Filter bag
amaFlow needled felt

1. Introduction

For a wide number of filtration applications amaFlow filter bags are a simple, easy to use and economical choice. The amaFlow needled felt bags are mainly employed where depth filtration is required. The three dimensional media provides good depth filtration characteristics and high solids loading versus two dimensional media.
2. Features
- Bags are quick and easy to change-out.
- Inside-out flow keeps contaminants enclosed in the bag.
- Bags are silicone free and are produced in a silicone free environment.
- Materials used for amaFlow AP and SP conform to the European Directive 2002/72/EC for plastic materials and articles intended to come into contact with food stuffs (food & beverage).
- Filter bags and bag filter housings are usually employed as closed systems, but open or end-of-pipe applications are attractive alternatives.
- The standard amaFlow filter bags are sized to fit into our baskets and housings, but will also fit into most other housings. Special sizes are available on request.
- Cost effective at lower microns versus two dimensional media (mesh).

3. Description
The amaFlow needled felt filter bags with Snap-Collar are sewn as standard at the ring, have a welded longitudinal seam and are sewn at the bottom seam. Other configurations are possible depending on material. The polyester and polypropylene filter bags are equipped with handles as standard:
- S, SS, PO: Finger grips inside bag (size 1, 2: slits in felt). An additional handle strap is optional, from the same material as needled felt.
- P: 2 handles in ring (size 3, 4: 1 handle)

Types
The amaFlow needled felt bags are available as standard in polyester or polypropylene with many different micron ratings. Other materials such as nylon, PTFE, PPS and Nomex® are available on request.

The amaFlow filter bags seal with either a Snap-Collar seal comprising of either carbon steel, stainless steel or polypropylene or with a plastic seal flange. For open systems (uses outside a filter housing) the filter bags can also be supplied without any ring (thus no integrated means of fastening) or with a pull cord only.

4. Sealing systems
In order for bag filters to function properly, especially with smaller pore sizes, a good seal between bag and support basket is of great importance. For this reason we have two options:
- The Snap-Collar; a felt-covered metal or plastic ring which clicks neatly into the upper collar of the support basket. The felt serves as the sealing.
- The plastic flange (with handles) which tightly fits into our standard baskets.

5. Surface treatment
Polypropylene is thermally treated on the outside as standard, for polyester this is available as an option. This will further minimise any possible release of fibres from the needled felt filter media. During the thermal treating process the softened fibres are bonded together on the downstream side of the bag.

6. Multi layered and pleated felt bags
Bags with multiple layers or pleats offer advantages when removing particles which are difficult to filter and have a longer service life. For information on amaFlow multi layered or pleated felt bags please see Data Sheets of these products.

7. Temperature and chemical resistance

<table>
<thead>
<tr>
<th>Filter bag grade</th>
<th>AP polyester</th>
<th>SP polypropylene</th>
<th>N nylon</th>
<th>TF PTFE</th>
<th>RT PPS</th>
<th>HT Nomex®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. temperature [°C]</td>
<td>150*</td>
<td>95</td>
<td>95</td>
<td>250</td>
<td>170</td>
<td>200</td>
</tr>
<tr>
<td>resistance to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>inorganic acids</td>
<td>++</td>
<td>++</td>
<td>-</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>organic acids</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>alkalines</td>
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<td>++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>oxidising agents</td>
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<td>-</td>
<td>+++</td>
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<tr>
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<td>+++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>vegetable/animal oils</td>
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<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>micro-organisms</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
</tbody>
</table>

* 95 °C for polypropylene ring / flange

Filter bag amaFlow needled felt
8. Order code

Example

<table>
<thead>
<tr>
<th>amaFlow AP mmm</th>
<th>10</th>
<th>P</th>
<th>2</th>
<th>S</th>
<th>-</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
</table>

Material
- AP = polyester
- SP = polypropylene
- N = nylon
- TF = PTFE
- RT = PPS
- HT = Nomex®

Micron rating [µm]
- AP: 0.8, 1, 3, 5, 10, 25, 50, 75, 100, 150, 200
- SP: 0.8, 1, 3, 5, 10, 25, 50, 75, 100, 150, 200
- Micron ratings for other materials on request

Finish
- P = plain (not for SP)
- P/S = standard finish for SP (with improved outer surface: thermally treated)
- S = outside thermally treated (AP)

Bag dimensions
- 1 = size 1 (Ø 178 x 432 mm)
- 2 = size 2 (Ø 178 x 787 mm)
- 3 = size 3 (Ø 104 x 203 mm)
- 4 = size 4 (Ø 104 x 356 mm)
- 30 = size 30 (Ø 106 x 254 mm)
- 65 = size 65 (Ø 106 x 559 mm)

Ring/seal
- S = carbon steel ring (Snap-Collar)
- SS = stainless steel AISI 304 ring (Snap-Collar)
- PO = polypropylene ring (Snap-Collar: SP only)
- P = polypropylene flange (size 1, 2, 3, 4: for AP and SP only)
- T = PTFE ring (Snap-Collar, TF standard)
- DS = draw string

Welded/sewn
- = standard with ring sewn, longitudinal seam welded and bottom seam sewn
  - For N, TF, RT, HT and for all size 3, 4, 30, and 65: standard all sewn
  - Option for AP and SP in size 1 and 2:
    - WE = all welded (P flange only, standard for SP)

Additional handle
- HS = handle strap, from same material as needled felt (standard on size 30 and 65 for S, SS and PO ring)

Other options
- 1PK = single packed in plastic bag, together in box