Material Handling and Assembly

Robotic Solutions for All Industries

YASKAWA

A Legacy
of Excellence

OVER 100 YEARS OF INNOVATION

In material handling applications, everything depends on quality, consistency and efficiency. Whether your priority is absolute precision, pure payload-moving power or both, Yaskawa material handling solutions can help you maximize throughput and optimize ROI for applications including machine tending, assembly, part transfer, picking, packing, palletizing and more.

Solutions for Every Application and Industry

Our unique approach to material handling solutions is founded on two core principles: exceptional design and optimal configuration. We start with an industry-leading range of robots, controllers and accessories all engineered for maximum performance. Our specialists then work with customers to determine the best combination of components for their specific needs, including analyzing parts and processes.

The combination of best-in-class offerings and expert consultation enables us to deliver outstanding solutions for companies of all sizes with remarkably diverse application needs. Whether you're handling small or large parts, prefer a process-to-part or part-to-process approach, or even need multiple robot control, Yaskawa Motoman has the solution.

Proven Impact

Material handling solutions from Yaskawa Motoman have delivered game-changing results for clients of all sizes. We've enabled Tier 1 automotive suppliers to manufacture heavy-duty parts with unprecedented speed and efficiency. We've helped electronics manufacturers produce their small, precision components with ease. And, we've enabled leading companies to go to market effectively with consumer products of all kinds. Whatever your requirements or challenges, we can configure the ideal solution.

Engineered to Perfection

Our experienced application engineers specialize in conceptualizing advanced material handling solutions in innovative, uniquely effective ways. By combining ISO 9001-2015 certified project processes, advanced 3D modeling software and offline simulation tools, we ensure well-executed projects. In addition, critical components such as system safeguarding, application equipment and programming are an integral part of the solution. Leveraging our wide variety of standard components, we can build a solution to fit your specific requirements.

Easy Automation

Providing powerful, yet easy-to-use, technology for quick and easy implementation of a robot system is our goal. Specifically designed for those branching out into robotics, our Smart Series product line offers simple, intuitive robot programming methods, reducing robot execution complexity and operator training investment. Easily adaptable, these products make automation easy for demanding manufacturing requirements.

Best-in-Class, Across the Board

Our industry-leading, high-speed robots include high-payload, extended-reach, ultra-maneuverable seven-axis and unique 15-axis dual-arm robots.

With cutting-edge controllers, vision systems, peripherals and other best-in-class components, we can configure a solution tailored to you.

Committed to Customer Satisfaction

All Yaskawa Motoman solutions are backed by our unwavering commitment to provide exceptional customer service and to ensure your complete satisfaction. You can depend on unmatched quality, integrity and timely service, including 24/7 technical phone support from associates with 100+ years of combined robotics experience. Coupled with regional service technicians throughout the Americas, and support services to maximize robot productivity and longevity, Yaskawa Motoman solutions deliver both world-class performance and true peace of mind.
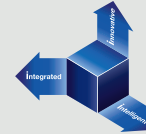
i³-Mechatronics

Amid the rapidly changing manufacturing industry, Yaskawa strives to create value-added products that foster growth for our customers. This has led to the development of new three-dimensional solutions that intertwine smart technologies with the human element to maximize productivity, enabling the next generation of factory automation.

i³-Mechatronics, Yaskawa's vision of Industry 4.0, is an integrated, intelligent and innovative approach that combines classical mechatronics, information and communications technology with new digital solutions.

Visualize Your Operations

A key component of i³-Mechatronics is **Yaskawa Cockpit™**, a state-of-the art software platform that easily monitors, accumulates and visually delivers operational data in real time via an integrated approach, providing the ability to synchronize all factory and operational knowledge for data-driven optimized planning. Yaskawa Cockpit provides companies with the flexibility needed to oversee the health, status and performance of networked production environments.
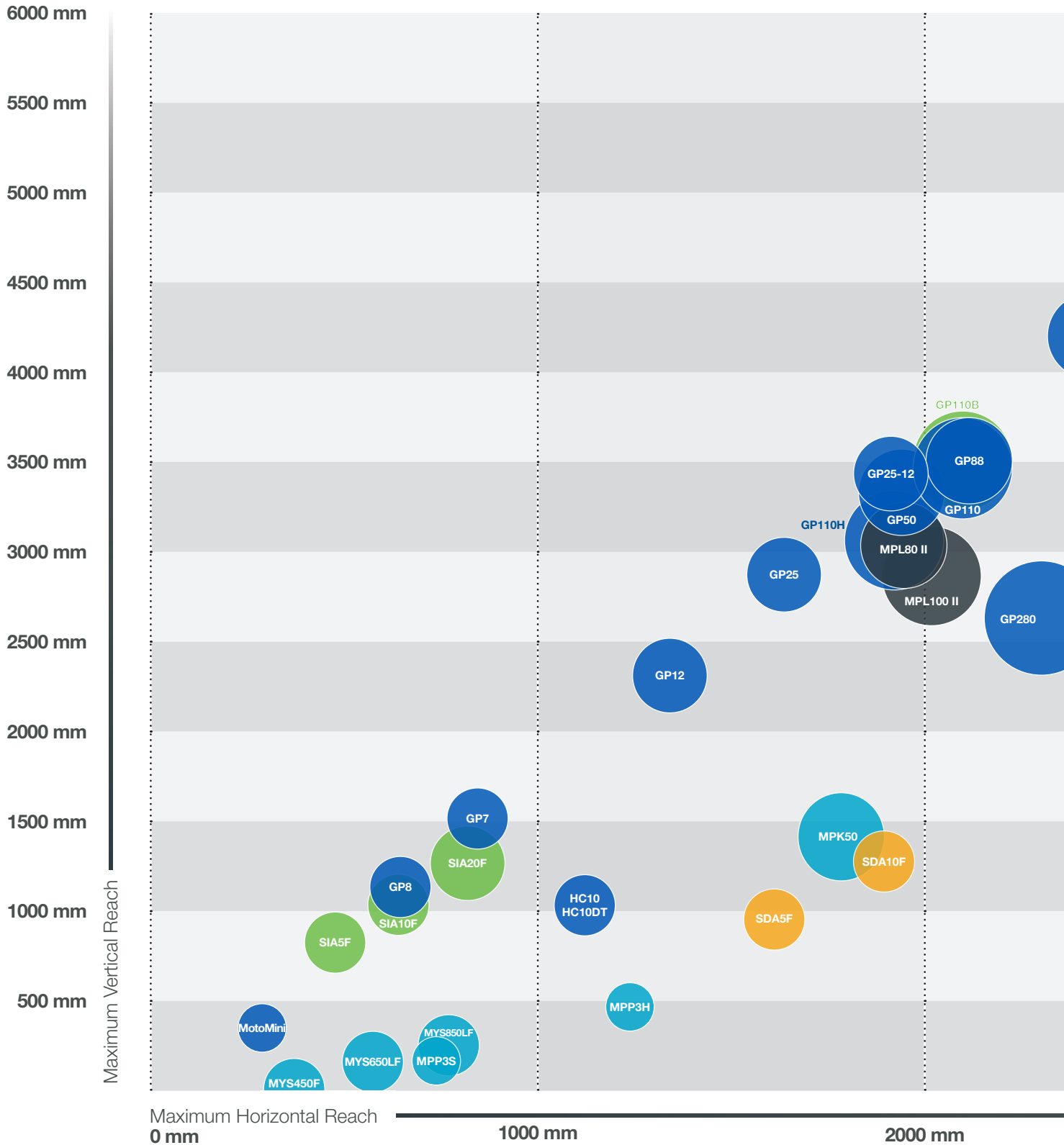
Yaskawa Cockpit is one of the first robot management systems that is extensible; non-robot devices throughout the factory can be incorporated with Add-on Functions. All processed data can be forwarded to external resources for utilization of AI-based Big Data analytics using its standard Open Platform Communication Unified Architecture (OPC-UA) interface which allows data to be shared throughout the extended enterprise or external systems.
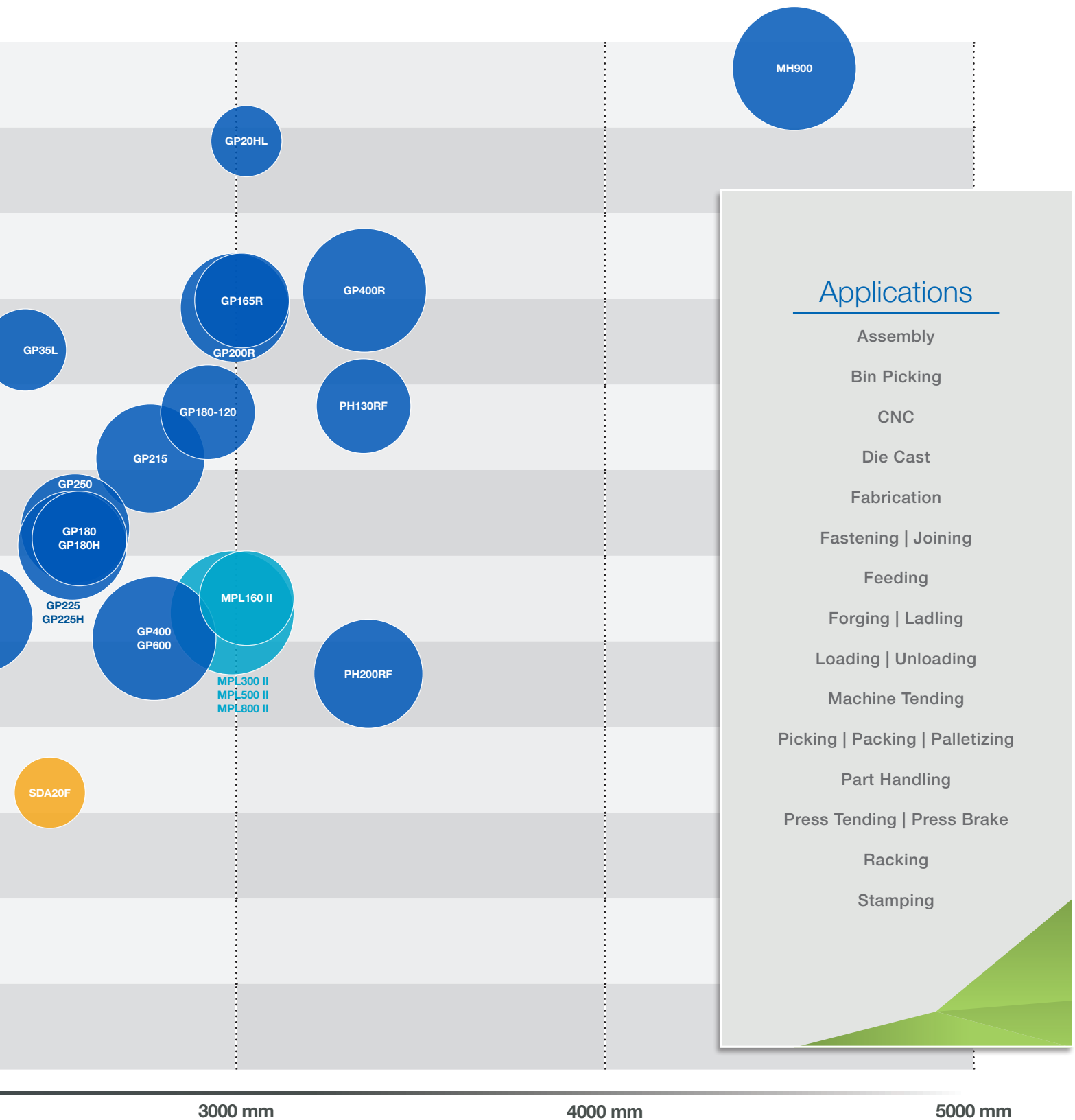
YASKAWA

