



GTX *plus*

**The simple and
versatile rapier
weaving machine**



Member of the
PICANOL GROUP

PICANOL
why weavers win

Weave more!

Keep it simple and manageable!

Be flexible!

Opt for top quality!

Focus on price/performance!

All this combined in one machine:

GTX*plus* •

**The simple and versatile
rapier weaving machine**

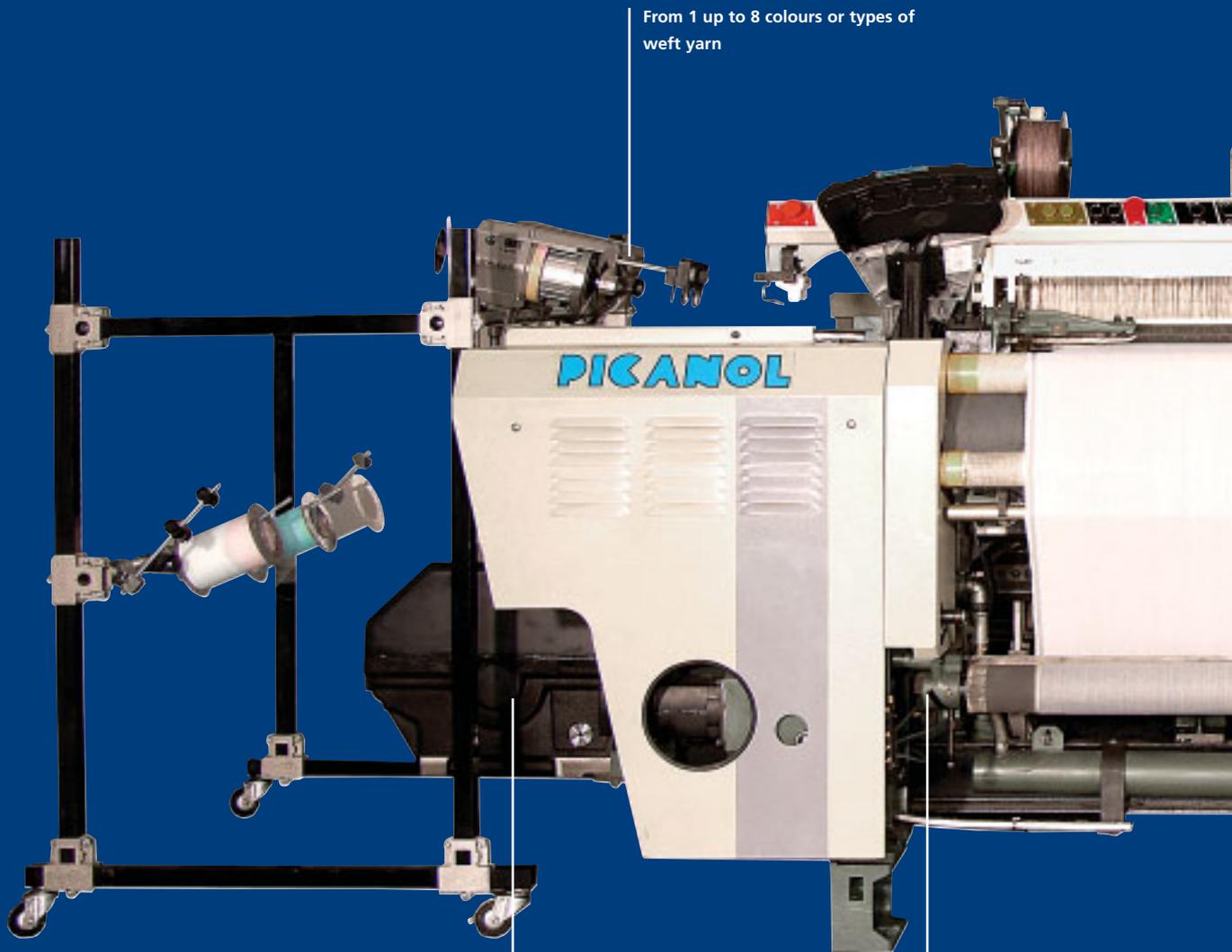
GTX *plus*



In developing GTX*plus*, Picanol has taken the requirements of the market as its starting point. The result is a versatile machine enabling the weaver to produce a very wide range of fabrics, going from apparel fabrics, over household to technical fabrics. Speeds of up to 450 RPM can easily be obtained (depending on the type of fabric and yarn quality).

