Single Axis AC Servo Driven Robots

横走式单轴伺服机械手

横走式單軸伺服機械手
Single Axis AC Servo Driven Robots
AD-80(s)

横走式單軸雙截伺服機械手
Single Axis Telescopic AC Servo Driven Robots
ADW-80(s) ADW-120(s)

姿勢部單元獲得實用新型專利
Practical New Patent for Posture Unit
專利號/Patent No：ZL201120245121.4

直綫驅動裝置獲得實用新型專利
Practical New Patent for Linear Driven Device
專利號/Patent No: ZL201220445326.1

適用于50~1600噸的各型卧式射出成型機的成品及水口取出。手臂型式有單截式及雙截式,單截式上下行程爲600/700/800/900,雙截式上下行程爲600/800/900/1000/1200mm。横走機構采用進口AC伺服馬達驅動,手臂采用雙段倍速結構，易調整穩定。模内快速下降取物,模外慢速下降置物，具“快拿輕放”動作功能，針對不同產品搭配各類治具，實現穩定、完美的取出動作。

Single Axis AC Servo Driven Robots are extensively applied to horizontal plastic injection machines ranging from 50~1600T which can take out the runners, runner and finished products from the mold of plastic injection molding machines. There are two types of arms-single stage and telescopic. The vertical strokes for single stage are 600/700/800/900 and for telescopic are 600/800/900/1000/1200mm. The arms move stably thanks to two sections of double speed structure. The traverse movement is driven by high performance AC servo motor. With different requirements of products, robot can work with various grippers and jigs to realize stable & perfect take-out products from mold by quick- descent of removal of products and slow -descent to place outside.

機械結構

◆本體結構高剛性設計,結構穩定震動小,耐久壽命長。
◆上下及前后使用氣缸驅動。走行、前后及上下手臂均采用高精密綫性滑軌，速度快，噪音低，定位精准,耐磨損、耐熱、壽命長不變形。

Mechanical Structure

◆High rigidity structure design, stable construction, low vibration, abiding and long service life.
◆Vertical and crosswise movement is driven by pneumatic cylinder. Traverse, crosswise and vertical unit adopt high precision linear guide way result in high speed and accurate position, high wear resistance, heat resistance, long service life without distortion.

高性能AC伺服馬達

配合高精度綫性滑軌及皮帶傳動，速度快噪音低,定位准度可達 ± 0.1mm。

High Performance Imported Ac Servomotor

Working with high precise linear guide way and imported steel wire belt driven result in high speed, low noise, precision position at ± 0.1mm.

治具回路

模内快速下降取物，模外慢速下降置物，具“快拿輕放”動作功能，針對不同產品伴隨各類治具，實現穩定、完美的取出動作。

Jig Circuit

Molded parts are quickly remove from the mold and placed them carefully outside of machines. “Remove quickly and place carefully, require various jigs according to different products to realize stable and perfect motion - remove and place products safely.

控制系統

◆微電腦控制系統，全部自主研發，專門針對國内注塑機現狀及安全保護措施不完善情況，在控制器内增加了較多之完善安全保護功能，爲操作者及注塑機提供最完善的安全保護。此外可根據客户需求修改特殊程序，以符合特殊模具及夾具之要求。

◆掌上型操作器，可切換中英文操作畫面，簡單易學。多種功能及程序提供選擇，可自動檢測故障并記録，便于維修及解決問題。

Control System

◆Micro-computer control system was programmed & developed by TOPSTAR, write the program with more safety protection functions to provide safeguard for operator and IMM in accordance with insufficient safety protection for domestic IMM situation. In addition, we also can write the special program to meet customers’ special requirements for matching the various molds and grippers.

◆Palm controller incorporate, changeable Chinese/ English screen page, easy learning. Multi-functions and programs are provided for selection, automatically detecting, displaying and recording the malfunctions, conveniently maintain and problem solving.

模塊特征

◆組件，結構設計均采用無給油裝置，機械保養簡易，壽命長（導軌、滑塊要定期注油。氣缸導杆要定期抹黄油）。

◆結構輕量化設計，并與微電腦控制系統良好配合，可大幅度節省電力。

◆模組化設計，可進行分體包裝，正反操作側現場進行變更。

◆電子元件均采用世界知名品牌產品，品質穩定且互换性好。

Module Features

◆Assembled parts and structures design adopt oilless device, easy maintenance and long service life.

