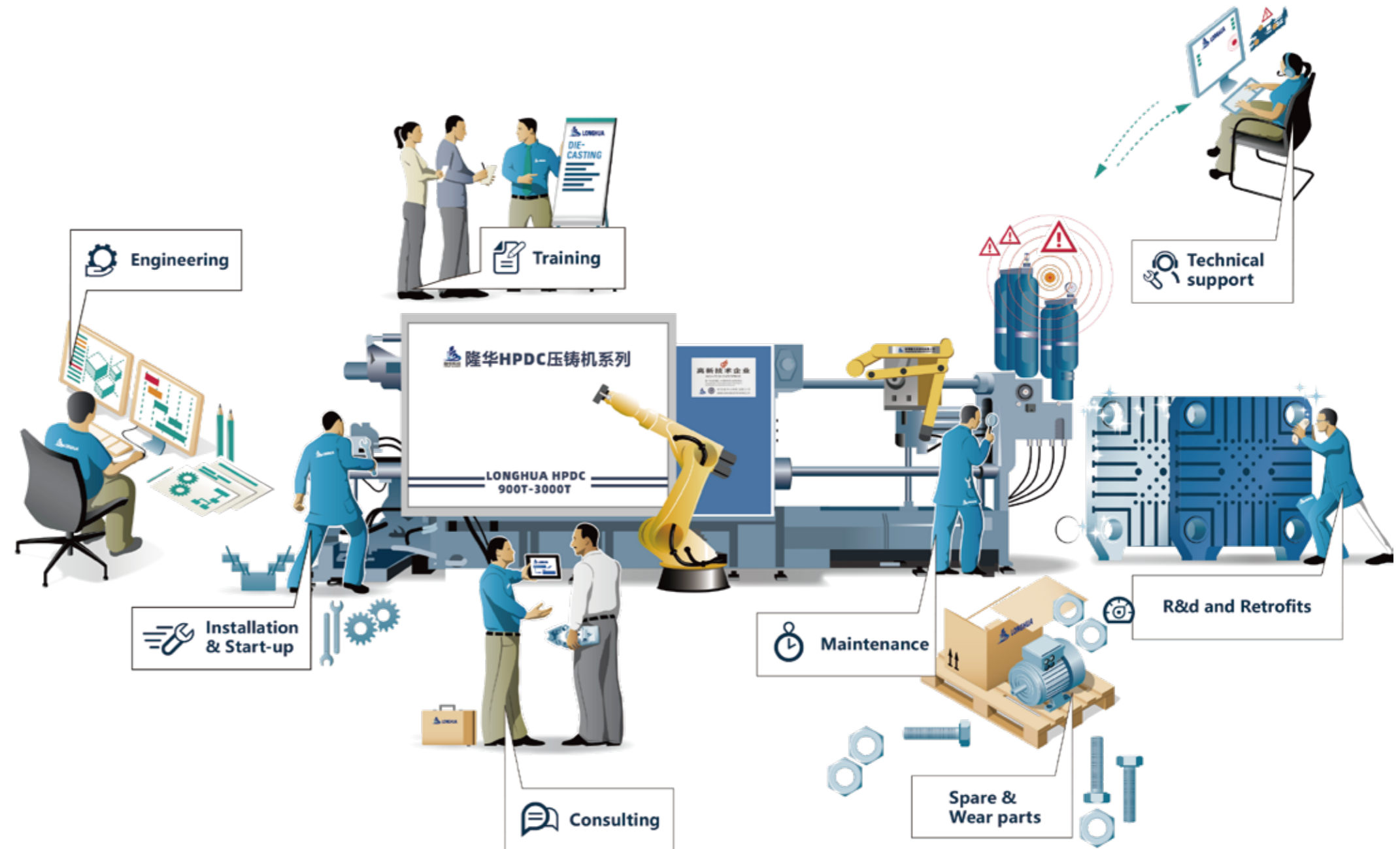


## 40 years of continuous practice Customized for customers around the world

We can provide you with the best and most economical solution according to your actual needs, your products, your goals and your vision.

Globally, we have many successful cases and experience in more than 40 countries in Asia, Africa and Latin America

We know that no two die casting solutions are exactly the same, which is the original intention of our personalized service.



# Company Qualification





# Corporate Image



In July 2006  
Wang Jinshan, Secretary of the Anhui Provincial Party Committee, visited Longhua



2020-2021  
Longhua and Chinese Academy of Sciences successively signed the projects of "High-speed and high-precision die casting machine system development" and "die casting machine automatic feeding and spraying robot development"



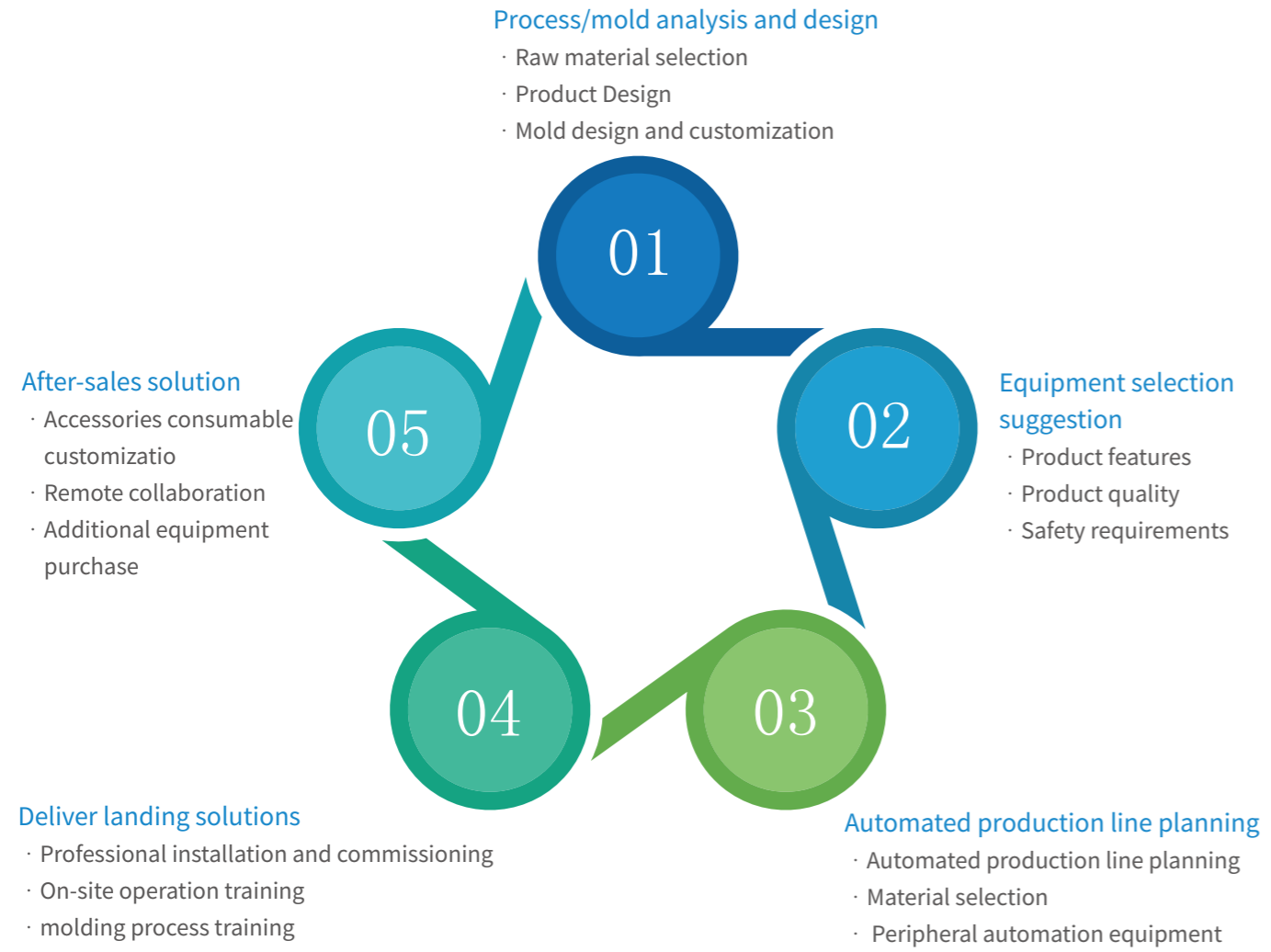
In 2023, Longhua became the Vice president unit of Anhui Import and Export Association



In 2023, Longhua and Bengbu College signed the electronic information provincial peak cultivation discipline co-construction project



# HPDC Standard Solution Customization



# Equipment Overview

<p><b>01</b></p>	<p>Adopt imported magnetic ruler to accurately control the opening and closing process</p>	<p><b>02</b></p>	<p>Use hydraulic motor to drive gear to adjust mold thickness</p>
<p><b>03</b></p>	<p>The hydraulic system adopts Japanese YUKEN hydraulic equipment, which has speed control ability and mold protection function</p>	<p><b>04</b></p>	<p>Independent fast booster accumulator</p>
<p><b>05</b></p>	<p>Semi-closed loop (full closed loop) control system optional</p>	<p><b>06</b></p>	<p>Advanced electrical control system, integrated peripheral automation manipulator equipment.</p>



