Simatek Reverse-Jet Bag Filter 3C

Optimal solutions for Air Environmental Control
Simatek Low Pressure Reverse Pulse Bag Filters enable economical collection of fumes and dust at high filtration rates and utilise absorption techniques to remove acid gases, heavy metals and dioxins from flue gases. The systems feature flow rates from 5 to 100 m³/s. The dirty flue gas is introduced tangentially into the top of the filter through a 180° scroll inlet. This ensures a very even gas and dust distribution into the filter and some coarse dust will be collected by this simple cyclonic effect.

The cylindrical walls ensure that there are no “dead corners” and the risk of low temperature pockets with increased corrosion risk is substantially reduced.

The low pressure (0.7-0.9 bar) but high volume cleaning pulse makes it possible to achieve up to 5 times higher cleaning energy than by other pulse jet filters.

- Flow rate from 5 to 100 m³/s.
- Efficient pulse-jet cleaning.
- Small footprint.
- For dry as well as sticky products.
- Advanced control functions.
- Separation of almost any type of dust.
Tenova Mining & Minerals is a total integrated solutions provider to the global mining, bulk materials handling and minerals beneficiation and processing sectors, offering innovative technological solutions and full process and commodity knowledge across the mining industry value chain.

Tenova TAKRAF is a key supplier of equipment and systems for open pit mining and bulk handling, having provided hundreds of complete systems, as well as individual machines to clients all over the world. Comminution systems for milling and crushing requirements in mining and mineral processing are based on a track record dating back to the 1920s. Air pollution control, specialised handling equipment, and technology for the cement and fly ash industries and pneumatic conveying, ensure selection of optimal processing options. A comprehensive after sales service is provided. Bateman Engineered Technologies (previously part of the Bateman Engineering Group) is now trading as Tenova TAKRAF.

Tenova TAKRAF’s in-house range for air pollution control is comprehensive, enabling the selection of the most cost-effective solution to any dust-control, air-cleaning or product-recovery problem, large or small. Systems are designed, manufactured and supplied as turnkey installation with full after-sales service.
**SIMPULSE 3C FILTER**

<table>
<thead>
<tr>
<th>FILTER JS XXX/YY-ZZ, SERIES 3C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X</strong> - No. of bags</td>
</tr>
<tr>
<td>Filter type</td>
</tr>
<tr>
<td>56</td>
</tr>
<tr>
<td>80</td>
</tr>
<tr>
<td>90</td>
</tr>
<tr>
<td>112</td>
</tr>
<tr>
<td>128</td>
</tr>
<tr>
<td>160</td>
</tr>
<tr>
<td>180</td>
</tr>
<tr>
<td>200</td>
</tr>
<tr>
<td>240</td>
</tr>
<tr>
<td>260</td>
</tr>
<tr>
<td>280</td>
</tr>
<tr>
<td>336</td>
</tr>
</tbody>
</table>

**FILTER MODULOS**

The filter modules are based on the unique filter concept SimPulse 3CS, which combines the features below.

- Pulse jet cleaning system for uniform and effective cleaning of all filter bags.
- Long bag technology allowing filter bag length above 16 m.
- Pulse jet technology based on low pressure – high volume – high energy.
- Circular design with integrated pre-separation of coarse particles.
- No “dead corners” and low temperature pockets with increased corrosion risk.
- Downflow filtration for optimum filtration of sub micron particles.
- Flat bottom design for elimination of dust bridging.

**UNIQUE INDIVIDUAL BAG CLEANING PRINCIPLE**

The valve has 10 openings, which allow a pulse of cleaning air through an ejector into one single bag. When 10 bags have been cleaned individually, the entire PAD, including the 10 blow pipe arms with ejectors, indexes to the next position for individual cleaning of the next 10 bags.

PLC control makes it possible to optimise pulse time, cleaning energy per bag, etc. The normal procedure is to automatically start and stop cleaning sequences to keep the pressure drop across the filter within the pre-set limits.

This unique individual bag cleaning principle will in all normal operating conditions result in very long cleaning intervals which, together with the low pressure – high energy – pulse, provides a very gentle cleaning and extended bag life.
FILTER MODULES

Each filter module includes
A.1 Pulse Air Distributor (PAD)
A.2 Tube sheet
A.3 Filter bags (not shown)
A.4 Filter cages (not shown)
A.5 Hub & gear for scraper bottom (not shown)
A.6 Discharge system – optional
B.1 Penthouse
B.2 WIP chamber
B.3 Filter housing
B.4 Scraper bottom
B.5 Supporting structure (Lobby)