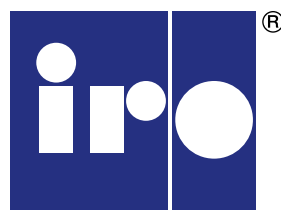




Accessories for all
textile applications





Weaving division

Our Weaving Division, comprising IRO AB Sweden, ROJ Srl Italy and Wuxi IRO Technology Co Ltd China, develops, produces and markets our branded equipment for the world-wide textile industry.

We focus on providing customer centric solutions by utilising our comprehensive network of agents and distributors to support our customers world-wide.

Our way to perfect fabric

Perfect fabric is the result of a combination of elements in the weaving process, with a key element being the correct set-up of the weft accumulators used on the weaving machine.

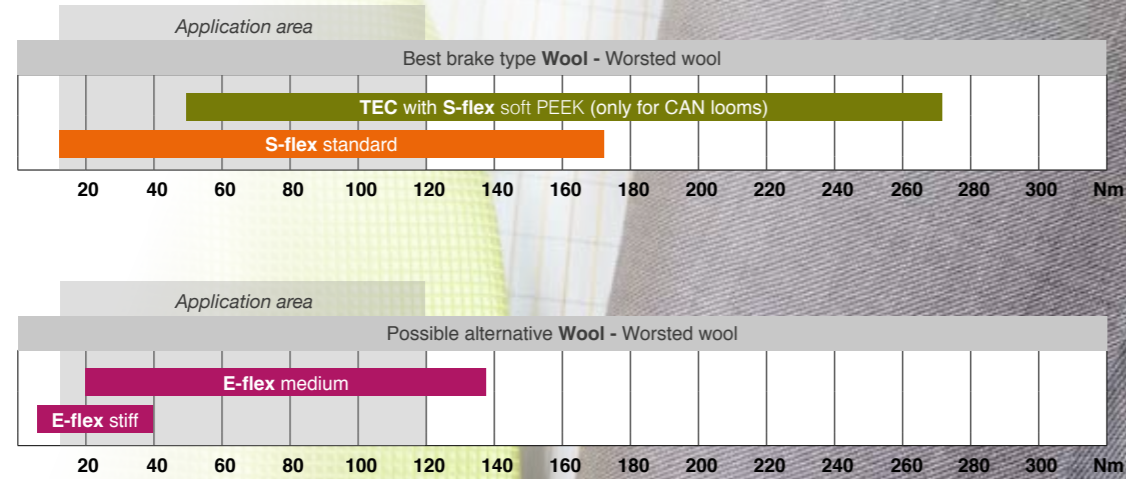
The core function of a weft accumulator, as a fundamental necessity in the weaving process, is the ability to minimize tension variations in the yarn insertion, from the bobbin to the weaving machine. This core function of the weft accumulator can be further enhanced by incorporating unique accessories.

- Output brakes that optimise yarn tension throughout the weft insertion process, ensuring the correct level required for both loom performance and fabric quality.
- Input brakes for ensured weft accumulator functionality, and to help equalize yarn tension variations between different bobbins.
- Weft detectors that can recognize yarn defects, for example knots, and prevent these defects from entering the fabric.
- Precise lubrication devices to increase the quality and performance of yarns that may benefit from the application of lubricants.
- A range of the most technologically advanced speciality devices for the most demanding of applications.
- Customized solutions for the most challenging yarns to weave.

In this brochure we would like to share our expertise with recommendations for many different woven applications to help create perfect fabric.

