Horizontal Vacuum Belt Filters
WesTech Horizontal Belt Filters are designed and built on a tradition of engineering excellence. Extensive filtration experience gained over nearly half a century is drawn upon for each new project providing reliable operations and long service. WesTech provides expertise in the following industries, and many more.

- Power (FGD Dewatering)
- Potash
- Steel Mills
- Municipal Sludge
- Chemical
- Agricultural
- Food Processing
- Tar Sands
- Minerals (Concentrate and Tailings)

Horizontal belt filters are an ideal solution for applications with very large flow rates, stringent low cake moisture requirements and the need for highly efficient cake washing as a process step.

With extensive background in filtration technology, WesTech has successfully applied this experience to develop horizontal belt filters which excel in industry specific applications. WesTech offers sizes from lab-scale to 150m² filters. The minerals and power industries demand a very robust design and rigorous performance requirements. WesTech’s Horizontal Belt Filter installations meet or exceed demanding production rates, low cake moisture and cake washing requirements, while minimizing process upsets. WesTech employs the right balance of conservative design and experience to provide a cost-effective and high performance filter.

Many of WesTech’s horizontal vacuum belt filter improvements result from cooperation with engineers and operators at multiple installations. Making use of the right construction materials and process design, WesTech’s Horizontal Belt Filter outperforms other types of vacuum filters in both throughput, low cake moisture, and optimized cake washing.
Operational Advantages

- Pneumatic vacuum box raising / lowering
- Horizontal surface assures regular cake thickness which provides flexibility of operation
- Pneumatic cloth tracking system
- Ability to wash the solid phase in perfect delimited zones by direct or counter current washing
- Natural classification of feed solids
- High filtration rates (up to 10t/h/m²). Better cake wash efficiency (>99%)
- Drier filter cakes (as low as 6%). Highly efficient fluid drainage
- Automated control system

Standard Filter Dimensions

<table>
<thead>
<tr>
<th>Belt Width</th>
<th>m² Filtration Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.3-Meter Belt Width</td>
<td>0.6  1.1  1.7  2.2  2.8</td>
</tr>
<tr>
<td>0.6-Meter Belt Width</td>
<td>2.2  3.3  4.5  5.6  6.7</td>
</tr>
<tr>
<td>1.2-Meter Belt Width</td>
<td>6.7  8.9 11.2 13.4 17.9</td>
</tr>
<tr>
<td>2-Meter Belt Width</td>
<td>13.5 20.3 27.1 33.9 40.6 54.2</td>
</tr>
<tr>
<td>3.2-Meter Belt Width</td>
<td>33.5 44.7 55.8 67.0 89.3 100.5</td>
</tr>
<tr>
<td>4.2-Meter Belt Width</td>
<td>74.1 88.9 118.6 133.4 148.2</td>
</tr>
</tbody>
</table>
Variations of this flowsheet including a counter-current cake wash can be employed depending on particular needs and circumstances. The above description provides a good baseline for the dewatering flow sheet.