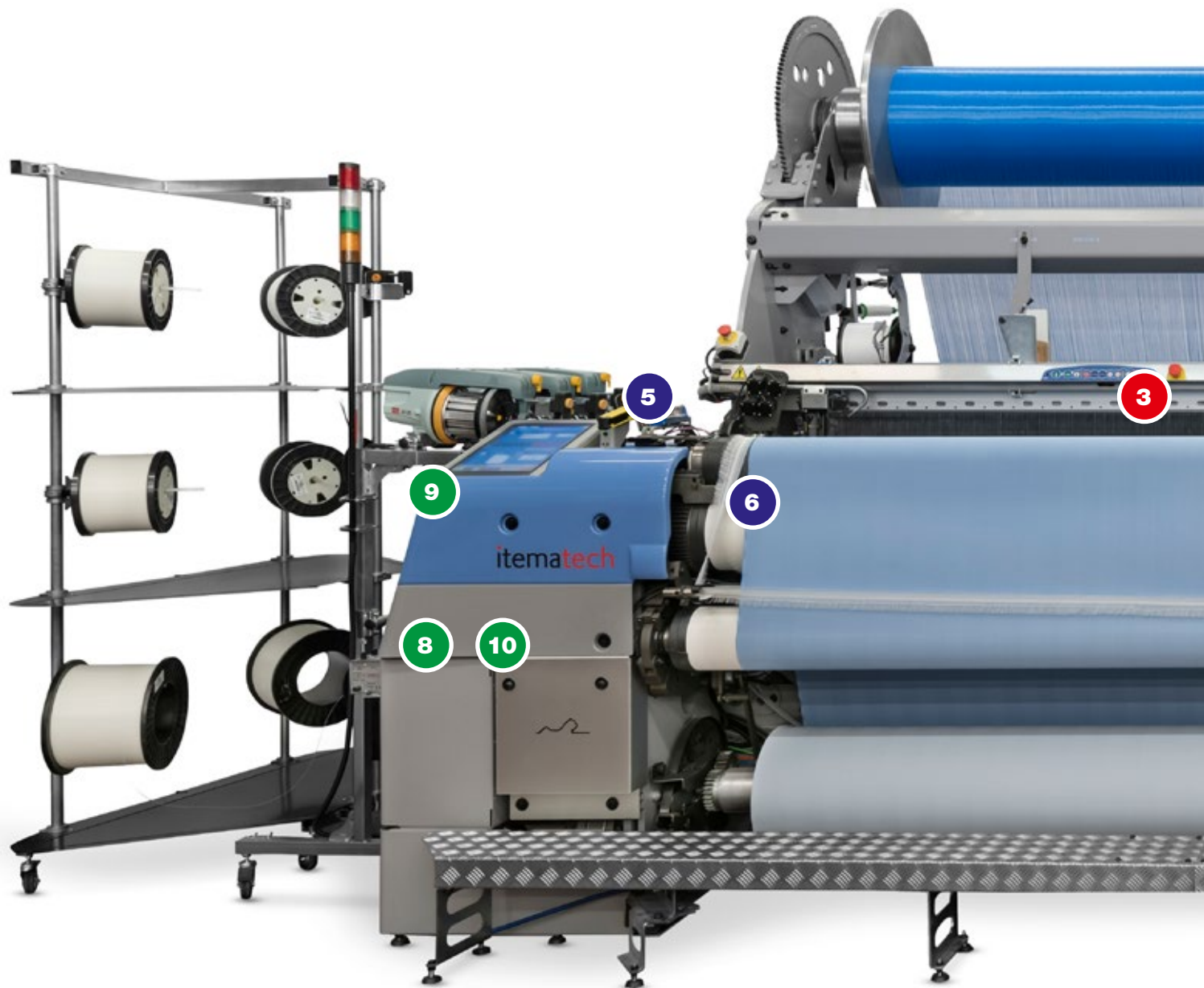
