

IML Products

IML制品

模内贴标广泛应用于硬塑包装，成为杨森未来新的增长点！

In mold labeling is widely used in rigid plastic packaging, as a new growth point in the future of Yang Sen.

- 汽车、轮船、机床、等各种轻重型工业机械用润滑油、润滑脂系列：20L、18L、10L、5L等各种规格工业用润滑油润滑脂系列桶。
- 日用品包装：杂物收纳箱、鞋类服装包装盒、垃圾桶、啤酒箱、保鲜盒等。
- 食品包装：打包装盒、月饼盒、饼干盒、茶叶罐、干果包装罐、果酱、调味品、食用香料、食用油、方便面碗、糖果包装等。
- 饮品包装：奶茶杯、传统茶、牛奶杯、酸奶杯等；高级水杯、冰激凌盒等。
- 洗涤护理用品：洗衣粉包装、洗衣液清洗剂包装、洗发水、沐浴露、护肤品包装等。
- 涂料及装修材料包装：20L、18L、10L、5L、2L等规格涂料桶，装修用玻璃胶容器等。
- 婴幼儿用品：童车、玩具、儿童用餐盘等

· Cars, ships, machine tools, such as lubricating oil for all kinds of light and heavy industrial machinery, grease series: series of grease barrel with lubrication oil lubricated 20L,18L,10L,5L various specifications of industry.

· Daily necessities packaging: sundries storage box, shoes and clothing packaging boxes, trash cans, beer boxes, fresh boxes

· Food packaging: packing box, moon cake box, biscuit box, tea caddy, dried fruit can, jam, sauce, edible spices, edible oil, instant noodles bowl, candy packaging

· Beverage packaging: tea cup, traditional tea, milk cup, yogurt cup, such as: senior cup, ice cream box

· Washing care products: washing powder packaging, laundry detergent packaging, shampoo, shower gel, skin care products packaging

· Paint and decoration materials packaging: 20L,18L,10L,5L,2L and other specifications of paint barrels, decorated with glass and plastic containers

· Baby stroller, toys, food, children.

At present, the YANGSEN IML series is popular in the international market.



金属标签制品 Metal label



Edition 1
2017

YANGSEN
IML Robot In
Mould Labeling



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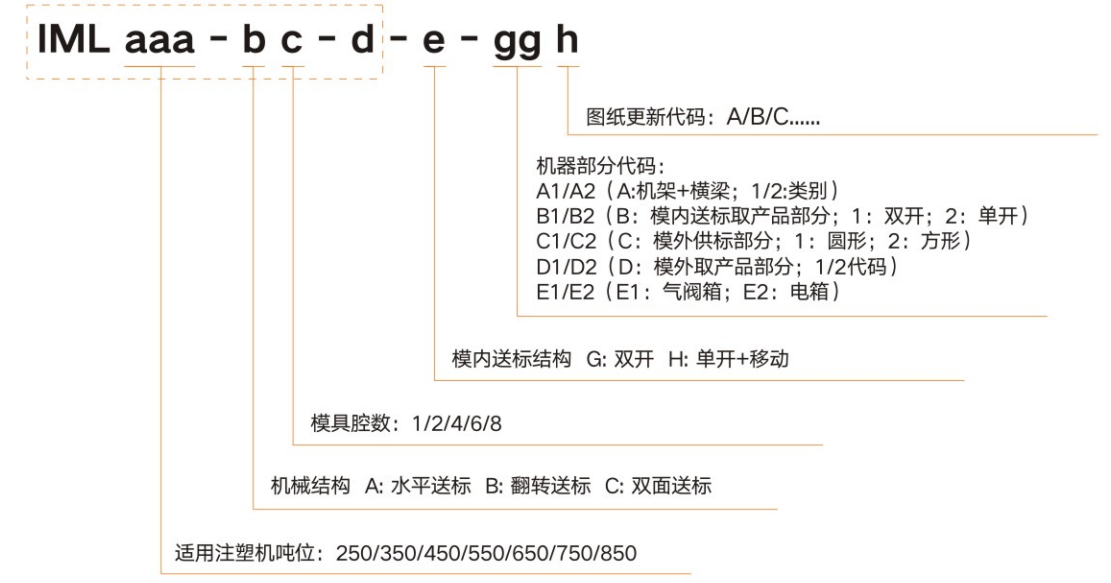