Material Handling and Assembly Robots

Axis Key

| 4 Axis | 5 Axis | 6 Axis | 7 Axis | 15 Axis |

Payload Key

<5 kg | 5-10 kg | 11-25 kg | 26-99 kg | 100-199 kg | 200-299 kg | 300-999 kg

Maximum Vertical Reach

6000 mm
5500 mm
5000 mm
4500 mm
4000 mm
3500 mm
3000 mm
2500 mm
2000 mm
1500 mm
1000 mm
500 mm

GP110B
GP88
GP25-12
GP110
GP110H
GP50
MPL80 II
GP25
MPL100 II
GP280
GP12
MPK50
GP7
SDA10F
SIA20F
GP8
HC10 HC10DT
SIA10F
SDA5F
SIA5F
MPP3H
MotoMini
MYS850LF
MYS650LF
MPP3S
MYS450F

Maximum Horizontal Reach
0 mm
1000 mm
2000 mm

MH900

GP20HL

GP400R

GP165R

GP200R

GP35L

PH130RF

GP180-120

GP215

GP250

GP180
GP180H

GP225
GP225H

MPL160 II

GP400
GP600

MPL300 II
MPL500 II
MPL800 II

PH200RF

SDA20F

Applications

Assembly

Bin Picking

CNC

Die Cast

Fabrication

Fastening | Joining

Feeding

Forging | Ladling

Loading | Unloading

Machine Tending

Picking | Packing | Palletizing

Part Handling

Press Tending | Press Brake

Racking

Stamping

3000 mm   4000 mm   5000 mm

YASKAWA

Material Handling and Assembly Robots

Axis Key

4 Axis | 5 Axis | 6 Axis | 7 Axis | 15 Axis

		MotoMini	GP7	GP8	GP12	GP20HL	GP25	GP25-12	GP35L	GP50	GP88
CONTROLLER	YRC1000		X	X	X	X	X	X	X	X	X
	YRC1000micro	X	X	X	X						
	DX200										
	MLX200										
	FS100										
PACKAGE OPTIONS	MLX300 SOFTWARE		X	X	X	X	X	X	X	X	X
	XP *		X	X	X		X	X	X	X	X
	FGG		X	X	X		X			X	
SPECIFICATIONS	MOUNTING	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T	F,W,C,T
	#AXIS	6	6	6	6	6	6	6	6	6	6
	PAYLOAD kg	0.5	7	8	12	20	25	12	35	50	88
	V REACH mm	495	1,693	1,312	2,511	5,622	3,089	3,649	4,449	3,578	3,751
	H REACH mm	350	927	727	1,440	3,124	1,730	2,010	2,538	2,061	2,236
	REPEATABILITY mm	±0.02	±0.03	±0.02	±0.06	±0.15	±0.06	±0.08	±0.07	±0.07	±0.07
TYPICAL APPLICATIONS	ASSEMBLY	X	X	X	X		X	X			
	MACH TENDING	X				X		X	X	X	X
	PART TRANSFER	X	X	X	X	X	X	X	X	X	X
	PRESS TENDING								X	X	X
	DIE CAST | FORGE						X	X	X	X	X
	PICKING	X	X	X							
	PACKING	X	X	X	X		X				
	PALLETIZING										
	OTHER	KITTING									

		COLLABORATIVE		DELTA STYLE		SCARA ROBOTS			4- AND 5-AXIS ROBOTS	
		HC10	HC10DT	MPP3S	MPP3H	MYS450F	MYS650LF	MYS850LF	MPK50	MPL80 II
CONTROLLER	YRC1000	X								
	YRC1000micro		X							
	DX200									X
	MLX200			X	X				X	X
	FS100			X	X	X	X	X		
PACKAGE OPTIONS	MLX300 SOFTWARE									X
	XP *									
	FGG			X (STANDARD)	X (STANDARD)				X (STANDARD)	X
SPECIFICATIONS	MOUNTING	F,W,C,T	F,W,C,T	C	C	F	F	F	F	F
	#AXIS	6	6	4	4	4	4	4	4	5
	PAYLOAD kg	10	10	3	3	6	6	10	50	80
	V REACH mm	1,200 mm MAX. WORKING RANGE	1,200 mm MAX. WORKING RANGE	Z 300	Z 601	Z 180	Z 330	Z 420	1,668	3,291
	H REACH mm			Ø800	Ø1,300	450 (RADIAL)	650 (RADIAL)	850 (RADIAL)	1,893	2,061
	REPEATABILITY mm	±0.1	±0.1	±0.1	±0.1	based on axis	based on axis	based on axis	±0.5	±0.07
TYPICAL APPLICATIONS	ASSEMBLY	X	X	X	X	X	X	X		
	MACH TENDING	X	X							
	PART TRANSFER	X	X						X	
	PRESS TENDING									
	DIE CAST | FORGE									
	PICKING			X	X	X	X	X	X	
	PACKING	X	X	X	X	X	X	X	X	
	PALLETIZING								X	X
	OTHER			KITTING	KITTING	KITTING	KITTING	KITTING		

MOUNTING: F = FLOOR; W = WALL; C = CEILING; S = SHELF; T = TILT (Mounting options based on review of application)
PACKAGES: XP = INCREASED BODY PROTECTION; FGG = FOOD GRADE GREASE
* Contact Yaskawa Motoman for availability of XP robot models.

	GP110	GP110B	GP110H	GP180	GP180H	GP180-120	GP215	GP225	GP225H	GP250	GP280	GP400	GP600	MH900
	X	X	X	X	X	X	X	X	X	X	X	X	X	
														X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X		X		X	X	X		X	X	X	X	
	F	F	F	F	F	F	F	F	F	F	F	F	F	F
	6	7	6	6	6	6	6	6	6	6	6	6	6	6
	110	110	110	180	180	120	215	225	225	250	280	400	600	900
	3,751	3,792	3,367	3,393	3,393	4,105	3,894	3,393	3,393	3,490	2,962	2,898	2,898	6,209
	2,236	2,236	2,044	2,702	2,702	3,058	2,912	2,702	2,702	2,710	2,446	2,942	2,942	4,683
	±0.07	±0.12	±0.2	±0.2	±0.2	±0.2	±0.2	±0.2	±0.2	±0.2	±0.2	±0.3	±0.3	±0.5
	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	X	X	X	X	X	X	
	X	X		X		X	X	X		X	X	X	X	

	MPL100 II	MPL160 II	MPL300 II	MPL500 II	MPL800 II	SHELF-MOUNTED ROBOTS					ACTUATOR-BASED	
						PH130RF	GP165R	PH200RF	GP200R	GP400R	SDA10F †	SIA10F †
						X	X	X	X	X		
	X	X	X	X	X							
		X	X									
											X	X
	X	X	X	X	X	X	X	X	X	X		
							X		X		X	X
	X	X	X									
	F	F	F	F	F	S	S	S	S	S	F	F,W,C
	5	4	4	4	4	6	6	6	6	6	15	7
	100	160	300	500	800	130	165	200	200	400	10 / ARM	10
	3,149	3,024	3,024	3,024	3,024	4,151	4,782	2,629	4,782	4,908	1,440	1,203
	2,150	3,159	3,159	3,159	3,159	3,474	3,140	3,505	3,140	3,518	1,970 P-POINT TO P-POINT	720
	±0.2	±0.5	±0.5	±0.5	±0.5	±0.3	±0.2	±0.5	±0.2	±0.5	±0.1	±0.1
											X	X
							X		X	X	X	X
							X		X	X	X	X
						X	X	X	X	X		
							X		X	X		
											X	X
	X	X	X	X	X							
												INJ MOLD

Application designations are representative; contact Yaskawa Motoman to discuss best model for your requirements.
Technical specifications subject to change without notice. Request detail drawings for all design/engineering requirements.
† Contact Yaskawa Motoman for various payload models.

