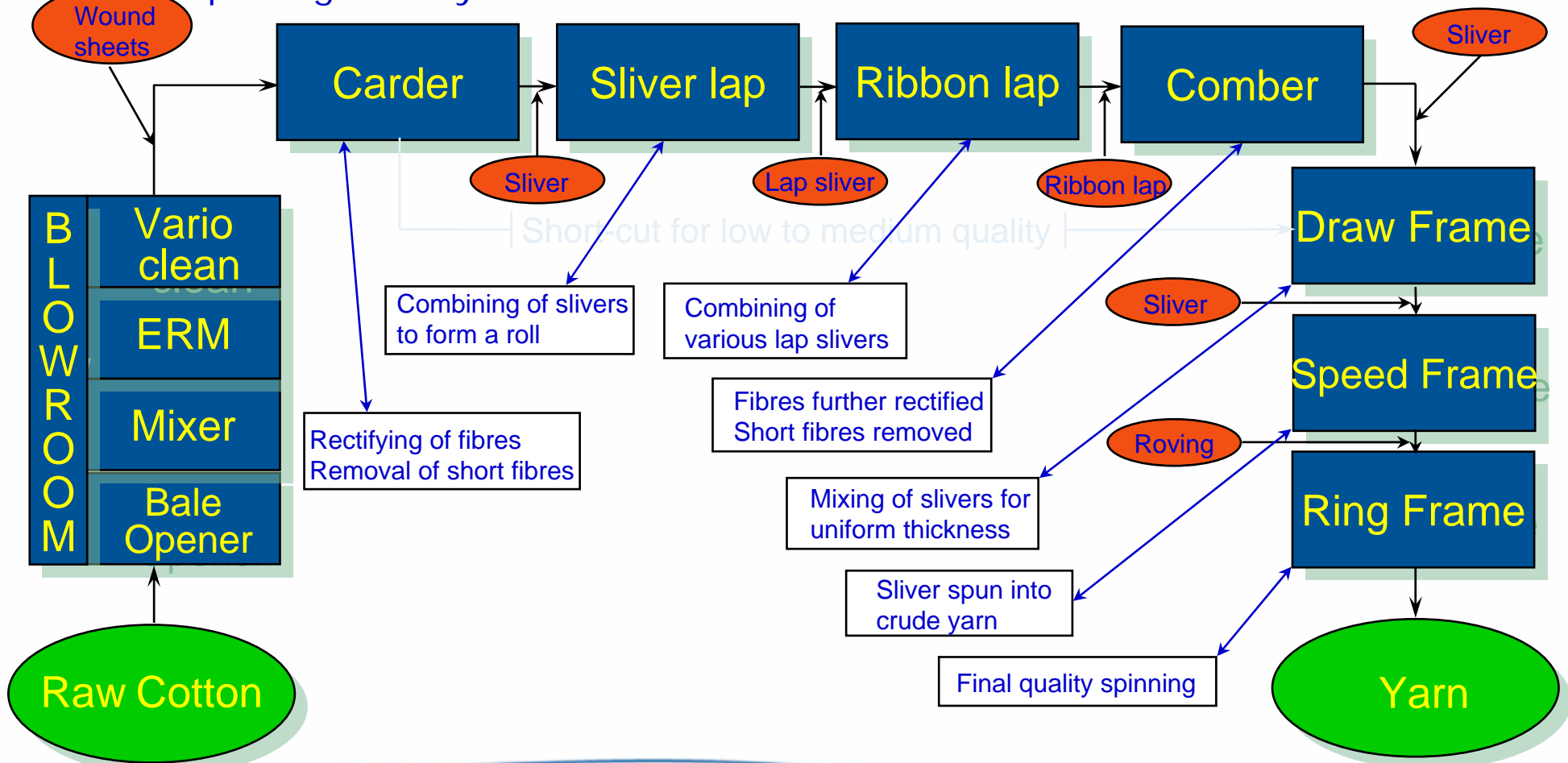


Vacon India

Textile Segment

The Spinning Mill Lay-out



Spinning Industry

BLOWROOM:

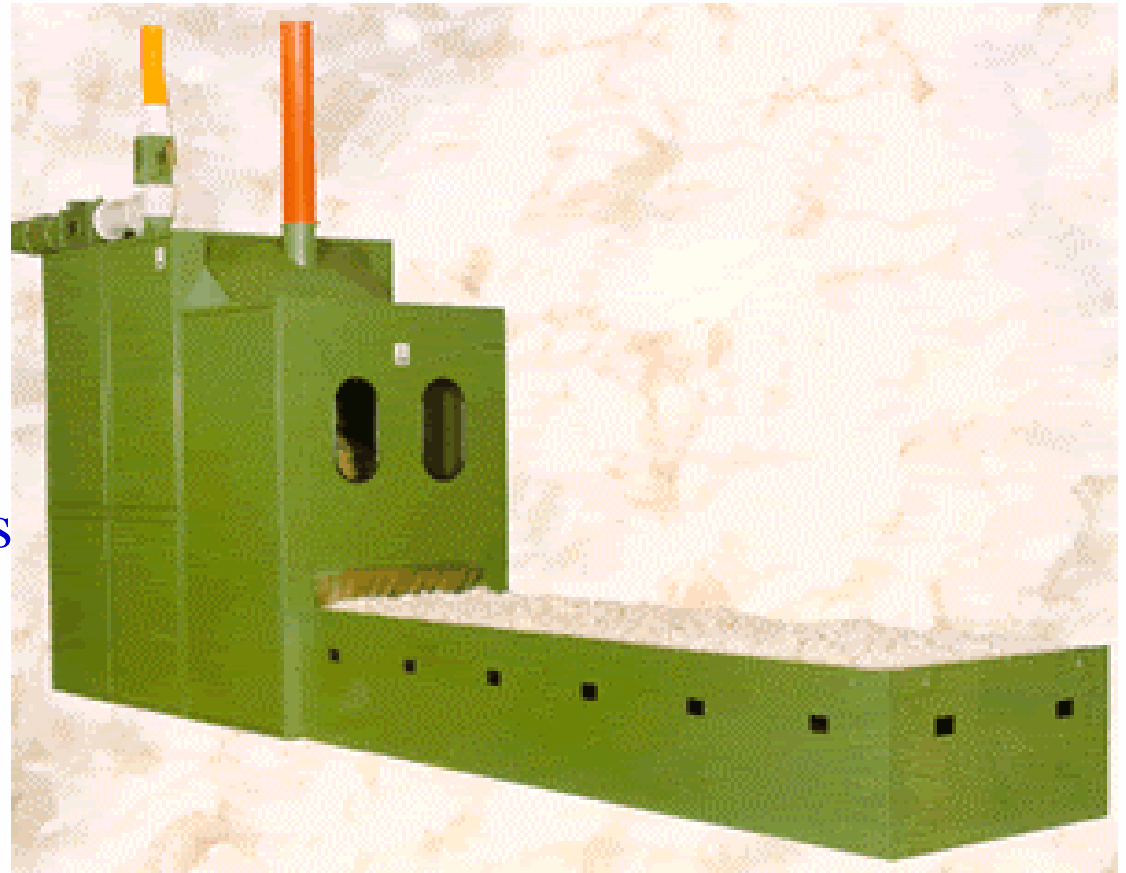
- Controls Speed of Inclined Lattice Drive Motor which eliminates costly maintenance of imported gear box, in machines like MBO, UNIMIX etc.
- Through the Inverter, Blow Room Feed Roller Motors can be controlled for a start stop ratio of 95: 5.
- All Fan Motors can be controlled with Inverter, so that the Mills can run the desired speed to achieve better quality and thereby they also save power to a maximum of 30%.

