

NINGBO HAITIAN DRIVE SYSTEMS CO., LTD.

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2014/02

SERVO ROBOT

Innovation Drives Future.



Innovation Drives Future.



Company Profile

One of the four main business of Haitian Group

Ningbo Haitian Drive Systems Co.,Ltd. is one of the four main business of Haitian Group. It has been developing into a specialized manufacturer in electric transmission industry, Whose products are including servo motor ,control, drive, electrical forklift, functional component and robot, and in hydraulic transmission industry, whose products are including hydraulic motor, hydraulic pump and hydraulic components

Cooperate with Star Robot

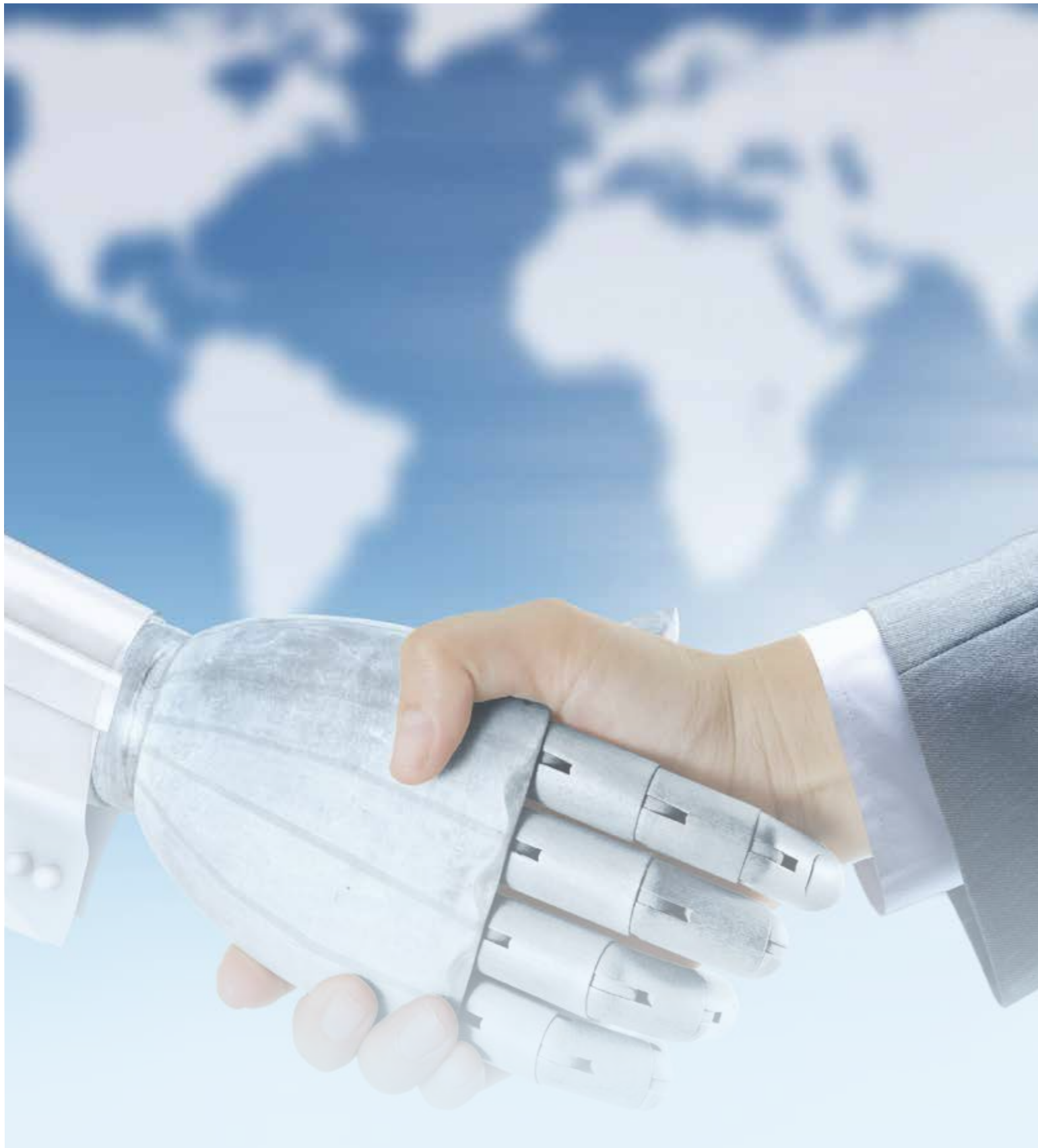
In 2011, Haitian Drive started to cooperate with world-class robot manufacturer, Star Seiki Co.,Ltd., on researching and developing of the new technologies. Among the achievements, the all servo large scale robot series has been ranked in the top of the world.

Professional robot manufacturer

Featured with a professional R&D team, and guided by the philosophy of high energy efficiency, Haitian Drive is continuously improving the robot technology so as to meet the multi-requirements of the customers. The sales of robot business got rapid increase in 2012 compared with 2011.

The mature platform of Haitian Group

Depending on the mature platform of Haitian Group, Haitian Drive has a strong financial strength, complete sales and service net, strict quality management system. Hilectro is a rapid developing brand in Chinese and overseas market now.



Cooperate with Star Robot



Committed in researching the high end products, Haitian Drive is not only focus on the high energy efficiency but also chasing the better product performance. In July 2010, Haitian Drive started to cooperate with the largest robot manufacturer in the world –Star Automation. INC. from Japan. The two sides cooperate to research the new technology. As one of the R&D achievements, the all-servo large scale robots, whose commended IMM covers 800-4000T . Haitian Drive becomes one of the minority large scale robot producers in China.

