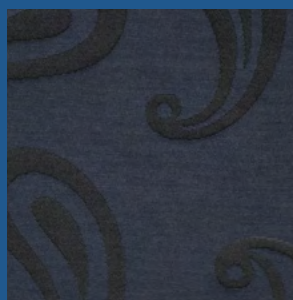
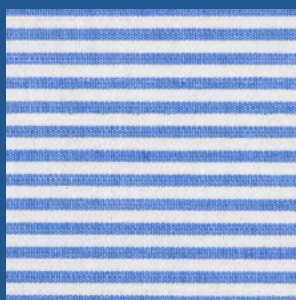
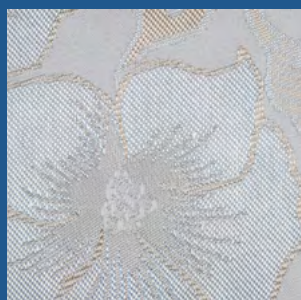
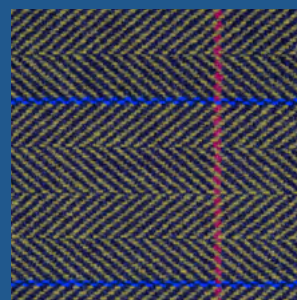
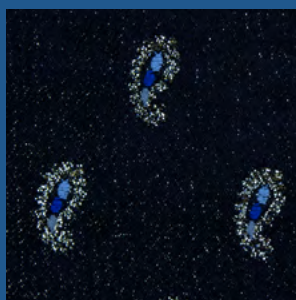
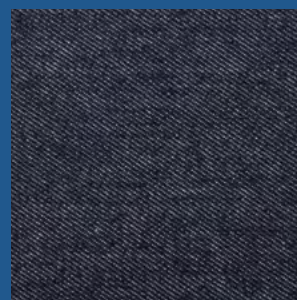
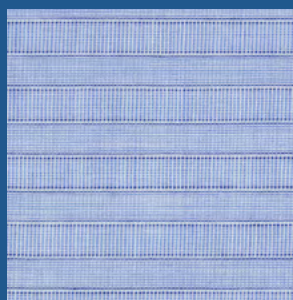
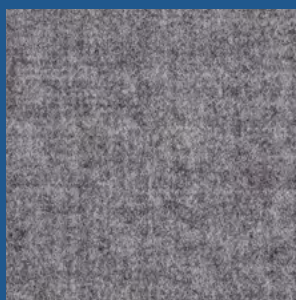
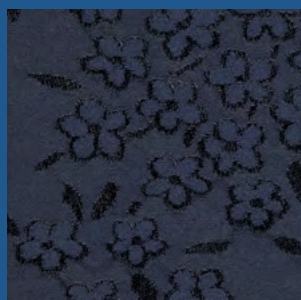


SANTEX  
RIMAR  
GROUP

 **SMIT**  
GS980



ONE PROVIDER · THOUSANDS SOLUTIONS



The fastest  
free flight  
rapier machine

Designed  
and exclusively  
**Made in Italy**

**SMIT GS980** ultimate inventions improve productivity in terms of **speed** combined with **efficiency** and **versatility** for the widest range of production.

Fabrics for apparel, home textile, technical applications and fabrics with exclusive yarns and patterns are today woven with excellent **quality** on SMIT GS980.

The free flight ribbons system marks out SMIT weaving machine since many years: smart and flexible, SMIT GS980 is conceived in Italy combining some of the most reliable SMIT features with groundbreaking function solutions that make **SMIT GS980** an asset that **will keep its value for a long time**.



