

**LET'S GROW  
TOGETHER** 

**PICANOL**

**EN**

**GTMax-*i* 3.0**

# ABOUT THE PICANOL GROUP

The Picanol Group is an international, customer-focused group specialized in the development, production and sale of weaving machines, engineered casting solutions and custom-made controllers.

Its Weaving Machine division (Picanol) develops, produces and sells advanced weaving systems based on airjet or rapier insertion technology. Picanol has played a pioneering role around the world for more than 80 years, and is now one of the world's leading producers of weaving machines.

The Industries division covers all the other activities not related to weaving machines. Proferro represents the group's metal casting and mechanical finishing activities. It produces cast iron parts for among other things compressors and agricultural machinery, as well as parts for Picanol weaving machines. PsiControl for its part develops and produces custom-made controllers, Human Machine Interface (HMI) and touch devices. Finally, Melotte develops and manufactures innovative product solutions using 3D printing.



Since 2013 the Picanol Group has also had a leading stake in the Tessenderlo Group (TESB).

In addition to its headquarters in Ieper (Belgium), the Picanol Group has production facilities in Asia and elsewhere in Europe, backed up by its own worldwide sales and services network. The Picanol Group employs some 2,000 people around the world, and has been listed on the Euronext Brussels exchange (PIC) since 1966.

## TRAINING TAKES YOUR TALENT FURTHER

Well-trained employees are a real asset to your company. Skilled staff makes your machines run at optimum performance, producing excellent fabric quality and resulting in superb plant efficiency.

Training is part of the deal Picanol makes with its customers. We feel it is our duty to help your employees to improve their skills and knowledge. Hence, in 2015 we decided to invest in a state-of-the-art Technical Training Center in Ieper. Three fully equipped rooms (each with weaving machines, cut models, mini workshop etc.) cover a total area of 270 m<sup>2</sup>. This new knowledge center allows Picanol to train technicians from customers around the world in optimal conditions. All facilities are there to give your employees a warm welcome. If your employees are not able to travel to one of our training centers, our instructors come to you and will organize training at your premises.

Next to Ieper, Picanol has two first-in-class training centers located in Suzhou (China) and Greenville (USA). All our training centers are specialized in technical training on weaving machines for machine operators, fitters and weaving managers.

A full list of our training courses can be found on our website: <http://www.picanol.be>

Our team is always at your disposal for further information or questions. Contact: [ttc-ieper@picanol.be](mailto:ttc-ieper@picanol.be) (tel. +32 57 22 21 11).



## SPARE PARTS

Weaving machines are one of your most important investments. Keeping them in optimal condition is essential to safeguard the high value of this asset and to remain competitive as a weaver in a globalizing world.

Use of original Picanol parts guarantees a continued high performance of the Picanol weaving machines.

Moreover, timely replacement of original parts enables Picanol's customers to run their machines in the most economical way.

Regardless of the age of the machine, the use of original parts will keep the machine in top condition which has a positive influence on the value of the machine throughout its life time.

Furthermore, to expand your weaving range and/or increase your machine performance, Picanol offers upgrade packages for installed Picanol machines. WeaveUp upgrades add state-of-the-art technology to your machines, which apart from the benefits in weaving equally increase the value of your investment.

With special services and a dedicated aftermarket team, Picanol takes care of the particular requirements and requests of its customers around the globe. These tailored solutions include among others :

- Online ordering of spare parts through P@rtsline
- Electronic spare parts catalogue (eSPC)
- On-time delivery of high-quality original parts
- Harness frames for different brands of weaving machines
- Tailor made upgrade proposals for installed machines
- Analysis and recommendations in respect with running costs
- Preventive maintenance and service audits

With headquarters in Belgium and local offices in China, India, Indonesia, Turkey, USA, Mexico, Brazil, Picanol is able to assure a close, long-term relationship with all its customers.

For more information, please contact your local Customer Service Representative (CSR).





# GTMax-*i* 3.0

Focused on adding value





# LET'S GROW TOGETHER

## PICANOL

The GTMax-*i* 3.0 offers all you need to weave yourself to the top in your market. It uses the proven rapier weaving technology, with full electronic monitoring and control, Sumo main motor and microprocessor-controlled filling insertion.

This weaving machine has been designed to meet your objective of maximizing return on investment. It guarantees high fabric quality, is best in class for minimum energy consumption, creates space to unleash your talent and optimizes your precious time.

GTMax-*i* 3.0 is a continuation of the success of GT-Max and GTMax-*i*. The optimization of the gripper movement and the integration of the future-oriented BlueBox electronic platform and CAN-communication allow for even higher production speeds.

If you really want to get the most out of your market, your material, your energy, your talent and your time, the GTMax-*i* 3.0 provides the platform for you to stay ahead. Always. Everywhere.

