CE

AGTEKS
IntelliWinder

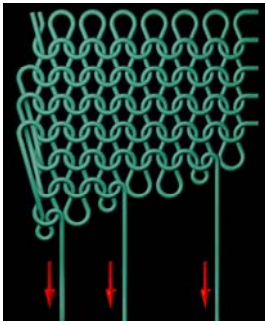# IntelliWinder®

FIRST IN THE WORLD

Intelligent unraveling machine for knitted fabrics

AGTEKS

Challenging Innovations

www.agteks.com

# Unraveling of Single - End Yarns
by *IntelliWinder*®

For a fabric to be unraveled, the yarns from the loops of the fabric should be stretched according to the reverse knitting sequence. There should be some gap between the yarns to be unraveled for not to be tangled each other. This situation is vital to make the unraveling process fluently. *IntelliWinder*® has automated, intelligent function to calculate the reverse knitting sequence and the necessary delay between unraveling yarns. (Patented)

After the unraveling process of a single yarn is finished at the end of the row, the tension remaining on the yarn causes pulling the yarn from the successive loops on the fabric. This event decreases the size of those loops. These small loops avoid the unraveling of the other loops. Then the tangles, damage on the yarn and even breaking of the yarn happens. This problem is very common for any kind of yarn.
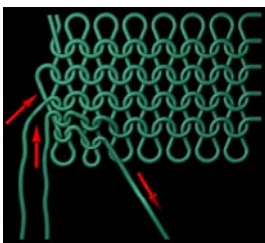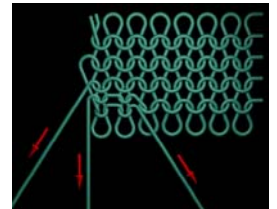
After the unraveling process of a single yarn is finished at the end of the row, the tension remaining on the yarn is completely eliminated automatically by means of genuine mechanisms on *IntelliWinder*®. Then, the tension on the active yarn helps the necessary yarn is supplied from the slackened yarns to the small loops for to be enlarged enough to release the tangled loops. After all the loops are unraveled, obviously the yarns should be stretched according to the correct yarn sequence. *IntelliWinder*® performs all these functions and find the yarn sequence. (Patented)

# Unraveling of Multi-End Yarns
by *IntelliWinder*®
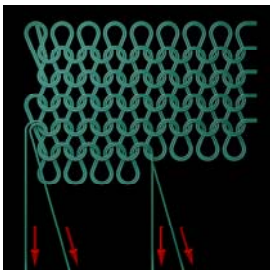
Frequently, more than single ply yarn is used in most of the fabrics. The tension and the feeding supplied as very preciously synchronized. *IntelliWinder*® calculates the necessary parameters automatically and unravels such fabrics by separating th counts of the yarn very fluently.

If the fabric is knitted on a coarse gauge with many yarn ends and with many systems, that time it may not be possible to seperate all the yarn ends. The yarns in the same loops may have different lengths and pre-tensions remained from knitting. Even if one or more plies unravel up to the end of the row, the others may not perform to be unraveled completely.
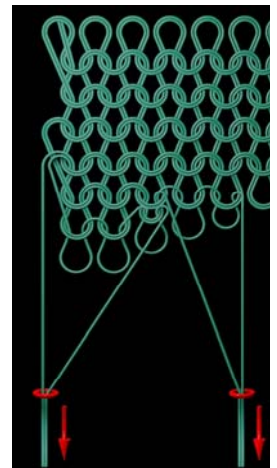
If the yarns ends are pulled simply together, due to the non-unraveled plies exist on the row, the successive unraveling yarn becomes tangled. And the unraveling process becomes more complex. But *IntelliWinder*® has an ingenious function to solve this problem!
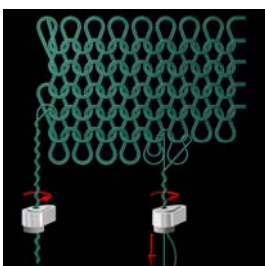
The plies are wound together temporarily by the *IntelliTwister*® mechanism on *IntelliWinder*®. Obviously, the slacker yarn will be wound on the streched one. Twisting them during unraveling makes all the plies are unraveled together. If there are excess slackness remained, the twisting of the stil yarn for a period of the fractions of a second, easily removes all. Certainly, *IntelliWinder*® winds the yarn to the cones without twisted and paralel, as it was only temporary twisting. (Patented)
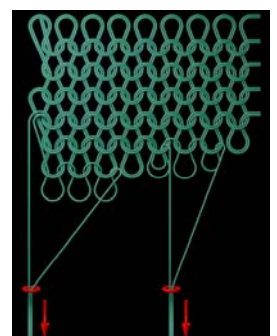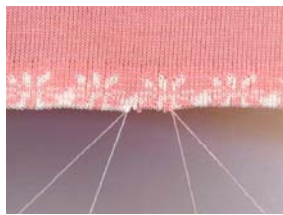
The Real Backwinder