**SMIT GS980**  
has improved  
in terms of:

Versatility

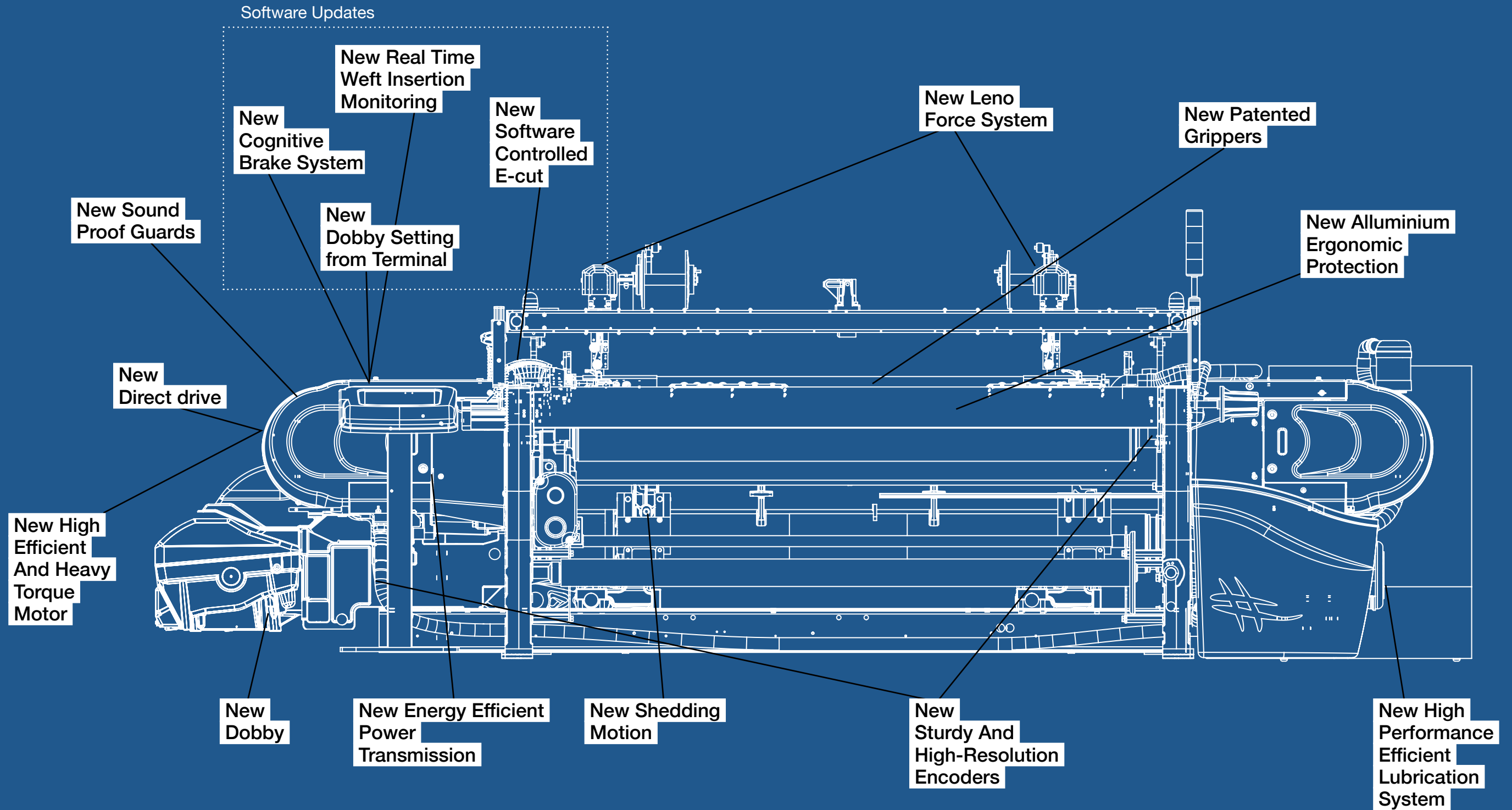
Performance

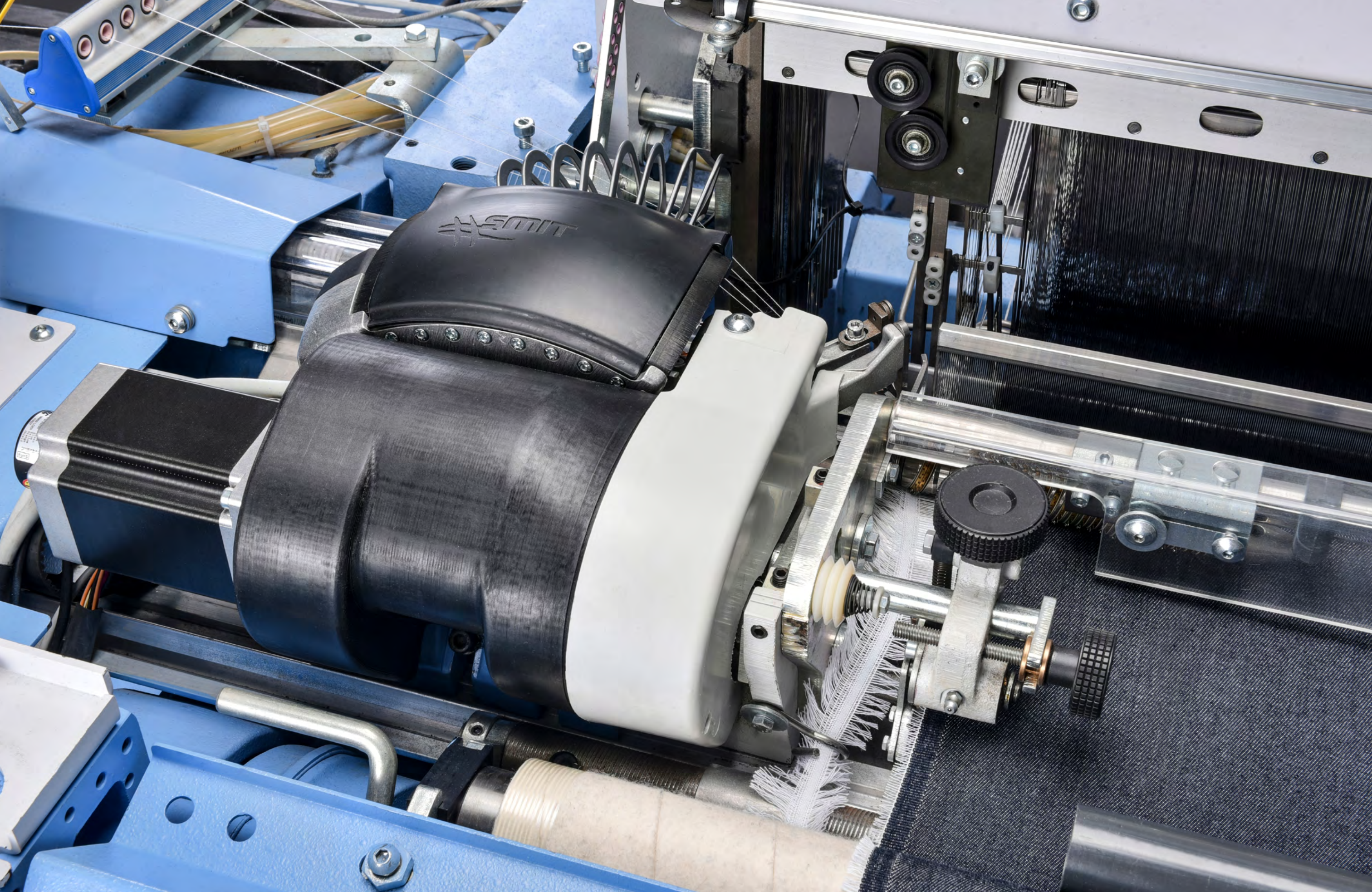
Production  
Quality

Efficiency

Sustainability

# SMIT GS980 What's New





# Versatility

## 01. Smart Platform



SMIT modularity concept integrates an extensive variety of arrangement options.

The “Smart Platform” concept allows to arrange several special

configurations suitable to produce high quality fabrics for any weaving sector, from the most sophisticated apparel and home textile applications, to technical textiles sector.

## 02. **New** Leno Force System

New SMIT GS980 programmable Leno-Force System is stronger and allows to program the false selvedge and leno yarn crossing, pick-by pick, independently for each side which means:

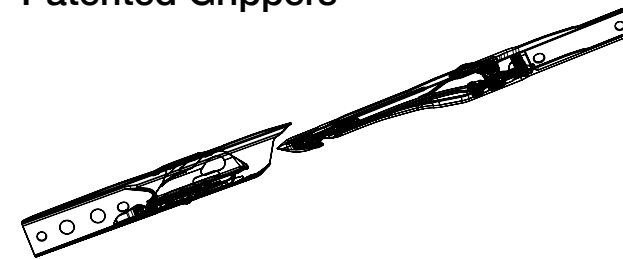
- Quick adaptation to the most varied types of fabrics

- Maximum effectiveness in the control of the weft stretching and weft tail reduction, ensured at the highest operational speed
- Higher tension in the fast selvedge and more precise opening of the shed.

Maintenance free component!



## 03. **New** Patented Grippers



Thanks to reduced cross section and warp shed geometry optimization, new SMIT GS980 Patented Grippers ensure great versatility with every type of yarn and application: fabrics for apparel, home textile and technical textiles.