The GTX*plus* uses proven rapier weaving technology which is easy to master. It enables operators to obtain good weaving results, even without optimal weaving expertise. Everything about the machine is kept simple and very manageable.

The GTX*plus* machine has been specifically designed to achieve the best price/performance ratio. It helps weaving mills win in the market by offering high-quality fabrics at the lowest possible weaving cost.



From 1 up to 8 colours or types of weft yarn

Electronic dobby is standard and weave patterns are set through the microprocessor – no technician needed

Electronic take-up motion – the pick density is set electronically

GTX*plus*

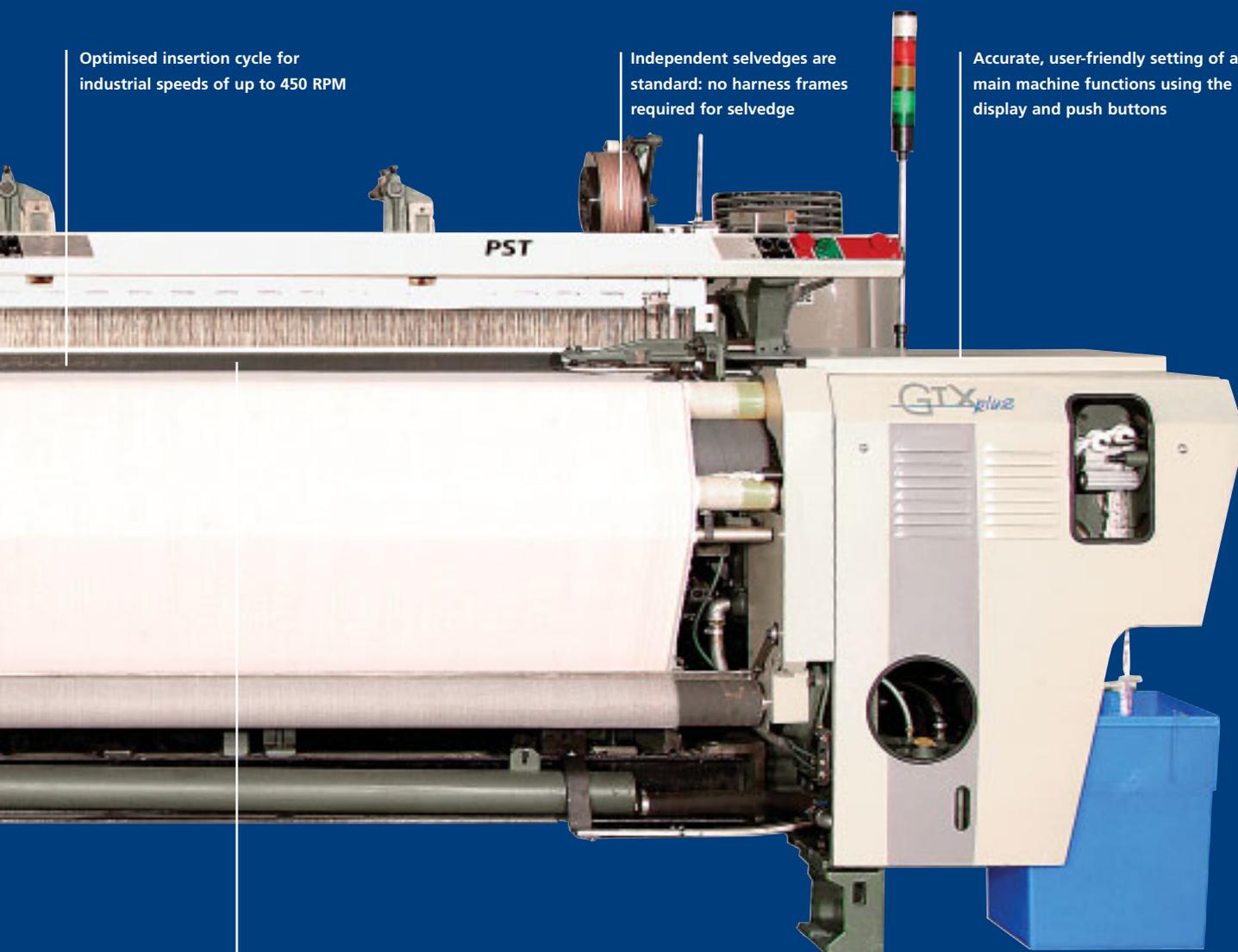
GTX *plus*

The simple and versatile
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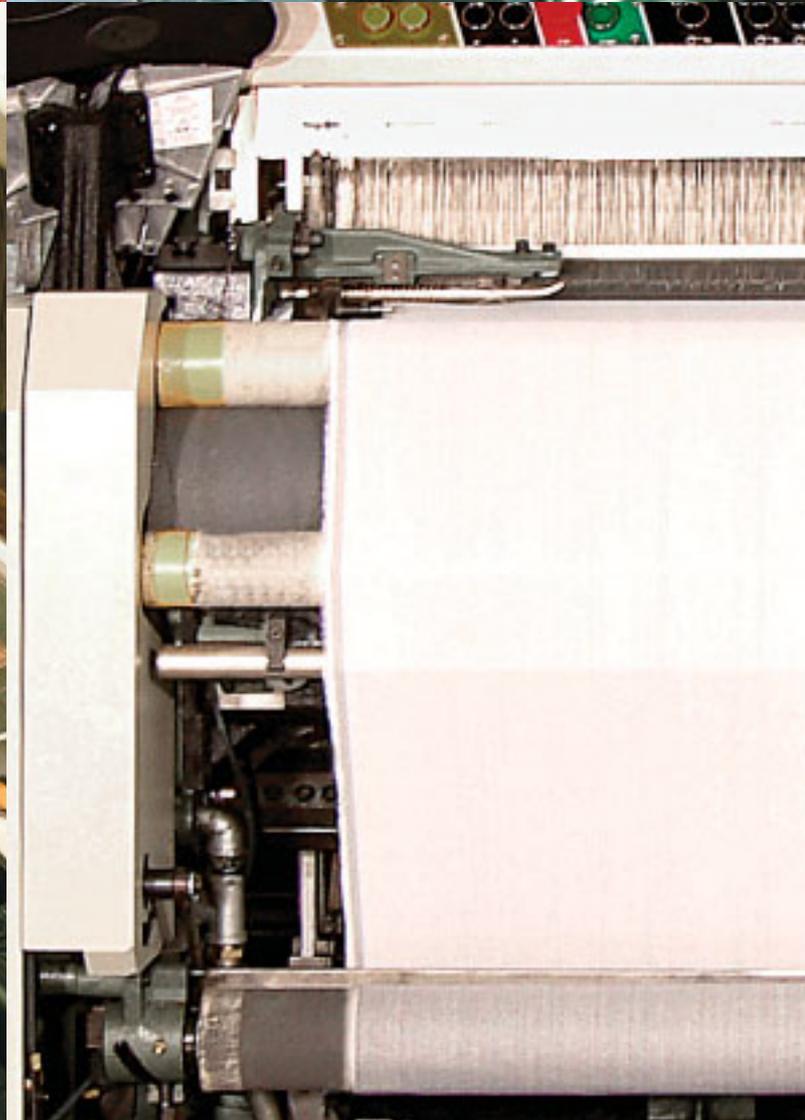
