

Filter Bags

PROGAF™  
ACCUGAF™  
ABP  
LOFCLEAR™

MAX-LOAD™  
HAYFLOW™  
HAYFLOW Q  
DURAGAF™

CLEARGAF™  
SENTINEL®  
SNAP-RING®  
BANDSEAL™

High performance  
unparalleled selection



**EATON**

*Powering Business Worldwide*

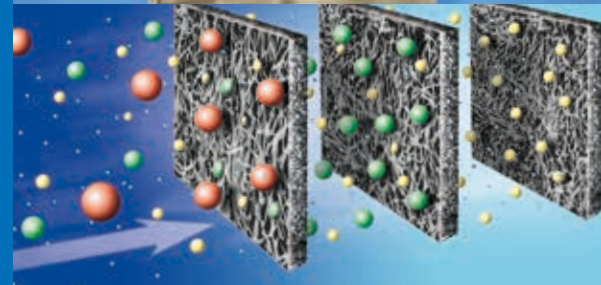
# Wide range of filter bag materials and fabrication technologies to meet every need

From unique element designs that range from multilayer construction, pleated extended surfaces and fully-welded seams to advanced sealing technology, Eaton delivers performance products for both simple and complex applications.

Whether sewn or welded, Eaton filter bags are fabricated using the most advanced techniques and equipment in the world. Highly automated welding systems produce consistent, dependable bag construction. Eaton's proprietary UNIWELD system provides bag seals that are strong, yet flexible to conform to restrainer baskets. Food-grade products are manufactured in facilities where both the environment and materials are controlled to assure cleanliness.

This range of design and fabrication options offers solutions for the full spectrum of fine and coarse filtration applications. Repeatable, durable, cost-effective technology is working for Eaton's customers.

Eaton's complete line of single and multi-bag filter housings and filter bags are used in a variety of industries and are designed to meet the needs of the most demanding applications. Eaton's bag filtration systems help customers around the world meet their need for efficiency, safety, convenience and value.



# Eaton Filter Bags

## Selection Guide

### HIGH EFFICIENCY



#### PROGAF filter bags

Combines high-efficiency media with a high-capacity pre-filter for effective retention rating down to the sub-micron level.



#### ACCUGAF / ABP filter bags

Highly efficient with an extremely high particle retention rating. Cost-effective filtration solutions for demanding applications with efficiencies greater than 99%.



#### LOFCLEAR filter bags

Highly effective filter bags with a special, multi-layer construction that results in *absolute* efficiency for demanding applications.



#### MAX-LOAD coreless filter bags

High efficiency, meltblown filter bag without inner core.

### HIGH CAPACITY



#### MAX-LOAD pleated filter bags

Extended-life pleated material increases dirt-holding capacity and lasts up to ten times longer than standard needle-felt filter bags.



#### HAYFLOW filter elements

Combines the best of filter bags and filter cartridges in one element.



#### HAYFLOW Q filter elements

High capacity extended-life needle felt with ultrafine nylon mesh cover layer with *absolute* efficiency.



#### DURAGAF filter bags

Extended-life material results in fewer filter bag change-outs, improves operating efficiencies and reduces operating costs.

### FOOD



#### CLEARGAF filter bags

Meets EC and FDA requirements for pharmaceutical, food and beverage industries.

### STANDARD



#### SENTINEL filter bags

Fully-welded construction for high efficiency and bypass-free filtration.



#### SNAP-RING filter bags

Sewn construction in needle felt, monofilament and multifilament material



#### ABSORPTION INSERT filter elements

The ultimate solution for increased dirt and oil removal capacity.

### STANDARD



#### Monofilament filter bags

Different materials of SENTINEL and SNAP-RING monofilament filter bags cover many applications with chemical and thermal properties.



#### Multifilament filter bags

Basic line of nominal rated sewn SNAP-RING multifilament mesh bags.



#### BANDSEAL filter bags

Tie-on filter bags for filtration without a bag filter housing.

