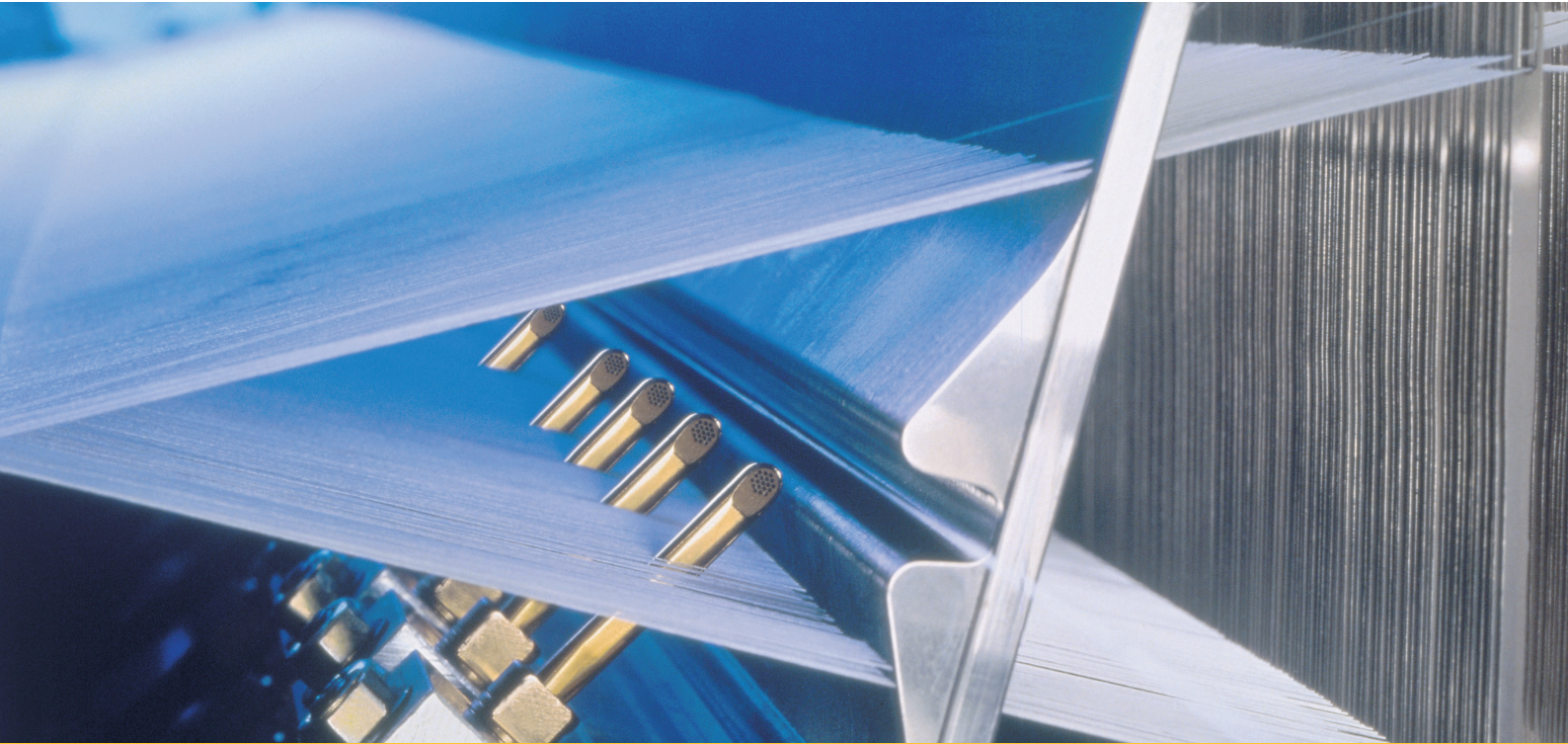




Loepfe



# **WEFTMASTER®**

**Solutions for top quality fabrics**



# TOP QUALITY FABRICS

## **WEFT MASTER®**

**SOLUTIONS FOR TOP FABRICS**

The history of LOEPFE BROTHERS LTD. is the history of its ideas and solutions. Since more than 55 years LOEPFE is a synonym for competence and consequence in comprehensive solutions for quality assurance in the weaving and spinning mill. It is not accidental that the worldwide active Swiss company is also known as «Masters in Textile Quality Control» in the industry.

### **Specialists working Hand in Hand**

As textile electronic specialist in the field of filling thread insertion systems on weaving machines, LOEPFE has a worldwide experience on all machine types. Not only electronic engineers and software specialists but also weaving specialists are working hand in hand. A fruitful cooperati-

on: the customer list includes all leading weaving machine manufacturers and their customers.