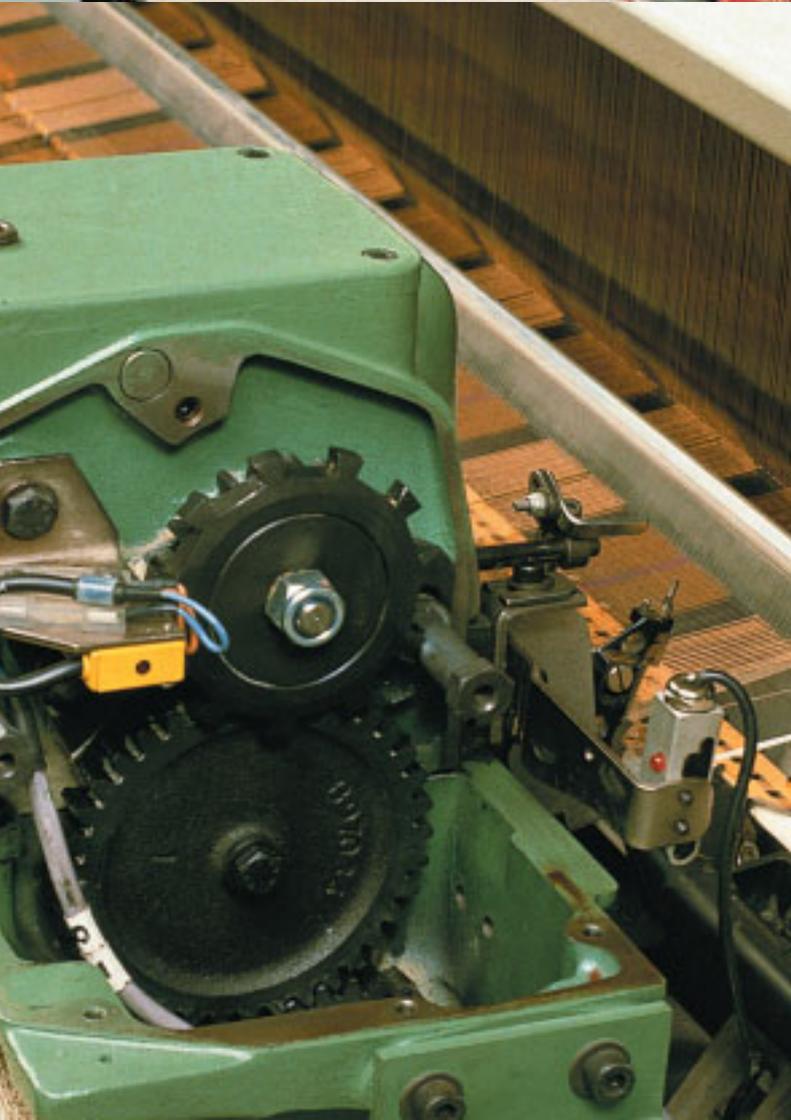
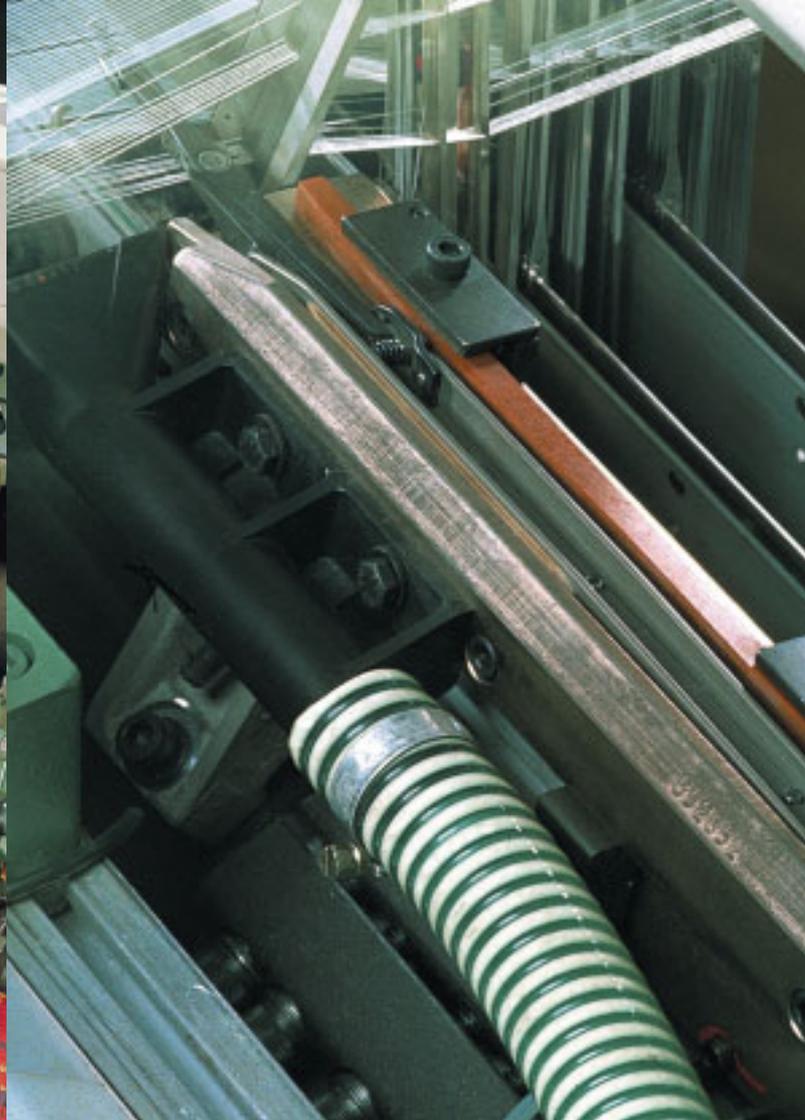
Optimised insertion cycle for
industrial speeds of up to 450 RPM

Independent selvages are
standard: no harness frames
required for selvedge

Accurate, user-friendly setting of all
main machine functions using the LCD
display and push buttons



Reed width of 190, 220 or 240 cm
(74.8", 86.6" or 94.5")



Weave more!