# Technical Data

| Ranges            | Codes  | Available grades                         | Sizes  | Seal rings | Welded, sewn or glued ring/side/bottom | Materials | Media types | Surface finish | Max.oper. temp. °F (°C) |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
|-------------------|--------|--|--------|------------|--|-----------|-------------|----------------|-------------------------|-----|-----|-----|-----|-----|-----|-------|------------|--|----------------|-------------|----------------|-------------------------|------|--------|--|-----------|--|
| PROGAF            | PGF    | 50, 51 or 55                             | 02     | E          | W / W / W                              | PP        | Melt        |                | 194 (90)                |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
| ACCUGAF           | AGF    | 51, 53, 55, 57 or 59                     | 01, 02 | E          | W / W / W                              | PP        | Melt        |                | 194 (90)                |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
|                   | AGFE   | 51, 55 or 57                             | 01, 02 | H          | W / S / S                              | PET       | Melt        |                | 302 (150)               |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
| ABP               | ABP    | 1, 5, 10 or 25                           | 03, 04 | E          | W / W / W                              | PP        | Melt        |                | 194 (90)                |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
| LOFCLEAR          | LCR    | 123, 124, 125, 126, 128, 129, 130 or 135 | 01, 02 | E          | W / S / S                              | PP        | Melt        |                | 194 (90)                |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
|                   | LCR    | 522, 525, 527 or 529                     | 02     | Z          | W / W / W                              | PP        | Melt        |                | 194 (90)                |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
| MAX-LOAD coreless | CLPO   | 1, 5, 10, 20, 50, 100 or 150             | 01, 02 | E          | W / W / W                              | PP        | Melt        |                | 194 (90)                |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
|                   | CLPE   | 1, 5, 10, 20, 50, 100 or 150             | 01, 02 | H          | W / W / W                              | PET       | Melt        |                | 275 (135)               |     |     |     |     |     |     |       |            |  |                |             |                |                         |      |        |  |           |  |
| Ranges            | Codes  | Available grades                         |        |            |  |           |             |                |                         |     |     |     |     |     |     | Sizes | Seal rings | Welded, sewn or glued ring/side/bottom | Materials      | Media types | Surface finish | Max.oper. temp. °F (°C) |      |        |  |           |  |
|                   |        | 1  | 5      | 10         | 25                                     | 50        | 80          | 100            | 125                     | 150 | 200 | 250 | 300 | 400 | 600 | 800   | 1000       | 1250                                   |                |             |                |                         |      |        |  |           |  |
| MAX-LOAD          | POXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | E           | W / W / W      | PP                      | Felt | Glazed |  | 194 (90)  |  |
|                   | PEXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | H           | G / W / G      | PET                     | Felt | Glazed |  | 275 (135) |  |
| HAYFLOW           | POXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 02             | E           | W / W / W      | PP                      | Felt | Glazed |  | 194 (90)  |  |
|                   | PEXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 02             | H           | W / W / W      | PET                     | Felt | Glazed |  | 302 (150) |  |
|                   | LCR    | 128                                      |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 02             | E           | W / S / W      | PP                      | Melt |        |  | 194 (90)  |  |
| HAYFLOW Q         | POXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 02             | E           | W / W / W      | PP                      | Felt | Glazed |  | 194 (90)  |  |
|                   | PEXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 02             | H           | W / W / W      | PET                     | Felt | Glazed |  | 302 (150) |  |
| DURAGAF           | POXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | E           | W / W / W      | PP                      | Felt | Glazed |  | 194 (90)  |  |
