

## Projet Taurus

Développement de la Stratégie Marketing et Communication pour le lancement d'une nouvelle machine textile produisant un tricot en 3D.

### Introduction de la société

Steiger est un producteur renommé de machine à tricoter rectiligne, basé en Suisse à Vionnaz. Fondée en 1947, la société fait partie du groupe CiXing depuis 2010 et emploie environ 100 personnes dans le monde. Elle est le leader technologique pour les machines à tricoter industrielles utilisées pour des produits techniques ou médicaux. Reconnue pour la qualité des vêtements de haute couture produits sur ses machines, Steiger s'est diversifié dans le domaine médical des vêtements compressifs sur-mesure pour les grands brûlés. Un troisième pôle d'innovation est la réalisation de matériaux composites, type fibre de carbone utilisés dans l'industrie des transports. Grâce à son réseau de vente et de service étendu, Steiger livre ses produits dans le monde entier. Sa culture d'entreprise basée sur l'innovation et le partenariat avec le groupe CiXing permettent à Steiger de rester le leader technologique de l'industrie du tricotage rectiligne.

### Introduction du projet Taurus

La production traditionnelle de produits tricotés se fait par l'assemblage de pièces tricotées séparément : une machine tricote l'avant du pull, l'arrière, les manches et des opératrices spécialisées appelées remailleuses, assemblent ces pièces dans une opération de confection. Le produit tricoté peut être un vêtement, une chaussure ou encore un vêtement médical de compression. Dans le cas d'un vêtement, ce temps de confection va de 20 minutes à 80 minutes et participe à la hauteur de 35% du coût d'un pull. Les remailleuses effectuent un travail pénible et sont rares sur le marché Européen. Ces caractéristiques expliquent la raison pour laquelle la production de tricot a migré en Asie depuis plus de 20 ans.

Steiger développe une machine appelée Taurus qui amène des solutions innovantes pour dynamiser la production Européenne de tricot. Cette machine tricote 3 dimensions le produit final qui sort prêt à être porté et permet de diviser le coût de confection par un facteur 7. Cela limite drastiquement tout le processus de finalisation et présente un avantage compétitif tant dans le domaine de la mode que pour le marché médical et technique. De plus, selon le besoin, nous pouvons offrir une solution complète de tricotage de produit sur-mesure par scannage des dimensions d'un individu et le transfert de ces données, via internet, à un logiciel de programmation. Cette technologie sera disponible début 2017 et nous voulons commercialiser ce produit en Europe pour répondre aux besoins d'un marché européen exigeant.

### Expérience client Unique

La Taurus permet de produire localement à faible coût, des articles tricotés, en réduisant au maximum les temps de confection tout en permettant de fabriquer des collections réduites et variées ou, si besoin, des produits sur-mesure.



Machine à tricoter pour produits 3D

## Objectif du travail de bachelors

L'objectif du travail de bachelors est de préparer l'ensemble de la stratégie marketing et de communication pour le lancement de cette machine sur le marché Européen.

- Valider la segmentation du marché
- Stratégie pour chaque segment
- Préparation de l'argumentaire par segment
- Mise à jour des documents & leaflets
- Définition de la stratégie digitale :
  - Site internet
  - LinkedIn
  - Préparation d'une newsletter mensuelle
  - Définition et négociation de la campagne de publicité avec les prestataires
  - Communiqués de presse

## Moyens à disposition

Le stagiaire travaillera sous la supervision directe du CEO de l'entreprise Pierre-Yves Bonvin

Il collaborera avec :

- Les responsables de ventes de différents marchés
- Le responsable IT pour le site internet
- Les experts textiles pour les échantillons

En fonction de l'avancement du travail, une partie du budget marketing sera attribué au lancement de la campagne.

## Personne de contact

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Annexe :

- communiqué de presse fait lors de la présentation de la machine
- leaflet de la Taurus

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**PRESS RELEASE**  
**For immediate release**

## Steiger displays the Taurus 2.170 XP, first 3D flat knitting machine able to produce intarsia complete garment

Vionnaz, Valais, October 13, 2016 – For the first time, Steiger Participations (« Steiger ») will display its Industrie 4.0 solution for the flat knitting market on its stand H4C01 at the ITMA Asia, taking place from 21.10. to 25.10 in Shanghai. Steiger, together with CiXing, will display the **Taurus 2.170 XP**, first 3D flat knitting machine which offers the possibility to knit complete garment knitwear with Intarsia patterns. The **Taurus 2.170 XP** machine contains two innovations patented by Steiger: the compound needle and the storage punch. This unique construction allows complete garment knitting with intarsia, multilayer knitting, and complex weft knitting.