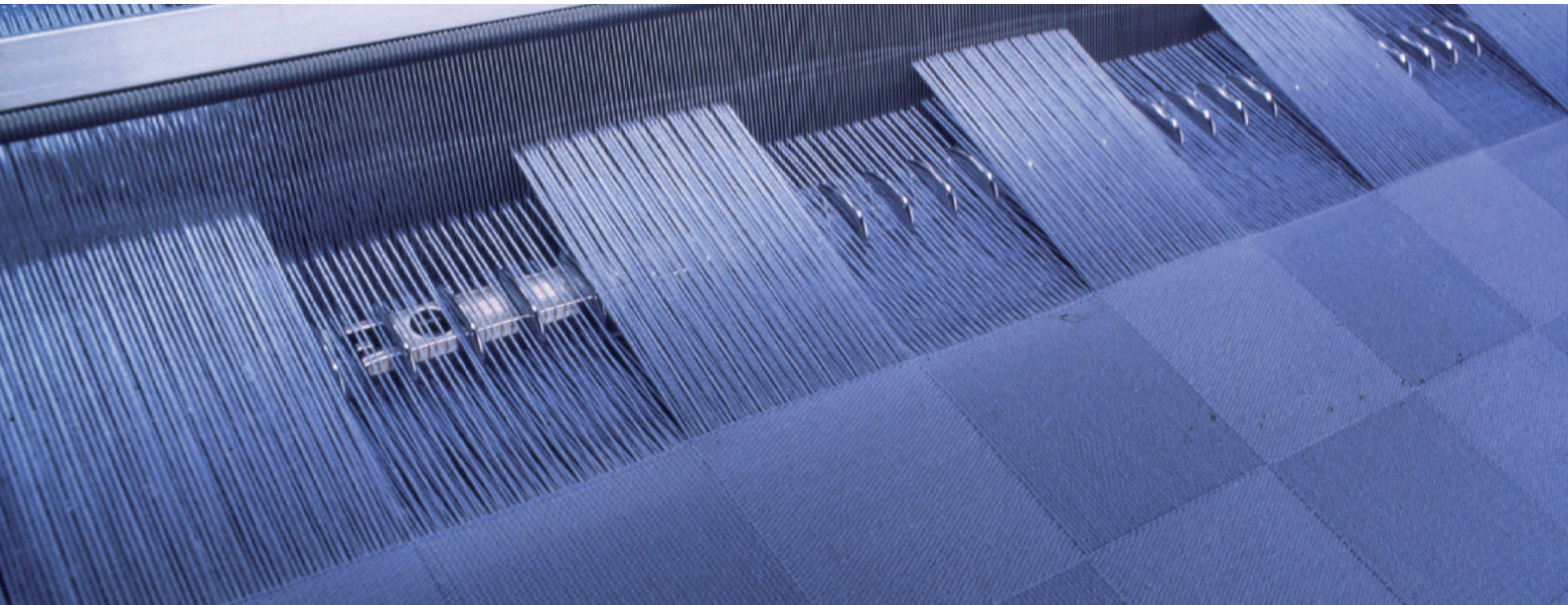
### **Customized Solutions as required**

LOEPFE develops customized solutions for integration into the most modern machines in close cooperation with machine manufacturers. The advantages are: the machine manufacturers can fully rely on the comprehensive experience in the area of filling thread insertion during every product phase. In particular, the enormous flexibility is appreciated. Thus, LOEPFE is capable of producing functional samples and prototypes within the shortest possible time in its own facilities in Switzerland.

<b>Weft Thread Brake</b>	<b>4</b>
optimal controlled brake time <i>for projectile and rapier weaving machines</i>	
<b>Weft Stop Motion</b>	<b>6</b>
detection of every filling break <i>for air-jet weaving machines</i>	
<b>Weft Stop Motion</b>	<b>8</b>
detection of every filling break <i>for rapier weaving machines</i>	
<b>Knot Detector</b>	<b>10</b>
monitoring of all knot-type thickenings <i>for all types of weaving machines</i>	
<b>Yarn Defects Sensor</b>	<b>12</b>
detection of smallest knots, fluff and filamentation <i>for all types of weaving machines</i>	
<b>Yarn Stop Motion</b>	<b>14</b>
monitoring of the running yarn <i>for all types of weaving machines</i>	
<b>Short Weft Detector</b>	<b>16</b>
monitoring of the weft insertion into the last phase <i>for projectile weaving machines</i>	
<b>Thermal fabric cutting</b>	<b>18</b>
separation and fusing of synthetic fabrics <i>for all types of weaving machines</i>	



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# WEFT THREAD BRAKE

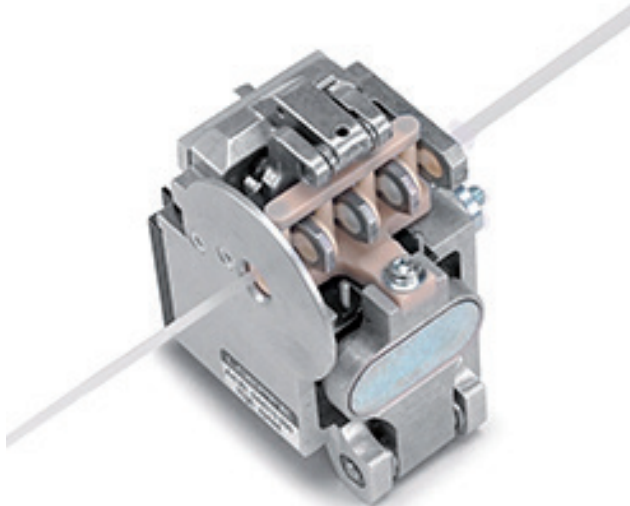
**WEFTMASTER®  
SFB-L**

for projectile and rapier weaving machines

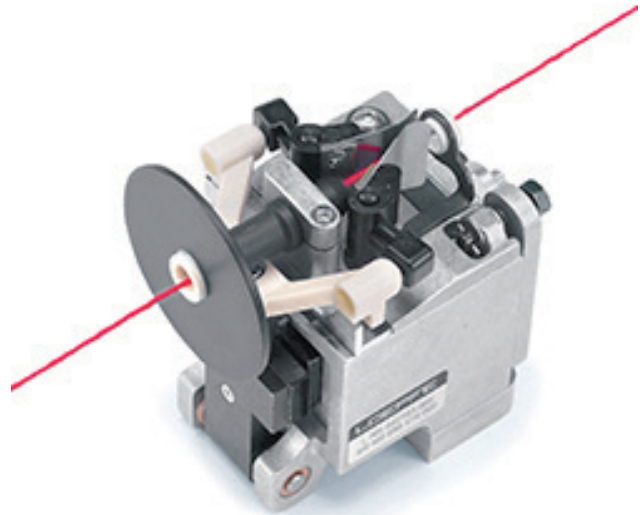
**Minimum weft thread tension  
owed to optimum brake timing**

