

# *N PLS*

**MULTI-PURPOSE YARN WINDER**



**FOR 10" TRAVERSE PACKAGES**

**For winding of a wide range of yarns at high winding speeds, in the coarse yarn sector:**

**Spun, natural or man-made yarns, Filament BCF, High Tenacity Technical Yarns, Air-entangled yarn, Sisal, Chenille, Fantasy yarn, Fibrillated PP tapes, Twisted or High Twisted yarns, Knitted Material, and many others**

**Modular Construction of the machine:**

**The N PLS is available in sections of 3 spindles, 800 mm spindle gauge, with minimum 6 and maximum 12 spindles per machine. Each spindle has fully independent working. The machine is standard equipped with automatic doffing per spindle.**

*Gilbos*

**Individual spindles – (Step)Precision winding**



**Yarn guiding by swivelling arm**



**Capstan feeder**



**Random or (Step)Precision winding**



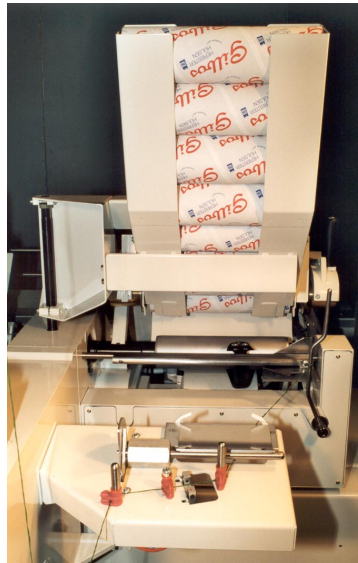
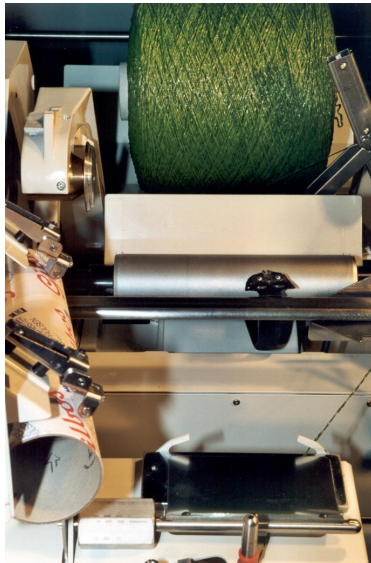
**Individual doffer per spindle**



**Extended tube magazines up to 8 tubes**



## Autodoffing



Automatic replacement of packages at length or diameter is standard on N PLS. Each spindle is foreseen with a fully independently working doffing device, with control through the PLC system. The magazine for tubes or cones is located just above the Capstan Feeder box, square to the spindle.

Capacity of the magazine:

tubes	dia. 73 mm	5/8 pcs.
cones 3°30	dia. 63 mm	7/8 pcs.

During a doffing cycle the magazine swings 90° to present an empty cone or tube to the winding head.



The Control Box is only connected to the machine by wires and flexibles, in order to prevent damage to the electronic systems by machine vibrations.

It houses all the electronic elements on the machine.

All machine functions are controlled by PLC, located in the control box, with operator friendly communication screen for parameter settings and read-out of production data.

Almost all electric and electronic components are off-the-shelf available parts in most countries.



# Technical details

## Spindle

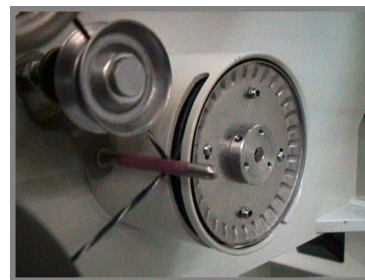
- 10" traverse, conical (up to 3°51) or cylindrical (up to diameter 105mm tubes).
- Yarn guiding by swivelling arm with positive yarn guide.
- Package rotation by driven contact roll, at constant winding speed.
- (Step)Precision winding.
- Production of packages up to diameter 400 mm.
- Angle of Winding, in function of the material to be wound, between 12° and 22°. The angle of winding can easily be altered mechanically by replacing pulleys only.
- Individual Drive per spindle by motor with frequency inverter, at winding speed up to 1000 m/min., depending on the winding parameters.
- Stepless speed regulation per spindle.
- Gradual start up after each winding stop. The ramp of speed increase is programmable.
- Yarn Tensioner with easy mechanical setting with a scale.
- Electronic broken end Detector.
- Vibration suppressor to avoid cobwebbing at the sides or ovalisation of the package.
- Anti wrap detector on the driving roll.
- Automatic Doffing per spindle.
- Transfer Tail Winding on an empty tube or cone, programmable in length.
- Specially designed yarn cutter to ensure perfect cutting of all yarns, singles or twisted, up to Nm 0,3.
- Length Measurement by counting the number of revolutions of the driving roll. Length Measurement with high precision available ( see Options ).
- Mechanical Diameter Stop Motion.
- Push Buttons per spindle for manual intervention: start, stop, manual start of doffing cycle, opening of spindle heads.
- All the moving mechanical parts, which are not in contact with the yarn, are built in dust free casted housings.
- Driven Capstan Feeders for neutralisation of yarn tension differences. Driven capstan feeders ensure the production of packages with uniform yarn tension throughout the package.
- Speed Setting per spindle: to allow very flexible speed setting when different qualities are wound simultaneously at the same machine.

