



推出新系列伺服机械手。 NEW BASIC MODEL APPEARED.

全伺服马达驱动机械手 ALL AXES SERVO MOTOR DRIVEN ROBOT

VK series

为协助客户实现“高信赖度工厂”的目标，STAR以伺服驱动机械手给予支持。
VK系列，是为初次使用伺服驱动机械手的客户而设计的射出注塑机用机械手。

A servo robot of STAR will respond to the customer aiming at "expensive factory of trust".
VK series is a servo robot for beginners.



提高生产效率 Increased productivity

通过智能伺服控制及制振控制实现的高速运转及精准的停止精度，提高生产效率。

Damping control of high-response digital servo control and high stopping accuracy, it enhances productivity.



简单·快捷 Easy and comfortable

按键数量少，易操作。新手也能快速掌握操作方法。

步进 / 后退动作

可通过一步一步的执行动作，来确认设定条件。

Minimal switch easy operation, provide a comfortable operation even for beginners.

Step feed operation / Step back operation

安全 Safety

不用爬到注塑机上，也能轻松完成各种操作。

Possible teaching work without having to climb into a molding machine.

3 段式 动作可能键

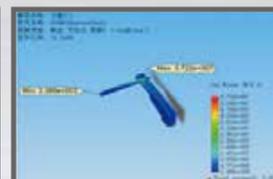
3 - Position
Enabling Switch



高刚性 High Rigidity

通过3-D CAD的CAE解析模拟进行设计

Design by CAE simulation analysis of 3-D CAD



(CAE : Computer Aided Engineering)

放心 Japanese maker

LM 导轨·马达·减速机·气动元件采用信赖度非常高的日本厂家的产品。

LM guide, servo motor, reduction gears, and empty pressure control apparatus employ a reliable Japanese maker.

缩短换模设定时间 Reduction of setup time

对编辑好的不同模具生产时的程序进行储存，下次换模时可直接从内存上调出程序。（最多可存储300套换模数据）

By memory once to teaching the program, it is only from the next time call the program from memory. Recordable step changes (Max 300 molds).

节能 Energy saving

背景灯自动 OFF 功能

超过设定的时间不操作操作盒，背景灯则自动关闭。

The backlight goes out if no pendant operation is performed for the period set with the [DISPLAY OFF TIME] function.

小型、轻量，易操作。

SMALL AND LIGHTWEIGHT,
EASY OPERATION.

操作盒 CONTROLLER

STEC-LC1

- ▶ 3.5英寸彩色液晶显示屏 3.5 inches color LCD screen
- ▶ 可记忆300套模具的换模数据 300 molds memory
- ▶ 2国语言切换 Bilingual switching

订购时，可从日语、英语、简体中文、泰语、印度尼西亚语（用英文字母表示）、越南语、葡萄牙语（用英文字母表示）中选择两种语言。

When ordering, display language on pendant can be selected from Japanese / English / Simplified Chinese / Thai / Indonesian (Alphabet display) / Vietnamese / Portuguese (Alphabet display).



VK-650 VK-650s

基本参数 | COMMON SPECIFICATIONS

电源 Power Source	常用气压 Air Pressure	驱动方式 Drive System	姿势(气缸) Posture (Air Cylinder)	气缸推力(气压: 0.5Mpa时) Air Cylinder Driving Force (Air Pressure at 0.5Mpa)		控制箱 Control Box
				最大可搬重量 Max. Load	姿势力矩 Posture Torque	
AC200V ±10% 50/60Hz (单相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 90°Fixed	2kg (含夹具重量) Incl Chuck Weight	4.9N·m	STEC-LC1

综合参数 | GENERAL SPECIFICATIONS

机种 Model	行程(移动量) (mm) Stroke				电源设备容量 (KVA) Electric Consumption	最大消费电力 (KW) Max Power Consumption	机器重量 (kg) Net Weight		空气消耗量 (N/L/周期) Air Consumption (N/L/Cycle)
	制品上下 ① Vertical	水口上下 ② Vertical	前后 Crosswise	走行 Traverse			本体 Main Body	操作盒 Pendant	
VK-650	650	—	57~550	1200 [1000] [1400] [1200]	1.0	0.7	98	0.4	3.58
VK-650s		700	Ⓟ 270~550 Ⓡ 125~405		1.8	1.1	112		

