

YASKAWA

Wood Processing

Best in Class Products for the Woodworking Industry



Maximum performance for every process

No matter how large a woodworking machine is designed, everything is about the quality and throughput of the final product. With Best in Class Components and an open and connectable architecture, YASKAWA provides an important contribution to performance. And has done so for decades.

Discover the limitless possibilities of YASKAWA.



Robots for handling and packaging

MOTOMAN Robots from YASKAWA are used for versatile transport, handling and packaging tasks. We also offer specific solutions to meet the different requirements of individual work steps in wood processing: from grinding, drilling, milling, conveying to complete pallet repair systems.



Next generation inverter drives for industrial applications

Flexibility, ease of use and a sustainable design for the best value proposition in your application. The newest inverter drive generation GA700 is ideal for the energy efficient operation of spindles, conveyor belts and fans.



Spindle motors and conveyor belts

- Inverter drives for precise control of motors in a broad speed range
- Energy efficient operation of all motor types

Servo systems

- Motors with optimized mass inertia for CNC centres
- Open: Easy integration in established CNC controller systems
- Space saving bookstyle for side-by-side mounting
- Maximum operational reliability
- Fieldbus compatibility: EtherCAT, MECHATROLINK-III

Integrated robots

- Proven robot technology for high reliability
- Integration into existing control environments without the need for additional programming
- Fully automatic handling for highest throughput even with a batch size of 1 and custom shaped parts

Operating and monitoring

- VIPA MICRO PLC with at least 30 integrated I/Os on board, expandable with modules
- Broad range of touch screens and Panel PCs



High precision, next generation servo systems

Sigma-7 offers a powerful response to today's market requirements for both machine constructors and final customers in the production industry. It offers great potential in the wood-working industry, especially in combination with CNC machines.

Micro PLC for a broad range of control applications

The new MICRO PLC can be used as a high-performance, small or micro controller in both serial and special machine construction as well as central or decentralized control in plant construction. Because of its compact construction size it is perfectly suited for building automation and the installation in sub-distributors.



YASKAWA in numbers:

More than **14,500** employees worldwide
 More than **1,350** employees in our worldwide service network
 More than **1,600** employees in Europe

Energy efficient inverter drives for spindle motors, transport and ventilation systems

Whether put in a control cabinet or at a wall, in clean or harsh environment, the flexible package design of the GA700 allows a reliable operation under various environmental conditions.

Limitless possibilities

With a flexible motor control, powerful and extendable functionality, and a broad power range up to 630 kW, the GA700 is the drive of choice for almost any task, ranging from simple transportation, presses and others up to complex systems with network connected drives or the demand for higher levels of safety.

Easy integration into your network

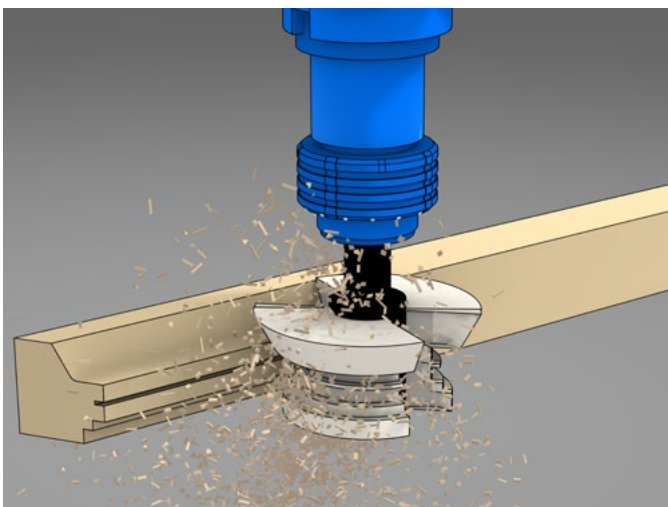
- Supports all major networks and topologies
- Network up to 5 drives with a single fieldbus card