**Features**

- higher machine performance and better fabric quality
- less weft thread breakage
- amortisation within one year by better quality of fabric and increase of machines' efficiency
- easy handling
- self cleaning



*SFB-L deviation brake head*



*SFB-L flat spring brake head*

### **SFB-L**

- guaranteed optimum late braking start due to electronic control by the projectile sensor which results in minimum, uniform weft thread tension.
- gentle braking of the weft threads with the LOEPFE brake assembly, thus fewer weft breaks.
- no change in brake performance due to yarn abrasion, due to the self-cleaning deviation principle
- all brake parts in contact with the thread are made of wear-resistant ceramic
- sturdy construction of the brake assembly with only one flexible part
- retrofittable to all projectile weaving machines

### **SFB-L Flat Spring Brake Head**

Preferably for use with filling threads with low tensile strength.

- preferably for use with filling threads with low tensile strength
- the resilient pressing system with gentle thread handling requires absolutely no initial tension of the filling thread, i.e. the output tension can be reduced to the absolute minimum on the accumulator
- the electromechanical system of the deflection brake head, which has delivered an optimal performance in practice in the weaving mill, has been retained
- all brake heads are exchangeable and can also be used in mixed operation on the multicolor weaving machines
- the control of the optimally delayed braking begin takes place by means of the patented projectile sensor with millisecond precision as with the delayed brakes.