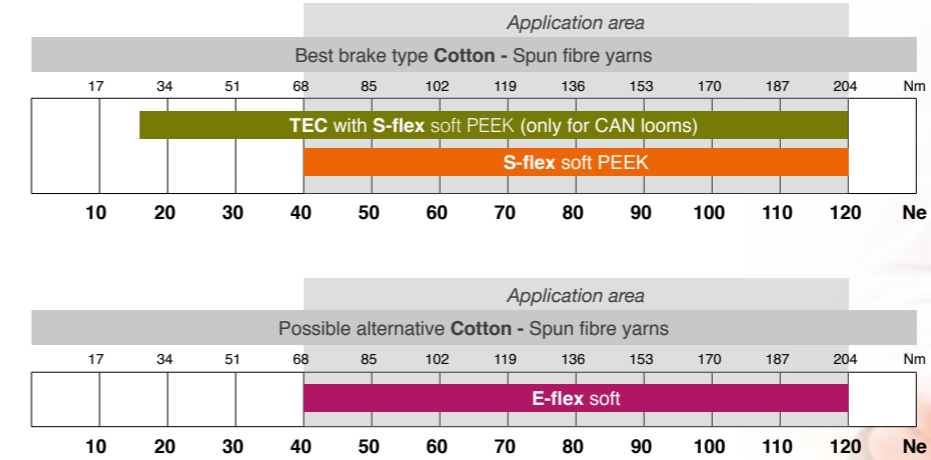
Wool

Quality and status are traditions we proudly share with wool weavers



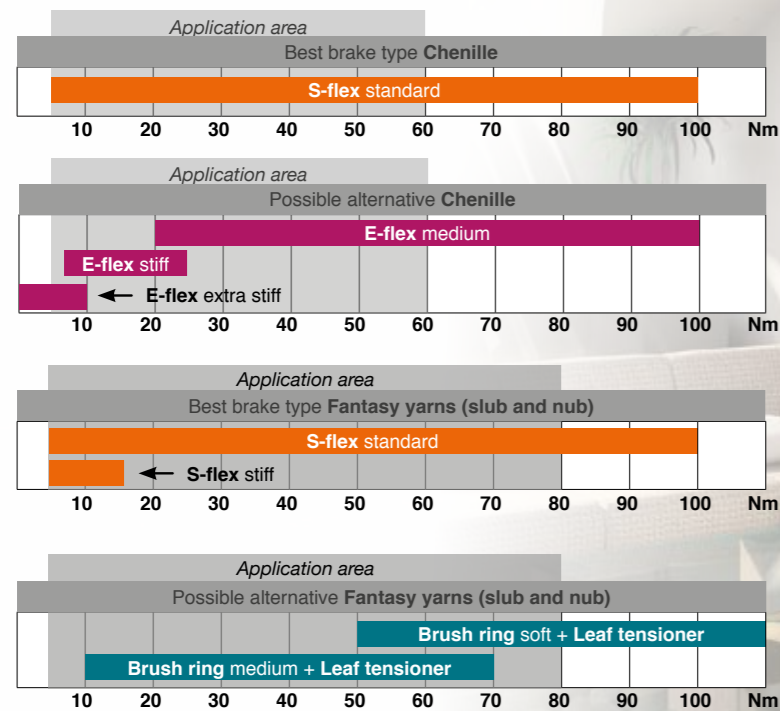
Shirting

A fresh, clean shirt everyday, chosen to show our style, attitude and individuality – the same criteria by which we challenge ourselves in the innovation of our products.



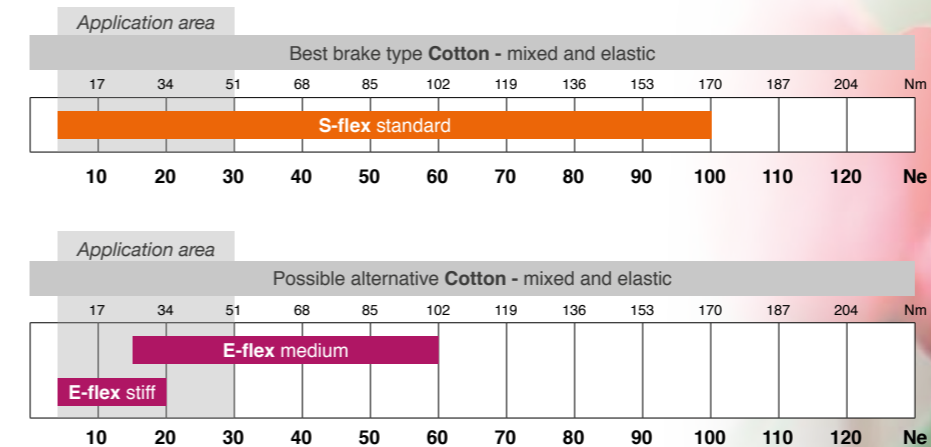
Furnishing and upholstery

Unique fabrics produced for home furnishings using flexible weaving technology.



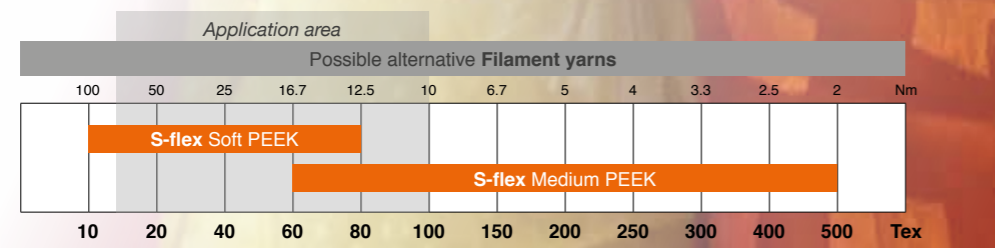
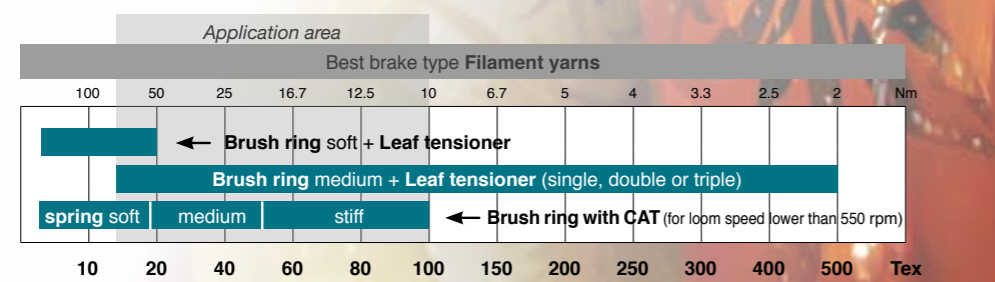
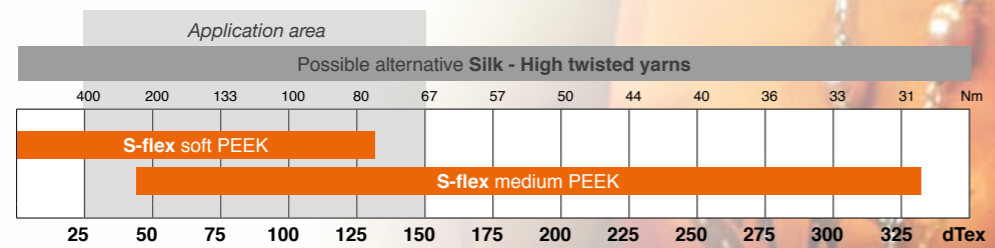
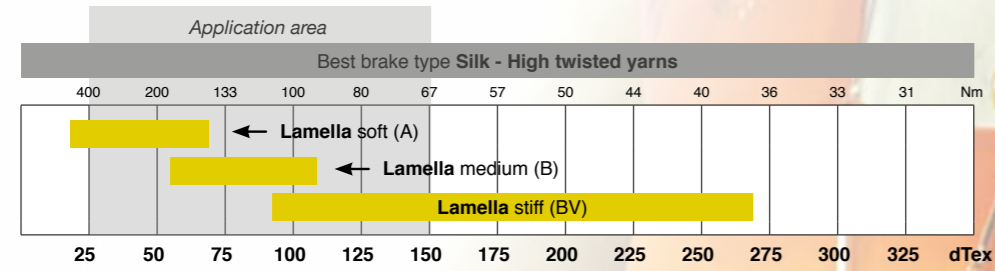
Denim

Like denim and the denim weavers, our feeder systems are designed by building on the traditional with a view to the modern, to produce durable value for our costumers.