|                   | PEXL   | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | H           | W / W / W      | PET                     | Felt | Glazed |  | 302 (150) |  |
| CLEARGAF          | POF    | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | E           | W / W / W      | PP                      | Felt | Singed |  | 194 (90)  |  |
|                   | POXLF  | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | E           | W / W / W      | PP                      | Felt | Glazed |  | 194 (90)  |  |
|                   | PEF    | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | H           | W / W / W      | PET                     | Felt | Singed |  | 284 (140) |  |
|                   | PEXLF  | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | H           | W / W / W      | PET                     | Felt | Glazed |  | 284 (140) |  |
|                   | NMOF   | ■  | ■      | ■          | ■                                      | ■         | ■           | ■              | ■                       | ■   | ■   | ■   | ■   | ■   | ■   | ■     | ■          | ■                                      | 01, 02         | H           | W / S / S      | Nylon                   | Mesh |        |  | 284 (140) |  |
| SENTINEL          | PO     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02, 03, 04 | E           | W / W / W      | PP                      | Felt | Singed |  | 194 (90)  |  |
|                   | PE     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02, 03, 04 | H           | W / W / W      | PET                     | Felt | Singed |  | 302 (150) |  |
| SNAP-RING         | PO     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | S           | S / W / S      | PP                      | Felt | Singed |  | 230 (110) |  |
|                   | PO     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 03, 04         | S           | S / S / S      | PP                      | Felt | Singed |  | 230 (110) |  |
|                   | PE     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | S           | S / W / S      | PET                     | Felt | Singed |  | 374 (190) |  |
|                   | PE     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 03, 04         | S           | S / S / S      | PET                     | Felt | Singed |  | 374 (190) |  |
|                   | NY     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02, 03, 04 | S           | S / S / S      | Nylon                   | Felt |        |  | 374 (190) |  |
|                   | PT     | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | A           | S / S / S      | PTFE                    | Felt |        |  | 500 (260) |  |
| UNIBAG            | POU    | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | UE          | W / W / W      | PP                      | Felt |        |  | 374 (190) |  |
|                   | PEU    | ■  | ■      | ■          | ■                                      | ■         |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | UK          | W / W / W      | PET                     | Felt |        |  | 536 (280) |  |
| Monofilament      | NMO    | ■  | ■      | ■          | ■                                      | ■         | ■           | ■              | ■                       | ■   | ■   | ■   | ■   | ■   | ■   | ■     | ■          | ■                                      | 01, 02, 03, 04 | S           | S / S / S      | Nylon                   | Mesh |        |  | 374 (190) |  |
|                   | NMO    | ■  | ■      | ■          | ■                                      | ■         | ■           | ■              | ■                       | ■   | ■   | ■   | ■   | ■   | ■   | ■     | ■          | ■                                      | 01, 02, 03, 04 | Z           | S / S / S      | Nylon                   | Mesh |        |  | 257 (125) |  |
|                   | PMO    |  |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | A           | S / S / S      | PP                      | Mesh |        |  | 230 (110) |  |
|                   | PEMO   |  |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | S           | S / S / S      | PET                     | Mesh |        |  | 374 (190) |  |
|                   | PEEKMO |  |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | A           | S / S / S      | PEEK                    | Mesh |        |  | 464 (240) |  |
| Multifilament     | PEMU   |  |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 01, 02         | S           | S / S / S      | PET                     | Mesh |        |  | 293 (145) |  |
| BANDSEAL          | NMO    |  |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 01             |             | S / S / S      | Nylon                   | Mesh |        |  | 374 (190) |  |
|                   | NMO    |  |        |            |  |           |             |                |                         |     |     |     |     |     |     |       |            |  | 43, 45         | R           | S / S / S      | Nylon                   | Mesh |        |  | 374 (190) |  |