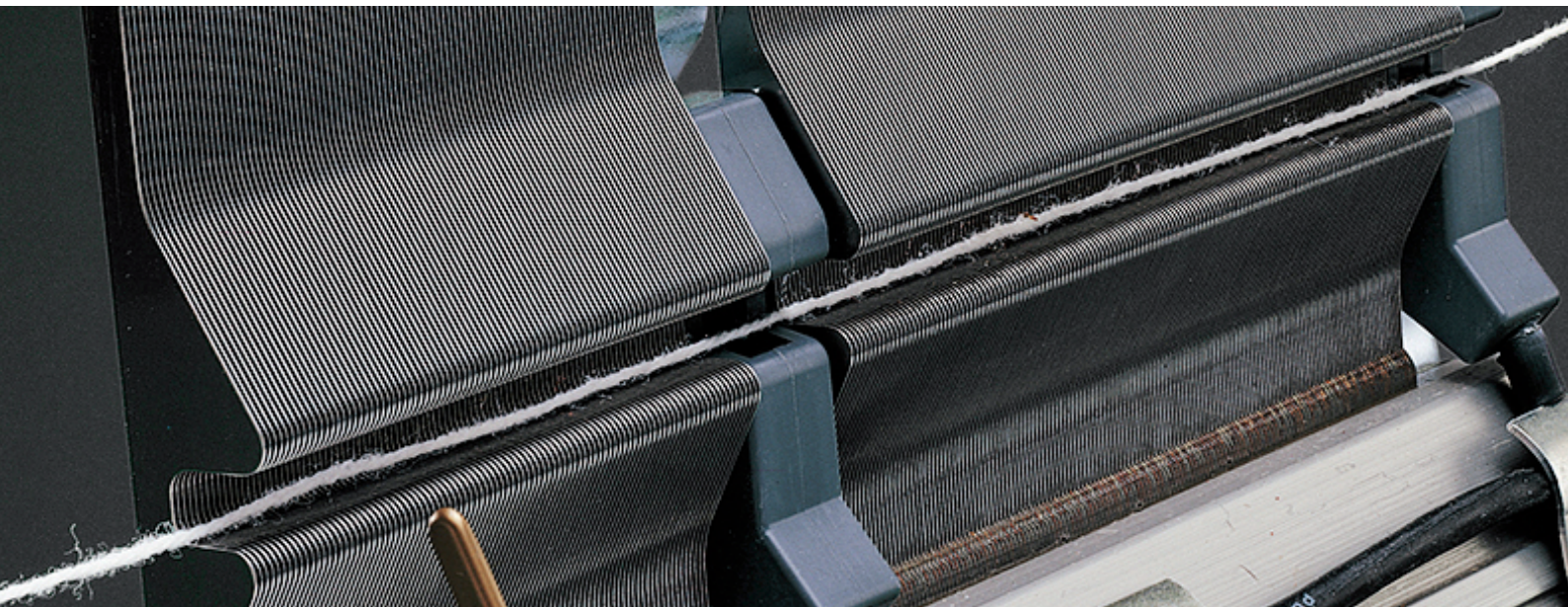
# WEFT STOP MOTION

WEFTMASTER®  
**SWA**

for air-jet weaving machines

**Detects every weft break on air-jet weaving machines.**

**Reliable monitoring of all types of weft breaks by sensors which are mounted on the sley.**

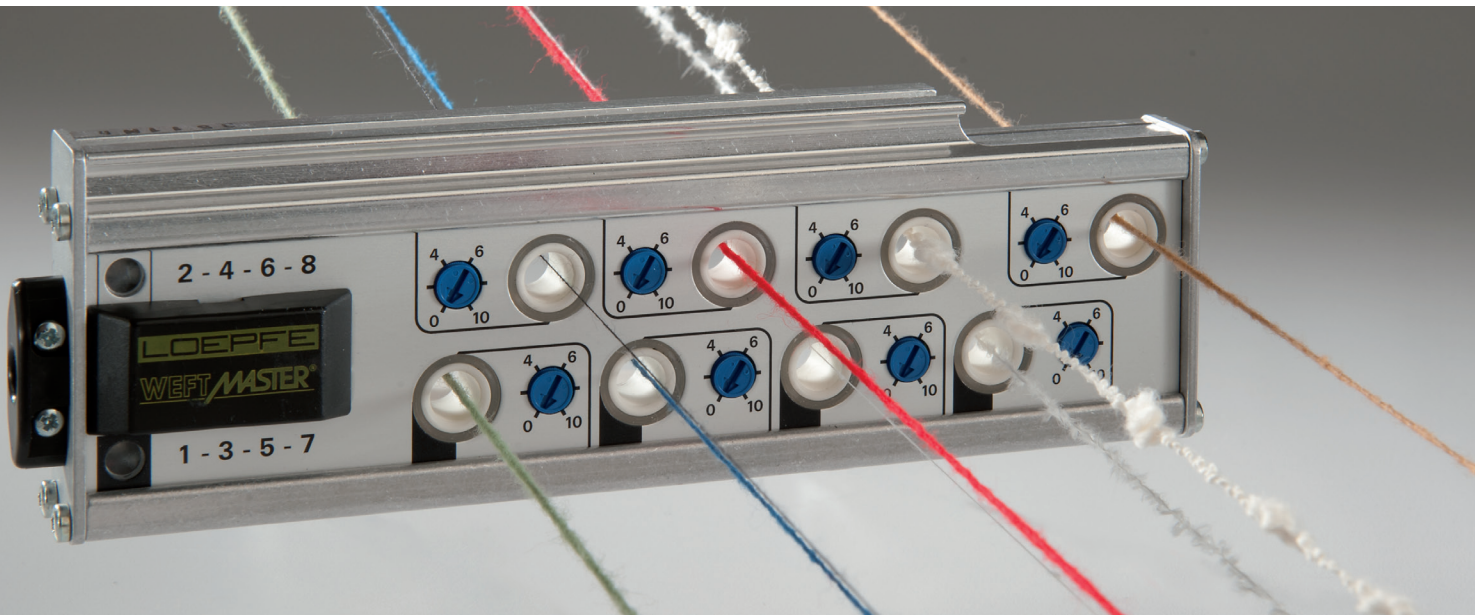


### **Advantages**

- instant detection of a weft fault
- work with all types of yarn
- can monitor the yarn at a low tension
- insensitive to dust, dirt or humidity
- reliable

### **Features**

- automatic light readjustment when sensors are dirty
- easily attachable control box with digital outputs for the sensor signal
- four sensitivity levels



# WEFT STOP MOTION

## WEFTMASTER® SW-G / SFW-L

for rapier and projectile weaving machines

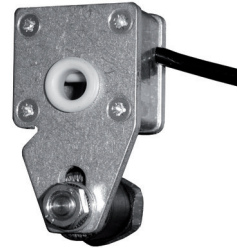
### The weft stop motion detects any yarn break or yarn stoppage

The movement of the weft yarn is detected up to the fabric selvedge with piezo-electric signal transmitters. The reliable monitoring of the weft insertion is performed on the overall fabric width and even for different weft yarns. The weft yarn moves over the sensing device without additional tension and with only little deviation.