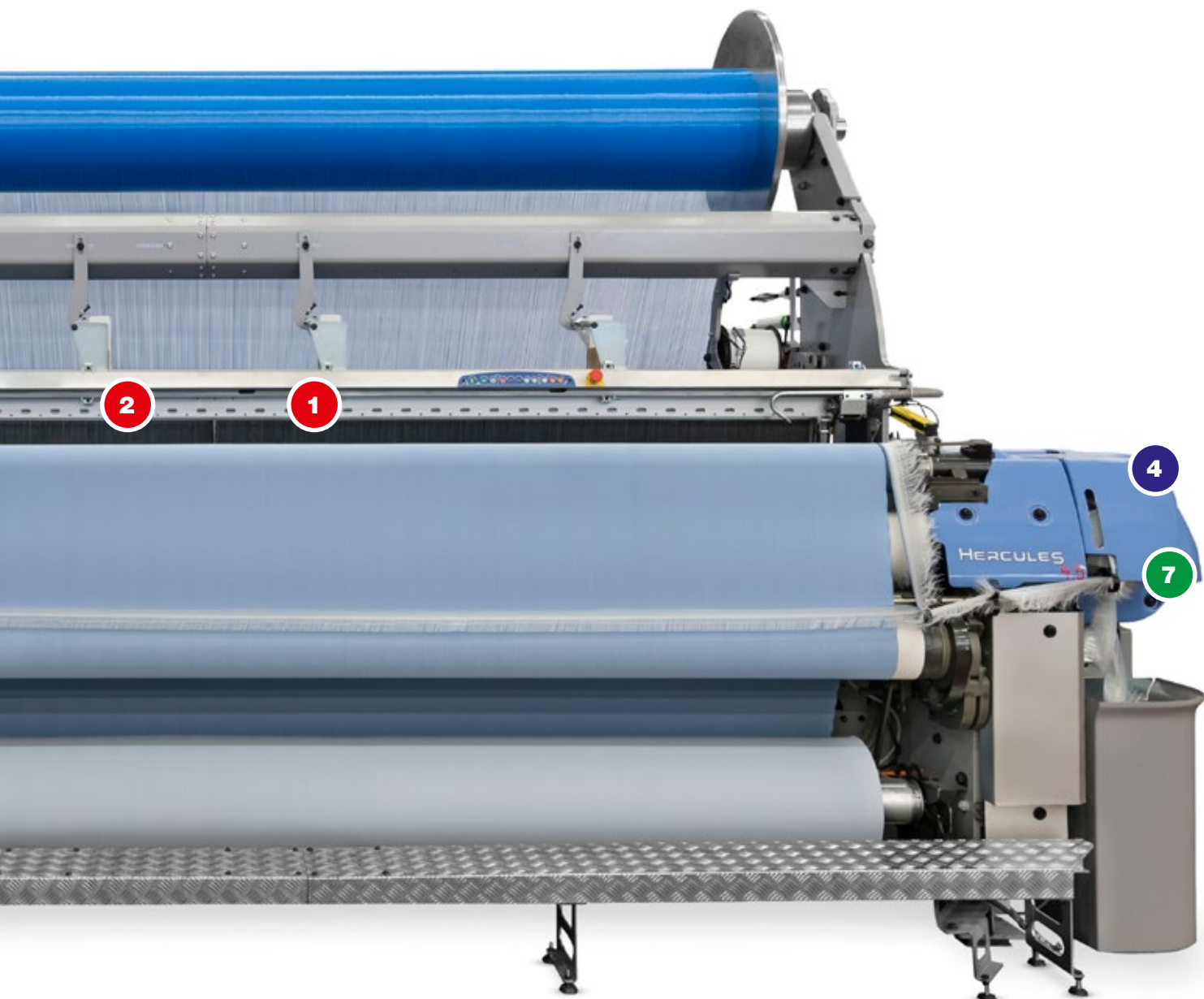