○ [] 尺寸表示选项行程。
○ 本体重量包括中继电器、驱动盒及电线的重量。
○ Ⓟ 表示制品侧手臂，Ⓡ 表示水口侧手臂。
○ 将走行行程为1200mm行程的走行体向取出侧移动200mm时，走行行程将变为1000mm。

○ Figure in [] shows option stroke.
○ Net weight includes the weight of interlock box and driver box.
○ In the column of stroke, Ⓟ stands for product side arm and Ⓡ stands for runner side arm.
○ Make the travers as 1200 mm moving forward to extracting side as 200 mm it will be 1000 mm.



适用射出注塑机 Injection Press Range
30-100 ton

VK-800 VK-800s

基本参数 | COMMON SPECIFICATIONS

电源 Power Source	常用气压 Air Pressure	驱动方式 Drive System	姿势(气缸) Posture (Air Cylinder)	气缸推力(气压: 0.5Mpa时) Air Cylinder Driving Force (Air Pressure at 0.5Mpa)		控制箱 Control Box
				最大可搬重量 Max. Load	姿势力矩 Posture Torque	
AC200V ±10% 50/60Hz (单相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 90°Fixed	3kg (含夹具重量) Incl Chuck Weight	4.9N·m	STEC-LC1

综合参数 | GENERAL SPECIFICATIONS

机种 Model	行程(移动量) (mm) Stroke				电源设备容量 (KVA) Electric Consumption	最大消费电力 (KW) Max Power Consumption	机器重量 (kg) Net Weight		空气消耗量 (N/L/周期) Air Consumption (N/L/Cycle)
	制品上下 ① Vertical	水口上下 ② Vertical	前后 Crosswise	走行 Traverse			本体 Main Body	操作盒 Pendant	
VK-800	800	—	56~700	1400 [1200] [1600] [1800]	1.0	0.7	167	0.4	4.77
VK-800s		850	Ⓟ 270~700 Ⓡ 125~555		1.8	1.1	182		

○ [] 尺寸表示选项行程。
○ 本体重量包括中继电器、驱动盒及电线的重量。
○ Ⓟ 表示制品侧手臂，Ⓡ 表示水口侧手臂。
○ 将走行行程为1400mm和1800mm行程的走行体向取出侧移动200mm时，走行行程将变为1200mm和1600mm。

○ Figure in [] shows option stroke.
○ Net weight includes the weight of interlock box and driver box.
○ In the column of stroke, Ⓟ stands for product side arm and Ⓡ stands for runner side arm.
○ Make the travers as 1400 and 1800 mm moving forward to extracting side as 200 mm it will be 1200 and 1600 mm.



适用射出注塑机 Injection Press Range
100-220 ton

VK-1000 VK-1000s

基本参数 | COMMON SPECIFICATIONS

电源 Power Source	常用气压 Air Pressure	驱动方式 Drive System	姿势(气缸) Posture (Air Cylinder)	气缸推力(气压: 0.5Mpa时) Air Cylinder Driving Force (Air Pressure at 0.5Mpa)		控制箱 Control Box
				最大可搬重量 Max. Load	姿势力矩 Posture Torque	
AC200V ±10% 50/60Hz (单相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 90°Fixed	5kg (含夹具重量) Incl Chuck Weight	12.9N·m	STEC-LC1

综合参数 | GENERAL SPECIFICATIONS

机种 Model	行程(移动量) (mm) Stroke				电源设备容量 (KVA) Electric Consumption	最大消费电力 (KW) Max Power Consumption	机器重量 (kg) Net Weight		空气消耗量 (N/L/周期) Air Consumption (N/L/Cycle)
	制品上下 ① Vertical	水口上下 ② Vertical	前后 Crosswise	走行 Traverse			本体 Main Body	操作盒 Pendant	
VK-1000	1000	—	121~715 [121~915]	1600 [1800]	1.4	1.1	201	0.4	4.8
VK-1000s		1050	Ⓟ 285~715 Ⓡ 125~555 Ⓟ 285~915 Ⓡ 125~755		2.2	1.5	216		

○ [] 尺寸表示选项行程。
○ 本体重量包括中继电器、控制箱及电线的重量。
○ Ⓟ 表示制品侧手臂，Ⓡ 表示水口侧手臂。
○ 将走行行程为1600mm行程的走行体向落下侧移动200mm时，走行行程将变为1800mm。

○ Figure in [] shows option stroke.
○ Net weight includes the weight of interlock box and driver box.
○ In the column of stroke, Ⓟ stands for product side arm and Ⓡ stands for runner side arm.
○ Make the travers as 1600 mm moving forward to release side as 200 mm it will be 1800 mm.

