

# Textile Industry

Best in Class Textile Solutions



# At home in the textile industry

Our AC drives are amazing for your textile applications. This is why.

## Designed for reliable performance in harsh environments

- Designed for 10 years maintenance free performance.
- Made for high temperature environments (up tp 60°C).
- Built to perform in demanding environmental conditions (i.e. fiber dust, oil, acid, humidity).
- Coated boards are standard for textile applications.
- Optional anti vibration coating.
- Finless design also means fanless design for maximum longevity.





Flat Backplate





Water Cooling

## Flexible cooling systems

- There are many established cooling solutions on the market. We do not want to limit you in your choices and options.
- Our solution is a special finless design that can work with any cooling solution you want to implement.
- Our drives will not be stopped by dust and fibres.

It's up to you!

Extrenal Heatsink



## Minimizing application complexity

# From fiber to finished product

We support you in every step of the production process.

## Your customer demands: Unstoppable performance

- The environment is not ideal for electronic devices.
- High temperatures, fibre dust and humidity are common.
- The machines are expected to run without break 24/7 and 365 days per year.

### Your challenge: Speed & success

- The machines are situated all around the world, more and more in low cost countries.
- The technology must be reliable.
- The market requires cost reduction to stay competitive.

### Our support: The Yaskawa way

- Because of our long textile experience and our Asian footprint, our products are designed for the demanding circumstances.
- A failure rate below 0.1 %, even in difficult environments proves our commitment to a high-quality standard.
- With a lot of integrated hardware features and software applications, we reduce the number of parts and provide a smarter solution.

# Integrated solutions and applications

We offer many solutions to the industries problems. Here are just a few.

## Advanced bobbin optimization

- High accuracy of the bobbin, even in different shapes.
- Several overlapping functions are necessary to create the perfect bobbin.
- In case of power failure, a controlled ramp down is necessary, keeping the speed ratio to avoid yarn break.
- Reduce the number of components, to reduce equipment and maintenance costs.
- High reliability of the application.

## Kinetic energy buffering

- Using the Kinetic Energy in your application to ride through momentary power loss or ramp down the application in a synchronized fashion without yarn break.
- Short power loss or stop does not require a machine restart, enabling continuous run of your system without production stop.
- No preparation time needed.
- Ensuring uniform quality standards.
- No need for additional UPS.



Unsynchronized, sudden shutdown after momentary power loss

Unbalance detection

integrated measurements.Less peripherals needed.Faster detection rate.Shorter cycle times.Protection of the machine.

• Faster unbalance detection due to intelligent

Synchronized, controlled shutdown after momentary power loss





Perfect!

# Effortless network integration

#### Embedded +24 VDC Input

When supplying the GA500 or GA700 through the built-in 24 VDC control power input, network communications can be maintained even during main power loss, thus allowing continuous monitoring and faster startup on power recovery.

#### **Cost effective network**

Up to five AC drives can be accessed through only one fieldbus option card, thus providing a cost effective solution with reduced wiring effort.

# DeviceNet CANopen ETHERNET **POWERLINK**

Ether**CAT** 

**lo**dbus

EtherNet/IP<sup>®</sup>









## One for all

PROFO

#### One drive for various applications

- Open loop zero speed and torque control of permanent magnet motors
- Run induction, permanent magnet and synchronous reluctance motors with only one type of drive
- 590 Hz output frequency
- High switching frequency for silent motor operation
- Time saving and hassle-free setup of any motor without the need for Auto-Tuning

### Unique energy saving functions

Energy savings are further increased and automatically optimized with the unique energy savings functions of the GA500 and GA700 AC drives. These functions minimize energy consumption through varying load and speed ranges, achieving power optimization for energy cost reduction. Maximize your energy usage by optimizing your motor torque per amp.



Chines.



# Safe

# Integrated functional safety

With the built-in dual channel STO (safe torque off, SIL3/PLe), the GA500 provides the right tools for easy machine integration of emergency stop functions, even when elevated levels of risk reduction are required.