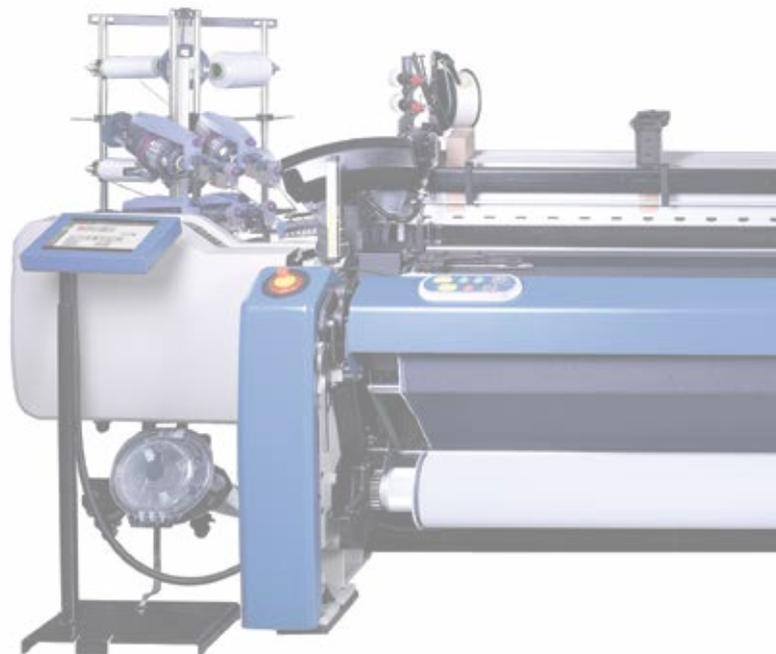
## GUIDED GRIPPER SYSTEM

The light-weight gripper permits high speeds at low yarn tension, reducing the number of filling stops. Its small size results in less friction on the warp yarns.



## FREE FLIGHT SYSTEM

The Free Flight system (FF) is specially designed for weaving delicate fabrics, providing maximum warp friendliness and filling versatility. The covered raceboard is the perfect solution for weaving fine filament warps as found in upholstery fabrics. The Free Flight system can also be guided by supporting teeth for weaving wool warp fabrics.



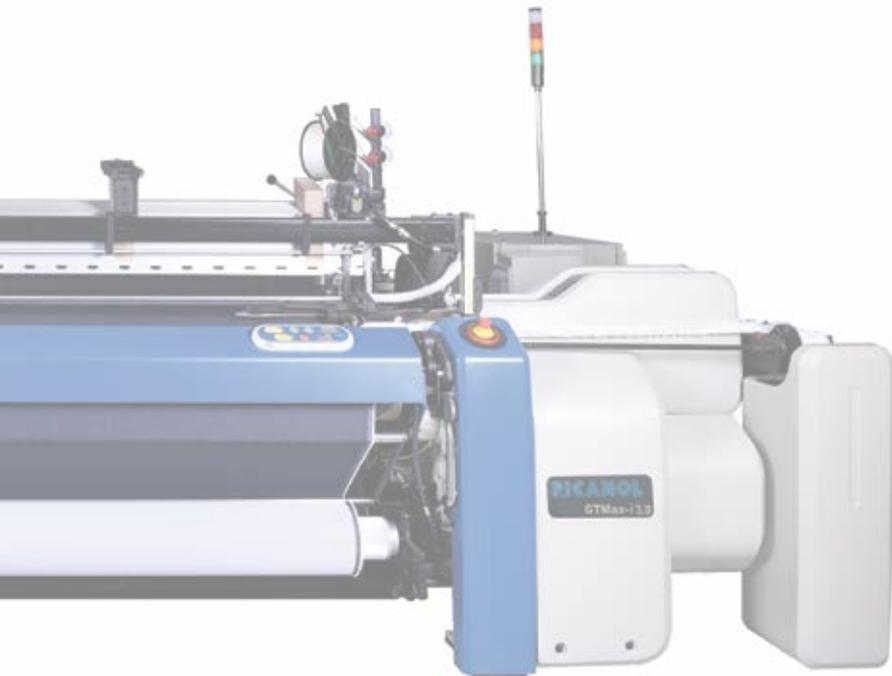
## TOP BEAM

A fancy beam can be mounted on top of the loom in a modular way. The structure contains a gearbox driven by an SR (switched reluctance) motor and controlled by means of a second warp tension sensor. The tension in both sets of warp yarns is controlled individually by the micro-processor.



## QUICK STEP FILLING PRESENTER

The weft presenter is fully modular, allowing you to start with e.g. 4-color insertion and to add more channels. The GTMax-i 3.0 is available with up to 12-color insertion. The color and weave pattern are controlled by microprocessor or jacquard. Finally, the Quick Step modules are interchangeable, and there are no mechanical drives, so no maintenance or lubrication is required.

