LASERFILTER

The high-performance filter system.
For continuously high melt throughputs.

New: now even more efficient thanks to innovative scraper technology.
More throughput.  
More thickening.  
More quality.

EREMA Laserfilter.  
Now featuring new innovative scraper technology.

The EREMA Laserfilter is a high-performance filtration system.

Thanks to its ingenious technology it ensures remarkably high throughput rates with outstanding melt quality. It is a specialist for high contamination contents when pellets in film quality are required and for a number of other tasks which conventional melt filters cannot handle.

Removes contaminants even faster and more thoroughly.

With the high-capacity EREMA Laserfilter you have proven technology which has now been enhanced with a further boost of innovation: thanks to the new scraper geometry and discharge system design the contaminants which are filtered out are removed even faster and more thoroughly. This results in first-class cleaning efficiency, discharge capacity and thickening. Service life is also extended at the same time.

Technical benefits

- Self-cleaning filter system with rotating scraper disc enables days and weeks of continuous filtration
- New! Enhanced cleaning efficiency through redesign of scraper geometry and discharge system – for even faster removal of contaminants
- Greater discharge capacity for contaminants such as paper, wood, aluminium, copper
- Fully automatic, constant pressure operation
- Top filtration reliability: perfectly sealed system prevents any filtered out contaminants from getting into the high-quality plastic melt

Economic benefits

- Continuously high filtration performance ensures high melt throughput together with outstanding melt quality
- Considerably higher screen service life through increased cleaning efficiency
- Less labour required thanks to longer screen change intervals
- Simple and fast screen disc changeover
- Minimum melt losses through increased thickening up to 50 %
High performance. Continuously.
EREMA Laserfilter for thermoplastics.
The high-capacity system.

Clean melt. Through and through. This is how the Laserfilter works.

The contaminated plastic melt is pressed through two laser bored screen discs in a parallel configuration. A scraper disc rotates between these screen discs. Their purpose is to remove the filtered contaminants from the screen immediately and forward them instantly to the discharge system. Continuously, thoroughly and as fast as possible.

The new scraper star is a considerable boost to efficiency. Thanks to its innovative scraper geometry and the new directly connected discharge channels any contaminants are lifted from the screen immediately and forwarded directly to the discharge system. The scraper and discharge screw speeds depend on the pressure and is controlled fully automatically (“constant pressure operation”).

Static screen, rotating disc: maximum filtration reliability
Unlike many conventional filters the EREMA Laserfilter has a rotating scraper rather than a rotating screen. This is a considerable advantage in terms of the system being leak-free. The static EREMA screen is perfectly sealed and prevents any filtered out contaminants from getting into the high-quality plastic melt. In short: EREMA Laserfilter – reliable filtration at its finest.

The fine difference. Laser technology gives you the edge.

The centrepiece of the Laserfilter is the filter screen, which is where the name comes from. It features ultrafine boreholes which are lasered into the hardened special steel of the screen discs using extremely modern laser technology. A self-cleaning effect is achieved through the conical shape of the holes. Your quality bonus: the screen discs are made at EREMA’s subsidiary 3 S.

Innovative scraper technology for fastest possible contaminant removal.

• Continuous filtration over days and weeks with enhanced cleaning efficiency
• Contaminants lifted off screen continuously and forwarded efficiently to discharge system
• Increased discharge capacity – lowest melt losses through increased thickening
• Considerably higher screen service life through increased cleaning efficiency
• Top-quality scraper elements manufactured from highly wear-resistant material
2,600 kg/h. Clean performance. Top filtration capacity. An example.

Application example

Filtration of plastic melts with non-melting content such as paper, wood, aluminium, copper etc.

INTAREMA® 2021 TVEplus® with LF 2/354 TRIPLE in parallel configuration (filtration 90 µm)

Throughput 2,600 kg/h (see picture above)

Input  PE washed shreds with 2 to 3 % residual contamination (PET, aluminium, paper, wood)

Filtration  Thickening 41 % – contamination removal with lowest melt loss!

Output  PE recyclate in film quality

Technical data Laserfilter

<table>
<thead>
<tr>
<th>Laserfilter type</th>
<th>LF 2/354</th>
<th>LF 2/354 TWIN</th>
<th>LF 2/354 TRIPLE</th>
<th>LF 2/354 QUATTRO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total filter area (cm²)</td>
<td>1342</td>
<td>2684</td>
<td>4026</td>
<td>5368</td>
</tr>
<tr>
<td>Number of heating zones</td>
<td>7</td>
<td>16</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Heating capacity (kW)</td>
<td>23</td>
<td>66</td>
<td>85</td>
<td>106</td>
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<tr>
<td>Drive power (kW)</td>
<td>4</td>
<td>8</td>
<td>12</td>
<td>16</td>
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<tr>
<td>Scraper disc speed (rpm)</td>
<td>1-8</td>
<td>1-8</td>
<td>1-10</td>
<td>1-10</td>
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<tr>
<td>Max. operating pressure (bar)</td>
<td>320</td>
<td>320</td>
<td>320</td>
<td>320</td>
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<tr>
<td>Throughput capacity (kg/h)</td>
<td>200-2000</td>
<td>800-3500</td>
<td>1800-4600</td>
<td>2500-6000</td>
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</table>

Filter units available

<table>
<thead>
<tr>
<th>70 µm</th>
<th>90 µm</th>
<th>110 µm</th>
<th>130 µm</th>
<th>150 µm</th>
<th>180 µm</th>
<th>230 µm</th>
<th>400 µm</th>
<th>800 µm</th>
<th>2000 µm</th>
</tr>
</thead>
</table>

Screen changes without stopping the machine – for continuous production: this special execution of the EREMA Laserfilter LF 2/354 TWIN makes it possible.
More questions? We would be pleased to answer them!
Your EREMA advisor will be pleased to attend to your request personally and quickly.
If you are interested in a demonstration or a test run with your specific material it would be a pleasure for us to make an appointment and welcome you to our EREMA Customer Centre at the headquarters in Ansfelden, near Linz in Austria.

We look forward to seeing you at EREMA!

For worldwide representatives please visit www.erema.at

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English