BALE OPENER

- ✦ Opening bales of staple fibres
- ✦ Mixing different fibres
- ✦ Cleaning fibres

The Vacon Scope:

👍 Vacon NXL, 0,75 kW for the feed motor & 2.2 kW for raw material mixing



The BLOW ROOM

MBO - Mixing Bale Opener

- ✦ Cotton Bale Opening
- ✦ Feeding Material
- ✦ Blending or Mixing of different Raw Material
- ✦ Removal of Dust and Foreign Matter in Raw Material

The Vacon applications:

👍 Vacon NXL series for the feeder motor, 0,75 kW.

👍 Vacon NXL series to drive the lattice used for mixing

Inverters are used for controlling the feed rate to suite the production rate required by different carding machines.

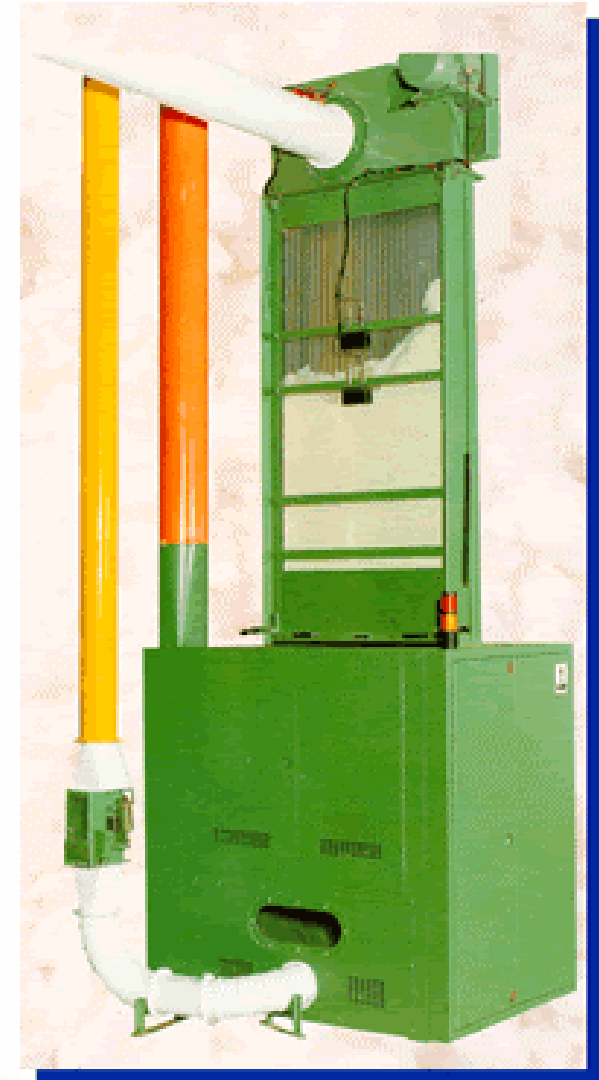
CLEANER

Cleaning material from bale opener:

- ✦ Removing waste and impurities

The Vacon Scope:

- 👍 Vacon series. 0.75 & 2.2 kW
for feeding and cleaning process



UNIMIX

- ★ Mixing of various Raw Material
- ★ Cleaning of Raw Material
- ★ Dust Removal



Vacon NXL, 2.2 kW for mixing

Vacon NXL, 0.75 kW for feeding
& cleaning

Card Feeding System

Feeding the material from the
Blow room equipment into the card.



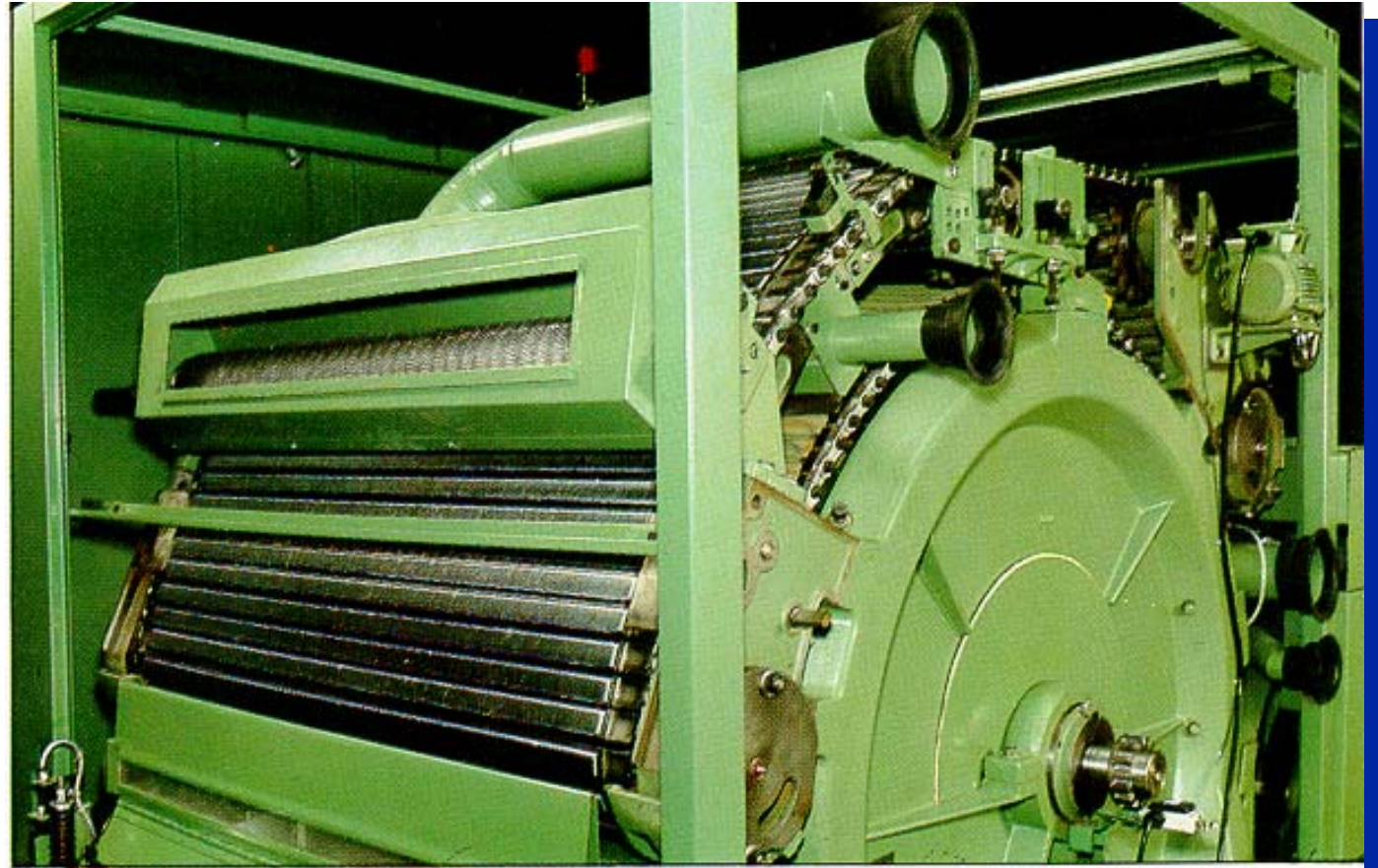
CARDING:

- Doffer Speed is controlled by a motor driven through an Inverter. A train of drive gears and pulleys on the machine are eliminated and direct speed control is achieved thereby reducing the maintenance of many spare parts and noise level.
- Feed Roller Drives, In Feeding Chutes.
- Continuous Waste Evacuation System, Fan Motors can be fixed with the Inverters.