The mechanics and electronics of the *GTXplus* machine are based on Picanol's know-how and experience with rapier weaving technology built up over several decades. The result is a reliable weaving machine that runs at high industrial speeds, enabling you to produce more fabrics in a shorter time. Picanol has also equipped the *GTXplus* machine with several features to keep the number of machine stops low and machine downtimes short.

High machine speeds

Industrial speeds of up to 450 RPM can easily be obtained with the *GTXplus* machine. Obviously, this depends on the type of fabric, yarn quality and preparation, and the shedding motion (number of harnesses used).

The sley and rapier movements of the *GTXplus* machine are driven by a standard motor and an electromagnetic clutch and brake unit. The machine's microprocessor monitors, controls and sets the braking and starting power.

Reliable shedding motion

The *GTXplus* is equipped with an electronic dobby device. It ensures play-free, precise and positive action of the dobby, also under maximum loading, satisfying absolutely all imposed demands.

Housing: maximum of 20 lifting units in a 12 mm (0.47") pitch.

Repeat length: up to 6,400 picks.

Optionally the *GTXplus* can be equipped with a Jacquard machine with oblique shed. The Jacquard machine is driven through a vertical shaft.

The *GTXplus* machine features an optimised reed movement with double-sided conjugated cams.

Quick Step filling presenter

The Quick Step filling presenter operates with independent modules, each consisting of an electronically controlled stepper motor with a presenter needle. The system handles up to eight colours. The operator enters the weave pattern on the microprocessor keyboard or at the Jacquard control unit.

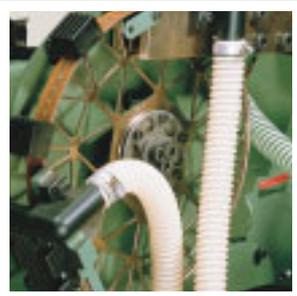
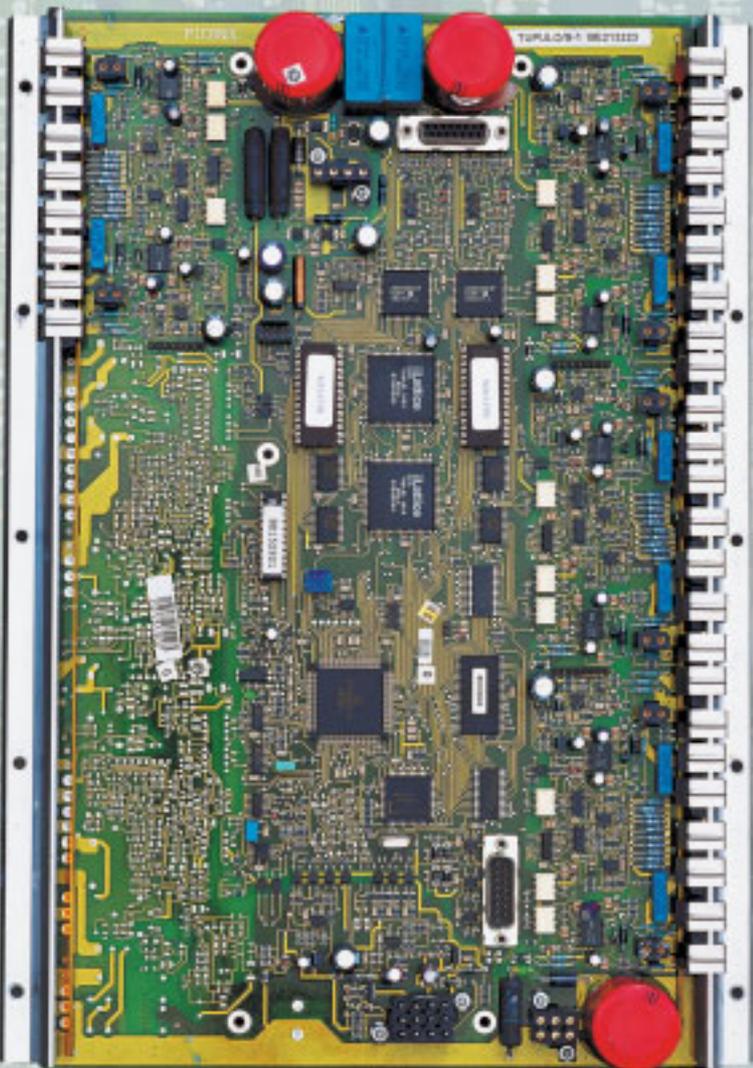
Automatic pickfinding

