

ISO-WINDER

Latest innovation in winding Technology



OPTIMUM WEAVING
For paper machine clothing manufacturers

BY RGI INDUSTRIAL PRODUCTS INC.
Over 20 years of "R & D" and precision machining

www.rgicanada.com

Iso-winder

SPÉCIFICATIONS

| SPINDLE | |
|--|----------------------------------|
| Number of station (simultaneous winding) | 4 |
| Speed / RPM (Infinitely variable) | 100~3800 |
| Maximum length of winding | 400mm ** |
| MEMORY STORAGE | |
| Maximum number of different recipes | 300 |
| Maximum number of different yarn | 300 |
| MAGAZINE | |
| Magazine capacity | 28 (4 x 7 pirns) |
| OSCILLATION (CAM) | |
| Stroke (oscillation movement length) (Infinitely variable) | 20~150mm |
| Frequency (oscillation movement within one second) | 0.1 Hz to 3Hz * |
| PIRN WINDING SPECIFICATIONS | |
| Maximum permissible pirn length between centers | 430mm ** |
| Maximum suggested pirn winding diameter | ø60mm *** |
| Maximum possible pirn winding diameter on ISO-WINDER | ø80mm |
| Maximum winded layer | 4 layers |
| WINDING TENSION | |
| Regular tension range (Versus yarn friction coefficient) | 200g~800g (±20g) |
| Maximum applicable tension | 1600g **** |
| MAIN SOURCES | |
| Electric source / Primary voltage | As required according to country |
| Pneumatic source | 6.9 bars (100 PSI) |
| MOTOR | |
| Main spindle motor | 2 HP |
| DIMENSION (L x W x H) | 2100 x 1100 x 1400mm |
| NET WEIGHT | 1100Kg |

* Maximum stroke at 3 Hz: 90mm

I.E.: 3 oscillations per second with 90 mm cam stroke. Higher frequency value can be used with shorter stroke

** Can be longer on special order, maximum 530mm

*** Can be larger, up to 80mm, according to loom & shuttle capacity

**** Can be ± according to friction coefficient of filling

Advantages & specifications

- ✓ Make your own standard.
- ✓ Easy to create recipe and pattern.
- ✓ Data sharing for worldwide group standard.
- ✓ Accurate yarn length on each pirn.
- ✓ Accurate diameter on each pirn.
- ✓ Accurate tension on each pirn.
- ✓ Minimum maintenance components.
- ✓ Possibility to fill 4 pirns at the same time.
- ✓ The machine is controlled by a Microsoft windows user friendly application.
- ✓ Uniform weaving result.
- ✓ Automated tension control.
- ✓ Spindle speed up to 3800 RPM.
- ✓ Statistical calculation of tension.
- ✓ Possibility to use up to 4 winding layers.
- ✓ Possibility to wind CW and CCW.
- ✓ Full control on any winding parameters.
- ✓ Maintenance is reduced at a minimum level.
- ✓ Possibility to change winding characteristics instantly, without any mechanical modifications (no cam, no gear).



Description

EASY DATA EXCHANGE

We offer total flexibility, giving you the opportunity to establish your own standard in winding operation. Fast result & low cost is now a must: you can now experiment at an exceptionally low cost, within minutes a quantity of winding method to optimize the winding of your spools. Once proven, it becomes possible to distribute the same information around your divisions to obtain a worldwide standard: a perfect spool for each type of yarn.

CONSTANT PRODUCTION CYCLE (NON STOP)

Available memory will provide you with over 300 winding recipes which can be saved and retrieved at any time for future use. This permits your operator to access over 300 different types of yarns set up without any mechanic or other intervention.

WINDING PRODUCTIVITY

Depending on available pirn capacity to accept high revolution speed, you can obtain rotations of up to 3800 RPM. (Resulting in 40% more productivity, compare to common actual original winders on market).

ERGONOMIC

RGI easy to thread exclusive devices, combined with a working height of 900mm, makes operator's work more enjoyable.

FULL FLEXIBILITY AT NO EXTRA COST

It is easy to create or change parameters within seconds when trying out new special windings. The user friendly interface will free you from expensive mechanical modifications, such as: gear, cam or threaded rod, which only partially optimize your winding quality.

WASTE CONTROL

An accurate yarn length control of each spool, enables you to maintain waste to a minimum, resulting in time saving at weaving due to a uniform winding in length, diameter and tension.

