

New products and highlights presented by Stäubli at ITMA 2011

Stäubli has been following its company principle "Progress through tradition and innovation" for many years. During the past year, the development of new products and technologies that offer the textile industry more and greater benefits has again borne new fruit. What follows is a summary of the new products and product highlights that Stäubli will present at ITMA in Barcelona.

Jacquard Weaving

Type SX Jacquard machine

Introduced a year ago, the SX Jacquard machine has gained wide and enthusiastic approval by customers. This extremely versatile machine for broad use in modern Jacquard weaving mills meets the highest demands. Productivity of the SX surpasses that of other models, the machine is more compact, and it offers higher performance – meaning high loads and high speed. Its nearly vibration-free drive mechanism is extremely reliable. The machine requires a minimum of maintenance. The SX is available in two sizes, with 1408 or 2688 hooks. It is adaptable to rapier, air jet, and projectile weft-insertion systems. Today over 100 SX machines are in daily use in weaving mills around the world, handling a variety of textile applications.

During ITMA Stäubli will demonstrate at its booth the SX with 2688 hooks with a Stäubli harness on an air-jet weaving machine producing apparel fabric at very high speed.

New type SX V Jacquard machine for velvet

As an ITMA 2011 novelty Stäubli will unveil the new type SX V Jacquard machine for the production of velvet fabrics. It is equipped with 2688 hooks driven by the M6.2 three-position module. The SX V can be adapted to any type of new or existing velvet weaving machine.

Jacquard machines with independent drive

The principle of running a Jacquard machine with no mechanical link to the weaving machine was introduced by Stäubli more than ten years ago, with the UNIVAL 100. Since then, Stäubli is in a position to offer solutions for individual drive with no cardan shaft to the weaving machine for its complete range of Jacquard machines.

A Stäubli Jacquard machine with independent drive on a rapier weaving machine will be exhibited at the Stäubli booth.

UNIVAL 100 – A wider range of application with new smaller formats

The well known UNIVAL 100 Jacquard machine with single-end control is superbly suited to the production of technical fabrics. New, smaller configurations with fewer actuators have been developed particularly for this application. The two new models can be equipped with up to 512 or 1024 actuators, complementing the previous range with configurations between 2048 and 15360 actuators.

Of particular interest to technical weavers, the new configurations facilitate production of narrower fabrics, from simple fabrics to sophisticated textiles such as multi-layers.

All UNIVAL 100 models are easy to program using the JC6U colour touch-screen controller, allowing the setting and archiving of shed parameters such as shed angle adjustment, opening profile, and crossing phase difference.

A small version of the single-end-control UNIVAL 100 Jacquard machine with a demonstration harness of 384 ends will be shown at the Stäubli booth.

Jacquard machines for name and narrow fabric weaving

UNIVALETTE

The introduction of the UNIVALETTE represents a significant step forward in name selvedge technology. This new electronic Jacquard machine is used for applying names and lettering to fabrics. As the name suggests, the UNIVALETTE adopts the technology of its big brother, the UNIVAL 100, for controlling the shed. The new machine is available in two configurations, with either 64 or 96 actuators for the movement of a corresponding number of warp threads. Using the JC6U control unit, shed parameters are freely programmable to achieve optimum performance and perfect synchronisation with the weaving machine. The positioning of the UNIVALETTE Jacquard head on the weaving machine can be easily adjusted to suit the desired shed geometry.

The UNIVALETTE can be used in combination with the positively controlled CS1 selvedge let-off motion device, available as an option. The CS1 precisely controls warp yarn tension in the selvedge area to achieve perfect fabric quality.

LX32

The LX32 electronic Jacquard head for narrow fabric weaving features up to 448 hooks driven by a precise mechanism. Electronic synchronization with the weaving machine is provided by the JC6N controller, which is also used to program the pattern or the letters respectively.

Both of these Jacquard machines, the UNIVALETTE and the CX 182, can be seen at the Stäubli booth during ITMA.

Frame Weaving

S3060/S3260 – New generation of dobbies

Stäubli is proud to announce the newly developed rotary dobby family S3060/S3260, just in time for ITMA. Based on the success of the rotary dobby invented by Stäubli many decades ago, the new dobby comes with a new locking system – the heart of every dobby. The new evolutionary principle features enhanced security for the selection of the heald frames, allowing higher running speeds as well as superior reliability.

Thanks to its state-of-the-art technology, the new machine is even more compact and has less noise and vibration despite its higher speed. It also has a built-in cooling system connexion and requires less maintenance.

New 1671/1681/1781 cam motions

Stäubli has adapted its range of cam motions to meet the latest requirements. The streamlined series of products now includes the new types 1671/1681/1781. With a high-performance cam-and-lever assembly and a broad range of symmetrical and asymmetrical cams, these advanced machines offer increased flexibility and performance.