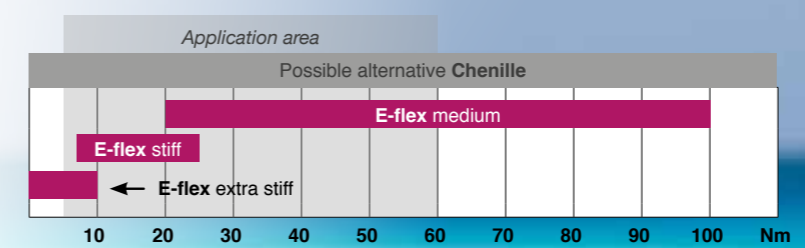
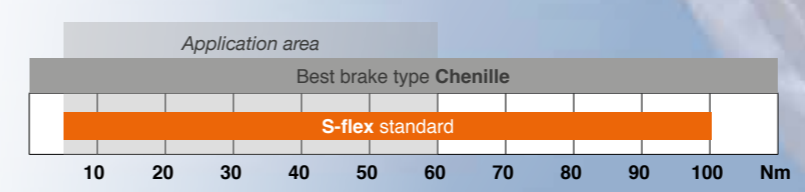
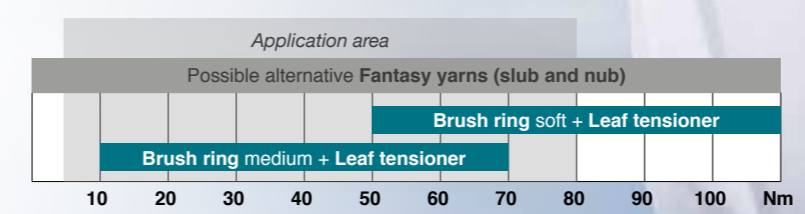
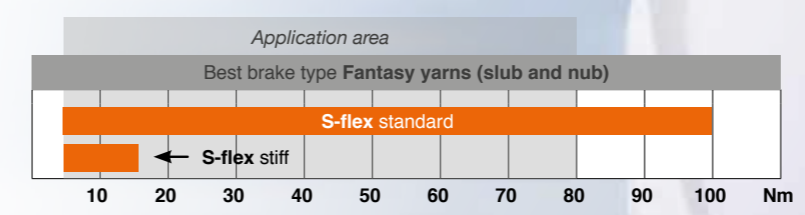
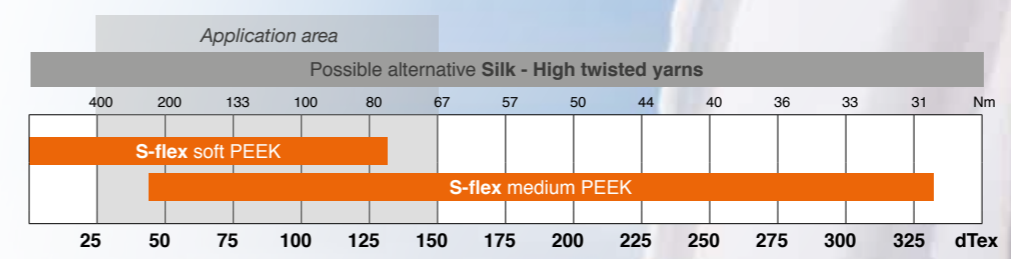
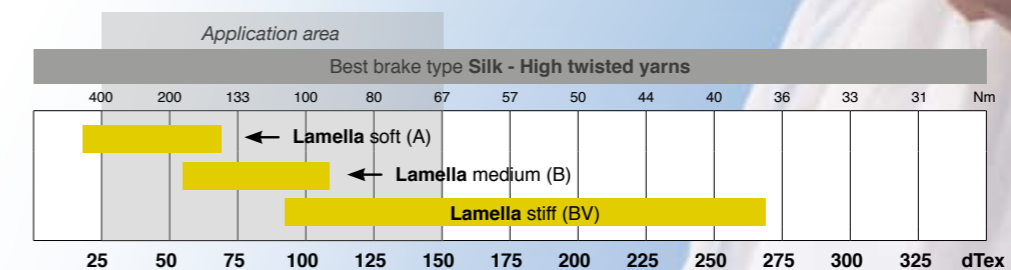
Silk, filament and fancy fabrics

Detail, creativity and flare – characteristics we share with the designers of fancy fabrics and accessories.