# Longhua HPDC Series Die Casting Machine

▲ HPDC 140T-800T

▲ HPDC 900T-3000T





# Integrated Die Casting Process Automation Scheme

Highly Integrated, Efficient And Intelligent

Mold constant temperature scheme



Mold temperature machine

Product treatment scheme



Trimming machine

Compressor scheme



compressor

Other equipment



granulator

Water cooler

Proportioning machine

conveyor

Metal melting scheme



Electric furnace

Natural gas furnace

Industrial metal furnace

Sprayer spray scheme



Standard nozzle

Copying nozzle

Integrated solution for taking and spraying parts



Die casting robot

Take-up spray fixture

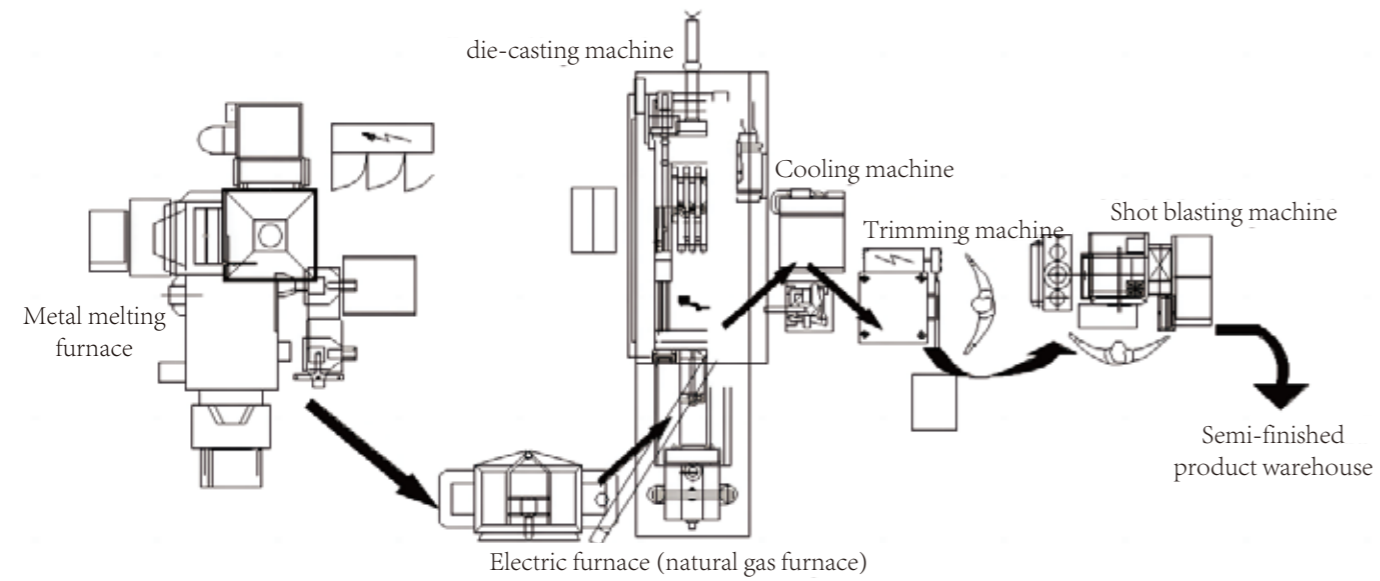




# Integrated Die Casting Layout

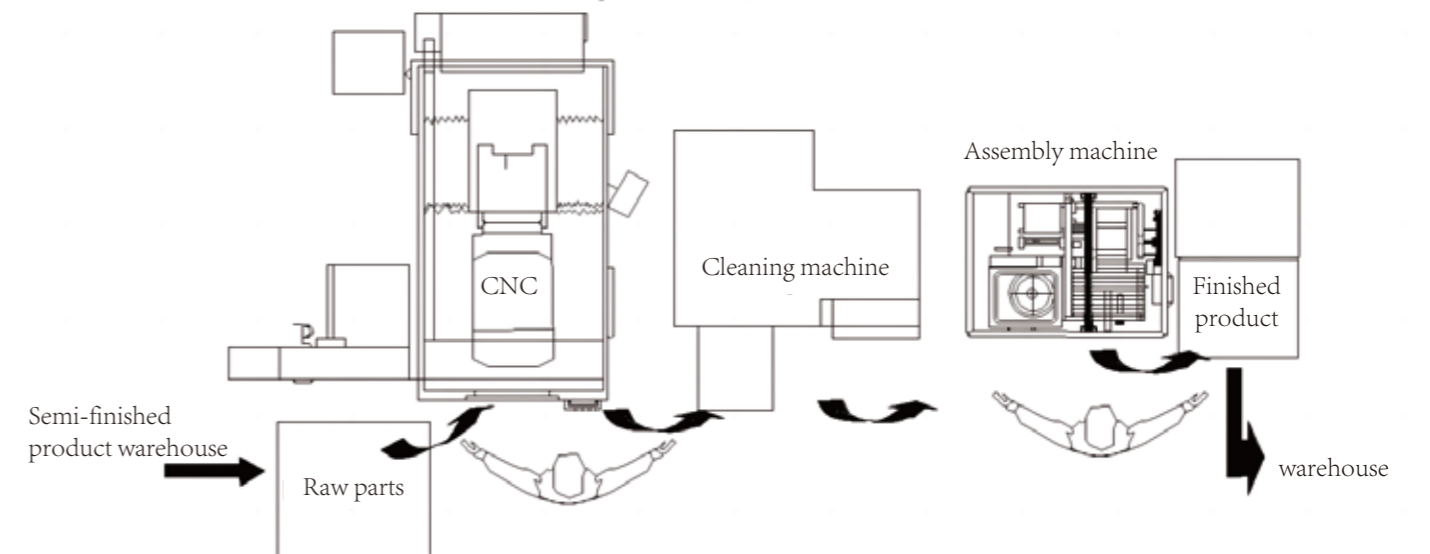
## DIE CASTING UNIT

metal melting   die-casting   Trimming   Shot blasting cleaning



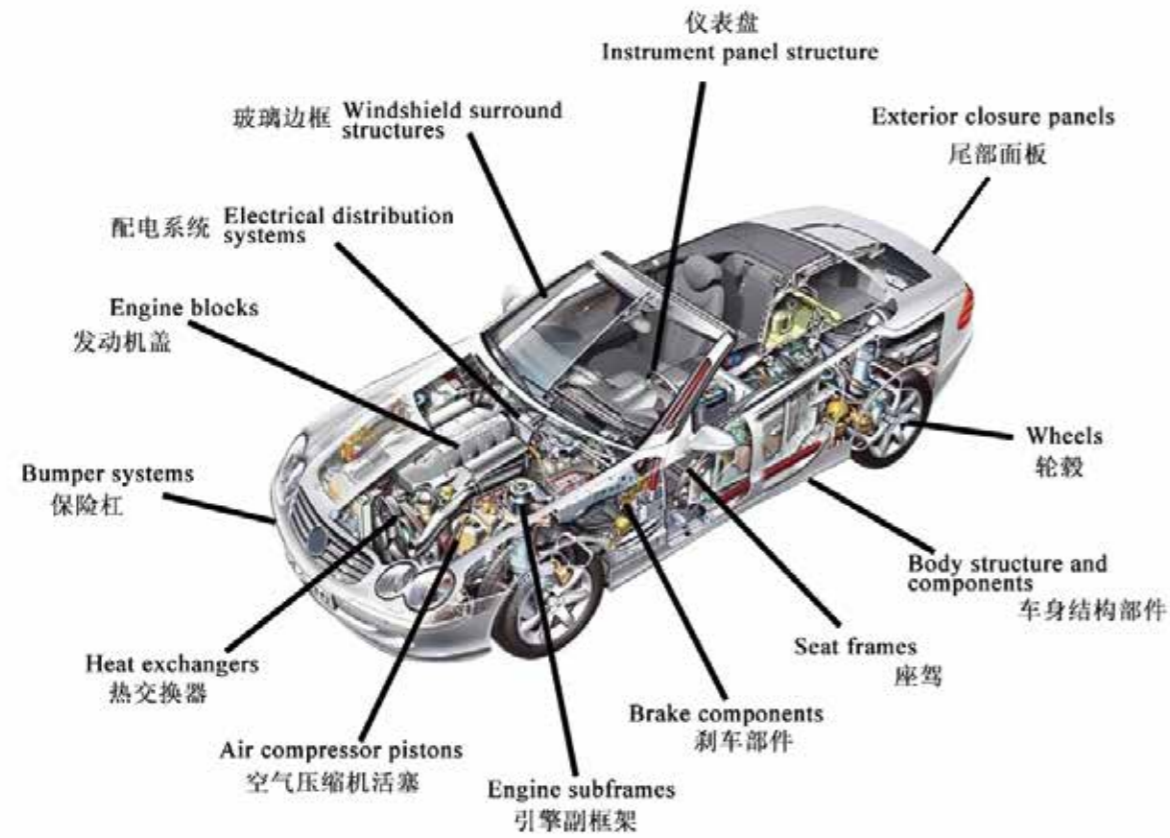
## PROCESSING UNIT

CNC machine   clean   assemble   package



# Customized Die Casting Solution

## ▲ CAR DIE CASTING



Automobile transmission housing



Car generator end cover



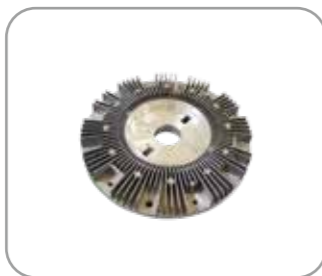
Automobile rear housing



Car shock absorber base



Car pedal



Automobile clutch casting



Car steering gear accessories



Car seat armrest

## ▲ MOTORCYCLE DIE CASTING



Motorcycle crankcase cover



Motorcycle shock absorber



Motorcycle cylinder head



Motorcycle hub inner parts



Motorcycle brake pads





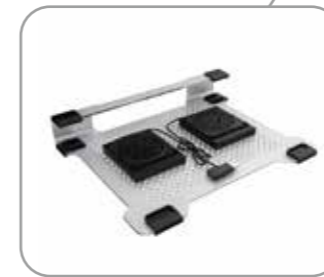
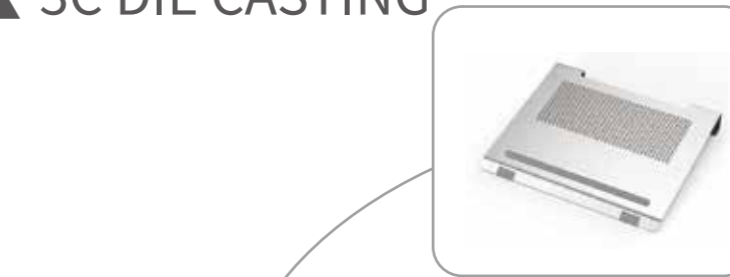
### ▲ LED LIGHT DIE CASTING