STO

# System solutions with a wide product range

DRIVES	AC Drives From 0.1 kW to 630 kW Servo Drives Wide range of motors Outstanding performance
ROBOTICS	Robots Up to a reach of 3,159 mm From 4 to 15 axes
CONTROLS	Machine Controllers For up to 62 axes IEC61131-3 standards
VISUALI- ZATION	HMI Line displays Touch panels
TELE- SERVICE	Teleservice   Remote Access   Industrial Ethernet   Fieldbus
INDUSTRIE 4.0	Industrial Automation i <sup>3</sup> -Mechatronics <i>i<sup>3</sup>-Mechatronics</i>
AFTER SALES SERVICE	<b>Total Customer Support</b> Worldwide Support Application Support Training Service Programs Optimization & Refurbishment

# Balancing power to perfection

Cost-saving by optimized application Efficiency

Experience from 23 million installed AC drives



Flexibility to master any challenge

Maximize machine Performance

Application Reliability by 10 years of maintenance free drive operation

Ease of USe minimizes setup times



# Get the maximum throughput

Yaskawa servo drives







#### Quick setup in just 3 minutes

Presets in the amplifier software simplify commissioning. A ,tuning-less' function allows immediate use of the Sigma-7 without the need for complex parametrisation or special knowledge of control equipment, while an auto-tuning function ensures quick adjustment.



#### **Eco friendly**

Sigma-7 motor efficiency reduces heat generation by up to 20%. The possible DC Power coupling of axes allows energy sharing and energy savings of up to 30%.



#### **Space savings**

New book-style housing supports gap-free, side-by-side installation of amplifiers even in small spaces. This makes it possible to realize a high performance density inside a cabinet. The needed space is reduced to a minimum, allowing it and the drive electronics to be integrated in the machine.

#### **Cost savings**

Sigma-7 reduces the overall costs by providing faster machine setup, higher throughput with more products in less time and reduced machine downtimes due to the high reliability of our products.

# Robots bring flexibility to any machine

Vision-based, high-speed robotic solutions

# Range of Capability





#### Yaskawa offers a wide range of robots for any task

- Picking, packing, packaging and palletizing
- IP67 robots
- 4, 6, 7 and 15 axes robots

More than 40 years experience in robotics and built-in functions in our controller for handling and packaging applications, enables you to build high performance machines.

# Machine controllers and HMIs

### The demand: Flexible and reliable

Today's customers need a finger on the pulse of their machines at all times. Success demands peak productivity, total reliability and greater freedom to interact.



#### What if ...

- Key elements of code are already written for you, using a standard, globally recognized programming language?
- Customers can safely access your machine controller from anywhere in the world?



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

# Teleservice

**VIPA Remote Access** 

Teleservice modules offer access to

your machines and plants worldwide

as if you were on site. The modules

are designed for all modern commu-

nication systems.

## VIPA Industrial Ethernet

Ethernet Switches with 5 or 8 ports Unmanaged are entrylevel models which support the IEEE 802.3 / 802.3u / 802.3x with 10/100M, full-/half-duplex and RJ45 ports with automatic MDI/MDIX recognition. For PROFINET networks there are Managed PROFINET switches with 5 or 8 ports available.

## **VIPA** Fieldbus

The PROFIBUS repeater family consists of advanced, flexible and robust network components for PROFIBUS DP installations. This allows the implementation of long spur lines with many users and network structures with star-/tree-shaped segments.



# Total customer support



# Yaskawa – Close to you

## A Global Company



Engineering Capacity in Europe

#### Application Engineering

- Machine Solutions
- Application Adaption
- Training & Support

> 2010 > > > > 2022 >

#### Product Development

- Firmware, Communication
- Hardware, Mechanics
- Safety Solutionss
- Software Tools
- Chip Development





of all Employees



190 Engineering/ Development

#### European Production Sites

Glasgow, Scotland Production of drives and servo products



Ribnica, Slovenia Plant construction and robot systems



Torsås, Sweden Assembly of controllers, positioners and portals



Allershausen, Germany Plant construction and robot systems



Kočevje, Slovenia Robot manufacturing and R&D center





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# YASKAWA