YASKAWA

Versatility and Power

Using a robot for machine tending applications can avoid the inconsistencies of manual handling and provide quality improvements for metal, polymer, ceramic and composite manufacturers. From boring to milling, grinding and more, automating machine tending tasks can help increase productivity and profitability.

GP35L

Overview

- Solutions for a complete range of processes, including turning, milling, grinding, broaching and boring
- Standard and heavy payload capability for safe and consistent process automation
- Floor-, wall-, shelf-, tilt- or ceiling-mounted solutions for ergonomic workcell designs using minimum floorspace
- Extended reach work envelopes for increased work range with fewer robots
- Internal cable routing for maximum protection and lower maintenance costs
- Optional fully integrated vision systems for robot guidance, pass/fail, part alignment or verification

Featured Solution

MotoSight™ 2D is a powerful, yet cost-effective, combination of hardware and software designed to solve complex vision problems. Ideally suited for both vision guidance applications and inspection tasks, MotoSight 2D expertly meets the majority of vision requirements.

Common Machine Tending Robots
SEE FULL ROBOT LINE-UP ON PAGES 6-7

| HC10 | GP12 | GP50 | GP88 | GP600 |

Cases for Automation

Large Production Runs – A robotic automation solution can reduce labor costs and allows talented employees to concentrate on higher-value, complex jobs.

Increase Productivity and Efficiency – Robots can deliver exceptional speed and precision, leading to reduced cycle times, increased production volume and less waste or rework.

Secondary Material Processing – Used frequently in common removal and cutting applications, high performance robots and patented robotic tools add versatility and streamline changeovers for low-volume, secondary operations such as deburring, grinding, finishing and polishing, as well as waterjet, ultrasonic, laser and plasma cutting.

Precision and Speed

High-speed, precision assembly and small part handling are simple when Yaskawa's wide range of industrial robotic arms are on the job. Our solutions also help optimize cell space and improve dexterity, with outstanding range of motion and tooling simplification. Whether your application calls for part location, flexible feeding, fastening or joining – with or without visual inspection – Yaskawa Motoman can help.

GP7

Overview

- Complete solutions for assembly operations, including part location, part identification, part sorting, feeding, fastening or joining, presence absence, error proofing and visual inspection
- Dual-arm robots with 15 axes and human-like motion, including the ability to maneuver in very tight spaces
- Actuator-driven, seven-axis robots with an unmatched level of flexibility
- High-performance, six-axis robots designed to shorten cycle time and increase throughput

- High-speed, four-axis SCARA robots require minimal mounting space
- 2D and 3D vision capability for operational efficiency
- Easily integrates with a variety of part feeding methods such as conveyors, bowls and flex feeders for production automation
- Extensive product line for dependable productivity combined with exceptional flexibility and scalability

Featured Solutions

A wide variety of **end-effectors** (or end-of-arm-tooling) enable the robot to grip parts or perform specialized tasks. Options for assembly vary from pneumatic or electric actuated grippers with custom fingers to tube-fed, torque-controlled screwdrivers for precise inserting and tightening of fasteners.

Common Assembly Robots
SEE FULL ROBOT LINE-UP ON PAGES 6-7

| MotoMini | MYS450F | GP8 | GP12 | GP50 |

Cases for Automation

Safety-Critical Component Assembly – Tedious and time-consuming work for the assembly of safety-critical components, including seat belts, air bags and brake assemblies, is well-handled with robotic automation, ensuring fast, efficient production of high-quality parts.

Final Stage Electronic Assembly – A standalone robotic system offers the highest accuracy and repeatability for the assembly of medical devices, consumer electronic devices and other commercial electronic assemblies.

Wood Pallet Assembly – Robotic automation provides the flexibility needed to build custom, stringer or block pallets – in a variety of sizes – on the same system. This can alleviate worker fatigue, increase product quality and boost overall productivity.
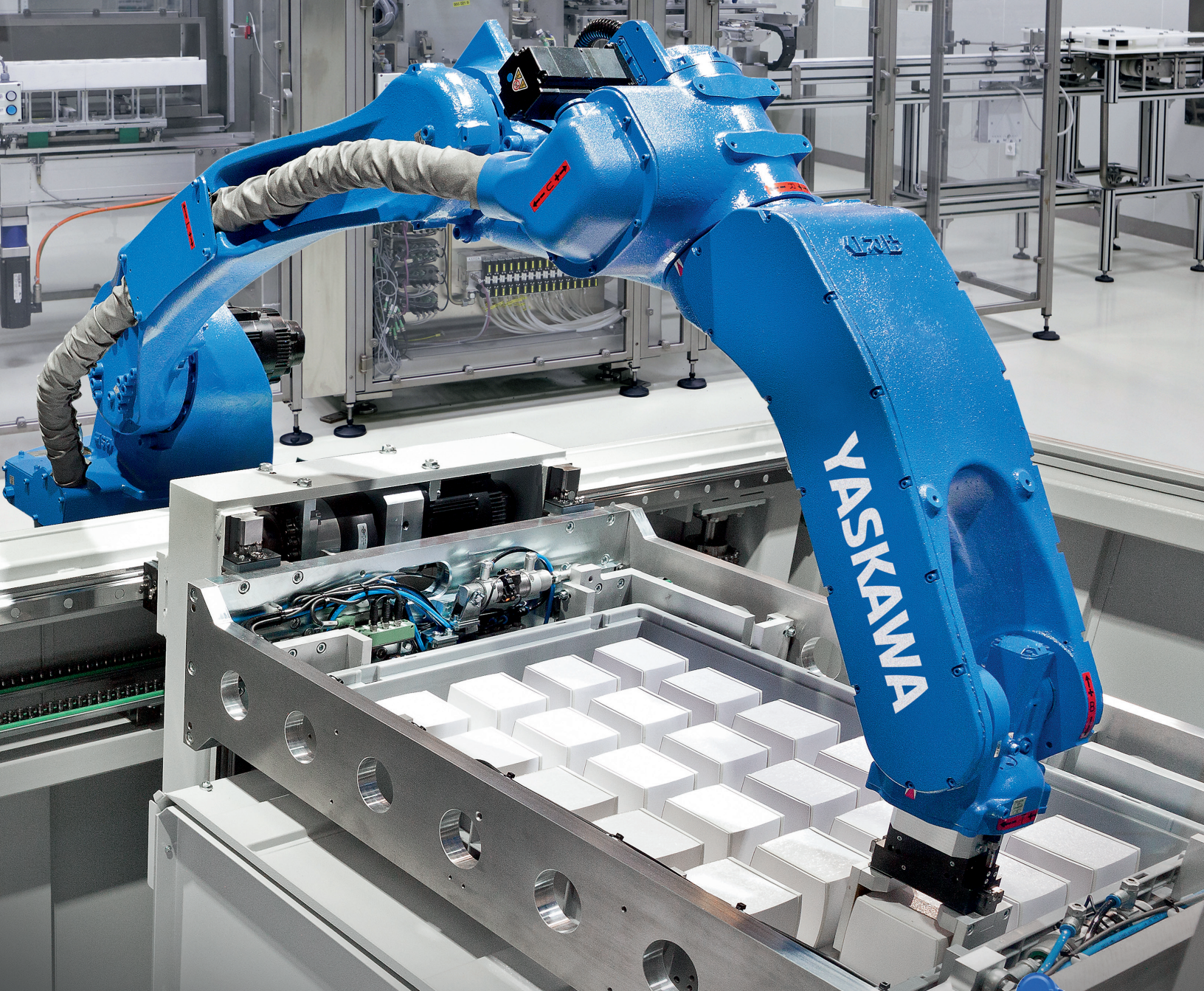
Dedicated Solutions that Really Deliver

We understand the importance and challenges of part transfer. That's why we developed a complete line of robots to support transfer of product payloads from 0.5 to 900 kg and to perform a wide range of operations, including handling parts of varied shape and size. For sophisticated applications, our 15-axis robots (with patented servo actuators and all cables routed through the arms) can perform independent operations with each arm simultaneously, delivering optimal efficiency and precision.