Recognized strengths that Steiger's equipment offers, such as the take-down and the open carriage are optimized on the Taurus 2.170 XP. New features such as the independent motorized clamps, the vertically and horizontally motorized yarn-guides have been developed, making the equipment user-friendly and easy to use.

Pierre-Yves Bonvin, CEO of Steiger, states: "Complete knitted garments can now be created very easily with great time saving. Our machine's 3D simulation software MODEL+ can detect potential knitting problems early in the creation of the garment. Thanks to the virtual knitting machine function, the creation of the stitches, row by row is simulated. The programmer can navigate into the product to inspect his sample. A wizard composed of 3 simple steps helps the user to easily program his knitwear. There are many benefits to using our machines and businesses who do, will find that their return on investment is very rapid. We can thus demonstrate the capability of the Steiger group to propose fully integrated solutions to control an automatized knitting production."

The Taurus 2.170 XP is part of an innovative concept that includes the programming software, MODEL+ and the production control software NETCONTROL 2.0 which allows the networking of machines, online monitoring and a centralised production management able to deliver relevant statistics. The final confection is limited and automated thanks to the Autolinker coupled with a robot.

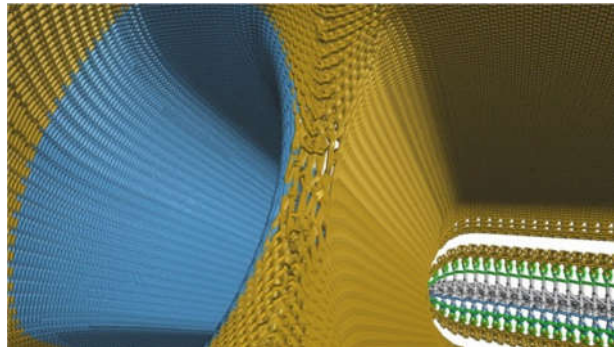
If you'd like to have more information about this topic, visit our booth H4C01 or contact Mr Pierre-Yves Bonvin +41 (0)24 482 22 50 or [pierre-yves.bonvin@steiger-textil.ch](mailto:pierre-yves.bonvin@steiger-textil.ch)

**Steiger** is a renowned flat knitting machine manufacturer based in Vionnaz, Switzerland. Founded in 1947, the company is part of CiXing group since 2010 and employs approximately 100 people worldwide. It is the technology leader for industrial knitting machines used for technical and medical products. In the fashion world, it is recognised for the quality of its stitch and for its Intarsia machines. Steiger delivers its products worldwide through a sales and extended service network. A corporate culture based on innovation and a partnership with CiXing group has enabled Steiger to remain the technology leader in the flat knitting industry.

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Taurus 2.170XP



3D view of the virtual knitting machine

# TAURUS 2.170 XP

## CHARIOT PORTE-CAMES

Machine 1 tête à chariot ouvert, enfilage direct du fil  
Porte-cames double chutes avec report bidirectionnel dans chaque chute  
Fonction trois-pistes techniques avec bouche-trou intégré  
Serre de mailles à changement électronique sans limite à tout instant  
Sélection Steiger électronique des aiguilles

## FONTURES

Longueur utile 170 cm  
Pince-fil, coupe-fil et pique-fil intégré  
Chevalement sélectif +/- 42 mm avec possibilité de correction  
Jauge E12 équipées d'aiguilles composées et de poinçon de stockage (brevet Steiger)  
Sélection par une seule clavette mono-sélecteur  
Auto-nettoyage par aspirateur Venturi  
Reigne de tirage

## GUIDE-FILS

24 guide-fils motorisés horizontalement et verticalement  
Cantré externe 34 arrêts aux nœuds (option)  
Programmation automatique du pilotage de guide-fils  
Vanisage de haute qualité réalisable par guide-fils multiples  
Kit support fournisseurs avec alimentation intégrée (option)

