

Sample Filters

Filter Cartridge and Housing Selection



Sample Filters

Disposable Adsorption Units (DAUs) contain a bed of adsorbent granules. Utilizing a wide choice of adsorbents, the DAUs selectively remove vapors from air and other gases.

Because the adsorbed vapor remains trapped in the solid bed, the DAU has a fixed upper limit of total weight of vapor which can be captured. It is usually not feasible to regenerate the filter when it has reached its adsorption limit. DAUs should be used only when small quantities of vapor are to be removed.

Considerations in Using Adsorbent Cartridges

The following factors should be considered when selecting a DAU:

- 1 Solid adsorbents are effective only for vapors. Since liquids will damage or inactivate most solid adsorbents, the DAU must be preceded by an efficient coalescing filter.
- 2 In contrast with Microfibre Filters, which operate at their initial efficiency throughout their life, adsorbent cartridges have a limited holding capacity. When the adsorption capacity is reached, no further adsorption occurs. The limiting capacity, or “break-through” point, is not sharply defined, and the exit vapor concentration will increase rapidly as saturation is approached. To avoid unwanted vapor contaminants downstream, it is necessary to change the adsorbent cartridge well before it has reached its ultimate adsorption capacity.
- 3 Adsorption is reversible, if operating conditions change, a vapor may desorb rather than adsorb. For example, if a temporary surge in vapor impurity concentration causes a relatively high concentration to be adsorbed on the solid, a subsequent decrease in inlet vapor composition will result in desorption of vapor from the solid to the gas stream.
- 4 The efficiency of a given adsorbent for a given vapor depends upon the specific operating conditions. Therefore, again in contrast to filtration, it is not possible to assign a single efficiency rating to an adsorbent. While it is not possible to predict or guarantee an adsorption efficiency for any specific set of conditions, it is possible to enhance the conditions beneficial to adsorption and avoid conditions which interfere with adsorption. Conditions which aid adsorption are: low temperature, high pressure, low flow rate, and absence of competing vapors (particularly water vapor).

Adsorbent	Grade	Use For
Carbon	000	Compressor oil vapors, C ₅ and heavier hydrocarbons, aromatics, oxygenated hydrocarbons, chlorinated organics, freons, carbon disulfide.
Silica Gel	101	Recommended only for water vapor.
Molecular Sieve Type 13X	103	Most C ₄ and lighter hydrocarbons, ethylene, propylene, acetylene, ethylene oxide, ammonia, mercaptans, sulfur hexafluoride, triethylamine, and smaller amines.
Mixed Sodium & Calcium Hydroxides	107	All acidic gases, including sulfur trioxide, sulfur dioxide, nitrogen dioxide, carbon dioxide, hydrogen sulfide, hydrogen chloride, phosphorus trichloride, boron trifluoride.

Notes:

- 1 Please refer to Ordering Information for complete explanation of nomenclature.
- 2 In DAU 9933-05-107 and DAU 9933-11-107, color indicator turns violet when adsorbent is spent.
- 3 In DAU 9933-05-101 and 9933-11-101, adsorbent turns pink when vapor capacity is reached.
- 4 Maximum operating temperature is 180°F (82°C).

To order EU version that complies with PED, use “EU” as a prefix (Example: EU27/35). Consult your local distributor; see EU flow rates in table on page 85.

Sample Filters

Balston OEM Disposable Filter Solutions



Balston Disposable Filter Units

Ideal for the following gas filtration applications:

- Final filter for air logic devices
- Protection of pneumatic components
- Filtration of portable environmental sampling devices
- Filtration of samples to on-line analyzers
- Protection of Pneumatic temperature controls

Ideal for the following liquid filtration applications:

- Filtration of liquid with minimum holdup volume
- Filtration of liquid samples to analyzers

Additional applications in the following industries:

- Instrument & Controls
- HVAC
- Dental
- Automotive
- Food Packaging

Parker Hannifin Corporation, the leader in separation and filtration technologies, is pleased to present a brochure designed to help customers choose the best Balston disposable filter product for industrial, commercial, measurement and control applications.

Balston brand disposable filter units (DFU) consist of a microfibre filter cartridge permanently bonded into a sealed plastic holder with 125 psig (8.62 barg) pressure ratings, temperatures to 275°F (135°C), and available in low and high flow models. The economical DFU offers all of the advantages of microfibre filter cartridges for high efficiency liquid and gas filtration, combined with the economics and convenience of complete disposability.

Our years of experience in fitting products to individual applications has led to the creation of a variety of standard products that can be ordered off the shelf for general purpose filtration requirements or can be custom designed for all types of specialty applications.

If you do not see the specific configuration, size or material that you are looking for, our OEM engineering team will be happy to review your requirements and design product to your exact specifications.

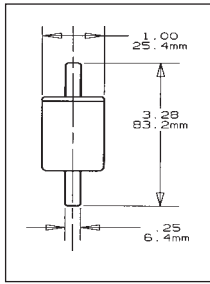
If you have questions, or would like to place an order, please call 1-800-343-4048.

To order EU version that complies with PED, use "EU" as a prefix (Example: EU27/35). Consult your local distributor; see EU flow rates in table on page 85.