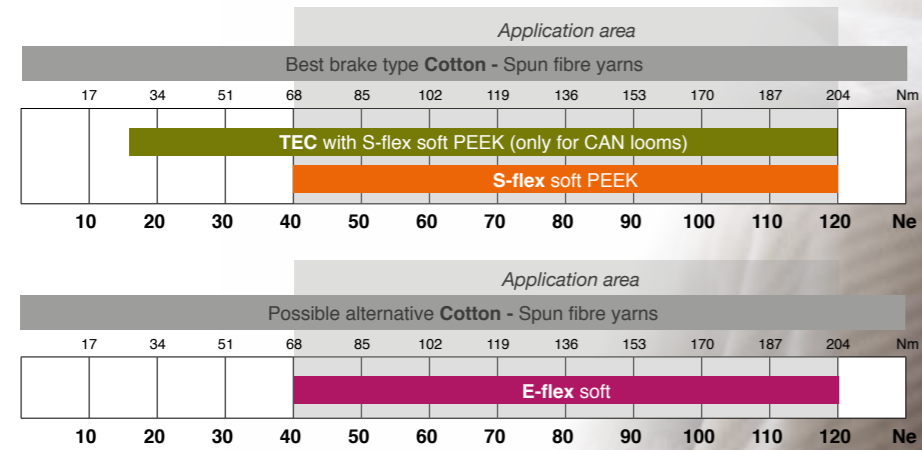
Curtains

Imagination is a key element in the creation of fancy fabrics



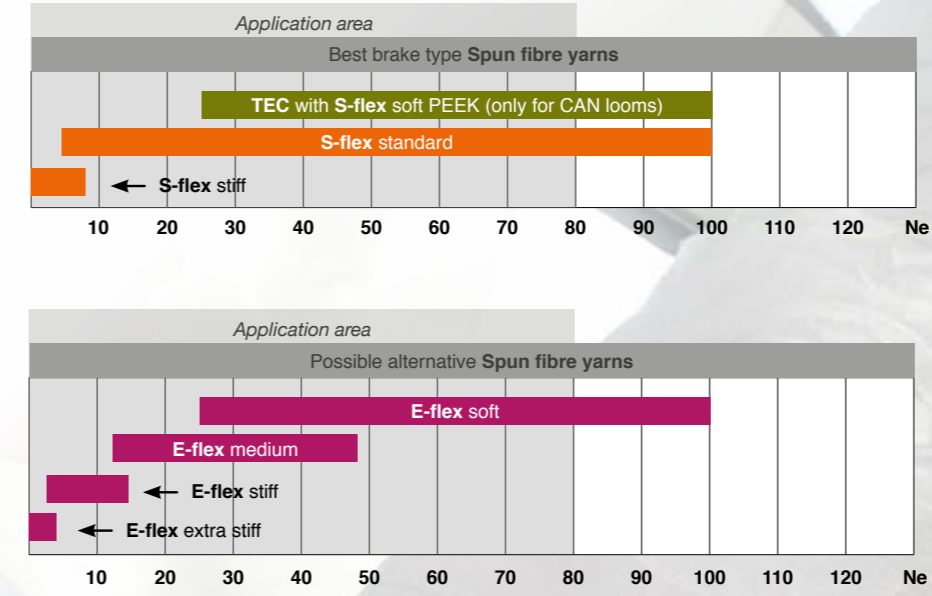
Bed sheeting and towels

Woven to ensure personal comfort.



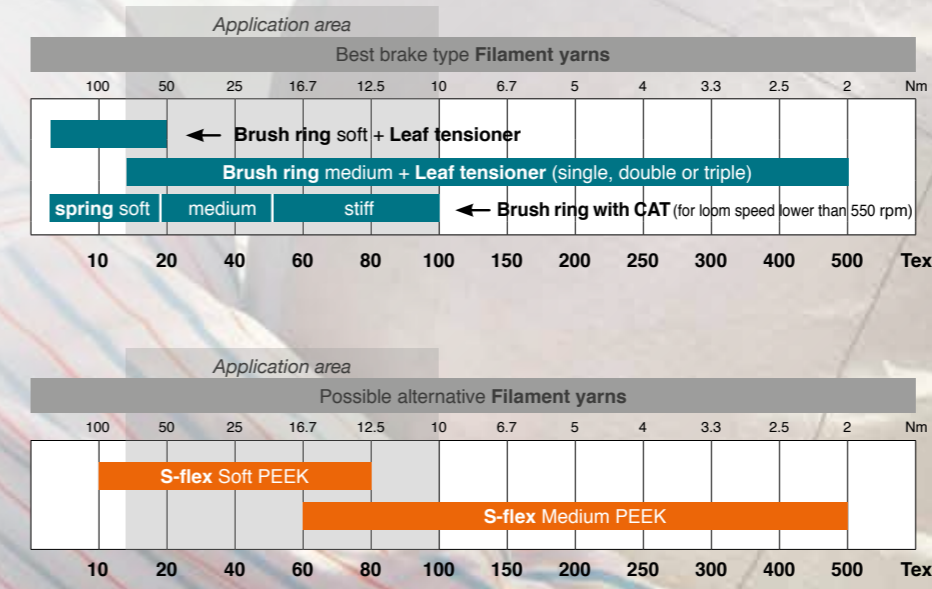
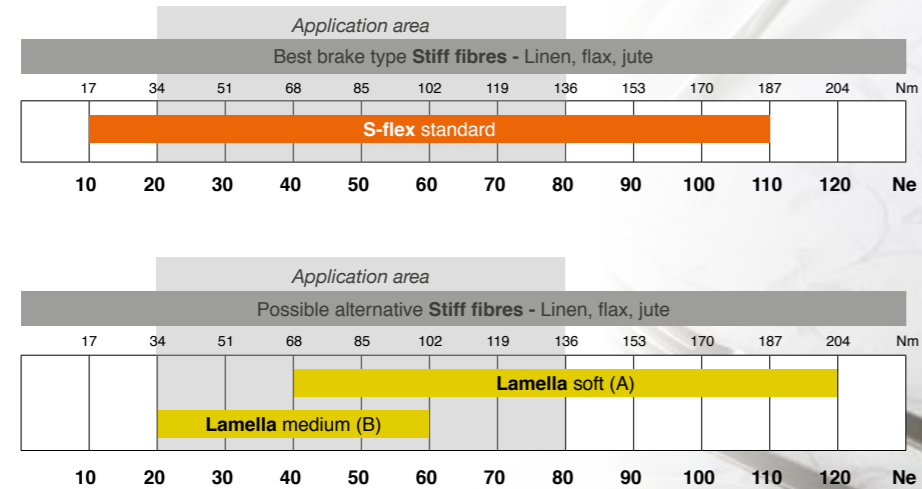
Automotive and technical fabrics