◆Lightweight construction design to work with microprocessor well result in significant power saving.

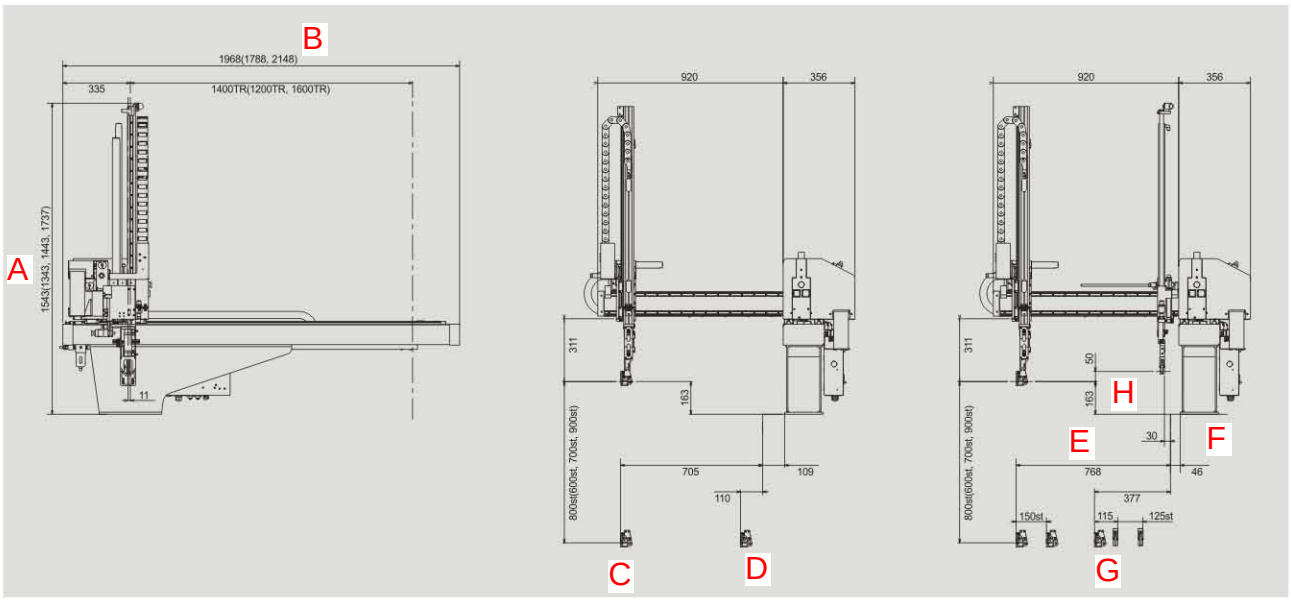
◆Module construction design, dismantled parts can be packed separately. This design is easy for assembling module parts no matter onto the operator side or non operator side on the spot directly if customers want to change.

◆Electrical parts adopt the world famous brands to provide stable quality and interchangeable traits.

