

### The Unique Problem of High Pressure Applications

Compressed air and gases at pressures higher than normal pressures (above 100 to 125 psi) pose a more serious environmental threat because the contaminant concentration is many times higher than in a normal system.

Example: The existing contaminant at 100 psi (7 Bar) is increased 8 times that of atmospheric pressure.

At 9,000 psi (620 Bar) the contaminant is increased 602 times that of atmospheric pressure.

### Patent-Pending Design for Simplified Maintenance

Microdyne Product's unique range of "EOR – Enhanced Oil Recovery" High Pressure Housings are covered by patent pending and are forged alloy steel with a safety factor of 5 times greater than the designed operating pressure. These filters feature top-end filter element(s) and manifold assembly removal, thereby eliminating the need to remove the bowl to gain access to the filter elements. As a result, end-users can perform routine field maintenance without disconnecting any of the piping or completely removing the filter from the skid. This is unlike other conventional housings where replacing bottom installed elements requires manipulating and removing bottom housing components, as well as disconnecting of all related piping from the skid. Such an operation requires specialized heavy lifting equipment and is unnecessarily dangerous, not to mention time consuming. With the patent pending design Microdyne high pressure EOR housings, these negatives are effectively eliminated. Another feature particular to these filters is the seamless forged main body design with inlet and discharge flanges machined directly into the housing wall. This along with removable top and bottom flanges characterizes a design that eliminates all seam welding. These features are absent in competitive housings.



### Application

These filters were initially designed to address the needs for enhanced oil recovery operations using high pressure natural gas injection. However, with the variety of elements available to meet virtually any need, their application extends to every S.I.C. coded industry requiring high pressure air/gas high efficiency purification to 9,000 psi high pressure filtration operating pressure.

**Housings** — Constructed of alloy steel or stainless steel forgings rated to 9,000 psi or greater operating pressures.

- Single element housing with 2" or greater inlet/discharge flanged connections,
- 9,000 psi or greater operating pressure,
- Patent-pending no seam-weld design,
- Forged alloy steel or stainless steel housing,
- In-situ, top-loading filter cartridge replacement.

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**Elements** — Single O-ring plug-in type connection with tie-rod. Pleated as well as Microdyne's full-range of high efficiency, modular interchangeable range of elements.

- **PF-Prefilter** — Designed for maximum pre-filtration of larger particulates rated at 100% efficiency @ 1 micron with minimum differential pressures and to extend the service life of microfilters installed thereafter.
- **CFA-Coalescing Filter/Alpha Series®** — The most effective coalescing filter in this series to remove oil, water, and dirt from compressed air systems. The Alpha Series is capable of removing contaminants .01 micron with 99.99998% efficiency. The special foam socks on the coalescers are resistant to mineral, synthetic, and decomposed oils.
- **CFB-Coalescing Filter/Beta Series®** — For more effective micron retention of oil, water, and dirt from compressed air. The Beta Series filter is designed to trap particulates, .01 micron and larger at an efficiency of 99.9999%.
- **CFC-Coalescing Filter/Gamma Series®** — For the removal of oil, water, and dirt from compressed air systems. Capable of performing with 99.99% efficiency at the .01 micron level of filtration. In applications where compressed air is severely contaminated, it is recommended that CFC filters be installed upstream of the CFA filters, in order to achieve economical operation.
- **ACF-Activated Carbon Filter** — For the elimination of odors from compressed air. The ACF filter is capable of producing compressed air which is 400,000 times more pure than the ambient air in which we breathe and is thus available for such applications.
- **DF-Dustfilter** — Specialized in the removal of rust and dust particulates from compressed air systems.

## Technical Data — Housing Specifications

High pressure single-element housings are fabricated in alloy or stainless steel and have flange connections.

Typical "EOR" Filters—other flow and pressures are available upon request.

Size	Nominal Flow (SCFM) @ 9000 PSI	Flange Size Connection	Elements Per Filter	Length of Filter	Width of Filter	Height to Connect
17	7200	2"	1	48"	20"	35.25 (I)" & 30.5 (O)"

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