Cane / Bagasse diffuser

→ Get the Tongaat-Hulett worldwide experience

Tongaat-Hulett: a key asset
• Full engineering involvement from proposal to commissioning
• Comprehensive training for customer
• Experience sharing with Tongaat-Hulett factory teams
• Worldwide exclusive licence to Fives Cail

Outstanding performance
• Very high extraction efficiency: up to 98.5%
• Fully automated operation
• Energy savings for co-generation
• Low electric consumption: 0.2 kWh per ton of cane for main drive
• Possible conversion into bagasse diffuser for capacity expansion

Simplified installation
• Outside installation
• No mud filters required in purification section thanks to mud recycling

Easy operation and maintenance
• Reduced staff for operation
• Maintenance cost: 50% less than for traditional mills
• No stops for maintenance

Fives Cail is exclusively licensed by Tongaat-Hulett Sugar of South Africa to provide worldwide cane and bagasse diffusers. Together we have designed and built fixed bed diffusers which process 100,000 tons cane everyday.

Diffuser installations consistently outperform factories which operated the traditional Milling Tandems to extract sucrose.

Fives Cail/Tongaat-Hulett diffusers profit from a revolutionary extraction technology, developed thanks to users experiments integrating several patented characteristics.

www.fivesgroup.com  Driving Progress
Tongaat-Hulett technology
- Dedicated team at all stages
- South African engineering company and sugar producer
- 7 sugar mill plants and 1 central refinery in Africa
- 12 cane diffusers in operation throughout the world

Installation recommendations
Cane diffuser

Bagasse diffuser

Supplementary equipment for sucrose extraction
Dewatering MillMax®: strong and well-suited for diffusion applications in order to achieve less than 48% moisture in bagasse.

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### Capacity (tch)

<table>
<thead>
<tr>
<th>Cane</th>
<th>Bagasse</th>
<th>Width (m)</th>
<th>Length (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 - 350</td>
<td>250 - 450</td>
<td>6.5</td>
<td>58 - 75</td>
</tr>
<tr>
<td>300 - 500</td>
<td>400 - 600</td>
<td>9</td>
<td>58 - 75</td>
</tr>
<tr>
<td>450 - 650</td>
<td>550 - 750</td>
<td>12</td>
<td>58 - 75</td>
</tr>
</tbody>
</table>

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**Process**
- High extraction: up to 98.5%
- Recirculation of muds: no filters required
- Direct contact presswater heater: energy savings

**Design**
- About 60 meters long vessel divided into 10 to 14 stages (additional stages possible)
- No need of building enclosure
- Entirely sealed and low suspended solids in mixed juice: uses less chemical

**Control device**
- Control of cane bed depth and speed
- Anti-flooding equipment to control megasse moisture
- Adjustable imbibition to optimise extraction

**Hygiene**
- Extraction at high temperature (85°C) limiting bacteriological decomposition
- pH control: by milk of lime injection at 2 points

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Data for information only.

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