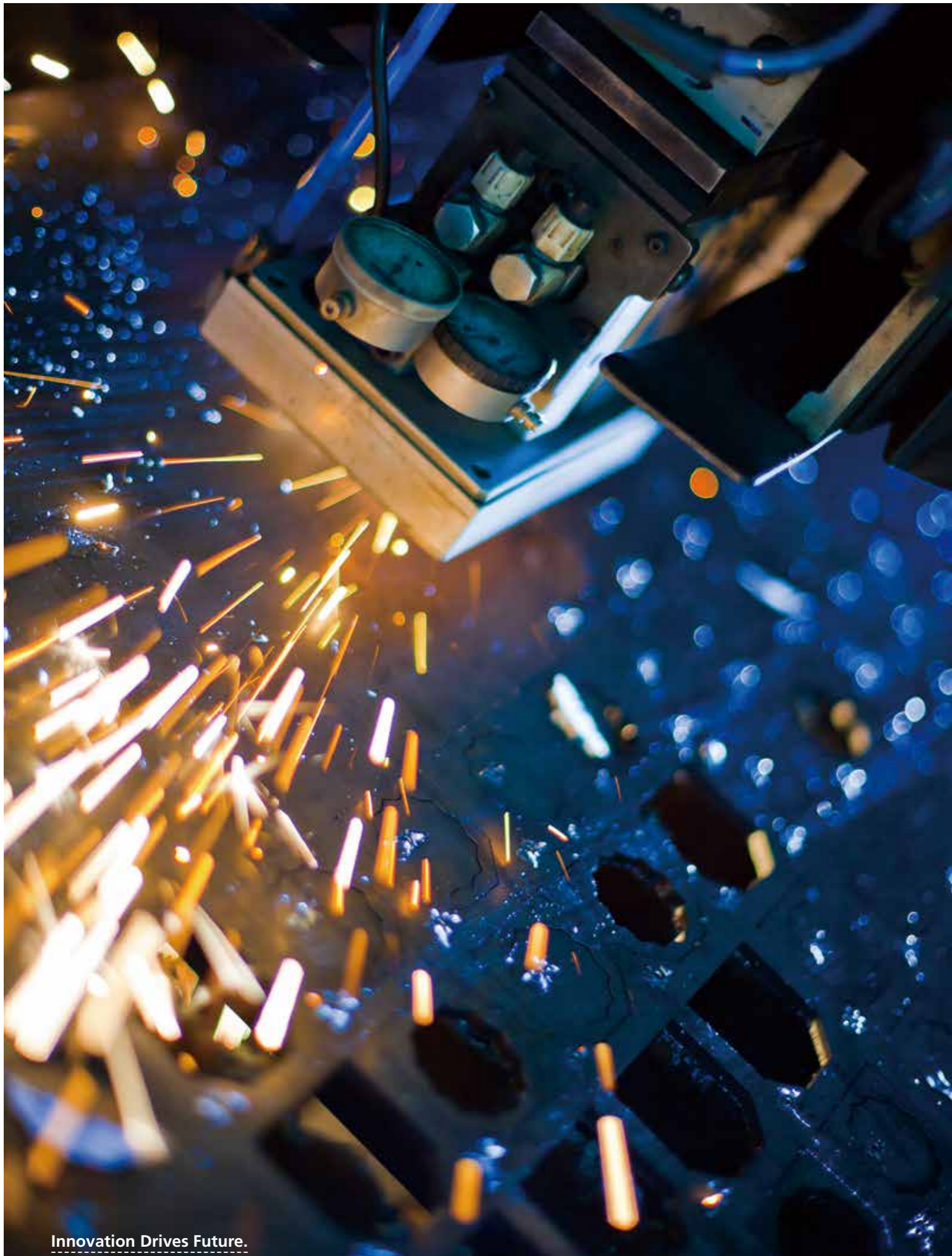
- > The technology is supplied by STAR, the new prototype will be developed by the two sides together.
- > The main components including the control, vertical parts are all improved from Japan.
- > The technique materials and manuals are supplied by STAR.
- > STAR is responsible for the design and shipment of the fixtures, and help Haitian Drive to make the robot to meet the requirements of customers.
- > STAR will send the technique engineers to China regularly to train the Haitian employees in manufacturing, quality control, shipment, sales, and maintains etc .



1
2
3

1. The Japanese and Chinese engineers in technique discussion
2. The largest industrial media reported the news of the cooperation
3. The large scale series during assembling

Manufacturing and Assembling Strength

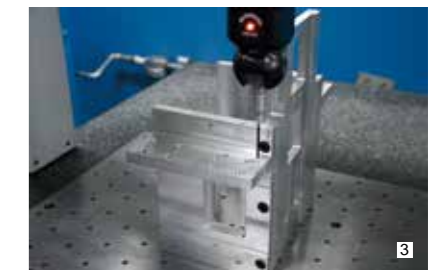


- 1 Large professional assembly workshop
- 2 Large scale finishing workshop
- 3 Coordinate precision measurement
- 4 Large scale assembly lines
- 5 Skilled assembly and testing employees



Depending on the financial strength of Haitian Group, Haitian Drive has a good platform for development.

- > At every stage of production, our machines are approved by very strict quality controls. The integrated components and high-grade workmanship provide the machines with robustness, dependability and longevity which can fulfill all international quality standards.
- > Having a full set of processing equipment, for example the large gantry machining center, large CNC machine center, robot welding process, professional coating process etc. Haitian Drive control every production steps strictly.
- > The Chinese and Japanese R&D team actively optimizes our technology with energy-efficient, cost effective and innovative concepts at every level.
- > Haitian Drive transfers innovative technological developments into profitable solutions by using intelligent, standardized production processes. Customers with the highest requirements attain critical competitive advantages by Hilectro robot.



Comprehensive Sales and Service Net



■ Headoffice, Ningbo, China
■ Agents map in Chinese market



Depending on the mature developing platform, Haitian Drive has a strong and complete sales and service net. Haitian Group has more than 60 distribution centers in more than 130 countries and regions. In China in particular, Haitian is represented with distribution and service centers in over 24 provinces. The company can supply the high efficient service anytime and anywhere.

INNOVATION



Oriented by the customers profits, we use the Japan imported control and advanced control system which can meet the requirements of easy operating, precise positioning, precision control etc.

Control Advantagtes

- > Embedded real-time systems, high reliability, high scalability, high integration
- > Color touch screen, full graphical interface, simple operation (7 inch, 5.6inch, 3.6 inch)
- > Euromap 12 standard, the signal between the IMM and the robot can be interlocked safely. (OP:Euromap67)
- > Release the material pin in the process, the release position and order can be set up.
- > Air pressure checking, can monitor the air in pressure and adsorption pressure, and show the figures.
- > Packing arrangement functions: standard function (256)
- > Has fixed guide mode and free guide mode available for select
- > Large memory capacity
- > The arm of the robot can be in, out, beside the mold.
- > Memorable process, .can support USB offline editing
- > Automatically detecte the error and show in the screen



Control of single axle servo robot

- XTB-700I(H)D
- XTB-800I(H)D
- XTB-900I(H)D
- XTB-1000I(H)D



Control of all servo robot

- XTA-800I(H)D
- XTA-900I(H)D
- XTA-1100I(H)D
- XTA-1300I(H)D
- XTA-1500I(H)D



Control of all servo robot

- XTA-800I(H)D
- XTA-900I(H)D
- XTA-1100I(H)D
- XTA-1300I(H)D
- XTA-1500I(H)D
- XTA-1700I(H)D
- XTD-1800ID
- XTD-2500ID



Control of all servo large scale robot

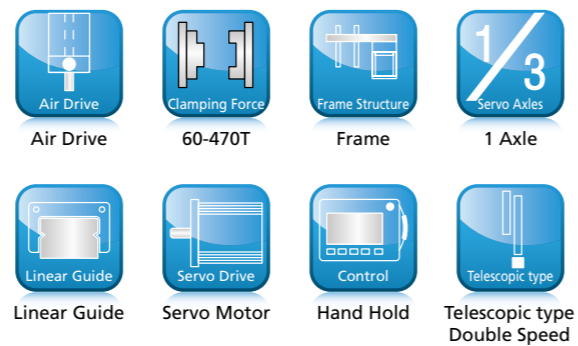
- XTA-1800I(H)D
- XTA-2000ID

XTB Single Axle Servo Series, Recommended injection molding machines: 60-470T.



