LSM 50

LSM 50 (Lamella Settler Module 50 mm) is a lamella pack obtained by the assembly of PS thermoformed plates.

**Design**
The product has been studied to maximize the projected surface without limiting the wastewater free passage. The channels have a arrow shape in order to allow the best solid flow.

LSM lamella pack can be made of different sizes and inclinations. Furthermore it is possible to cut them to size: all these customization possibilities make the product easy to adapt to any kind of plant or basin, including circular ones.

The structure is self-supporting, so it is not necessary to use metal frames. Anyhow we suggest to use them whenever you wish to simplify the maintenance and installation operations.

**Principal Applications**
The channels sizes and the considerable projected surface allow this product to find a wide use in many applications in wastewater treatment, among with:

❖ primary and secondary clarifiers (settlers) in wastewater treatment plants;
❖ clariflocculation
❖ oil and water separation systems
❖ settlers in potabilizer plant

**PS Characteristics**
The PS used to make this lamella settler module comply with the most restrictive standards, presenting many advantages:

❖ Lightness, which allows an easy handling
❖ High mechanical resistance
❖ Resistance to the majority of chemicals and to the biological aggression
❖ On demand the product can be supplied in virgin PS, which is compatible with drinking water applications

<table>
<thead>
<tr>
<th>Material</th>
<th>Colour</th>
<th>Standard Thickness</th>
<th>Working Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS or PS for drinking water</td>
<td>carbon black</td>
<td>1,8 mm</td>
<td>-5°C ÷ 80°C</td>
</tr>
</tbody>
</table>
Formats
Sheets sizes depend on the mould size and from the possibilities given by our thermoforming machines. On request we can supply cut to size blocks.
Can be supplied both in pre-assembled blocks and sheets to be assembled on site.
The latter option allow to optimize the freight volume and consequently to reduce the transport costs.
The assembly process can be chemical, using a solvent glue, which doesn’t leave any residual in the finished product, or thermal, by welding.
Refill-tech can supply the suitable machines to make these operations.

Standard Block Sizes

<table>
<thead>
<tr>
<th>Use</th>
<th>Width B</th>
<th>Inclination</th>
<th>Length L (without projection)</th>
<th>Height H (min ÷ max)</th>
<th>Projected Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarifier (Settler)</td>
<td>1000 mm</td>
<td>60°</td>
<td>50 mm Pitch</td>
<td>530 ÷ 1320 mm</td>
<td>14,6 m²/m³</td>
</tr>
<tr>
<td>Oil water separator</td>
<td>1000 mm</td>
<td>45°</td>
<td>61 mm Pitch</td>
<td>445 ÷ 1110 mm</td>
<td>19,6 m²/m³</td>
</tr>
</tbody>
</table>

Hydraulic data - 60° inclined modules

<table>
<thead>
<tr>
<th>Hydraulic Radius</th>
<th>Hydraulic Diameter</th>
<th>Minimum free Passage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,5 cm</td>
<td>6,0 cm</td>
<td>78 mm</td>
</tr>
</tbody>
</table>

Metal Frames for lifting and bounding:
To simplify maintenance and installation operations, as well as to give a stronger structure to the blocks, Refill-tech can supply made to size metal frames in AISI 304, AISI 316L and galvanized sheet, suitably shaped and equipped with lifting hooks.

* Projected Specific Surface (m²/m³) can be increased of 10% by thermoforming process respect the mentioned values.

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