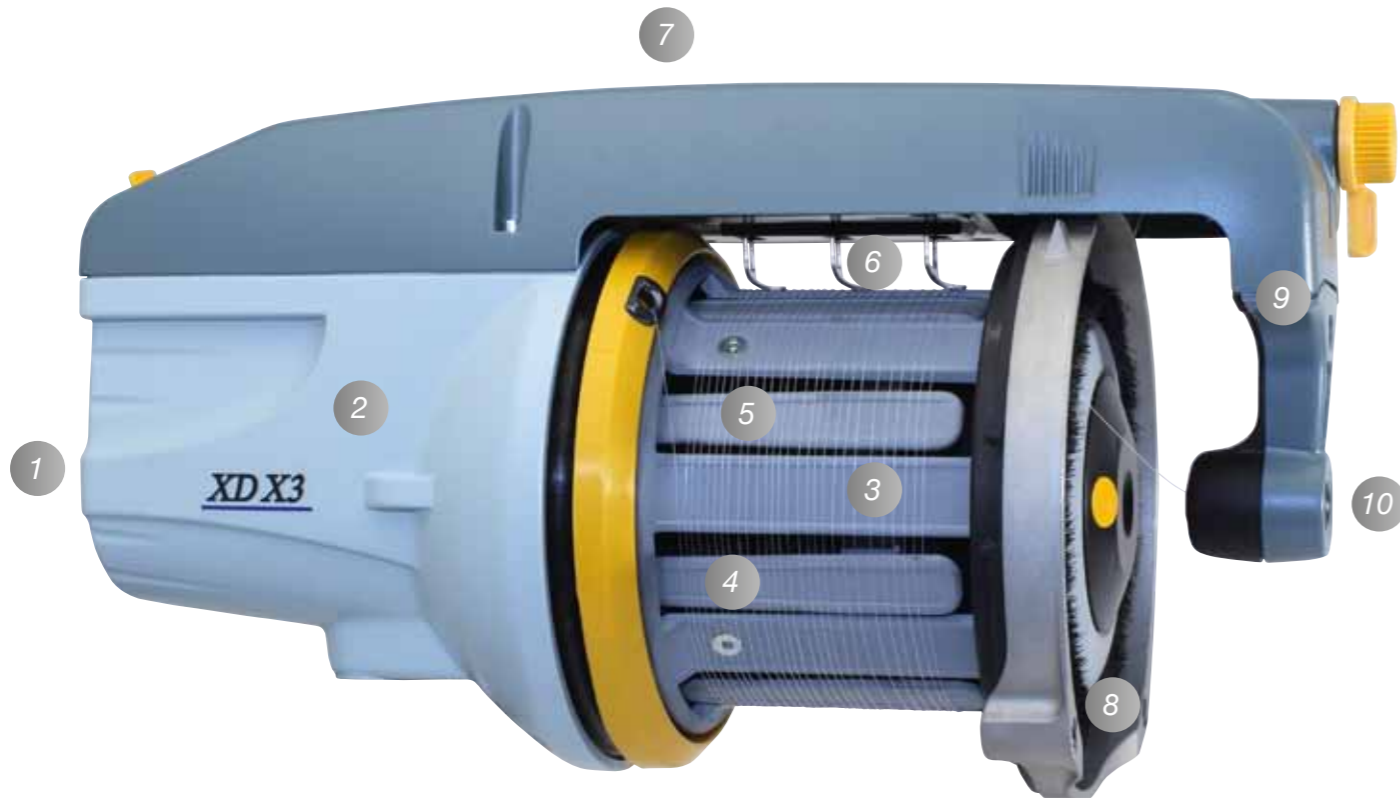
Numerous variations in yarn types continues to present new challenges, but our wealth of experience ensures we are a perfect partner in the weaving process



Tablecloths and household linen

Natural fibres woven with simplicity to furnish the most elegant tables is an art in itself





”Countless variations in yarn fibres continue to make new and rigorous demands on yarn tension control”

We provide unique solutions to the demands of specialised applications. Decades of experience in yarn feeding technology with a range of specialised yarns.

Technical textiles

	1	2	3	4	5	6	7	8	9	10
	Input	Motor	Spool body	Tumble cylinder	Separation	Sensor	Others	Brake/balloon control	Output angle	Output accessories
Mono filament diameter 0,8 mm - 2,5 mm	Rotating ceramic disc + large balloon breaker	700 W	Plasma coated, concave	Plasma coated	Standard	Optical	One-way bearing, stiff bellow	Brush ring x-stiff synthetic "Z"	55°	Double rotating ceramic disc
Mono filament diameter 0,1 mm - 0,7 mm	Rotating ceramic disc + large balloon breaker	230 W (std)	Plasma coated, concave	Plasma coated	Standard	Optical or mechanical with plasma feet	One-way bearing	Brush ring stiff synthetic "Z"	42°	Double rotating ceramic disc
Aluminium wire 0,05 mm - 0,15 mm	Compensator	230 W (std)	Chromed, concave	Chromed	Standard	Optical	Sealed circuit board area	Brush ring medium natural "Z"	42°	Double rotating ceramic disc
Aluminium wire 0,15 mm - 0,4 mm	Rotating ceramic disc	230 W (std)	Chromed, concave	Chromed	Standard	Optical	Sealed circuit board area	Brush ring stiff synthetic "Z"	42°	Double rotating ceramic disc
Aramid fibre 3 mm flat	Compensator	230 W (std)	Chromed, special treatment, concave	Chromed	XL	Optical	Stiff bellow	Brush ring stiff synthetic "Z"	55°	Multiple leaf tensioner
Jute > Nm 1	Compensator	700 W	Plasma coated	Plasma coated	Standard	Optical		Brush ring stiff synthetic "Z"	42°	Multiple leaf tensioner
Roving texturized < 500 tex	None	230 W (std)	Chromed, relaxation ramp, concave	Chromed	XL	Optical		Brush ring medium natural "Z"	55°	Double rotating ceramic disc
Glass fibre parallel filament	None	230 W (std)	Chromed, polished surface, concave	Chromed	Standard	Optical	Polished shaft, polished eyelets	Brush ring stiff synthetic, long bristles "Z"	30°	Double rotating ceramic disc
Glass fibre twisted filament	Compensator	230 W (std)	Chromed, concave	Chromed	Standard	Optical	Polished eyelets	Brush ring stiff synthetic, long bristles "Z"	30°	Double rotating ceramic disc
Carbon fibre (not flat)	Compensator	230 W (std)	Chromed, relaxation ramp, concave,	Chromed	Standard	Optical	Sealed circuit board area	Brush ring stiff synthetic "Z"	30°	Multiple leaf tensioner