GP180

Overview

- Flexible handling robots can transfer directly robot-to-robot to eliminate set-down and pick-up time as well as fixturing costs
- Dual-arm robots can transfer directly arm-to-arm for reduced handling and simplified orientation, resulting in improved cycle time
- Robotic handling of large, heavy or odd-shaped parts improves worker safety and ergonomics
- Robot(s) can be synchronized with conveyor systems for precise part handling
- Ideal for a variety of application needs:
  - Simple, repetitive pick and place tasks
  - Complex operations such as sorting and part identification
  - Multi-step processes

Featured Solutions

Precise handling enables Yaskawa robots to handle even extremely delicate and fragile parts quickly and securely. In addition, advanced sensing and programming capabilities mean that unevenly spaced components, different part sizes and layered parts are no problem.

When it comes to **heavy-duty applications**, Yaskawa Motoman can deliver the power to move your heaviest payloads – including single-robot capacities up to 900 kg. Or, add a lift assist option to expand a robot's capacity for even heavier loads.

MotoSight 3D BinPick is an easy-to-use hardware and software solution that enables quick and precise recognition of randomly placed parts in bins. Each part is located and its orientation determined, before accurately being presented for the next step in the processing sequence.
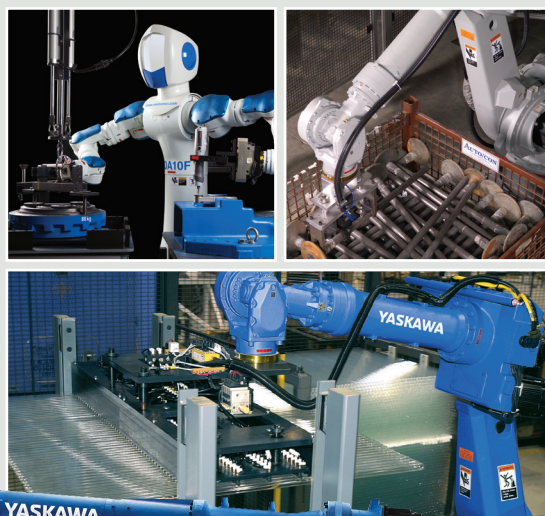
Common Part Transfer Robots
SEE FULL ROBOT LINE-UP ON PAGES 6-7

| GP8 | SDA10 | GP50 | GP110 | GP250 | MH900 |

Cases for Automation

Delicate Parts – Ideal for precise handling of fragile goods such as glass tubes or sintered metal parts, robots can accommodate unevenly spaced components, different part sizes and part stacking in layers, greatly reducing cycle time.

Injection Molding and Blow Molding – Highly flexible robot systems can efficiently pick and place newly-formed plastic goods from molding machines into a case for conveyor transfer, eliminating downtime and increasing productivity.

Large, Heavy Part Transfer Handling – Particularly suited for large objects, including castings and weldments up to 900 kg, Yaskawa robots facilitate the easy and safe transfer of heavy parts from one assembly line to another, reducing direct labor costs and maximizing throughput.

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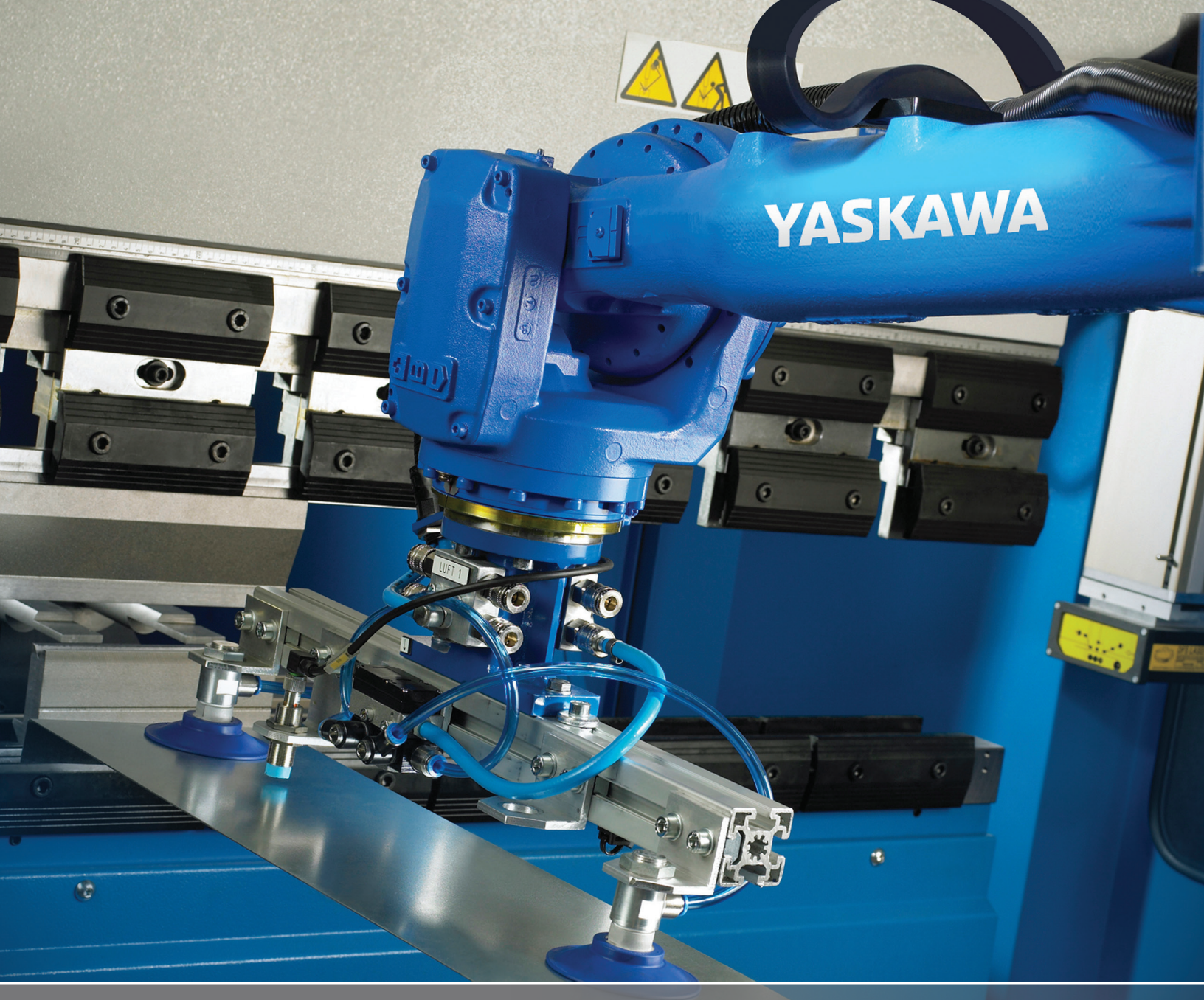
Durability that Delivers

For press tending or stamping applications with high duty cycles, our press handling robots are ideal. Designed with heavy-duty drive systems that can deliver in the most demanding applications, these robots also have higher vibration ratings to tolerate the tough conditions often encountered in press rooms.
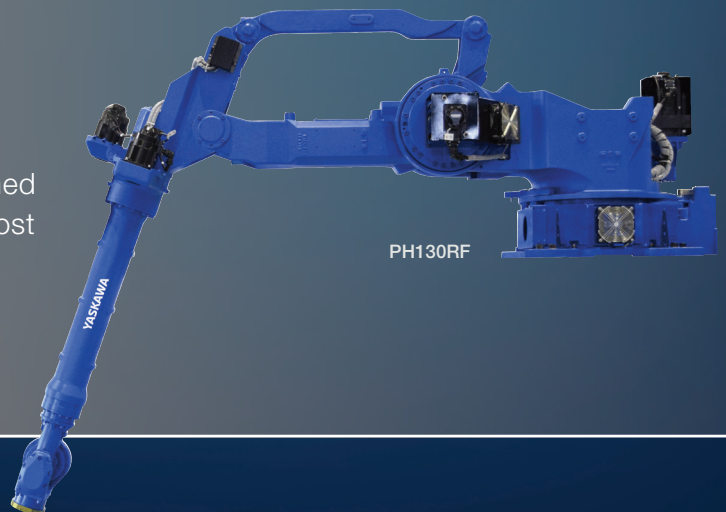
PH130RF

Overview

- Power and durability for heavy-duty press tending and stamping applications
- Robotic automation for quick changeover without sacrificing accuracy, flexibility or operational efficiency

- Patented multiple robot control for precisely coordinated motion and streamlined completion of multi-stage processes
- Elimination of manual press loading and repetitive lifting for significantly improved operator safety

Featured Solutions

PH-series robots feature specialized reducers optimized for high-frequency handling operations and increased vibration ratings enabling them to stand up to the rigors of press forming.

