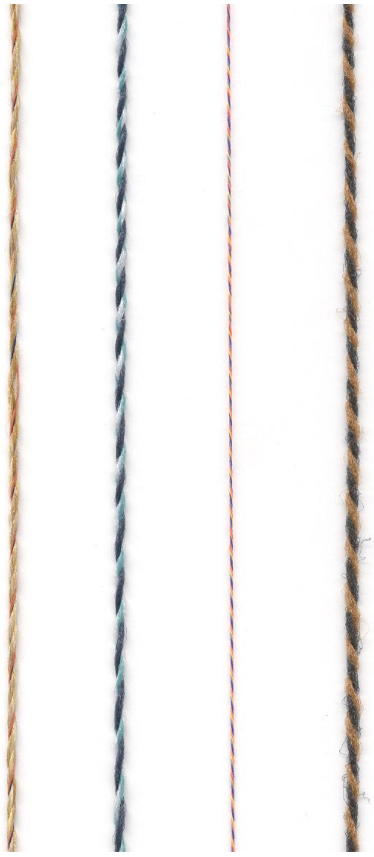
# *AirTwist*

Gilbos

# AirTwist



*Giving a twist effect on filament yarns at high speed*

**For the Carpet Industry**

**Filament BCF for carpet**
**Effect yarns**
**Combined Twisted / Air entangled yarns**
**Air entangled yarns**

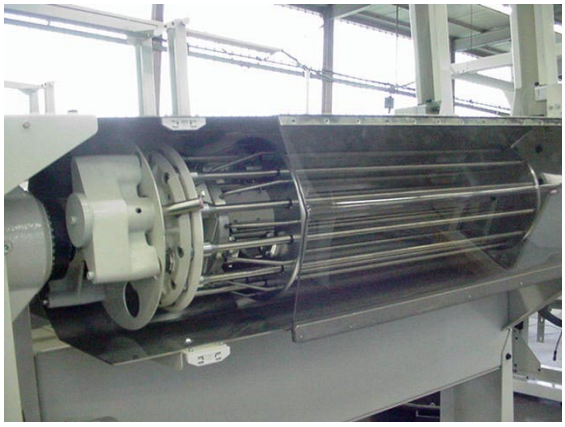
**For the Technical Fabrics Industry**

**Twist effect on high tenacity yarns for hoses, belts, conveyor belts, ropes, strings, cords, nets, composies etc..**

Gilbos

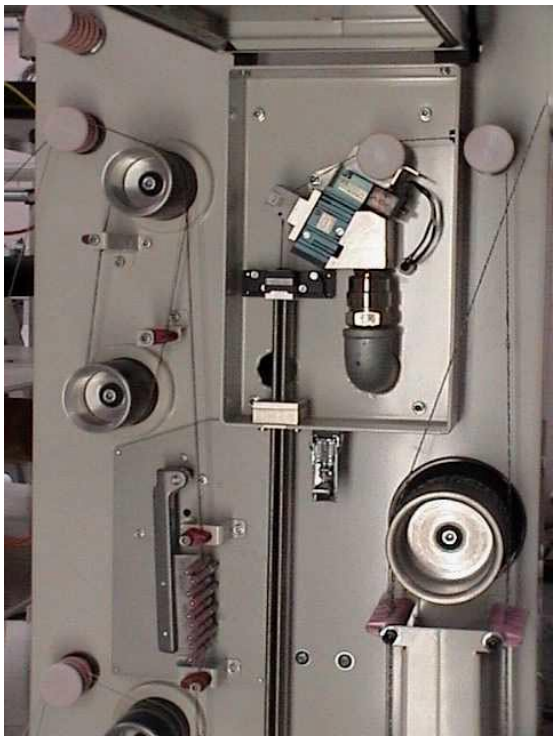
# AirTwist module :

- The AirTwist system is fully electronically controlled : the computer allows a perfect control of the length of the twist, the interlace, ramp up and down during start and stop.
- All parameters of the twist process can be set independently per spindle, allowing the customer to produce a different product on each spindle, or develop a new product on one spindle, without interfering with normal production.



- An accumulator can be placed between the AirTwist module and the winder which will allow high speed doffing of small packages at the maximum twisting speed.

- A cycle diagram is used for setting timing parameters, amking flexibility for spacing extremely versatile while also allowing higher speeds.
- Alternate sections of twisted and air entangled product is existing technology and can be produced by just changing the required parameters.
- Two or more ends twisted in various combinations are possible, through the compact thread path for operator convenience.
- During the process no untwisted sections of yarn will occur, so no waste is produced.
- User friendly operator interface allowing flexible setting and clear read-out of all the parameters.

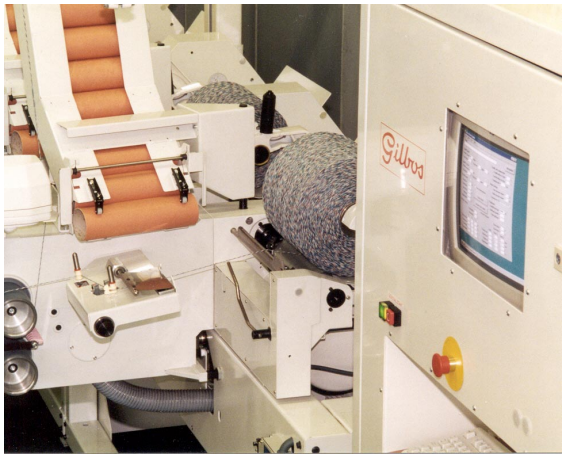


- All parameters needed to produce a certain product are stored in a “recipe” allowing the user to easily recall and reproduce a product. The recipes can be stored on a floppy disk for backup purposes.
- No wear on mechanical parts since the twist is created by means of compressed air.
- Very low air and engery consumption.
- Working speeds between 300 and 800 m/min., depending upon the tpi, yarncount & material.
- Stand-alone units and units for in-line heatsetting available for both Superba and Power-Heat-Set.

