Cane Preparation Equipment

- Increased Extraction and Milling Capacity
- Robust Construction
- Low Hammer and Knife Maintenance
- Efficient and Stable Energy Demand
- Novel Washboard Design
Cane Preparation

Sucrose in cane is contained as juice within thin-walled cells protected by the fibrous structure of the stalk. For easy and efficient extraction of the sucrose, whether by milling or diffusion, it is necessary that the cells are first ruptured to expose the sucrose within the cells.

Milling

With good cane preparation, milling performance improves because:

- The juice is made available for easy extraction.
- The cane density is increased and it is more homogenous, assisting feed and throughput.
- Lower mill feed/discharge ratios can be used, reducing mill power requirement. The power saved in the mills approximately offsets the power used by a heavy-duty shredder.
- Re-absorption is reduced through improved juice drainage.
- Bagasse moisture is improved.

Diffusion

The degree of preparation is the single most important factor in diffuser extraction. It affects both the following mechanisms in the diffusion process:

- The lixiviation or washing out of sucrose can only occur from exposed, broken cells.
- The diffusion of sucrose from high brix juice inside cells through unbroken cell walls will only occur where the outer wall of the cell is in direct contact with lower brix liquid.

Bosch Projects Cane Preparation Solutions

Cane Levelling

Counter-rotating levelling drums, in either one or two stages, ensure the most consistent rate of cane supplied to the preparation equipment.

Knifing

Excellent knifing is achieved by Bosch Projects counter-rotating knives, at the nose of the cane carrier or off the deck. The cane is usually fed into the knifing zone by a feeder drum and then knifed around an overhead Bosch Projects sprag washboard.

Vertically-fed Shredders

Bosch Projects vertically fed heavy-duty shredders with deep-pocketed washboards provide:

- Surge-free operation
- High reliability, with robust resistance to damage from rocks and tramp iron
- Low maintenance costs
- Full width hammer coverage, producing excellent preparation (PI> 90 %) while retaining long fibres.

Whole Stick Shredder

Bosch Projects Whole Stick Shredders incorporate all of the best-practice design features from the Southern African industry including:

- Two leveller drums to provide consistent cane supply and bulk density
- A large feeder drum
- Deep-pocketed washboard
- Installation at the nose of the cane carrier to provide consistent power consumption and reduce power surges
- Excellent resistance to rocks
- PI> 90 %
- A proven design

The Bosch Projects Whole Stick Shredder is used without preceding cane knives.