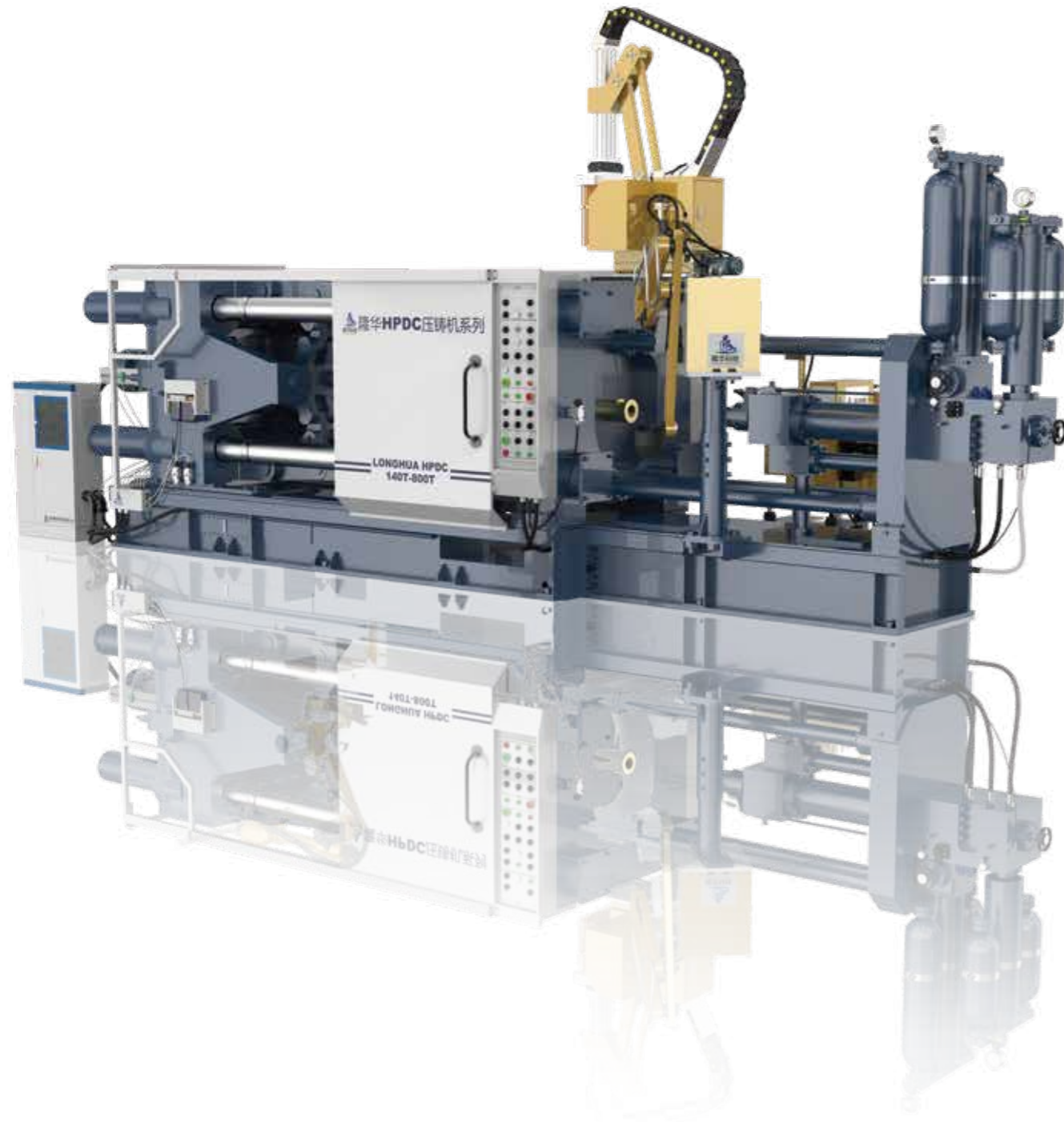
### ▲ RADIATOR DIE CASTING



### ▲ 3C DIE CASTING



# Die Casting Automation Equipment



(Due to the continuous progress of science and technology, the picture, parameter configuration, etc. will not be changed without notice)

## LH Series-Servo Ladle Machine

Models	LH-2#	LH-4#	LH-6#
Machine type	125-400T	500-900T	1100-1600T
The maximum amount of soup given	5KG	10KG	30kg
Feeding accuracy	+/-1%	+/-1%	+/-1%
Feed rate	Max.5-8sec	Max.6-10sec	Max.8-15sec
Inside diameter of the crucible	Min.300-480mm	Min.400-600mm	Min.500-800mm
Soup depth	Max.350mm	Max.350-450mm	Max.500mm
Arm drive power supply	1500W 4P	2000W 4P	2500W 4P
Spoon drive power	750W 4P	1000W 4P	1500W 4P
Power source	2ø-380V 50-60HZ		
Power supply capacity	1.5KVA		
Control system	Longhua Chinese Academy of Sciences jointly developed automated control system		

## LH Series-Servo Sprayer

Machine type	LH-2#	LH-4#	LH-6#
tonnage	125T-400T	500T-900T	1100T-1600T
Die thickness adjustment	±250mm	±350mm	±400mm
Power source	380V50HZ	380V50HZ	380V50HZ
Rise time	1.2s	2.0s	2.5s
power	1.5KW	1.5KW	2.3KW
Sprinkler group spray form	Two layers of dynamic/fixed die	Two layers of dynamic/fixed die	Two layers of dynamic/fixed die
Number of dynamic die	6	10	14
nozzles	6	10	14
Number of fixed die nozzles	L260*W180*H220	L390*W180*H220	L520*W180*H220
Size (mm)			
Control system	Longhua Chinese Academy of Sciences jointly developed automated control system		

## LH Series-Servo Extractor

Machine type	LH-2#	LH-4#	LH-6#
Suitable for die casting models	125-450T	500-900T	1100-1600T
Handle diameter	Φ 40-90mm	Φ 60-120mm	Φ 70-130mm
Drawing force	68kgf	98kgf	150kgf
Drawing force direction adjustable distance	200-250mm	350-400mm	500mm
Arm strength	680-900kgf	1000-1100kgf	1450kgf
Wind pressure source	4-6.5kgf/m <sup>2</sup>	4-6.5kgf/m <sup>2</sup>	4-6.5kgf/m <sup>2</sup>
Air interface	PT3/8"	PT3/8"	PT1/2"
Work load	3-4kg	6-8kg	12-15kg
Fixed mode	stationary	Floor type	Floor type
Servo motor power	0.85KW-2.3KW		
Control system	Longhua Chinese Academy of Sciences jointly developed automated control system		



# LH-HPDC Cold Chamber Die Casting Machine Standard Series Parameter Table

	ITEMS	UNIT	LH-120U	LH130S	LH-160G	LH-160S	LH-180T	LH-200T
Clamping Unit	Clamping Force	KN	1400	1450	1600	1600	1800	2000
	Opening stroke	mm	350	350	360	380	380	380
	Die thickness(Min--Max)	mm	200~500	250~500	200~550	200~550	200~550	200~550
	Space between tie bars	mm	420*420	429*429	440*440	460*460	480*450	480*480
	Ejector stroke	mm	80	85	80	85	80	80
	Ejector force	KN	100	108	100	108	110	110
	Injection Unit	Injection position (0 as center)	mm	0, -100	0, -100	0, -140	0, -140	0, -140
Injection force (intensification)		KN	180	220	180	270	270	270
Injection stroke		mm	320	320	320	340	350	350
Plunger diameter		mm	φ 40 -- φ 60	φ 40 -- φ 60	φ 40 -- φ 60	φ 40 -- φ 60	φ 50 -- φ 70	φ 50 -- φ 70
Injection weight (aluminum)		Kg	1.3	1.6	1.5	1.8	2.4	2.4
Casting pressure (intensification)		MPa	143/92/64	175/112/77	143/92/64	214/137/95	112/78/57	135/93
Max. casting area(40Mpa)		CM <sup>2</sup>	350	362	400	400	450	500
Injection plunger penetration		mm	120	115	120	110	130	135
Diameter of pressure chamber flange		mm	110	110	110	110	110	110
Height of pressure chamber flange		mm	10	10	10	10	10	10
Max.working pressure		MPa	12	12	12	14	14	14
Motor power		Kw	11	11	11	11	11	11
Others		Dimensions (L*W*H)	m	4.6*1.2*1.5	4.6*1.2*1.5	5.2*1.5*2.05	5.5*1.5*2.35	5.22*1.5*2.35
	Machine lifting reference weight	T	4.5	4.5	5.2	6	6.7	7.5
	Oil tank capacity	L	300	480	500	520	600	600