Single axle servo series

- > The single servo motor drive is imported from Panasonic, which can realize fast operating, precise positioning, and high controllability.
- > Equipped with the precise linear guide which can ensure the stable, precise, wear-resistant and long using life even in high speed operating.
- > The Y axle is single beam. The main structure uses the qualified steel, which can satisfy the requirements of high rigid, high precision and high speed.
- > Compact design, optimize and integrate the drive cabinet, save the space



XTB-700I(H)D	XTB: Single axle servo series
XTB-800I(H)D	700: Vertical stroke
XTB-900I(H)D	I: Single arm
XTB-1000I(H)D	D: Telescopic type

Customer of XTB: Ningbo ** Mold Co., Ltd
Injection Molding Machine: Haitian Mars Series

Robot: XTB-700I(H)D/XTB-800I(H)D/XTB-900I(H)D
Products: Plastics cup

Advantages in Details



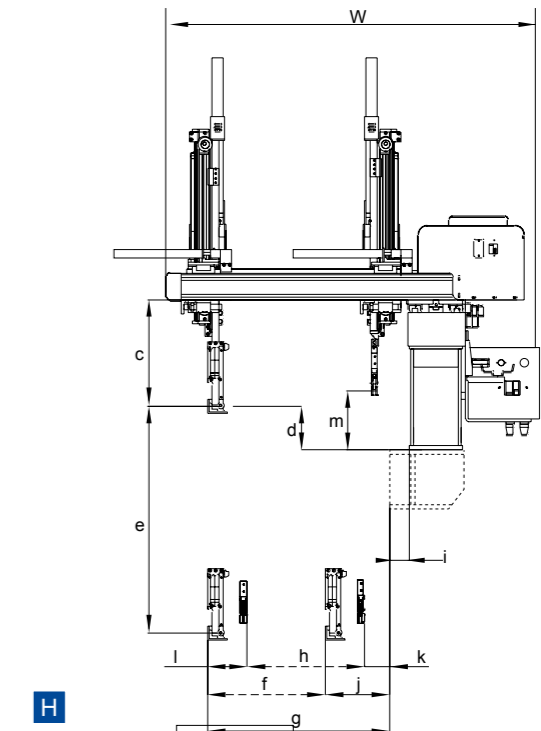
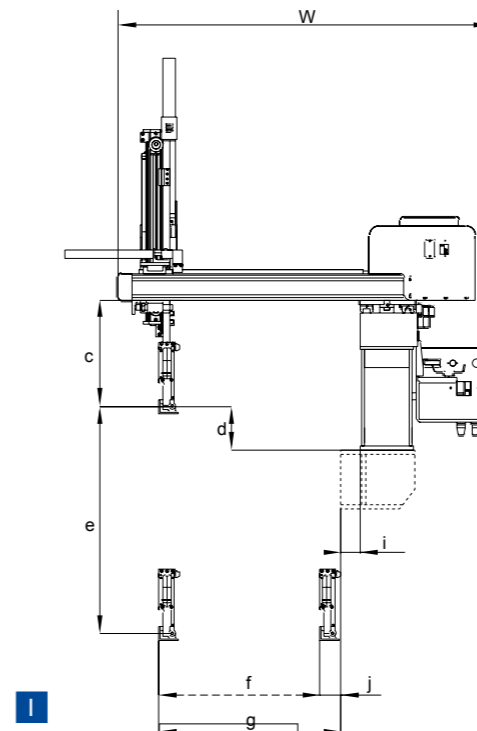
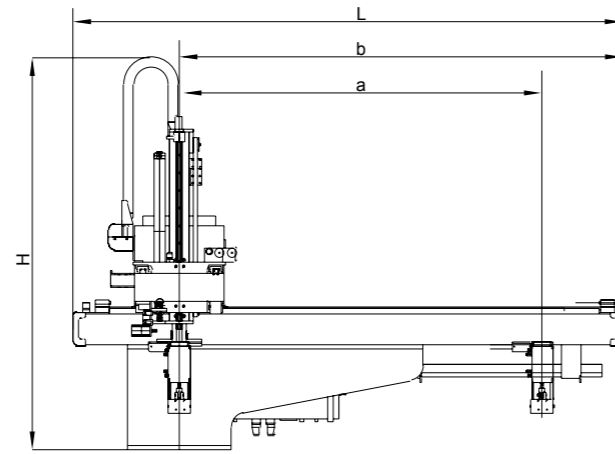
The cylinder imported from Japan provides small friction and long life. The imported pneumatic components with good tightness and reliable performance.



The high qualified towline and cable provides high flexibility, low noise and long using life.

Innovation Drives Future.

**XTB Single Axle Servo Series,
Recommended injection molding
machines: 60-470T.**



Main Specification and Size

		XTB-700		XTB-800		XTB-900		XTB-1000		
		60-160T		160-250T		250-380T		380-470T		
		XTB-700ID	XTB-700HD	XTB-800ID	XTB-800HD	XTB-900ID	XTB-900HD	XTB-1000ID	XTB-1000HD	
	Model									
	Recommended IMM: 60-4700T									
	I(H)D									
L	Shape Dimension(Long)	1862	1862	2042	2042	2222	2222	2670	2670	L
W	Shape Dimension(Wide)	1300	1300	1480	1480	1480	1480	1720	1720	W
H	Shape Dimension(High)	1300	1300	1395	1395	1420	1420	1570	1570	H
a	Traverse stroke	1200	1200	1400	1400	1600	1600	1800	1800	a
b	Listallation dimensions side by side	1500	1500	1680	1680	1898	1898	2110	2110	b
c	Bottom of crosswise to chuck mount PS	364	364	364	364	364	364	456	456	c
d	Products side vertical standby	130	130	130	130	130	130	165	165	d
e	Products side vertical stroke	700	700	800	800	900	900	1000	1000	e
f	Products side crosswise stroke max (Cylinder trip)	350	350	350	350	350	350	450	450	f
g	Products side crosswise reach max (Adjustable)	550	550	730	730	730	730	930	930	g
h	Runner side crosswise stroke max (Cylinder trip)	-	200	-	200	-	200	-	200	h
i	Base offset	100	100	100	100	100	100	100	100	i
j	Products side crosswise standby min	40	150	40	150	40	150	60	280	j
k	Runner side crosswise standby min	-	60	-	60	-	60	-	70	k
l	Products and Runner side proximity min	-	120	-	120	-	120	-	230	l
m	Runner side vertical standby	-	195	-	195	-	195	-	185	m
Comment		*1: XTB-700 a can be lengthened to 1400 1600		*2: XTB-800 a can be lengthened to 1600						