IML Robot In Mould Labeling



Coding rules for IML in mould labeling system

模贴机编码规则

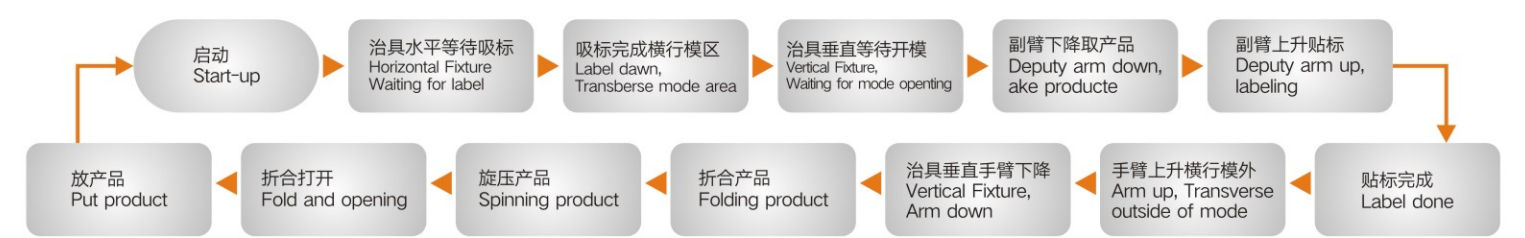


Top entry IML & auto folding system(milk powder can lips)

顶入式IML模内贴标及自动折叠集成应用系统(奶粉盖)



系统动作流程图
Flow chart of system operation



工业自动化智能匠师

Side-entry in mould labeling solution

侧入式模内贴标方案



侧入式-IML模内贴标机

注塑机

IML制品

自动输送带

Top-entry in mould labeling solution

顶入式模内贴标方案



自动输送带

IML制品

顶入式-IML模内贴标机

机械手

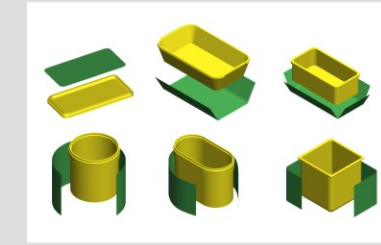
自动送标系统

IML in mould labeling system information collection table

IML模内贴标系统信息采集表

A 产品 (Part)

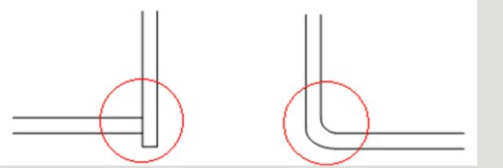
- (1)种类(Type): _____ (盖、桶、杯、盒...等) (图A1)
- (2)形状(Shape): _____ (圆、方...等) (图A1)
- (3)重量(Weight): _____ g
- (4)样品(Sample): Yes/No
- (5)产品尺寸(Size L×W×H): _____ mm
- (6)壁厚(Thickness): _____ mm
- (7)材料(Material): _____ (如:PP/PS.....等)
- (8)是否有以下条件:有/无(Below condition:Yes/No) (图A2)



图A1

B 生产情况 (Production)

- (1)成型周期(Cycle time): _____ sec
- (2)堆叠和排列(Stacking): _____



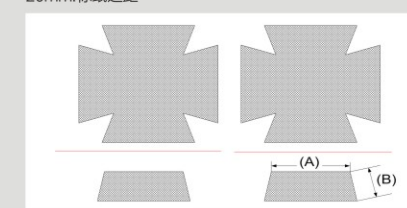
图A2

C 模具 (Mould)

- (1)模穴数量(Number of cavities): _____
- (2)穴与穴中心距(Cavity to cavity distance): _____ mm
- (3)五面标模具中心距计算方法(For 3 and 5 side labeling): $(A+B \times 2) \pm 20\text{mm}$ (图C1)
- (4)圆桶模具产品水平放置中心距计算方法(Cavities horizontal layout for round full wrap): $A \times 3.1416 + 60\text{mm}$ (图C2)
- (5)圆桶模具产品垂直放置中心距计算方法(Cavities vertical layout for round full wrap): $[(A \times 3.1416 \div 2 - A) \pm 2] + A + 100\text{mm} + 50\text{mm}$ (图C3)
- (6)方盒模具产品水平放置中心距计算方法(Cavities horizontal layout for square full wrap): $(B+C) \times 2 + 60\text{mm}$ (图C4)
- (7)方桶模具产品垂直放置中心距计算方法(Cavities vertical layout for square full wrap): $B+C+100+50\text{mm}$ (图C5)