The CARD

The “Buzz” Words

- ★ Feed roller
- ★ Main cylinder
- ★ Doffer
- ★ Take-up roller
- ★ Stripping brush roller



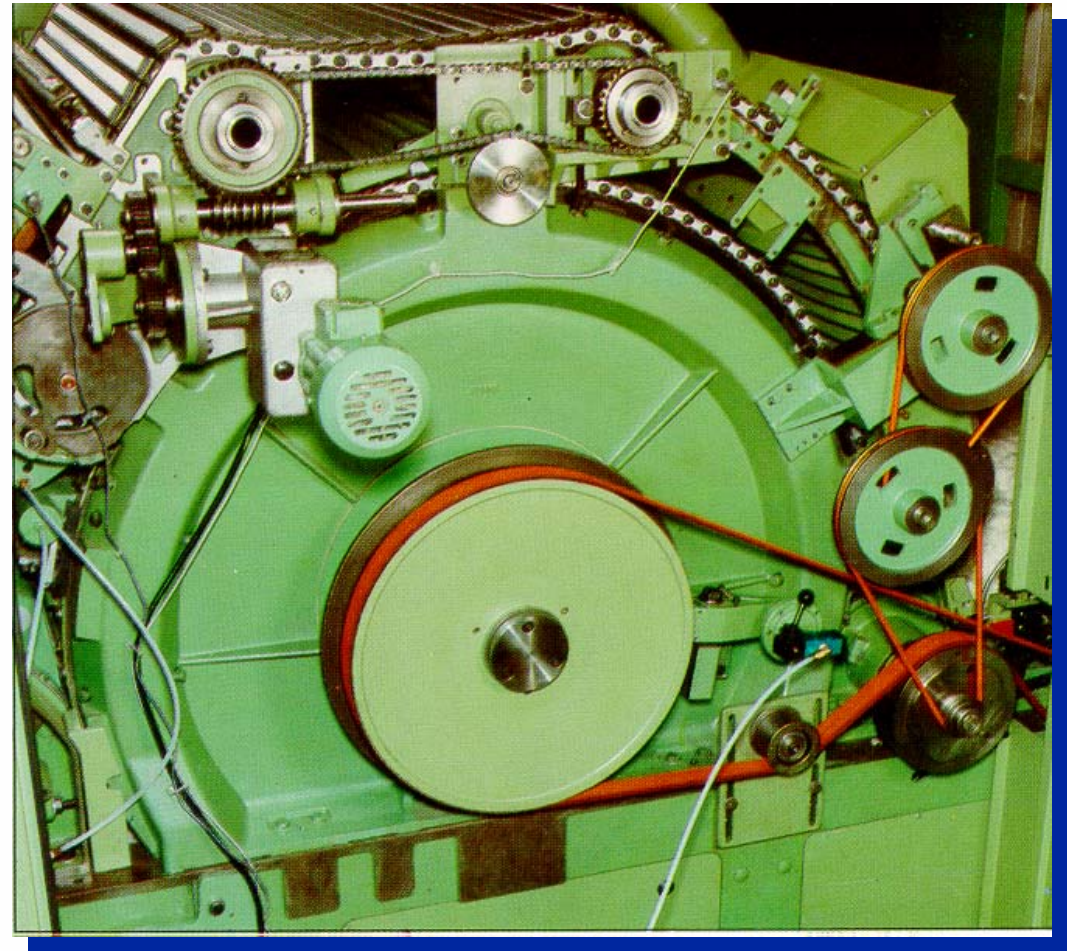
The Card

Vacon Applications:

- 👍 Vacon NXL, 0.75 kW for the feed rate. Replacing two-speed operation
- 👍 Vacon NXL, 2.2 kW for the doffer motor to keep production rate

Potential Vacon Applications:

- 👍 Replacing mechanical gearing and synchronization systems

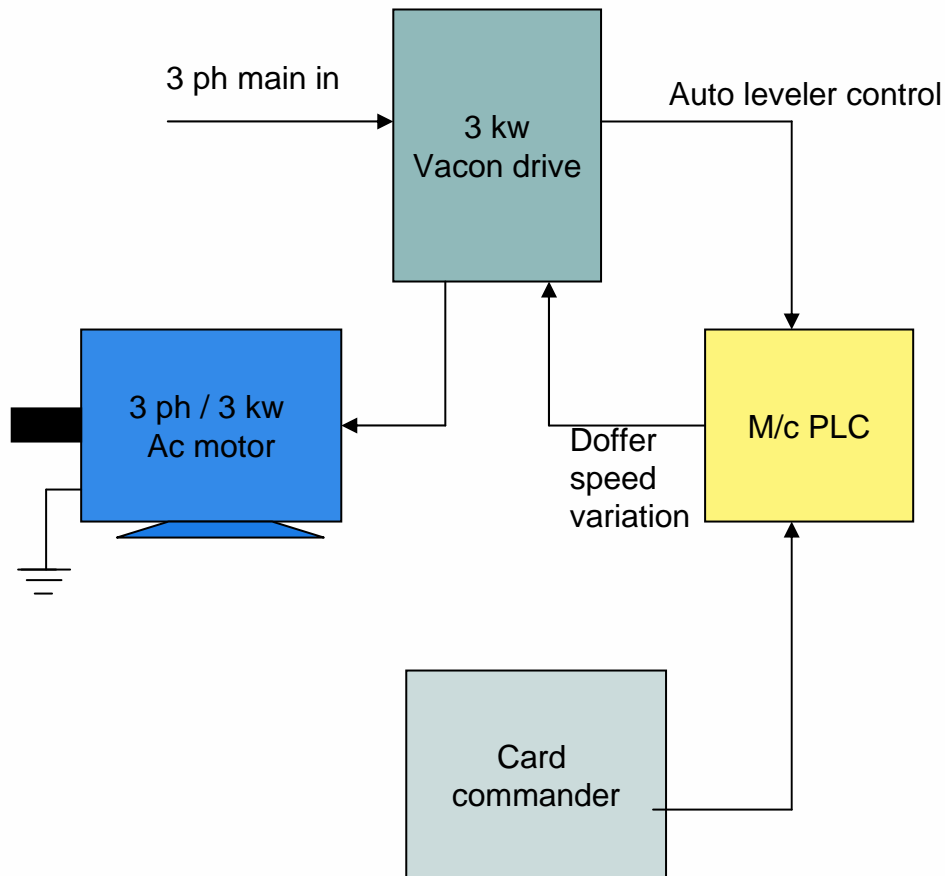


DOFFER DRIVE CONVERSION FOR CARDING MC

- Smooth acceleration of the doffer
- Doffer speed can be individually increased or decreased depends upon the material
- AC drive and AC motor eliminates doffer gear box entire pneumatic kit
- Easy mechanism
- Reduce maintenance
- Easy operation
- Reduce frequently bearing, gear wheel, failure due to smooth speed up speed down
- Suitable for all TRUMAC and RIETER Cards



DOFFER DRIVE CONVERSION KIT FOR TRUMAC CARDS



- Eliminates Doffer dc motors
- Eliminates techo generator from dc motor
- Eliminates GMB 2 B DC drive
- No need any mechanical modification
- Minimum alteration for fixing the system
- No need to change any machine functions and parameters
- No Dc Motor and Dc drive maintenance
- Easy operation
- Easy maintenance
- Does not disrupt any existing function
- No need to maintain techo generator
- Scope of supply

3 kw Vacon drive.

3 kw inverter grade S1 duty f class VPI treated motor.

Mechanical kit for motor fixing.

Motor gearbox coupling unit.

Dust proof Control panel for drive.

HI LAP, SLIVER LAP, RIBBON LAP/UNILAP:

- Inverter helps to achieve slow take up speed at start up. This substantially reduces soft waste which normally occurs during start up.

COMBER:

- Comber Drive Main Motor Speed (Nips per minute) is controlled by Inverter. Easily programmable for slow speed and fast speed
- Also for Waste Evacuation Systems.