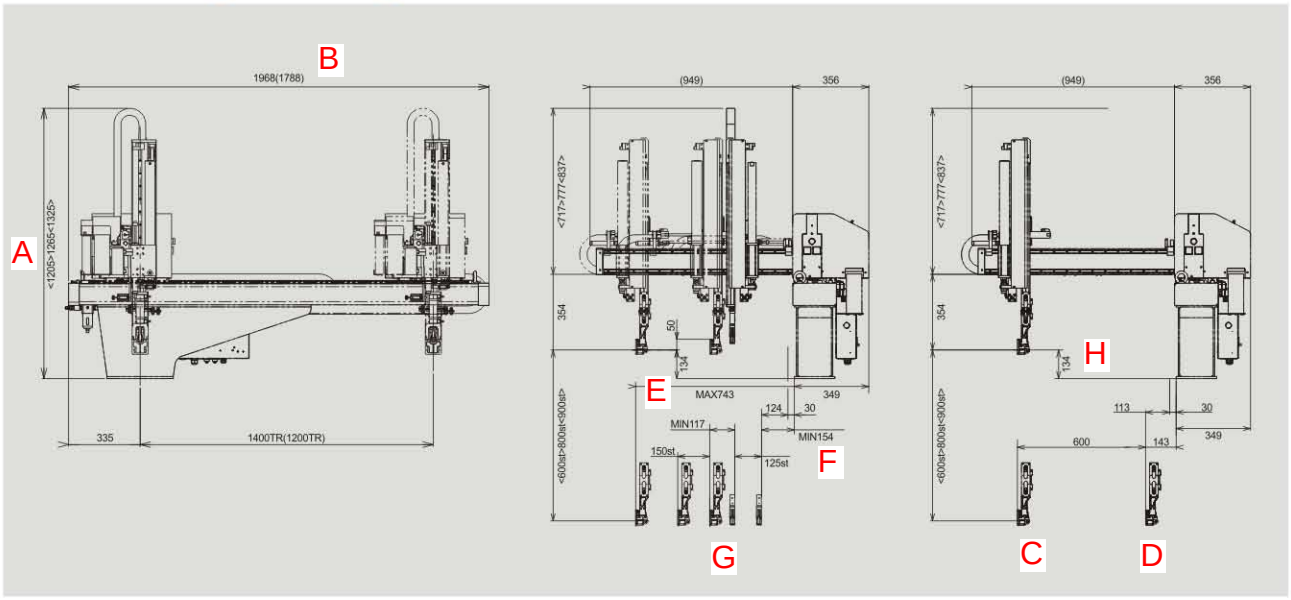
標准功能	Standard Function
1-16點的位置動作	Position motion 1-16 point
取出側姿勢控制	Product extract side posture control
取出側前進姿勢控制	Product extract crosswise posture control
不良品排出回路	Detective product reject circuit
副臂單獨動作	Sub-arm action independently
水口途中落下	Midway runner release.
模内開放	In-Mold releasing
内部記憶功能(30組)	Internal memory (30 sets)
吸着確認單元(1回路)	Vacuum sensing unit (1 circuit)
落下側下降低速	Low speed descend at release side
横走行待機	Delayed traverse
輸送帶起動信號輸出	Start signal of conveyor.
副臂落下側下降	Sub-arm descent at release side
副臂可動側取出	Sub-arm extract from moving platen
2國語言切换	Two language exchangeable
固定可動切换	Extract side exchangeable from moving platen / fixed platen

選項功能	Optional Function
夾具内剪刀回路	Air ripper in chuck circuit
吸着確認2回路	Additional vacuum sensing unit (2 circuit)
NT剪切	NT gate cutting
滑移取出回路	Undercut gate circuit
制品確認開關	Product confirmation limit switch

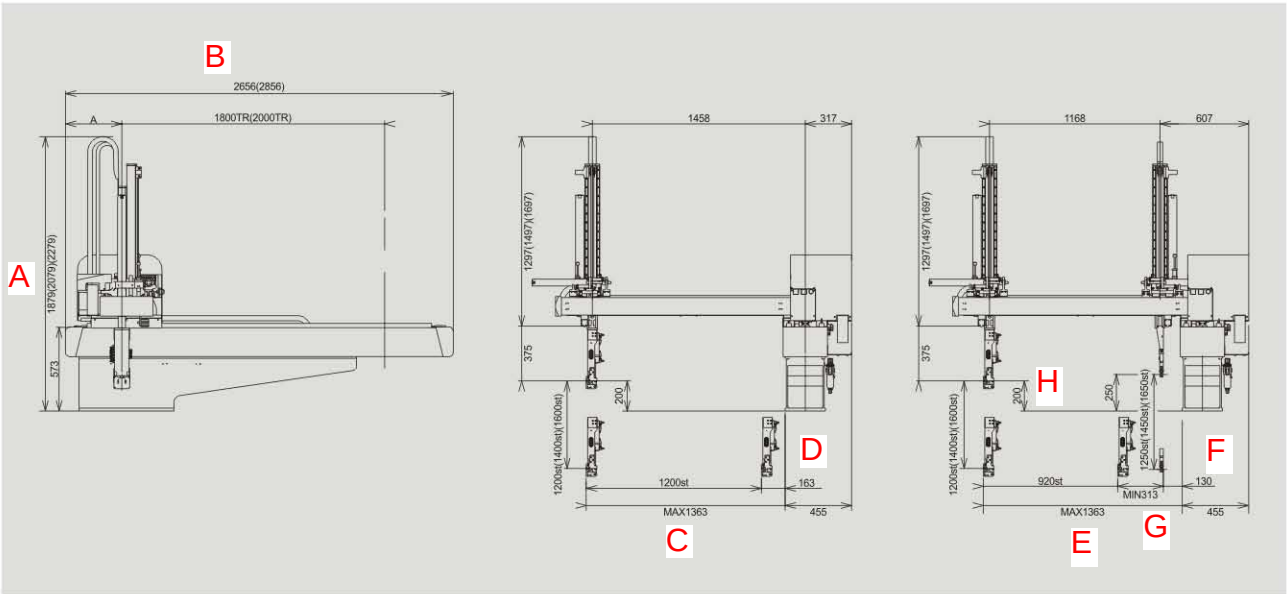
AD-80(s)產品結構圖
Product Structure Diagram of AD-80(s)



