

CARPET FLASH



Low pile carpet weaving

Solutions for light weight, easy folding, and vintage carpets

Binding technology

Zoom on Magic Weft Effect Duo - the Schönherr solution for realistic used looks

Carpet trend

Outdoor carpets

Schönherr carpet systems

This "CARPET Flash", a special edition of our customer magazine Stäubli Flash, gives you a load of essential information about machine-made carpets and how these are produced on Schönherr ALPHA carpet weaving systems by Stäubli.

Today's carpet market craves individuality and demands high standards in terms of workmanship and materials. Trends are often short-lived and differ greatly depending on country and culture. To stay at the forefront of the carpet market, weaving mills must fulfill customers' requirements effectively and swiftly.

With a weaving width of up to 5.3 metres and integrating the latest technologies and high-end system components, the different machine types of the ALPHA 500 series enable carpet weavers to master these challenges.

Proven at some of the largest weaving mills around the world, Stäubli with its product division Schönherr carpet systems is renowned for efficient production.

Middle East markets and ambitious designers seek carpet qualities with high and extremely

high densities for their sophisticated carpet collections.

Schönherr carpet systems recognised these needs and launched the perfectly suited ALPHA 500 XHDC, mastering up to 4 million points per sqm. The ALPHA 500 XHDC and the ALPHA 500 UNIVERSAL master reed densities up to 1,400 dents / metre (8 colours)

which allows weaving carpets with ultra-high resolution, without mixed contours, and with excellent backs.

On the following pages we invite you to discover more about latest carpet trends, binding technologies and news from Schönherr carpet systems.

EDITORIAL

Dear Reader

When designers, architects, interior designers and carpet manufacturers engage in dialogue to discuss the trends, fashions, needs and new ideas of potential customers and buyers, Stäubli – as a manufacturer of high-performance carpet weaving systems – is a key player. In our talks with our customers we listen carefully and find out what they want and need. At the same time, these talks give us the chance to tell them about new opportunities in carpet design made possible by the highly flexible Schönherr ALPHA 500 carpet weaving systems and their state-of-the-art manufacturing processes.

With this Carpet Flash, we want to summarise our current production systems and share some good reasons to carry the discussion with our customers to the next level. The partnerships that result and develop from this dialogue form the basis for us as a machinery manufacturer to continue to promptly respond to changing market requirements in the future and to always provide our partners optimal production systems.

I would like to thank you for your interest in our products, and I look forward to many productive talks in good partnership.

Sincerely,

Patrick Itlis,
Group Division Manager Textile

LOW PILE CARPET WEAVING

Solutions for light weight, easy folding, and vintage carpets



Low pile technology for 5m wide 'light carpets'

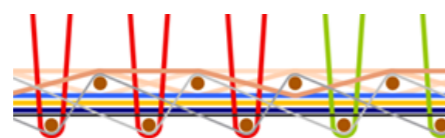
Trends in the carpet industry are changing faster than ever before. The carpet is no longer an heirloom that is passed on from generation to generation but a fashion item used for just a few years. Television programmes and magazines on interior decoration now have a big impact on what consumers buy. This means carpet producers need a carpet weaving machine that is flexible and can keep up with the trends – one like the Stäubli ALPHA 500.

One of the latest trend is low-density velour carpets, carpets with very low pile. Traditional velour looms can weave very fine high-density carpets but only at rather low productivity levels. That makes these carpets too expensive for the consumer who just wants to follow the latest trends.

Low pile for light weight

Stäubli ALPHA 500 UNIVERSAL weaving machines enable the weaving of carpets with a pile height of 3mm (the 4m wide model) and 4mm (the 5m wide model), with pile heights similar to traditional velour carpets.

By using cotton wefts and a special ground weave structure, these carpets woven on ALPHA are very soft and easy to fold, just like 'real' velour carpets.



Low-pile carpet with "floating" dead pile threads

Weaving carpets with such low pile heights requires lancets in order to preclude the problem of tight pile threads pulling the top and bottom carpet together.

In its broad product range, Stäubli offers 6mm lancets for its double rapier weaving machines, allowing pile heights – before shearing – of less than 3mm. Such lancets can only be used on two-ropier looms.

Binding technologies for vintage carpets and easy folding

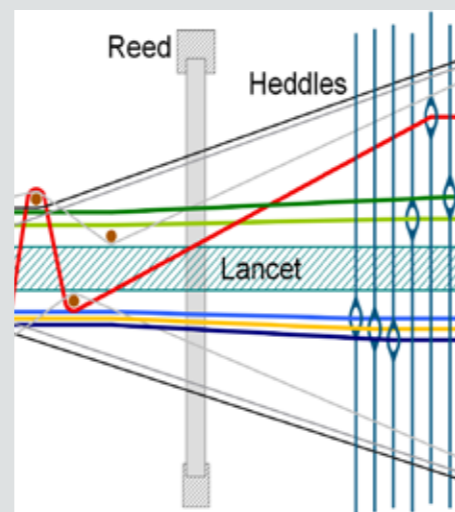
By having some of the dead pile threads float between the pile, the pile height appears to be even lower, and the carpet back is made softer as well.



