

## Operating Instructions

### Disposable Filter Units (DFU)

#### 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

Principal Specifications	Model 8822-11, 9922-05, 9922-11	Models 9900-05, 8833-11, 9933-05, 9933-11, 4433-05
Material, Filter Cartridge	Borosilicate Glass with Fluorocarbon Resin Binder	Borosilicate Glass with Fluorocarbon Resin Binder
Material, Housing	PVDF	Nylon
Max. Pressure at 110 °F (43 °C)	125 psig (8.6 barg)	125 psig (8.6 barg)
Max. Temperature at 0 psig (0 barg)	275°F (135°C)	230°F (135°C)
Max. ΔP, Filter Cartridge:		
<b>Gases</b>		
• Flow per arrow	80 psid (5.5 bar)	80 psid (5.5 bar)
• Flow opposite arrow	20 psid (1.4 bar)	20 psid (1.4 bar)
<b>Liquids</b>		
• Flow per arrow	50 psid (3.5 bar)	50 psid (3.5 bar)
• Flow opposite arrow	20 psid (1.4 bar)	20 psid (1.4 bar)

#### 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, ethanolamine, pyridine, sulfur trioxide.

**Chemical Compatibility,  
Models 9900-05, 8833-11, 9933-05, 9933-11, 4433-05 - 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)	
<b>Gas Filtration</b>			
<b>GradeDQ,DX</b>	General Purpose	<b>GradeDQ,DX</b>	General Purpose
<b>GradeBQ,BK, or BX</b>	Complete oil and water droplet removal  Note: Grade BK contains a visual oil indicator which turns a portion of the surface of the cartridge pink when saturated with oil.	<b>GradeCQ</b>	Removes almost all visible particles
		<b>GradeBQ,BX</b>	Removes all visible particles and most colloidal haze
<b>GradeAQ (1)</b>	Commercially sterile		

**Installation Instructions**

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.

**Notes:**

- 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. For locations outside North America, please contact your local representative.



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