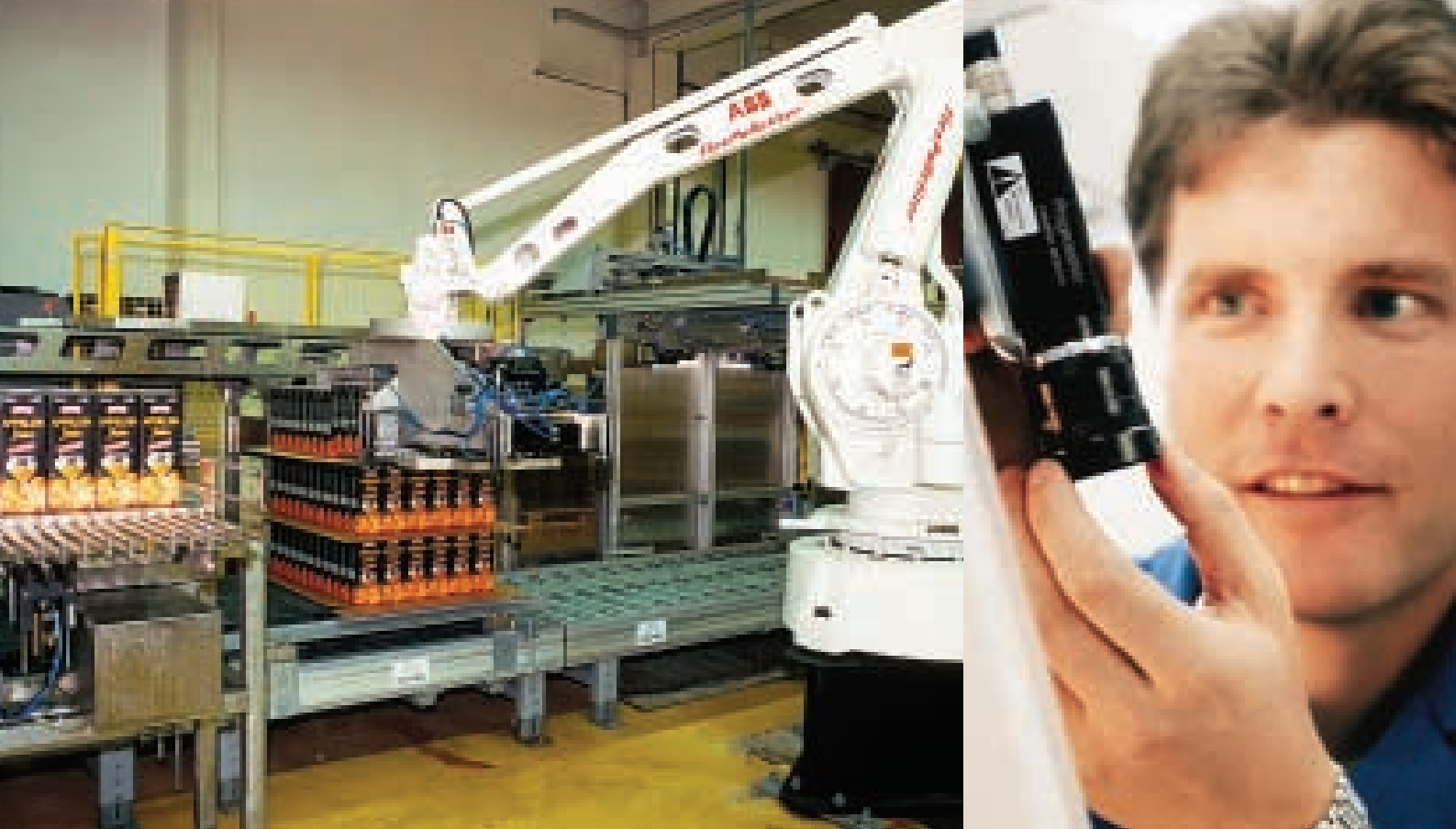


# Fast and Flexible Packaging – Simplified

## ABB Packaging-Line Robots





## Simple brilliance in ABB's Packaging-Line Robots

You understand your business and products better than anyone and that's the area that deserves your primary focus. But as demand rises for convenience packaging in all shapes and sizes, line speeds increase and product life cycles shorten it will be your packaging line that will demand your attention. If your packaging processes aren't simple, fast, dependable and flexible then it could cripple your whole operation and your ability to deliver. So when it comes to getting your products sorted, wrapped, stacked, packed and palletized – then ABB Packaging-Line robots can help make a difference. Probably *the* difference.