IRO AB/ROJ s.r.l reserve the right change the contents and/or specifications without prior notification. Recommendations are only guidelines. For best performance tests must be carried through.

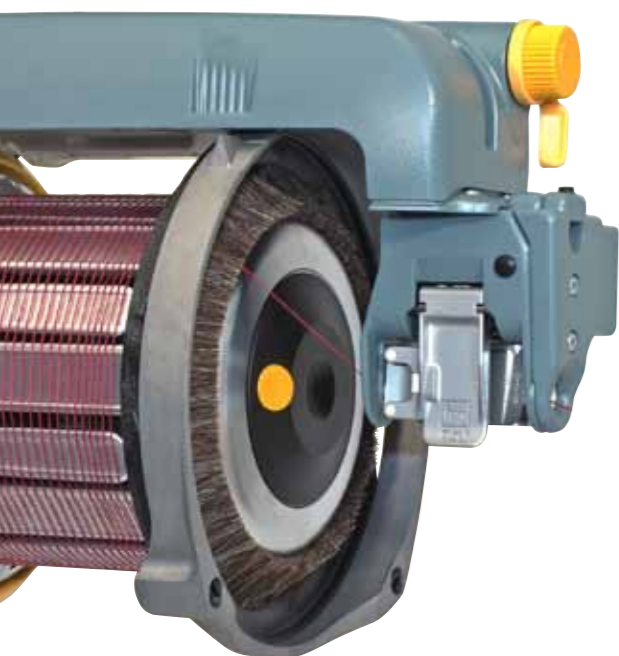


A complete range



Our comprehensive range of accessories are tools to further optimise feeder performance and bring your weft insertion to the highest level to ensure the highest quality of your woven product. Our extensive range of accessories covers everything needed to improve tension and balloon control, and includes sensors for the detection of knots, yarn breaks and bobbin switch-over, and also a range of accessories for lubricating the yarn.

TEC Weaving machine controlled (CAN) active tensioner



The TEC is a proven and reliable programmable tensioner suitable for all modern rapier weaving machines equipped with CAN, fully controlled and set via the weaving machine panel. The TEC can also be equipped with optional automatic cleaning.

- Extremely fast and precise operation
- Compact modular design
- Integrated pneumatic cleaning
- Suitable for most yarn types
- Excellent yarn tension regulation, reaction time 2,5 ms for maximum effect.
- The tension leaf used has a long braking surface.
- Good knot passage, tilts the leaf (1,4 g) to reduce yarn tension peaks
- Easy handling
- Low dust accumulation
- Compact and integrated into the weft feeder
- Good wear resistance.

E-flex Compensating tensioner and balloon control



The most popular combination of tensioner and balloon control on the market today. The E-Flex has proven to be a very flexible solution for spun yarns and is appreciated by customers worldwide. This patent protected item continues to be a corner stone for solving tension difficulties on an array of different yarns.

- High-wear resistance
- Low dust creation/accumulation
- Self-cleaning tension surfaces.

S-flex Compensating tensioner and balloon control



Expanding on the design of the M-Flex, the S-Flex has been developed with a design focused on the combination of "balloon control" and "braking" functionality that covers a range of typical yarns and applications. An optimized braking cone ensures a solution with excellent performance and further improved resistance to wear.

Performance, versatility and longevity are the driving factors behind the development of this new family of brakes, where one brake is able to cover an extensive range of applications.

- For low and constant tension, these brakes can replace natural soft brushes, with the great advantage of being self-cleaning.
- Designed to achieve the criteria of a "one brake, one application" solution. See also our application recommendations.
- High resistance to wear.
- Compact modular design
- Compatible with the optional pneumatic threading system
- Available with PEEK material in the cone

Brush Balloon control only



The traditional brush element used for balloon control when the yarn is inserted into the weaving machine, exists in many different versions, including: Direction orientated bristles for the optimum performance, different bristle materials and a range of bristle thicknesses.

Our vast experience has created a range of brushes available today for all weaving requirements.

- Versatile
- Large variety of versions depending on yarn type
- Suitable for most yarn types.

CAT Coaxial output tensioner



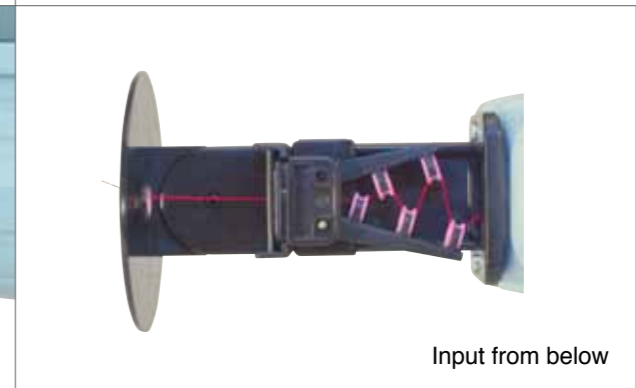
A compensating tensioner for mid/low speeds, that is suitable for most yarns, but particularly suited to give excellent results with endless filament yarns. Has a high wear resistance. And is a self-cleaning unit. With a ceramic version for extreme wear conditions.