ADW-80(s)產品結構圖
Product Structure Diagram of ADW-80(s)



ADW-120(s)產品結構圖
Product Structure Diagram of ADW-120(s)



橫走式單軸伺服機械手規格表
Specification of Single Axis AC Servo Driven Robots

機種 Model	行程Stroke(mm)					最大消耗電力 Max. power consumption	總重量Weight(Kg)		空氣消耗量 Air Consumption	走行往返精度 precision	電源 Voltage	驅動方式 Driven system	使用空氣壓力 Working air pressure
	主臂 Main-arm	副臂 Sub-arm	主臂 前后 Main-arm crosswise	副臂 前后 Sub-arm crosswise	走行 Tarverse	W	本體 Main body	負載 Max. loadNL	(NL/Cycle)				
AD-80	600 700 800 900	—	150	—	1200 1400	240	186	3	19	± 0.1	AC220V 50/60Hz	上下,前后:氣缸 走行:AC伺服馬達 Vertical crosswise: air cylinders Traverse: AC servo driven motor	0.5~0.7MPa
AD-80s		650 750 850 950		125			208		22				

橫走式單軸雙截伺服機械手規格表
Specification of Single Axis Telescopic AC Servo Driven Robots

機種 Model	行程Stroke(mm)					最大消耗電力 Max. power consumption	總重量Weight(Kg)		空氣消耗量 Air Consumption	走行往返精度 precision	電源 Voltage	驅動方式 Driven system	使用空氣壓力 Working air pressure
	主臂 Main-arm	副臂 Sub-arm	主臂 前后 Main-arm crosswise	副臂 前后 Sub-arm crosswise	走行 Tarverse	W	本體 Main body	負載 Max. loadNL	(NL/Cycle)				
ADW-80	600 700 800 900	—	150	—	1200 1400	280	231	3	28	± 0.1	AC220V 50/60Hz	上下,前后:氣缸 走行:AC伺服馬達 Vertical crosswise: air cylinders Traverse: AC servo driven motor	0.5~0.7MPa
ADW-80s		650 750 850 950		125			279		36				
ADW-120	1000 1200 1400	—	300	—	1800 2000	360	496	5	56				
ADW-120s		1050 1250 1450		150			532		72				

注: 產品規格若有變更，恕不另行通知　We reserve right to change specifications without prior notice.

Model			AD-80	AD-80s	ADW-80	ADW-80s	AD-120	ADW-120s
Stroke	Traverse		1200TR/1400TR/1600TR		1200TR/1400TR/1600TR		1800TR/2000TR	
	Vertical	Main-arm	600 or 700 or 800 or 900		600 or 700 or 800 or 900		1000 or 1200 or 1400	
		Sub-arm	-	650 or 750 or 850 or 950	-	650 or 750 or 850 or 950	-	1050 or 1250 or 1450
	Crosswise	Main-arm	150		150		300	
		Sub-arm	-	125	-	125	-	150
Max.Power consumption(W)			240		280		360	
Weight(Kg)	Main body		186	208	231	279	496	532
	Max.load(with tool)		3		3		5	
Air Consumption(NL/Cycle)			19	22	28	36	56	72
Precision(mm)			±0.1		±0.1		±0.1	
Voltage(Standard)			AC220V 50/60Hz					
Driven System			Vertical&Crosswise: Air cylinder Traverse: AC servo driven motor					
Working Air Pressure(Mpa)			0.5~0.7		0.5~0.7		0.5~0.7	
Dimensions(mm)		A	1343/1443/1543/1737		1205/1265/1325		1879/2079/2279	
		B	1788/1968/2148		1788/1968		2656/2856/3056	
		C(Max)	814	-	743	-	1363	-
		D(Min)	219	-	143	-	163	-
		E(Max)	-	768+46=814	-	743	-	1363
		F(Min)	-	30+46=76	-	154	-	130
		G(Min)	-	115	-	117	-	313
		H	163		134		200	