Guarenteed Performance on Any Kind of Yarn & Any Kind of Fabric Structure

PROBLEM OF CONVENTIONAL METHODS

INTELLIGENT SOLUTIONS by *IntelliWinder*®

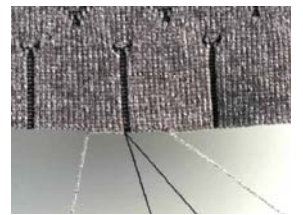**Wool**
Full Jacquard

Cashmere
Floating Jacquard
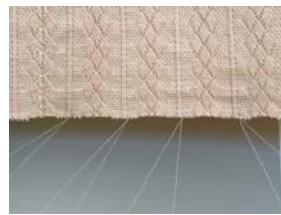
Viscose
Transfer Jacquard

Chenille
Transfer Jacquard

Boucle
Structure

Angora
Intarsia

Wool
Integral Garment

Fine Merino
Double Jersey

Mohair
Lace

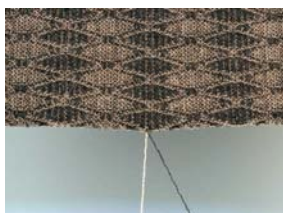**Acrylic**
Lace

Cashmere
Cable

Lambswool
Cable

Wool
Plating

Cotton
Shaping

Fine Cotton
Rib

Boucle
Rib

GONE WITH THE WIND...
CAME WITH THE *IntelliWinder*®...

IntelliWinder ® 12-T

IntelliWinder ® 10-T

IntelliWinder ® 8-T

IntelliWinder ® 6-T

**Let your production
be insured,
Let your factory
be more efficient by**
IntelliWinder ®

Intelligent control software*

What the operator needs is only to guide the yarns and directing some yarn & fabric parameters vis user friendly touch-screen panel. All the rest to do is IntelliWinder's business.

*Patented

Ease in operation via touching a button*

By intelligent software, the buttons for individual systems act accordingly within the same group of unraveling system. By pressing down any of the buttons commencing or ceasing all the group is possible. They work harmoniously owing to being members of the same team.
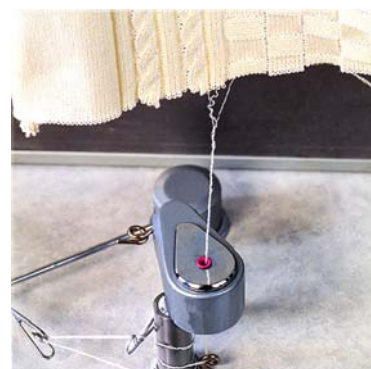
*Patented

Light alloy winder drum with low inertia for energy saving*

Specially designed yarn guide ways on the drum evades hazards to the yarn and prevents yarn jumps on the bobin during process of braking. Toothed surface improves short accelaration and braking period.

*Patented

A revolutionary invention*

The newly developed multi-count yarn tension compensation device, which operates fluently under varying tension and length conditions of the unraveling yarn. This feature is ideal for plating patterns.

*Patented

Ergonomic indicators on each system*

*Patented

Helps operator to be much more aware of the work done even while unraveling more complex fabric. Offers eligible application techniques and of course is human friendly.