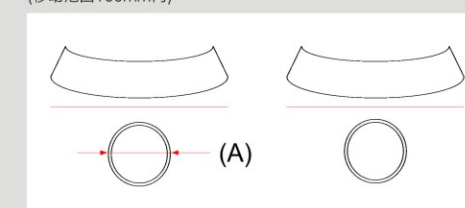
A:产品底部最大边长

B:产品侧面贴标位置边长, 20mm:标纸间距



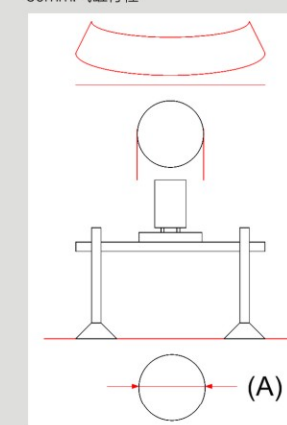
图C1

A:产品最大贴标面直径, 60mm:标纸间距
备注:如模具中心距太大可移动标纸减小模具中心距 (移动范围100mm内)



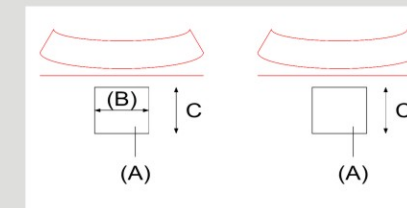
图C2

A:产品最大贴标面直径
100mm:取标治具总高度
50mm:气缸行程



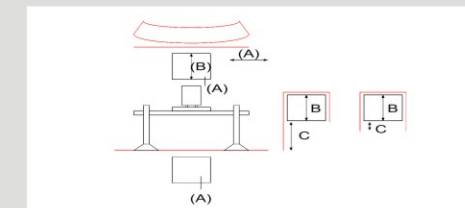
图C3

备注:如模具中心距太大可移动标纸减小模具中心距 (移动范围100mm内)
A:建议贴标时标纸贴缝
B:产品贴标面垂直方向边长
100mm:取标治具总高度
60mm:标纸间距



图C4

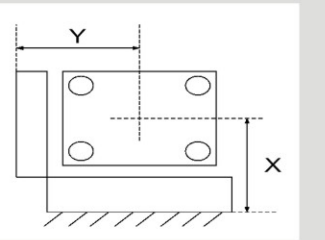
A:建议贴标时标纸贴缝
B:产品贴标面垂直方向边长
100mm:取标治具总高度
50mm:气缸行程



图C5

D 注塑机情况 (Injection machine)

- (1)注塑机品牌与型号: _____
- (2)锁模力(Clamping force): _____ tons
- (3)开模行程(Opening stroke): _____ mm
- (4)X尺寸(X dimension): _____ mm
- (5)Y尺寸(Y dimension): _____ mm
- (6)侧入系列注塑机开模行程计算方法(G、Side entry IML robot): $A+100\text{mm}+C+D+20\text{mm}$ (图D1)
- (7)顶入系列注塑机开模行程计算方法(L、Top entry IML robot): $A+50\text{mm}+C+D+20\text{mm}$ (图D2)



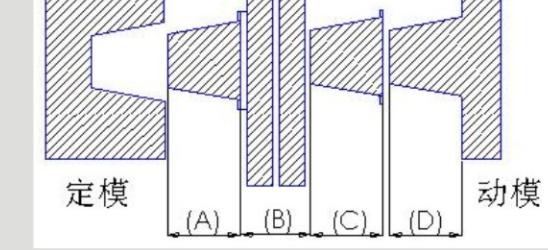
A:C+5mm

B:IML手臂(SF、SM)+吸盘、接头固定板=100mm

C:产品高度(product height)

D:型芯和型腔突出部分距离(Mould core height)

