

# Replacement Filter Elements



## Background:

Balston branded filter cartridges offer high efficiency filtration rating, consistency in quality and performance, as well as robustness and durability. Balston filter media consists of specialized fiber technologies that are

designed specifically for Balston filter housings. The use of any other filter media will compromise the performance and could cause contamination downstream to the critical points of use you are trying to protect result-

ing in downtime and costly maintenance. Parker Hannifin supplies filter cartridges in three different designs: LP Cartridges, Sintered Stainless Steel Cartridges, and Microfibre Filter Cartridges (X, H, or Q-type).

## Filter Descriptions:

### LP Cartridges:

Designed to filter liquids with high solids contents. Have an integral prefilter and an external support structure (flow direction is inside-to-outside).

### X-Type Cartridges:

Used for solids and relatively large amounts of suspended liquids in gases. Provide excellent chemical resistance, temperature resistance to 300°F (150°C), and good mechanical handling properties. These cartridges have thick walls for improved coalescing efficiency. Should be used whenever permitted by housing internal volume. Fluorocarbon Resin Binder.

### Q-Type Cartridges:

Used for solids and trace amounts of liquids in gases. Also ideal for liquid service and removal of particulates. Similar to X-Type cartridges in chemical and temperature resistance. Fluorocarbon Resin Binder.

### H-Type Cartridges:

Recommended for oxygen service or when X-Type or Q-Type are unsuitable. H-Type cartridges have temperature resistance to 1000°F (538°C) in dry gas, 100°F (38°C) in liquid. Quartz construction.

### M-Type Sintered Stainless Steel Cartridges:

Designed for applications having heavy loading of solid contaminants. These cartridges are also suitable for removing heavy, viscous liquids from gases and as prefilters to high efficiency final filters. Constructed of 316 stainless steel with molded viton end seals.

### Vapor Removal:

Used to remove trace quantities of oil vapor. Activated carbon sandwiched between two layers of microfiber filter media absorbs oil vapor. Must be pre-filtered with Grade DX and Grade BX. Max. operating temp. is 180°F/82°C.

## How to select the right type of filter element for your housing:

- 1 When selecting a cartridge, do not over specify. Select the coarsest grade which will adequately protect the instrument. Coarser grade filters provide lower pressure drop and longer life than finer grades.
- 2 When selecting X, Q, or H type cartridges, a D or B positioned before the cartridge type will determine the retention efficiency (see retention efficiency chart). For LP and Sintered Stainless Steel Cartridges, the numerical Grade value indicates retention efficiency (see "Retention Efficiency of Filter Cartridges for Gas and Liquid Sample Filtration" chart).

## Retention Efficiency of Filter Cartridges for Gas and Liquid Sample Filtration

<p>Microfibre Filter Cartridges</p> <p>Grades DX, DQ, DH</p> <p>Grades BX, BQ, BH</p> <p>Grade AQ</p> <p>Grade AAQ</p>	<p>Gas Filtration at 0.01µm</p> <p>93%</p> <p>99.99%</p> <p>99.9999+%</p> <p>99.99999+%</p>
<p>Sintered SS Cartridges</p> <p>Grade 5M</p> <p>Grade 10M</p> <p>Grade 20M</p> <p>Grade 40M</p> <p>Grade 70M</p> <p>Grade 00M</p>	<p>Liquid and Gas Filtration at Indicated Micron Size</p> <p>5 µm Nominal</p> <p>10 µm Nominal</p> <p>20 µm Nominal</p> <p>40 µm Nominal</p> <p>70 µm Nominal</p> <p>100 µm Nominal</p>
<p>Microfibre Filter Cartridges</p> <p>Grades DX, DQ, DH</p> <p>Grades CX, CQ, CH</p> <p>Grades BX, BQ, BH</p> <p>Grade AQ</p> <p>Grade AAQ</p>	<p>Liquid Filtration (98% retention)</p> <p>25 µm</p> <p>8 µm</p> <p>2 µm</p> <p>0.9 µm</p> <p>0.3 µm</p>
<p>LP Cartridges (80% retention)</p> <p>Grade 10</p> <p>Grade 20</p> <p>Grade 30</p> <p>Grade 50</p>	<p>75 µm</p> <p>25 µm</p> <p>10 µm</p> <p>1 µm</p>

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