SMIT GS980 new grippers are smaller and lighter with significant advantages in terms of speed, **enhancing the superiority of SMIT GS980 as the fastest free flight rapier machine on the market.**

Due to the mechanical improvements new grippers better grip the wefts and can transport more different types of yarns: **SMIT GS980 is a warp friendly machine** where yarns are never mechanically stressed.



## 04. **New** Software Controlled E-Cut

New SMIT GS980 software-controlled e-cut ensures optimal cutting conditions and top performance even when the fancy article requires the insertion of a wide range of counts and weft types.

Very different wefts can now be woven with the highest precision: weaving fancy articles with SMIT GS980 is easy, precise and faster!

## 05. **Electronic Weft Selector (Ews)**

The modular and expandable Electronic Weft Selector for 4-8 and 12 colors, with converging presentation fingers, ensures optimal weft discrimination, also

when very fine and very coarse / fancy yarns are in mixture. Reduced taking and cutting speed ensure minimum weft waste and top performance.

## 06. **Single Beams**

Ground single beams with flange diameter from 400 to 1100 mm; twin beams available for width from 260 to 360 cm; top effect beam up to 800 mm and beam Euronorm solutions ensure the widest range of solution

to comply with Customer specifications. Special solution for “off loom” beam with flanges diameter 1600 mm.



# Performance

01.

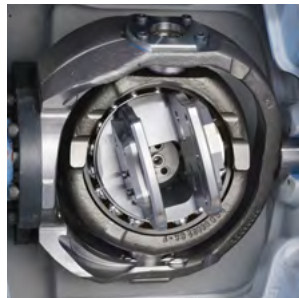
## **New** High Efficient and Heavy Torque Motor

New SMIT GS980 high efficient and heavy torque motor motion is improved with optimal acceleration, high speed and less vibrations.



02.

## Rapier Drive and Optimized Distribution of the Mechanism Masses



The Rapier Drive, carried out by a “spherical crankshaft” and one gear stage, ensures minimum weft cutting, transfer and release speed, with the highest regularity in weft insertion.

The sturdy machine structure and the optimized distribution of the mechanism masses ensure the greatest stability and the most effective reduction of dynamic load on the floor.



03.

## **New** Dobby

New dobbie guarantees better performances: weaving with SMIT GS980 is faster and smoother. **Higher performance with minimum maintenance:** the new dobbie is suitable for weaving all types of fabrics.

04.

## **New** Shedding Motion



SMIT GS980 shedding motion, optimized in combination with the latest dobbie models, ensures minimal vibrations of heald frames, with increased warp efficiency at top speed.

The new dobbie drive with increased transmission capacity ensures high reliability of elements and shedding reduced vibration, with longer life of healds and frames and increased warp performance.



05.

## **New** Sturdy and High-Resolution Encoders

SMIT GS980 is equipped with two sturdy magnetic encoders to control the crossing position of the shed in relation to the beating up point.

SMIT GS980 sturdy and high-resolution encoders are less sensitive to loom vibrations, dirt, oil and water, are more reliable and need very low maintenance.

06.

## **New** Sounds Proofs Guards

New crankcase to cover the moving parts of the machine for operator safety are made of polymeric materials to reduce the noise.



07.

## **New** Alluminium Ergonomic Protection

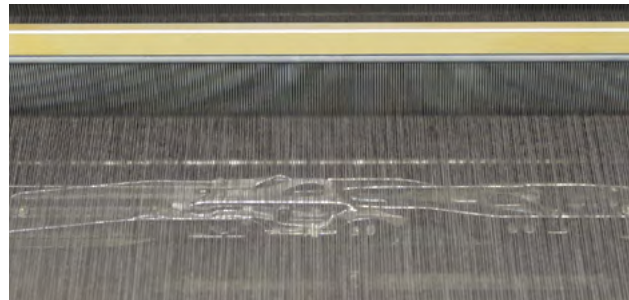
New SMIT GS980 design is conceived to make the machine an asset that will keep its value for a long time.

# Production Quality

## 01. Free Flight Ribbons System

SMIT GS980 grippers fly in the shed.

The free flight ribbons system and optimized shed geometry ensure top fabric quality avoiding any marks, warp yarn wearing, loosing and sticking coming from friction between hooks and warp yarns.