With a minimum of fuss, the speed to maximize your throughput and the flexibility to open up your ever-changing opportunities, ABB Packaging-Line robots have the qualities necessary to make the difference throughout your packaging operations. Added to ABB's global support capabilities and worldwide

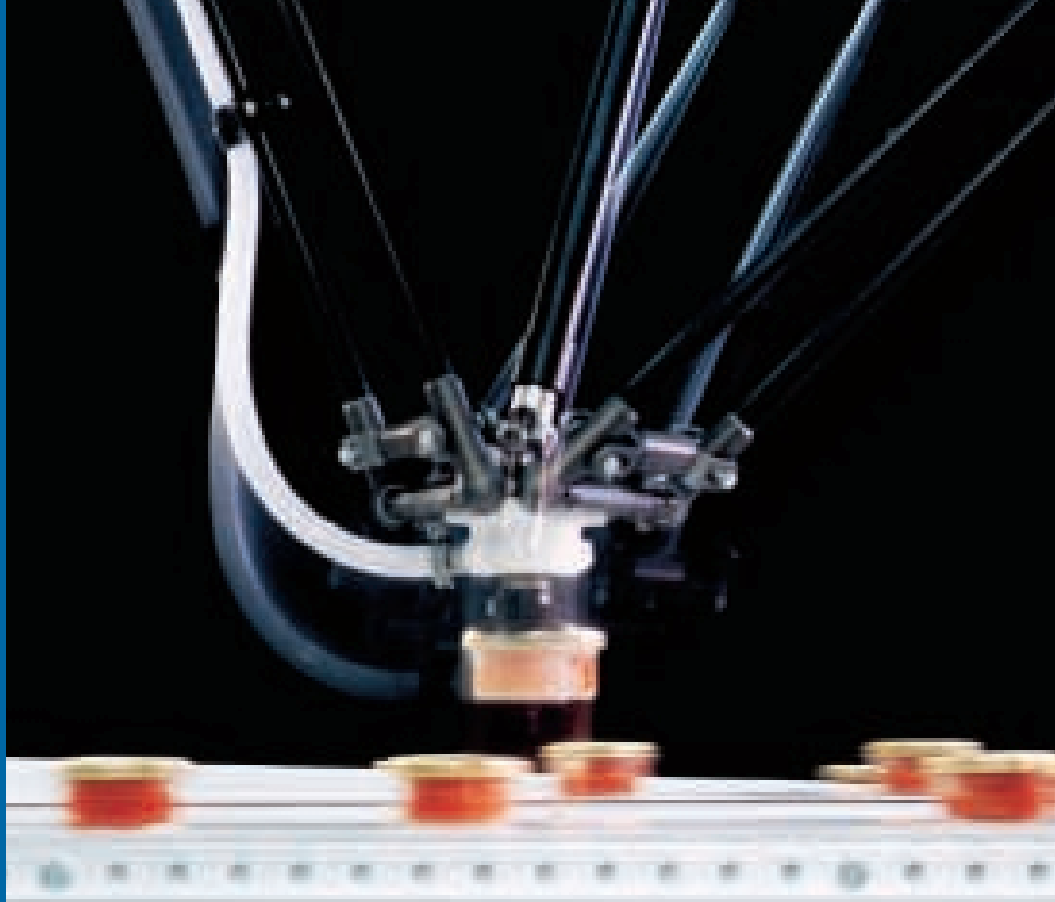
alliance of leading packaging system integrators and specialist machine builders you now have the possibility of selecting virtually any robot-based packaging machine or solution with the confidence of ABB performance, global industry acceptance and worldwide ABB support and service.