- Compensating tensioner for mid/low speeds
- High-wear resistance
- Self cleaning
- Ceramic version for extreme wear conditions
- Suitable for most yarns.

Compensator



A compensator is used when the yarn needs to be stretched before weft-insertion. A compensator can be used for most yarns, but is mainly used for twist yarns. There are versions for mounting on both the input and output sides of a weft-feeder. Combinations of leaf brake assemblies fitted with compensators are available.



Lamella Tensioner and balloon brake



A combination of tensioner and balloon brake widely used for high-twisted yarns and delicate thin yarn applications. The yarn is handled gently, but at same time the Lamella Brake ensures the required tension level.

- High-wear resistance
- Self cleaning tension surfaces.
- Especially suited to high twist and silk yarns.

M-flex Compensating tensioner and balloon control



A highly proficient brake that utilizes magnetic springs to create the required tension. The braking cone is made from a special material that has a very high resistance to wear but with high flexibility. Performance, flexibility, extensive application range and longevity are the challenges this product overcomes. Particularly suitable for very low and constant tension level, can replace natural soft brushes, with the great advantage of being self-cleaning.

- Excellent performance for both high and low tension applications
- High resistance to wear
- Compact modular design
- Compatible with the optional pneumatic threading system
- Suitable for most yarn types.

Leaf tensioner

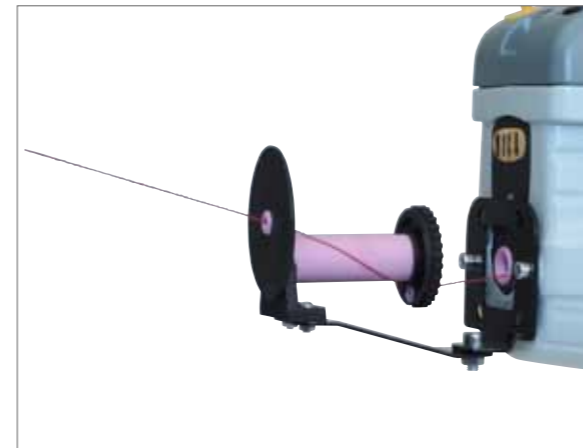


The traditional Leaf brake system is very versatile for applying tension to a yarn, and covers most yarns used today. Our specific recommendation is for high twist yarns, stiff yarns and heavy yarns.

The Leaf Tensioner consists of a minimum of two leaves. The leaf itself varies in thickness depending on the tension required. Thicknesses vary from 0.08 mm to 0.20 mm. Most of the types available have a surface treatment of hard chrome with a minimum of 5 um up to 12 um, to increase the life of the leaf.

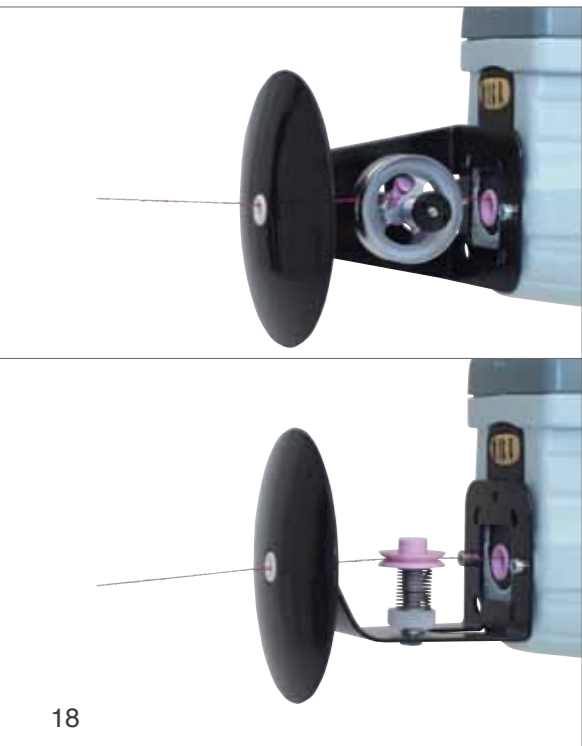
For special applications, such as thin yarn sizes (high yarn count) where low tension is required, a special treatment named DLC has proven to give excellent results

Twine-Around Brake



The Twine-Around Brake is used for yarns which have a twist greater than 2000 turns/meter (crepe, silk, viscose, etc.), and where snarls may form during yarn movement.

Rotating disc tensioner



Exists in two versions, where the metal disc execution is suitable for spun yarns, and the ceramic disc execution is recommended for filament yarns. This brake type has one major advantage, it is self-cleaning. Mainly used at the input side of a weft feeder.

Balloon breaking cone or funnel



This item can be supplied when the combination of the weight of the yarn together with the insertion rate (meter per minute) of the weaving machine requires that the balloon created by the yarn is correctly controlled. These are for extreme applications and are needed to ensure the yarn can be inserted correctly into the weaving machine.

Low twist unit



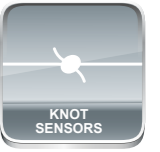
The Low Twist unit is essentially an unrolling device, using an optical system to achieve that the rotation of the package is synchronized with the insertion speed of the loom.

This concept is specifically designed to improve weaving metallized polyester film e.g. Lurex, since it can reduce twist from ribbon yarn when drawn from the package.

Technical specifications			
Max unrolling speed	600 m/min	Suitable bobbin inner diameter	9 mm
Max bobbin weight:	500 grams	Suitable bobbin external length	65, 87 or 96 mm
Suitable bobbin external diameter	55, 70, 79 or 82 mm		

The Low Twist unit must be installed behind a weft feeder, and the new model Low Twist X3 can be connected to the same Voltage Supply Box of the X2 / X3 generation of rapier feeders.