20mm:IML移出模内活动空间



图D1侧入式

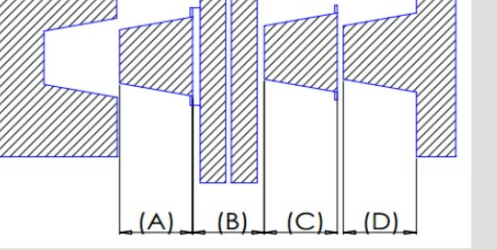
A:C+5mm

B:IML手臂(SF、SM)+吸盘、接头固定板=50mm

C:产品高度/product height

D:Mould core height/型芯和型腔突出部分距离

20mm:IML移出模内活动空间



图D2顶入式

IML-模具效果图

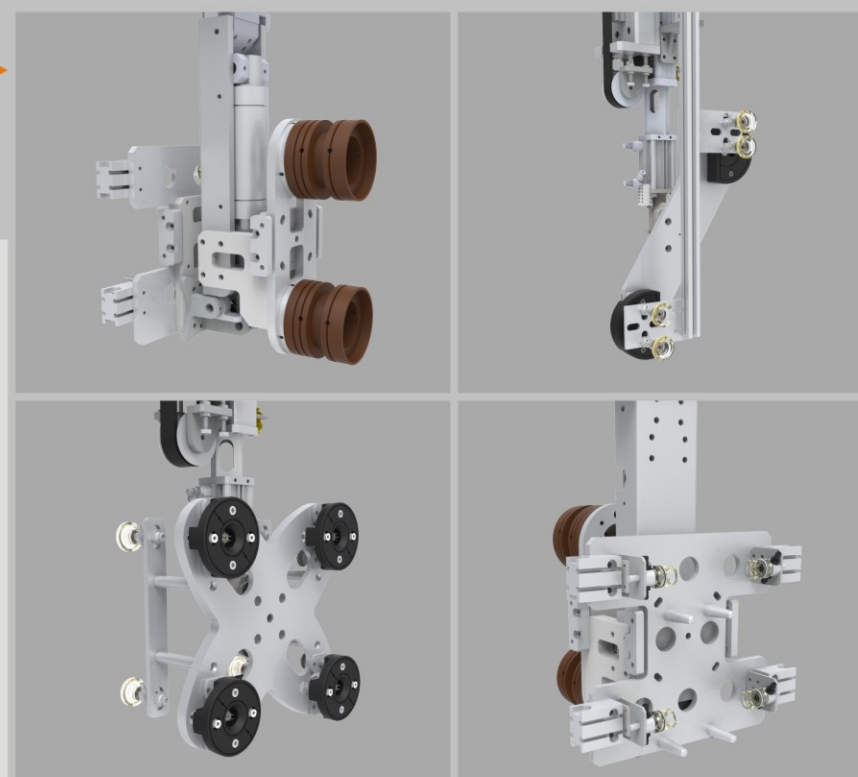


标仓 Label storage device

治具 Fixture

治具 Fixture

标仓 Label storage device



RB SERIES RB-L **RB SERIES** RB-PR **RB SERIES** RB-W **XG SERIES** XG-Z

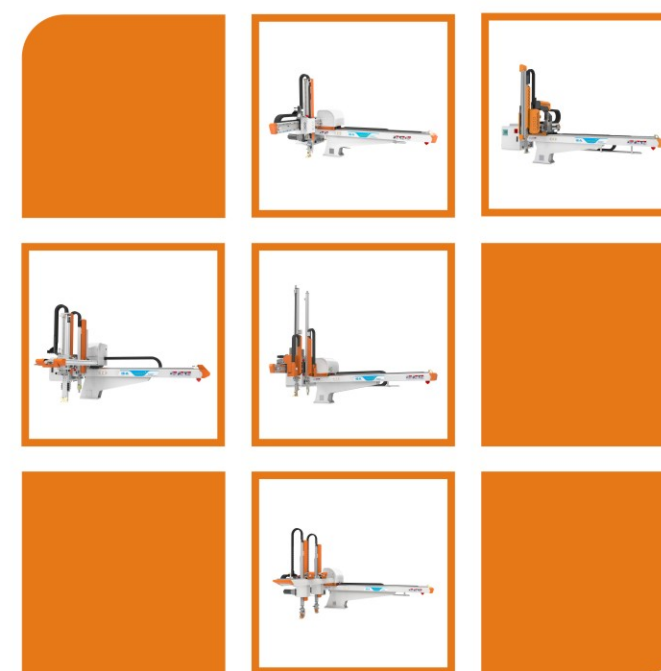


| 类型 (Type) | Side Setry Type | Swing Type | | | | | | Swing Type | | | | |
|---|--------------------|--------------------|---------------|---------------|-------------|-------------|-------------|--------------------------|-----------|-----------|----------------------|---------------|
| | RBLS50 -V | RB550 RB550-V | RB650 RB650-V | RB750 RB750-V | RB550 -PR | RB650 -PR | RB750 -PR | RB750 -WS | RB850 -WS | RB950 -WS | XG550SF -Z | XG500 -Z |
| 最大荷重 (含治具) MAX load(with tool) (kg) ▶ | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 |
| 手臂形式 Type (mm) ▶ | 单段 Single-Stage | 单段 Single-Stage | | | | | | 二段 (倍速式) Telescopic type | | | 单段 Single-Stage | |
| 上下行程 Vertical stroke (mm) ▶ | 500 | 550 | 650 | 750 | P:550 R:550 | P:650 R:650 | P:750 R:750 | 750 | 850 | 950 | 550 | 550 |
| 引拔行程 Crosswise stroke (mm) ▶ | 120 | 120 | 120 | 120 | P:120 R:100 | P:120 R:100 | P:120 R:100 | 175 | 175 | 175 | 250 | 250 |
| 横出行程(Z轴) Swing stroke (mm) ▶ | | | | | | | | | | | | |
| 驱动方式 Drive System ▶ | 气压 (pressure) | 气压 (pressure) | | | | | | 气压 (pressure) | | | X,Z 伺服马达 servo motor | 气压 (pressure) |
| 最小取出时间 Minimum take time (sec) ▶ | 0.7 | 0.7 | 0.8 | 0.9 | 0.8 | 0.9 | 1 | 0.8 | 0.9 | 1 | 0.9 | 1 |
| 空循环时间(不含治具) Dry cycle time(without tool) (sec) ▶ | 3.8 | 4 | 4.2 | 4.4 | 4.3 | 4.5 | 4.7 | 4 | 4.2 | 4.5 | 4 | 4.3 |
| 工作气压 Working Air pressure (Kg/cm ²) ▶ | 5-7 | 5-7 | | | | | | 5-7 | | | 5-7 | |
| 空气消耗量 Air Consumption (nl/cycle) ▶ | 7.6 | 7.6 | 7.7 | 7.8 | 12 | 13 | 14 | 7.7 | 7.8 | 7.9 | 6 | 12 |
| 电源消耗量 Power Consumption (KVA) ▶ | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 2 | 0.5 |
| 电源 Power ▶ | AC220V+10% 50/60HZ | AC220V+10% 50/60HZ | | | | | | AC220V+10% 50/60HZ | | | AC220V+10% 50/60HZ | |