## 02. **New** Direct Drive

Thanks to the new direct drive and the short kinematic arrangement, higher regularity is achieved with the lowest vibration and noise level.

### Features:

- High performance permanent magnet motor with feedback by resolver for high response
- Speed control by terminal
- Nor clutch, neither brake
- Slow-motion and pick finding by main drive. The slow-motion clutch and auxiliary drive are not more necessary

### Electronic speed control without frequency converter:

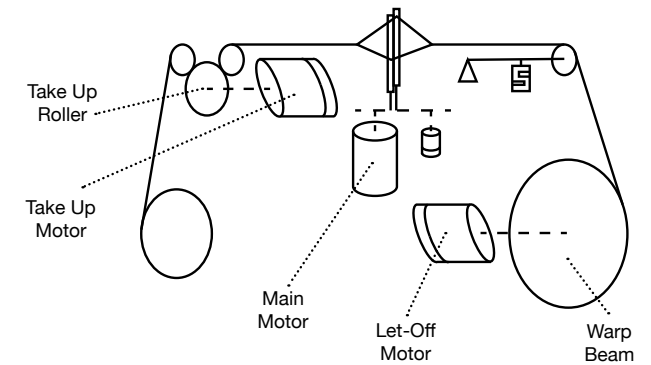
- High “power factor”
- Low energy consumption
- Low heat generation (no auxiliary cooling device required)
- Control of weaving speed at start and stop phases within one beat-up cycle
- Full stop control in case of black-out (no defects on the cloth)

### Advantages:

- High fabric quality
- Low energy consumption
- Reduced air conditioning load
- Low maintenance
- User friendly speed set-up and programming
- High speed stability and low vibrations

## 04. Warp Let-Off, Electronic Take-Up and Main Direct Drive, simultaneously Controlled

Warp let-off, electronic take-up and main direct drive, simultaneously controlled ensure maximum accuracy in the electronic warp control and excellent and stable fabric quality for whatever yarn count and type of pattern.



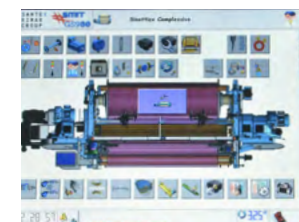
## 05. High Precision Load Cell

Precision of the electronic warp motion and constancy of the warp tension parameters, granted by high accuracy load cell and encoder feedback, ensure excellent and stable fabric quality

with every type of yarn. Repeatability of the warp tension parameters are granted by high precision load cell.



The Industry Fourth Revolution is already reality in some features of SMIT GS980 which enable new levels of productivity and ensure that the items being manufactured are good quality products.



## 06. **New** Real Time Weft Insertion Monitoring

Real time monitoring of weft movement and behavior during the weft insertion.

## 07. **New** Cognitive Brake System

Weft/warp cycle optimization.



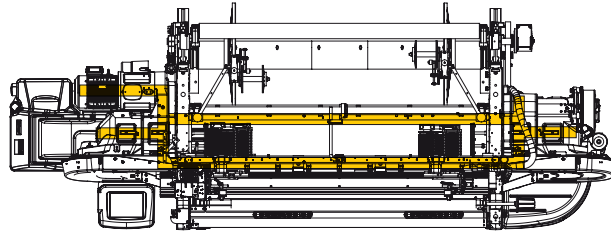
# Efficiency

01. **High Efficiency Brushless Motor**

The high response brushless motor ensures 100% beating efficiency at first pick insertion (with total absence of starting mark).

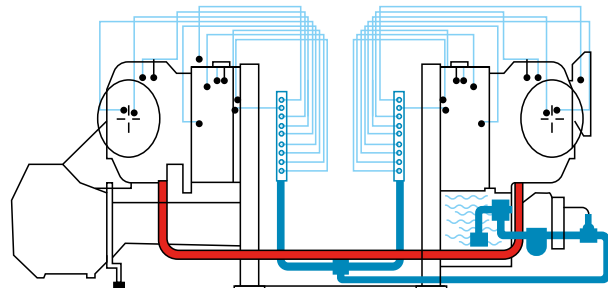
SMIT GS980 is characterized by the highest power factor and ensures the lowest heat generation. No auxiliary cooling systems are required.