## Yarn Supply

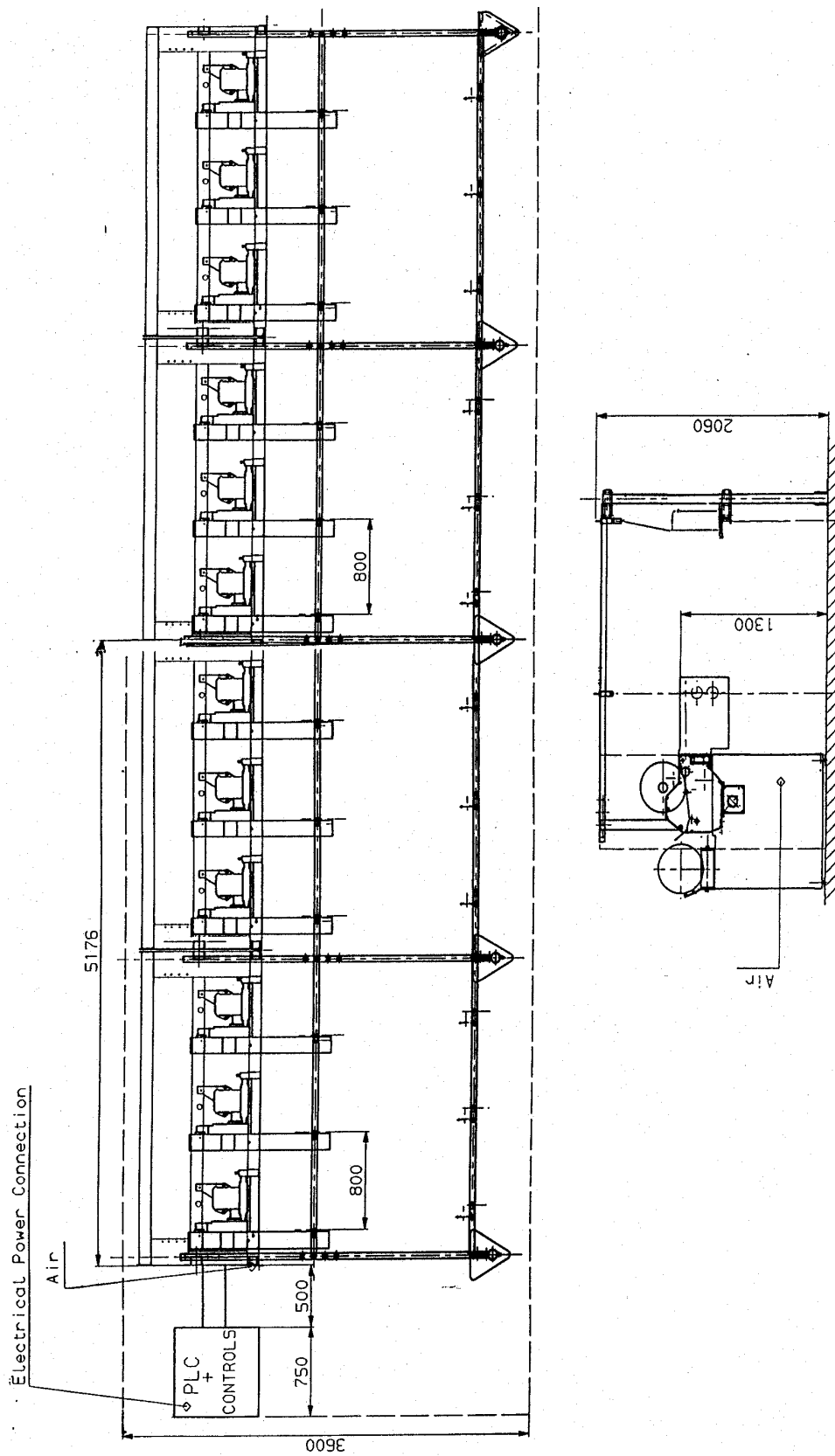
The machine can be foreseen with different kinds of creels: for spinbobbins, for packages, for flanges, for containers or other kinds of yarn carriers. For yarn supply on hanks or skeins, the specially adapted model N IDS-HK is recommended.

## Optional Equipment

- Length Measurement with high precision: by using a measuring wheel with hysteresis per spindle. Maximum accuracy attainable up to +/- 0,5%, depending on production factors.
- Mechanical Knotcatcher.
- Electronic Clearer: at the choice of the customer. When applied, the clearer also acts as broken end detector.
- Conveyor Belt: to guide full packages to a side of the machine. The direction of the belt should be chosen at the moment of ordering a machine.



# Machine lay-out



All technical details, descriptions, illustrations, dimensions and other particulars in this pamphlet are given in good faith, and can be subject to change without notice.