HERCULES

itematech

HERCULES





UNBEATABLE TEXTILE FLEXIBILITY

UNPARALLELED PERFORMANCES

OUTSTANDING USER-EXPERIENCE

1 Exclusive Positive and Negative Weft Transfer

Unique in the market, Hercules offers the advantage to have in a single weaving machine the best benefits of the positive and negative weft transfer

Unmatched Textile Flexibility and Top Productivity

2 Exclusive Shed Geometry

The reduced shed opening dimension guarantees minimal warp peak of tension

Superior Fabric Quality

3 Powerful Beating Force

Hercules offers multiple machine versions according to the fabric structure. The beating force ranges from up to 3 tons in standard machine configuration to 4.5 tons for Hercules 4.5 machine version.

Widest Textile Range

4 Compact and Sturdy Machine Structure

Hercules provides the benefits of a sturdy structure without sacrificing compactness. The flexible tapes system, in fact, ensures reduced machine footprint thus saving space on plant layout.

Space Saving and Efficiency

5 Effective Weft Yarn Selector

The Hercules weft yarn selector has been designed to provide gentle yarns control with a reduced weft yarns peak. The Weft Yarn Selector features a movable cut specifically engineered to reduce the waste selvedge.

Textile Efficiency and Waste Reduction

6 Smart Weft Cutter

The Hercules weft cutter has been designed to reduce, as much as possible, the waste selvedge. Moreover, in case of 2 colors weaving, with specific weft yarns and dedicated accessories, it is possible to completely eliminate the LHS waste selvedge.

Cost Savings and Waste Reduction

7 Direct Drive Technology

The direct drive motor ensures reduced maintenance and maximum user-friendliness.

Reduced Maintenance and Enhanced Textile Settings

8 Armotion Independent Motor for the Shedding Machine

Thanks to Armotion, the second motor for the dobby or the Jacquard, the set-up of the shed closing timing is electronically adjustable directly from the machine console and machine's vibrations are significantly reduced.

Time saving and Enhanced Textile Efficiency

9 User-friendly Machine Console

The machine console—featuring a wide, full color, touch screen—is intuitive and interactive providing the whole machine control.

Maximum Ease of Use

10 Remote Diagnostics

The advanced remote diagnostics system Site Manager represents a real-time support for the weaver by allowing the Itematech technician to easily access the machine parameters no matter where it is installed in the world.

Real Time Technical Support

Hercules Rapiere Weaving Machine

Born to be flexible and versatile. Hercules rapiere weaving machine has been designed to excel in the weaving of technical textiles. Offering both negative and positive rapiere transfer systems, Hercules represents the perfect combination of mechanical sturdiness and textile efficiency ensuring the greater profitability in the market.

Hercules is the ideal weaving machine to easily produce any kind of technical fabric thanks to its superior ease of use and flexibility. The sturdy yet flexible machine structure ensures the maximum reliability leading to enhanced production capability.

One of a kind on the market, Hercules provides unbeatable textile flexibility thanks to its unique weft transfer system that enables the valuable possibility to easily and quickly switch from positive to negative rapiers, thus leading to unparalleled textile efficiency when handling the widest range of weft yarns counts, from 10 up to 48,000 dtex, in single or multiple weft insertions configurations.

Another key advantage of Hercules lies in the perfect warp yarns control. In fact, the back-rest roller perfectly couples sturdiness with responsiveness ensuring the perfect warp yarns compensation. Moreover, the take-up system

skillfully handles both extremely coarse and super light fabrics.

Hercules, available in weaving width up to 6200 mm, personifies the strong know-how and long textile tradition of the historical inventors of the main modern weaving innovations. Born in the cradle of the weaving industry, the Seriana Valley in Italy, Hercules relies on the most skilled textile experts and engineers, constantly fully dedicated to study every kind of technical solution to effectively weave even the most demanding technical textile.

Applications

- Agrotextiles
- Coating Fabrics, standard and heavy
- Conveyor Belts, standard and heavy
- Filter Fabrics, standard and heavy
- Fiberglass
- Geotextiles
- Mesh Fabrics

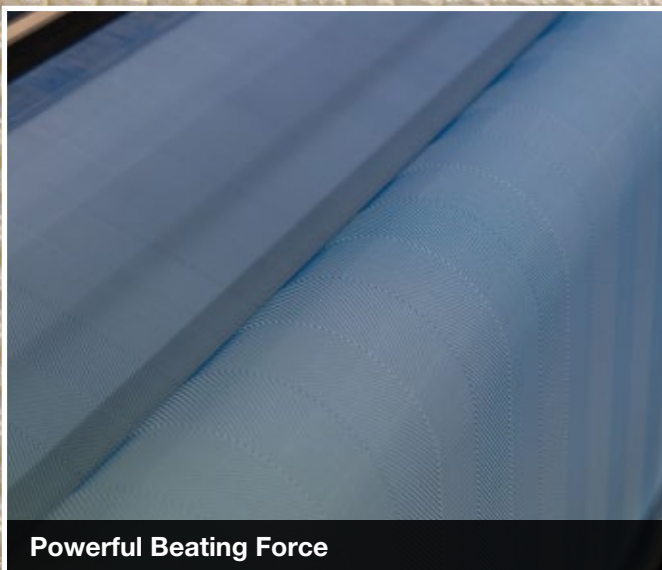
And many others



HERCULES



Exclusive Positive and Negative Weft Transfer



Powerful Beating Force



Exclusive Shed Geometry

Unbeatable Textile Efficiency

Exclusive Positive and Negative Weft Transfer

Due to its unmatched simplicity and to the best textile know-how, Hercules is the only weaving machine available in the market offering the great advantage to merge in a single weaving machine the best benefits of the positive and negative weft transfer. In fact, in just a few, quick moves the operator can change the weft transfer from positive to negative according to production or textile requirements.