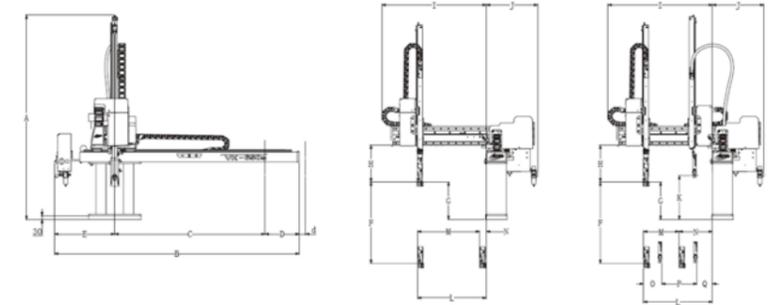


适用射出注塑机 Injection Press Range
220-350 ton

外形尺寸 | OUTER DIMENSIONS

○ [] 内的尺寸表示选项行程。
○ 水口夹的厚度为25mm。
○ 姿势部的厚度为45mm，但根据配管方式不同，此尺寸多少会有些不同。
○ 水口侧上下行程比制品侧上下行程长50mm。
○ *1表示C尺寸为1000mm，*2表示C尺寸为1400mm。
○ *3表示C尺寸为1200mm，*4表示G尺寸为350mm。
○ *5表示G尺寸为400mm，*6表示G尺寸为450mm。

○ Figure in [] shows option stroke.
○ Thickness of runner chuck is basically about 25 mm.
○ Thickness of posture area is basically about 45 mm (depends on tubing).
○ Runner side vertical stroke is 50 mm longer than that of product side.
○ *1 When dimension C is 1000 mm. *2 When dimension C is 1400 mm.
○ *3 When dimension C is 1200 mm. *4 When dimension G is 350 mm.
○ *5 When dimension G is 400 mm. *6 When dimension G is 450 mm.



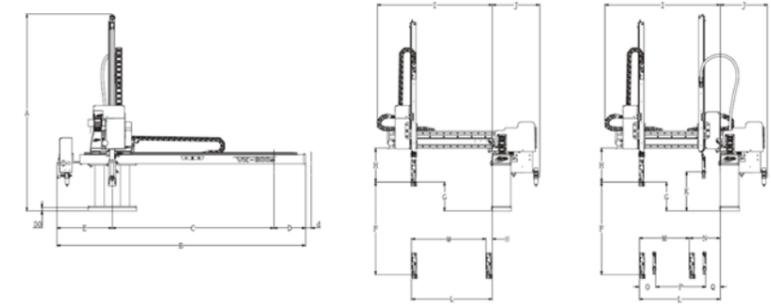
机种 Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
VK-650	1570 [1620] ^{*4} [1670] ^{*5} [1720] ^{*6}	1954 [1954] ^{*1}	1200 [1000] ^{*1} [1400] ^{*2} [1200] ^{*3}	274 [274] ^{*1} [274] ^{*2} [274] ^{*3}	480 [680] ^{*1} [680] ^{*2} [480] ^{*3}	650	300 [350] ^{*4} [400] ^{*5} [450] ^{*6}	293	833	410	—	550	493	57	—	—	—
VK-650s	1630 [1680] ^{*4} [1730] ^{*5} [1780] ^{*6}	2154 ^{*3}	1200 ^{*3}	274 ^{*3}	480 ^{*3}						350 [400] ^{*4} [450] ^{*5} [500] ^{*6}	280	270	145	280	125	

※反操作时D值为274, [274]^{*1}, [274]^{*2}, [274]^{*3} ※正操作时d值为28, [28]^{*1}, [28]^{*2}, [28]^{*3}
※反操作时E值为480, [680]^{*1}, [680]^{*2}, [480]^{*3} ※反操作时d值为0, [0]^{*1}, [0]^{*2}, [0]^{*3}
※Opposite operation D dimension: 274, [274]^{*1}, [274]^{*2}, [274]^{*3} ※d dimension normal operation: 28, [28]^{*1}, [28]^{*2}, [28]^{*3}
※d dimension opposite operation: 0, [0]^{*1}, [0]^{*2}, [0]^{*3}