## POSSIBILITÉS / PERFORMANCES

Tous types de jacquards et structures  
Formes, finitions, divers, chaînettes, col intégré,  
Reprise de tricotage sur aiguilles vides  
Fléchage illimité grâce à son tirage actif à 40 mm de la formation de maille  
Programmation Model+ mise à jour, assistance et maintenance cumulées (option)

## ENTRAÎNEMENTS

Chariot par moteur "brushless" course variable à l'aiguille de 0 à 1,60 m / sec. maximum  
Guide-fil moteur Brushless  
Tirage tricot par moteur à courant continu avec possibilité d'inversion

## CONTRÔLES / SÉCURITÉS

Toutes sécurités nécessaires pour arrêter la machine en cas de casse-fil, nœud, choc, surcharge, bourrage  
Batterie de sauvegarde du programme en cas de coupure de courant  
Arrêt au bourrage rétractable  
Carte accès réseau-atelier 10/100 Mbps  
Programme d'auto-diagnostic  
Mémoire machine 1 GB  
Interface utilisateur par écran tactile couleur  
Clé USB pour transfert et sauvegarde des programmes  
Netcontrol : gestion de la production (option)  
Duoknit : tricote 2 articles sur la fonture (option)  
Powerloss : arrêt avec sauvegarde du panneau en cours en cas de coupure prolongée de courant (option)

## DIMENSION/CONSUMMATION

Longueur : 3645 mm  
Hauteur : 1800/2400 mm  
Largeur : 780/1800 mm  
Poids : 1350 kg  
Puissance : AC400V +/- 10 % ; 50Hz ; 1.5 KW

## CARRIAGE - CAM BOXES

Single head without cam carriage bridge, with direct yarn feeding from the top.  
2 systems cam boxes each with integrated bi-directional transfer  
Unlimited patterning possibility with the Three-Way-Technique  
Integrated split-stitch function  
Stitch length controlled electronically with possibilities to modify any time electronic needle selection

## NEEDLEBEDS

Working width 170 cm  
Yarn clamps / scissors and yarn picks integrated  
Selective racking over +/- 42 mm with possibility of correction  
Gauge E12 equipped with compound needle and storage system patented by Steiger  
Mono-selector  
Auto cleaning by venturi  
Comb

## YARN CARRIERS

Equipped with 24 vertically and horizontally motorized yarn carriers  
Outside creel with 34 yarn tensioners (option)  
Independently programmable yarn carriers  
Unique device for in-lay for technical articles (option)  
Plating with 2 yarn carriers  
Kit for supporting yarn feeding unit (option)

## POSSIBILITIES / PERFORMANCES

All types of jacquard and structures  
Shape, cast-off, V-neck, etc.  
Press-on on empty needles  
Narrowing by retained stitch with take-down active at 40 mm from loop formation  
Programming with Model+ updates, assistance and maintenance (option)

## DRIVES

Carriage brushless motor adjustable from 0 to 1,60 m / sec. max.  
Yarn carrier encoders  
Upper take down system with possibility of reversing drive

## CONTROLS / SECURITIES

All necessary devices to stop the machine in case of yarn breakage, knot, running out of yarn, shock  
Fabric press-off, over-heating motors, load-up detector  
Reserve battery (in case of power failure)  
Self diagnostic  
Backup capacity 1 Giga  
Network 10/100 Mbps  
12" color touch-screen interface  
Interface USB stick  
Netcontrol production control  
Dimensions (option)  
Duoknit : 2 samples produced on the same needle-bed (option)  
Powerloss : machine stop without loss of production in case of power failure (option)

## DIMENSION

Length: 3645 mm  
Height: 1800/2400 mm  
Width: 780/1800 mm  
Weight: 1350 kg  
Power consumption: AC400V +/- 10 % ; 50Hz ; 1.5 KW

## CARRO CON PIASTRE PORTA CAMES

Macchina a una testa a carro aperto, con alimentazione diretta del filo.  
Piastrine porta cames a doppia caduta con trasporto bidirezionale in ogni caduta.  
Tre vie tecniche con tappabuchi integrato.  
Gradazioni di maglia con controllo elettronico illimitato in ogni istante.  
Selezione elettronica Steiger degli aghi.

