Weaving machines for 3D hybrid fabrics
Stäubli Group

- Technological solutions for a vast range of industries – textile machinery, industrial connectors and robotics
- A family owned industrial company which originated in 1892 in Switzerland
- Turnover surpassing one billion Swiss francs with 4000 employees
- Present across 5 continents with units in 25 countries, agents in 50 countries
Global presence of the Stäubli Group
3 Stäubli divisions

Textile

Connectors

Robotics
Stäubli Textile

- Development & production of high quality systems for the weaving industry since 1892
- High-tech equipment and first class customer service
- Shed forming systems for frame and Jacquard weaving, suitable for every kind of fabric and weaving machine
- Weaving preparation systems for fast warp and style change
- Carpet weaving machines
Stäubli Textile

Frame Weaving
- Machines and accessories for frame weaving with cam and dobby systems for the production of all kinds of fabrics

Jacquard Weaving
- Jacquard weaving with two and three position machines
- UNIVAL technology is the latest mechatronic innovation

Weaving Preparation
- Automatic drawing-in machines
- Warp tying installations
Weaving machines

- Maximum flexibility for the production of all kinds of single- and double-sided area rugs, wall to wall carpets and technical fabrics
- The double-gripper weaving machines are equipped with a cam motion or dobbý mechanism and Stäubli Jacquard machines
Stäubli Connectors

One of the leading manufacturers of **quick connection systems**:  
- Single and multiple connectors for all types of fluids & gases  
- Electrical connectors (Group company Multi-Contact)  
- Tool changers for robots  
- Quick mould change systems

These standard or specific products combine performance, quality, safety, dependability and durability
Connectors markets

Stäubli and Multi-Contact connectors guarantee increased process reliability and productivity gains, whatever the industry sector or the type of application:

- Aeronautics
- Alternative fuels
- Car manufacturing
- Chemical
- Machine tools
- Defense
- Steel industry
- Motorsports
- Nuclear
- Off-shore
- Plastics
- Power industry
- Railway
- Renewable energy
  and many more...
Stäubli Robotics

- Stäubli Robotics is a **leading-edge** player with its engineering as effective and reliable as its sales and services.
- Application and programming support, spare parts and **on-site maintenance** around the world.
- **Training** facilities in Europe, the Americas and Asia.
- **Worldwide network** of integrators, partners and original equipment manufacturers.
Robotics markets

- Stäubli Robotics increases process **reliability** and **productivity** gains, whatever the industry sector or the type of application:
  - Aerospace
  - Automotive
  - Chemical
  - Electronics
  - Food processing
  - General industry
  - Life science & Pharmaceuticals
  - Photovoltaics
  - Plastics
  - Research
  - and many more...
Weaving machines for 3D hybrid fabrics
A machine woven carpet:

- Two fabrics above each other
- Connected by pile yarns
- Cutted in the middle
Carpet and Artificial Grass:

- Different material
- Different pile height
- Different weave structure
Distance fabric:

- Different material
- Different pile height
- Different weave structure
Details ALPHA 400 LEANTEC:

- Double rigid rapier system
- Up to 2 x 65 mm pile height or 140 mm distance fabrics
- Up to 16 harness frames controlled by servo dobb
- Strong beat up force at an angle of 90°
- With creel, single tier or double tier warp beam stand and QBC
- Liquid cooling system
- Electric connections with IP67
- Multi colour touch screen HMI
- Vacuum cleaning system for less maintenance
A machine woven Carpet:

- Two fabrics above each other
- Connected by pile yarns
- Cutted in the middle
A machine woven Multi Layer:

- Weft yarns separated by warp yarns
- Connected by pile yarns
A machine woven Multi Layer:

- Weft yarns separated by warp yarns
- Connected by pile yarns
A machine woven Multi Layer:

- Weft yarns separated by warp yarns
- Connected by pile yarns
- Different yarns
A machine woven Multi Layer:

- Weft yarns separated by warp yarns
- Connected by pile yarns
- Different yarns
A machine woven Multi Layer:

- Weft yarns separated by warp yarns
- Connected by pile yarns
- Different thickness
A machine woven Multi Layer:

- Weft yarns separated by warp yarns
- Connected by pile yarns
- Different thickness
Applications for woven Multi Layer:

- **Carbon Multi Layer**
  - Parts of turbine
  - Automotive

- **Aramid Multi Layer**
  - Satellite protection

- **Glass fibre Multi Layer**
  - Armoured protection
Details ALPHA 500 TECH:

- For yarns like Carbon, Aramid, Glassfibre, etc.
- Optionally “Free Move Rapiers”
- Different weaving width from 0.8 m up to 5.2 m
- Single or Double fabric production
- Up to 16 harness frames controlled by servo doby or rotary doby
- And / or 3-position Jacquard machine with up to 33792 hooks
- With creel, single tier or double tier warp beam stand and QBC
- Strong beat up force at an angle of 90°
- Liquid cooling system
- Electric connections with IP67
- Multi colour touch screen HMI
- Vacuum cleaning system
A machine woven Multi Layer:

- Multiple fabrics
- Connected by pile yarns
Applications for woven Multi Layer:

- Convoyer Belt
  - Food industry
  - Mining industry

- Canvas
  - Truck cover
  - Tarpaulin
  - Architectur
Details D_TECH:

- Strong machine base with negative flexible tape rapiers, guided by teeth
- Different weaving width from 2.5 m up to 12 m
- Single or double fabric production
- Up to 24 harness frames controlled by servo dobbby
- Strong beat up force at an angle of 90°
- With creel, single tier or double tier warp beam stand and QBC
- Vacuum cleaning system for less maintenance
- Liquid cooling system
- Electric connections with IP67
- Multi colour touch screen HMI
Schönherr machinery for heavy technical fabrics:

**ALPHA 400 LEANTEC**
- Double rigid rapiers
- Double fabric production

**ALPHA 500 TECH**
- Single or Double rigid rapiers
- Single or Double fabric production out of all technical yarns like Carbon, Glass, Aramid, PES, etc.

**D_TECH**
- Single or double flexible tape rapiers
- Single or double fabric production out of yarns like Cotton, PES, PP, etc.
Thank you for your attention and we are happy to see you on our booth 6D06!

www.schoenherr-machinery.com