外形尺寸 | OUTER DIMENSIONS

○ [] 内的尺寸表示选项行程。
○ 水口夹的厚度为25mm。
○ 姿势部的厚度为45mm，但根据配管方式不同，此尺寸多少会有些不同。
○ 水口侧上下行程比制品侧上下行程长50mm。
○ *1表示C尺寸为1200mm，*2表示C尺寸为1600mm。
○ *3表示C尺寸为1800mm，*4表示G尺寸为350mm。
○ *5表示G尺寸为400mm，*6表示G尺寸为450mm。

○ Figure in [] shows option stroke.
○ Thickness of runner chuck is basically about 25 mm.
○ Thickness of posture area is basically about 45 mm (depends on tubing).
○ Runner side vertical stroke is 50 mm longer than that of product side.
○ *1 When dimension C is 1200 mm. *2 When dimension C is 1600 mm.
○ *3 When dimension C is 1800 mm. *4 When dimension G is 350 mm.
○ *5 When dimension G is 400 mm. *6 When dimension G is 450 mm.



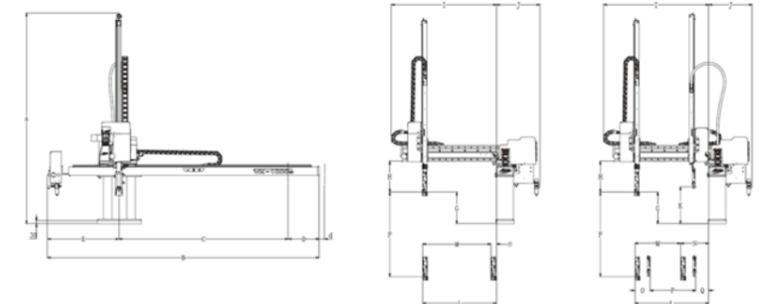
机种 Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
VK-800	1705 [1755] ^{*4} [1805] ^{*5} [1855] ^{*6}	2155 [2155] ^{*1}	1400 [1200] ^{*1} [1600] ^{*2} [1800] ^{*3}	275	480 [680] ^{*1} [680] ^{*2} [480] ^{*3}	800	300 [350] ^{*4} [400] ^{*5} [450] ^{*6}	293	996	410	—	700	644	56	—	—	
VK-800s	1755 [1805] ^{*4} [1855] ^{*5} [1905] ^{*6}	2575 ^{*2}	1600 ^{*2}								350 [400] ^{*4} [450] ^{*5} [500] ^{*6}	430	270	145	430	125	

※反操作时D值为275 ※正操作时d值为28 ※Opposite operation D dimension: 275 ※d dimension normal operation: 28
※反操作时E值为480, [680]^{*1}, [680]^{*2}, [480]^{*3} ※反操作时d值为0 ※Opposite operation E dimension: 480, [680]^{*1}, [680]^{*2}, [480]^{*3} ※d dimension opposite operation: 0

外形尺寸 | OUTER DIMENSIONS

○ [] 内的尺寸表示选项行程。
○ 水口夹的厚度为25mm。
○ 姿势部的厚度为69mm，但根据配管方式不同，此尺寸多少会有些不同。
○ 水口侧上下行程比制品侧上下行程长50mm。
○ *1表示C尺寸为1800mm，*2表示L尺寸为915mm。
○ *4表示G尺寸为350mm，*5表示G尺寸为400mm，*6表示G尺寸为450mm。

○ Figure in [] shows option stroke.
○ Thickness of runner chuck is basically about 25 mm.
○ Thickness of posture area is basically about 69 mm (depends on tubing).
○ Runner side vertical stroke is 50 mm longer than that of product side.
○ *1 When dimension C is 1800 mm. *2 When dimension L is 915 mm.
○ *4 When dimension G is 350 mm. *5 When dimension G is 400 mm. *6 When dimension G is 450 mm.