## FRONTURE

Lunghezza utile 170 cm.  
Pinza, forbici e prendi filo integrati.  
Spostamento selettivo +/- 42 mm con possibilità di correzione.  
Finezza E12 con ago composto e punzone di stockaggio (brevetto Steiger).  
Selezione con una sola platina monoselettore.  
Autopulizia con aspiratore Venturi.  
Petine di tiraggio.

## GUIDAFILI

24 guidafilii motorizzati orizzontalmente e verticalmente.  
Cantra esterna di 34 tensioni (opzione).  
Programmazione automatica del posizionamento dei guidafilii.  
Vanisé di alta qualità realizzabile con guidafilii multipli.  
Kit per supporto di fornitori di filo (opzione).

## POSSIBILITÀ/PRESTAZIONI

Tutti i tipi di Jacquard strutturato.  
Capi sagomati, finiture, catenelle, scollo integrato.  
Rimagliatura su aghi vuoti.  
Fléchage illimitato grazie al tiraggio attivo a 40 mm. dalla formazione delle maglie.  
Programmazione Model+ , servizio aggiornamenti, assistenza e manutenzione (opzione)

## TRAINO

Motore "brushless", corsa variabile sull'ago da 0 a max. 1,60 m./sec.  
Motori brushless per guidafilii.  
Motore a corrente continua per tiraggio con possibilità di inversione.

## CONTROLLI/SICUREZZE

Tutte le sicurezze necessarie per arrestare la macchina in caso di rottura di filo, nodi, choc, sovraccarico, salva aghi, etc.  
Batteria di salvaguardia del programma (in caso di black-out elettrico).  
Salva-aghi retraibile.  
Scheda gestione collegamento in rete 10/100 Mbps.  
Programma di autodiagnostica.  
Memoria macchina 1 Gb.  
Interfaccia utilizzatore tramite touch-screen a colori.  
Uscita per chiave USB.  
Netcontrol: gestione della produzione (opzione).  
Duoknit: lavora contemporaneamente 2 articoli sulla frontura (opzione).  
Powerloss: arresto macchina con salvataggio tela in lavorazione in caso di black-out elettrico (opzione).

## DIMENSIONI/CONSUMI

Lunghezza: 3645 mm.  
Altezza: 1800/2400 mm.  
Larghezza: 780/1800 mm.  
Peso: 1350 kg.  
Potenza: AC 400V +/- 10 %; 50 Hz; 1,5 KW.

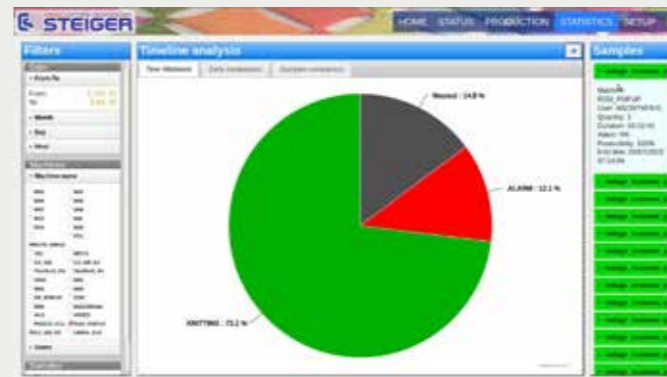
# TAURUS 2.170 XP

STEIGER offers new software solutions to optimize the output of your machines. Discover MODEL+ the totally new programming software. Intuitive, powerful and easy to access, it makes programming of complete garment knitting, multilayer knitting, complex in-lay and intarsia available to the greatest number of people. With Netcontrol 2.0, the production control software, just connect your machines to a server and optimize the productivity of your workshop.