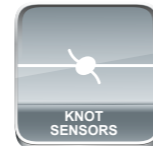
Knot sensor LB



A completely new design with competitive pricing

- Suitable for middle to big sizes of yarn (from Nm 35 to Nm 2)
- Works with a magnetic sensor which detects the leaf oscillations when knots pass through the ceramic tubes
- Detects only knots and not yarn irregularities
- Easy mechanical adjustment of the distance between the ceramic tubes
- No parts subjected to wearing.

Knot sensor



The X2 Knot Detector, for simple and precise monitoring of knots in the weft. The detector is integrated with the feeder's CAN communication network giving immediate reaction to irregularities, but can also be used with stand-alone systems. The virtually contact-free design of the detector ensures that no additional tension is applied to the yarn even when weaving at maximum insertion velocity. The unit is easily installed and can be used together with all the input and output components in the X2 system.

- Yarn-count range: Nm 40 – Nm 150
- Easily adjusted to the required yarn count
- No wearing parts
- Power supply and signal directly from the feeder.

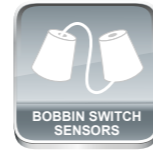
Piezo sensor



External piezo sensors for multiple yarn insertions. The multi yarn sensor system can control a combination of up to eight wefts divided between up to four weft-feeders at the same time.

The TFE-6 Piezo sensors ensure a high level of sensitivity with a minimum increase in yarn tension and the compact design makes the system extremely simple to install. This system is available both for rapier and air jet feeders.

BSS Bobbin switch sensor



Compact Sensor designed for integration in the CAN communication system. It is designed to give an instantaneous, reliable indication of bobbin switch-over, allowing the weaving machine to take the appropriate measures. The BSS is extremely simple to install.

Multiple uses:

- Signal to change the air pressure level on an Airjet machine.
- Activate knot removal cycle (between yarn bobbins) for knot free weaving.
- Signal that a yarn bobbin needs renewing.
- Supply information to a data collecting system.

Advantages with our solution:

- Simple and efficient function
- One moving part
- Low yarn tension at switch-over
- Robust and compact design.

Powered weft lubricator



The X2/X3 powered weft lubricator is an automatically controlled oil dispensing device for use on all X2/X3 series feeders. The Oiler is integrated into the systems communications network and is therefore fully synchronized with the feeder's insertion speed.

The dosage rate of the oiler can be electronically adjusted allowing the application of lubricant to be exactly adapted to the required volume. The unit is extremely simple to install and can be used together with all other input and output components in the X2/X3 system.

The feed cylinder is self-cleaning and it is powered by a maintenance free synchronous motor.

The powered lubricator has many production advantages, such as; even weft lubrication, reduced lubricant waste, reduced wet spots, improved fabric quality, reduced weft breakage - enabling increased weaving efficiency and speed.

Overview

	Wool (page 4)	Furnishing and upholstery (page 4)	Shirting (page 5)	Denim (page 5)	Silk, filament and fancy fabrics (page 6)	Curtains (page 7)	Bed sheeting and towels (page 8)	Table cloth and household linen (page 8)	Automotive/ Technical fabrics (page 9)	Technical fabrics (page 10-11)
TEC (page 14)	•		•	•			•	•	•	
S-flex (page 14)	•	•	•	•	•	•	•	•	•	•
E-Flex (page 15)	•	•	•	•	•	•	•	•	•	•
Brush (page 15)	•	•	•	•	•	•	•	•	•	•
CAT (page 16)					•					•
Lamella (page 16)					•	•		•		
Compensator (page 17)		•	•	•	•	•	•	•	•	•
M-flex (page 17)	•	•	•	•	•	•	•	•	•	•
Leaf tensioner (page 18)	•	•	•	•	•	•	•	•	•	•
Rotating disc tensioner (page 18)	•	•	•	•	•		•	•	•	•
Twine-Around brake (page 19)					•	•				
Ballonbreaking cone or funnel (page 19)										•
Low Twist Unit (page 20)		•			•					
Knot sensor (page 20)	•				•				•	•
Knot sensor LB (page 23)		•			•	•	•	•	•	•
Piezo sensor (page 23)	•	•			•	•	•	•		•
BSS (page 24)	•	•	•	•	•	•	•	•	•	•
Powered weft lubricator (page 24)	•	•			•	•		•		•

IRO AB/ROJ s.r.l reserve the right change the contents and/or specifications without prior notification. Recommendations are only guidelines. For best performance tests must be carried through.

◀ VAN DE WIELE
CARPET AND VELVET WEAVING MACHINES



◀ BONAS
ELECTRONIC JACQUARDS



◀ TITAN
FINISHING MACHINES



◀ COBBLE
TUFTING MACHINES



innovation through creativity



vandewielegroup.com

iro
FEEDERS



ROJ
FEEDERS/CONTROLLERS



iro
MEMMINGER-RO
KNITTING TECHNOLOGY



PROTECHNA
QUALITY ASSURANCE FOR TEXTILES



Aros electronics AB
MOTORS & DRIVES



Through research and development, in a close relationship with our customers, the Van de Wiele group offers a comprehensive range of equipment designed to exceed the ever-growing expectations of the textile industry.

We offer

- solutions for pile, plain, shaft and Jacquard weaving
- yarn tension and control for all knitting and weaving applications
- extrusion and tufting equipment
- quality assurance and inspection systems for knitting, weaving and warping
- finishing equipment

Let us share our knowledge and expertise in textile technology with you.



IRO AB
Box 54
SE-523 22 Ulricehamn
SWEDEN
Tel: (+46) 321 297 00
Fax: (+46) 321 298 00
info@iro.se www.iroab.com



ROJ srl
Via Vercellone 11
IT-13900 BIELLA
ITALY
Tel: (+39) 015 84 80 111
Fax: (+39) 015 40 58 15
comm@roj.com www.roj.com