### **Leading the flexible packaging revolution. Exactly how can we do this?**

#### **Leading packaging product range**

By firstly providing an industry leading portfolio of packaging robots that range from the fastest and most advanced high-speed picking robots and integrated vision systems, to robots capable of handling pallet layers up to an unprecedented 650 kg. With 30 years experience and more than 100,000 robot installations globally, we lead the industry in everything from advanced engineering to intelligent software – all the qualities that add up to brilliant performance.

*“We were already confident about ABB’s reputation for performance, but what impressed us even more were the continuous cost savings coming from the freedom that robot-based packaging brought to the whole operation.”*



#### **Environment qualifications**

Secondly we ensure that Packaging-Line robots are designed and tested to meet and exceed the demanding environmental requirements necessary for global applications in food, pharmaceutical and electronic production.

#### **Truly global support**

Thirdly by ensuring local robot support no matter where in the world you need to pick, pack or palletize. Wherever your operations need to go, ABB is probably already a major service provider to the local industry and ready to support you with training, spare parts, and a range of services that will maintain or increase your robots productivity.

#### **Global Partner Alliance – the best of both worlds**


Fourthly, ABB is working closely with the leading suppliers of packaging machines and systems to ensure continuous development of ABB Packaging-Line products to fully maximize system performance. So when you

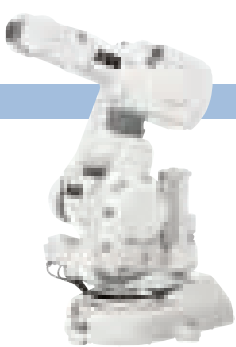
buy an ABB robot-based system or solution from one of our partners you get the best of both worlds.

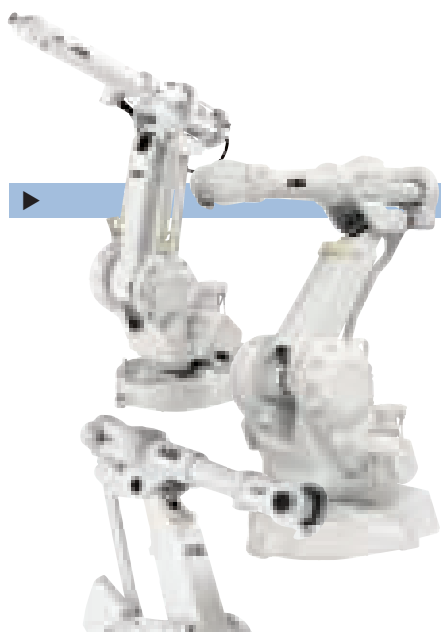
#### **ABB Packaging-Line payback potential**

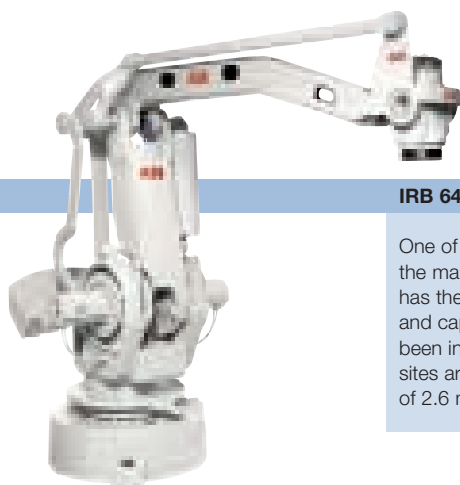
Utilizing packaging systems based on ABB Packaging-Line products can dramatically decrease machine/system delivery, start-up delays, product changeovers, maintenance requirements, material loss, and overall line downtime, while increasing flexibility and total through-put. ABB Packaging-Line products are becoming the foundation of flexible multi-function packaging cells that are scalable, re-configurable, and agile enough to cope with the emerging revolution in packaging.