Versatile mounting options can add flexibility, save floorspace and maximize performance. Shelf-mounted robots offer a wide range of motion and reduced overall height, making them a good fit for reaching into presses and other machines. Robots can also be mounted on a moving seventh axis for increased versatility and range.
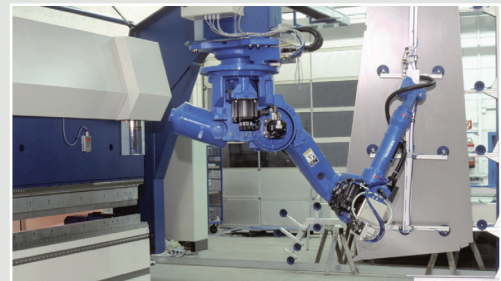
Common Press Tending Robots
SEE FULL ROBOT LINE-UP ON PAGES 6-7

| GP50 | GP180 | GP180-120 | GP215 | PH200RF |

Cases for Automation

Fully Automatic Press Brake Operation – From small to large parts, robots are ideal for demanding press brake applications, providing consistency, eliminating bottlenecks and enabling "lights out" manufacturing. Various gripper options and flexible regrip/ orientation stations make difficult positioning simple during the bending sequence. Infeed magazines, outfeed pallets, conveyors and other peripherals can be integrated to create a complete solution.

Forming and Press Tending Operation – Designed for part variations and frequent die changes, robotic systems can optimize production while improving worker safety. Automatic tool change, high-speed part shuttles and robot-to-robot part transfer offer increased flexibility, while various robot mounting configurations can accommodate nearly any system layout.

Stacking and Racking – Robots can easily automate end-of-line press automation and quickly load finished parts into racks, bins, pallets or conveyors, optimizing production. 2D and 3D vision systems for location and inspection further enhance end-of-line processes, increasing quality and reducing programming time.
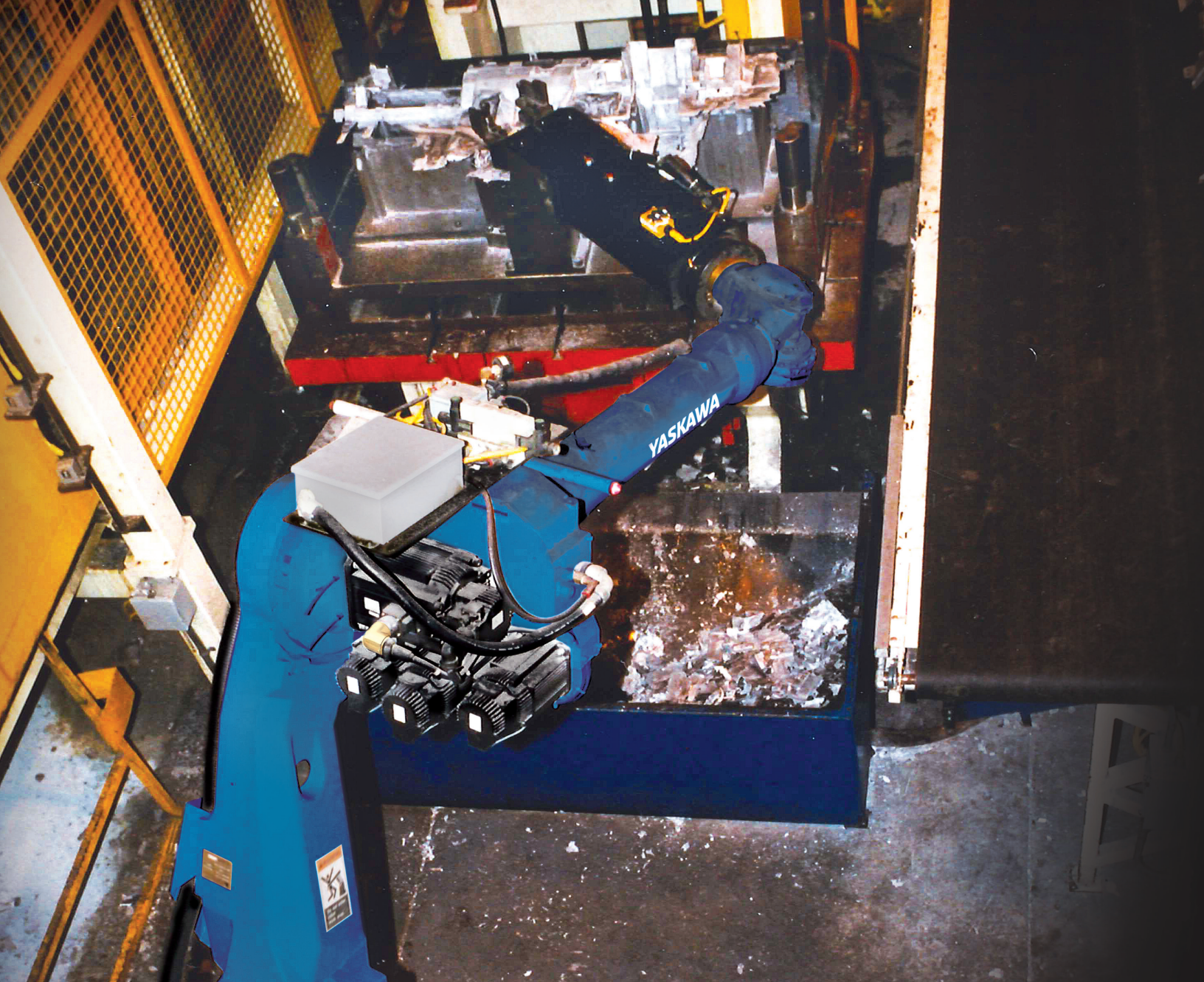
High Performance
When the Heat is On

Our toughest industrial robots are designed for high performance under the most intense conditions, enabling automation of numerous casting and foundry processes. Robots can perform die lubrication, sand core processing and even ladling of molten metal. When conditions are most challenging, Yaskawa Motoman solutions continue to deliver.
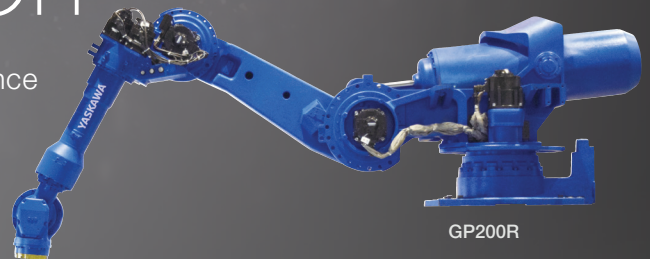
GP200R

Overview

- Solutions to withstand common foundry hazards, including coolants, die lubrication, airborne particles (metal spits and grit) and severe heat

- IP67-rated wrist is standard on most Yaskawa robots, offering protection against dust and the effects of water immersion

- Optional XP package provides additional ingress protection for the robot body, allowing it to reliably function when wash-down is required

- For the harshest conditions, specialized jackets are available for further protection against heat and chemicals

Featured Solutions

XP "eXtra Protection" Package increases the body protection rating – typically to IP65 – to protect the robot and to ensure long life in harsh environments. Select models are available with anti-corrosive paint for further protection against heat and chemicals.

High durability robot jackets offer increased protection from the most severe environments. Designed with optimal materials and active cooling, these jackets keep the robot functioning reliably in extreme temperatures or where corrosive chemicals are used.

Common Die Cast and Forge Robots
SEE FULL ROBOT LINE-UP ON PAGES 6-7

GP25XP   GP25-12XP   GP165RXP   GP225XP   GP280XP

Cases for Automation

Ladling – Engineered to deliver the same quantity and quality every time, robots skim dross and ladle molten metal, increasing yields and improving worker safety.

Extracting – Easily equipped and programmed to remove castings, robots reliably perform to reduce process variation while increasing consistency and speed.