MINIMUM MAINTENANCE

Mostly all maintenance free components have been used to build your ISO-WINDER, eliminating unexpected breakdowns, saving you time and money, freeing your mechanics for other machine repairs.

PRODUCTION REPORT AND EVENTS LOG BOOK

Information on each pirn is available on production reports archived after each cycle. Printer can also be used to obtain a "hard copy" of any relevant information within winder's memory, such as: production reports, activity log book, sub reports, etc.

Reports can be exported on a "Microsoft Excel" file to be used for statistical control.

MULTI-LAYERS FUNCTION

An exceptional and exclusive iso-winder advantage

Capacity: 4 layers Example below: 4 layers

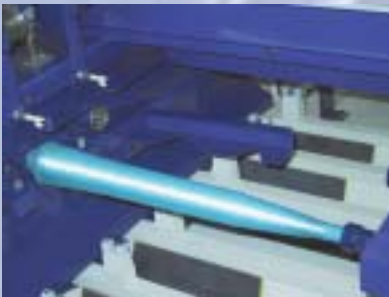
As we accurately control every parameters in real time, within a milli-second, it is now possible to make a multi-layer winding. This **unique technology** enables user not only to **prevent yarn from slipping** during weaving operation, by changing winding pattern on each layer, but **also increases dramatically the quantity of yarn** on some pirn design. **Obtain up to double weaving time** without changing pirns, and this **without any modifications to shuttle** or loom set-up. **Specially effective** on monofilament winding where there is a natural torsion to highly reduce loops at winding point.



FIRST LAYER



SECOND LAYER



THIRD LAYER



FOURTH LAYER

PERFECT QUILL

As we can see on this picture, we have a 4 layers winded quill, winded at a 49mm outside diameter, at a speed of 3500 RPM, and we still have no loops on the end of the pirn.



Each layer's winding pattern is independent from others, giving full flexibility to improve weaving stability according to diameter of previous layer. Because of its larger diameter over first layer, winding the second layer almost eliminates any friction resistance during weaving, same for 3rd layer over 2nd and 4th over 3rd.

Features

AUTOMATIC "IN/OUT" BOX

This device will automatically take IN or OUT the box from under ISO-WINDER.



STATE OF THE ART TECHNOLOGIE

Exclusive electronic tension control, specially developed for pirn winding application.

Does individual control tension on each pirn from 100gr, up to 1600gr, within ± 20 grams.

Batch report archived every cycle show the average tension and confidence interval of each pirn. Also any result outside programmed parameters are archived.



Optional accessories

HORIZONTAL CREEL

We are now offering, as an option with ISO-WINDER, a new Horizontal creel. This new unwinder creel developed expressly for single monofilament or high twisted monofilament cable. This option gives the possibility to unwind the yarn on the bobbin horizontally instead of vertically in order to not add twist to the yarn when winding on the pirn.

This device combined with a multi-layer recipe will dramatically reduce looping at winding.



VERTICAL CREEL

Specially designed with users in mind. Equipped with exclusive RGI guillotine, to prevent unwanted "slug" or twisted yarn to go through. This bobbin holder is easy to thread, and is made of transparent acrylic for full view.



RIGID PIRN

Our rigid pirn can be used when your original plastic pirn cannot wind at the maximum speed of the winder. Some plastic pirn don't accept a revolution speed higher than 2300 when the outside diameter of the filled quill is 48-50mm.

With our rigid pirn, you will be able to wind up to 50mm outside diameter at 3800 RPM without vibration of the quill.



Proud to be certified

ISO 9001 : 2000

**Developed and manufactured exclusively by
RGI Industrial Products Inc.**

RGI also specializes in:

- ✓ Instrument used for paper machines calibration. Linear measuring wheel, thickness gauge, seaming device, etc.
- ✓ Loom improved spare parts, covering mostly all sections of looms.

**Our stock is constantly replenished to cover our customer's
actual & future needs.**

Please contact us for our latest catalog.



**755, Pierre-Caisse
Saint-Jean-sur-Richelieu
Quebec, Canada
J3B 7Y5
Tel.: (450) 348-4959
Fax: (450) 348-8661
www.rgicanada.com**

**We always work with the latest technology
to provide you with the best quality at the lowest price.**

Specifications subject to change without prior notice.