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	ITEMS	UNIT	LH-220T	LH-280T	LH-300T	LH-330T	LH-350T	LH-400T
Clamping Unit	Clamping Force	KN	2200	2800	3000	3300	3500	4000
	Opening stroke	mm	400	460	460	460	520	550
	Die thickness(Min--Max)	mm	200~600	250~650	250~700	250~750	250-750	300~750
	Space between tie bars	mm	510*510	560*560	570*570	600*600	620*620	670*670
	Ejector stroke	mm	90	100	100	110	110	130
	Ejector force	KN	120	110	150	160	160	200
	Injection Unit	Injection position (0 as center)	mm	0, -140	0, -160	0, -160	0, -160	0, -175
Injection force (intensification)		KN	270	330	350	360	410	415
Injection stroke		mm	370	380	410	480	480	570
Plunger diameter		mm	φ 40 -- φ 70	φ 50 -- φ 70	φ 50 -- φ 70	φ 50 -- φ 80	φ 60 -- φ 80	φ 60 -- φ 80
Injection weight (aluminum)		Kg	2.8	3	3.2	3.8	4.5	4.8
Casting pressure (intensification)		MPa	152/106/77	168/116/85	143/99/73	184/127/96	145/106/81	148/109/83
Max. casting area(40Mpa)		CM <sup>2</sup>	550	700	720	865	875	1000
Injection plunger penetration		mm	140	140	140	180	180	210
Diameter of pressure chamber flange		mm	110	110	110	110	110	110
Height of pressure chamber flange		mm	10	10	10	10	10	10
Max.working pressure		MPa	14	14	14	14	14	16
Motor power		Kw	11	15	15	18.5	18.5	22
Others		Dimensions (L*W*H)	m	5.8*1.6*2.4	6.4*1.7*2.8	6.6*1.85*2.8	6.8*1.8*2.7	6.7*1.9*2.88
	Machine lifting reference weight	T	8.5	12	12.5	14.5	15	16
	Oil tank capacity	L	600	650	700	800	810	820

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	ITEMS	UNIT	LH-450T	LH-500T	LH-630T	LH-650T	LH-700T	LH-800T
Clamping Unit	Clamping Force	KN	4500	5000	6300	6500	7000	8000
	Opening stroke	mm	580	580	650	650	720	760
	Die thickness(Min--Max)	mm	320~800	350~850	350~850	350~900	350~900	400~950
	Space between tie bars	mm	760*660	760*760	750*750	810*810	860*860	910*910
	Ejector stroke	mm	120	140	150	160	160	180
	Ejector force	KN	240	250	315	315	315	315
Injection Unit	Injection position (0 as center)	mm	0, -220	0, -220	0, -250	0, -250	0, -250	0, -250
	Injection force (intensification)	KN	450	480	590	590	590	680
	Injection stroke	mm	580	580	600	650	700	760
	Plunger diameter	mm	φ 70 -- φ 90	φ 70 -- φ 90	φ 70 -- φ 90	φ 80 -- φ 100	φ 80 -- φ 100	φ 80 -- φ 100
	Injection weight (aluminum)	Kg	6.9	7	7.2	10	10	11.2
	Casting pressure (intensification)	MPa	135/117/92	175/200/250	153/117/92	123/79	117/92/75	135/106/86
	Max. casting area(40Mpa)	CM <sup>2</sup>	1250	1250	1575	1525	1750	2000
	Injection plunger penetration	mm	250	250	250	280	250	295
	Diameter of pressure chamber flange	mm	130	130	130	165	165	200
	Height of pressure chamber flange	mm	15	15	15	15	15	20
Others	Max.working pressure	MPa	14	14	14	14	14	14
	Motor power	Kw	22	22	30	30	30	30
	Dimensions (L*W*H)	m	7.7*2.1*3.1	7.75*2.28*3.14	8*2.2*3	8*2.1*3.1	8.4*2.5*3	8.7*2.5*3
Others	Machine lifting reference weight	T	20	22	25	30	32	38
	Oil tank capacity	L	1000	1000	1050	1100	1100	1300

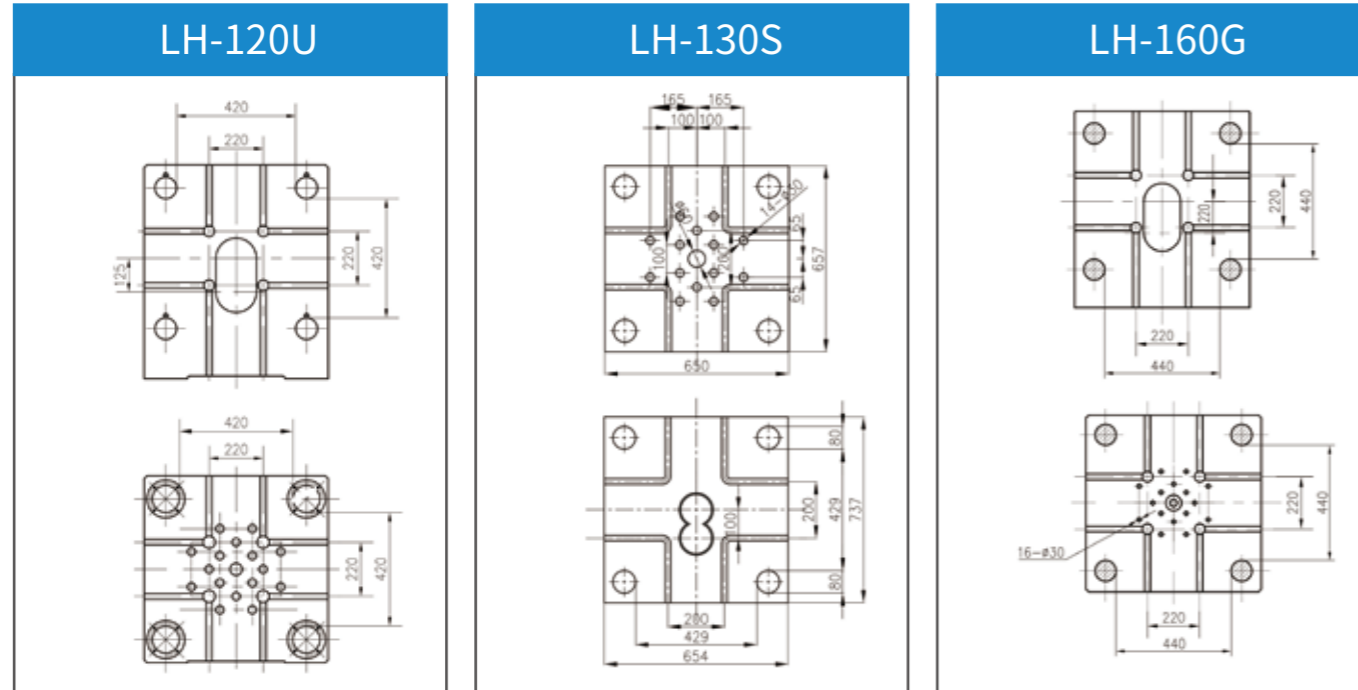
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	ITEMS	UNIT	LH-900T	LH-1000T	LH-1250T	LH-1600T	LH-2000T	LH-2500T
Clamping Unit	Clamping Force	KN	9000	10000	12500	16000	20000	25000
	Opening stroke	mm	800	880	1000	1200	1400	1500
	Die thickness(Min--Max)	mm	400~1000	450~1150	450~1180	500~1400	650~1600	800~1800
	Space between tie bars	mm	960*960	1030*1030	1100*1100	1250*1250	1350*1350	1500*1500
	Ejector stroke	mm	190	200	200	250	300	300
	Ejector force	KN	360	500	570	570	650	750
Injection Unit	Injection position (0 as center)	mm	0, -250	0, -300	-160, -320	-175, -350	-175, -350	-200, -400
	Injection force (intensification)	KN	775	882	1075	1298	1510	1800
	Injection stroke	mm	760	800	880	930	960	1050
	Plunger diameter	mm	φ 80 -- φ 110	φ 90-- φ 120	φ 100-- φ 140	φ 110-- φ 150	φ 130-- φ 170	φ 140-- φ 180
	Injection weight (aluminum)	Kg	13.5	17	25.4	30.8	40	50
	Casting pressure (intensification)	MPa	154/121/81	138.6/78	137/70	174/32.3	113/66	110/66
	Max. casting area(40Mpa)	CM <sup>2</sup>	2250	2500	3125	4000	5000	6250
	Injection plunger penetration	mm	300	300	320	360	400	450
	Diameter of pressure chamber flange	mm	200	240	240	260	260	280
	Height of pressure chamber flange	mm	20	20	25	30	30	30
Others	Max.working pressure	MPa	14	16	16	16	16	16
	Motor power	Kw	30	45	30*2	37*2	55*3	75*2
	Dimensions (L*W*H)	m	8.7*2.5*3	9.3*3.9*4	11.3*4.3*4.5	12.2*4.7*4.6	13.5*4.7*4.8	14.7*5*5
Others	Machine lifting reference weight	T	45	70	80	95	120	160
	Oil tank capacity	L	1500	2000	3000	3000	3600	4700