机种 Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
VK-1000	1945 [1995] ^{*4} [2045] ^{*5} [2095] ^{*6}	2575	1600 [1800] ^{*1}	295 [295] ^{*1}	680 [480] ^{*1}	1000	300 [350] ^{*4} [400] ^{*5} [450] ^{*6}	293	996 [1196] ^{*2}	410	—	715 [915] ^{*2}	594 [794] ^{*2}	121	—	—	
VK-1000s	1995 [2045] ^{*4} [2095] ^{*5} [2145] ^{*6}										350 [400] ^{*4} [450] ^{*5} [500] ^{*6}	430 [630] ^{*2}	285	160	430 [630] ^{*2}	125	

※反操作时D值为275, [275]^{*1} ※正操作时d值为28, [28]^{*1} ※Opposite operation D dimension: 275, [275]^{*1} ※d dimension normal operation: 28, [28]^{*1}
※反操作时E值为680, [480]^{*1} ※反操作时d值为0, [0]^{*1} ※Opposite operation E dimension: 680, [480]^{*1} ※d dimension opposite operation: 0, [0]^{*1}

机器参数 SPECIFICATIONS

VK series

VK-1200 VK-1200s

基本参数 | COMMON SPECIFICATIONS

电源 Power Source	常用气压 Air Pressure	驱动方式 Drive System	姿势 (气缸) Posture (Air Cylinder)	气缸推力 (气压: 0.5Mpa时) Air Cylinder Driving Force (Air Pressure at 0.5Mpa)		控制箱 Control Box
				最大可搬重量 Max. Load	姿势力矩 Posture Torque	
AC200V ±10% 50/60Hz (单相) Single Phase	0.5Mpa	AC伺服马达 AC Servo Motor	90°固定 90°Fixed	8kg (含夹具重量) Incl Chuck Weight	20.2N·m	STEC-LC1

综合参数 | GENERAL SPECIFICATIONS

机种 Model	行程 (移动量) (mm) Stroke				电源设备容量 (KVA) Electric Consumption	最大消费电力 (KW) Max Power Consumption	机器重量 (kg) Net Weight		空气消耗量 (N/L/周期) Air Consumption (N/L/Cycle)
	制品上下 ①Vertical	水口上下 ②Vertical	前后 Crosswise	走行 Traverse			本体 Main Body	操作盒 Pendant	
VK-1200	1200	—	131~1100	1800 [1600] [2000] [2200]	1.4	1.1	308	0.4	7.55
VK-1200s		1250	③300~1100 ④123~923		2.2	1.5	328		

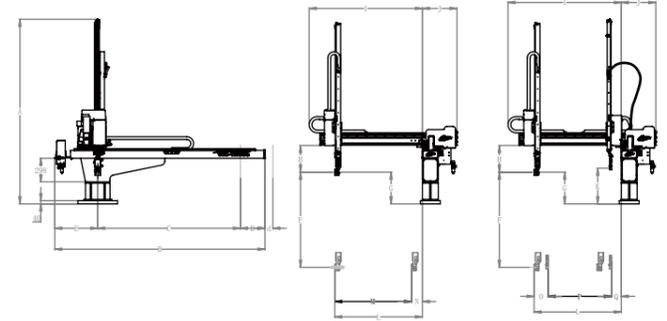
① [] 尺寸表示选项行程。
 ② 本体重量包括中继电器、控制箱及电线的重量。
 ③ ④ 表示制品侧手臂，⑤ 表示水口侧手臂。
 ⑥ 将走行行程为1800mm和2200mm行程的走行体向取出侧移动200mm时，走行行程将变为1600mm和2000mm。
 ⑦ Figure in [] shows option stroke.
 ⑧ Net weight includes the weight of interlock box and driver box.
 ⑨ In the column of stroke, ⑩ stands for product side arm and ⑪ stands for runner side arm.
 ⑫ Make the traverses at 1800 and 2200 mm moving forward to extracting side as 200 mm it will be 1600 and 2000 mm.