Sample Filters

OEM Disposable Filter Solutions

General Purpose DFU - Low Flow Gas



Model 9933-05

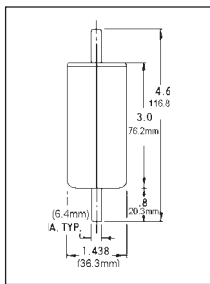
Specifications

Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 230°F (110°C)
 Inlet / Outlet Ports: 1/4" Tube
 Drain: None
 Housing Material of Construction: Nylon
 Internal Volume: .01L

Ordering Information

9933-05-□ Box of 10
 Available in Type Q and in the following grades: A, B, C, BK, and D. Also available with adsorbents 000, 101, 103, and 107.

General Purpose DFU - Higher Flow



Model 9933-11

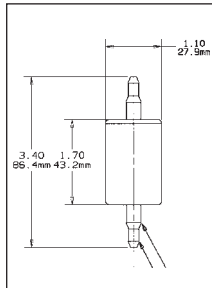
Specifications

Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 230°F (110°C)
 Inlet / Outlet Ports: 1/4" Tube
 Drain: None
 Housing Material of Construction: Nylon
 Internal Volume: .02L

Ordering Information

9933-11-□ Box of 10
 Available in Type Q and in the following grades: A, B, C, and D. Also available with adsorbents 000, 101, 103, and 107.

General Purpose with Integral Barb Fittings



Model 4433-05

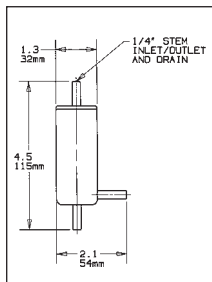
Specifications

Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 230°F (110°C)
 Inlet / Outlet Ports: 1st Tier: 1/4" Tube
 2nd Tier: 3/8" Tube
 Drain: None
 Material of Construction: Nylon
 Internal Volume: .01L

Ordering Information

4433-05-□ Box of 10
 Available in Type Q and in grades: A, B, C and D.

General Purpose with Drain Port



Model 8833-11

Specifications

Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 230°F (110°C)
 Inlet / Outlet Ports: 1/4" Tube
 Drain: 1/4" Tube
 Housing Material of Construction: Nylon
 Internal Volume: .02L

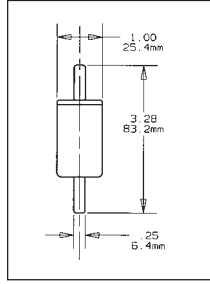
Ordering Information

8833-11-□ Box of 10
 Available in Types Q and X and in the following grades: A, B, C, D, and S.

Sample Filters

OEM Disposable Filter Solutions

High Chemical Resistance - Low Flow



Specifications

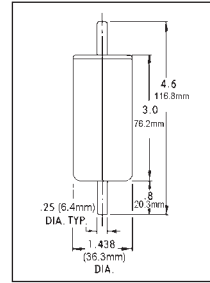
Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 275°F (135°C)
 Inlet / Outlet Ports: 1/4" Tube
 Drain: None
 Housing Material of Construction: PVDF
 Internal Volume: .01L

Ordering Information

9922-05-□ Box of 10
 Available in Type Q and in the following grades: A, B, C, D. Also available with adsorbents 000, 101, 103, and 107.

Model 9922-05

High Chemical Resistance DFU -Higher Flow



Specifications

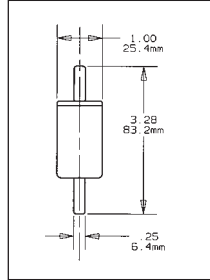
Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 275°F (135°C)
 Inlet / Outlet Ports: 1/4" Tube
 Drain: None
 Housing Material of Construction: PVDF
 Internal Volume: .02L

Ordering Information

9922-11-□ Box of 10
 Available in Types Q and in the following grades: A, B, C, and D. Also available with adsorbents 000, 101, 103, and 107.

Model 9922-11

Oil Indicating DFU



Specifications

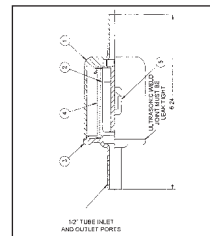
Max. Pressure at 110°F (43°C): 125 psig (8.62 barg)
 Max. Temp. at 0 psig: 230°F (110°C)
 Inlet / Outlet Ports: 1/4" Tube
 Drain: None
 Housing Material of Construction: Nylon
 Internal Volume: .01L

Ordering Information

9900-05-□ Box of 10
 Available in Type K and in grade B.

Model 9900-05

Large Capacity High Flow DFU



Specifications

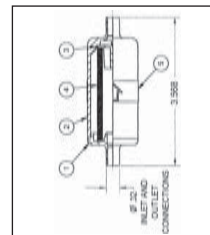
Max. Pressure at 110°F (43°C): 50 psig (3.4 barg)
 Max. Temp. at 0 psig: 150°F
 Inlet / Outlet Ports: 1/2" Tube
 Drain: None
 Housing Material of Construction: Nylon
 Internal Volume: .0138L

Ordering Information

8800-12-□ Box of 1
 Available in Types Q and X and in the following grades: A, B, C, and D. Also available with adsorbents 000, 101, 103, and 107.

Model 8800-12

Large Capacity High Flow DFU Intake Filter



Specifications

Max. Pressure at 110°F (43°C): 2 psig (0.14 barg)
 Max. Temp. at 0 psig: 125°F
 Inlet / Outlet Ports: .032" OD
 Drain: None
 Housing Material of Construction: Polypropylene
 Internal Volume: 0.033L

Ordering Information

9953-11-□ Box of 10
 Available in Types Q and X and in the following grades: A, B, C, and D.
 Replacement element:
 050-11-?Q
 050-11-?X

Model 9953-11