Special ground weave structure for an extra flexible backing fabric (patented)

"Constant pile height and freedom in weaving"

With the LX2493 Jacquard machine, weavers can level the pile-yarn heddles in the middle position so that they are above or below the unique Schönherr low lancets. The pile-yarn heddles, except the one in patterning action, are not hindered by the lancets. This solution offers constant pile height plus maximum freedom in weaving (as if without lancets) – for minimum shearing loss and perfectly even surfaces.



This requires a full 3-position Jacquard such as the Stäubli LX 2493. The designer can vary the length of the pile floats to create a 'vintage look': Longer floats show more between the pile than short floats, creating the impression of worn areas.

A standard Rep 2/2 ground weave structure normally gives quite a stiff backing fabric, but with the electric dobby UNIVAL 500T on a Stäubli system different, far more flexible ground weave structures can be used, making it very easy to fold the carpet.

ALPHA features decisive factors for economical production

Traditionally velour carpets are woven with very fine silk or viscose yarn, but the Stäubli ALPHA 500 series allows weaving with thicker – and thus cheaper – yarn of any material. Carpet yarns, like PP (polypropylene), PAN (acrylic) and PES (polyester) can be used.

Velour weaving machines are generally not wider than 3m. The ALPHA 500 weaving systems offer weaving widths up to 5.3m, depending on the application.

A reed density of 400 – 480 pile points per metre can be chosen to meet the trend of low density, light weight and foldable carpets. This low density, combined with a much lower weft density, results in a higher production capacity, i.e. more metres of carpet per hour than on a velvet weaving machine, especially when you take the weaving width of around 5m into consideration.

BINDING TECHNOLOGY

Magic Weft Effect Duo for a realistic 'used' look



Until recently, weavers of machine-woven used-look carpet lacked the means of creating real, flowing transitions that give the appearance of unevenly worn spots on the carpet.

But now, using Schönherr's new binding technology Magic Weft Effect Duo (MWE Duo), designers can create designs that include "faded out" areas. This is done by weaving a gradual transition from 100% cut pile to a pure weft pattern, creating areas with a "thinned out" pile.

This binding technology also enables additional colour effects by combining up to 12 cut pile colours and up to 5 weft colours per gripper. This allows carpet designers to set extraordinary colour accents.

Modern, used-look carpets remain a strong trend, and they are no longer mainly limited to tone-on-tone designs. With MWE Duo, carpet mills can now efficiently weave them in high-contrast colour combinations – extending their product range and potentially serving an expanded market.

CARPET TREND

Outdoor carpets for stylish exteriors



Today, carpets are used not only in living rooms and bedrooms but increasingly outdoors too, to enhance lifestyle. Outdoor carpets are ideally weather-resistant, UV stable, and easy to clean.

Thanks to a wide choice of weave structures, woven carpets can be designed to reduce water absorption and dry quickly. Binding technologies thus help meet requirements for weather resistance and cleaning.

With its flexible ALPHA 500 series of weaving systems, Stäubli allows carpet mills to follow the trend of outdoor carpeting, economically producing good quality while benefitting from high productivity.

A wide range of options for colour combinations using pile and/or weft yarns allows carpet mills to delight their markets with astonishing designs.

Established binding technologies such as REVERSE (carpet back is the negative of the front, and both sides can be used) also help carpet manufacturers stand out from their competitors and offer carpets that bring living space outdoors.

And apropos nature, woven outdoor carpets are ideally produced from a single material (e.g. PP) and are thus fully recyclable.



Scan and access to www.carpet-weaving-technology.com

About Schönherr carpet systems

Schönherr, a carpet weaving machinery manufacturer rooted in tradition and based on more than 150 years of experience, became a member of the Stäubli Group in 1998. Its activities with development and production of high-quality double carpet rapier weaving machines have been integrated into Stäubli's textile division. The name Schönherr has been kept as the name of the product range for Stäubli's carpet weaving systems such as ALPHA.

About the Group

Stäubli was founded in 1892 as a small workshop in Horgen, near Zurich. Through its high-quality products Stäubli became one of the world's leading manufacturers of textile machinery. Today, Stäubli employs over 5,000 people in three dedicated activities: Connectors, Robotics and Textile machinery. The Group maintains a presence in 29 countries and is represented by agents in 50 further countries.

Stäubli Flash

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Editor's address: textile.mkg@staubli.com
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