Degating – Robotic automation can be used for loading, unloading and removing excess material from the casting, improving casting output and quality while providing a safer working environment.
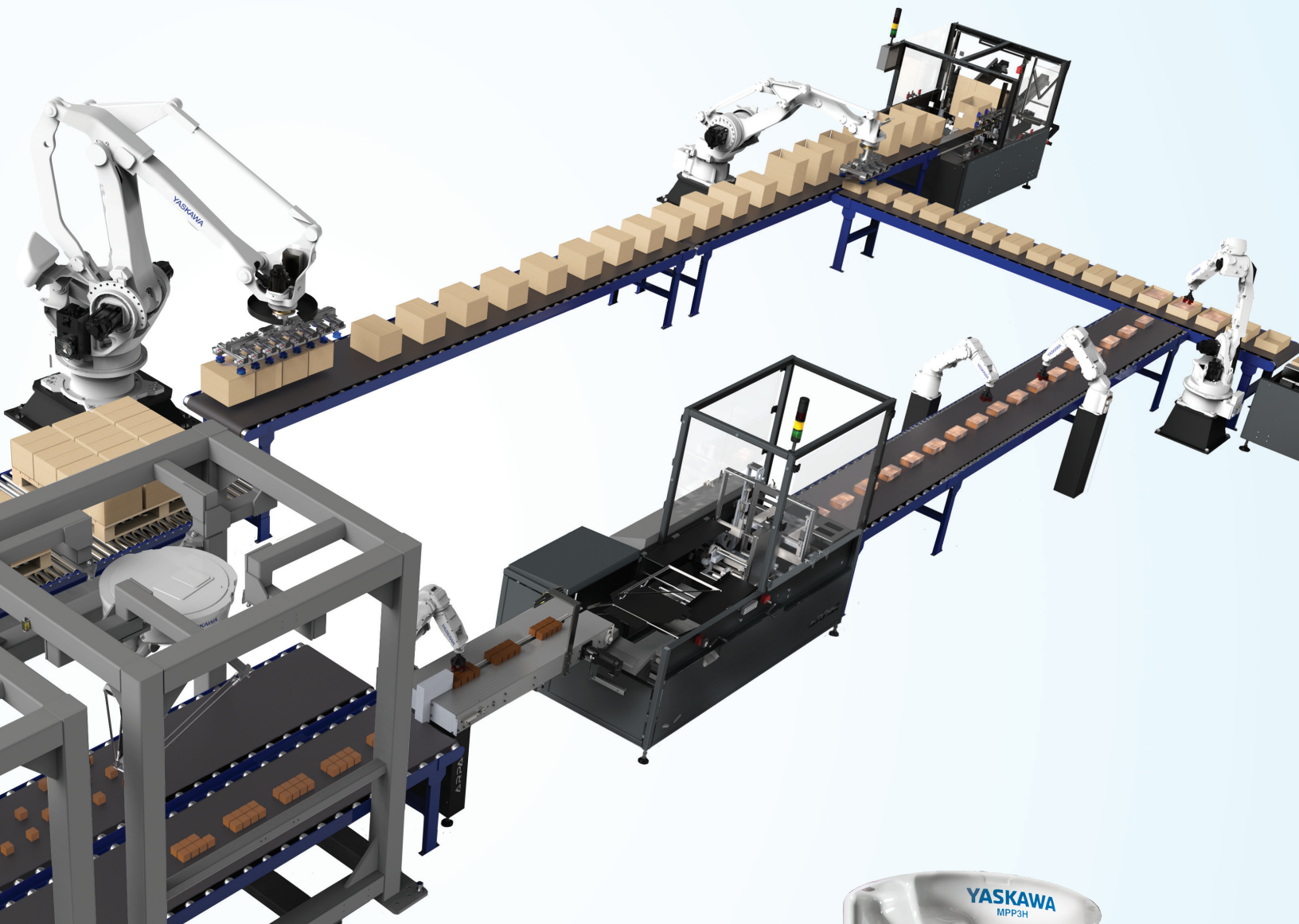
End-to-End Automation

Whether your application calls for picking, packing, end-of-line palletizing, container unloading, warehouse inbound depalletizing or outbound mixed pallets, we offer a complete line of robots to pick from. With 4 to 15 degrees of freedom and payload capacities ranging from 0.5 to 900 kg, our robots allow you to pick single cases or entire layers for palletizing or depalletizing tasks.

MPP3H

Overview

- Select models available with NSF-H1 certified food grade lubricants for use in food-processing environments
- Robotic solutions for a wide variety of industries, including food and beverage, warehouse and distribution, industrial products and more
- MotoSight 2D and 3D vision solutions add intelligence to your packaging line by enabling robotic identification, picking, inspection and sortation with minimal human involvement
- Fully integrated, turnkey robotic systems customized to your unique requirements are available through Yaskawa Motoman or our expert strategic partners
- High-speed picking, sorting or part transfer with both high cycle and accuracy rates, for a wide range of payloads

- A wide variety of robots with robust payload capacities can automate repetitive processes that require speed and precision, such as layer-forming and palletizing/depalletizing applications
- Easy-to-use, simple-to-integrate software options:
  - MotoSight software for vision-guided applications
  - PalletSolver software for case or bag palletization
- Conveyor tracking technology enables robots to accurately monitor, pick up, place and manipulate objects on moving conveyors in a coordinated fashion
- The MLX300 Software Option enables robot programming and control in a standard PLC programming environment

Featured Solutions

PalletSolver® software features powerful pattern-generation tools that facilitate quick changeover of patterns or products without halting production for manual programming. With PalletSolver, palletizing is simple and quick, allowing for maximum efficiency and uptime.

MotoPick™ is the state-of-the-art software solution that combines high-speed vision, simultaneous line tracking of up to two lines per robot, and built-in, user-friendly scheduling algorithms to task multiple robots for synchronized picking operations.
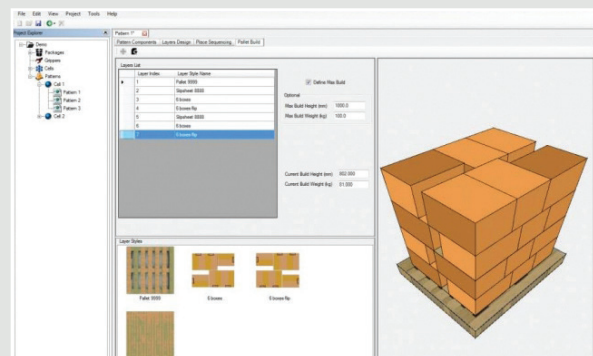
Common Pick, Pack, Palletize Robots
SEE FULL ROBOT LINE-UP ON PAGES 6-7

MotoMini   MYS850L   GP8   MPK50   MPL160 II   MPL500 II
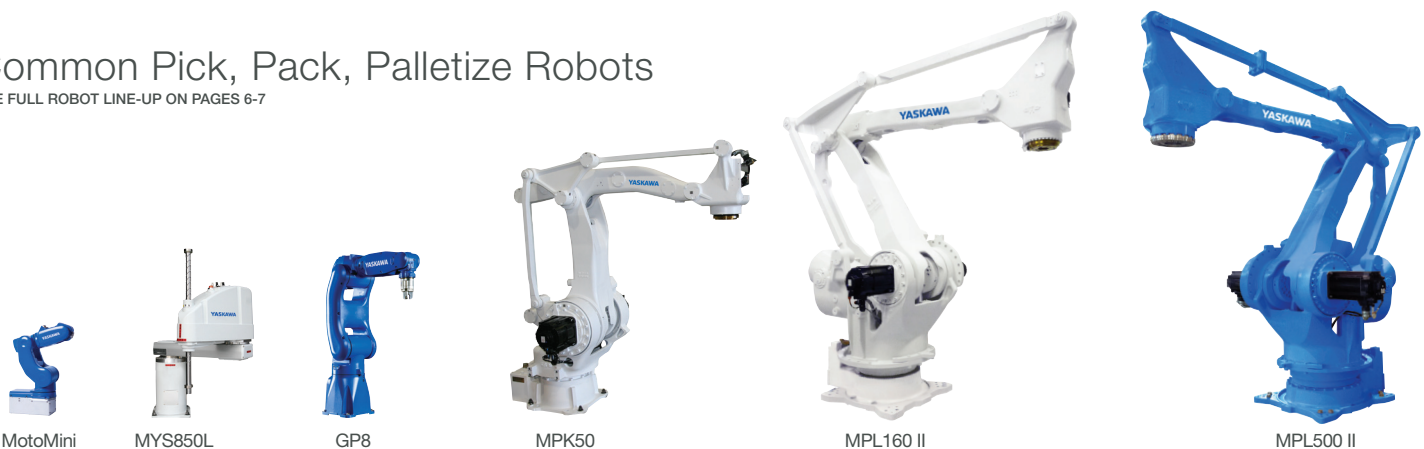
Cases for Automation

High-Speed Sorting and Product Placement – Fast and reliable delta robots can efficiently complete primary packaging needs, such as sortation and orientation, in preparation for downstream operations.

Control Flexibility – Through the use of MLX300 and conveyor tracking, Yaskawa robots seamlessly integrate into existing automation components, minimizing integration time.

Automated Palletizing – Palletizing can be one of the most effective parts of your packaging line to automate. Dedicated palletizing robots with payloads ranging from 50 to 800 kg, work tirelessly, eliminating inconsistencies and worker injuries.

Warehouse & Distribution

Trying to solve a specialized logistics problem?

Our strategic partners can provide turnkey robotic solutions embracing intelligent software to solve your specific needs and throughput requirements.

