



Filtration for Catalyst Recovery

Eaton's ACCUGAF and DURAGAF filter bags efficiently recover catalyst bonded to support material

Catalysts such as nickel, platinum, rhodium or palladium are often used in the production of specialty and agricultural chemicals as well as pharmaceuticals to speed up reactions, or reduce the temperature and pressure required to begin one. A catalyst is not consumed in the process and therefore, not considered part of a next step or final product. Catalysts are often bound to a support material such as activated carbon, calcium carbonate or aluminum oxide to maximize the surface area. One criterion for selecting an appropriate support material is the filterability of the catalyst (bonded to the support material) out of the finished liquid product. Filtration plays an important role in recovering the expensive or hazardous catalyst solid, either for reuse in the process, or for recycling. The optimal method of filtration is determined based on factors such as particle size, distribution and geometry of the catalyst bound on carbon, for example. In many instances, filter bags offer tremendous flexibility and choice.

Eaton's high-efficiency ACCUGAF filter bag allows for a single-pass filtration. An absolute rated safety filter such as the LOFMEM membrane filter cartridge, is often added as a second filtration step after the filter bag. Alternatively, all needle felt media type filter bags can be used in a multi-pass set up. In this case, the activated carbon will build up to form a cake, allowing it to assume the role of the primary filter. Through a downstream sight glass, the operators can observe when the carbon is fully being retained. At which point, the final passage can take place, and the catalyst bound on activated carbon can then be sent out for recovery. In many cases, specially designed, polished bag filter housings are selected to match the needed cake volume.

Eaton's recommended filter bags, equipped with bypass-free sealing SENTINEL® ring, installed in TOPLINE™ bag filter housings, ensure optimal and safe filtration solution for a broad spectrum of applications.

- Pressure-activated sealing
- Full bypass-free filtration
- Ergonomic handles
- Optimal fit with magnetic bar



| Single-Pass Filtration | | Multi-Pass Filtration | Standard and Special Bag Filter Housings |
|---|---|--|--|
| High-efficiency main filter + membrane safety filter | | Standard efficiency | High-polished single and multi-bag housings with individual inlet per bag for optimal laminar flow pattern |
| Main Filter: ACCUGAF filter bag, melt-blown polypropylene | Safety filter: LOFMEM membrane filter cartridge | Main Filter: DURAGAF filter bag, extended life needle felt | |
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