

PICK & PLACE AUTOMATION AN INTEGRATED ENGINEERING APPROACH



PRABHA ENTERPRISES
AHMEDABAD



COMPANY PROFILE

The background is a solid dark red color. In the four corners, there are decorative white line-art patterns that resemble circuit traces or a stylized tree structure. These patterns consist of thin lines that branch out and terminate in small circles, creating a sense of connectivity and technology.

Pick and place robots are available for a wide range of applications. Whilst this gives you an overview of pick and place robots, the exact type of pick and place robot to suit your application will be very dependent on your specific requirements.

Robotic pick and place systems can be configured for multiple different types of products and plant layouts. As a robotic handling system, it can run without any operator input, to pick and place parts from one process into another, or from a process into packaging or any other application where items need to be moved from one place to another. A robotic pick and place system will reduce repetitive strain injury and worker fatigue, whilst increasing production throughput, productivity and efficiency.

- Pick and place robots are used in many ways, depending on the product being handled and the manufacturer's need for automation. There are four main ways that pick and place robots are used:

- 1. Assembly:** pick and place robots, during assembly processes, grab an incoming part from a conveyor belt and then place this part onto another work piece, which is then typically carried away by another conveyor belt.
- 2. Packaging:** similar to assembly processes, a pick and place robot grabs a part on an incoming conveyor belt and, rather than assemble the part, the robot places it in a packaging container at a high speed.
- 3. Bin Picking:** pick and place robots equipped with advanced vision systems can grab a part out of a bin, sometimes even when parts are randomly mixed together in a bin, and place this part on a conveyor for production.
- 4. Inspection:** vision systems can monitor products moving on an incoming conveyor belt and detect defective products, and then a pick and place robot can remove the defective product before it reaches the final phases of production.

MAJOR INDUSTRIES WERE PICK & PLACE ROBOTS WIDELY USED

- AUTOMOBILES
- FOOD PACKING
- PLASTIC MOLDING
- PLASTIC PACKING
- DIE CASTING
- ASSEMBLY
- MANUFACTURING /MACHINING
- LOADING /BAGS
- STAMPING

- **Robotic Arm**

Probably the most common type of pick and place robot is the robotic arm type; which typically come as 5 axis robots for standard pick and place application in plane, or 6 axis robots for more complex applications where the products needs twisting from the horizontal .



TYPES OF PICK & PLACE ROBOTS

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- **Cartesian**

The cartesian robot is also a very common type of pick and place robot, that used to be cheaper, but is now not so commonly installed apart from for injection moulding machines.



TYPES OF PICK & PLACE ROBOTS

- **Delta**

Delta robots are mounted above conveyors and are typically used for high speed pick and place applications.



- **Fast Pick / Scara robots**

Fast pick robots are also another option for fast pick and place applications; with cycle times as fast as 150 cycles per minute.



TYPES OF PICK & PLACE ROBOTS

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- **Collaborative robots/Cobots**

In recent years a wide range of different types of collaborative robots have hit the market and these are becoming increasingly used in industrial applications, but they are mostly smaller, slower robots with less of the complex functionality available. This limits their usefulness for some applications.

- There is no standard definition of a collaborative robot but a collaborative robot is generally understood as one that is intended to work alongside and / or directly interact with humans in a shared space. The term cobot is an abbreviation of collaborative robot



COMPANY PROFILE OF BORUNTE ROBOTS

- Guangdong Bo Langte intelligent equipment CO.,Ltd. was founded in 2008. The registered capital is 45million RMB. Currently has about 400 employees. Bo Langte is also robot backbone enterprises of R&D, production, sales, service of industrial robots, level robot, IMM robot, stamping robot, die casting robot, intelligent equipment system in Guangdong Province.
- Guangdong Bo Langte Intelligent Equipment Co.,Ltd. became the first listed company after the NEEQ national expansion on January 24, 2014. Bo Langte is also the first listed company that completes the share register since the NEEQ national expansion in China Securities Depository and Clearing Co., Ltd. At the same time, we are the first listed company in linear industry.

SILENT FEATURES OF BORUNTE

- FASTEST GROWING ROBOTIC COMPANY IN CHINA
- SOLD MORE THAN 15,000 ROBOTS WORLDWIDE IN LAST FINACIAL YEAR
- ALL SERVO MOTORS ARE USED FROM INOVANCE
- VERY HIGH REAPETABILTY
- MANY CRUCIAL ELECTRONIC PARTS ARE USED FROM JAPANESE COMPANY
- UNBELIVABLE CHEAPEST ROBOTS AVAILABLE IN MARKET WITH GAURANTEE SUCCESS
- PROMT AFTER SALES SERVICE

ESTEEM CUSTOMER LIST OF BORUNTE





BRIR801-5
六轴工业机器人

产品特点 Product Features

BRIR801-5型机器人是伯朗特机器人第三代，整个系统操作简单、结构紧凑、定位精度高、动态性能好，其5kg的负载能力尤其适用于喷涂、焊接、注塑、冲压、锻造、搬运、上下料、装配等领域。

BRIR801-5 type robot is BORUNTE's the third generation of robots. The whole operation system is simple, compact structure, high position accuracy and has good dynamic performance. The load ability is 5kg, especially suitable for painting, welding, molding, stamping, forging, handling, loading, assembling, etc.



产品特点 Product Features

延习标准串联6轴结构，加大各环节的活动范围，使之可以应对各种应用的考验。采用封闭式设计，防护等级达到ip68。适用于喷涂车间、多灰场地和潮湿环境。内走线和内藏式电机设计，极大降低本体的二次污染；外观圆滑、平整，不易藏污纳垢且方便清洁，适用于卫生级别较高的行业。

Carbon Fiber Six axis robot for Anti-explosion Application

The extension of the standard series 6 axis structure, increase the range of activities of each link, so it can be used to deal with a variety of applications. The close design, protection grade reaches IP68, suitable for spraying workshop, ash site and humid environment. In line with built-in motor design, greatly reduce the bulk of the secondary pollution; sleek, smooth, easy to filth and clean, and convenient for higher level health industry application.

BREP-CF-150

碳纤维防爆喷涂六轴机器人

BRTIRUS Series

六自由度工业机器人 Six Axis Industrial Robot

产品特点 Product Features

BRTIRUS3050A是广东伯朗特智能装备股份有限公司针对多自由度的复杂应用而开发的六轴机器人，其最大负载可达50kg的六轴机器人，拥有3000mm超长臂展。六个自由度的灵活性对上下料、装配、压铸，码垛等场景能够随心所欲。

防护等级高——IP 54，防尘防水

精度高——重复定位精度 ± 0.1 mm

BRTIRUS3050A type robot developed for complex applications. The maximum load is 50KG, the maximum arm length is 3000mm. Suitable for painting, welding, molding, stamping, forging, handling, loading, assembling, etc. The protection grade reaches IP54. The repeatability is ± 0.1 mm.



对象注塑机
Recommended I.M.M
1000T-2400T

VIDEOS OF BORUNTE ROBOTS WORKING IN PICK & PLACE

<https://www.youtube.com/watch?v=iZYmTEQ67wE>

<https://www.youtube.com/watch?v=6zw1CFhiWZ4>

https://www.youtube.com/watch?v=MwLJla5z6_A