According to the fabric style and construction, the weaver can freely and easily decide to weave with the negative weft transfer to achieve maximum productivity or to weave with the positive weft transfer to reach the maximum versatility.

The Hercules exclusive positive weft transfer ensures the highest machine performances both in terms of production targets and textile range, allowing to process the widest yarns range from 10 to 48,000 dtex.

In addition to the flexibility of the exclusive Hercules weft transfer, rapiers and tapes present reduced dimensions guaranteeing minimum friction on warp yarns thus ensuring maximum textile efficiency and fabric quality.

Featuring an innovative design, the Itematech positive rapiers merge the

advantages of small dimensions with maximum versatility. The reduced dimensions—typical of negative rapiers and ensuring an optimal weft insertion—are here uniquely coupled with a special design that provides maximum textile efficiency even when weaving the coarsest weft yarns.

Exclusive Shed Geometry

The reduced shed opening dimension guarantees minimal warp peak of tension thus leading to an excellent treatment of the yarns to ensure superior fabric quality. Furthermore, the optimized reed holder thanks to an increased cross section ensures the highest beating force.

Fully Functional Rapier Drive System

The Hercules rapier drive mechanism is recognized as the most compact in the industry with minimum moving parts guaranteeing top reliability and reduced maintenance.

Powerful Beating Force

Hercules offers multiple machine versions according to the fabric structure.

The standard machine version provides a maximum warp tension up to 3 tons. The Hercules 4.5—thanks to key machine reinforcements—guarantees a maximum warp tension up to 4.5 tons.

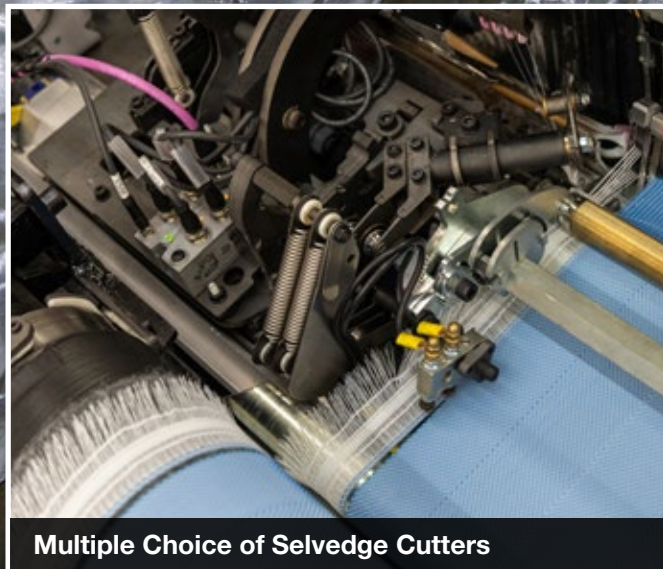
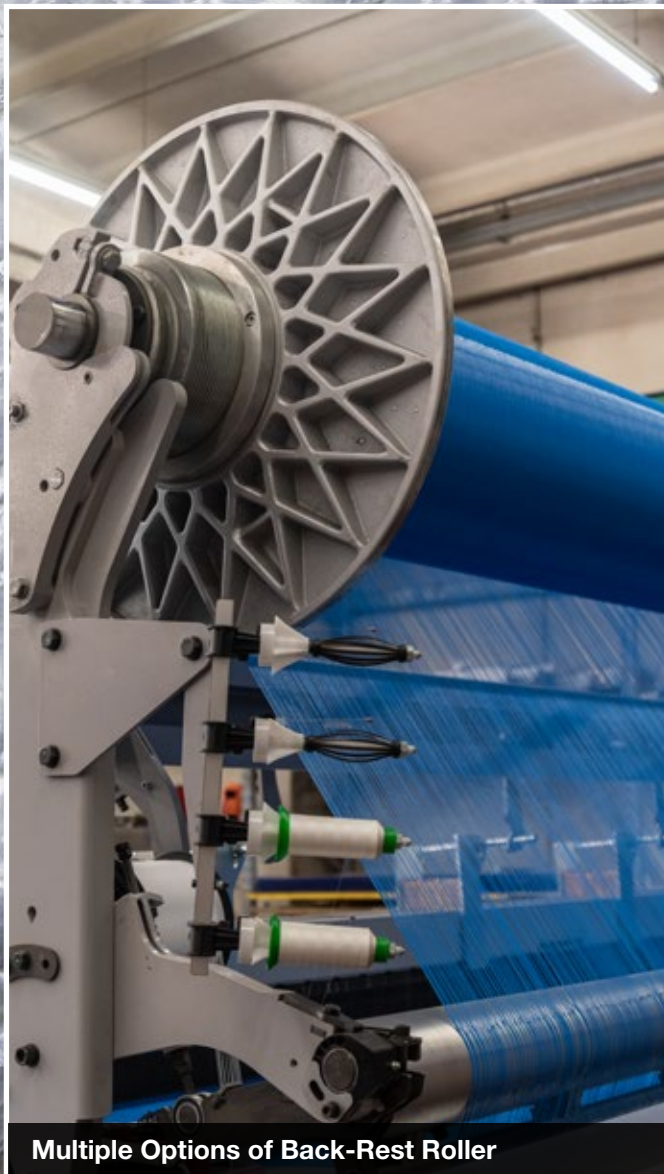
Multiple Options of Take-up Systems

