

NEW HV-TFP TECHNOLOGY MULTIPLIES PRODUCTIVITY – AVAILABLE EXCLUSIVELY ON ZSK TECHNICAL EMBROIDERY SYSTEMS

At JEC World 2019 Paris, ZSK TECHNICAL EMBROIDERY SYSTEMS presents the new High Volume - Tailored Fiber Placement technology (HV-TFP), developed in cooperation with NOBRAK, France.

The new HV-TFP technology is available only for ZSK TECHNICAL EMBROIDERY SYSTEMS. In connection with the ZSK twin active fibre supply unit, it allows the laying of two or more rovings in parallel thus doubling output in production of composites.

Advantage of ZSK TECHNICAL EMBROIDERY SYSTEMS: High level of automation

To achieve the highest level of automation and efficiency, all ZSK technical embroidery machines can additionally be equipped with innovative options, like



Fig.: JGW 0200-550D 700 ZSK technical embroidery system

Options

- active wire and fibre supply systems (for industrial demands)
- automatic unwinding function
- automatic change of different material
- pneumatic media trimmer
- fast fibre laying
- carbon protection of the electronics
- automatic bobbin changer

Advantages

- load specific laying of fibres
- part specific laying of fibres
- minimized material wastage
- multiple layers, partial reinforcement
- create hybrid carbon fibre and glass components

About

ZSK TECHNICAL EMBROIDERY SYSTEMS is a division of **ZSK STICKMASCHINEN**. The company is the leading brand for industrial embroidery machines and technical embroidery machines MADE IN GERMANY.

The application of unusual material like fibers, wire, tubes or even LED to **ZSK STICKMASCHINEN**'s approved embroidery technology opened a wide scope of products, applications and methodical procedures.

Today companies from diverse branches develop and manufacture functional products, fashion, advanced composites or wearables with the embroidery solutions of **ZSK TECHNICAL EMBROIDERY SYSTEMS**.

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NOBRAK

INNOVATIVE TECHNOLOGIES
FOR TECHNICAL TEXTILES AND COMPOSITE MATERIALS

TOP
INNOVATION

TFP for industrial mass production

Tailored Fiber Placement or **TFP** is still at the beginning of its possibilities. Especially if you see the great potential for use in mass production markets like automotive, sports and consumer goods. For efficient use on an industrial scale, this promising technology must be further developed.

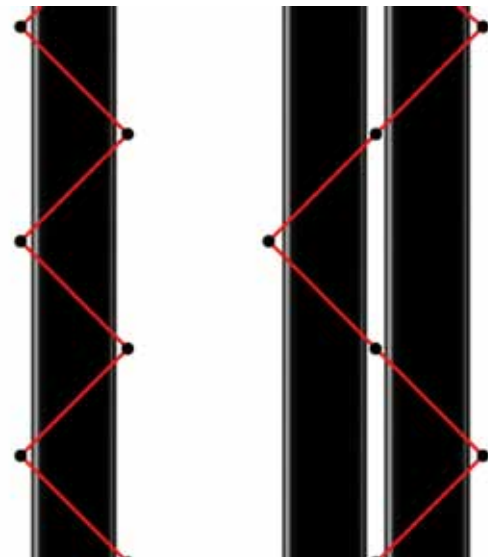
In order to unlock the enormous growth potential, **NOBRAK** has filed a first patent. With the claimed development, it is possible to improve the productivity of **ZSK TECHNICAL EMBROIDERY SYSTEMS** for TFP with what **NOBRAK** call **HV-TFP** for **High-Volume Tailored Fiber Placement**.

The HV-TFP Technology - Exclusively for ZSK TECHNICAL EMBROIDERY SYSTEMS

First filed HV-TFP technology allows multiplying the productivity of **ZSK TECHNICAL EMBROIDERY SYSTEMS** for TFP by a factor of two or more at a slightly higher invest. **ZSK TECHNICAL EMBROIDERY SYSTEMS** and **NOBRAK** are pleased to officially present HV-TFP during JEC World Paris 2019 with a new laying technology allowing to feed two or more rovings in parallel.

The principle of HV-TFP technology is rather simple, and illustrated by the picture alongside where two rovings are laid down simultaneously, each being stitched with a linear distance two times wider than in the actual process, thus leading to a twofold productivity increase.

This new functionality could be combined with other options like "Fast Laying" in order to multiply the productivity of the machines of **ZSK TECHNICAL EMBROIDERY SYSTEMS**, thus increasing the benefit and potential of TFP. **The HV-TFP technology is exclusively available on ZSK technical embroidery machines.**



Standard Technology
for laying one roving

New HV-TFP Method for laying
multiple rovings, here doubling
amount of laid rovings with
same number of stitches

About

NOBRAK is a tech-based company located close to Toulouse. The company develops innovative technologies for technical textiles and composite materials. **NOBRAK** is using these technologies to design, produce and distribute personalized objects. **NOBRAK** also proposes its technologies to third party companies to produce textiles and/or composite parts.

NOBRAK is doing its best to limit the environmental footprint of its products/activities by using natural fibers and bio-based/renewable/recycled materials when possible but also by using energy-efficient technologies.

NOBRAK was founded end of 2016 by two co-founders Aymeric Azran and Bertrand Laine, both engineers and Doctors in mechanics and material science with a strong background in composite, technical textiles, aeronautic and innovation.

In its framework, **NOBRAK** has chosen TFP technology together with **ZSK TECHNICAL EMBROIDERY SYSTEMS** because of the growth potential of this technology combined with the know-how and vision of **ZSK TECHNICAL EMBROIDERY SYSTEMS, Germany.**

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