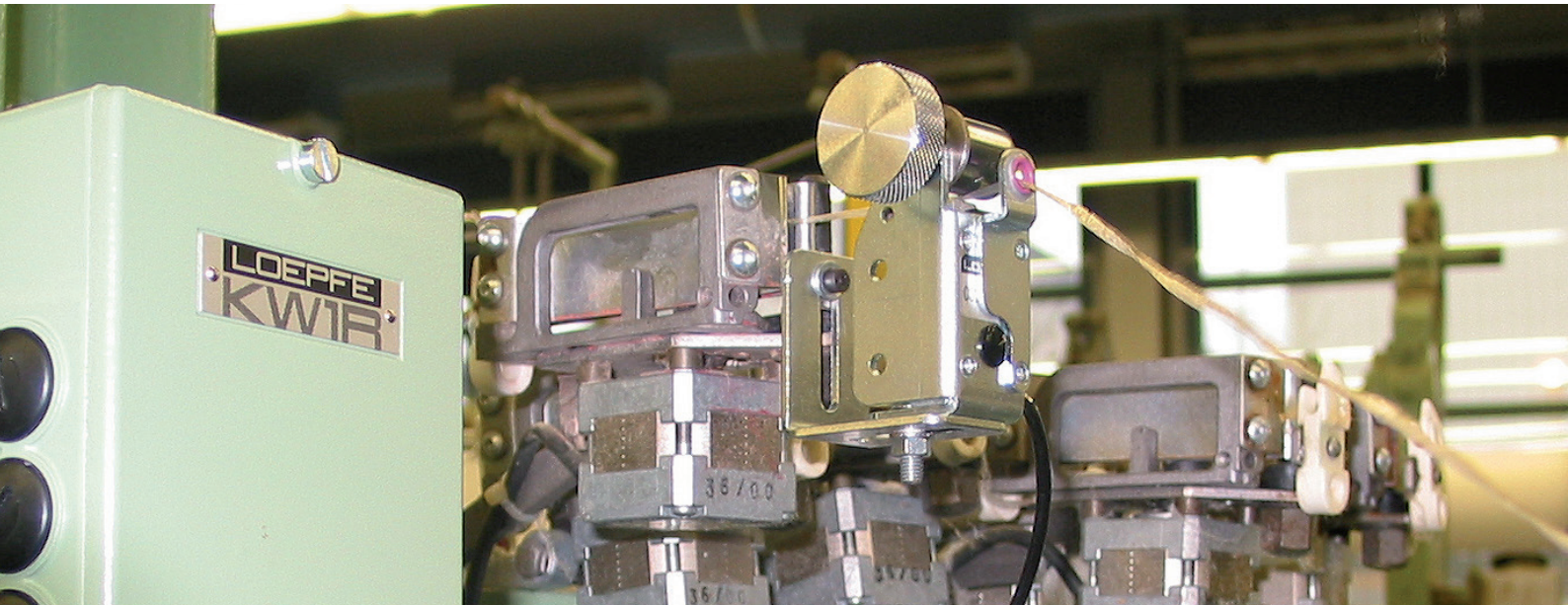
*SW-10G for rapier weaving machines*



*SFW-L for projectile weaving machines*

## Features

- instant detection of a weft fault
- direct signaling to the control unit of the weaving machine
- works with all types of yarn
- 8 thread guides
- single or multiple input possible
- monitoring of yarn at a low tension possible
- insensitive to dust, dirt or humidity
- reliable



# KNOT DETECTOR

WEFTMASTER®  
**KW**

for all types of machines

The piezo-electrical knot detector monitors all knots in running yarn - simple and reliable.

„Knotless weaving“



*KW-1R*

### **Applications**

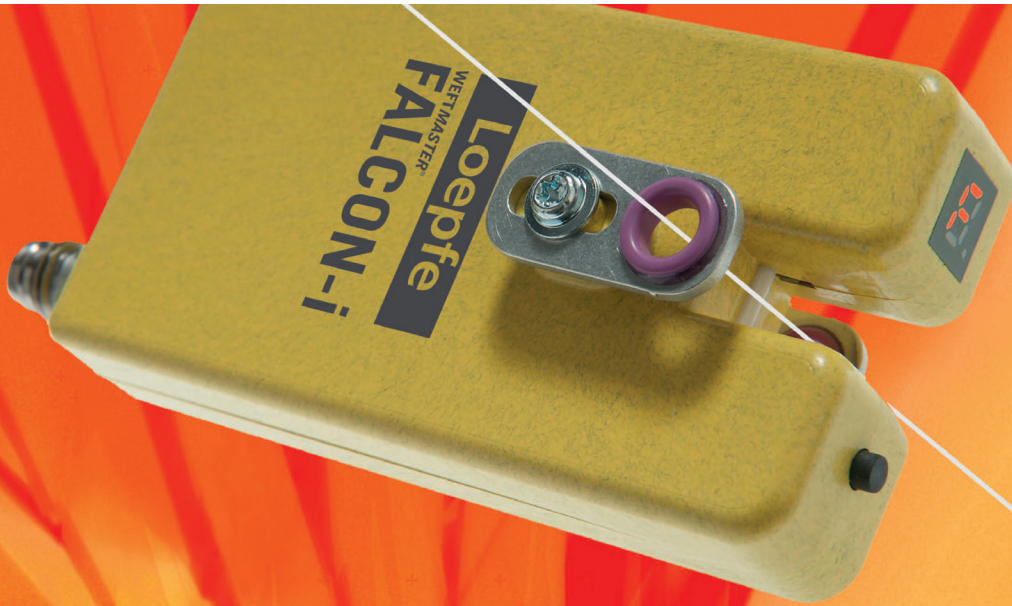
When a knot passes the sensor, a predefined action can be released, such as activating:

- a stop at the textile machine
- a weft accumulator
- a cutter
- a counter

### **Advantages**

- compact and robust construction
- quick reaction time
- simple adjustment
- suitable even for finest yarns too
- no wear and tear
- no additional yarn tension
- no false impulses by fluff
- indicator lamp on amplifier box
- every kind of yarn up to a diameter of 3mm

Alternative product: WeftMaster FALCON-i



# OPTICAL YARN DEFECTS SENSOR

## WEFTMASTER® FALCON-i

for all types of machines

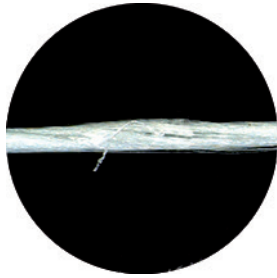
### Removing smallest knots, fluff and filamentation

Loepfe's novelty in optical quality assurance is reliably removing smallest yarn defects in the textile manufacturing process.

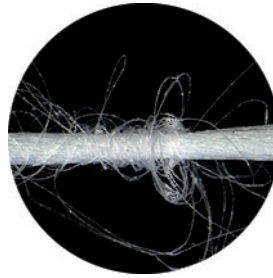
Wherever hardly detectable yarn impurities can affect your valuable end product, you will prefer Loepfe's FALCON-i as your companion for achieving quality beyond expectations.

The new optical yarn defects sensor FALCON-i is an important innovation to complement the solutions of the knotless weaving concepts. All conventional knot detectors have limitations in regard to the size of the yarn defects or knots to be detected. Problems faced in manufacturing high-tech fabrics, such as eliminating smallest knots, fluff or even filamentation from the weft yarn, are solved by installing FALCON-i yarn defects sensors.

