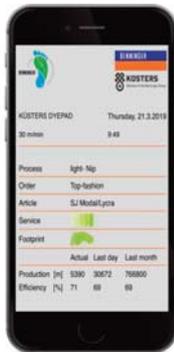




Benninger Küsters DyePad.

Benninger celebrates 160th anniversary this ITMA 2019

In this 2019 ITMA year, Benninger is celebrating its 160th anniversary. This anniversary stands primarily for 160 years of commitment to textiles, but also for 160 years of responsibility towards sustainable textile production. Thanks to consistent innovation and the continuous improvement and further development of our products, processes and services, for the past 160 years the name Benninger has stood for textile finishing plants that are particularly resource-efficient.



Benninger BEN iData.

At this year's ITMA Barcelona BENNINGER will be presenting its latest developments:

- ❖ The Benninger-Küsters CPB dyeing centre for knitwear and woven fabrics - the only salt-free cold dyeing process.

- ❖ The TEMPACTA washing steamer for knitted fabrics with freshwater supply that is controlled by the degree of contamination
- ❖ The TRIKOFLEX drum washing machine that is available up to a working width of 5400 mm. In addition, a specially developed expander roller for sensitive fabrics will be exhibited.
- ❖ BENNINGER – Küsters Multipad - the new development for complex

impregnation tasks on woven fabrics and knitwear with electronically monitored, automatic lubrication.

Salt-free dyeing of woven fabrics and knitwear

Salt-free dyeing without the use of energy is only possible using the cold pad batch (CPB) dyeing process. This process is also becoming increasingly popular in tropical and subtropical regions, which is



TEMPACTA washing steamer.

reason enough for Benninger-Küsters to adapt the CPB systems even more effectively to the climatic conditions. The heart of our CPB system is the BENNINGER KÜSTERS DYPAD, which will also be presented again this year at ITMA Barcelona. BENNINGER is the only textile machine manufacturer with the know-how of the original S-roller technology, which is synonymous with an even dyeing result across the entire fabric width.

Contamination-dependent washing

The TEMPACTA washing steamer has been especially developed for all low-tension washing processes and is mainly used for diffusion washing (fastness washing). The unit has a consistent counterflow water supply. Online measurement of the degree of contamination regulates the necessary amount of fresh water in order to a). guarantee the lowest possible water and energy consumption and b). ensure a high reproducibility of the washing result.

Nothing is impossible: Tension-free and crease-free washing of textiles up to 5400mm

The TRIKOFLEX drum washing compartment has the highest mechanical washing efficiency thanks to the double drum technology and the front and back washing technology. Crease-free fabric transport is guaranteed, even with sensitive fabric. In addition, BENNINGER has developed a cylindrical expanding roller for particularly sensitive textiles for wet and steam applications. The washing

compartment is rounded off with the HYDROVAC vacuum-water extraction system. Since each reaction process is followed by a washing process in wet finishing, 70% of the energy consumption is incurred during washing. For this reason, Benninger washing compartments are insulated so that up to 50% of the radiated energy can be saved here.

BENNINGER Küsters MULIPAD - there's nothing that can't be impregnated

The newly-developed BENNINGER KÜSTERS Multipad is an absolute highlight with regard to flexible impregnation tasks. The unit is equipped with an optional double impregnation feature and is suitable both for heavy denim articles and for very light knitwear. One of the special applications is over-dyeing and mercerising of denim. The Multipad is also used for cold bleaching and pre-treatment of knitwear.

IoT - networked and informed at all times

The topic of the "Internet of Things" (IoT) is also becoming increasingly important in the textile machinery industry. True to the principle "Trust is good, control is better," the important operating parameters of the BENNINGER systems are continuously monitored in a closed control circuit. Deviations are detected and corrected immediately.

Particularly quality-critical parameters are forwarded to those responsible by

means of modern IoT technologies and an alarm is sounded in the event of limit value violations. A good example of this is the central bearing lubrication on the BENNINGER KÜSTERS Dyepad: The critical lever bearings of the padder are permanently lubricated, malfunctions are reported and the lubricant is automatically replenished. Another example is online monitoring of the air-conditioned electrical circuit cabinets.

A newly revised maintenance manager provides information about the maintenance status of the system at any time and generates a recommendation as well as a schedule for the next maintenance cycle. Another example of modern process monitoring is the newly-developed online measurement of the degree of contamination of the washing water and the resulting optimisation of water consumption.

To give their customers an overview of their production facility at all times, Benninger have further developed the established management information system BEN-iDATA. This allows the customer to query all important machine data, the maintenance status and the ecological footprint of the current production batch at any time and from any place. Last but not least, Benninger has developed an electronic ticket system for service assistance, which transmits diagnostic data at the time of the event to the Teleservice team in our main facility at the customer's request. This enables them to offer customers efficient and timely support. ♦



*Benninger
 TRIKOFLEX
 drum washer.*