Cost savings with built-in protocols

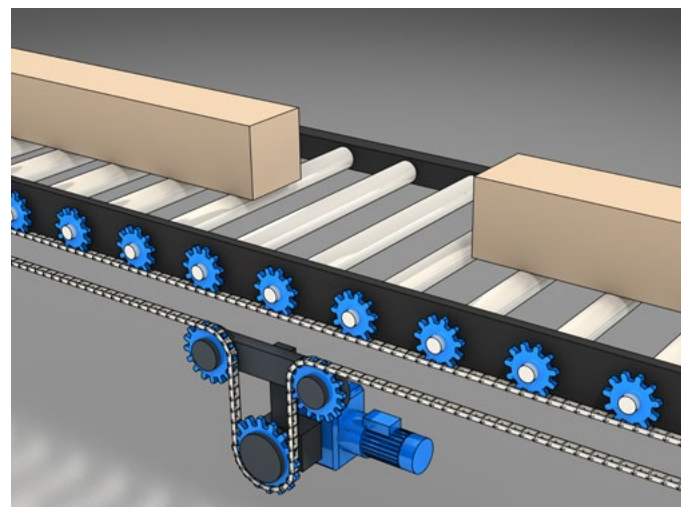
- RS-485 MEMOBUS/Modbus protocol
- 115.2 kbps communication speeds

Keep control during main power loss

- Embedded +24VDC input control power standard
- Programming and monitoring without main power

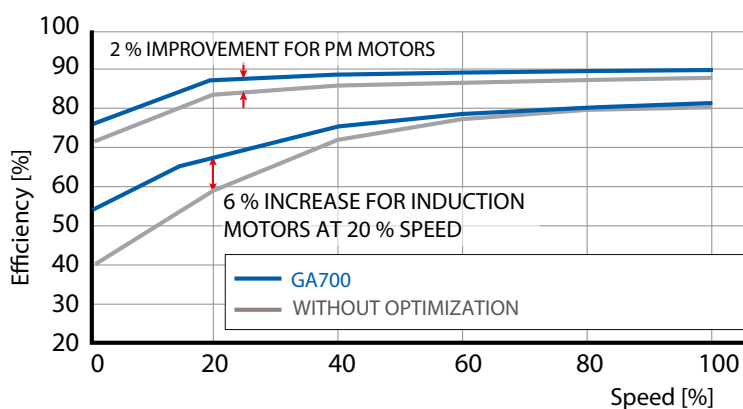
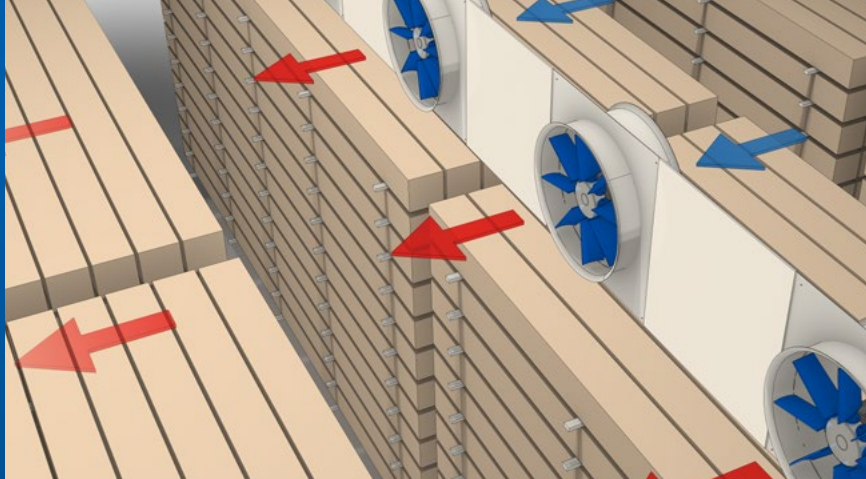


With a standard output frequency of 590 Hz spindle speeds of up to 35,000 U/min can be realised.



YASKAWA inverter drives teamed up with IE4+ permanent magnet motors provide premium efficiency even in partial load conditions.

YASKAWA opens up new possibilities of energy efficiency and energy saving for fans and other applications with variable torque, using the latest inverter drive technology.



Maximum efficiency

By introducing motor speed control as a replacement of gears, valves or dampers the GA700 unlocks great energy saving potential in various applications. In addition it automatically optimizes the motor efficiency for any speed and load condition and so minimizes overall losses.