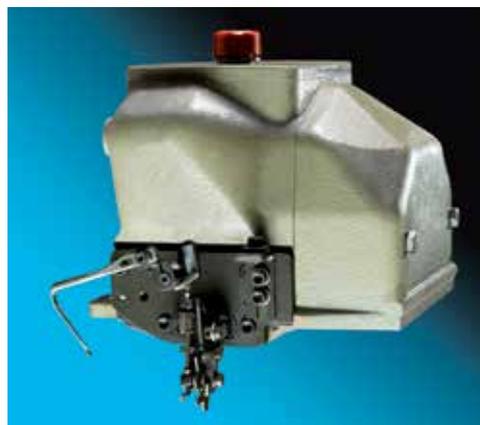


## SHEDDING MOTION

The GTMax-i 3.0 can be combined with an electronically controlled jacquard or an electronic, positive dobby motion with leveling, for up to 20 harness frames.

## TUCKERS

The GTMax-i 3.0 can be equipped with a versatile mechanical tucker on both sides of the fabric.



**LET'S GROW**   
**YOUR MARKET**

## **RIGID CONSTRUCTION**

The GTMax-i 3.0 has two cast iron side frames connected by four sturdy cross-members. The conjugated cams are built into the side frames to allow a strong beat-up. The damping capacities of the cast iron eliminate all vibrations, while maintaining long-term stability. The machine rests on its four feet: no anchor bolts are required.

## **DOUBLE BACKREST AND TAKE-UP**

The standard double backrest and double take-up rollers enable the heaviest styles to be woven with excellent fabric quality. The second roller is modular and can be removed to make the machine ready to weave light styles. Another example of how Picanol makes its looms fit for every market requirement.



## **ELECTRONIC SELVEDGE SYSTEM**

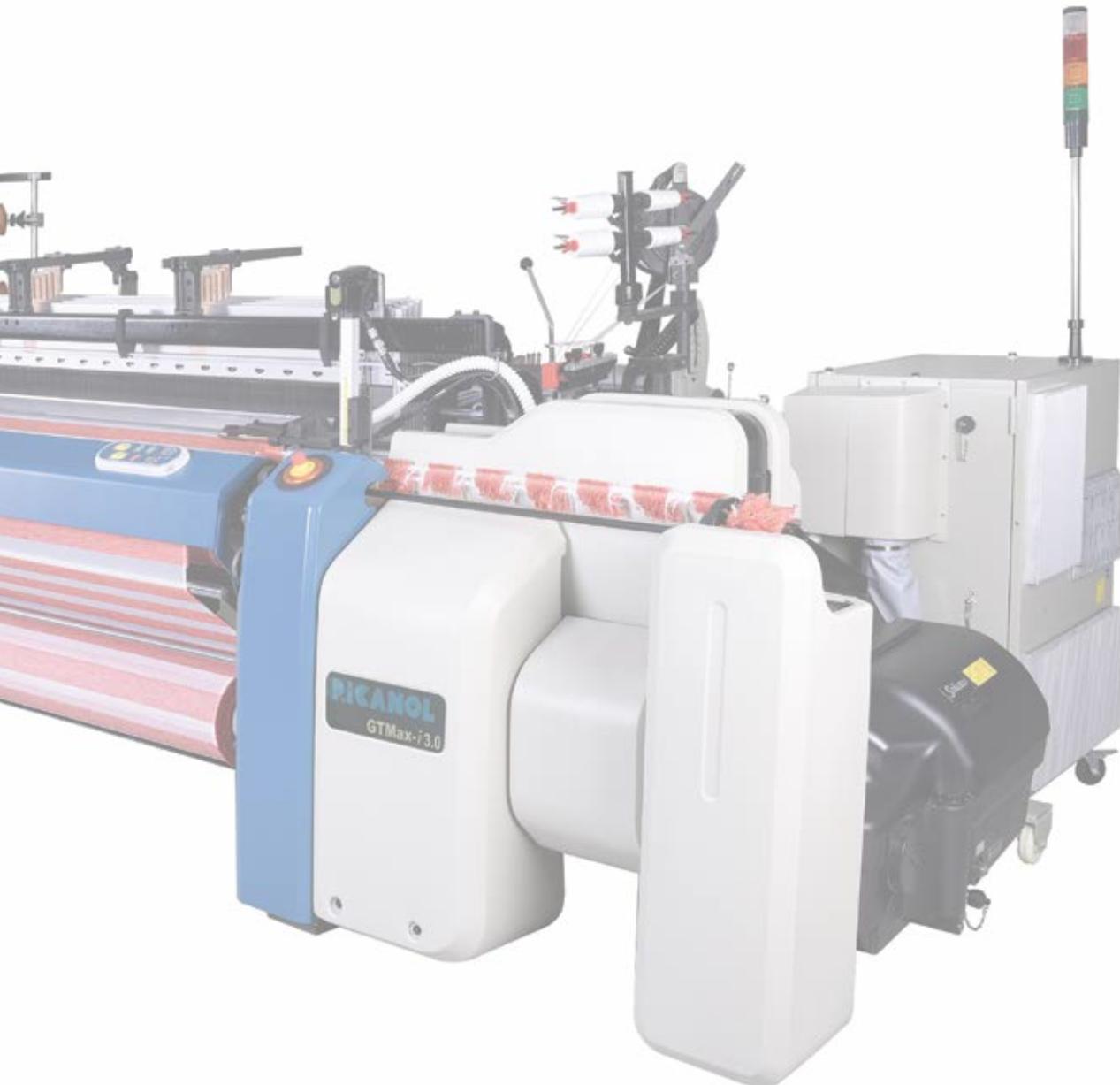
The unique Electronic Selvedge System (ELSY) full leno selvedge motions are electrically driven by individual stepper motors. They are mounted in front of the harnesses, so that all the harnesses remain available for the fabric pattern. The selvedge crossing and pattern are programmed on the microprocessor independently of the shed crossing, even while the machine is in operation, so the result of a resetting can be checked immediately.