### Eliminated defects in multifilament yarn



*Filamentation*



*Fluff*

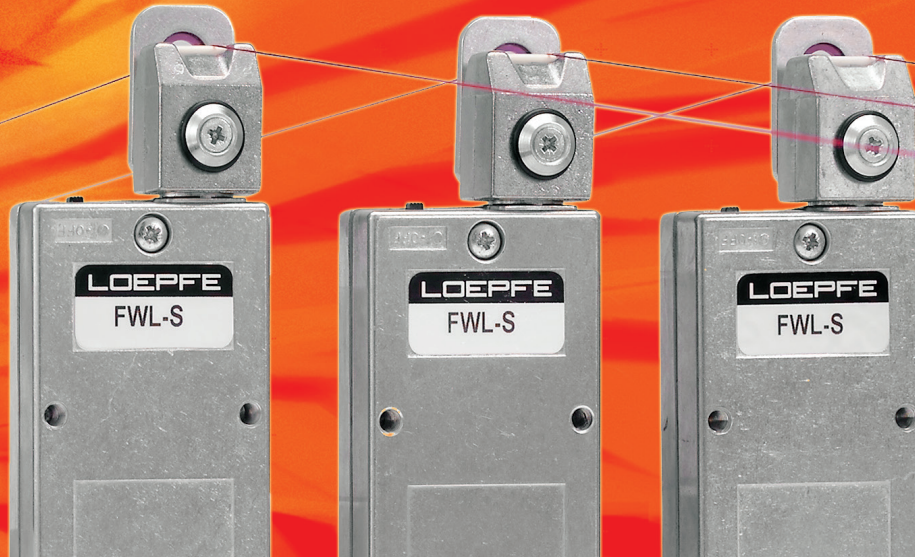
#### **Application**

- wide yarn range: 20 – 3000 dTex
- color of yarn does not matter
- yarn speed up to 30 meters/second
- conductive materials (carbon fibers)
- monofilament or multifilament yarns
- chemical resistant housing

#### **Advantages & Features**

- detects fluff, knots and filamentation
- easy, intuitive user interface
- one button operation
- settable sensitivity level to match your end-product quality requirements
- automatic or manual setting of sensitivity
- processor controlled optical detection engine
- fast, uncomplicated installation and setup
- industry Standard Connector
- PNP and NPN signal output
- evaluation electronics shielded against electrostatic or electronic magnetic interference
- only minimal yarn deflection needed
- Other sensors can be omitted or replaced by FALCON-i

Alternative product: WeftMaster KW



# YARN STOP MOTION

WEFTMASTER®  
**FWL**

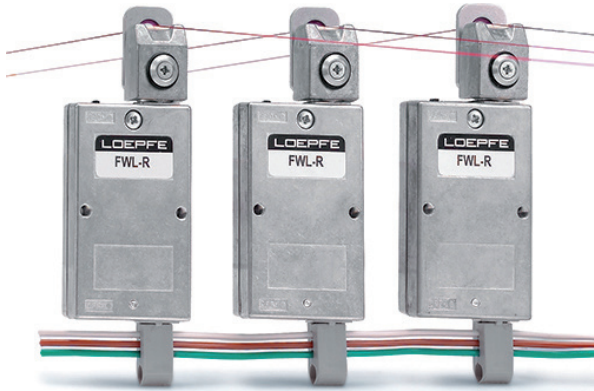
for all types of machines

**The piezo-electric yarn stop motion detects any yarn break or yarn stoppage**

## **Application**

Various applications wherever threads must be continually monitored.

- winding machines
- roving machines
- yarn preparation machines
- sewing machines
- texturizing machines
- spinning machines
- cable machines
- twisters
- plastic rattan weaving



FWL-R



FWL-S

## Features

Movement detection on yarn or cable

- accepts all yarn qualities
- fast reaction
- minimum of yarn tension
- insensitive to dirt
- high noise immunity
- no moving parts
- maintenance free

## FWL-R

FWL-R sensing head with logical signal output for activation of:

- LÖPFE RKL relay box
- relay in machine control
- machine control electronics

Operating voltage: AC 12-30 V / DC 15 - 40 V

## FWL-S

The FWL-S sensing heads and the SG-25 control device form a unit for monitoring up to a maximum of 25 yarn positions with common switch-off. The following additional functions are integrated in this version:

- individual display of yarn break position
- blocked display for external switch-off, e.g. for manual stop
- automatic start-up bridging via motor contactor
- test switch for functional check in case of machine standstill
- stop relay with automatic reset

Control unit supply voltage SG-25:

110 V - 575 V 50/60 Hz oder 24V DC

Sensing head supply voltage: DC 15 V



## SHORT WEFT DETECTOR

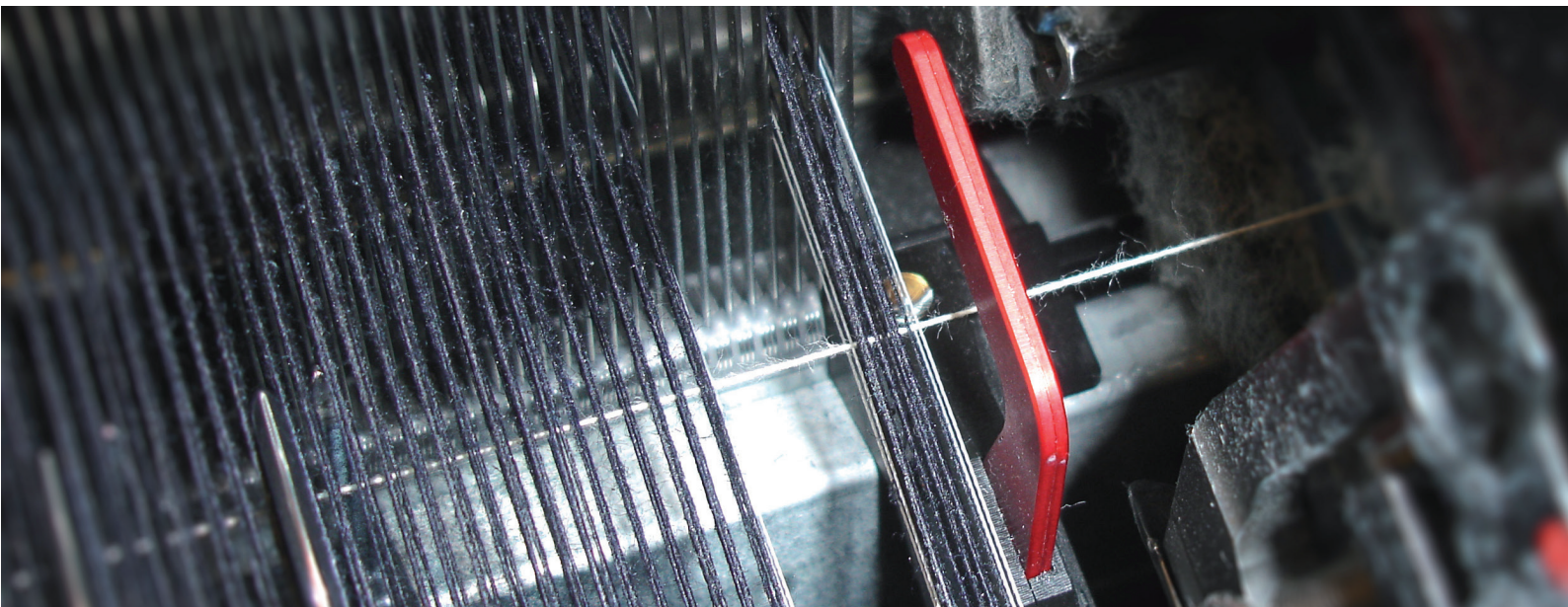
### WEFTMASTER® KBW-L

for projectile weaving machines

**The present generation of electronic weft stop motions monitors weft insertion on projectile weaving machines up to the range of 310 machine degrees, i.e. shortly after arrival of the projectile in the receiving mechanism.**

An extension of monitoring to the end of the pull-back phase at 0 machine degrees is achieved with the KBW-L short weft detector especially developed for top quality requirements in the weaving mill. This also safely detects the shortest misspicks in the right fabric selvedge area. The heart of the KBW-L is the one-piece optical sensor to be fit at the right end of the reed. If the weft insertion is correct an infrared light beam crosses the weft thread at



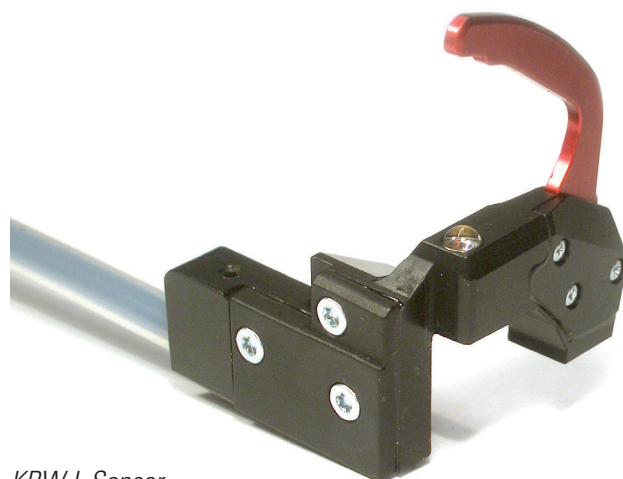


about 0 degrees and is briefly interrupted simultaneously. If there is no weft thread and therefore no light interruption, the machine is stopped at approx. 85 degrees, i.e. after the reed beat-up but still before insertion of the next weft thread. Short mispicks can easily be seen in this machine position and corrected by the operator.



### Features

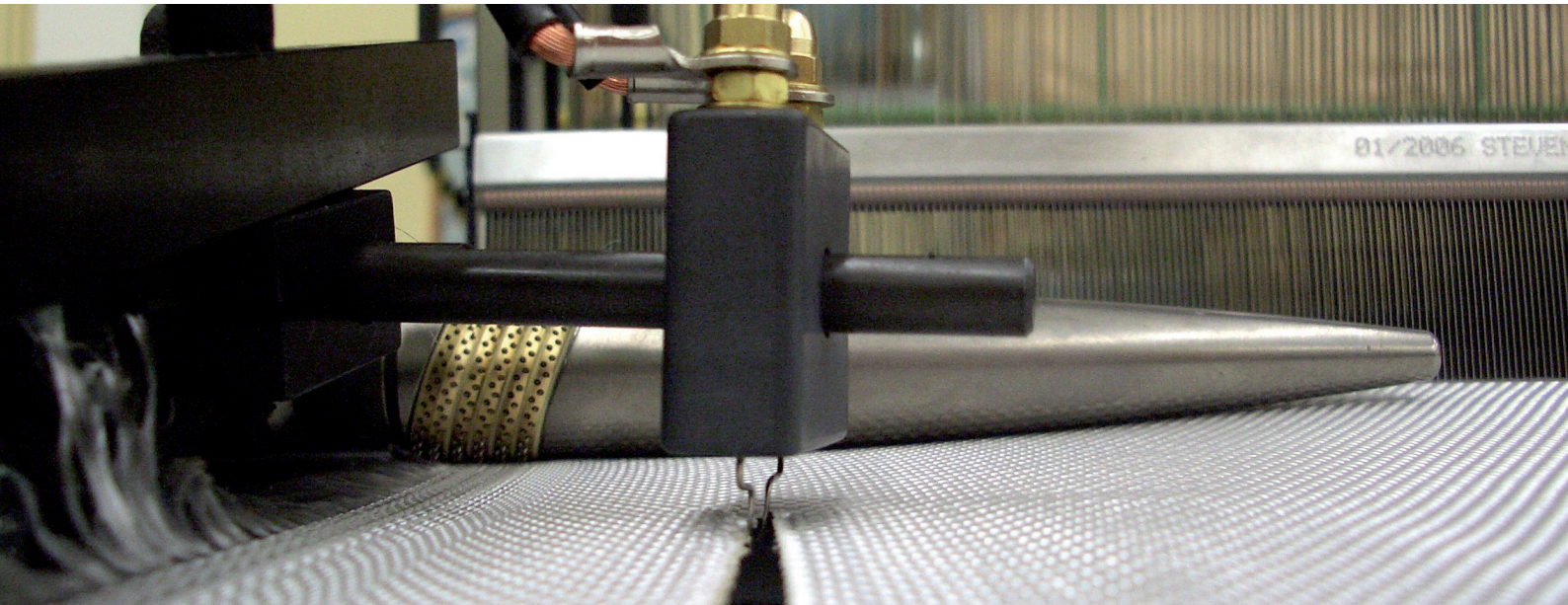
- stops the machine prior to insertion of the next thread
- simple assembly
- simple handling
- indication of pollution
- quick amortisation by higher fabric quality