One for all

- Power range from 0.55 to 630 kW
- Available as 200 V and 400 V variants (3-phase)
- Gapless side-by-side mounting
- Integrated peripherals (EMC filter, Braking transistor [up to 75 kW], DC reactor [22 kW and above] ...)
- Reduced set-up time with an intuitive keypad, navigation and start-up wizards
- Parameter management via PC or smartphone



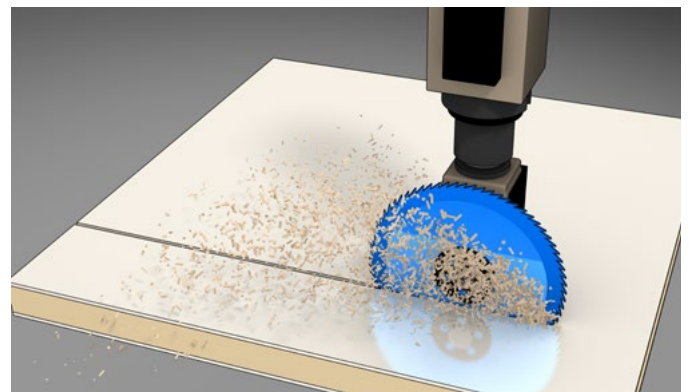
Servo drive technology for high-precision work

With more than 12 million servo systems in the field, YASKAWA has lots of experience and technical know-how in motion and control. The result: Excellent performance and an extremely low fault rate. Start-up is possible in just a few minutes. With the new Sigma-7 series, you achieve an unprecedented level of precision.



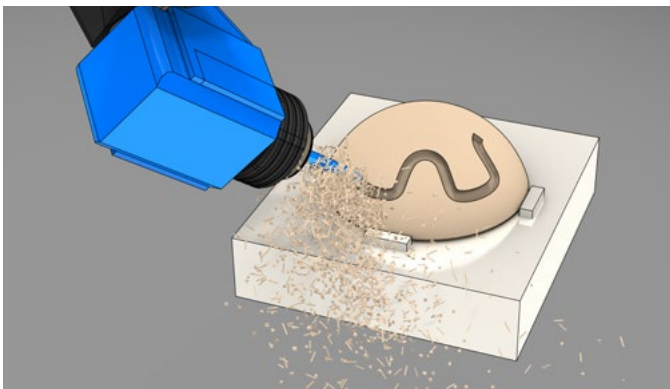
Enhanced vibration suppression

High torque in combination with highly efficient vibration suppression responds optimally to the smallest differences in the material and can produce perfect results.



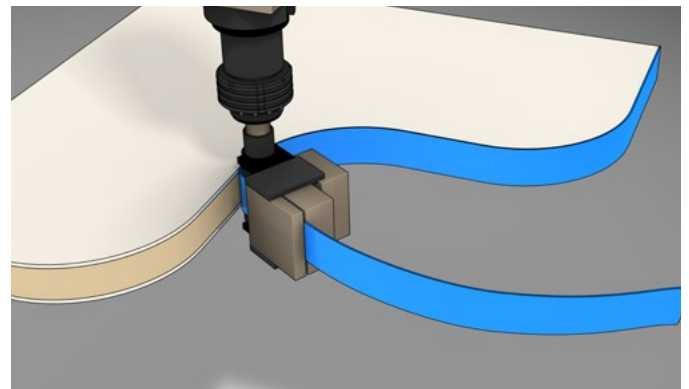
High performance

High speeds combined with high torque - this allows wood to be accurately and quickly cut to the desired dimensions.



Maximum control accuracy

With its excellent control accuracy, all work is done reliably in the highest precision.



Extremely low drag errors

Lowest drag errors ensure high-precision and even application of the gluing for optimum protection of the material.



SIGMA-7

Servo systems for CNC machines

The development of the new Sigma-7 series focused on three main goals: consistently fast commissioning, high production output and maximum operational reliability.

The prerequisites for this are provided by intelligent functions such as autotuning, automatic load adjustment or integrated vibration suppression. New book-style housing supports gapless side-by-side installation of amplifiers even in small spaces for high performance density inside a cabinet.