## ELECTRONIC TAKE-UP AND LET-OFF

The electronically controlled take-up (ETU) and let-off (ELO) are fitted as standard on the GTMax-i 3.0. Both are driven by Sumo-type motors which are synchronized by the integrated control box. This arrangement guarantees high quality fabric without marks.



**GET THE MOST**   
**OUT OF YOUR MATERIAL**

## SUMO MAIN MOTOR

The oil-cooled Sumo main motor drives the weaving machine directly, without belt or clutch and brake. The combination of the highly energy-efficient Sumo motor with the direct drive (patented) of the main shaft and shedding motion results in power savings of more than 10% in comparison with conventional clutch and brake configurations. The energy cost for air conditioning is also reduced as the Sumo motor dissipates less heat in the weaving mill.



## SHORT DRIVE TRAIN

The very short drive train is simple and compact, and the machine is up to full speed right from the very first pick. Thanks to a re-design of the gripper movement, the GTMax-i 3.0 can weave at higher speeds compared to its predecessor.



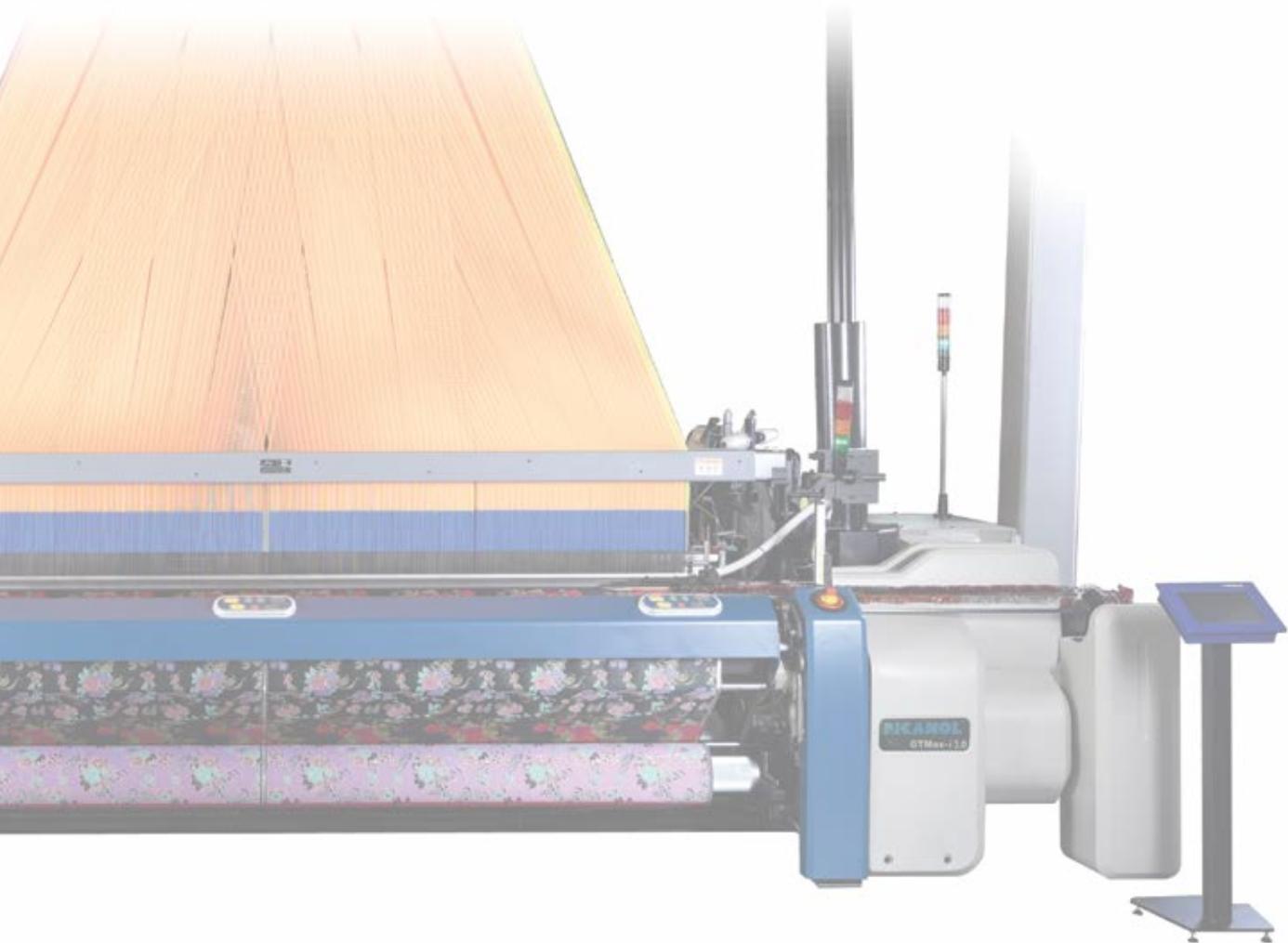
## PICANOL INTEGRATED CONTROLS

The integrated controls link all features of the loom into one integrated unit. The different loom functions are perfectly synchronized with each other. The speed of the motor is controlled electronically, without a frequency converter, thus reducing power consumption while permitting greater flexibility.