# The ABB portfolio of Packaging-Line Robots

	<b>IRB 340 and IRB 340/2</b>	<b>Main applications</b>	<b>Features</b>
	<p>Uniquely optimized parallel-arm designed robot for the fastest and most demanding high-speed picking and packing applications. The robot has a speed of more than 150 picking cycles per minute. The stainless steel and wash-down versions are specifically designed for open food applications. Available in 1 or 2 kg payload options, the exceptional low moving mass and overhead mounting of the robot also makes it highly suitable for use within for example packaging machines, feeding and unloading flow wrapping systems and blister pack machines.</p>	<p>Material handling Picking Packing</p>	<p>IP 67 Wash down Washable Clean room 10 Food grade PickMaster</p>

	<b>IRB 140</b>	<b>Main applications</b>	<b>Features</b>
	<p>Extremely fast and agile 6-axis robot, ideal for high-speed packing applications up to 5 kg handling capacity and/or 6-axis degree of freedom. Although small in its structure the robot can be mounted in any direction but still has the reach of 810 mm. Due to its compact design and speed of a SCARA robot the IRB 140 is extremely effective in assembly and larger picking and packing applications.</p>	<p>Assembly Material handling Picking Packing</p>	<p>IP 67 Washable Clean room 10 PickMaster</p>

	<b>IRB 1400/2400/4400</b>	<b>Main applications</b>	<b>Features</b>
	<p>Fast and flexible 6-axis robots for multi-purpose handling and multifunction cells combining for example; carton/case erecting, loading, taping and palletizing. Compact, high performance units with a number of size variants to make them suitable for any application from 5 to 60 kg with reach up to 2.74 m and palletizing height up to 1.8 m. The very slim wrists, highly flexible and compact design coupled with large working envelope make them perfect for a wide range of packaging operations in narrow locations saving floor space while offering accessibility to numerous functional units.</p>	<p>Assembly Material handling Packing</p>	<p>IP 67 Washable Clean room 100 PickMaster</p>



▶	IRB 640	Main applications	Features
	<p>One of the leading palletizing robots on the market, the optimized 4-axis IRB 640 has the perfect combination of reach, speed and capacity. Extremely reliable. The robot has been installed at more than 1,200 customers' sites around the globe. It palletizes to a height of 2.6 m and can handle 160 kg payload.</p>	<p>Material handling Palletizing</p>	<p>IP 54</p>



▶	IRB 6600	Main applications	Features
	<p>The IRB 6600 replaces the well-known IRB 6400 series. Now available in five versions with up to 225 kg payload and 3.2 m reach, this robot is ideal for high-payload handling, palletizing and bottling applications up to a height of 2.8 m. Small interference radius ensures flexible installations in compact areas.</p>	<p>Material handling Packing Palletizing</p>	<p>IP 67 Washable PickMaster Clean room 100</p>



▶	IRB 7600	Main applications	Features
	<p>The latest from ABB is the IRB 7600 series power robots for extremely high payloads. Choose from the 150 kg payload version with 3.5 m reach, the 340 kg with 2.8 m reach, the 400 kg at 2.55 m or the 500 kg at 2.3 m. With axis 5 pointing down, the maximum payload can be as high as 650 kg, ideal for heavy payload full layer palletizing.</p>	<p>Material handling Packing Palletizing</p>	<p>IP 67 Washable PickMaster Clean room 100</p>

## Make the intelligent choice

The usefulness of robots in the packaging industry depends on exceptional ease of use, motion control, flexibility and reliability. With our advanced, modular and extremely reliable S4Cplus controller, the brains of our products, ABB robots have emerged as the preferred robot for many of the world's leading consumer goods manufacturers by satisfying these exact same requirements.

### **S4Cplus – untapped intelligence at your command**

Compact, highly configurable and modular system with operator-friendly interfaces, the S4Cplus contains a powerful computer system including RAPID, ABB's open and highly advanced robot language. Flexibility, as we've said, is one of the intelligence quotients of the S4Cplus. Whatever control or intelligence is required to handle your particular packaging application you can be sure that the S4Cplus controller has the intelligence to reliably control and fine-tune your production process while allowing easy to use operator interfaces.