Weaving preparation systems

SAFIR S80 – Automatic drawing in for the highest requirements

With the new generation of SAFIR, Stäubli offers automatic drawing-in machines that incorporate decades of experience and deliver users added value through state-of-the-art technologies. Since its launch, the top-end SAFIR S80 has proven its worth through simple operation, high universality, and technical properties that deliver faultless quality of drawn-in warps.

The SAFIR S80 can handle drawing in from 1 or 2 warp beams, each with up to potentially 8 thread layers when necessary. The warp sheets can be with or without a 1:1 lease, depending on the type of warp production. As far as harnesses are concerned, the SAFIR S80 can handle almost any type of healds, drop wires, and reeds, and the number of heald frames to be drawn in can total up to 28 units. Thanks to its unique camera system, which is part of the completely new yarn separation module, even coloured threads can be recognized and will be monitored and compared to the given colour repeat

pattern. Drawing-in an colour repeat patterns can be programmed either on the built-in operator console or via download from a textile CAD system. This results in high throughput and production rates, and it eases the work of the operating personnel.

The SAFIR S80 will be exhibited drawing in a fancy cotton warp from two warp sheets.

OPAL multilayer leasing machine

OPAL applies a 1:1 lease to a warp sheet to ensure perfect thread order in the warp. As the name *multilayer leasing machine* says, it can do this with one or several – up to 8 – warp sheets. The heart of the system is the thread separation unit, which is responsible for the faultless sequencing of the separated warp threads. The unit has been optimized to handle new yarn types, especially fine yarns down to 10 den, transparent yarns, and FDY (fully drawn yarns).

The range of usable warp widths has been expanded. Besides the previous standard versions of OPAL for warp widths of 230 cm and 280 cm, a new model with a working width of 360 cm is now available. Thanks to these recent developments, more and more mills can benefit from OPAL.

MAGMA T12 warp tying machine for medium to coarse yarn types

MAGMA is ideal for tying technical fabrics, which are rapidly growing in importance. It ties monofilaments, coarse multifilaments, PP ribbons, bast fibres, coarse staple fibres, and many other fibre types. The machine is easy to operate and very reliable, thanks to its optical system for double-end detection and its patented thread separation system with no need of specific separation needles. The quality of the tied warp is excellent.

To make operation even more convenient and to provide more information about the progress of the tying process, the MAGMA T12 is equipped with a touch-screen panel. The panel is used to display information and enter parameters.

Two operational MAGMA T12 tying machines will be demonstrated during ITMA at the Stäubli booth: Number one is tying PP ribbons of 5 mm width; number 2 will tie very coarse cotton yarn.

Weaving systems by Schönherr (member of the Stäubli Group)

ALPHA 400 series – for area rugs and carpets

The ALPHA 400 series of carpet weaving machines was launched four years ago at ITMA 2007. In the meantime the machine has proved its success with many customers who use it to efficiently produce area rugs and wall-to-wall carpeting for the residential, contract, and transportation sectors. Available in five configurations and featuring state-of-the-art technology, the ALPHA 400 produces carpets in excellent qualities and impressive patterns at outstanding production rates.

Multi Weft Selector

The new Multi Weft Selector adds even more flexibility to the ALPHA 400. It allows the insertion of up to six plus six different weft yarns in the same fabric, offering many new possibilities for designers and carpet weavers to create and produce new carpet qualities. The Multi Weft Selector features a modular design that allows scaleable configuration. Any ALPHA 400 machine can be upgraded by adding this new option. Innovative product samples produced with Multi Weft Selector will be shown.

High density carpets

During ITMA Schönherr will exhibit top of the top quality area rugs with highest reed densities produced on ALPHA 400.

ALPHA 400 LEANTEC with servo driven UNIVAL 500 T

This configuration allows the manufacturing of an outstanding product variety with highest efficiency such as Artificial Grass, Shaggy with high pile heights and Technical Textiles.

D_LOOP – for area rugs and wall to wall carpets and technical textiles

The new D_LOOP weaving machine is designed for the highest efficiency in producing various end uses such as textiles for the contract, transportation, and residential sectors, and technical textiles. It features

flexible rapier weft insertion that allows weaving an extremely wide range of technical fabrics and carpets. Engineered for flexibility, the D_LOOP can be configured for weaving widths up to 6 meters – a novelty for industrial fabric producers and carpet weavers.

The D_LOOP completes the range of weaving machines provided by Schönherr – users now have the choice between a rigid rapier or flexible rapier insertion system.

A fully equipped D_LOOP will be exhibited producing carpets for the contract sector at ITMA.

DEIMO

Hall 3, Booth A166

Stäubli Group member DEIMO will be showing servo motors, drives, electronic control solutions, input/output devices, and related programming tools at Booth A166 in Hall 3. Of particular note is the highly advanced technology for electronic controllers for circular knitting machinery for hosiery as well as the control units for weaving machine devices such as main direct-drive motors, let-off and take-up motions, and for Jacquard machines.

Further examples of Stäubli products in numerous applications with Jacquard machines, dobbies, and cam motions can be seen at ITMA at various booths of Stäubli partners. Please consult our “mini-guide” for their locations.