Comber

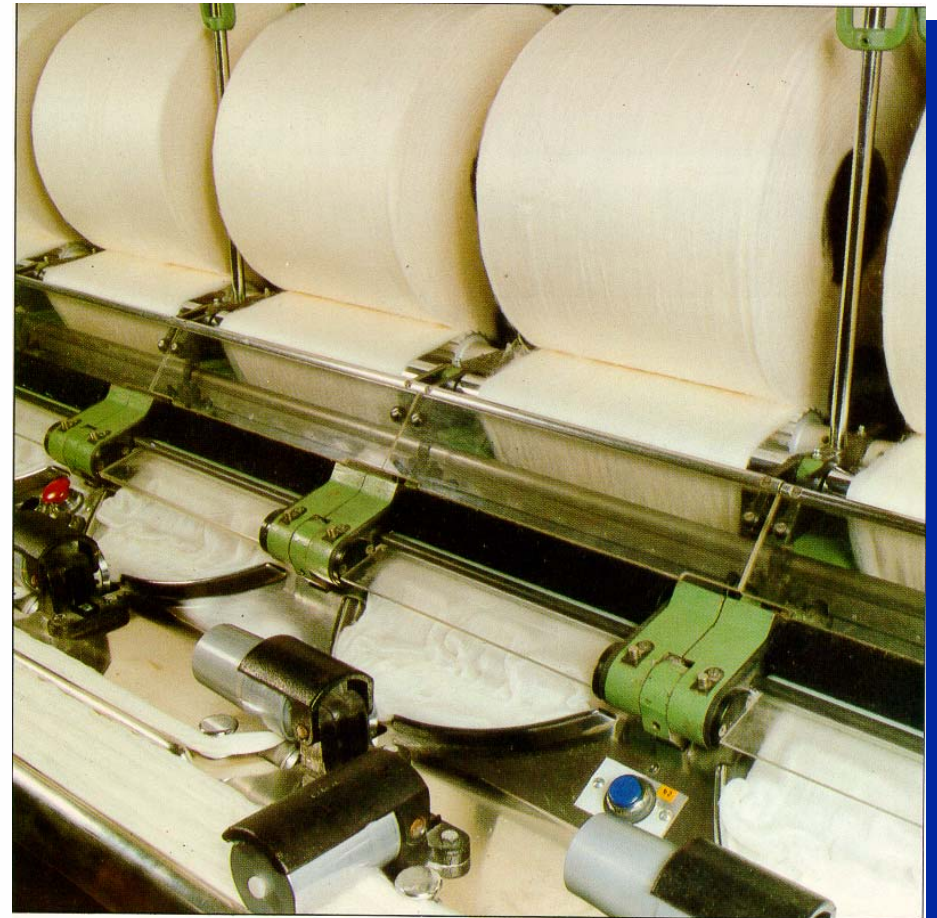
- ✦ Improves yarn quality
- ✦ Extracts short fibres
- ✦ Extracts small impurities
- ✦ Eliminates neps



COMBER

Vacon Applications:

Vacon NXL, 2.2 kW basically
for two speed operation -
low speed and high speed



DRAWFRAMES:

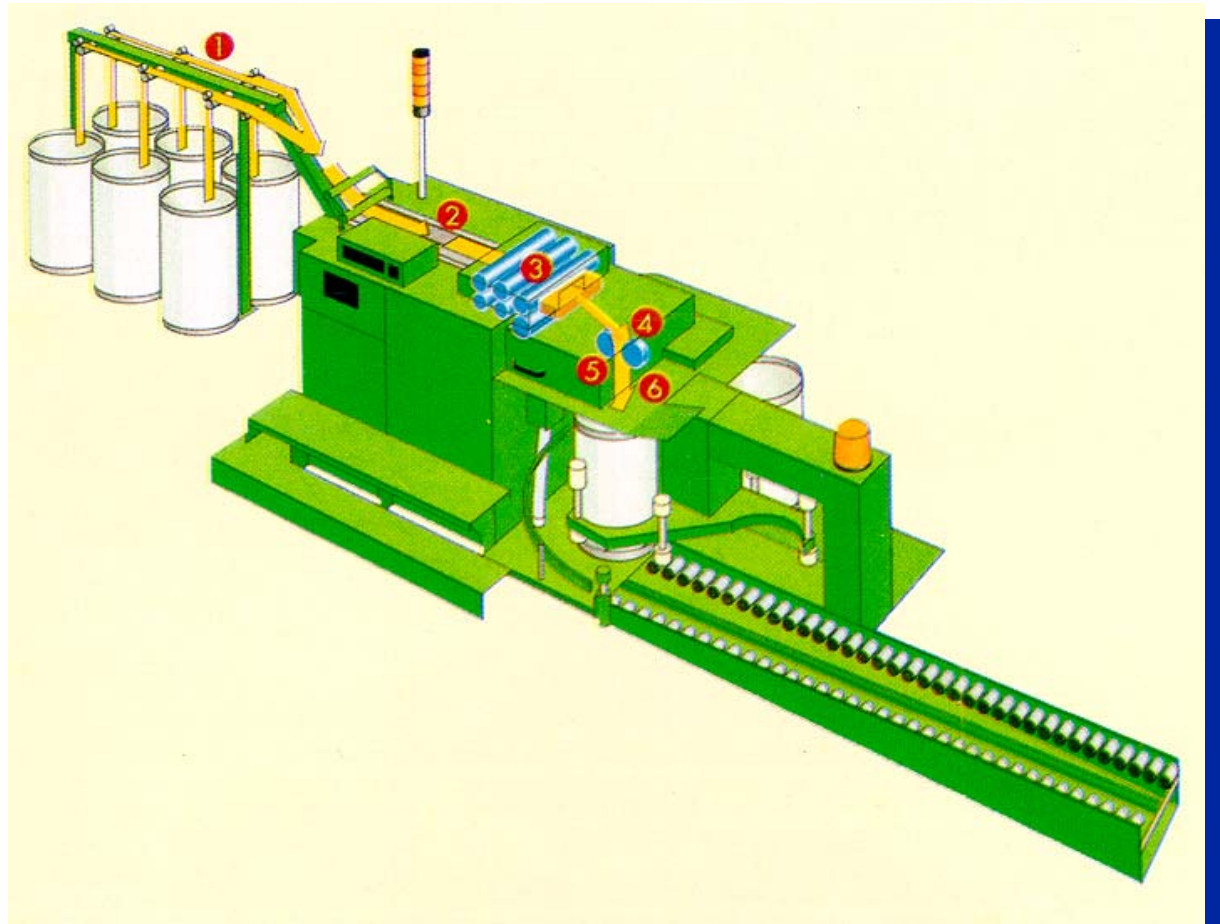
- Installing inverter on the Pneumafil Motor optimises the Pneumafil suction in relation to material processed and also saves power.
- In Rieter / Lakshmi RSB Series Draw frames, During Power failure, Un-Controlled sliver Passes through the process (Infact in some cases it induces variations in Hank of Sliver), Using VACON Inverter we bring it to a Controlled stop by sensing the Drop in Voltage during Power failure.

