

# Operating Instructions

## Disposable Filter Units (DFU) and Adsorbent Units (DAU)

### Filtration Efficiency

The Balston® Microfibre® Disposable Filter Unit (DFU) may be used to filter liquids or gases; therefore, each DFU has two retention ratings. Liquid ratings are defined as 98% retention of the stated particle size; gas ratings are defined as percentage retention of 0.01 micron particles.

Retention Efficiency Grade	Gas Efficiency (at 0.01 µm)	Liquid Efficiency (98% retention)
DQ,DX	93%	25 µm
CQ	98%	8 µm
BQ,BK,BX	99,99%	2 µm
AQ	99,9999+%	0.9 µm
AAQ	99,9999+%	0.3 µm

DAU Media Adsorbent
000 Carbon
101 Silica Gel
102 Molecular Sieve 4A
103 Molecular Sieve 13X
105 Calgon HGR
107 Sodium/Calcium Hydroxide

### Principal Specifications

Models 8822-11, 9922-05, 9922-11  
Models 9900-05, 8833-11, 9933-05, 9933-11, 4433-05

Material, Filter Cartridge  
Borosilicate Glass with Resin Binder

Borosilicate Glass with Resin Binder

Material, Housing  
PVDF

Nylon

Max Press at 110°F (43°C)

125 psig (8.6 bar)

Gas: 50 psig (3.4 bar)  
Liquid: 70 psig (4.8bar)

Max Temp at 0 psig (0 bar)

275°F (135°C)

150°F (66°C)

#### Max ΔP, Filter Cartridge:

##### Gases

• Flow per arrow

80 psid (5.5 bar)

50 psid (3.5 bar)

• Flow opposite arrow

20 psid (1.4 bar)

20 psid (1.4 bar)

20 psid (1.4 bar)

##### Liquids

• Flow per arrow

50 psid (3.5 bar)

50 psid (3.5 bar)

50 psid (3.5 bar)

• Flow opposite arrow

20 psid (1.4 bar)

20 psid (1.4 bar)

20 psid (1.4 bar)

Model	Weight (g) when new	Weight (g) when spent
9933-05-101	18.5	20.3
9933-11-101	63.4	71.9
9922-11-101	78.2	85.8

**Notes:** 1 Actual weight may vary by ± 3%.

2 Orange silica gel will turn translucent after adsorbing 6% by weight of water vapor; however it will continue to adsorb up to 28% of its weight in water vapor.

**Housing and Filter Chemical Compatibility,**  
**Models 8822-11, 9922-05, 9922-11 - Polyvinylidene fluoride (PVDF), opaque**

**Suitable:** Water (to 275°F/135°C); concentrated nitric, sulfuric, and hydrochloric acids; chlorine (gas or liquid); sodium hypochlorite; ethylene oxide (gas or liquid); Freons; hydrogen peroxide (all concentrations); bromine (dry and aqueous solutions); all chlorinated solvents except methylene chloride; all aromatic and aliphatic solvents; all alcohols and glycols; aniline; phenol; ammonia (gas, liquid, or aqueous).

**Limited Use:** Acetone, MEK, Dioxane, furfural, methylene chloride.

**Unsuitable:** THF, DMF, ethylene diamine, chlorosulfonic acid, ethanalamine, pyridine, sulfur trioxide.



**Housing and Filter Chemical Compatibility,**  
**Models 9900-05, 8833-11, 9933-05, 9933-11, 4433-05, 8800-12 - Nylon, clear**

**Suitable:** Water (to 158°F/70°C); benzene, toluene, other aromatic hydrocarbons; hydrocarbon solvents and fuels; perchloroethylene; trichloroethylene; nitric acid (to 10%); sulfuric acid (to 40%); hydrochloric acid (to 10%); most salt solutions; sodium and potassium hydroxide (to 50%).

**Limited Use:** Water at 176°F (80°C); acetone; MEK; acetaldehyde; ammonia (to 25%).

**Unsuitable:** Water (above 194°F/90°C), alcohols, glycols, phenol, aniline, DMF, concentrated acids, chlorine.



Choice of DFU Grade		Liquid Filtration (select particle and size retention)	
Gas Filtration	General Purpose	Grade D0,DX	General Purpose
Grade D0,DX	Complete oil and water droplet removal	Grade C0	Removes almost all visible particles
Grade B0,BK, or BX	Note: Grade BK contains a visual oil indicator which turns a portion of the surface of the cartridge pink when saturated with oil.	Grade B0,BX	Removes all visible particles and most colloidal haze
Grade A0 (1)	Commercially sterile		

©1986, 2018 Parker Hannifin Corporation Printed in U.S.A. Bulletin TI-152AF

**Parker Hannifin Corporation**  
 Industrial Gas Filtration and  
 Generation Division  
 4087 Walden Ave.  
 Lancaster, NY 14086  
 Tel: 716-656-6400  
 Fax: 877-857-3800  
[www.parker.com/fms/sample-filters](http://www.parker.com/fms/sample-filters)

**Parker Hannifin Manufacturing Limited**  
 Gas Separation and Filtration Division EMEA  
 Dukesway, Team Valley Trading Estate  
 Gateshead, Tyne and Wear, England NE11 0PZ  
 Tel: +44 (0)191 402 9000 Fax: +44 (0)191 482 6296  
[www.parker.com/dfns](http://www.parker.com/dfns)  
 dfns\_TSG@parker.com



## Installation Instructions

**Notes:** Primary flow should be in the direction of the arrow (inside-to-outside of the filter cartridge). Moderate reverse flow can be tolerated without damage, as in a vent or breather application. Slip-on tubing (1/4" ID) may be used for low pressure applications. For high pressure applications, compression tubing fittings recommended by the manufacturers for use with 1/4" OD plastic tubing are satisfactory to 125 psig (8.6 barg). Obtain detailed recommendations from our Technical Support staff at 800-343-4048.

- 1 DFU 9933-05-AQ (or others with Nylon housings) may be sterilized with ethylene oxide or by autoclaving to 230°F (110°C). For autoclaving to 275°F (135°C), use DFU 9922-05-AQ (or others with PVDF housings).
- 2 If you have any questions or concerns, please call the Technical Services Department at 800-343-4048, 8AM to 5PM Eastern Time or email at: [balstontechsupport@parker.com](mailto:balstontechsupport@parker.com). For locations outside North America, please contact your local representative or email at: [pgservicesupport@parker.com](mailto:pgservicesupport@parker.com).