**Chart abbreviations:** PET: polyethylene terephthalate, PP: polypropylene, MA: Meta-Aramid, Melt: melt-blown, W: welded, S: sewn, G: glued

**Ring abbreviations:** E: polypropylene/SENTINEL seal ring, H: polyester/SENTINEL seal ring, Z: Santoprene™/SENTINEL seal ring, S: zinc-plated steel  
SNAP-RING, A: Stainless steel SNAP-RING, R: without seal ring

**Maximum flow rates** for most filter bag ranges are as shown below with the following exceptions:

- 1) POXL, PEXL, POXLF and PEXLF filter bags, size 01: 15 m³/h and size 02: 30 m³/h. 2) AGF, AGFE and LCR 100 filter bags, size 01: 8 m³/h and size 02: 15 m³/h. 3) LCR 500 filter bags, size 02: 12 m³/h. 4) PGF filter bags, size 02: 10 m³/h

## Filter specifications

| Size | Max. flow rate GPM (m³/h) | Filter area ft² (m²) | Volume gal (l) | Diameter in (mm) | Length in (mm) |
|------|---------------------------|----------------------|----------------|------------------|----------------|
| 01   | 90 (20)                   | 2.6 (0.24)           | 2.0 (7.6)      | 7 (180)          | 17 (430)       |
| 02   | 180 (40)                  | 5.2 (0.48)           | 4.5 (17)       | 7 (180)          | 32 (810)       |
| 03   | 26 (6)                    | 0.9 (0.08)           | 0.5 (1.9)      | 4 (100)          | 9 (230)        |
| 04   | 53 (12)                   | 1.7 (0.16)           | 0.7 (2.7)      | 4 (100)          | 15 (380)       |
| 43   | 26 (6)                    | 1.0 (0.09)           | 0.8 (3.0)      | 3.5 (89)         | 12 (300)       |
| 45   | 53 (12)                   | 1.6 (0.15)           | 1.2 (4.5)      | 3.5 (89)         | 20 (500)       |

## Chemical resistance of filter bags

| Materials                  | Codes             | Aqueous media | Aliphatic solvents | Aromatic solvents | Alkaline media | Strongly alkaline | Acid media | Strongly acidic |
|----------------------------|-------------------|---------------|--------------------|-------------------|----------------|-------------------|------------|-----------------|
| Needle felt polypropylene  | PO/POXL/POF/POXLF | ■             | ■                  |                   | ■              |                   | ■          | ■               |
| Needle felt polyester      | PE/PEXL/PEF/PEXFL | ■             | ■                  | ■                 | ■              |                   | ■          |                 |
| Needle felt nylon          | NY                | ■             | ■                  | ■                 | ■              | ■                 |            |                 |
| Needle felt meta-Aramid    | HT                | ■             | ■                  | ■                 | ■              |                   | ■          |                 |
| Multifilament polyester    | PEMU              | ■             | ■                  | ■                 | ■              |                   | ■          |                 |
| Monofilament polypropylene | PMO               | ■             | ■                  |                   | ■              |                   | ■          | ■               |
| Monofilament nylon         | NMO               | ■             | ■                  | ■                 | ■              | ■                 |            |                 |
| Needle felt PTFE           | PT                | ■             | ■                  | ■                 | ■              | ■                 | ■          |                 |
| Monofilament PEEK          | PEEKMO            | ■             | ■                  | ■                 | ■              | ■                 | ■          |                 |



## Applications

**Automotive** Filtration of pre-treatment bath, filtration of e-coat, top coat and clear coat, primer, paint ring line filters, parts cleaning fluids, drawing compounds, lubricants, metal working fluids and pump intake filters.

**Chemical** Catalyst recovery, removal of pipe scale, polishing of aqueous process fluids, alkalis, acids and solvents, filtration of emulsions and dispersions, gel removal from resins. Activated carbon or catalyst removal in the fine chemicals industry is a typical example of a demanding application in chemical processing. Eaton filter bags meet the requirements for high-efficiency, yet also offer long service life and reliability.

**Electronics** Wafer and chip processing, electronic etching

baths, photo-chemical polishing, and high-purity water filtration and pre-filtration of various membrane filtration processes to improve their cost-effectiveness. Eaton filter bags demonstrate the required purity, efficiency and consistent performance.

**Food and beverage** Filtration of wine, spirits and beer, removal of particles from edible oils, removal of carbon black from cellulose, slime removal in gelatin, liquid sugar, thick juice, corn syrup polishing, starch processing, milk processing and soft drinks. Many Eaton filter bags conform to FDA and EC food processing standards and can meet the unique and varied demands of these applications.