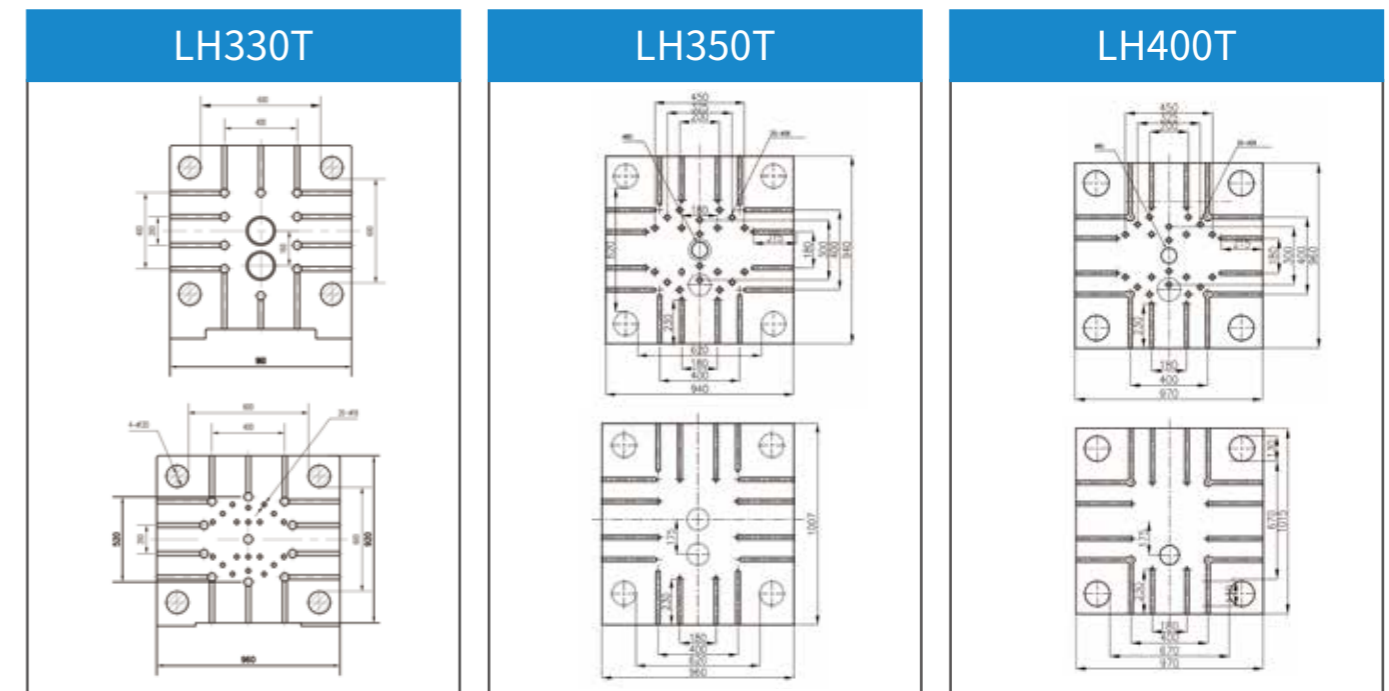
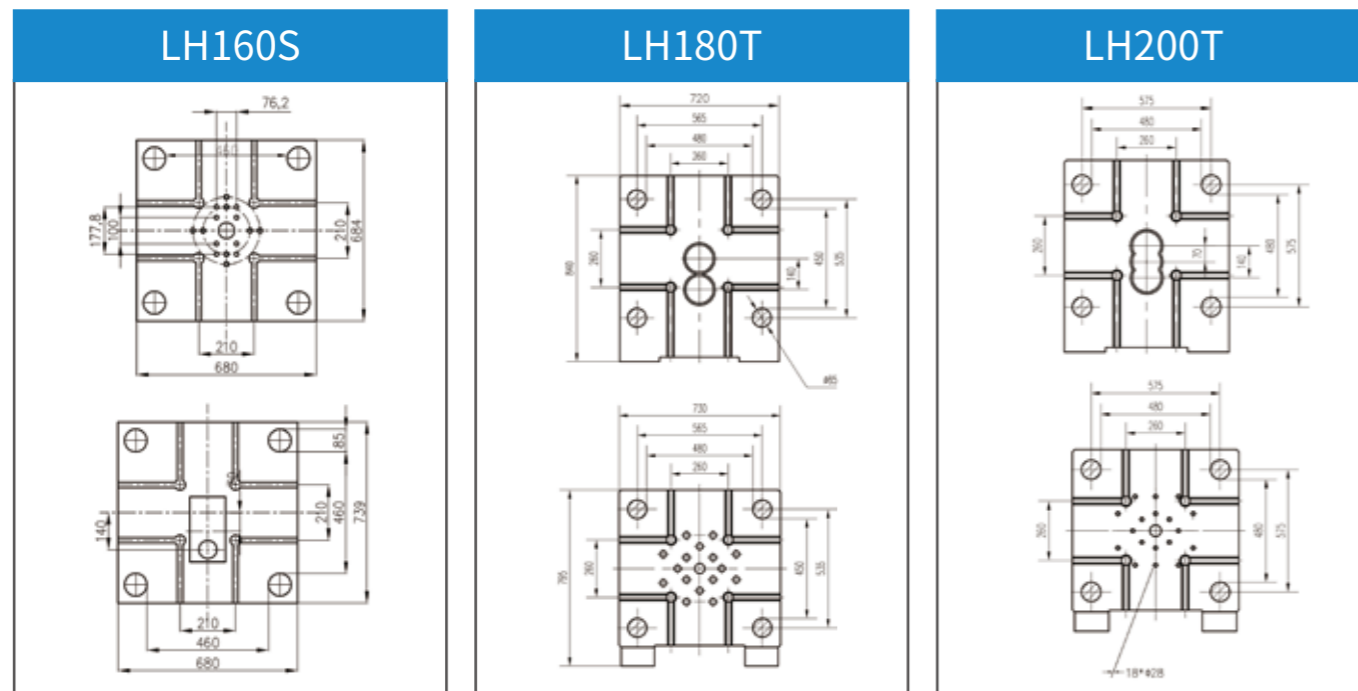
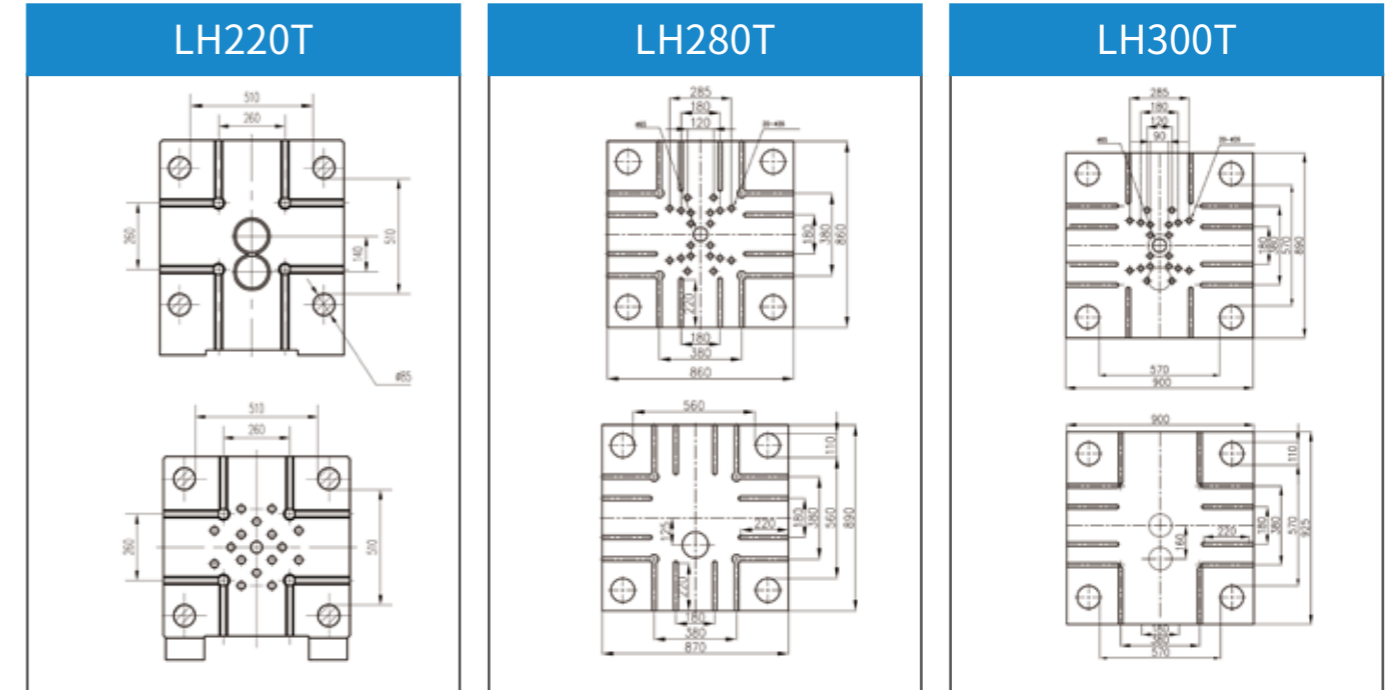
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### Template Size Drawing