Warehouse Management Software

TRUCK UNLOAD	DEPALLETIZE	SORT	STORE	ORDER PICK	CASE PACK	PALLETIZE	TRUCK LOAD
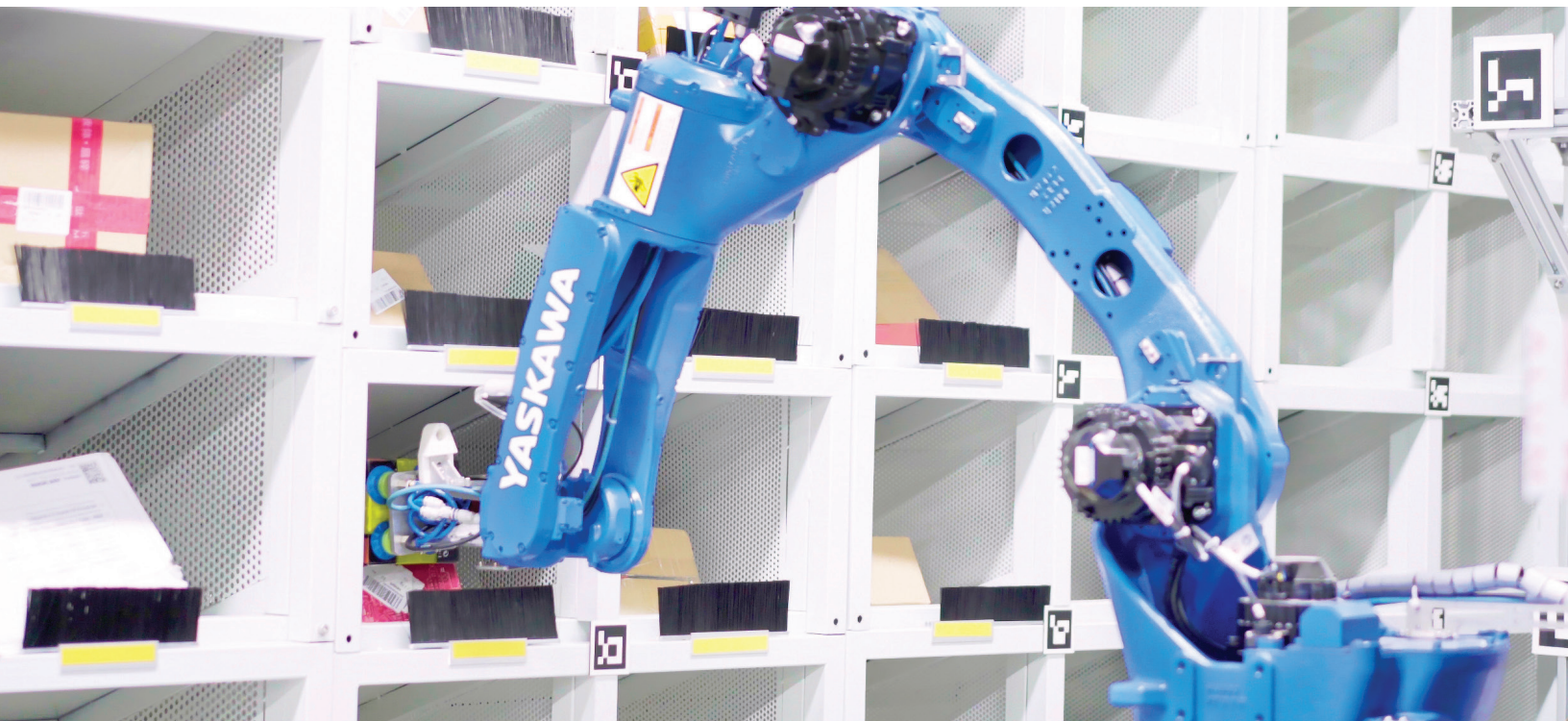
Faster, Efficient Operations

Our versatile robotic solutions minimize errors and reduce costs for sortation, order picking and loading/unloading in warehouse and distribution environments. Robust Robot Operating System (ROS) support speeds integration of robots and vision systems with existing warehouse management software and automation.

The Smart Choice for Easy Automation

Specifically designed for manufacturers branching out into robotics, Yaskawa Motoman's Smart Series suite of products allows quick and easy implementation of a robot system. Unlike traditional, more complex, robot execution which requires significant upfront investment in training, Smart Series technology provides simple, intuitive robot programming methods for novice programmers. Easily adaptable to changing manufacturing requirements, these products can readily be redeployed.

SMART SERIES

- Ideal for a variety of inspection, machine tending and other handling applications
- Simplified, efficient technology without losing powerful functionality
- High-performance, industrial robots
- Variety of gripper, sensor and vision options
- Easy-to-use; minimal robot experience required
- World-class customer support

Smart Series products include MotoMini, GP7, GP8, GP12 and HC10DT robots, along with the intuitive Smart Pendant and ultra-compact YRC1000micro controller.

Available through authorized Smart Series distributors.
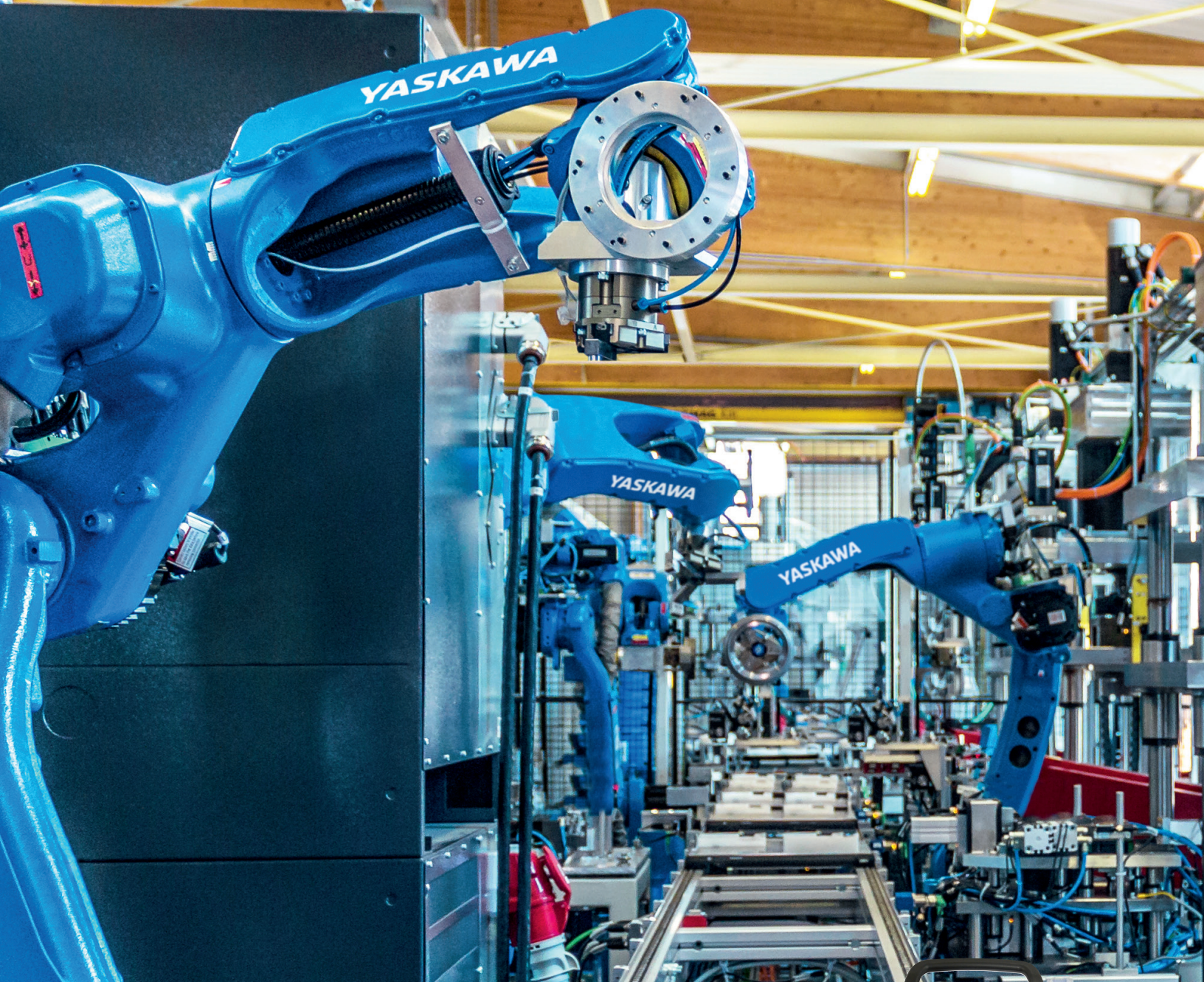
Command
and Control

Regardless of your comfort level with industrial robots, we have a solution to fit your needs. Whether you are an experienced robot user, depend on an expert PLC staff, or are just starting to explore ways to handle parts robotically, we offer options to put you firmly in control.

Overview

- Core software offering superior reliability, proven through use in manufacturing plants worldwide

- Adaptable technology to meet the needs of diverse applications, ranging from handling to painting, welding and more

- Patented multiple robot control – up to 8 robots/72 axes with coordinated motion between devices – enables higher productivity and lower integration costs

- Streamlined development, training and support for plant personnel to ensure a smooth system installation and ongoing operation at peak efficiency

- Comprehensive set of user-friendly, standard software functions allows for efficient programming in a variety of application environments

Featured Solution

MotoSim® EG-VRC is a comprehensive software package that provides accurate 3D simulation of robot cells. This powerful simulation software can be used to optimize robot and equipment placement, as well as performing collision detection, reach modeling and cycle calculations. MotoSim also enables accurate offline programming of complex systems.
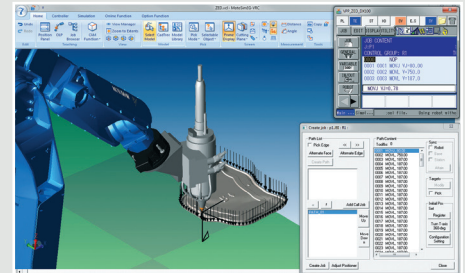
Controllers

The **YRC1000** is compact, fast and precise. It is built to a global standard and does not require a transformer for input voltages ranging from 380VAC to 480VAC. The YRC1000 features integrated machine and functional safety for simplified setup.