Basic Specifications

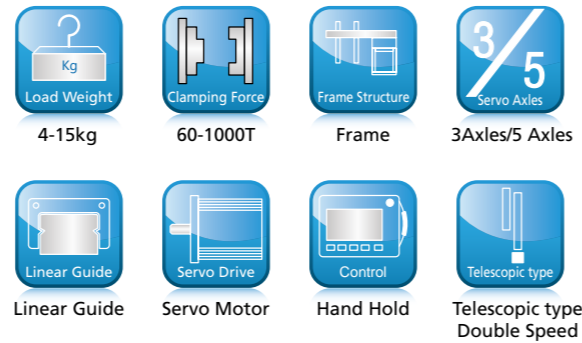
Model	Power Consumption	Air Consumption	Net Weight	Power	Power Capacity	Compressed Air	Drive System	Dry Take Out Time	The cycle time (excluding fixture)	Max Load incl chunk weight	Posture Torque
XTB-700I(H)D	0.7KW	16/22NL/cycle	200kg/220kg	Single phase AC 200-220V±10% 50/60HZ	1.6KVA	0.6Mpa	the traverse axis is servo motor;(AC SERVO); the crosswise axis, vertical axis and runner side is air driven	2.5S	6.0S	4kg	5Nm
XTB-800I(H)D	0.7KW	18/22NL/cycle	220kg/240kg	Single phase AC 200-220V±10% 50/60HZ	1.6KVA	0.6Mpa	the traverse axis is servo motor;(AC SERVO); the crosswise axis, vertical axis and runner side is air driven	3.2S	7.0S	4kg	5Nm
XTB-900I(H)D	0.7KW	20/24NL/cycle	250kg/270kg	Single phase AC 200-220V±10% 50/60HZ	1.6KVA	0.6Mpa	the traverse axis is servo motor;(AC SERVO); the crosswise axis, vertical axis and runner side is air driven	3.2S	7.0S	4kg	5Nm
XTB-1000I(H)D	1.3KW	27/42NL/cycle	405kg/455kg	Single phase AC 200-220V±10% 50/60HZ	1.6KVA	0.6Mpa	the traverse axis is servo motor;(AC SERVO); the crosswise axis, vertical axis and runner side is air driven	4.0S	10.0S	6kg	8.8Nm

XTA All Servo Series, Recommended injection molding machines: 60-1000T.



All Servo Series

- > Three axles (five axles) full servo motor is imported from Panasonic, which can realize fast operating, precise positioning, and high controllability.
- > Precision linear guide ensure the stable, precise, wear-resistant and long using life even in high speed operating.
- > The cross and traverse moving is in T-shape layout. The Z axle is in dual-beam structure for better carrying capacity, more stability and higher rigidity.
- > The Z axle is vertical telescopic arm which can redouble the speed then so that robot can reach the default position in shorter time.
- > Compact design, optimize and integrate the drive cabinet, save the space.



XTA-800I(H)D
 XTA-900I(H)D
 XTA-1100I(H)D
 XTA-1300I(H)D
 XTA-1500I(H)D

XTA: All servo series
 1500: Vertical stroke
 H: Two arms
 D: Telescopic type



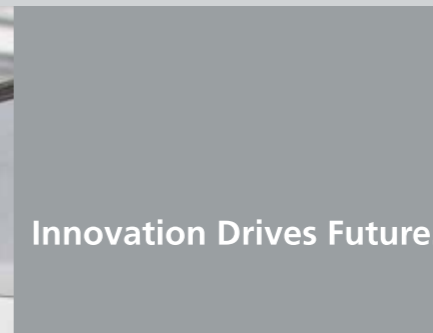
Customer of XTA: Ningbo ** Industrial Co., Ltd
Injection Molding Machines: Haitian Mars Series

Robot: XTA-800I(H)D
Products: Appliance Switches

Detail Advantages



The high qualified towline and cable with high flexibility, low noise and long life.

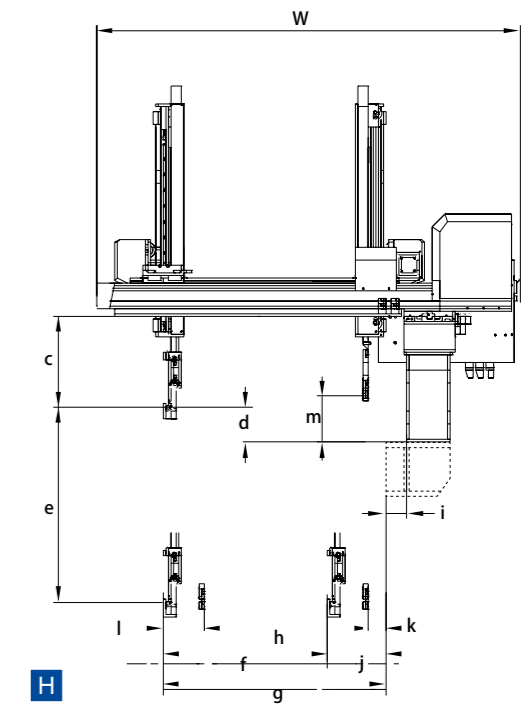
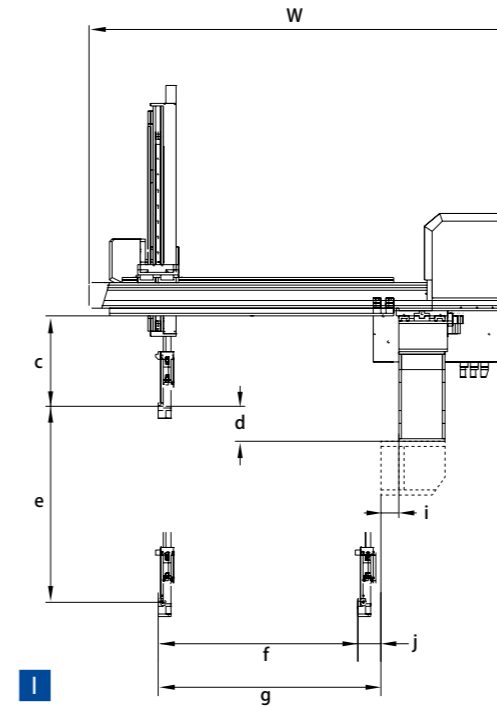
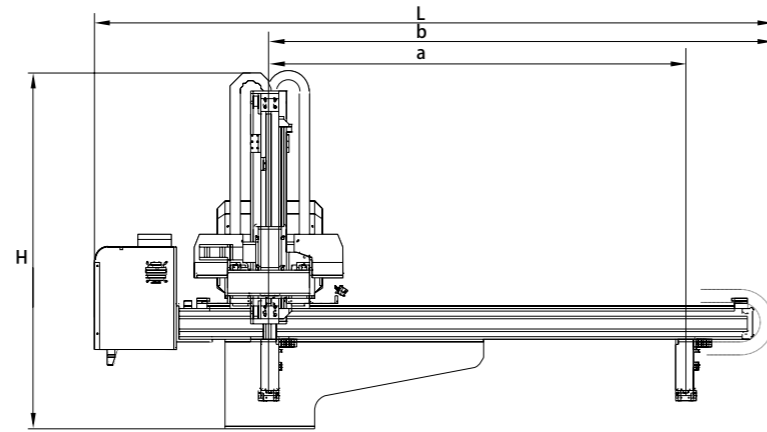


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High-strength alloy profiles provides high internal stress, good rigidity and beautiful appearance