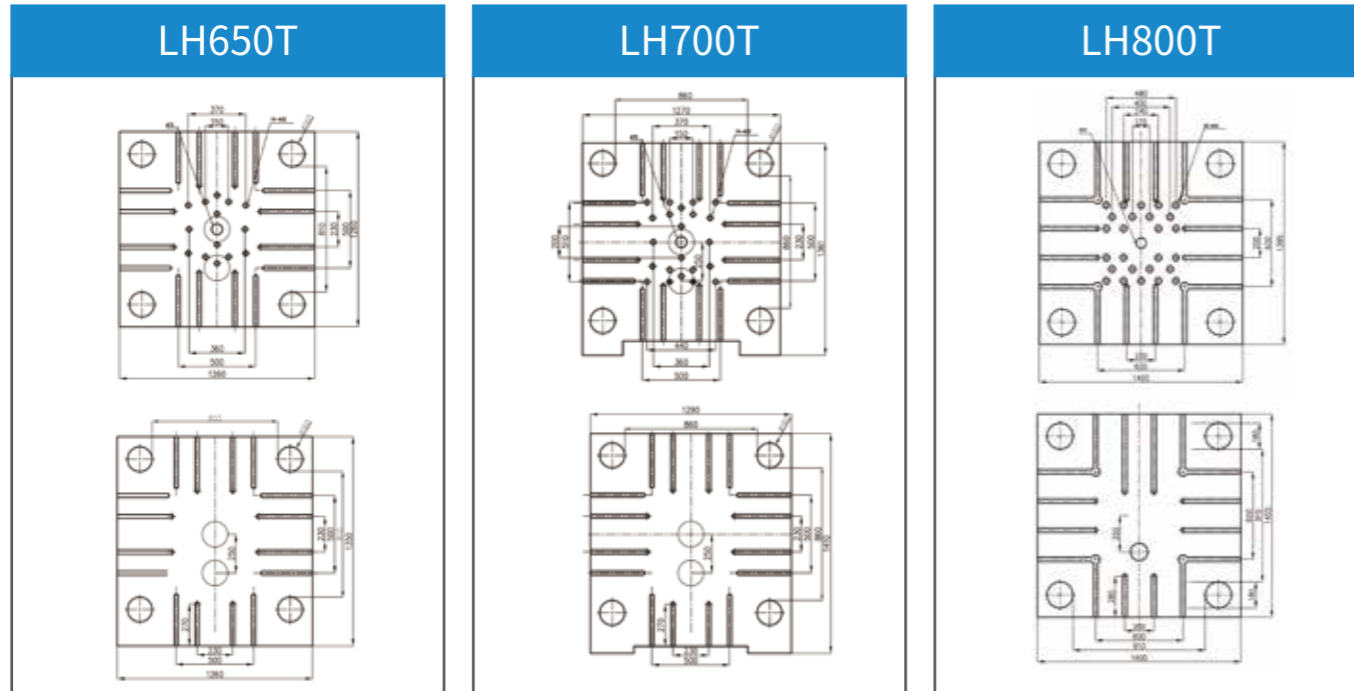
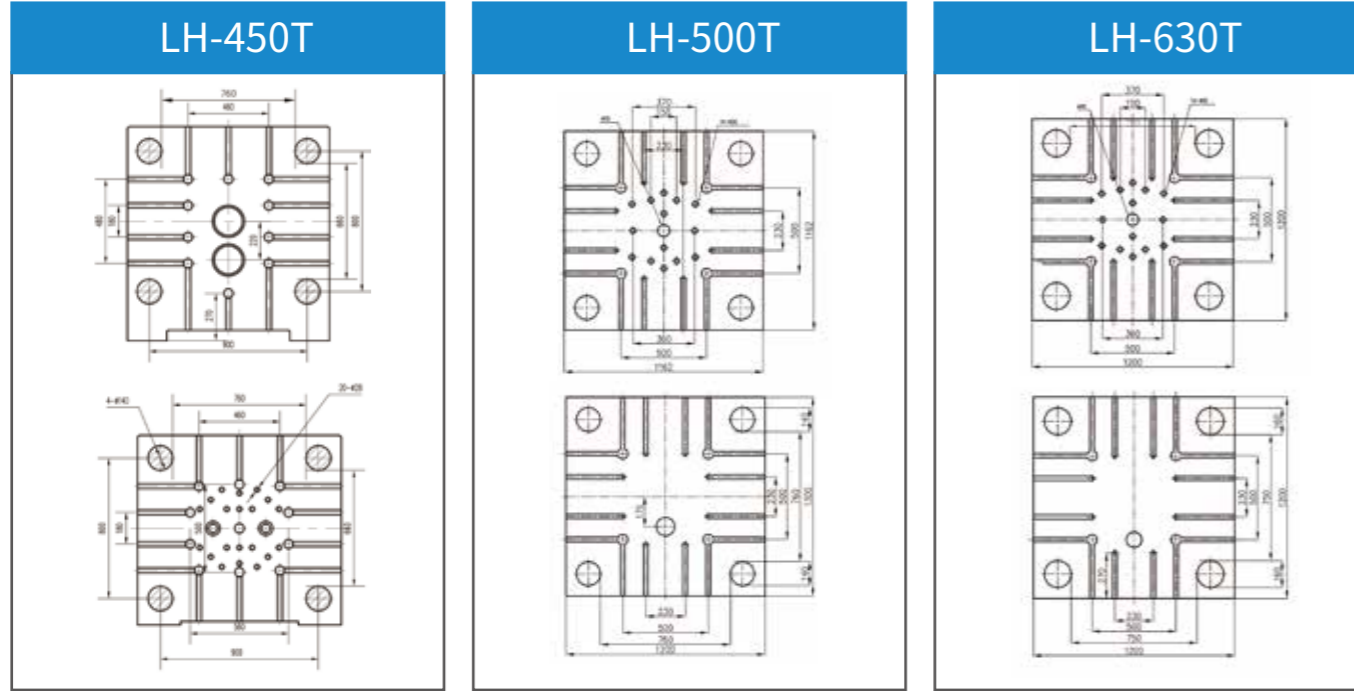
### Template Size Drawing



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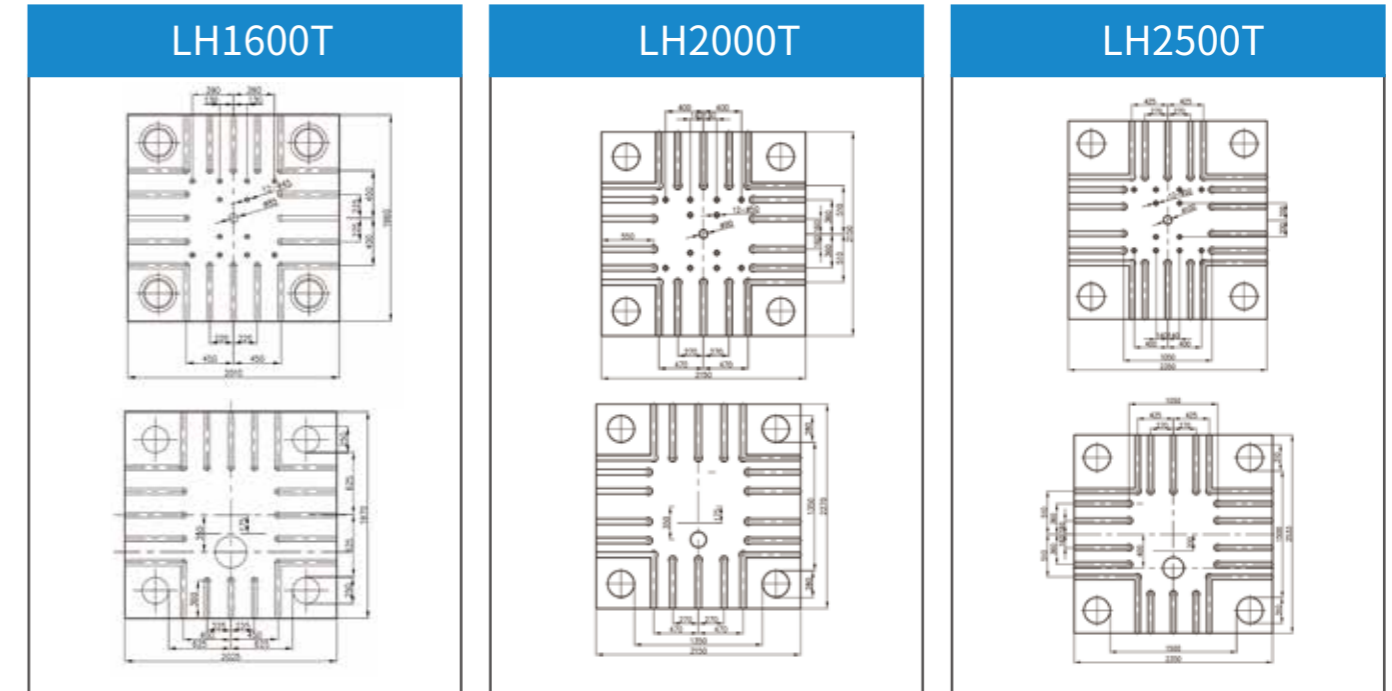
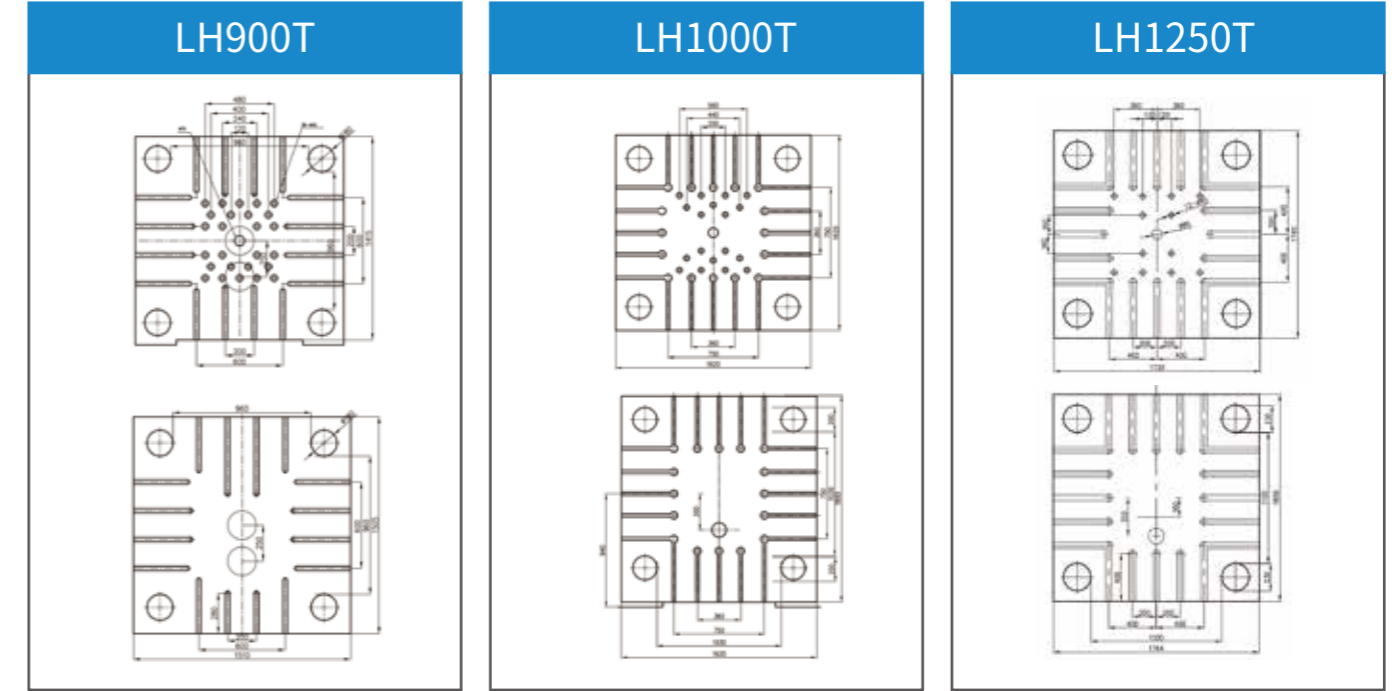
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# Template Size Drawing