# PC

The PC brings a number of parameter setting facilities to the operator, a combination of which will result in the requested air twisted product. Parameters that can be set by the operator are :

- winding speed of the spindle
- air pressure for twisting & tacking
- number of ends to be supplied from the creel
- length of yarn per package produced
- depending on the creel execution, the tension per individual end
- setting of safety parameters out of which the machine must shut off automatically
- storage of formerly tested combination of parameters under a personalized name
- cycle diagram with length of the twisted zones and tack length
- control of preset parameters
- control of efficiency of working of the machine or the shift
- control of stops, and the reason why




# The control box

- Houses all the electronics that are mechanically not necessary on the spindles
- Only connected to the machine by wirings, to prevent transmission of vibrations
- All control functions are programmable, either at operator level, supervisor level, maintenance or manufacturers level.
- Combined working of PC with PLC for machine function and private creation of twsting parameters combinations.

# Features of the creel

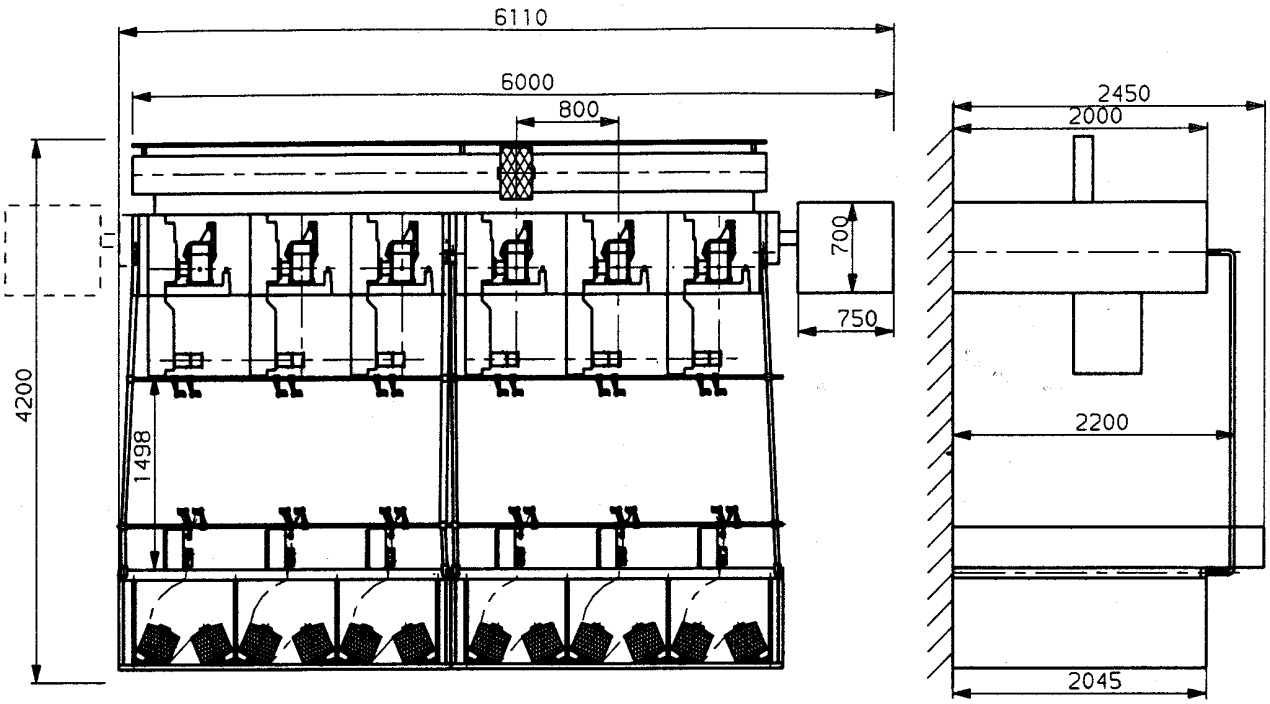
Creels are designed in accordance with customer's individual requirements.

- number of ends
- diameter of full supply packages
- positioning versus the machine
- standard per end:
  - balloon breaker with guiding eye
  - mechanical yarn tensioner
  - electronic yarn detector
  - reversing rolls on the creel and on the machine
  - two package holders for top-to-tail connection, each one to be loaded from the rearside of the creel
  - separating plates between two ends
- TC for full tension control

# Technical Data :

Up to 12 spindles per machine, with 3 spindles per section.
Speed between 300 and 800 m/min., depending on the twist level, winding angle and type of package.
Angle of winding adjustable between 12 and 22°.
Maximum package diameter up to 400 mm.

| | | |
|---|---|---|
| Motor per spindle : | | 0,75 kW – 1500 rpm |
| Electric supply : | | 3 x 400 V + N or 3 x 230 V – 50/60 Hz<br>Transformer is needed for other supplies |
| PLC : | | Mitsubishi |
| Compressed air : | | 6 bars pressure for machine functions |
| Air pressure for AirTwisting : | | 3 to 9 bars, depending on the type of material & twistlevel |
| Conveyor belt motor : | | 0,18 kW |
| Dimensions | 6 spindles : | 6110 x 4200 mm |
| | 9 spindles : | 8790 x 4200 mm |
| | 12 spindles : | 11470 x 4200 mm |
| Main colour of machine : | | White RAL 9002 |




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