*KBW-L Sensor*



Loepfe



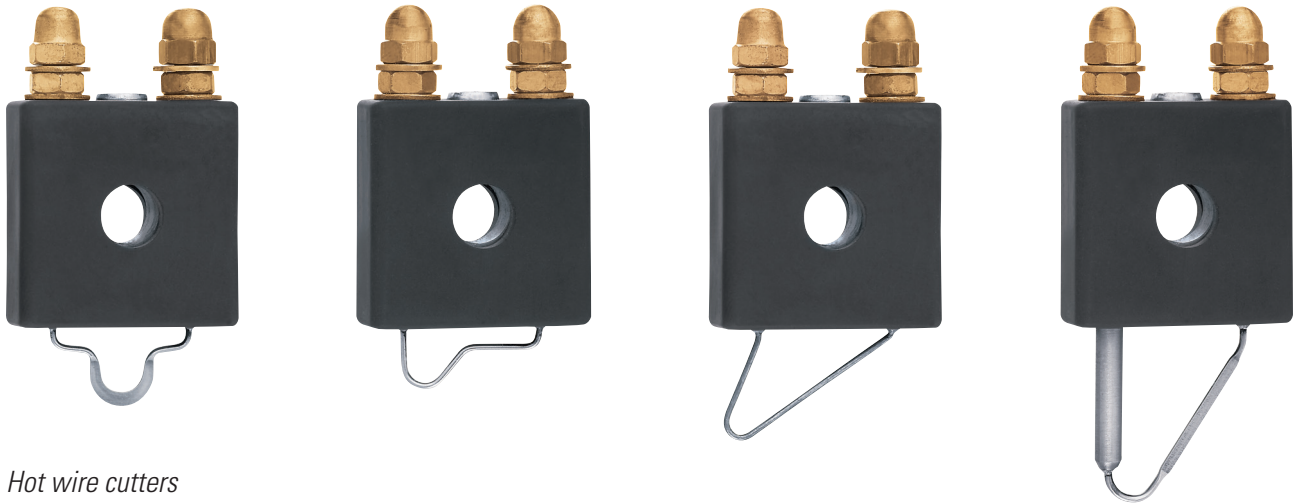
# THERMAL FABRIC CUTTING

WEFTMASTER®  
**CUT-iT**

for all types of machines

**WeftMaster CUT-iT is the ideal fabric cutter system for thermal cutting from thin and light to dense and heavy synthetic fabrics.**

**All applications with a high quality demand benefit from this innovative solution.**

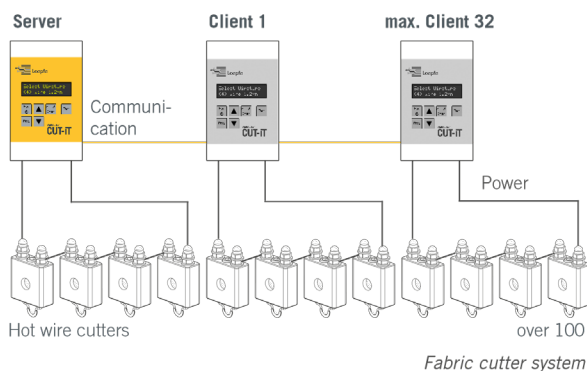


Hot wire cutters

## MEETS YOUR NEEDS

Perfectly cutted woven synthetic fabrics.

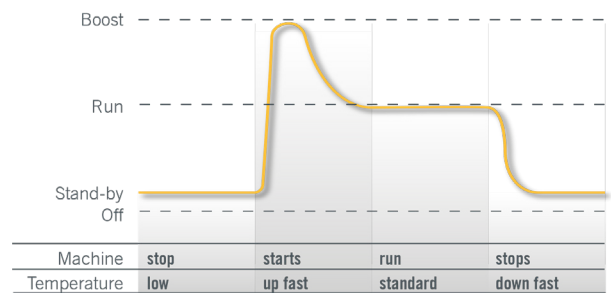
- Perfect results for sensitive and finest fabrics such as medical filters and screen printing meshes
- Constant high-quality selvages for dense or heavy fabrics like carpet backings, airbags, geotextiles and 3D
- Precise performance for maximum safety at fast machine starts and stops
- Cuts coarse fabrics into numerous ribbons thanks to Client-Server functionality



## FACTS & FIGURES

Digital control unit offers various advantages.

- 10 user-defined settings are addable to the 5 predefined
- One control unit operates up to four hot wire cutters at highest power
- Over 100 hot wire cutters can be controlled in Client-Server mode
- Easy retrofit solution for all weaving machine types and WeftMaster TC1
- Runs from industry standard 24V power supply



Temperature control



Loepfe

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