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# Template Size Drawing



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## Accessory Consumables



Nickel base punch



Shot chamber



Injection rod



connector



Release agent  
in iron drum



Slag remover



Serving ladle



Black particle oil



Oil filter truck



Distribution  
cabinet



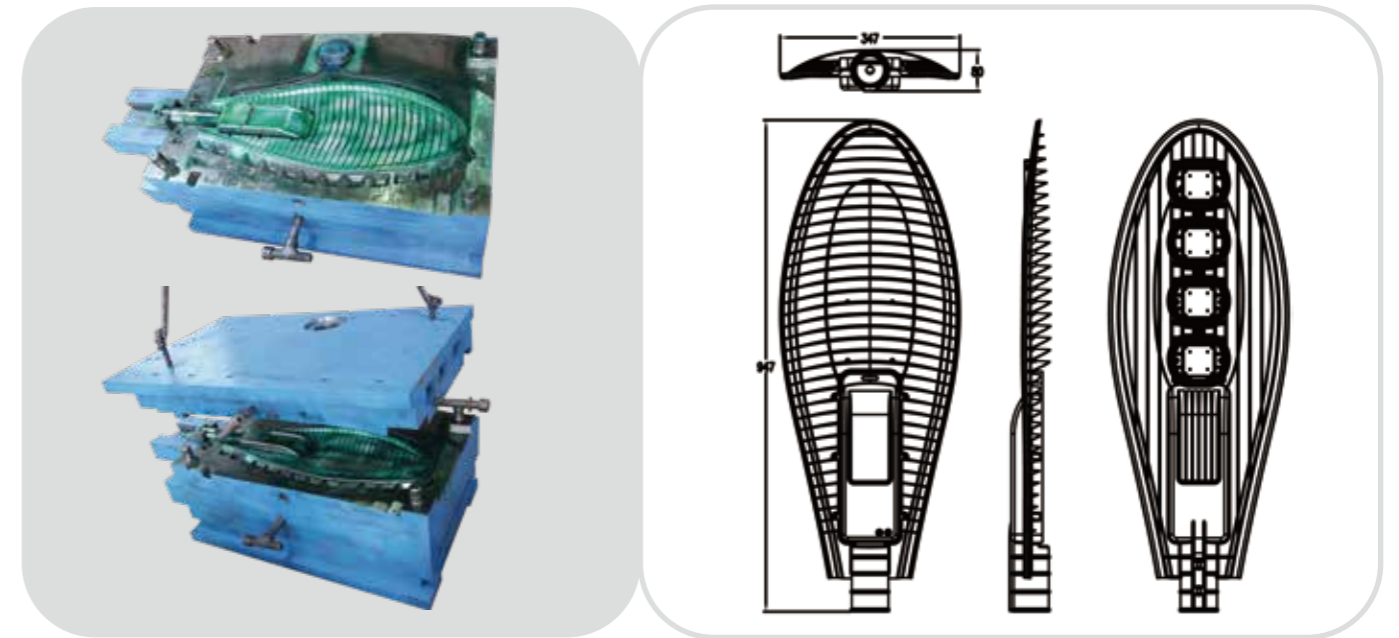
Double barrel  
spray gun



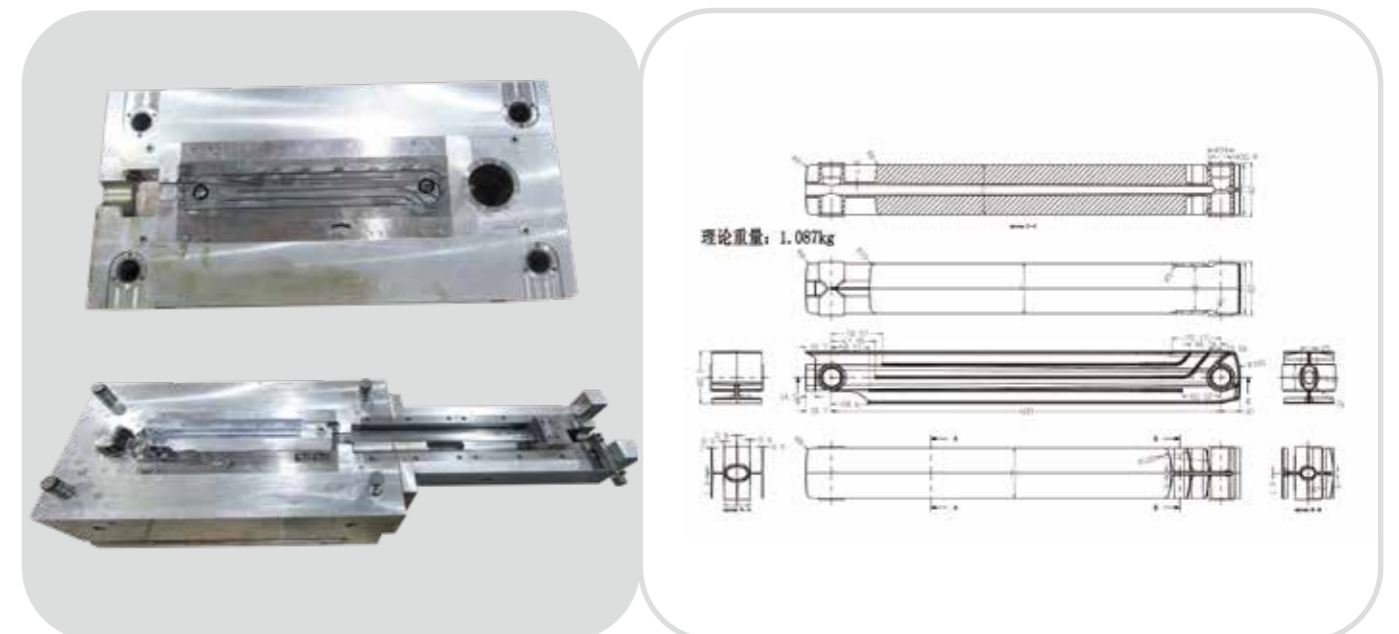
Graphite silicon  
carbide crucible

## Mold Customization

### ▲ Case 1: Street lamp mold customization



### ▲ Case 2: Radiator mold customization



# Longhua Automation Integration Solution Industrial Robot



Type		LH20-2000	LH50-2230
Axes		6	6
Load		20Kg	50Kg
Manipulator	Weight	280Kg	550Kg
	Reach	2000mm	2238mm
Positioning accuracy	Position repeatability	±0.03mm	±0.06mm
	Ingress Protection	IP54 ( Wrist : IP67)	IP54 ( Wrist : IP67)
Mounting		Floor/ wall/ ceiling	Floor
Working range	Axis 1 rotation	-170°/+170°	-185°/+185°
	Axis 2 arm	-95°/+155°	-75°/+145°
	Axis 3 arm	-95°/+170°	-120°/+170°
	Axis 4 wrist	-185°/+185°	-350°/+350°
	Axis 5 bend	-135°/+135°	-120°/+120°
	Axis 6 turn	-400°/+400°	-360°/+360°
Rotation rate	Axis 1 rotation	175°/s	180°/s
	Axis 2 arm	175°/s	180°/s
	Axis 3 arm	170°/s	180°/s
	Axis 4 wrist	355°/s	260°/s
	Axis 5 bend	355°/s	255°/s
	Axis 6 turn	600°/s	370°/s
Controllers		LH-20	LH-50
Mounting conditions	Ambient temperature: 0~45°C		
	Humidity: not more than 95% at constant temperature without condensation. Allowable altitude: not more than 1000m above sea level. No corrosive, flammable or explosive gases.		