The smallest robot controller in its class, the ultra-compact **YRC1000micro** minimizes installation space and optimizes performance with power and precision. Ideal for factories with high-density layouts, the YRC1000micro can be installed in a vertical or horizontal position, or in a 19-inch rack.

Small, powerful and open, the **FS100** controller is designed for packaging, small parts handling and assembly applications. Its open software architecture enables OEMs, machine builders and system integrators to develop customized software solutions.

Programming

powered by

Ideal for novice robot programmers, **Smart Pendant** supports powerful controller functionality while providing simplified programming and fast, efficient implementation of a robot system. Built-in, patented Smart Frame technology eliminates the use of coordinate frames; the robot adapts to the user.

The **Standard Pendant** is an ergonomic, lightweight teach pendant with intuitive features for efficient robot command. Its touchscreen user interface enables quick and simple robot programming. A convenient USB connection allows service staff to directly comment for remote service purposes.

The **MLX300 Software Option** enables the operator to control and program Yaskawa robots in a standard PLC programming environment; knowledge of specialized robotic programming language is not required. System design and environment is simplified due to reduced I/O boards, hardware and networking requirements.

Make the Most of Your Investment

Yaskawa Motoman is committed to complete customer satisfaction at every stage of the project life cycle. Our Yaskawa Support Services team nurtures long-term customer relationships through a wide range of solutions that help maximize uptime, accelerate ROI and ensure long-term performance.

TECHNICAL SUPPORT | FIELD SERVICE | PARTS | TRAINING | REPAIR and RETROFIT | LIFE CYCLE MANAGEMENT
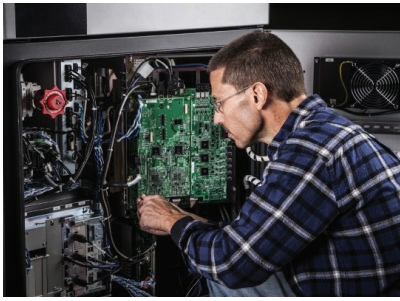
YASKAWA
SUPPORT SERVICES

One robot or hundreds, Yaskawa Motoman is committed to every customer.
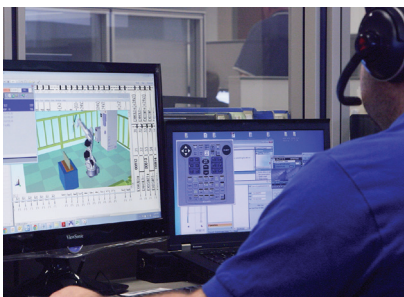
Technical Support
Just a call away

- 24/7 expert coverage
- Highly skilled technicians; 100+ years combined experience
- Online self-troubleshooting including FAQs and how-to videos

Field Service
Experience minimal downtime

- 24/7 dispatch
- 99.95% first time fix rate
- Grease analysis and torque sampling

Parts
Maintain operational success

- Over $30m of inventory
- 90% first pass fill rate
- 24/7 emergency parts availability

Training
Empower employees with the knowledge they need

- IACET accreditation
- 13,400 square feet of classroom space with 60+ dedicated robots
- 2:1 student-to-robot ratio
- Remote and on-site training available
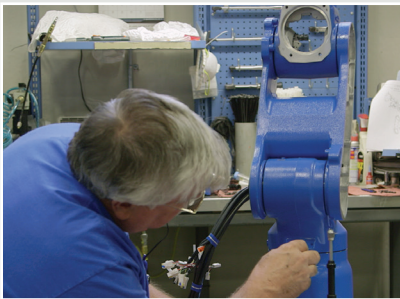
Repair and Retrofit
Dramatically increase productivity

- Certified pre-owned robots
- Extend the life of your robot through rebuilds, upgrades and retrofits
- Each option comes with a 1-year warranty

Life Cycle Management
Optimize ROI and system throughput

- Regional Technical Managers strategically located throughout the country
- Preventative and predictive maintenance planning
- Complete line modernizations

Leaving a Legacy

In a time of rapid industry growth, enabling sustainable workforce development and providing competitive career pathways for students are both vital and challenging. Yaskawa Motoman is committed to addressing these critical needs with innovative products, curriculum, training certification and services for education and industry.
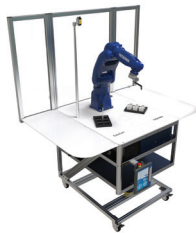

Hardware

STEM Robotics Platform
- Designed for education and training programs in advanced manufacturing and robotics
- Ideal for classrooms, labs and training centers
- Teach robotics with the same equipment used in factories

MotoSim Touch
- PC-based offline programming environment and robotics simulation tool
- Designed specifically for K-16 schools, training organizations and educational research institutions
- Simulates a fully functional production environment
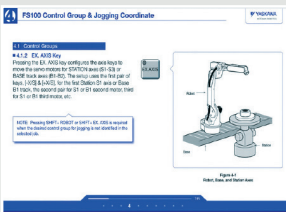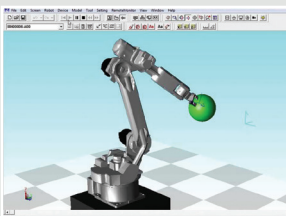
Software

MotoSim
- Comprehensive software enables accurate 3D simulation of robot cells
- Optimize robot and equipment placement with virtual testing
- Collision detection, reach modeling and cycle calculations

Yaskawa Academy Learning Management System (LMS)
- Online training tool for skill-based robotics education
- Curriculum designed for classroom, lab, manufacturing training and industrial certification programs
- Accessible via standard browsers for secure, 24/7 access

Certification

### Yaskawa Academy offers two certification programs
- **Train-the-Trainer Program** is designed specifically for educational institutions to provide students with a Yaskawa industrial robotic credential. It provides training, resources and tools for instructors to teach a robotics credentialing course.
- **MERIT (Motoman Endorsed Robotics Instructor Training)** is designed for instructors of educational institutions and to support workforce development certification with industry. This program enables instructors to deliver the same curriculum and instructional model as Yaskawa Academy to local manufacturers.

YASKAWA
ACADEMY

AUTHORIZED
IACET
PROVIDER

We Enable Real-World Success Stories

Yaskawa Motoman's commitment to excellence extends beyond simply delivering exceptional products, user education and customer support. Our passion for providing high-quality, innovative automation solutions is rooted in our desire to help our customers be competitive leaders in their industries and markets.

While we work with a number of Motoman Strategic Partners for individual application needs, our Automation Group (AG) is a single source for robots, application process expertise, controls, programming, handling systems and safety solutions that can be integrated with legacy systems. With a large staff of experienced engineers, the AG team can design, build, test and install fully integrated, custom automation solutions.
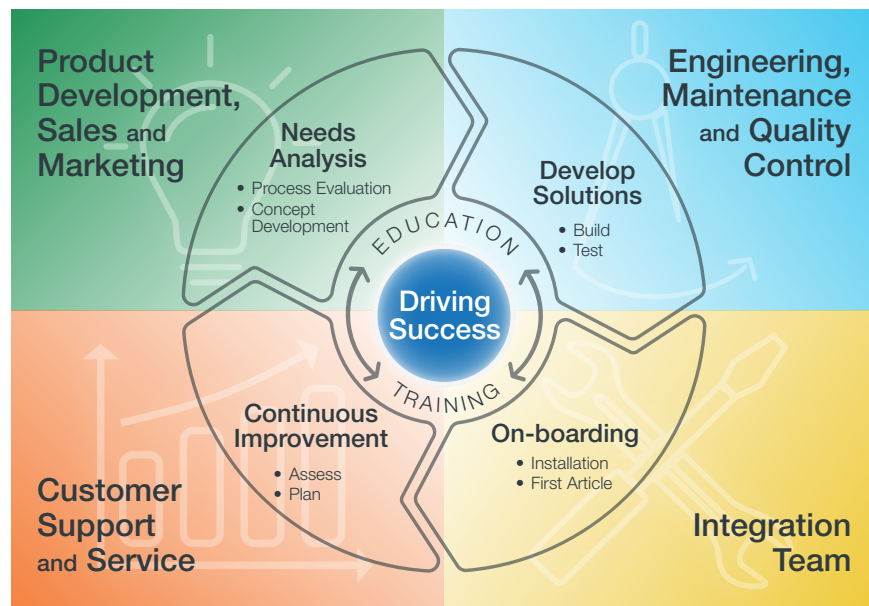
Driving customer success is at the core of every discipline within our company and spans the complete project life cycle. First, we thoroughly evaluate application needs to understand your unique requirements and challenges. This analysis drives the development of a configured solution specifically for your application. Next, we complete installation and training, with a strong focus on ensuring a positive on-boarding experience. Support doesn't end with installation – our goal is always total customer satisfaction, ensured by a dedicated AG Project Manager who oversees and coordinates all project details.

The life cycle continues with world-class support, post installation review and continuous improvement recommendations to sustain your cycle of success.

With Yaskawa Motoman, you can count on a committed partner with a proven track record of industry-leading innovations. In addition to our material handling solutions, we are a world leader in fully integrated welding workcells, best-in-class arc and spot welding robots, and high-performance part positioners. Whether you need standard products or a fully customized solution, Yaskawa Motoman is the ideal partner to achieve your goals – and drive your long-term success.

YASKAWA

YASKAWA

yaskawa-motoman.com

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