The *GTXplus* machine is equipped with an automatic pickfinding device and with slow forward and backward motion. In case of a filling stop, the pickfinder opens the shed on the broken pick for removal by the operator. The microprocessor synchronises all mechanisms in this process. The automatic pickfinding system makes repairing a filling break much easier for the operator and it shortens the time lost by filling stops.

X : 320° Detection : ON
 Expected : 317° ■
 Excitation:
 [Progress bar]
 [OFF] [X] []

Harp detection : ON Mode : 2
 BEAM
 Detection
 Sensitivity normal
 [OFF] [] []

Pattern	4	004	channel 04
0000000000	3	003	channel 03
Mainpattern	2	002	channel 02
6 lines	1	001	channel 01
COMMAND	NAME	Select	



Keep it simple and manageable!

The GTX*plus* rapier technology is easy to master. It enables operators to obtain good weaving results, even without optimal weaving expertise or with lower-quality yarns. Everything about this ergonomic machine is kept simple and manageable.

An ergonomic machine

The GTX*plus* machine provides easy access for the operator. The push buttons are within easy reach and provide control of all the machine functions. Signal lamps indicate filling, warp and manual stops or service calls. The automatic pickfinding system simplifies the process of repairing filling breaks. A continuous suction system evacuates lint and dust from the rapiers and grippers.

As on all Picanol machines, the bearings on GTX*plus* are fed with oil under pressure from a central lubrication system under microprocessor control. Microfine oil filtering removes all impurities and extends the lifetime of the parts and of the oil, too.

All the advantages of digital control

The electronic GTX*plus* terminal monitors and controls all the main machine functions. Its LCD screen enables the operator to set the weaving parameters in a very user-friendly way. The settings are accurate and the result of slight adjustments can be checked immediately in the fabric. Among other things, this high degree of digitisation also makes it easier to weave yarns of lower quality.

The GTX*plus* terminal provides control and input of all dobby patterns, warp tension, pick density, prewinders and the Quick Step presenter system. It can display diagnostic data and stop causes, so avoiding search time for stop detection. It can also display all the main data in shifts, giving the opportunity to maximise efficiency. For the weaver all this means great ease of operation and higher weaving productivity.

Electronic Let-Off and Take-Up

Electronic Let-Off and Electronic Take-Up motions are standard on GTX*plus*, another feature greatly simplifying the weaver's job. The required pick density is electronically set: no pick wheels are required. The accuracy of the settings makes it easy to adjust the pick density of the fabric for optimum fabric weight and minimum yarn consumption. The settings are also easy to reproduce on other machines.

The Electronic Let-Off motion is driven by an independent servomotor. Tension control is carried out by means of an electronic sensor. The system operates very accurately from full to empty beam, an essential requirement for efficient anti-starting mark procedures.

Also the Electronic Take-Up is driven by an independent servomotor. Pick densities can be set electronically from 1.75 to 134 picks per cm (4.5 to 340 picks per inch). The accuracy of the system also contributes to the efficiency of the anti-starting mark procedures.

GTX*plus* provides motor-assisted pull through of the warp sheet and knots at warp tieback, making warp change easy.

Efficient stop motions

The GTX*plus* machine has an electric warp stop motion with up to 6 bars with a 30 mm (1.2") pitch. A dropper location lever helps the operator to locate the warp break quickly.

The filling stop motion consists of a piezo-electronic weft monitor. It checks the correct selection of the weft, the pick-up transfer to the centre of the machine and the arrival at the right-hand side selvedge.