DRAW FRAME

A number of different slivers are mixed for uniform thickness

- ✦ Ensures yarn evenness
- ✦ Improves spinning process

- 1 . Power creel
- 2 . Scanning rollers
- 3 . Draft system
- 4 . Draw off rollers
- 5 . Leveled sliver
- 6 . Sliver deposition



Speed Frame Machine:

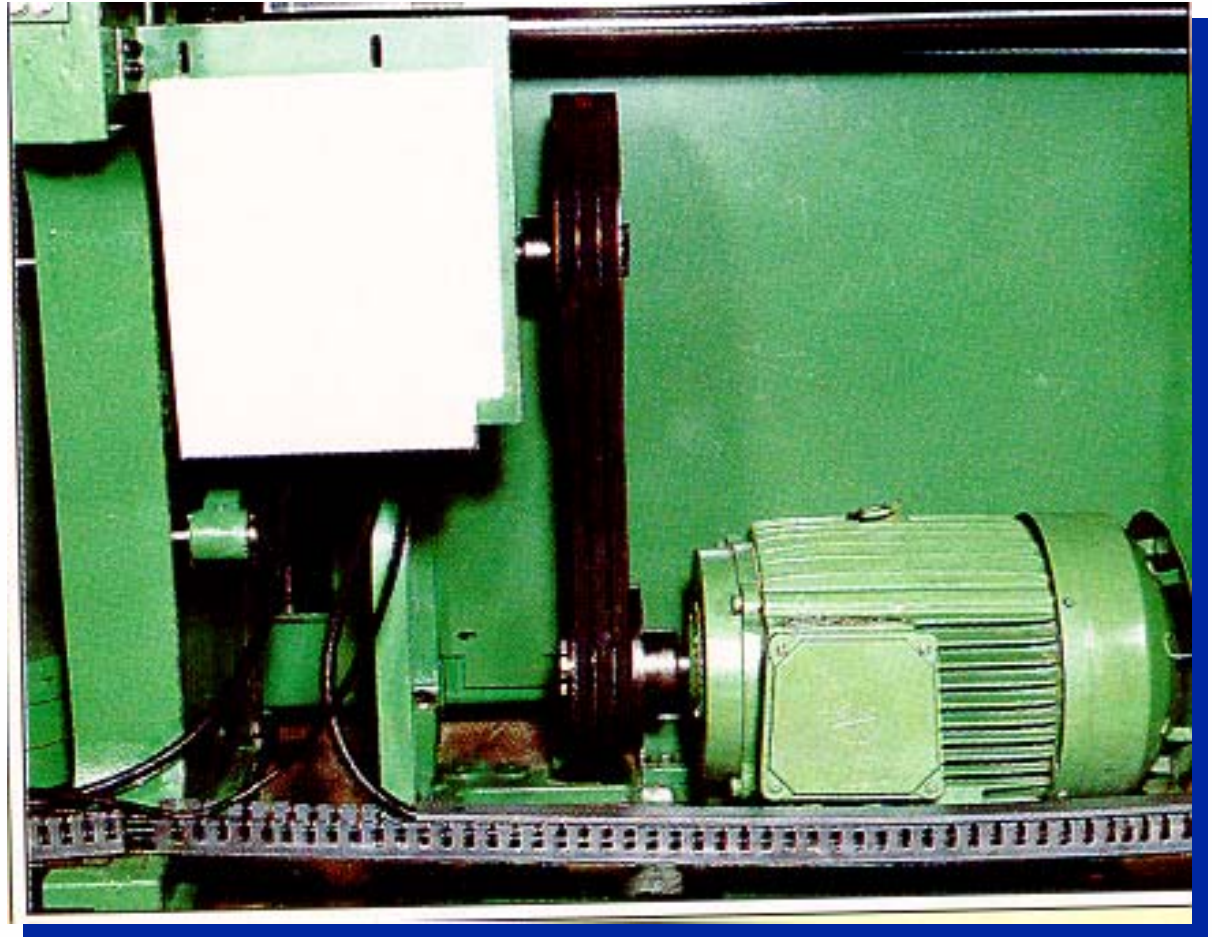
- Vacon NX drive with special application software for Speed frame machine
- Benefits of using Vacon Drives:
 - Smooth starting and stopping to reduce end breaks. Excess motor heating due to frequent inching is avoided.
 - No need to change pulley ratio for different counts and speed.
 - Uniform tension can be achieved at all times during cop build up.
 - Better bobbin build up with programmable step speed profile there by increase productivity.



Main drive system

SPEED FRAME

Main Motor Drive

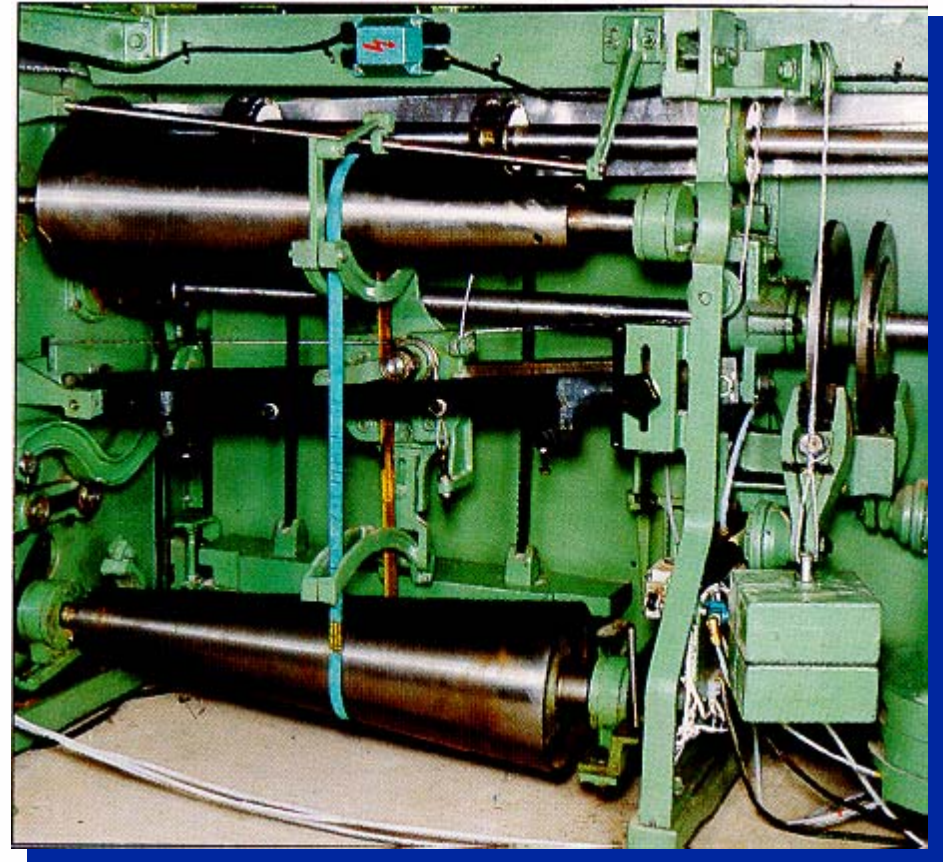


Drive system for flyer package

SPEED FRAME

Vacon Applications:

Vacon NXS, 7.5 or 11 kW
with a separate arrangement
to control inverter speed for
achieving a specific speed
profile



Ring spinning frame

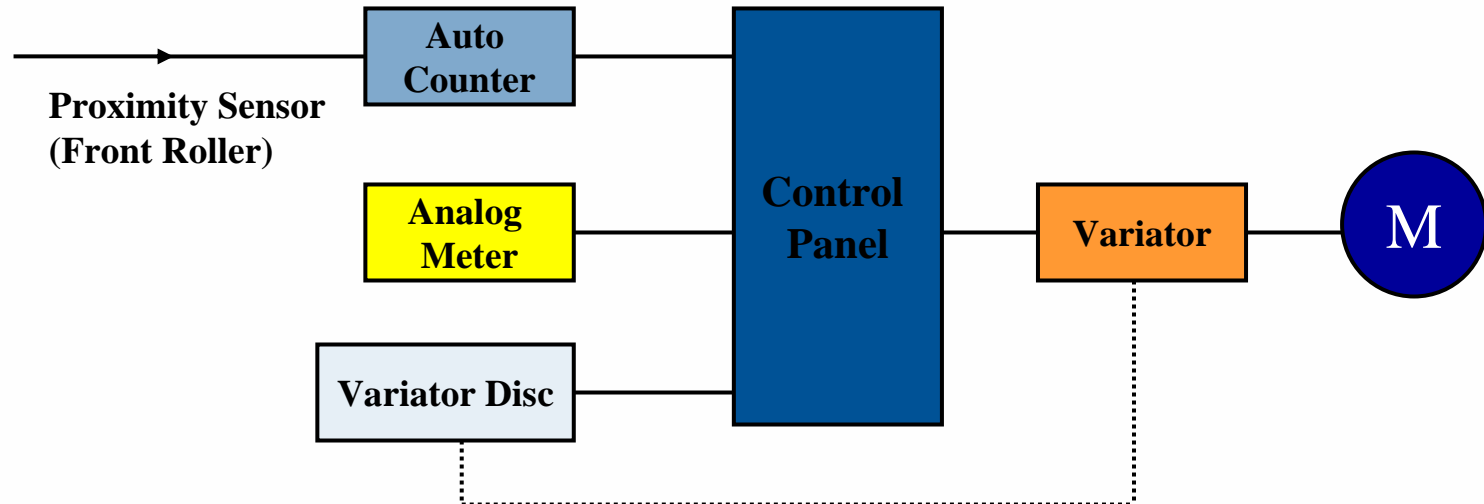
Spinning of sliver from speed frame. The final product is yarn for weaving or knitting.