**XTA All Servo Series,
Recommended injection
molding machines: 60-1000T.**



Main Specification and Size

	Model	XTA-800		XTA-900		XTA-1100		XTA-1300		XTA-1500		XTA-1700		
		60-250t		250-380T		380-530t		530-700t		700-1000t		1000-1300t		
	Recommended IMM: 60-900T	XTA-800ID	XTA-800HD	XTA-900ID	XTA-900HD	XTA-1100ID	XTA-1100HD	XTA-1300ID	XTA-1300HD	XTA-1500ID	XTA-1500HD	XTA-1700ID	XTA-1700HD	
L	Shape Dimension(Long)	2410	2410	2570	2570	2955	2955	3155	3155	3847	3847	3847	3847	L
W	Shape Dimension(Wide)	1627	1627	1627	1627	1965	1965	(1965) 2145	(1965) 2145	2480	2480	2480	2480	W
H	Shape Dimension(High)	1405	1405	1460	1460	1680	1680	1740	1760	1935	1935	2065	2065	H
a	Traverse stroke	1400	1400	1600	1600	1800	1800	2000	2000	2500	2500	2500	2500	a
b	Listallation dimensions side by side	1538	1538	1898	1898	2165	2165	2365	2365	3107	3107	3050	3107	b
c	Bottom of crosswise to chuck mount PS	355	355	355	355	440	440	415	415	570	570	570	545	c
d	Products side vertical standby	120	120	120	120	190	190	190	190	60	60	60	85	d
e	Products side vertical stroke	800	800	900	900	1100	1100	1300	1300	1500	1500	1700	1700	e
f	Products side crosswise stroke max	760	610	760	610	1050	830	(1050) 1210	(830) 1010	1340	1120	1380	1120	f
g	Products side crosswise reach max	848	848	848	848	1180	1180	(1180) 1340	(1180) 1340	1470	1470	1530	1470	g
h	Runner side crosswise stroke max	-	620	-	620	-	830	-	(830) 1010	-	1120	-	1120	h
i	Base offset	100	100	100	100	100	100	100	100	100	100	100	100	i
j	Products side crosswise standby min	88	238	88	238	130	360	130	360	150	350	150	350	j
k	Runner side crosswise standby min	-	60	-	60	-	120	-	120	-	160	-	160	k
l	Products and Runner side proximity min	-	168	-	168	-	230	-	210	-	190	-	190	l
m	Runner side vertical standby	-	181	-	181	-	205	-	205	-	175	-	175	m
Comment		*1: XTB-800 a can be lengthened to 1400,1600		*2: XTB-1100 a can be lengthened to 2000		*3: XTA-1300 a can be lengthened to 2200								

Basic Specifications

Model	Power Consumption	Air Consumption	Net Weight	Power	Power Capacity	Compressed Air	Drive System	Dry Take Out Time	The cycle time (excluding fixture)	Max Load incl chunk weight	Posture Torque
XTA-800I(H)D	1.2/2.1KW	2.9NL/cycle	200/230kg	Single phase AC 200-220V±10% 50/60HZ	3.0KVA	0.5Mpa	AC SERVO	1.8S	5.5S	4kg	5 Nm
XTA-900I(H)D	1.2/2.1KW	2.9NL/cycle	260/290kg					2.0S	6.0S		
XTA-1100I(H)D	2.1/3.2KW	15NL/cycle	400/450kg	Single phase AC 200-220V±10% 50/60HZ	4.5KVA	0.5Mpa	AC SERVO	2.3S	6.3S	8kg	7.3 Nm
XTA-1300I(H)D	2.1/3.2KW	15NL/cycle	435/485kg					2.5S	6.5S		
XTA-1500I(H)D	2.3/3.5KW	24NL/cycle	920/995kg	Single phase AC 200-220V±10% 50/60HZ	5.0KVA	0.6Mpa	AC SERVO	2.5S	7.0S	15kg	21 Nm
XTA-1700I(H)D	2.3/3.5KW	24NL/cycle	935/1020kg					2.5S	7.0S		
				Three phase AC 200±10% 50/60HZ	5.0KVA	0.6Mpa	AC SERVO	2.5S	7.0S		


Hilectro-STAR All Servo Large Scale Robot

Recommended injection molding machines: 800-4000T



All Servo Large Scale Series

- > Developed by Haitian Drive and STAR together, using the high technique from STAR, especially fir to supporting 800-1600Ton injection molding machines.
- > Three axles (five axles) full servo motor is imported from Panasonic, which can realize fast operating, precise positioning, and high controllability.
- > The Z axle is vertical telescopic arm which can redouble the speed then the robot can reach the default position in shorter time. At the same time, equipped with the SMC air cylinder, the robot have good sealing, low gas consumption, low maintenance and repair costs, and long service life.
- > Double speed of the fixture to clip, take, put , in and out of the mold, which shortened the working cycle time and improve the efficiency.

 Kg 35-40kg	 Clamping Force 800-4000T	 Frame Structure Frame	 3/5 Servo Axles 3Axles/5 Axles
 Linear Guide	 Servo Motor	 Control Hand Hold	 Telescopic type Double Speed

XTA-1800(H)D XTA: All servo series
XTA-2000ID 1800: Vertical stroke
 H: Two arms
 D: Telescopic type



Customer of Hilectro- STAR: Zhejiang ** Mold Co., Ltd Robot: XTA-1800ID/XTA-2000ID
 Injection Molding Machine: Haitian Mars Series/ Haitian Jupiter Series (Two platen)
 Products: Television Frames

Detail Advantages



The servo motor imported from Japan can provide the advantages of quick performance, precise positioning and high controllabilities.

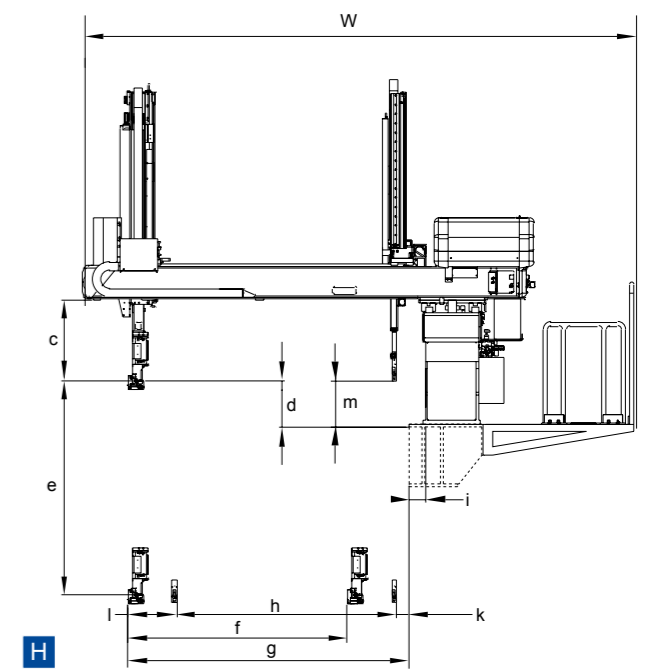
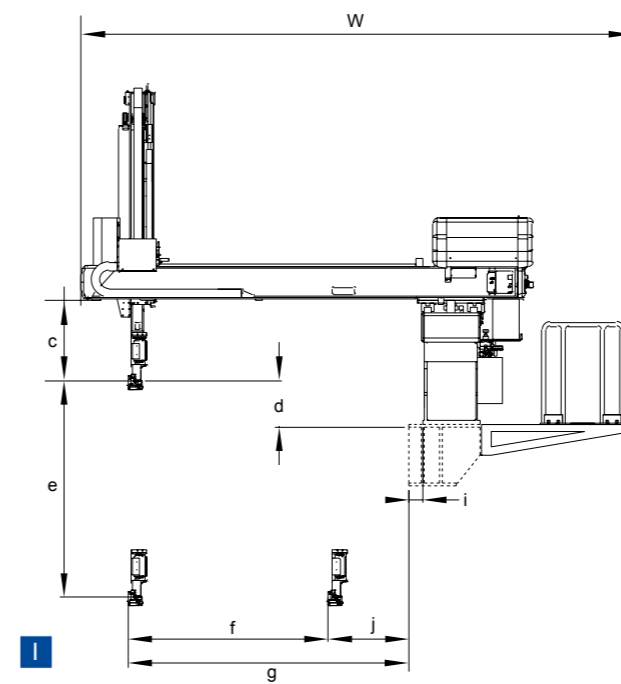
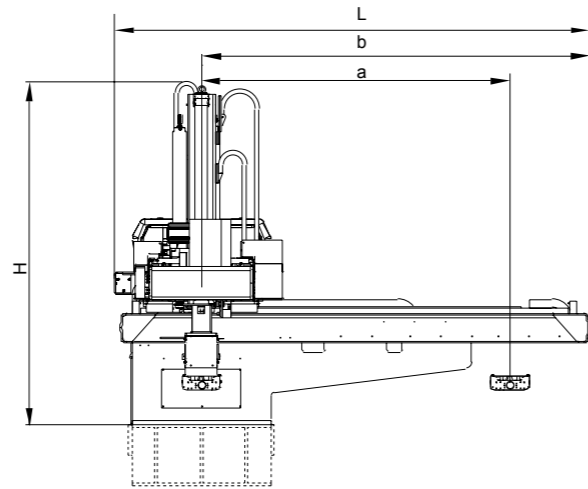
Innovation Drives Future.



