



THE SOLUTION IN FOCUS

**TEXTILE MACHINES
AND AUTOMATION**



The Wichelhaus Group is the specialist for the development and realization of complete solutions for textile machines and automation for small medium-sized companies to global players.

TEXTILE SOLUTIONS

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INNOVATE YOUR PROCESS

The Wichelhaus Group is the specialist for the development and realization of complete solutions for textile machines and automation for small medium-sized companies to global players.

During our more than 110-year company history, we have developed into an engineering partner for our global clients. We have proven expertise with our customers in the textile industry around the world.

Our objective: the automation of processes, exactly according to your requirements and wishes, for maximum efficiency and cost-effectiveness.

We are proud to have been able to accompany our demanding customers for many years in their technological development as an impulse generator and innovative implementer.

So, the only one question that remains open:

What`s your topic?

1 VARIO JIGGER

2 HT JIGGER

3 ULTRA JIGGER

4 JIGGER UPGRADES

5 AUTOMATION

6 IOT

7 LAB-JIGGER

1

VARIO JIGGER

TEXTILE MACHINERY - VARIO JIGGER

In the textile machinery sector, we develop, design and build state-of-the-art dyeing systems, so-called “jiggers”, for woven and knitted fabrics. With our ecological high-end solution “Vario Line” with a 30% lower energy consumption, the most difficult woven fabrics can be further processed. If required, we can upgrade our customers’ existing plants to the latest drive technology. “State of the art” automation solutions up to the planning and realization of the use of robot technology for the infeed and outfeed, as well as laboratory technology complete our offer.

With innovative engineering, Wichelhaus increases the efficiency of the dyeing machines - increasing productivity, optimizing quality or securing and improving ecological standards while maintaining a balance between ecology and economy.

VARIO LINE JIGGER HT

The Vario Line HT (high temperature 143°C.) is made in high quality stainless steel and reached a high degree of process security, durability, flexibility and economic for Polyester and mixed fabrics in width's to 4000 mm

The very well controlled fabric tension (0-1000N) steeples adjustable allow a perfect dyeing of different fabric types (Polyester and mixed fabrics) and fabric qualities.

In order to ensure a uniform absorption of the dyestuff over the entire width of the fabric the machine is equipped with two independents of each other expander which secures a constant bending angle of the goods.

Different batch diameter (800 / 1200 / 1400 mm) allows higher capacity dyeing processes which are not possible on beam dyeing machines, special impermeable fabrics.

The Vario Line high temperature Jigger is built with roller widths of up to 4000mm.

DETAILS

- ➔ Machine and cabinet complete in stainless steel
- ➔ Jigger is a complete unit (simple installation – reduce cost & time)
- ➔ Constante fabric tension and speed
- ➔ High speed function (optional) 200 m/Min. to reduce time of dyeing to 25% High performance heat exchanger (heating/ cooling within shortest time)
- ➔ New developed dye additive system
- ➔ New designed circulation system for a constante temperature and dyestuff concentration in the complete bath
- ➔ Power drain for shortest liquir drainage
- ➔ Complete supervised dyeing process

2

HT JIGGER

3 ULTRA JIGGER

ULTRA JIGGER AT

The ULTRA Jigger with the robust and compact construction is the result of modern engineering. This universal precision Jigger is for dyeing, washing & bleaching of woven goods such Nylon, Viscose, Cotton, Acetate, Perlon, Silk etc.

Even for heavy cotton and delicate fabrics the ULTRA Jigger give the guarantee of constant fabric tension [0-1000N] and employs the energy use rationally by latest control technology.

The reliable and well-known Wichelhaus driven- and process technology is also use here. Temperature, constant tension & speed, exactly dosing and favorable liquor ratio are some of the important points in order to achieve best fabric quality.

Controlled monitoring of dyeing process offers optimum safety. The ULTRA Jigger fulfils each of the requirements, is economical, user-friendly, environmentally and inexpensive.

ULTRA JIGGER ADVANTAGES

- ➔ Automatic Jigger process / Reproducibility
- ➔ Constant and controlled fabric tension and speed
- ➔ Loading and unloading controlled / Reduced time of heating
- ➔ Fabric tension 0-1000N steeples adjustable / Fabric speed with 150 m/Min
- ➔ Consumption controlled by Energy Control

ULTRA JIGGER EQUIPMENT

- ➔ Heat exchanger / Filterstaion / Dosing tank with mixer / Debatcher device

LEVEL SENSOR

- ➔ Circulation pump / Rinsing tubes / Touch screen PLC

JIGGER UPGRADES

Due to the fact, that these equipment are running since decades in the factories often the machine control system ore the winding technology is not state of the art anymore. We offer to our customers a variety of upgrades and retrofits for their textile machinery equipment.