Vacon Applications:

- 👍 Vacon NXS, 22 kW for short frames < 500 spindles
- 👍 Vacon NXS, 55 kW for long frames > 1000 spindles



Before:

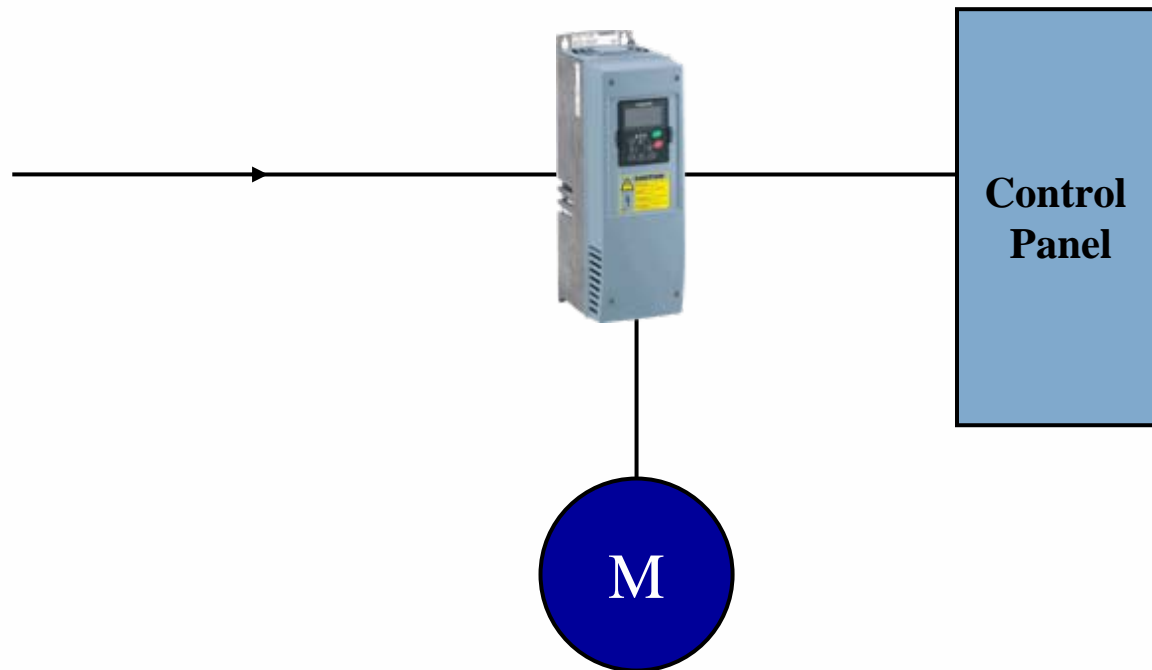


Before:

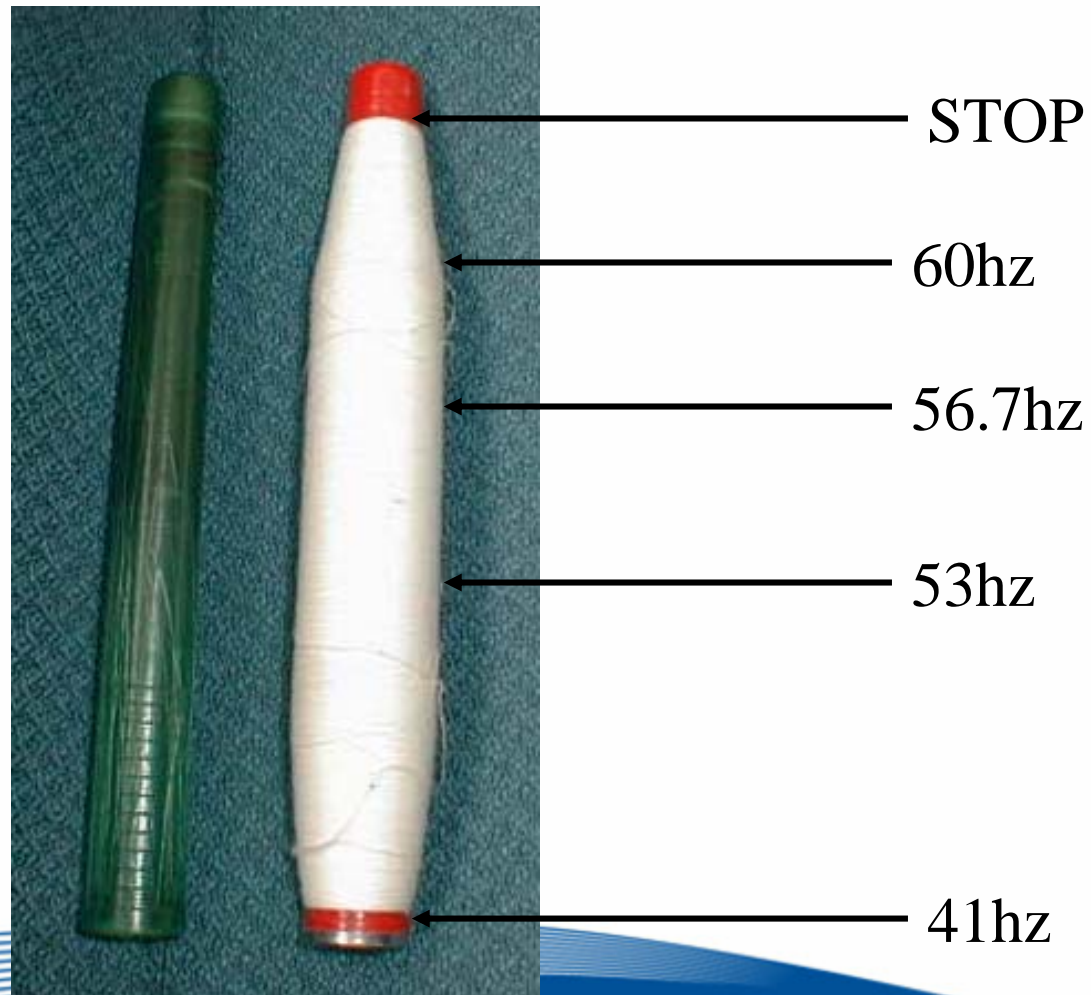
- Frequent yarn breakage's
- More electro mechanical devices are installed (i.e.. Counters, relays & analog meters)
- Production data is not readily available. Manual computation is necessary.
- Limited to 4 steps speed profile.
- Maintenance on the clutch system is more difficult and expensive

After:

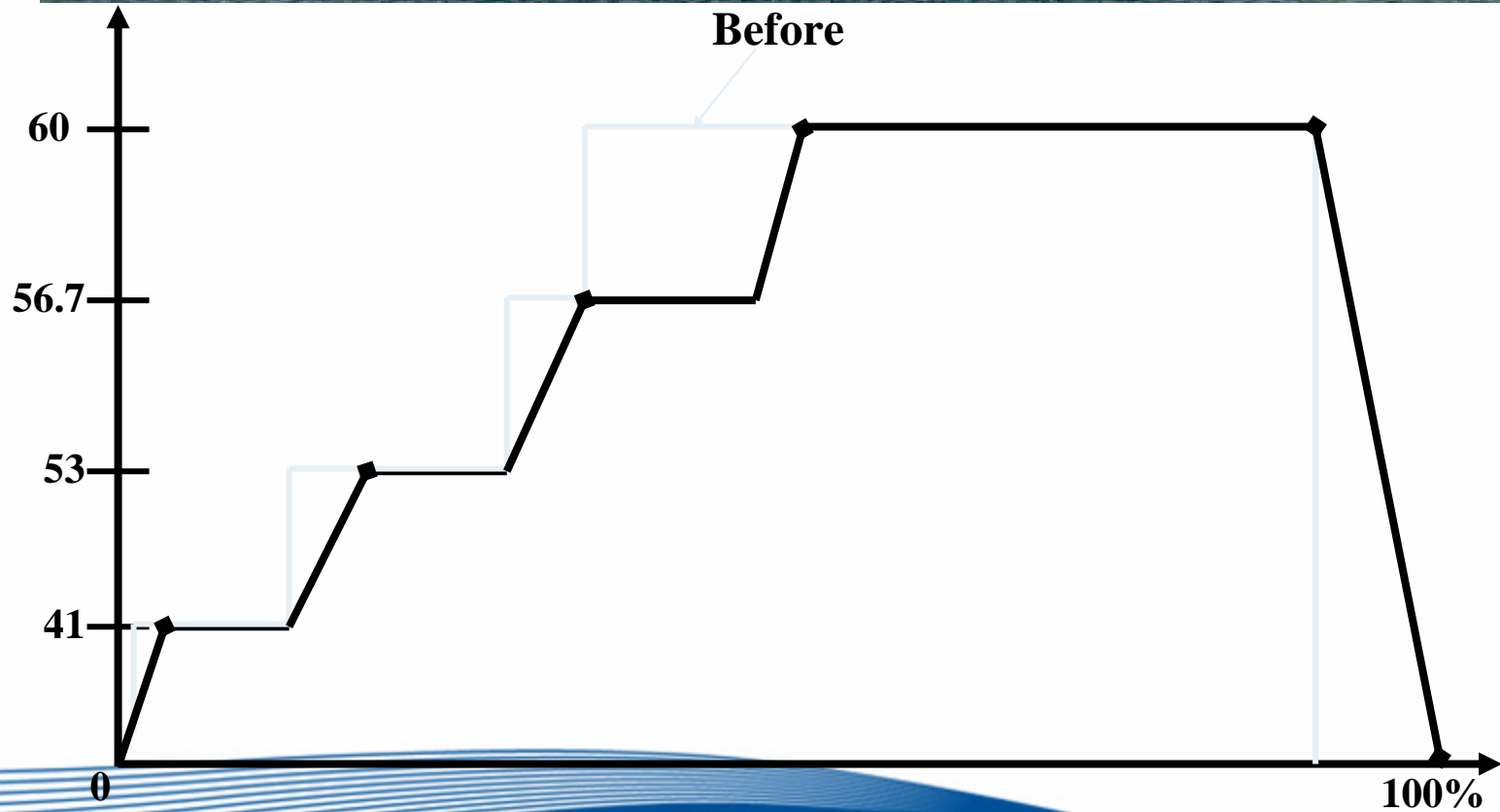
**Vacon NX
Drive**



BOBBIN:



Approx 3000
meters, which takes
2 hours



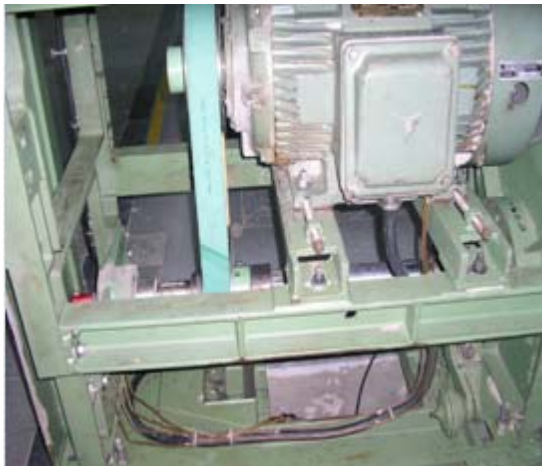
Ring Frame for Textile Industries

Vacon NX drive with special application software for Ring frame machine

Advantages:

- Complete Logic within the drive which increases the reliability of the system.
- Drive display totally customized to textile terminologies.
- Elimination of external counter and proximity switches.
- By converting to Flat belt pulley coupled with the VACON drive, the power saving is maximum up to 12% in ring frames from mills to mills which is considerable savings in power cost





RING FRAME FAN MOTOR:

- Ring Frame Fan motor can be fixed with the VACON Inverter, with or without Pressure Transducer
- Programmable step speed according to the Count and Speed Pattern of the Ring frame by which power savings are achieved.
- While Restarting after the Doff, Can be programmed for maximum speed and later on according to the step the speeds can be reduced, Max power savings up to 28%.

- NXL / NXS drives with built in Ring frame application software on RS485 Modbus network communicates with SCADA software in PC.
- All ring frame machines shall be monitored and controlled with a Centralized PC



Open end frame

Spinning of slivers to yarn
in one process.
Also called rotor frame.

Vacon Applications:

👍 Vacon NXP, 7.5-30 kW



GEAR BOX ELIMINATION FOR OPEN END SPG

- No mechanical maintenance
- Completely invert control
- Easy operation to speed inc / dec
- All motors control thro VACON Drive
- Monitoring rotor speed, feed rate, delivery rate, TPM, draft and machine run time
- High energy efficiency Motors
- Smoothly start/stop thro Drive Control
- Take of roll control thro separate Motor for energy savings



OPEN END:

- Battery backup shall be provided for Vacon Drives during power failure, where breakages of all the ends will be avoided (if auto piecing is not working). The back up time can be according to the mills requirement using suitable battery bank, which avoids production loss.
- Drives for the feed and delivery roller can be provided for better optimization.
- Once the Rotor, opening rollers, feed rollers and delivery Rollers are driven by Vacon, it can be easily controlled for optimum performance and stored for each count processed. These settings can be easily called back later on while processing the same.



Humidification Plant for Textile Industries

- Use of VACON Inverter in Humidification, results in saving of **25% to 45%** power consumption.
- RH (Relative Humidity) and Temperature inside the plant is monitored and precisely controlled without any external controller/PLC
- On-line RH % , Temperature in the DRIVE keypad and also can be Computer Interfaced based on the customer requirement.