Imported linear guide provides high rigidity ,low noise and stable performance even in high speed.

Hilectro-STAR All Servo Large Scale Robot

Recommended injection molding machines: 800-4000T



Main Specification and Size

Model		XTA-1800		XTA-2000
Recommended IMM: 800-4000T		800-1600T		1600-4000T
I(H)D		XTA-1800ID	XTA-1800HD	XTA-2000ID
L	Shape Dimension(Long)	3042	3042	5000
W	Shape Dimension(Wide)	3256	3256	3937
H	Shape Dimension(High)	2195	2195	2769
a	Traverse stroke	2500	2500	3600
b	Listallation dimensions side by side	2516	2516	4300
c	Bottom of crosswise to chuck mount PS	550	550	761.5
d	Products side vertical standby	255	255	403
e	Products side vertical stroke	1800	1800	2000
f	Products side crosswise stroke max	1290	1115	1600
g	Products side crosswise reach max	1500	1500	2150
h	Runner side crosswise stroke max	-	1115	-
i	Base offset	100	100	100
j	Products side crosswise standby min	210	385	550
k	Runner side crosswise standby min	-	75	-
l	Products and Runner side proximity min	-	310	-
m	Runner side vertical standby	-	300	-

Comment *1: XTA-1800 a can be lengthened to 2500,3000 e can be lengthened as 2000,2500t *2: XTA-2000 a can be lengthened to 4000 e can be lengthened to 2500

Basic Specifications

Model	Power Consumption	Air Consumption	Net Weight	Power	Power Capacity	Compressed Air	Drive System	Dry Take Out Time	The cycle time (excluding fixture)	Max Load incl chunk weight	Posture Torque
XTA-1800I(H)D	3.85KW	59.9NL/cycle	1274kg	Three phase AC 200-220V±10% 50/60HZ	7.5/9.8KVA	0.5Mpa	AC SERVO	3.5S	10.8S	35kg	88 Nm
	5.0KW	59.9NL/cycle	1341kg								
XTA-2000ID	4.0KW	125NL/cycle	2630kg	Three phase AC 200-220V±10% 50/60HZ	7.8KVA	0.5Mpa	AC SERVO	3.8S	12.5S	40kg	64 Nm




XTD All Servo Series

Recommended injection molding machines: 800-4000T



XTD All Servo Series

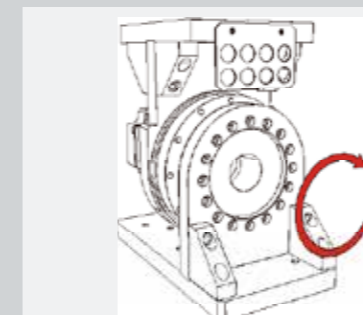
- > The XTD all servo series has got rid of the frame structure, which makes the move more flexible and reliable, so that can apply to broader scope.
- > The vertical unit is made of high rigidity aluminum. Combined with the telescopic and double-speed design, the unit makes the structure more compact and in better appearance.
- > Equipped with the SMC air cylinder, the robot has good sealing, low gas consumption, low maintenance and repair costs, and long service life.
- > Double speed of the fixture to clip, take, put, in and out of the mold, which shortened the working cycle time and improve the efficiency.

 Kg 30kg	 800-4000kg	 Open	 3/5 Three
 Linea Guide	 Servo Motor	 Hand Hold	 Telescopic type Double Speed

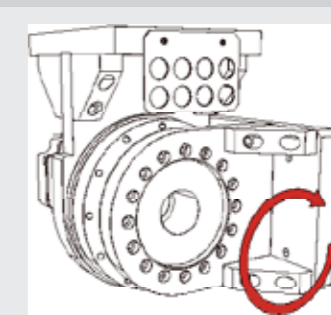
XTD-1800 ID XTD:All servo open frame series
 XTD-2500 ID 1800: Vertical stroke
 I:Single arm
 D:Telescopic type