| 净重 Net Weight (kg) ▶ | 42 | 38 | 40 | 42 | 58 | 60 | 62 | 44 | 47 | 50 | 135 | 120 |
| 适用成型机 I.M.M.range (Ton) ▶ | 120-150 | 50-150 | 80-180 | 120-250 | 50-150 | 100-180 | 120-250 | 100-200 | 120-250 | 180-300 | 80-120 | 80-120 |



YANGSEN® ROBOT
FOR THE INDUSTRY AUTOMATION

YANGSEN Take-Out Robot Line-up



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Advanced technology and optimal design in harmony,

YANGSEN a new standard in Take-out Robots

Premium



五轴
Five servo motor robot controller

- 8.4寸触摸屏中英文显示, 人机界面友好。
- 采用了多CPU控制, 系统响应速度快, 动作控制精度高, 定位精度0.01mm。
- 可控制5个伺服轴进行动作, 可扩展IO口, 满足机器外部复杂控制。
- 机器参数、程序程序均可通过U盘在不同机器间导入导出, 方便调试, 使用。
- U盘升级, 可随时更新最新系统, 持续获得稳定支持。
- 除注塑机械手外, 亦可适配其他多轴机械结构。
- 8.4 inch touch screen display in English, user-friendly interface.
- The use of multi CPU control, the system response speed, high control accuracy, positioning accuracy 0.01mm.
- It can control the 5 servo axes, and can extend the IO port to meet the complex external control of the machine.
- The machine parameters, mold number procedures can be imported and exported through the U disk in different machines.
- U disk upgrade, you can update the latest system, continue to get stable support.
- In addition to injection molding machine robot, but also suitable for other multi axis mechanical structure.

Advanced



三轴
Three servo motor robot controller

- 8.4寸触摸屏中英文显示, 人机界面友好。
- 采用了多CPU控制, 系统响应速度快, 动作控制精度高, 定位精度0.01mm。
- 堆叠、用户教导、电动调位等多项功能, 动作作为示教模式, 满足客户的各种控制需求。
- 丰富的保护功能, 自动检测机器运行情况, 及时显示故障报警及故障原因, 确保机器的使用安全。
- 可控制3个伺服轴进行动作, 可扩展IO口, 满足机器外部复杂控制。
- 8.4 inch touch screen display in English, user-friendly interface.
- The use of multi CPU control, the system response speed, high control accuracy, positioning accuracy 0.01mm.
- The stack, the user to teach, electric and other functions of the tune, Action for teaching mode, to meet the various needs of customers.
- Rich protection function, automatic detection of the machine operation, timely display the fault alarm and fault reasons, to ensure the safe use of the machine.
- It can control the 3 servo axes, and can extend the IO port to meet the complex external control of the machine.