## ELECTRONIC TAKE-UP AND LET-OFF

The take-up and let-off are also driven by the highly energy-efficient Sumo-type motors. The forced lubrication in the gearbox keeps the parts cool and reduces the friction tremendously. The advantage is low energy consumption. Excess braking energy in both drives is recuperated in the main drive. This is only possible with Picanol's integrated controls.



**GET THE MOST**   
**OUT OF YOUR ENERGY**

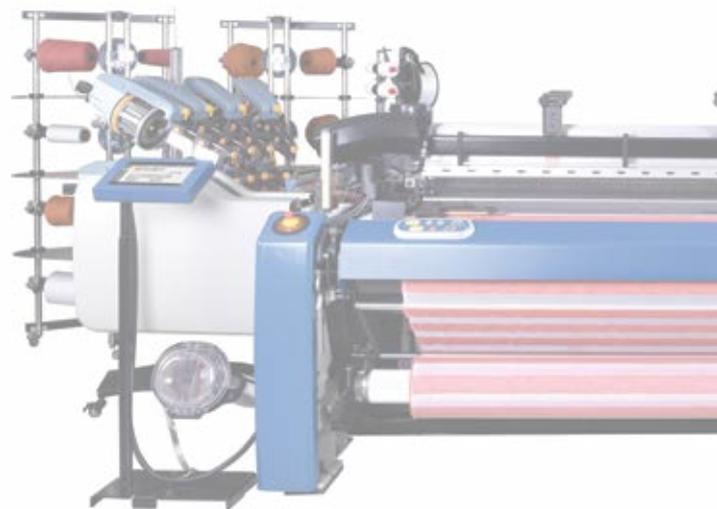
## SUMO MAIN MOTOR

With the Sumo motor it is possible to continuously adapt the machine speed pick by pick (Optispeed) to match the strength of the filling yarn. This combination of the Sumo motor with electronic settings makes it easy to obtain the highest possible industrial speeds, taking into account the yarn quality, number of harnesses and weaving pattern. It also considerably reduces the set-up times and enables you to maximize output.



## AUTOMATIC FULL PICKFINDING

The machine has an automatic full pickfinder driven by the Sumo main motor. In case of a broken pick the machine stops and only the harness frames are brought in motion – automatically – so as to free the broken pick, without the reed touching the beat-up line.



## FAST WIDTH CHANGES

All the components to be moved on the left and on the right are mounted on a single support whose position can be easily varied.

## ELECTRONIC SETTING OF SHED CROSSING

The electronic setting of the closed shed position – a unique Picanol feature – allows the weaver to control the aspect and hand of the fabric without even touching the drive train of for instance the dobby.