The series offers a powerful response to today's market requirements for both machine constructors and final customers in the production industry.

SERVOPACKs

- Quick setup in just 3 minutes
- Single & dual axis amplifier
- Satisfies the requirements of SIL 3 and PL-e
- STO function integrated, SS1, SS2 and SLS safety functions can be integrated by using the safety module

200 V

- Power range from 50 W to 15 kW
- Embedded fieldbus
 - » Pulse train / analog input
 - » MECHATROLINK-II
 - » MECHATROLINK-III
 - » EtherCAT

400 V

- Power range from 200 W to 15 kW
- Space saving bookstyle for side-by-side mounting
- European connectors
- Daisy-chain-connection
- Embedded fieldbus
 - » MECHATROLINK-III
 - » EtherCAT

Servo motors

- Motors with optimum mass inertia for CNC centers
- Highest precision for maximum product throughput
- Extreme precision thanks to perfect synchronization
- Available from 50 W to 15 kW
- 100 % compatible with Sigma-5, downsizing by up to 20 %
- 24-bit high-resolution encoder
- IP67 by default
- Very low heat generation



Robots for handling, packaging and more

Robots offer many advantages due to their speed, precision and cost-effectiveness. They also ensure a consistent quality standard and high repeatability.

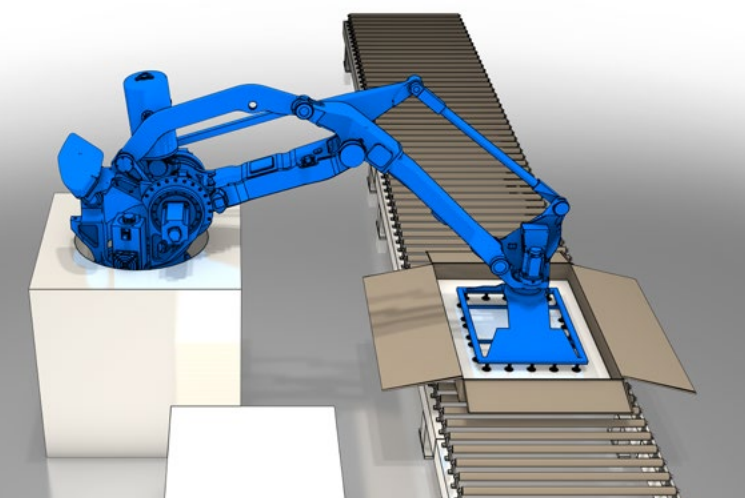
They guarantee a high return on investment and are suitable for handling, sawing, grinding, polishing, milling or quality control, 24 hours a day, all year round.

MotoLogix is a revolutionary software interface for controlling MOTOMAN robots via PLC

- Easy programming, commissioning and operation of robots
- Support of all DX200 robot types
- Data storage in the PLC, not in the robot control
- Ensuring the interpolated movement known from YASKAWA

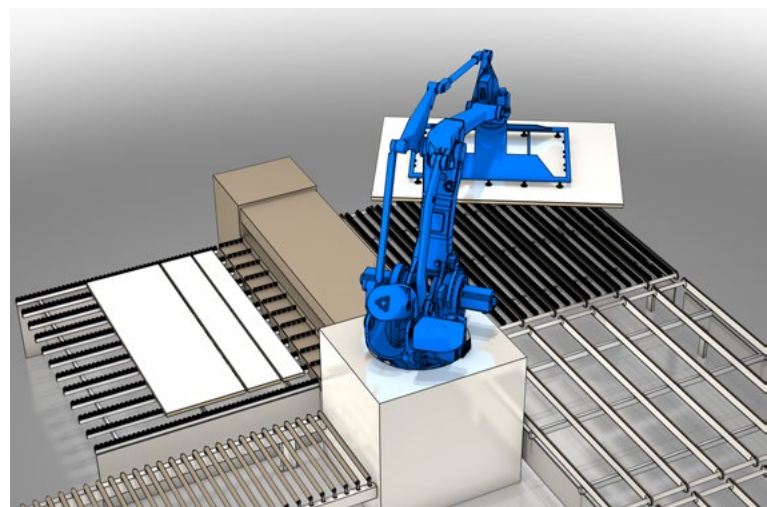
Camera connection and sensor technology equip the robot for higher flexibility

- MotoSight 2D is a software extension for the operation and control of camera applications
- MotoModbus, our standard interface for almost every HMI (Human Machine Interface) allows variable I/O configuration



Packaging

Cycle time, flexibility and availability make the robot irreplaceable in the packaging process.