02. **New Energy Efficient Power Transmission**



The new Energy efficient power transmission ensures the highest regularity and the lowest energy consumption, also in combination with Jacquard

03. **New High Performance Efficient Lubrication System**



SMIT GS980 is excellently reliable thanks to continuous lubrication and oil filtering.

The new efficient lubrication system, with forced oil circulation, guarantees the lowest energy dissipation in the mechanisms, avoiding the adoption of additional oil cooling systems. Extended lubricant life time reduces maintenance costs.



04. **New Dobby Setting From Terminal**

The new functionality of shed-crossing phase setting from touch screen terminal shortens considerably the set-up and start-up time in combination with both dobbie and jacquard.

05. **Fast Style Change Solutions**



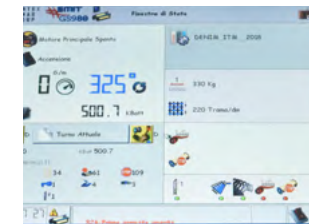
Fast style change solutions enable to reach the highest weaving hall efficiency. Available for the quick change of beam, heald frames, reed and warp stop motion.

06. **Long-Lasting Rapier Drive Components**

Very long-lasting rapier drive components, thanks to the One gear stage and all joints equipped with rolling bearing.



07. **Electronic Platform and Touch Screen**



Easy control of technical parameters. Simplified maintenance by the modular arrangement of both cabinet and machine wiring system. Multilingual user-friendly touch screen.

# Sustainability

01. **Green Certified**



Smit is an Italian textile machinery manufacturer registered as Supplier of Sustainable Technologies.

SMIT GS980 comes with ACIMIT Green Label certification that aims to identify energy and environmental performances of the machine.

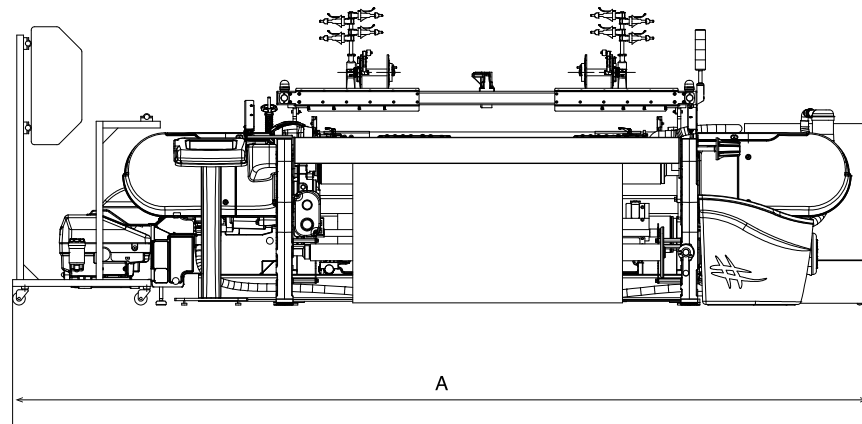
 **SMIT** GS980

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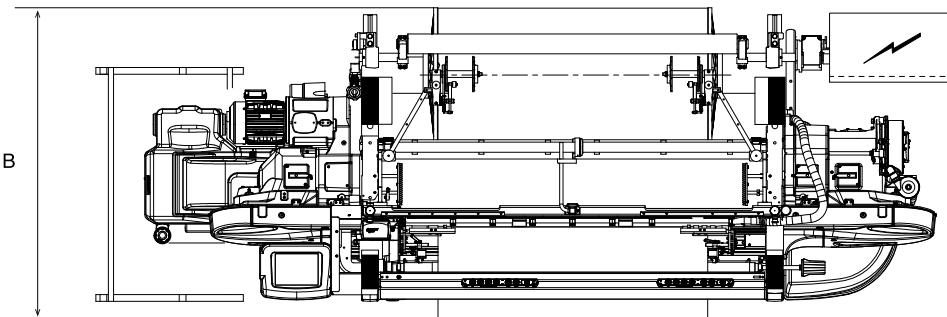
TELEFONICO  
SERVIZIO CLIENTI  
CASA S.M. S. GIUSEPPE

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# Technical Data



<b>GS980</b>	1400	1700	1900	2000	2200	2300	2400	2600	2900	3200	3400	3600
<b>A</b>	4590	4890	5090	5190	5390	5490	5590	5790	6190	6590	6790	6990



<b>Ø Warp Beam</b>	800	940	1000
<b>B</b>	1847	2013	2043



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