The upgrade package can be used for all Jigger brands and for atmospheric and also high temperature Jigger.

TECHNOLOGY

- ➔ Full automatic controller (control box stainless steel)
- ➔ Large Touch Screen Monitor / Ethernet und Internet Technology (TPC/IP Network)
- ➔ AC Motors with incremental transducer
- ➔ Upgrade Kid (main plate, main shaft and bearing housing)

ADVANTAGE

- ➔ Unit is free of maintenance / Simple operation
- ➔ Sampling always at the same place / Variable times of pendling
- ➔ Constant fabric tension and fabric speed / Reduce of energy costs
- ➔ All functions are programmable / Complete control of the process by PLC
- ➔ Without sensors in the dye vat / Computation of the accurate fabric length

4 UPGRADES



AUTOMATION

AUTOMATION

Intelligent machine concepts, the focus always on the continuously increasing customer requirements for process automation as well as the minimization of life cycle costs are our core competences in the field of automation.

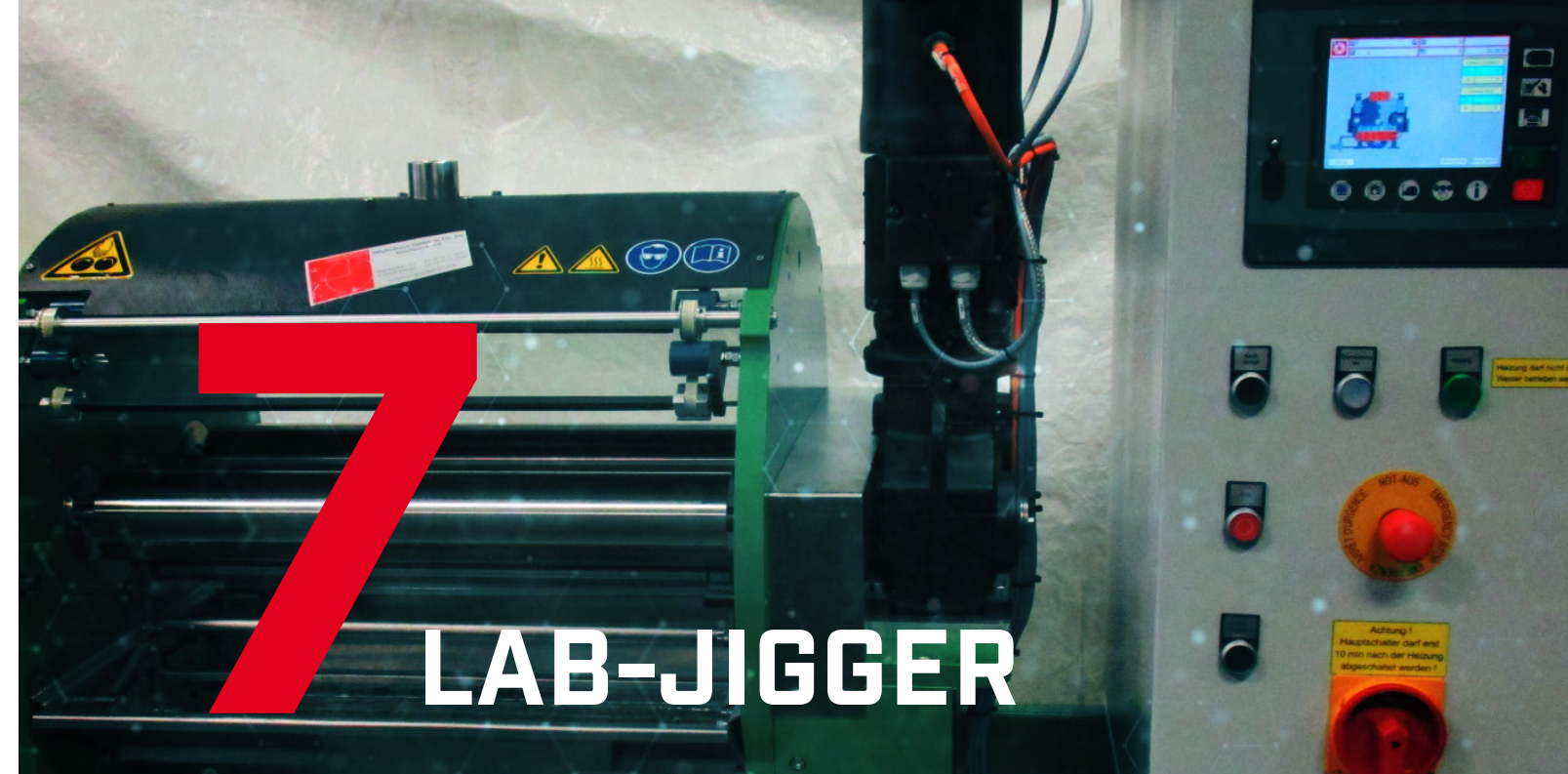
For us, the product and the process always determine the level of technology used. Which automation systems and which degree of automation are finally implemented is done individually in coordination with the customer. In this way, we achieve the highest level of dynamics and quality with our solutions at low personnel costs.