Dedicated solutions to handle the fabric formation can be equipped on Hercules, such as the elastic press roller.

Besides the standard take-up system, for fabrics with a high fabric tension—such as heavy filters and heavy coating fabrics—to guarantee an optimal fabric grip Hercules 4.5 is equipped with a dedicated take-up system. The system is composed by Twin Grip that—thanks to a double take-up roller—ensures an excellent grip on both fabric's sides and by Tinix, the system that enables to achieve the maximum tension thus avoiding fabric's slipping.

Both devices enable to effectively produce even the coarsest, slippery and most delicate fabrics with the possibility to adopt the permitted width reductions.

HERCULES



Unparalleled Performances

Compact and Sturdy Machine Structure

Hercules provides the textile and performance benefits of a sturdy structure without sacrificing compactness. The flexible tapes system, in fact, ensures reduced machine footprint thus saving space on plant layout.

Based on a modular design, Hercules structure presents interconnected steel and cast-iron machine parts guaranteeing machine reliability and significantly reducing vibrations.

Multiple Options of Back-Rest Roller

The Hercules ULTRA back-rest roller has been developed to maximize two fundamental aspects:

- a sturdy structure to guarantee medium and heavy fabrics weaving (i.e. coating and filters)
- cylinders featuring reduced dimensions and weight to ensure high reactivity that is of primary importance to compensate the low elasticity of specific warp yarns (i.e. fiberglass)

Different type of surface for the back-rest roller cylinders are available to meet the specific needs of any type of fabric.

Furthermore, on request the machine can be equipped with oversized compensation supports for rigid fibers.

Multiple Choice of Selvedge Cutters

Hercules offers a wide range of weft cutters:

- Motorized
- Thermal for synthetic fabrics
- Chopper for fiberglass fabrics

Effective Weft Yarn Selector

Available for 1, 2, 4, 6 or 8 colors configurations, the Hercules weft yarn selector has been designed to provide gentle yarns control with a reduced weft yarns peak.

Different presentation profiles are available according to weft yarns composition and count.

The Weft Yarn Selector features a smart weft cutter specifically engineered to reduce the waste selvedge.

Moreover, in case of 2 colors weaving, with specific weft yarns and dedicated accessories, the Hercules weft cutter allows the complete elimination of the LHS waste selvedge.

Multiple Options for Selvedge Formation

Different solutions for the waste selvedge control are provided on Hercules.

Mechanical and motorized leno device are available for 2 or 4 ends.

The motorized leno device enables the setting of the auxiliary selvedge crossing directly through the machine console.

Mechanical lateral and central tuckers are available for fabrics where tucked-in selvedge is required.

HERCULES



User-friendly Machine Console



Outstanding User-Experience

Direct Drive Technology

Hercules is equipped with a direct drive technology.