Ultra-sensitive tension/reservoir system*

As a novelty, reversibility, low inertia & hardened surfaced double yarn feeders decrease the undesired friction effects during tensioning and loosening of the yarn. Undoubtedly, eligible for weak yarns such as your valuable cashmere which is really delicate and vulnerable at the process of unraveling. Bulky yarns also may easily be unraveled by Intelliwinder.
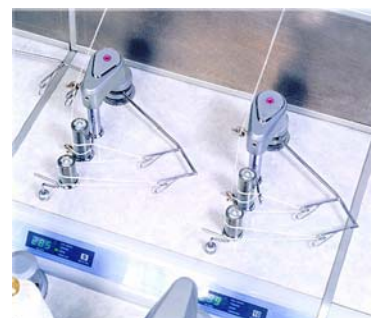
*Patented

Lecture: Economics
Subject: Recovery of money by the recovery of yarn at a knit factory.

No. of knitting machines at the factory : 20
Daily use of yarn : ~40 kg x 20 machines = 800 kg/day
Expected wastage : 5% x 800 kg = 40 kg/day
Price of yarn : ~ 8 Euro
If it is recovered : 8 Euro x 40 kg/day X 250 days/year
= 80.000 Euro / year
If this yarn is used in on-time production : (profit = 1.5 x yarn price)
80.000 Euro x 1.5 = 120.000 Euro per year

A considerable amount !

INCREDIBLY SHORT PAYBACK PERIOD

Genuine devices & technique

Latest technology microprocessor control

Intelligent control software paving the way to eligible solutions

Extremely easy & quick threading

Robust construction

Ergonomic & aesthetic body conception

Very silent operation

Button touch operation ease

Utmost versatility, adjustable to differing kinds of yarn and fabric

Ergonomic displays & indicators

Adjustable to varying parameters by user friendly touch-screen operation terminal

Mass-production began after three years test period at a knitting factory for different sorts of yarn & knit-fabric types.

Possible to recover any kind & any count of yarn such as Cashmere, Lambswool, Shetland, Angora, Merino, Acrylic, Cotton, Linen, Alpaca, Chenille, Boucle, Modal, Polyamide, Polyester etc.

Unraveling of varying kinds of flat knitted fabric is applicable such as; Single jersey, Double jersey, Milan rib, Cable, Structure, Lace, Intersia, Shaping, Integral, Jacquard, Rib, Links, Tuck, Plating etc. Patterns from 3 to 14 gauge flat knitting machines.

By addition of optional multi-count yarn tension compensation device, multi-counts may be unraveled together.

By help of digital inverter, each winding units steepless speed is controlled distinctly.
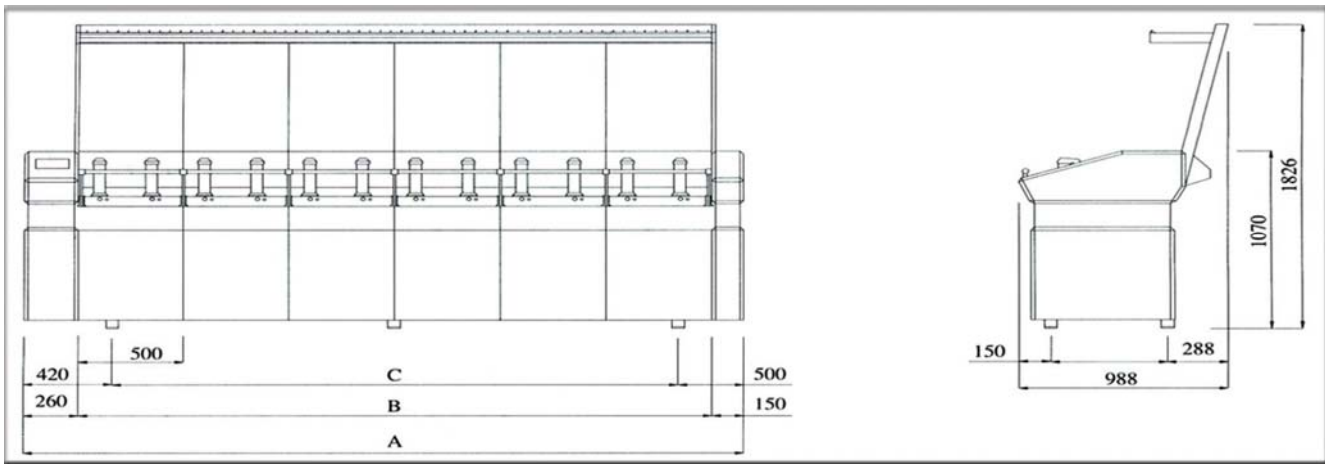
Prompt, silent electronic brake of winding units