## NETCONTROL 2.0



Display of the shop-floor with machine status



Production's reporting and statistics

## FEATURES:

- Networking machines
- Online monitoring of the machines' status
- Centralised production management
- Statistics

## CUSTOMER BENEFITS:

- Simplified production supervision
- Cost reduction
- Quality and productivity monitoring
- Increased productivity

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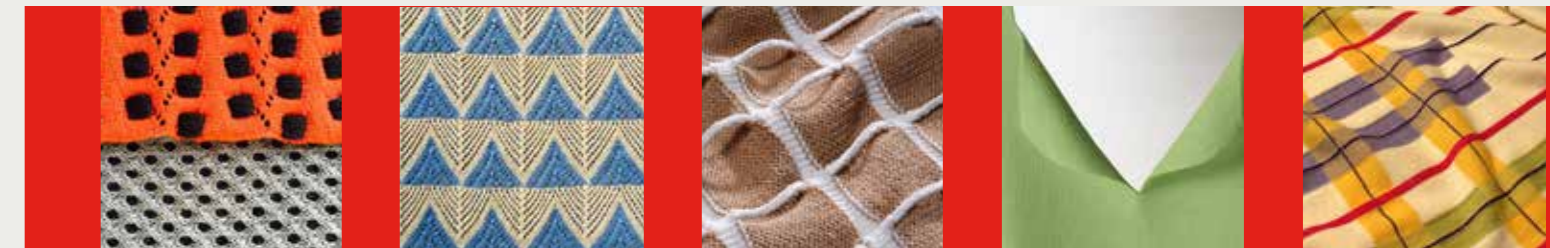
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## Flat knitting machine

# TAURUS 2.170 XP



# TAURUS 2.170 XP



Un nouveau domaine d'application s'ouvre dans le tricotage rectiligne avec la Taurus 2.170 XP. Cette machine contient 2 innovations brevetées par Steiger : l'aiguille composée et le poinçon de stockage. Cette construction unique permet le tricotage de pull intégral, de tricot multicouches, de tramés et d'intarsia complexes. Les atouts reconnus de Steiger comme le tirage, le chariot ouvert sont optimisés sur la Taurus 2.170 XP. De nouvelles fonctions apparaissent telles que les pinces motorisées indépendantes, les guides-fils motorisés horizontalement et verticalement. Conviviale et facile d'utilisation, la Taurus 2.170 XP fait partie d'un concept innovant qui inclut un nouveau soft de programmation : MODEL+. Intuitif, puissant et facile d'accès il rend accessible la programmation au plus grand nombre.

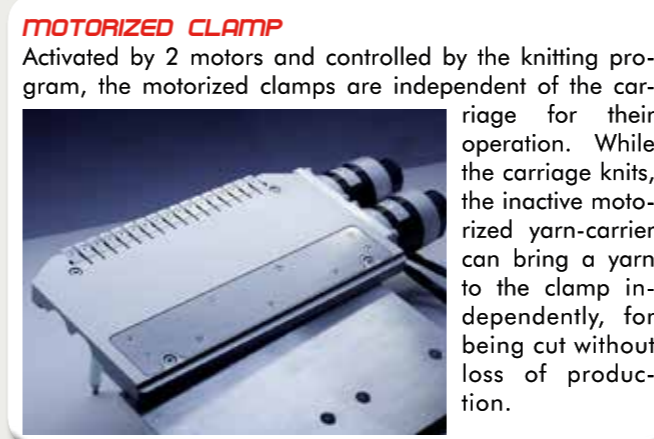
The Taurus 2.170 XP opens new horizons for the flat knitting industry. This machine contains two innovations patented by Steiger: the compound needle and the storage punch. This unique construction allows complete garment knitting, multilayer knitting, complex in-lay and intarsia. The recognized Steiger's strengths as the take-down, the open carriage are optimized on the Taurus 2.170 XP. New features also appear such the independent motorized clamps, the vertically and horizontally motorized yarn-guides. Friendly and easy to use, the Taurus 2.170 XP is part of an innovative concept that includes a new programming software: MODEL+. Intuitive, powerful and easy to access, it makes programming available to the greatest number of people.

La Taurus 2.170 XP apre nuove ed inedite prospettive di lavorazione a maglia nel settore delle macchine rettilinee per maglieria. Questo modello contiene 2 elementi brevettati da Steiger: l'ago composto ed il punzone di stockaggio. Questa macchina permette la lavorazione a maglia integrale, a multistrato, con tramature ed intarsi complessi. I punti di forza da sempre caratteristici di Steiger, come il tiraggio o il carro aperto, sono ulteriormente ottimizzati sulla Taurus 2.170 XP. Fanno la loro comparsa nuove funzioni come le pinze indipendenti motorizzate ed i guidafili motorizzati in senso orizzontale e verticale. Conviviale e di facile utilizzo, la Taurus 2.170 XP fa parte di un progetto di sviluppo innovativo che comprende anche un nuovo software di programmazione: MODEL+. Intuitivo, potente e di facile accessibilità, rende la programmazione veramente alla portata di tutti gli utilizzatori.