**Metal working** Filtration of hydraulic oil, pre-treatment

system filtration, precious metal recovery, metal working fluids and drawing compounds. Parts cleaning machines use our filter bags for minimizing residual dirt on parts.

**Paint and lacquer** Removal of agglomerates, removal of paint coagulates, solvent filtration, removal of storage contaminants, filling lines, paint mixing lines and monomer purification.

**Petrochemicals** Filtration of lube oils, fuel additives, enhanced oil recovery, filtration of amine solutions, filtration of glycol fluids, gas purification processes, distillation and cracking processes, amine washers, off-shore filter stations, oil drilling and injection fluids.

**Pharmaceutical** Recovery of expensive active ingredients, catalyst recovery, active carbon

purification and removal, filtration of gelatin, hormones, vitamin extracts, polishing of herbal mixtures, protein removal from plasma, filtration of saline solutions

**Resins, plastics, inks and coatings** Oil and polymer filtration, dispersions, polymerization batches, resins for can coatings, plastics compounding, printing ink, plastics processing, paper coatings, high-purity ink-jet fluid filtration.

**Water treatment** Well water filtration, water treatment plants, silt removal, pipe scale removal, sand and algae removal from sea water, ion exchange resin recovery, calcium deposit removal, filtration of chemicals used for water treatment, dust removal from cooling tower installations.

## Contaminant Spectrum

Factors to consider when selecting a filter bag range

|                   | Contaminant particle size  |   |   |                     |
|-------------------|--|---|---|---------------------|
|                   | Fine filtration  | Coarse filtration   |   |                     |
|                   | 1 $\mu\text{m}$  | 10 $\mu\text{m}$  | 100 $\mu\text{m}$   | 1,000 $\mu\text{m}$ |
| <b>Ranges</b>     | <ul style="list-style-type: none"> <li>• PROGAF filter bags</li> <li>• ACCUGAF filter bags</li> <li>• MAX-LOAD coreless / ABP filter bags</li> <li>• LOFCLEAR filter bags</li> </ul>                                     | <ul style="list-style-type: none"> <li>• MAX-LOAD pleated filter bags</li> <li>• HAYFLOW filter elements</li> <li>• DURAGAF filter bags</li> <li>• CLEARGAF filter bags</li> <li>• SENTINEL filter bags</li> </ul>  | <ul style="list-style-type: none"> <li>• Monofilament filter bags</li> <li>• SNAP-RING filter bags</li> </ul>   |                     |
| <b>Materials</b>  | <ul style="list-style-type: none"> <li>• Precision melt-blown materials</li> <li>• PROGAF filter bags</li> <li>• ACCUGAF filter bags</li> <li>• LOFCLEAR filter bags</li> <li>• MAX-LOAD coreless filter bags</li> </ul> | <ul style="list-style-type: none"> <li>• Precision needle felt materials</li> <li>• MAX-LOAD pleated filter bags</li> <li>• HAYFLOW filter elements</li> <li>• DURAGAF extended-life filter bags</li> <li>• CLEARGAF filter bags</li> <li>• Standard needle felt filter bags</li> </ul> | <ul style="list-style-type: none"> <li>• Monofilament mesh materials</li> <li>• Accurate, <i>absolute</i> retention rating</li> <li>• High precision</li> </ul> |                     |
| <b>Seal rings</b> | <ul style="list-style-type: none"> <li>• SENTINEL seal rings</li> <li>• "The best in the business"</li> <li>• Pressure activated seal ring</li> <li>• Wide fluid and temperature compatibility</li> </ul>                | <ul style="list-style-type: none"> <li>• SNAP-RING seal rings</li> <li>• Versatile, cost-effective</li> <li>• Wide range of material</li> </ul>   | <ul style="list-style-type: none"> <li>• BANDSEAL seal ring</li> <li>• Simple, effective</li> </ul>   |                     |

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