ROBOTIC APPLICATIONS

In state-of-the-art factories handling tasks are more and more carried out with industrial robots than with conventional methods. A significant advantage over manual handling, in addition to the cost savings, is the high flexibility provided by the use of modern robots. Subsequent changes or expansions of the functionality can be implemented easily and inexpensively. With the Wichelhaus Group you have an experienced partner, both in terms of project planning and programming, as well as in the area of attachments and grippers. With our 3D construction and simulation software, robot applications can be tested as a “virtual prototype” before construction begins. This reduces errors and saves time during commissioning.

THE NEXT GENERATION

Many customers want to know more details about the actually status of their “real-time” of production. Nowadays, “Just in time” production, a reducing latency, in the event of machine malfunction is a very critical factor. We are able to support you professionally to the right way of “Industry 4.0” and to refine your “Big Data” to “Smart Data”. It will help you to generate knowledge from data.



LAB-JIGGER

LABORATORY JIGGER

Very often there are differences found in the shade when recipes are transferred from lab to bulk. In order to achieve the results in a “right-first-time” attempt, our team of technologists and engineers has developed the Vario Lab Jig. Identically to the Vario Line Jigger for large scale production this laboratory machine was down scaled without loss of any features. The Vario Lab Jig is perfectly suitable for obtaining lab recipes, which will not cause any variation in production afterwards. Furthermore the Vario Lab Jig is an outstanding alternative for sampling for your next collection. Last but not least, the Vario Lab Jig is a first class option for processing narrow fabrics. The liquor volume in the standard machine can be varied from 3,5 to 12 liters.

SPECIFICATION

- ➔ Roller Width: 300mm - 500mm / Max. Diameter of batch: 250mm
- ➔ Speed: 0,5 - 10m/Min. / Fabric Tension: step less adjustable (0-60kg)
- ➔ Temperature: max. 98°C. / Liquor capacity: 3-12 Liter / Heating: 2 kW / Cooling: cold water
- ➔ Drive: Electro motor drive (frequency)
- ➔ Controller: PLC Wichelhaus - fully automatic to Functions: Filling, heating, pendling; passages, drain, rinsing
- ➔ Equipment: circulation pump, electro heating, valves & sensors



IOT

THE WICHELHAUS NETWORK IN CHINA

The Wichelhaus group is more than its individual companies and cooperation partners.

For our customers in the textile industry in China we have built up a network of specialized competence partners with

FYI Fanyuan Instrument and Dening Textile Technology Center.



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1 TEAM – 1 SOLUTION

THE SUM OF COMPETENCE, MOTIVATION AND TEAM SPIRIT

Our employees work hand in hand in the Wichelhaus Textile Network in Germany and China. Driven by their desire for innovation and perfection, for highly developed, new and mature technologies. Only through the interaction of specialists can we meet the complex requirements of our customer industries and global markets.

Due to our curiosity and our incentive to see technical challenges also as an opportunity to learn, the experience in the team grows continuously and is reliably passed on to the young colleagues. Specialised knowledge on the one hand, teamwork on the other, that is what makes working with us interesting. From the order to the finished product on schedule, the coordinated cooperation of many people involved is necessary. We simply enjoy working together. This is how technology of the highest level is created. - Challenge us.