General



两轴
Two servo motor robot controller

- 操作面板采用3.5寸真彩屏显示。
- 处理器升级为高性能32位DSP处理器, 系统运行速度比之前提升10倍。
- 高速I/O传输技术, 使机械手的运行速度更快, 可缩短周期时间10%以上。
- 控制精度大幅度提高, 所有时间控制精度达到0.01秒, 可更准确的配合模具取出产品, 缩短机械手的取出时间, 提高注塑机的效率。
- 增加机械手报警信息和取出时间的记忆功能, 方便用户查看机械手历史运行情况。
- 增加USB端口, 方便用户的模组参数的储存和共享, 并可通过U盘进行程序的升级。
- Operation panel with 3.5 inch true color display.
- The processor is upgraded to a high-performance 32 bit DSP processor, the system operating speed increased by up to a factor of 10.
- High speed I/O transmission technology, so that the robot speed is faster, can shorten the cycle time of more than 10%.
- The control precision is greatly improved, and the control precision of all the time is up to 0.01 seconds, which can be more accurate with the mold out of the product, shorten the time to remove the robot, improve the efficiency of the injection molding machine.
- Increase the alarm information and take out the time of the robot memory function, convenient for users to view the robot running history.
- Increase the USB port, easy to store and share the user's module parameters, and can be upgraded program through the U disk.

Basic



单轴
One servo motor robot controller

- 控制精度大幅度提高, 所有时间控制精度达到0.01秒, 可更准确的配合模具取出产品, 缩短机械手的取出时间, 提高注塑机的效率。
- 增加机械手报警信息和取出时间的记忆功能, 方便用户查看机械手历史运行情况。
- 增加USB端口, 方便用户的模组参数的储存和共享, 并可通过U盘进行程序的升级。
- Operation panel with 3.5 inch true color display.
- The control precision is greatly improved, and the control precision of all the time is up to 0.01 seconds, which can be more accurate with the mold out of the product, shorten the time to remove the robot, improve the efficiency of the injection molding machine.
- Increase the alarm information and take out the time of the robot memory function, convenient for users to view the robot running history.
- Increase the USB port, easy to store and share the user's module parameters, and can be upgraded program through the U disk.



斜臂
Swing arm robot controller

- 操作面板采用3.5寸真彩屏显示。
- 处理器升级为高性能32位DSP处理器, 系统运行速度比之前提升10倍。
- 高速I/O传输技术, 使机械手的运行速度更快, 可缩短周期时间10%以上。
- Operation panel with 3.5 inch true color display.
- The processor is upgraded to a high-performance 32 bit DSP processor, the system operating speed increased by up to a factor of 10.
- High speed I/O transmission technology, so that the robot speed is faster, can shorten the cycle time of more than 10%.

| 类型 (Type) | 机型 (Model) | 最大荷重 (含治具) MAX load(with tool) (kg) ▶ | 手臂形式 Type (mm) ▶ | 上下行程 Vertical stroke (mm) ▶ | 引拔行程 Crosswise stroke (mm) ▶ | 横出行程(Z轴) Swing stroke (mm) ▶ | 驱动方式 Drive System ▶ | 最小取出时间 Minimum take time (sec) ▶ | 空循环时间(不含治具) Dry cycle time(without tool) (sec) ▶ | 工作气压 Working Air pressure (Kg/cm ²) ▶ | 空气消耗量 Air Consumption (nl/cycle) ▶ | 电源消耗量 Power Consumption (KVA) ▶ | 电源 Power ▶ | 净重 Net Weight (kg) ▶ |
|-----------|------------|---------------------------------------|------------------|-----------------------------|------------------------------|------------------------------|---------------------|----------------------------------|--|---|------------------------------------|---------------------------------|------------|----------------------|
| | | | | | | | | | | | | | | |

FP SERIES
FP-W



FG SERIES
FG-IS/ID



FG SERIES
FG-WS/WD



FK SERIES
FK-WS/WD



FP SERIES
FP-GW



FG SERIES
FG-GW



FK SERIES
FK-GWS



FK SERIES
FK-GWD



Table with columns for Type, Model, Max load, Stroke, Drive System, etc. for various machine series.

Table with columns for LMM range (Ton) and machine size (Large, Medium, Small).