The direct drive motor ensures reduced maintenance and maximum user-friendliness, in fact the machine speed can be controlled and adjusted directly from the color touch-screen console.

The Armotion Independent Motor for the Shedding Machine

The Itematech Hercules is equipped with a powerful electronic platform which includes Armotion - an independent motor for the shedding machine, both dobby and Jacquard, thus leading to time saving and enhanced textile efficiency for the weaver, in fact:

- the set-up of the shed closing timing is electronically adjustable directly from the machine console. Each set-up with its style data can be stored in the console database and recalled anytime
- machine's vibrations are significantly reduced ensuring reduced stress on mechanical elements and superior fabric quality.

User-friendly Machine Console

Hercules has been developed to guarantee an outstanding user-experience. The machine console—featuring a wide, full color, touch screen—is intuitive and interactive providing the whole machine control and manages all the different motorized devices.

Remote Diagnostics

On request, Hercules can be configured with the advanced remote diagnostics system Site Manager. Site Manager represents a real-time support for the weaver by implementing all the latest Industry 4.0 principles, in fact the Itematech technician can easily access the machine parameters no matter where it is installed in the world.

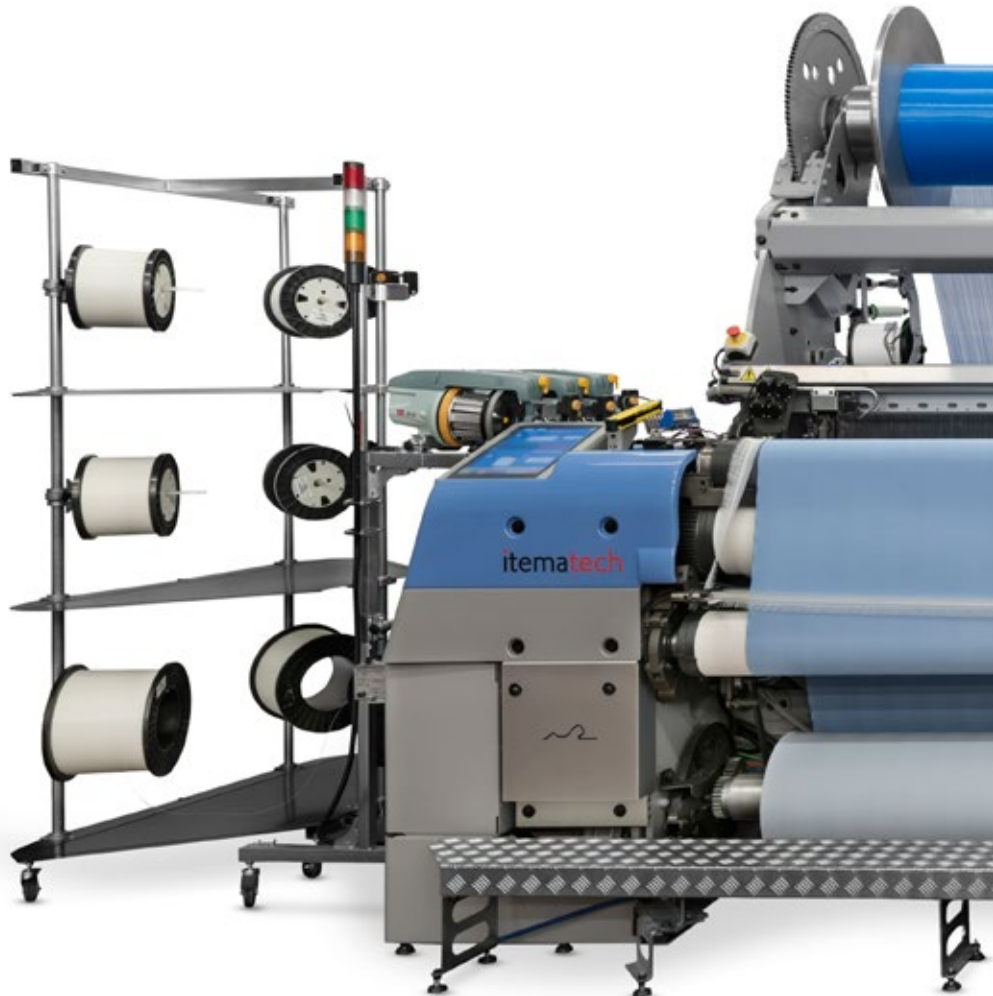
HERCULES

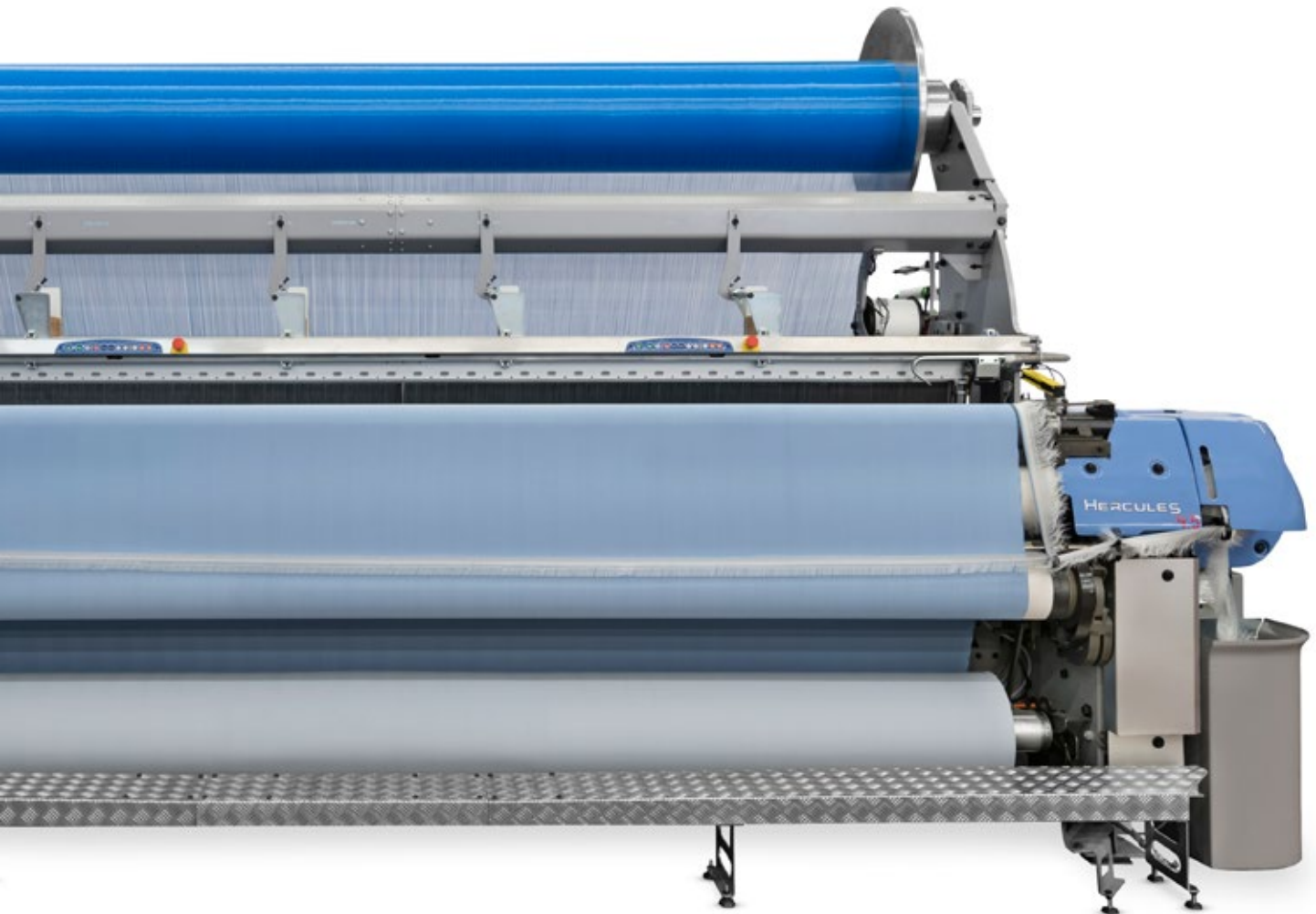


Designed to excel in the weaving of all technical textiles fields. Offering both negative and positive rapier transfer systems, Hercules represents the perfect combination of **mechanical sturdiness** and **textile efficiency** for **greater profitability**.

Something special or never-before-seen in your mind? Just contact our team and share your textile production desires. Itematech mission is precisely to make available its expertise to meet even the most demanding weaving needs.