## MOTORIZED YARN-GUIDES

Controlled by the knitting program, it allows the performing of all the most creative patterns. Horizontally and vertically motorized, this new system provides greater job security and opens new knitting skills for Intarsia, plating and in-lay knitting.



## MOTORIZED CLAMP

Activated by 2 motors and controlled by the knitting program, the motorized clamps are independent of the carriage for their operation. While the carriage knits, the inactive motorized yarn-carrier can bring a yarn to the clamp independently, for being cut without loss of production.



## CONTROLLED KNITTING COMB

The latest generation comb takes the stitch and release it with a motor controlled hook closure. This new system allows using any kind of press-on yarn with a 100% hooking and dropping reliability.

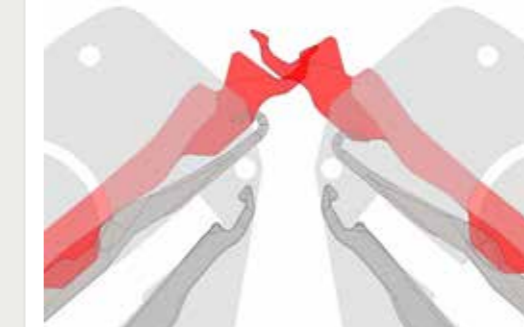


## FAN STRIPING BARS

This disposal is designed to give maximum visibility and easy threading to the 24 yarn-carriers by the operator. The 6 bars with 2 yarn-carriers on each side offer a bird's eye view of the needle bed lit by a LED economically efficient system. The safety of the operator is ensured by an optical barrier.