## OPTIMIZED HARNESS FRAMES AND CONNECTIONS

On narrow machines, connecting the harness frames to the drive system is done by means of quick connections (DRC2). No manipulations are to be carried out under the fabric line. The unique harness height adjustment is done entirely at the top of the harness frames.



## EASY WARP GAITING AND CLOTH DOFFING

The warp beam is driven by an electronically controlled let-off system via a separate gearwheel, that remains on the machine. Fitting a warp beam and changing a cloth roll are done by means of quick connections.



**GET THE MOST**  
**OUT OF YOUR TIME** 

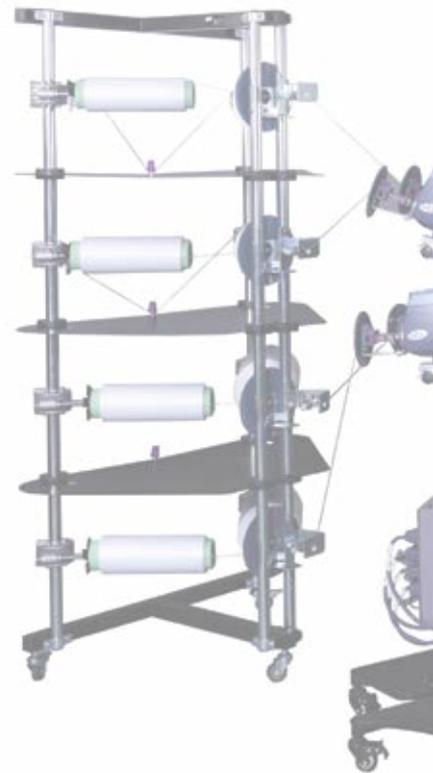
## ERGONOMIC MACHINE

All Picanol machines are tilted slightly to the front, providing easy access for the weaver. The machine has been designed maximizing the ergonomomy of the machine. The microprocessor is located at the left handside of the machine, close to the insertion area to easily check the result of changes. The pushbuttons with metal dome technology are conveniently located and have optical command confirmation. The shedding motion is mounted on the right hand side and is not obstructed by the package creel and prewinders.



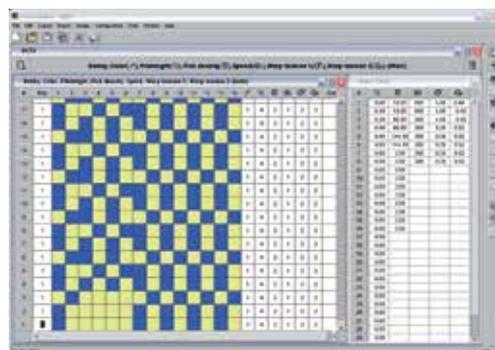
## MAXIMUM CONTROL

All the machine functions are controlled by the microprocessor. Mechanical settings have wherever possible been replaced with electronic ones. The microprocessor records, analyses and stores all the production data. With the interactive touchscreen display, settings of several articles can be stored locally on the display. The weaving machine itself can be linked to a central monitoring system by a parallel, serial ethernet connection.