适用射出注塑机 Injection Press Range
350-550 ton

外形尺寸 | OUTER DIMENSIONS

① [] 内的尺寸表示选项行程。
 ② 水口夹的厚度为25mm。
 ③ 姿势部厚度为74mm，但根据配管方式不同，此尺寸多少会有些不同。
 ④ 水口侧上下行程比制品侧上下行程长50mm。
 ⑤ *1表示C尺寸为1600mm。
 ⑥ *2表示C尺寸为2000mm。
 ⑦ *3表示C尺寸为2200mm。
 ⑧ *4表示G尺寸为450mm。
 ⑨ *5表示G尺寸为500mm。
 ⑩ *6表示G尺寸为550mm。
 ⑪ Figure in [] shows option stroke.
 ⑫ Thickness of runner chuck is basically about 25 mm.
 ⑬ Thickness of posture area is basically about 74 mm (depends on tubing).
 ⑭ Runner side vertical stroke is 50 mm longer than that of product side.
 ⑮ *1 When dimension C is 1600 mm.
 ⑯ *2 When dimension C is 2000 mm.
 ⑰ *3 When dimension C is 2200 mm.
 ⑱ *4 When dimension G is 450 mm.
 ⑲ *5 When dimension G is 500 mm.
 ⑳ *6 When dimension G is 550 mm.



机种 Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
VK-1200	2289 [2339] ^④ [2389] ^⑤ [2439] ^⑥	2652 [2652] ^①	1800 [1600] ^① [2000] ^② [2200] ^③	310	542 [742] ^① [742] ^② [542] ^③	1200	400 [450] ^④ [500] ^⑤ [550] ^⑥	337	1429	435	—	1100	969	131	—	—	—
VK-1200s	2329 [2379] ^④ [2429] ^⑤ [2479] ^⑥	3052] ^①									450 [500] ^④ [550] ^⑤ [600] ^⑥		800	300	177	800	123

* 反操作时D值为365 * 反操作时E值为487, [687]^①, [687]^②, [487]^③ * 正操作时d值为0 * 反操作时d值为0
 * Opposite operation D dimension: 365 * Opposite operation E dimension: 487, [687]^①, [687]^②, [487]^③
 * d dimension normal operation: 0 * d dimension opposite operation: 0

标准功能 STANDARD FUNCTIONS

功能名 Function Name	说明 Description
取出侧 Product Extract Side	<p>取出下降待机 Delayed arm descent 开模完毕前，夹具下降至模具附近待机，有效缩短取出周期。可任意变更设定位置。 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.</p> <p>前进取出侧姿势控制 Crosswise product extract side posture control 在姿势动作状态下通过安全门上方，取出和搬送纵型产品时，为避免与模具上的障碍物及走行导轨干涉，可任意设定姿势动作的前后位置。 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.</p> <p>自由滑移取出 Free extract for under-cut mold 取出有扣位的产品时，在抓取到产品后根据轴设定值移动，解除扣位后取出产品。 Extracting the products with snap joints, moving it according to axis setting after taking the products. The products can be extracted after unlocking the joints.</p> <p>顶针联动 Ejector link 与注塑机的顶针联动，取出产品。 Product extraction is performed in conjunction with the ejector of IMM.</p> <p>顶针后退联动 Ejector return link 抓取住产品后，与注塑机中的顶针联动，取出产品。 The ejector of IMM is interlocked with after holding a product.</p> <p>水口模内开放 Runner release within mold 产品或水口从模具上剥离后，需要直接在模内开放时选择此功能。 Used to release products or runners within mold after pulling them out of the mold.</p> <p>固定可动切换 Extraction from fixed mold 标准机从模具可动侧取出产品。切换至固定侧则从模具固定侧取出产品。 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.</p> <p>前后自由伺服点 Crosswise Free Servo point 在产品夹取位置限制前后轴的伺服马达扭矩，防止对手臂增加负荷时造成损伤。 The torque of the servo motor of an anteroposterior axis is restricted in a product chuck position. The damage to when load is added to an arm is prevented.</p> <p>吸着确认1回路 Vacuum confirmation unit 使用真空发生单元1回路取出产品。 Products are extracted with vacuum generator.</p>

