



ISO-9001:2008

Gin Cotton Lint Opener



ICAR-Central Institute for Research on Cotton Technology
(ICAR-CIRCOT)

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Gin Cotton Lint Opener

Cotton lint samples used for testing fibre properties are prepared by opening up and cleaning of test specimens obtained from densely packed bales. If the lint samples are tested as such in the condition in which received without any sample opening and cleaning, there is every possibility of variations in the readings from the actual value. Fibre fineness or micronaire values can be considerably higher if samples are tested without opening which incidentally removes some of the bigger trash particles also. While opening allows proper air flow and accurate surface area measurement, unopened samples reduce the actual surface exposed to air and offer less resistance to air flow thereby increasing the micronaire reading. Hence proper opening of samples introduced into the porosity chamber for micronaire measurement is very important. Otherwise not only erratic micronaire but also erratic strength values can result.

Presently, many High Volume Instrument (HVI) testing laboratories generally employ trash analyser for the purpose of lint opening. Some laboratories follow the method of hand opening by employing human labour. The extent of lint opening is not uniform and optimum in both these methods and also the speed is very slow.

In case of trash analyser the more aggressive and excessive opening is achieved by saw band cylinder adversely affecting the micronaire and other fibre quality parameters. The speed of opening of samples by trash analyser machine is also too slow to match with the capacity of the HVI. Hence many times, there is a tendency, on the part of machine operators, of testing samples without opening.

In the case of hand opening, desired opening is not achieved and the amount of non-lint content is also more as compared to opening by trash analyser. Besides, opening of samples by hand is very tedious and laborious job that leads to testing of samples without opening, thus affecting the micronaire values.

Special Features of Gin Cotton Lint Opener

A new device has been designed and developed for opening of cotton lint samples for micronaire testing. The tests for performance evaluation of the cotton lint opener gave similar results as compared to the trash analyser in terms of the quality of lint opening. The cotton lint opener has the capacity to open 40-50 lint samples per hour.

Specifications of Gin Cotton Lint Opener

Licker-in Cylinder Assembly:

- RPM- 800 rpm
- Cylinder Dia - 225 mm
- Cylinder Length - 300 mm
- Shaft Dia - 30 mm

Feeder Roller Assembly:

- RPM - 12 rpm
- Dia - 50 mm
- Cylinder Length - 300 mm
- Shaft Dia - 30 mm

Suction Assembly:

- High Voltage Brushless blower of 200 mm WGP
- Power - 500 Watt, 240 volt AC. Input, single phase
- HDPE piping for suction of opened lint over the perforated chamber
- Lint collection chamber for 100 g opened lint

MS Frame:

- For mounting licker-in, feeder and suction assemblies, drives etc

SS Screen:

- For lint opening by scrubbing action underneath licker-in cylinder
- 3 mm thickness

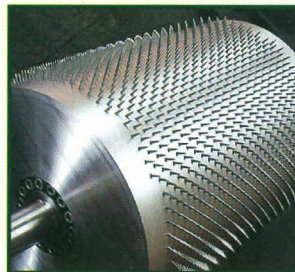
Drives:

- Electric motors, V Belt, Pulley and Chain

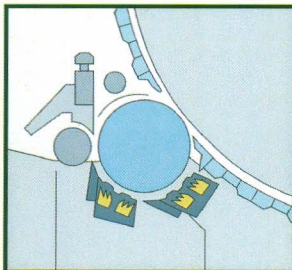
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Licker-in Cylinder



Feeder Roller



Suction



ICAR-CIRCOT



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ICAR-CIRCOT established in the year 1924, is engaged in basic and strategic research on processing of cotton and its agro-residues, development of value added products and quality assessment. Skill development and business incubation services are undertaken at the Institute and it also functions as a referral laboratory for cotton fibres.

AGRI BUSINESS INCUBATION (ABI)



ICAR-CIRCOT has established Agri Business Incubation (ABI) Centre at Mumbai to facilitate incubation of new enterprises for innovative technologies by admitting them and providing physical, technical, networking support and services. The centre provides services, facilities and need based business support to start-ups and entrepreneurs to test their venture before setting up of their own enterprise.

PRECISION TOOLING ENGINEERS



Precision Tooling Engineers, Nagpur is engaged in manufacturing products like Cotton Seed Mini Pre Cleaner, Cotton Seed Delinting Machine, Double Roller Ginning Machine, Modified Lab Ginning Machine and Cotton Seed Planter. It works for latest technology and contemporary machines and is accredited as one of the most cardinal manufacturer and supplier in the market place. Precision Tooling Engineers is an incubatee of ICAR-CIRCOT-ABI Centre. Precision Tooling Engineers has developed Gin Cotton Lint Opener in technical collaboration with ICAR-CIRCOT.

For details please contact

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