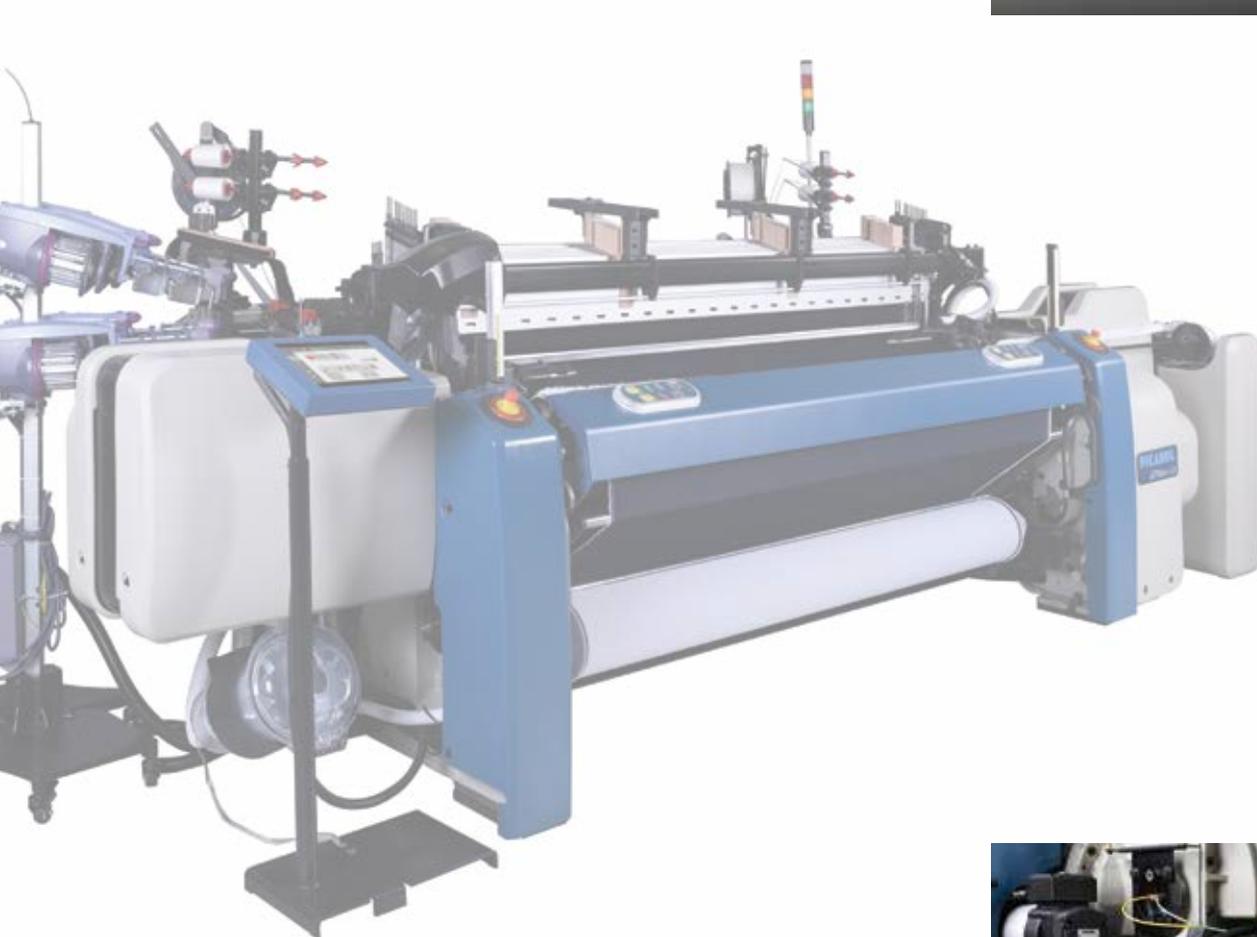
## PICANOL PC SUITE

*Picanol PC Suite* is a collection of PC software applications. *Picanol Pattern Editor* is used to create new designs on the PC, for transfer to the weaving machines.



## PICANOL BLUEBOX SYSTEM

Future-proof platform with optimal micro-processor speeds, increased memory capacity and modular circuit board set-up. Network connectivity allows for remote monitoring and service. Integration of CAN-communication. Picanol BlueBox is the electronic platform to keep up with increasing requirements for modern weaving mills and ready for future developments.



## PERFECT LUBRICATION

Lubrication is by means of a central oil circulation system. Constant and adequate filtering of the oil ensures perfect lubrication.



**GET THE MOST**   
**OUT OF YOUR TALENT**



## FABRIC SPECIFICATIONS

Useful widths	190, 220, 230, 250 and 340 cm	
Width reduction	60 to 90 cm dependent on reed width	
Performance	Filling insertion rates up to 1430 m/min	
Yarn range	Spun yarns	Nm 200 - Nm 3 (Ne 120 - Ne 1.8)
	Filament yarns	22 den - 3000 den (25 dtex - 3300 dtex)
	Warp yarns	sized, unsized, twisted, non-twisted, intermingled filament

## FILLING INSERTION

Guided gripper or Free Flight version		
Filling selection	1 - 12 colors or yarn types (filling presenter with insertion position) [patented]	<b>Standard</b>
	Weaving 2 weft yarns simultaneously	Optional
Prewinder	Prewinder Switch-Off (PSO)	Optional
Filling monitor	Piezo-electric filling detector	<b>Standard</b>
	Double-pick prevention (anti-two)	<b>Standard</b>

## WARP LET-OFF

Warp beam diameter	805, 1000 mm	<b>Standard</b>
Second fancy warp beam on top of the machine		Optional
Easy warp beam connection		<b>Standard</b>
Backrest	Single or double backrest roller	<b>Standard</b>
Warp stop motion	6 bars electrical 30 mm pitch or 8 bars electrical 16 mm pitch	<b>Standard</b>

## CLOTH TAKE-UP

Cloth take-up	Double pressure roller	<b>Standard</b>
	Electronically controlled take-up system (ETU)	<b>Standard</b>
	Diameter of cloth roll: 600mm	<b>Standard</b>
	PBM Batching motion system for diameters up to 1500 mm	Optional
Easy cloth roller connection		<b>Standard</b>
Fabric illumination	LED illumination above reed	Optional