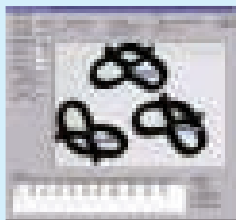
### **Motion Control**

One of the true strengths of ABB robots is our ability to maximize productivity through the most advanced motion control available in the market. Utilizing 'TrueMove' and 'QuickMove', unique self-optimizing motion control features, ABB Packaging-Line robots keep cycle times at a minimum by ensuring maximum acceleration and path accuracy every moment. Irrespective of individual maximum axis speeds it is this motion control that drives ABB robots to reach up to 25% faster cycle times than competitors and ensures your packaging quality and productivity.

### **Reliability and recovery**

The reliability of ABB robot-based systems significantly improves line uptime while the open nature of robotic solutions allows immediate identification and recovery from jams and crashes. The ability of ABB robots to instantly return to the programmed path ensures systems are more rapidly and safely brought back to operation after stoppages, further improving productivity and operator confidence.

## PickMaster™ – the complete packaging productivity tool



PickMaster™ is ABB's standard software solution for integrating cameras, vision systems and conveyors with robots.

It combines the functions

of system integration tool, operator interface and advanced cell controller into one powerful, adaptable and easy to use package for flexible high-speed packaging installations. It is specifically designed to enable the easy integration of ABB's robots to a wide range of random material flow handling applications

and is especially suited to run combined high-speed picking and case packing systems.

PickMaster contains wizards and guides in a familiar PC environment where the user intuitively understands how to calibrate, configure and run the system. PickMaster can integrate up to 8 cameras, 8 ABB robots and multiple conveyors per robot. Integrated into PickMaster is vision HW and SW by Cognex, that offers powerful search machine and quality inspection control capabilities. When handling high speed and high flow

## Talking the same language

Whatever packing application you might have, the robot must function in its environment all day, every day. Our long history in packaging has helped ABB develop the product features needed for most demanding applications, like handling of open food and extreme clean environments. You can rely on the fact we are talking the same language!

### Clean Room

Clean room robots have been tested according to ISO and US Federal standards. The robots have been designed to meet demands from industries where cleanliness is paramount, as in electronics and pharmaceuticals.

### Wash Down

Wash Down means that the robot can be cleaned under industrial conditions, using hot water, pressure and detergents. The robot is tested to withstand common detergents in food industry; naturally all materials are corrosion free. The robots in itself is IP67 but is furthermore designed without crevices but with flat surfaces that easily can be rinsed off.



Wash Down to us and to you does of course also mean that the robot complies with USDA and FDA standards.

### Wash

Wash robots have a special resistant polyurethane cover that allows cleaning. The IP67 design gives the robots a longer lifespan in cleaning applications.

### IP67

Robots are often working in very severe environments that require that they are resistant to penetration. ABB offers a complete product program with the tightness class of IP67, the level of the robot's tightness. The IP67 standard means that the robot fulfills the most severe requirements regarding the ability to withstand the impact of firm material and that the robot can be submerged in water, without being damaged.

of products in a line with conveyors the process stability of PickMaster is paramount. PickMaster is therefore also an excellent solution in non-vision applications where process stability and easy integration is essential.