Servo C axis



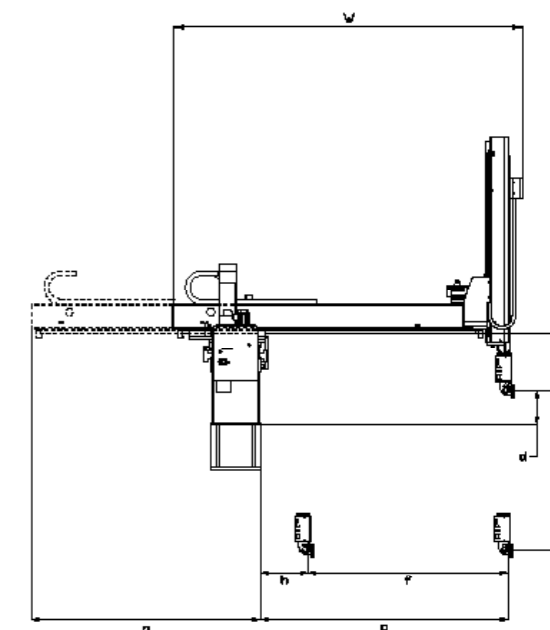
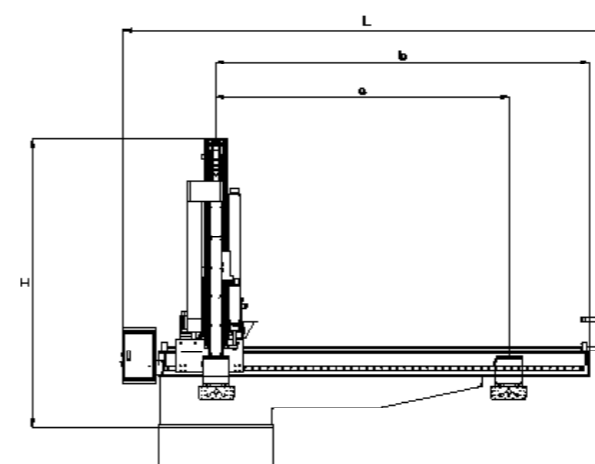
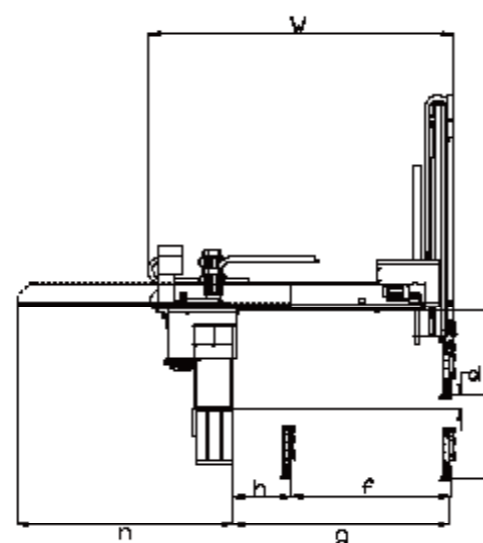
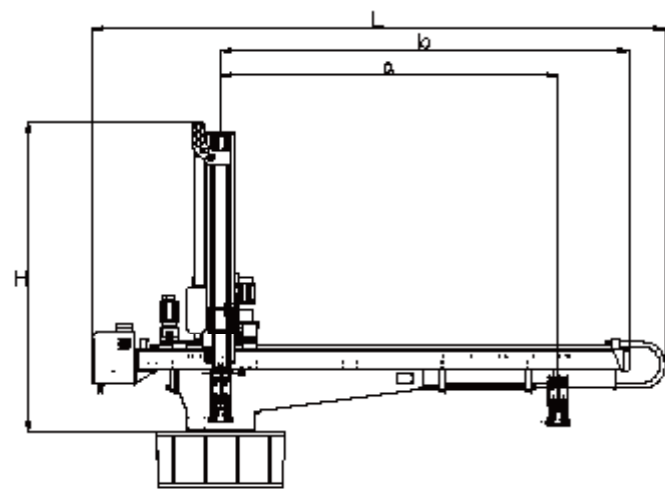
Innovation Drives Future.



In the fast developing injection molding industry, the servo axis in the end of the arm will show its great advantages in the complicated applications.

XTD All Servo Series

Recommended injection molding machines: 800-4000T



XTD-1800 ID Main Specification and Size

	Model	XTD-1800
	Recommended IMM:	800~1600T
L	Shape Dimension(Long)	4200
W	Shape Dimension(Wide)	2200
H	Shape Dimension(High)	2370
a	Traverse stroke	2500
b	Listallation dimensions side by side	2990
c	Bottom of crosswise to chuck mount PS	660
d	Products side vertical standby	65
e	Products side vertical stroke	1800
f	Products side crosswise stroke max	1200 1400
g	Products side crosswise reach max	1600
h	Products side crosswise standby min	400
n	The max distance between the remote of the front and rear axle and the mold plate	1820 2050

Basic Specification

Model	Power Consumption	Air Consumption	Net Weight	Power	Power Capacity
XTD-1800 ID	4.0KW	24NL/cycle	1248kg	Three phase AC200-220V±10% 50/60HZ	7.8KVA
Compressed Air	Drive Mold	Dry Take Out Time	The Cycle Time (excluding fixture)	Max Load (including fixture)	Posture Torque
0.6Mpa	AC SERVO	2.53s	10.7s	30kg	33 N.m

XTD-2500ID Main Specification and Size

	Model	XTD-2500
	Recommended IMM:	1600T-4000T
L	Shape Dimension(Long)	5135
W	Shape Dimension(Wide)	3675
H	Shape Dimension(High)	3027
a	Traverse stroke	3500
b	Listallation dimensions side by side	3915
c	Bottom of crosswise to chuck mount PS	545
d	Products side vertical standby	367
e	Products side vertical stroke	2500
f	Products side crosswise stroke max	2200
g	Products side crosswise reach max	2660
h	Products side crosswise standby min	460
n	The max distance between the remote of the front and rear axle and the mold plate	3120

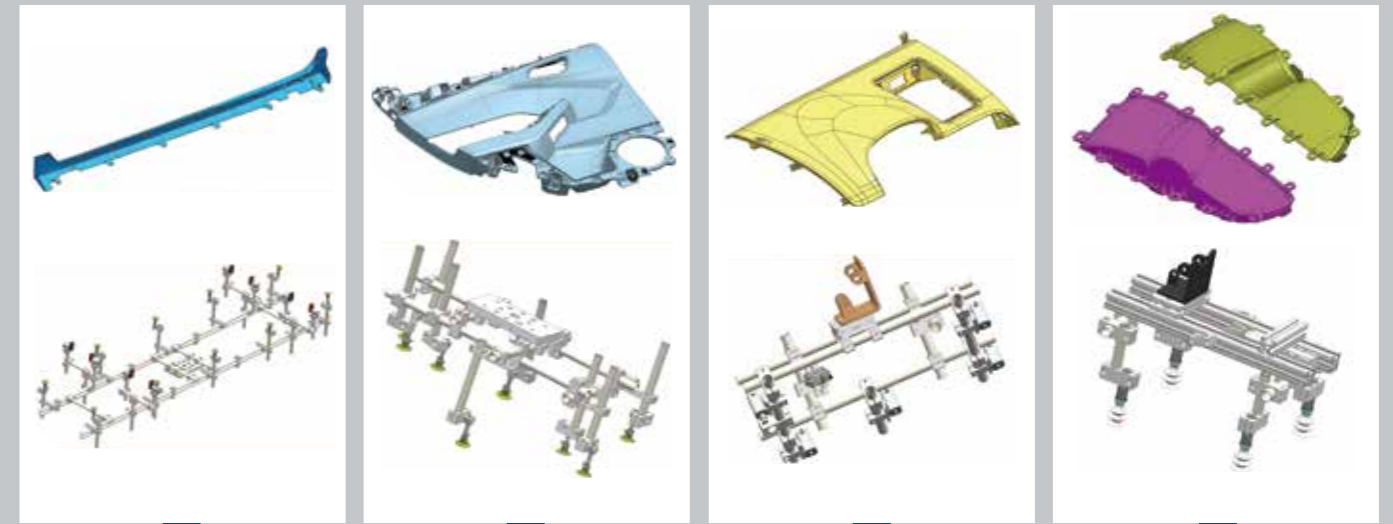
Basic Specification

Model	Power Consumption	Air Consumption	Net Weight	Power	Power Capacity
XTD-2500 ID	4.0kw	125NL/cycle	1750kg	Three phase AC200-220V±10% 50/60HZ	7.8KVA
Compressed Air	Drive Mold	Dry Take Out Time	The Cycle Time (excluding fixture)	Max Load (including fixture)	Posture Torque
0.6Mpa	AC SERVO	5.6s	20.4s	40kg	64 N.m