Improved safety measures, human friendly

Of course environment friendly in the sense that she evades losses of any kind & contamination.

MODEL	Intelliwinder – 6T	Intelliwinder – 8T	Intelliwinder – 10T	Intelliwinder – 12T
No of unraveling units	**6**	**8**	**10**	**12**
Dimensions A	1910mm	2410mm	2910mm	3410mm
B	1500mm	2000mm	2500mm	3000mm
C	1180mm	1680mm	2180mm	2680mm
Power	220V-1P/380V-3P 1.3KVA	220V-1P/380V-3P 1.7KVA	220V-1P/380V-3P 2.1KVA	220V-1P/380V-3P 2.5KVA
Winding speed	0-300 m/min (all the systems can be adjusted individually)			
Capacity: (varies acc. To yarn count & fabric type)	Max. ~50kg /16hours	Max. ~70kg /16hours	Max. ~90kg /16hours	Max. ~110kg /16hours
Programmable grouping modes of operation:* (no. of yarn counts/fabric)	1x6 2x3 3+3 4+2 6	1x8 2x4 3+3+2 4+4 5+3 6+2 8	1x10 2x5 3+3+4 4+4+2 5+5 6+4 7+3 8+2 10	1x12 2x6 3x4 4x3 5+5+2 6+6 7+5 7+3+2 8+2 9+3 10+2 12
Unraveling method*	Very fast and gently stretching and slackening and/or twisting tje plies of the yarn together, according to the commands from the intelligent controller			
Control method*	Full microprocessor control of unraveling of yarns, by calculating automatically the reverse knitting sequence with intelligent software			
Program input	Ergonomic, easy to use touch-screen display, operation panel			
Yarn tension adjustment*	Via operation panel, by ultra sensitive, precise servo-regulator			
Winding unit*	Light alloy winding drum with low inertia for energy saving Specially designed yarn guide ways for winding unraveled yarn			
Tension/reservoir unit*	Precise, pneumatic driven, multi-guided, with very low inertia, with yarn locking rings, easy threading design. Allows 5-800g tension on the yarn			
Yarn feed unit*	Reversible, low inertia hardened coating, decreases negative friction effects during increasing and decreasing of the tension on the yarn. Can be used together or single			
Multi-ply yarn tension compensation unit*	Makes easy even there are difference of tensions and the length of the unraveling yarn Ideal for plating patterns			
Dust Cleaner	Standard, automatically operates if any unraveling system is active			
Operation in use*	Operator needs only run or stop the process by pressing down to any buttons of the pre-grouped unraveling systems.			
Fabric fixing	By special ball-point needles, which allow easy fixing of knit fabrics			
Individual indicators on each system	System Cancel, Tension, Sense, Overload, Yarn Flow Rate			
Programmable parameters:	Trying period, waiting period to start trying, no of tests for sequencing. Yarn breakage sensing period. Relative speeds, starting and breaking delay for individual units etc.			
Automatic stop:	Yarn breakage, entanglement, bobin limit, misguided yarns, overload, etc.			

✓ All the contents of this brochure is subject to change without prior notice.
*   PATENTS: WO 00/61849 US09/958,634 EP99928323.7 JP2000610892 CN99816563.8 SG 200105801-5
     IN/PCT/2001/01034 TR/1999/00813 PCT/TR99/00022