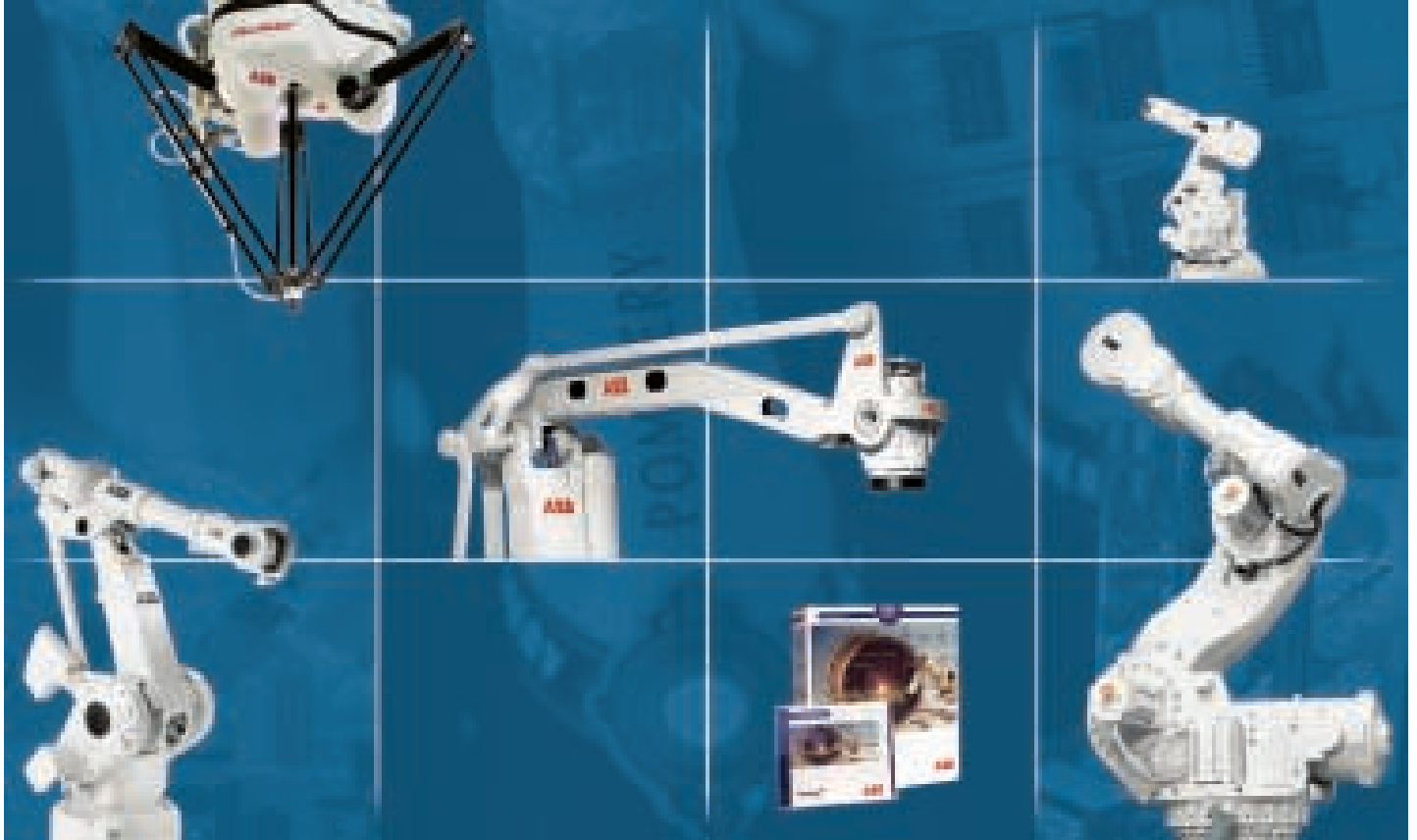
Functions like Adaptive Task Completion (ATC) and Load Balancing highlight the benefits of using PickMaster in controlling groups of robots in joint packaging processes. For example, 'Smart' functions in PickMaster allow the packaging process to be immune to individual robot stops as the system redistributes missed

positions and work share to the operational robots – yet it is easy to implement through simple drag and drop interfaces.

PickMaster also incorporates numerous functions for advanced mixing and sorting as well as tools for remote support and interfaces to operator panels. PickMaster is therefore the complete packaging tool with one common goal, to make packaging installations quick to commission, easy to operate, reliable to run and maximize productivity.

**World leading robot range based on 100,000 units of experience**

Ever since 1974, when the first all-electric industrial robot was introduced, ABB has been at the forefront of robot based automation technology. Today, our wide range of robotic products help to optimize production in the automotive, foundry, plastics and food industries. Our products and services are available through ABB's global network of sales and services centers, as well as via carefully selected partners all over the world.

**ABB**

[www.abb.com/robotics](http://www.abb.com/robotics)