## MACHINE DRIVE AND CONTROL

Main motor	Sumo main motor with direct machine drive [patented]	<b>Standard</b>
	Optispeed	<b>Standard</b>
Automatic full pickfinding and closed shed positioning [patented]		<b>Standard</b>
Reed motion	Positive double-sided conjugated cams in both side frames	<b>Standard</b>
Shedding motion	Harness drive DRC2 for T-190 – T-250	<b>Standard</b>
	Electronic rotary dobbie for 20 frames, 12 mm; with leveling	<b>Standard</b>
	Electronic jacquard (CAN)	<b>Standard</b>
	Electronic setting of the crossing moment (AKM)	<b>Standard</b>
Let-off motion	Load-cell electronically controlled warp let-off system (ELO)	<b>Standard</b>
Take-up motion	Electronically controlled take-up system (ETU)	<b>Standard</b>
Lubrication	By forced circulation of filtered oil	<b>Standard</b>
	Grouped grease points for manual lubrication	<b>Standard</b>
Machine controls	LCD touch screen with color display	<b>Standard</b>
	Push buttons on front panel	<b>Standard</b>

## SELVEDGE FORMATION

Independently electronically controlled (ELSY) [patented]		<b>Standard</b>
Tucked selvages		Optional
Hotwire cutter		Optional

## MONITORING & SOFTWARE TOOLS

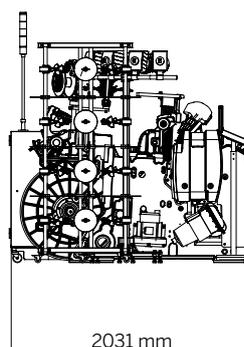
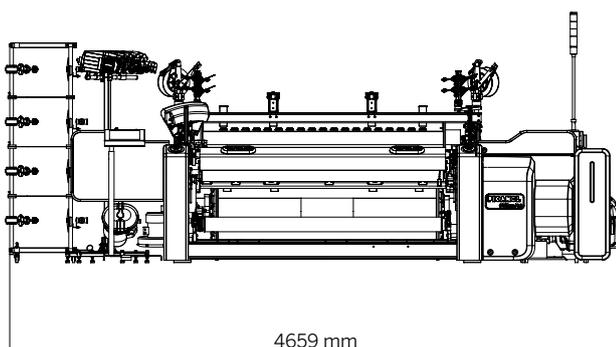
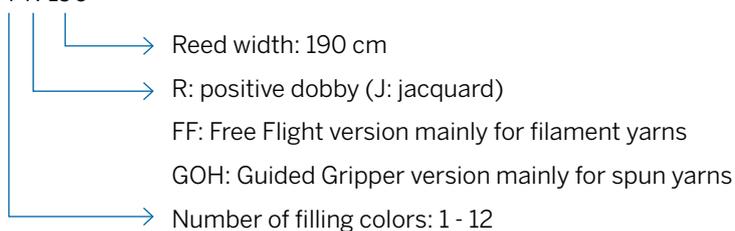
Self-diagnosis	<b>Standard</b>
Stop distribution reporting	<b>Standard</b>
Connection provided for major weaving room monitoring systems	<b>Standard</b>
Ethernet connection	Optional
Picanol PC Suite	Optional 

## SAFETY

Light curtain (depending on country of delivery)	<b>Standard</b> 
Protection guard over take-up rollers	<b>Standard</b>

### How to read the name

GTM*ax-i* 3.0-4-R-190



Dimensions GTMax*i* 3.0-4-R-190

### Regulations

In designing the GTMax*i* 3.0, Picanol has taken into account international regulations concerning safety (mechanical and electric) and the environment (ergonomics, noise, vibrations, and electromagnetic compatibility).



### **Growing is the essence of weaving.**

Thread by thread, line by line, from the most basic to the most exquisite, a wide range of fabrics emerge from our weaving machines. That's why Picanol offers a wide variety of machines and services that enable weavers to create every fabric imaginable.

### **Growing is the essence of doing business.**

The relentless pursuit to weave faster, better and more cost-efficiently is what drives you, and motivates us. That's why we make our machines ever more energy-efficient, user-friendly and easy to set.

### **Growing is the essence of the future.**

The world changes quickly, and only those who are ready to learn and adapt will survive. That's why Picanol machines are sustainable, future-proof and intelligent machines that can adapt to changing circumstances and connect with each other. And that's why at Picanol, we want to be an intelligent organization that listens to our customers and develops together with them.

### **Because our goal is to Grow Together.**

#### **With you, our customers and partners.**

We will grow together by removing all the obstacles and conventions holding back your ambition and our imagination. We will grow together by enabling your continued access to the latest technology. We will grow together by inspiring each other, listening to each other and learning from each other.

We truly believe that the future holds tremendous opportunities for growth. Let's grab them.

**Let's grow together**



**LET'S GROW  
TOGETHER** 

[letsgrowtogether.be](http://letsgrowtogether.be)

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