



TOBACCO ENGINEERING



BENEFITS

- Gentle slice opening action
- Uniform conditioning of all tobacco particles
- Reduced small particle generation
- Higher tobacco yield potential throughout primary department

DIRECT CONDITIONING CYLINDER (DCC)

The LTL Group are designers and manufacturers of process equipment for the world tobacco industry. The LTL range of Direct Conditioning Cylinders have been designed specifically for the opening and conditioning of Lamina from sliced bales.

Upon entry to the Direct Conditioning Cylinder the bale slice is presented to the opening section which retains the slice and exposes it to a jet of low pressure steam to gently loosen the lamina from the slice without overheating. The loosened leaf then passes into the conditioning section which has been designed to minimise product degradation and present each particle to equal process parameters leading to a uniform output moisture. The combined effects of the gentle opening action and uniform loading within the conditioning section leads to increased particle size and enhanced filling power at subsequent process stages.

Uniformity of product flow into the Cylinder is essential, to achieve equilibrium of moisture throughout the batch.

The diagram overleaf demonstrates one way in which this can be achieved by means of a vertical bale slicer. It also illustrates the preferred orientation at which the logs of product should be presented, especially in the case of smaller cylinders.

DIRECT CONDITIONING CYLINDER

FUNCTIONAL DESCRIPTION

The key to good product conditioning is uniformity through equal particle exposure to the process, whilst avoiding localised, or short term overheating which can impair the quality of the tobacco.

The LTL DCC has three distinct process zones within the cylinder, firstly there is the opening zone which has pinned area designed to retain the bale slices and expose them to steam opening jets positioned at the feed end of the cylinder. Secondly there is the conditioning zone which includes a lipped paddle arrangement designed to lift the product to a predefined release point and form a thin, falling curtain of product which is more easily exposed to the conditioning atmosphere within the cylinder.

Typical Sizes:

1.5m dia x 5.0m long

2.0m dia x 7.0m long

2.5m dia x 8.5m long

Additional sizes are available to suit individual customer requirements.

Finally there is a discharge zone, which has specially designed product scoops to enable an even discharge from the cylinder. The cross sectional diagram below illustrates these three process zones.

The application of Humectants or Casings can be made either with separate spray nozzles within the DCC, or through a water/casing mix system, whereby the water utilised for moisture addition is first mixed with the Humectants, or Casings in the correct proportions before application within the cylinder.

