



## NONWOVEN TERMS

For the informed employee

# Fine Opener

Fiber systems for staple fibers usually consist of balefeeds, conveyors, a storage and/or mixing bin, an opening device, and fans.. The opening device is often a fine opener. There are various configurations for a fine opener, but most of them consist of a set of fluted feed rolls and a cylinder covered with short spikes or coarse card wire. The fine opener has a twofold purpose: (1) It tears up large chunks of fiber so the feed batt presented to the card has fiber chunks that are small enough to be manageable by the card. (2) Since it is located after a fiber blending bin, it presents a more intimate blend of fibers to the card.

Often the fine opener is fed from a reserve chute located above the fine opener. In this case it is called a VTO or vertical fine opener. The fine opener can just as easily be fed from a horizontal conveyor. Fiber is removed from a fine opener by means of a fiber fan. A stream of air is sucked across the cylinder with such velocity that it completely removes all fibers from the cylinder. The opening action in the fine opener takes place as the cylinder tears the fibers off the feed rolls. The feed rolls revolve slowly and the cylinder travels at quite a high speed. The speeds of the feed rolls and the cylinder are adjustable for the fiber type, denier, and length. The starting and stopping of the feed rolls is usually controlled by photo eyes sensing the fiber level in the machine downstream from the fine opener. The main cylinder runs continuously. Fine openers are usually 1 to 1.5 meters wide.

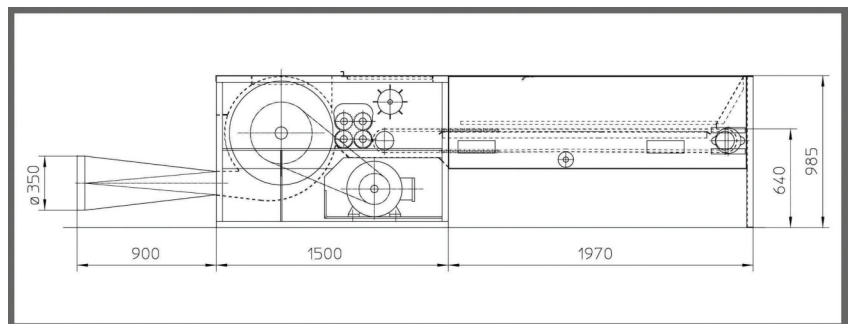


Vertical FO with a chute to enable bypassing the FO



Pinned FO cylinder showing the pins imbedded in the wooden lagging

Drawing of an Erko-Trutzschler type EWMP Fine Opener. This machine is designed for longer staple, higher denier fibers. Notice the double feed rolls. Drawing is from [www.lpmatson.com](http://www.lpmatson.com)



**“Learn to do common things uncommonly well; we must always keep in mind that anything that helps fill the dinner pail is valuable.”**

**George Washing Carver**

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