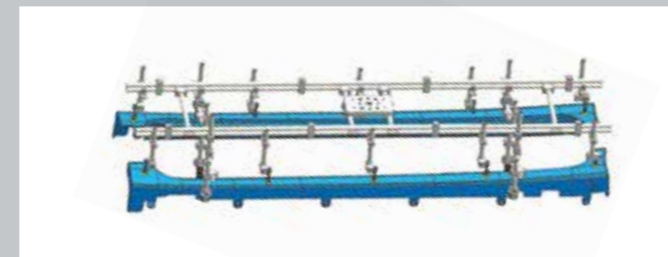
High Quality from Precise Components



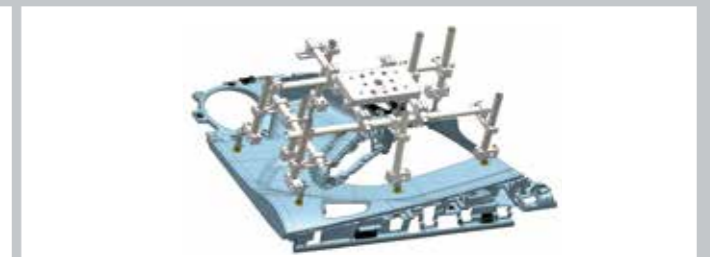
Fixture Options



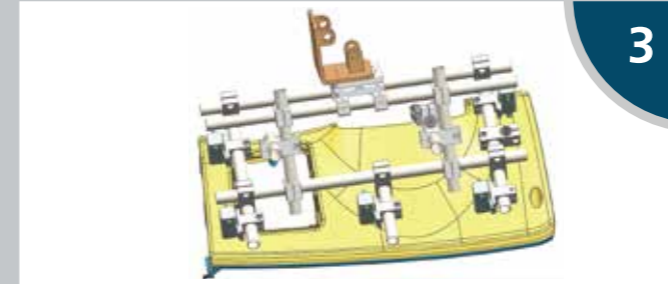
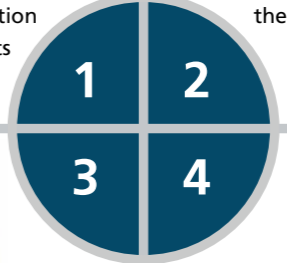
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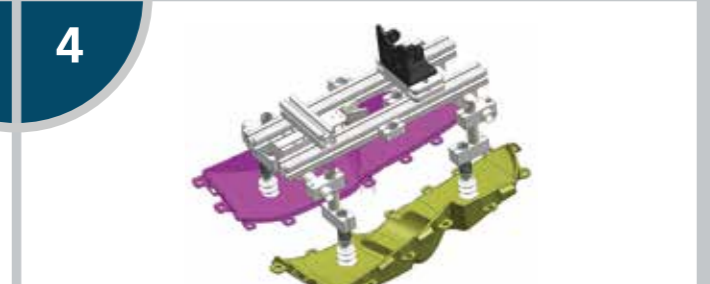
Note: When the product is thin and long in radian: The fixture frame is in stainless steel which can not only meet the requirements of the rigidity and strength, but also can adjust the suction angle, so as to reach the parallel adsorption between the sucker and the surface of the products which makes the products taking out more stable.



Note: When the surface of the products is irregular and has curvature change: The fixture frame is in stainless steel, and uses the connections to adjust the sucker angle so as to achieve the effects of the parallel adsorption.



Note: When the surface of the products is irregular: the fixture use the stainless steel as the frame, at the same time, because the ejection distance is limited, the absorbing action is happening together with the clamping by air driven so as to reach absorbing actively.



Note: When the product surface is irregular but has two parallel side can be absorbed: The fixture use the aluminum as the frame with stable rigid. The runner has the signal detection points which can help the grips to catch the products.

Standard Option

Option Items	Description
Delayed arm descent	Used to shorten the cycle time by letting the product-side/runner-side vertical arm stand by just above the mold.Setting position is adjustable.
Crosswise Product	Used to first carry out posture action on the extracting side and then start traverse action after extracting vertically extended products.But in order to avoid interference with an obstacle on mold or the traverse rail,used to carry out the posture action after the completion of advance action. Crosswise position is adjustable.
Extract Side Posture Control During Traverse	All the cycles can also be shorten by carrying out traverse return and posture return together after products were released during traverse action.The timing of posture action start is adjustable.
Prduction Control	The scheduled production end time is informed by entering the planned production number.Graphic presentation of the production result,sampling feature,etc.,are usefull to control the production.
Maintenance Feature	Regular inspection schedules and inspection items,lubrication schedules for each axis are confirmed on the screen.The maintenance history(with data)can be registered or displayed for confirmation.
Extornal Menory	The setting data such as the setting value of mode,timer,axis point and packaging can be written in,read out,compared and erased immediatly. The data is registered in the external storage mediums(Compact Flash)as setup condition data.
Vacuum Confirmation Unit	1 set of vacuum generator unit(taco)is equipped as standard devise.
Release During the Runner Axis Motion	Runner is released during traverse ot traverse return motion when 2 mold plates are used.
Packaging Motion	Packaging operation carried out by linking with packaging device of conveyer or of pallet changer.
Alarm History Function	Alarm history data are displayed.
Web Functions	Connection to LAN via Ethernet permits confirmation and priniting of unloader settings and operational status.The information is transmitted as web data,with no special software required.
NC Step Program	The user defined program can be executed during basic operation. Necessary data can be entered or added from the pendant and registered as setup change data.
Easy NC Step	Features the simple NC step program settings.This makes it possible to designate positions for interruptions in mold changing operations.In addition,NC point and timer labels can be rewritten.
Conection to PC	After installing the software ,connection to computers via communication cable allows to send and receive data, get printouts,and edit programs.
Power saving function	Power saving mode
Storage function	External storage (999molds)
European map	European map12

Option

Option Items	Description
Defective products discharged	Put the defective product to the other place, saving the human resources.
Extraction from fixed mold	Standard machines is designed to extract products from the moving-side mold.To extract products from the fixed mold after molding.use the operation mode for this fixed-side extraction.
Delayed traverse	Used to let the unloader stand by outside the molding machines's door if there are obstacles in the mold moving section.
Point free packaging	Used to make packaging operation at an arbitrary position after the product extraction. The maximum number of packaging points that can be set is 1024(1 MAX 256 points on one stage).
Remove the loop slip	Remove products slip through the fixture
Grease receiver(Vertical)	Preventing grease drippings
Release products at two different points	Two different products are extrated and released to different positions on the release side.Two circuits are required for the chucking.
Additional vacuum sensing unit	Products are extracted with vacuum generator(tacovam)2 circuits.
Shear pneumatic double loop	Plastic mouth cut and freedom of movement
Mold close during arm ascent	Used to shorten the molding time by starting the mold closing on the way to ascent.
Descent during mold open	Used to shorten the molding cycle by starting the descending of arm on the way to mold open.
Product rotation structure(I-II-III-IV)	Used to prevent product from hitting the robot in the mold,within the mold or on the release side by rotating the chunk plate.
Alarm lamp	The alarm lamp is switched on a light when there is a alarm(error)in the robot. Mounting positions are different with robots.
Automatic replacement fixture	One-touch replacement fixture
European map	European map67
Bilingual function	Language switching between two languages can be used for display.Basically used languages are Chinese and English, and Chinese and Japanese