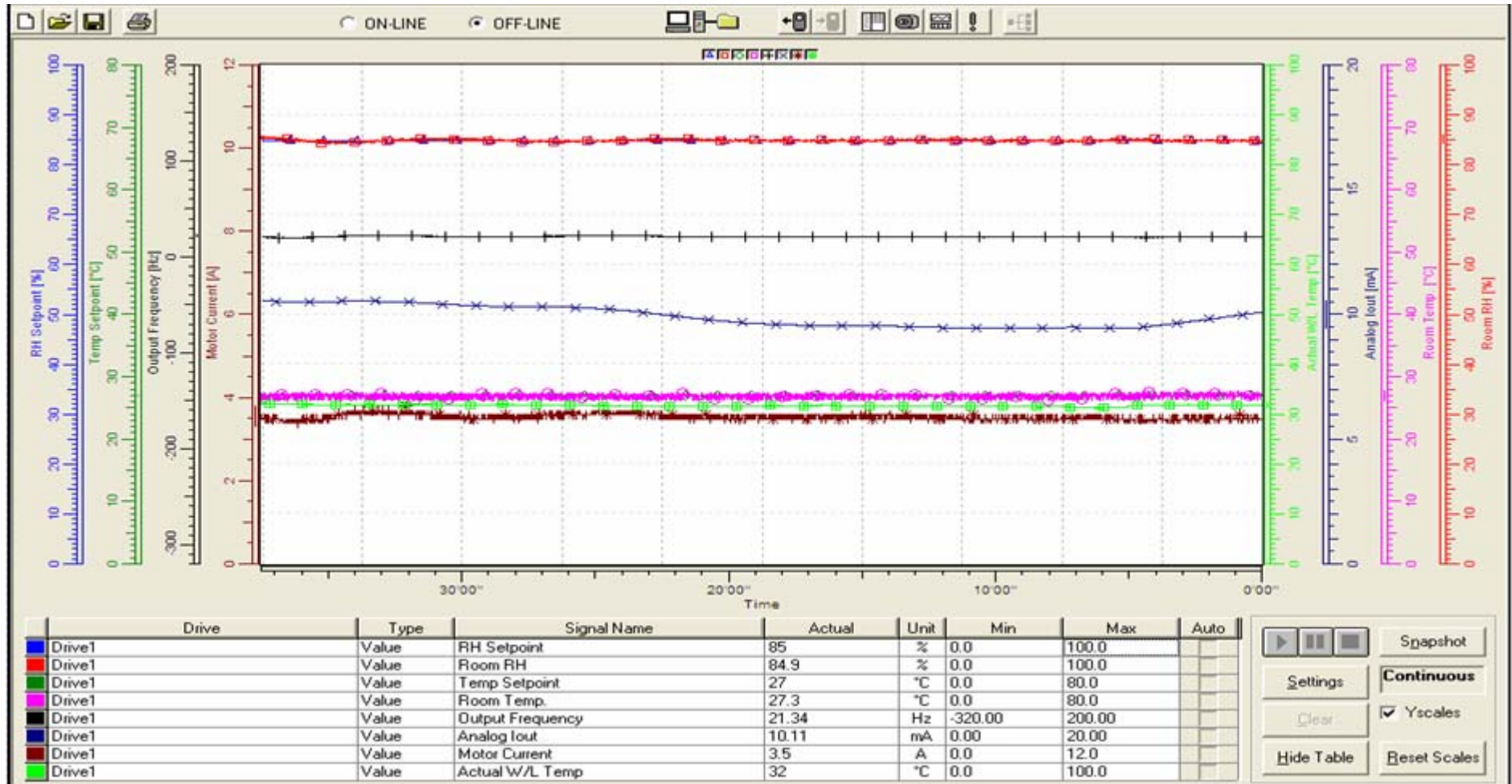


Advantages:

- The accuracy has been increased to + / - 0.5% in RH and +/- 1 Deg.C Temperature.
- Earlier with the conventional controller accuracy was more than +/- 5%
- Elimination of controller cost
- Any Plant Can be Controlled Automatically.



Humidification plant performance



COMPRESSORS:

- For Screw Compressors, We recommend VACON Inverters for **Power savings upto 40%**
- Cheapest Solution available in the Industry for automation of 2 or more Compressors Connected to common Header.
- One VACON Inverter Connected to Max of 4 Compressors with similar capacity or the largest capacity Inverter.
- Power savings Depends upon the Loading and Unloading pattern. max of Up to 35%.
- Uniform usage of all Compressors there by reduced maintenance cost.



WHY VACON?

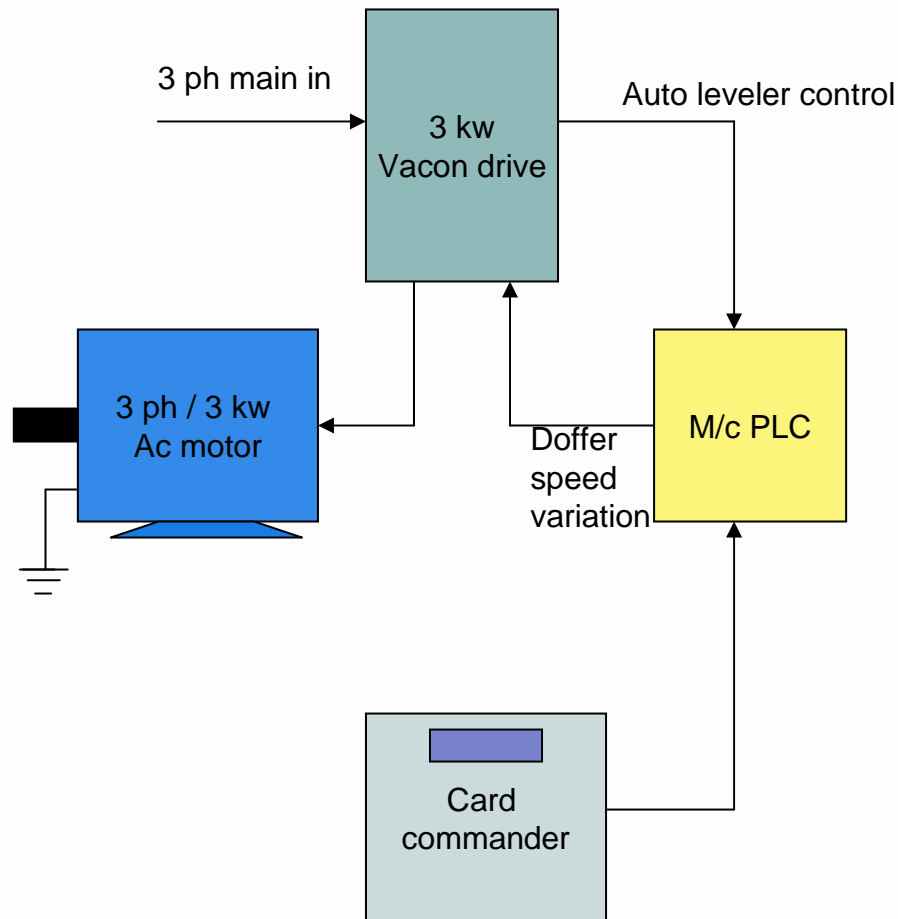
- 50 Degree Ambient temperature-
Ideal for Tropical countries like India.
- Coated PCB Boards by default.
- Built in with AC Chokes
Protects Inverter during Surges and Peaks
- Voltage Ranging from 323 Volts to 550 Volts-
Even when fluctuated within this range the speeds are same.
- Physical separation of Power and Control Voltage by Metal Plate.
- Higher Switching Frequency by default without any deration.
- Built-in PLC.
- Modular designed-
Each and every Component can be Repaired
- IP21, IP54 and IP66 Standards can be met depending upon Customers requirement. For IP21 and IP54 physical dimensions are same.

PIV GEAR BOX ELIMINATION FOR BLOWROOM

- No mechanical maintenance
- No need PIV Gearbox
- Complete Drive with A/C Motor Control
- Smooth start, stop and control the A/C drives
- No need any modification



DOFFER DRIVE CONVERSION KIT FOR TRUMAC CARDS



- Eliminates Doffer dc motors
- Eliminates techo generator from dc motor
- Eliminates GMB 2 B DC drive
- No need any mechanical modification
- Minimum alteration for fixing the system
- No need to change any machine functions and parameters
- No Dc Motor and Dc drive maintenance
- Easy operation
- Easy maintenance
- Does not disrupt any existing function
- No need to maintain techo generator
- Scope of supply
- 3 kw Vacon drive.
- 3 kw inverter grade S1 duty f class VPI treated motor.
- Mechanical kit for motor fixing.
- Motor gearbox coupling unit.
- Dust proof Control panel for drive.