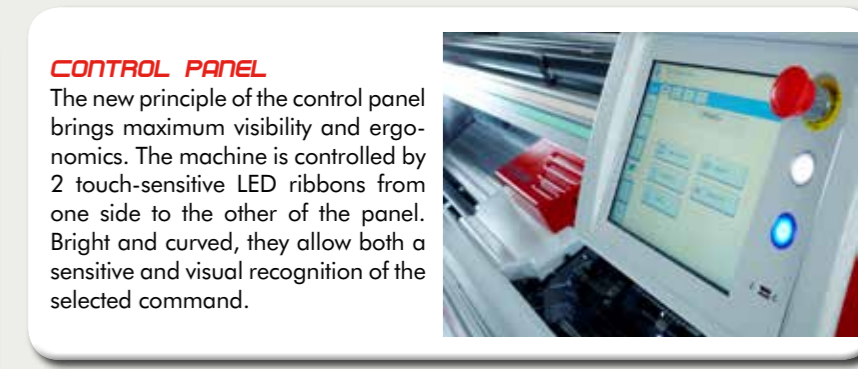
## Needle to slider transfer



## Slider to slider transfer

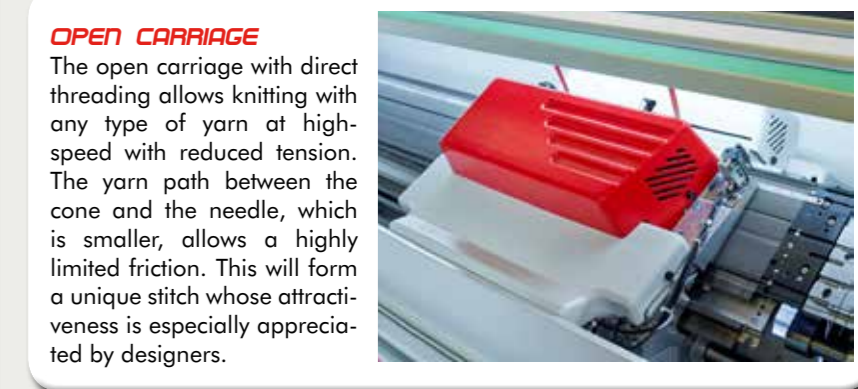


## Storage punch to slider transfer



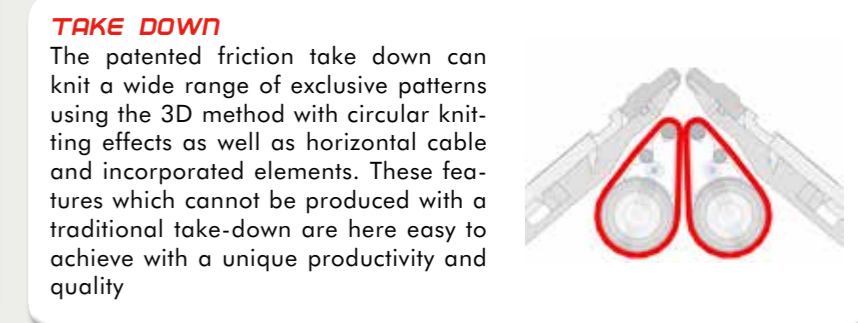
## CONTROL PANEL

The new principle of the control panel brings maximum visibility and ergonomics. The machine is controlled by 2 touch-sensitive LED ribbons from one side to the other of the panel. Bright and curved, they allow both a sensitive and visual recognition of the selected command.



## OPEN CARRIAGE

The open carriage with direct threading allows knitting with any type of yarn at high-speed with reduced tension. The yarn path between the cone and the needle, which is smaller, allows a highly limited friction. This will form a unique stitch whose attractiveness is especially appreciated by designers.



## TAKE DOWN

The patented friction take down can knit a wide range of exclusive patterns using the 3D method with circular knitting effects as well as horizontal cable and incorporated elements. These features which cannot be produced with a traditional take-down are here easy to achieve with a unique productivity and quality

L'aiguille composée brevetée par Steiger possède une coulisse originale qui rend la Taurus 2.170 XP unique. En effet cette coulisse permet de réceptionner une maille alors qu'une ou plusieurs mailles sont stockées dans le crochet de l'aiguille. Il est donc possible de faire un report de maille de l'aiguille ou de la coulisse opposée vers la coulisse active. A tout moment les coulisses peuvent servir soit à former la maille soit de relais pour déplacer les mailles. Une étape supplémentaire a été franchie avec l'ajout d'un poinçon de stockage. Activable par un mono-sélecteur, il ajoute une 3<sup>e</sup> possibilité de stockage de la maille, nécessaire au tricotage de pull intégral. Ces innovations, disponibles pour la première fois sur une machine à tricoter, ouvrent des possibilités infinies de tricot multicouches, de tramés et d'intarsia complexes.

The compound needle patented by Steiger has an original slider that makes the Taurus 2.170 XP unique. This slider, which works as a pallet to form the stitch, allows receiving a stitch while one or more stitches are stored in the hook of the needle. Thus, to move stitches laterally, it is not necessary that the opposing needles are empty since they can receive the stitches on their slider and then return them. A further step was taken with the addition of a storage punch located under the needle. Selected by a mono-selector, it adds a third storage capability of the stitch, necessary for the complete garment knitting of sweaters. These innovations, available for the first time on a knitting machine, open up infinite possibilities for multi-layer knitting, complex in-lay knitting, intarsia and complete garment knitting.

L'ago composto brevettato da Steiger comprende un elemento a scorrimento (slitta) sullo stelo dell'ago che rende unica la Taurus 2.170 XP. La slitta, che svolge la funzione di linguetta per la formazione maglia, permette infatti di ricevere una maglia mentre una o più maglie sono già caricate nell'uncino dell'ago. Pertanto, per spostare lateralmente delle maglie, non è più necessario che gli aghi opposti siano vuoti, dato che possono comunque ricevere le boccole ciascuno sulla propria slitta per poi restituirle. Un'alternativa supplementare è rappresentata da un punzone posizionato sotto l'ago che, selezionato da un monoselettore, aggiunge una terza possibilità di stockaggio delle maglie, utilizzata per esempio nella lavorazione del capo integrale. Queste innovazioni, disponibili per la prima volta in una rettilinea, dischiudono infinite nuove possibilità di lavorazioni a maglia multistrato, di tramati, di intarsia complessi.