功能名 Function Name	说明 Description
走行 Traverse	<p>走行途中姿势 Posture control during traverse 在走行途中与姿势动作、走行回归开始同时进行姿势复位，可缩短全周期。 All the cycles can also be shortened by carrying out traverse return and posture return together after products were released during traverse action.</p> <p>浇口途中落下(走行-复归) Midway runner release (Move·Revert) 2板模时，在浇口往返走行途中进行开放动作。 Runner is released during traverse or traverse return motion when 2 mold plates are used.</p> <p>不良品排出回路 Defective product reject circuit 与注塑机发出的不良品信号联动，进行不良品排出动作。 Defective products are separated from other products interlocked with the defect signal of IMM.</p> <p>初期不良品排出回路 Initial defective product reject circuit 换模或换料后，在刚开始的一段时间即使注塑出的产品也是不良品的情况下，自动开始后，在排出位置排出已设定了取出次数的产品及水口，之后再继续进行正常运转。 Ejects only the number of extracted products and sprues preset with the counter to the ejection position after the start of automatic operations when faulty products exist after the continuation of molding following the replacement of the metal mold or material. Normal operations are then performed after this.</p> <p>横走行待机 Delayed traverse 如开模未完毕，机械手或夹具板与模具上的障碍物相干涉时，走行体在走行复归途中待机，等待开模完毕。 Used to let the robot stand by outside the molding machine's door if there are obstacles in the mold moving section.</p>
落下侧 Product Release Side	<p>自由装箱点 (256点×2级) Point free packaging (256 points × 2 stage) 设定从注塑机中取出的产品的随机开放顺序。 Set the order to randomly release the products extracted from the molder.</p>
其他 Other	<p>2国语言切换 Bilingual function 订购时，可从日语、英语、简体中文、泰语、印度尼西亚语 (用英文字母表示)、越南语、葡萄牙语 (用英文字母表示) 中选择两种语言。 When ordering, display language on pendant can be selected from Japanese / English / Simplified Chinese / Thai / Indonesian (Alphabet display) / Vietnamese / Portuguese (Alphabet display).</p>

选项功能 OPTION FUNCTIONS

选项编号及名称 Code no. & Description of option	选项说明 Option Name
0007-04 吸着确认2回路 Additional vacuum sensing unit(2 circuits)	使用真空发生单元 2 回路取出产品。 Products are extracted with vacuum generator 2 circuits.
9999-99 吸着确认 3 回路 Additional vacuum sensing unit (3circuits)	使用真空发生单元 3 回路取出产品。 Products are extracted with vacuum generator 3 circuits.
0007-06 吸着确认 4 回路 Additional vacuum sensing unit (3 circuits)	使用真空发生单元 4 回路取出产品。 Products are extracted with vacuum generator 4 circuits.
0019-01 模内吹气 Blowing in the mold	在模具上追加吹气去除模具上的毛刺。 Adding air to blow the mold to remove burrs on the it.
0055-01 上升途中闭模 Mold close during arm ascent	模内上升途中，使注塑机开始闭模，缩短开模时间，提高周期的仕样。 Used to shorten the molding time by starting the mold closing on the way to ascent.
0056-01 开模途中下降 Descend on mold opening	注塑机开模途中，取出机开始执行下降动作，可以缩短注塑机的时间。 During the opening process of the injection moulding machine, the withdrawing machine starts to perform the descending action, which can shorten the time of the injection moulding.
0087-02 制品确认 (LS-4) Product confirmation LS-4	上升途中安装限位开关，检知产品。 Detects the product mounting the limit switch in the middle rise.

选项编号及名称 Code no. & Description of option	选项说明 Option Name
0008-01 剪切回路 (夹具内) Air nipper in chuck circuit	使用夹具内气剪 (1回路) 剪切水口的时候，需要此仕样。 自动运转时，在落下侧的产品开放位置处，产品开放前进行此动作。 Used to take the cutting of direct gates or side gates with the air nipper in the chuck plate. When in automatic operation, cutting is made at product release position before the product release.
0009-01 NT 剪切·可动侧 (带单元) NT gate cutting on crossmember of moving mold side (w/unit)	以处理产品水口为目的，利用安装在落下侧的走行导轨尾端的NT单元的气剪切断水口。 For purposes of product gate processing, the air nipper in the NT unit mounted at the end of the release-side traverse rail is used to cut gates at 2 points.
0001-02 制品 2 点开放 Release product at two different points	在 2 处进行制品开放动作。产品夹取变为 2 回路。 Two different products are extracted and released to different positions on the release side. Two circuits are required for the chucking.
0001-03 制品 4 点开放 Release product at four different points	在 4 处进行制品开放动作。产品夹取变为 4 回路。 Four different products are extracted and released to different positions on the release side. Four circuits are required for the chucking.