No special floor needed

The GTX*plus* is built around two cast iron side frames connected by sturdy cross-members. This robust frame and the perfect balancing of the mechanical parts eliminate all vibration, enabling the machine to work continuously at high industrial speeds while maintaining permanent, long-term stability. The absence of vibration enables the GTX*plus* machine simply to rest on its four feet: no anchor bolts are required, and the floor does not have to meet special conditions. This reduces the building costs of the mill.



Be flexible!

The *GTXplus* is a versatile machine enabling the weaver to produce a very wide range of fabrics. The standard equipment includes an electronic dobby, making it possible to change the weaving pattern by simply pushing control buttons – no technician needed! Short runs, different styles, new requirements from your customer: *GTXplus* adapts itself perfectly to all your specific needs.

A wide range of fabrics

The range of fabrics that can be woven on the *GTXplus* machine is very wide. It goes from apparel fabrics, such as light shirting, lining, fashion fabrics, denim, corduroy, woollen and worsted outerwear, over all kinds of furnishing and household fabrics to a wide variety of technical fabrics, from light tent cloth, filter cloth to heavy coating fabrics. The machine parameters can easily be adapted by means of the microprocessor without the need for a technician.

A wide range of yarns

The *GTXplus* machine weaves spun yarns of natural and man-made fibres from Nm 200 to Nm 3 (Ne 120 to Ne 1.8) and filament yarns, continuous or texturised, from 22 den to 4,000 den (25 dtex to 4,500 dtex).

Up to 8 colour insertion

GTXplus is available from single colour to up to 8 colours or types of weft yarn. All the advantages of the Quick Step filling presenter are retained in the 8-colour version.

Three weaving widths

The *GTXplus* machine is available in three reed widths: 190, 220 and 240 cm (74.8", 86.6" and 94.5"). The drawing-in width can be reduced either asymmetrically by up to 30 cm (11.8") or symmetrically by up to 60 cm (23.6").

Independent leno selvedge

An independent leno selvedge device is standard on the *GTXplus* machine. The device is driven by independent conjugated cams. The selvedges are mounted in front of the harnesses, leaving all the harnesses available and giving the possibility to set the leno timing independently from the shed timing.

Also provided are mechanical cutters on both sides with flange bobbins for auxiliary ends.

Mechanical tucking in

The optional tucking devices are used when selvedges without fringes are to be made. They form a smooth selvedge by tucking the inserted filling back into the fabric. Tucking devices for both sides are available.

Hot-wire cutters

The optional hot-wire cutters are an alternative to the electrical selvedge scissors. They are intended exclusively for 100% synthetic fabrics. Instead of separating the waste by cutting it, the hot-wire cutters melt the fabric, leaving a neat selvedge.

Double backrest for heavier styles

A double backrest with hard-chromium rollers provides better control of warp tension when weaving heavy fabrics. It also reduces beat-up of the fabric and reduces the risk of starting marks for heavy styles.



Opt for top quality!

Picanol's advanced R&D, the computer-assisted design, its use of precision equipment, its worldwide procurement policy, the ISO 9001 certification etc., they all ensure that the GTXplus machine offer the highest possible quality and will remain reliable under all mill conditions and for a long time.

Picanol is a pioneer

Again and again throughout its history, Picanol has been the first to develop and introduce new technologies aimed at raising the productivity and quality of its weaving machines. Many of these techniques have since been adopted by other manufacturers, but Picanol's know-how in weaving technology remains unique. The company devotes 6% of its annual turnover to R&D, so that the mechanics and electronics in new Picanol machines are the most advanced in the sector.

Produced with highest attention to quality

Total Quality Control is a strategic philosophy at Picanol, permeating every section of the company. Each employee is continually involved in the comprehensive system of quality control, wherever in the world he or she

is located. As a result, quality is built into every Picanol weaving machine. It starts with development and continues through planning, purchase of materials and parts, production and assembly, and on through computer-controlled test operation, installation with the customer and after-sales service.

Picanol was the first weaving machine manufacturer to obtain the ISO 9001 certificate. This certification was renewed in 1996, in 1999 and in September 2002.

Top-quality parts only

Picanol can rely on its global sourcing facilities for delivery of parts that meet the highest quality standards, wherever in the world they are needed.



Focus on price/performance!

Picanol's thorough knowledge of weaving technology and of the global textile market have enabled it to develop and produce a rapier weaving machine that provides the perfect balance between price and performance. The *GTXplus* also cuts the cost of fabric production: the machine combines extremely low energy requirements with minimum needs for maintenance. Wear and tear is kept down by the low number of mechanical parts in the machine.