Handling

Tool changing systems and different gripper concepts, as well as their simple control, handle parts of any shape.



Robotics competence and worldwide service

- YASKAWA robots have been successfully used worldwide for decades
- To date, more than 350,000 robots have been installed worldwide
- As one of the world's largest manufacturers, YASKAWA produces 25,000 robots annually
- We have branches or partners almost everywhere, where industrial production takes place

40 Years MOTOMAN

- MOTOMAN robots from YASKAWA are known for the highest quality and reliability
- Decades of application experience are stored in our controls as optimized function blocks
- Additional software and simulation possibilities, facilitate the planning and the use of MOTOMAN robots

Solutions for the woodworking industry

A robot is the universal tool for a variety of processing steps:

- Handling
- Drilling
- Milling
- Grinding
- Assembly
- Workpiece feeding
- Edge gluing
- Hinge setting
- Window production
- Painting
- etc.

MOTOMAN MH series

The MOTOMAN MH series offers flexible 6-axis high-speed robots for a variety of applications such as handling, machine loading, processing and distribution applications.

The MH models have a load capacity of up to 600 kg and a working range of 532 mm to 3,106 mm.

The compact design allows for close positioning on the workpiece and reduces cycle times.



Operating and monitoring with HMI and VIPA PLC

The interaction between man and machine is usually carried out via control units, which are connected to the control of the systems. From the smallest system up to a large, multi-networked machine: VIPA Controls offers the entire spectrum of HMI and PLC for a variety of applications.

Touch Panels & Panel PCs

With the Panel PC series from VIPA Controls you are optimally equipped for all control and monitoring tasks.

The combination of Industrial PCs with state-of-the-art performance features and Touch Panels with optimum display options concentrates high performance in a small space.



Panel PCs Specifications

- Latest Intel Atom processor technology
- High display resolution up to full HD with the 21.5" panel
- Numerous interfaces for full PC operation
- Fanless cooling
- High quality metal housing

Touch Panels

The VIPA Touch Panel family is suitable for all applications in factory, process and building automation. The VIPA Touch Panels are mechanically particularly robust due to the aluminum die-cast housing. With the front-facing protection class IP65, these devices are also suitable for harsh industrial environments.

VIPA MICRO M13C

With VIPA MICRO, VIPA Controls presents a very compact and extremely fast micro control system. The design has a definite wow-factor and opens up completely new paths as regards operating and status display. Thus the VIPA MICRO M13C is the starting signal for the new controller generation from YASKAWA VIPA Controls.



Specifications

- Stand-alone PLC
- Up to date, pleasing and functional design
- Extremely compact construction size
- Very high performance with SPEED 7 technology
- Fast backplane bus connection of 48 MBit/s
- 30 integrated I/Os on board
- CPU expandable up to max. 8 modules
- Detachable connection plug with spring terminal and push-in technology
- Bluetooth communication for diagnosis and visualization (optional)
- 2-port Ethernet switch
- Optional 2× RS485 module for MPI and PtP and optional PROFIBUS slave
- 64 up to 128 kByte remanent work memory and 128 kByte load memory
- Full STEP 7 compatible – supports IL, LAD, FBD, SCL and GRAPH7

VIPA SLIO I/O

SLIO is an extremely compact I/O system with fast backplane bus, single-channel diagnostics LEDs and standing wiring. It offers highest cost-effectiveness through its modular concept, especially in assembly and service.

SLIO can be combined with all VIPA systems. The combination with systems from other CPU manufacturers is easy and possible without restrictions.

It is one of the most efficient and advanced decentral I/O systems available on the market. SLIO combines the highest functionality with a clever mechanical concept in an extremely compact and maintenance-friendly design.



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