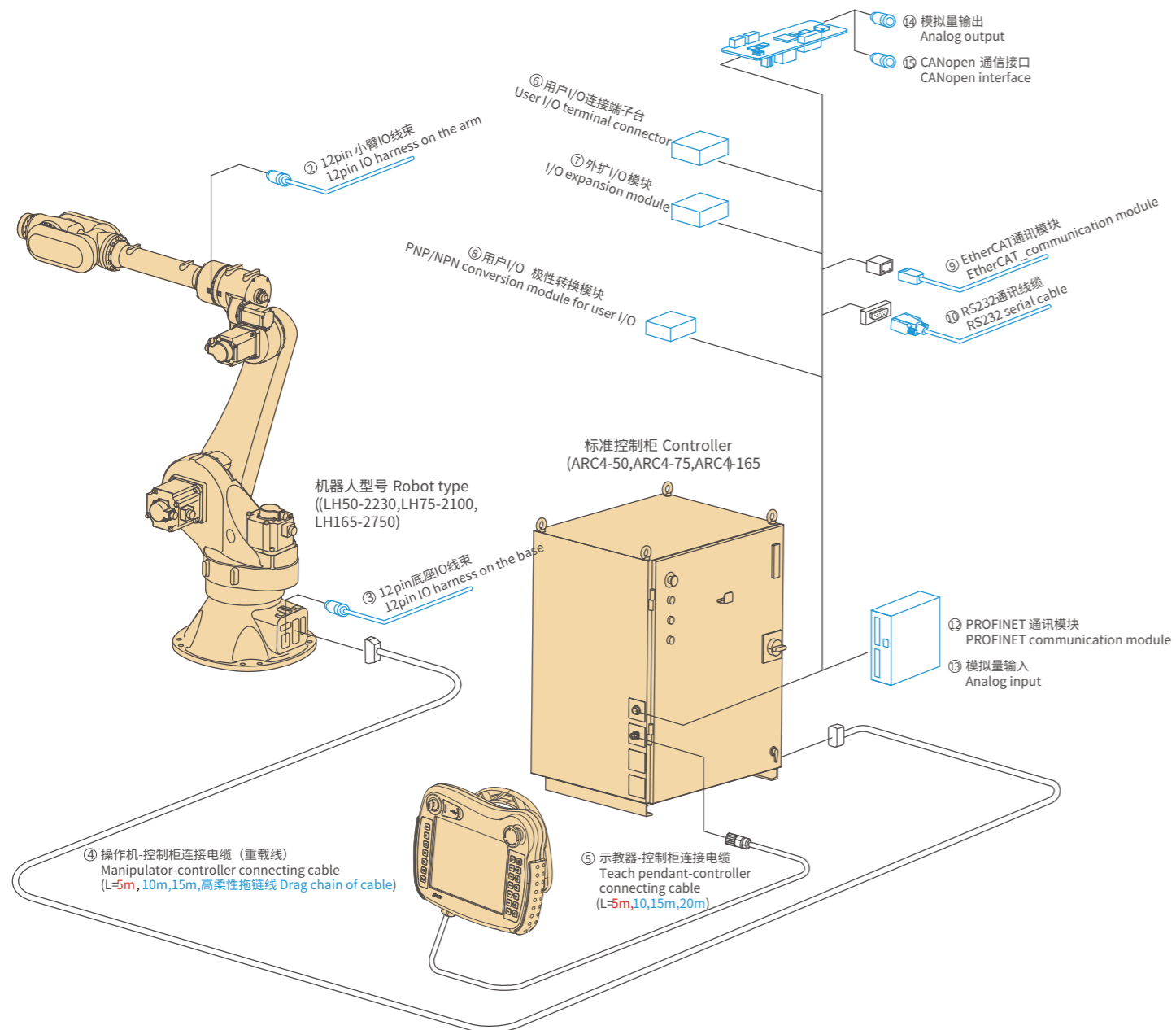
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Type		LH75-2100	LH165-2750
Axes		6	6
Load		75Kg	165Kg
Manipulator	Weight	530Kg	1200Kg
	Reach	2112mm	2750mm
Positioning accuracy	Position repeatability	±0.06mm	±0.1mm
	Ingress Protection	IP54 ( Wrist : IP67)	IP54 ( Wrist : IP67)
Mounting		Floor	Floor
Working range	Axis 1 rotation	-170°/+170°	-170°/+170°
	Axis 2 arm	-75°/+145°	-60°/+85°
	Axis 3 arm	-120°/+170°	-120°/+155°
	Axis 4 wrist	-350°/+350°	-360°/+360°
	Axis 5 bend	-120°/+120°	-125°/+125°
	Axis 6 turn	-360°/+360°	-360°/+360°
Rotation rate	Axis 1 rotation	177°/s	125°/s
	Axis 2 arm	178°/s	113°/s
	Axis 3 arm	173°/s	125°/s
	Axis 4 wrist	260°/s	180°/s
	Axis 5 bend	255°/s	175°/s
	Axis 6 turn	370°/s	280°/s
Controllers		LH-75	LH-165
Mounting conditions	Ambient temperature: 0~45°C		
	Humidity: not more than 95% at constant temperature without condensation. Allowable altitude: not more than 1000m above sea level. No corrosive, flammable or explosive gases.		

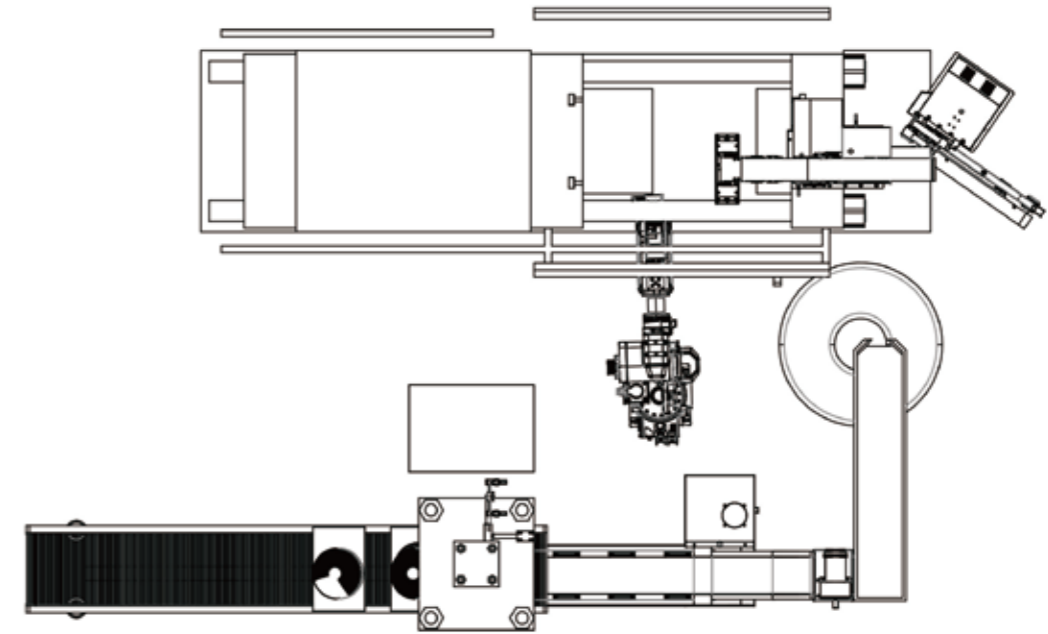
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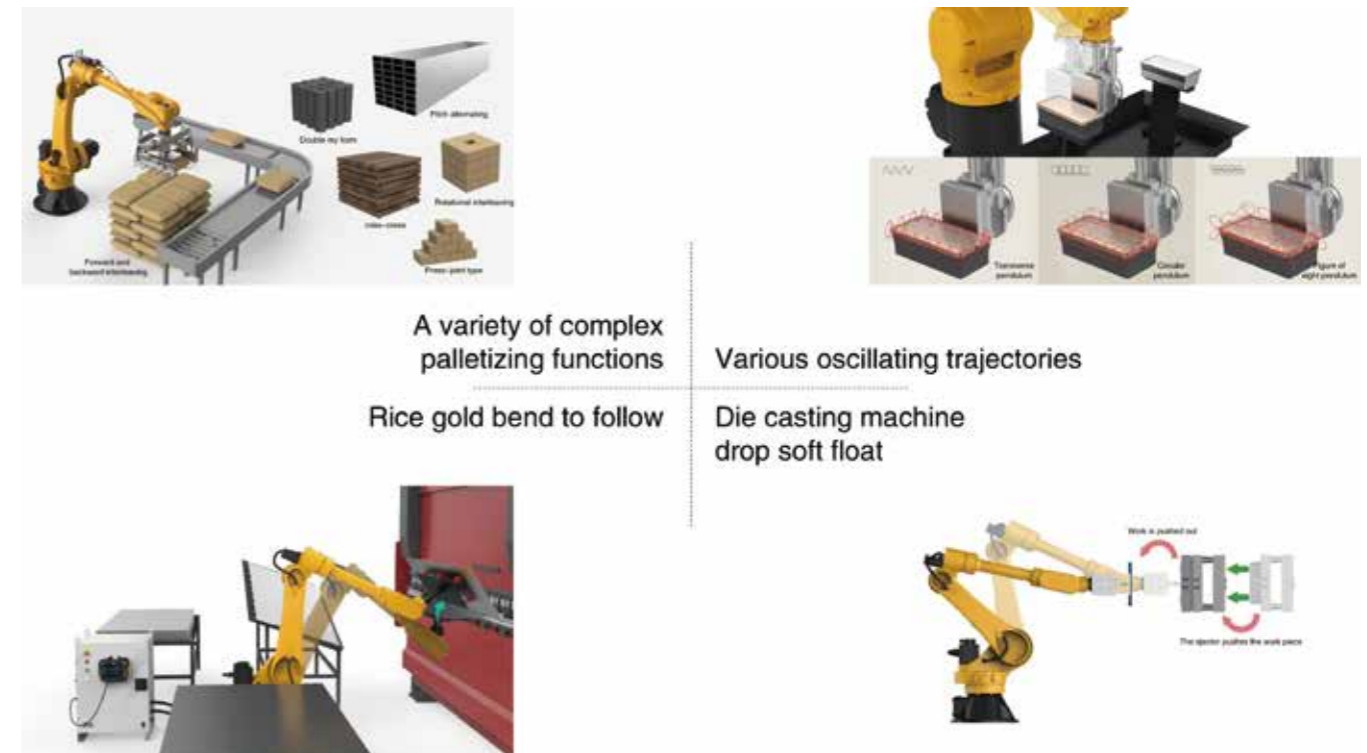
# ROBOT PARTS DRAWING



# DIE CASTING GUIDE DESIGN



# ROBOT APPLICATION RANGE





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