High-quality fabrics at the lowest possible production cost

The *GTXplus* rapier weaving machine has been specifically designed to achieve the best price/performance ratio. The machine is based on Picanol's rapier weaving technology, with full electronic monitoring and microprocessor-controlled filling insertion, but lacking some of the more sophisticated features necessary to produce specialties.

The *GTXplus* weaving machine meets the investors' objective of maximizing their return on investment. It enables weaving mills win in the market by offering high-quality fabrics at the lowest possible weaving cost.

Procurement policy based on quality and price

Picanol weaving machines are built to the highest standards. They have to combine high performance with reliable operation at a competitive price.

These requirements are primordial, not only within Picanol itself but also throughout its supply chain. Picanol's quality assurance extends to the procedures for worldwide selection and continual evaluation of its suppliers, based on quality and price.

Central lubrication system

As on all Picanol machines, the bearings on *GTXplus* are fed with oil under pressure from a central lubrication system under microprocessor control. Microfine oil filtering, with a clogging sensor, removes all impurities and extends the lifetime of the parts and of the oil, too.



Standard equipment

Reed widths

190, 220 and 240 cm (74.8", 86.6" and 94.5")

Width reduction

Asymmetrical: 30 cm (11.8")

Symmetrical: 60 cm (23.6")

Performance

Filling insertion rates up to 450 RPM, depending on yarn quality and preparation, type of fabric and shedding motion

Yarn range

Spun yarns: Nm 200 - Nm 3 (Ne 120 - Ne 1.8)

Filament yarns: 22 den - 4,000 den (25 dtex - 4,500 dtex)

Filling insertion

1 - 8 colours or yarn types

Filling monitor

Piezo-electric filling detector

Reed motion

Double-sided conjugated cams

Shedding motion

Electronic dobby with up to 20 lifting units, 12 mm (0.5") pitch

Let-off motion

Servo-motor driven, electronically controlled

Warp beams

Screwed flanges of 805 mm (31.7") diameter

Selvedge motion

Full leno driven by independent selvedge motion

Warp stop motion

Electrical with 4 to 6 bars

Dropper location lever

Cloth take-up

Electronically controlled take-up system

Max. cloth roll diameter: 600 mm (23.6")

Cloth roll can be removed while machine is running

Pick density from 1.75 to 134 picks/cm

(4.5 to 340 picks/")

Machine drive

Sley and rapier movement driven by standard motor through electromagnetic clutch and brake unit

Pick finding

Automatic pickfinding

Slow forward and backward motion

Machine controls

LCD screen

Push buttons on front panel

Lubrication

By forced circulation of filtered oil and centralised grease points

Monitoring

Microprocessor monitors and controls all main functions, sets fabric and colour patterns, stores all production data etc.

Dimensions

190 cm (74.8") machine with dobby and 4 colours:
4,879 mm x 1,827 mm (192" x 71.9")

How to read the name

GTX*plus*-4-R-190Ti

Ti: tucking-in device

Reed width: 190 cm (74.8")

Shedding motion

R: dobby

J: Jacquard

Number of filling colours: 1-8

Options

Shedding motion

Jacquard

Warp beams

Screwed flanges of 1,000 mm (33.4") diameter

Selvedge

Mechanical tucking in
Hot-wire cutter

Weave more!

Keep it simple and manageable!

Be flexible!

Opt for top quality!

Focus on price/performance!

All this combined in one machine:

GTX*plus* .

**The simple and versatile
rapier weaving machine**

Picanol – a pioneer for more than half a century

The GTX*plus* rapier weaving machine is a synthesis of technological know-how and experience built up over many decades. In 1971, Picanol pioneered the application of electronics to weaving machine control. The company was also the first weaving machine manufacturer to obtain ISO 9001 certification. This certification was renewed in 1996, in 1999 and in September 2002. There are now over 110,000 Picanol airjet and rapier machines installed with more than 2,500 customers around the world.

The GTX*plus* rapier weaving machine

Picanol has developed GTX*plus* specially for high productivity and outstanding flexibility. It offers the best price/performance ratio. It helps weaving mills win in the market by offering high quality fabrics at the lowest weaving cost. Contact your Picanol representative, and he will show you how this machine can bring you higher productivity and more profit.



GTX*plus*

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