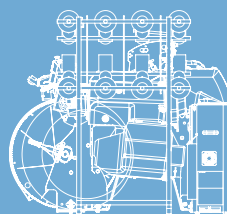
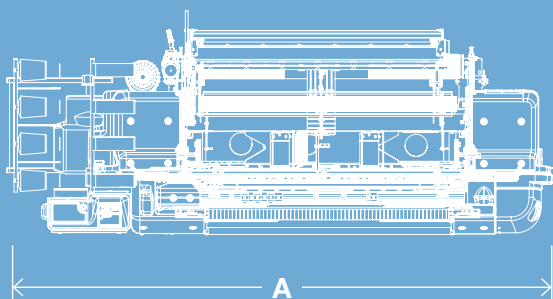
Send us an email at info@itematech.com







Weaving Width	Machine width (A)
1600 mm	4400 mm
1900 mm	4700 mm
2100 mm	4900 mm
2300 mm	5100 mm
2400 mm	5200 mm
2600 mm	5400 mm
2800 mm	5600 mm
3000 mm	5800 mm
3200 mm	6000 mm
3400 mm	6200 mm
3600 mm	6400 mm
3800 mm	6600 mm
4400 mm	7200 mm
4600 mm	7400 mm
5500 mm	8300 mm
6200 mm	9000 mm



Hercules at a glance

MAIN MACHINE SPECIFICATIONS

Nominal Machine Width (cm)	160, 190, 210, 230, 240, 260, 280, 300, 320, 340, 360, 380, 440, 460, 550, 620	
Weaving Width (cm)	Maximum weaving width	+60 mm
	Width reduction	600 mm (standard); or 1000 mm (optional); over 1000 reduction as special version
	Asymmetric reduction	300 mm on rhs

SHEDDING MACHINE

Stäubli electronic dobby type 3020 for 8-10-12-16-20 frames

Electronic Jacquard

Armotion Independent motor for dobby and Jacquard Standard

FRAME CONNECTION

DRC1 Standard

DRC4 (QSC solution) Optional

COLORS

1, 2, 4, 6 or 8 colors freely programmable

WEFT DENSITY

5–200/cm Standard

2–100/cm or 0.2–50/cm Optional

BEAM ARRANGEMENT

Single for 800, 1000 or 1100mm (Optional) flanges

Twin (from w. 260) for 800 or 1000 mm flanges

Double beam on floor, 700+500 mm

Top beam for 800, 1000 or 1100mm (Optional) flanges

Multiple beam on request

Prepared for warp feeding with external creel (bottom or top calender)

RACEBOARD

Guided with different shaped hooks

BACK-REST ROLLER

“Ultra” version

Overall tension reading system by loadcell

Fixed or rotating, chrom plated or “satin” finish cylinders

Increased compensation version for stiff yarns

SELVEDGES

Independent mechanical leno devices for 2 or 4 ends, lateral and central

Mechanical cutters, lateral and central

MAIN OPTIONS

Motorized leno devices for 2 or 4 ends, lateral and central

Motorized cutters, lateral and central

Thermal cutters for welded selvedges

Tuck-in selvedge devices, lateral and central

Arrangement for external batcher

LED lighting for reed area

ELECTRONICS

New generation system with VGA MMI Standard

HERCULES



Itematech brings together the strong know-how resulting from the merger of Itepa and PTMT (formerly Panter) expertise and competences to provide the market with the most comprehensive weaving portfolio to weave technical fabrics and the most skilled and experienced technical textiles team in the industry.

Technical fabrics manufacturers will now on find in Itematech a unique partner and technological reference point to meet and exceed all their needs when it comes to weaving the full range of technical applications.

For more information about Itematech, to contact our Sales Team in your country, to learn more about our weaving machines or to order spare parts, please visit our website **www.itemagroup.com**.

A large blue diagonal banner is the central focus. Above and below it are several rectangular panels showing different types of technical fabrics, including woven meshes, ribbed structures, and textured surfaces. The banner contains the following text:

Itematech is the brand-new Itema business unit exclusively dedicated to technical fabrics. Unique in the industry, Itematech leverages the expertise and know-how of Itema and Panter technology to provide the market with the widest range of best-in-class technological solutions to weave technical fabrics.

Specifications subject to change without notice. IEF 49.07.09 Abb - EN



www.itemagroup.com

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