

## Grand™ 43 XL Green

### Gamma Irradiated Single Use Hollow Fiber Cartridges Easy and Reliable



Designed for large scale biopharmaceutical concentration/diafiltration and clarification unit operations, the **Grand™ 43 XL Green** hollow fiber membrane cartridge is WaterSep's largest production cartridge with a surface area of 15.42 m<sup>2</sup> and a flow rate of several thousand liters an hour with multi-cartridge set ups.

The **Grand™ 43 XL Green** cartridges is gamma irradiated and ready to use, and utilizes WaterSep's antifouling, low binding, modified polyethersulfone membrane (m-PES) which provides a process flux and product recovery that typically exceeds other crossflow devices.

The **Grand™ 43 XL Green** HF cartridge is compatible with most commercially available hollow fiber cartridges of similar size (6" x 24"). The **Grand™ 43 XL Green** cartridge can be retrofitted to existing large scale crossflow skids or designed-in to new processes where high product yield and process flux are essential.

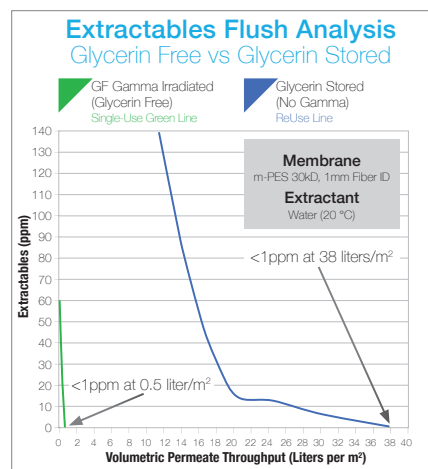
WaterSep offers the **Grand™ 43 XL ReUse** HF cartridge in molecular weight cut-offs (MWCO) from 3K-750K Dalton and pore sizes from 0.1 μm to 0.45 μm.

The 15.42 m<sup>2</sup> **Grand™ 43 XL Green** HF cartridge can accommodate batch volumes between 400L and 1500L, with an average permeate flow rate of 450-900 L/hr for ultrafiltration applications and 300-600 L/hr for microfiltration applications.

The **Grand™ 43 XL Green** cartridge is also offered as part of fully integrated open architecture **single use crossflow assemblies** available with pressure sensors, flow meters, pumpheads, aseptic connectors or bags.

The **Grand™ 43 XL Green** cartridges offer a true single use crossflow system that provides:

- Significant cost savings over traditional cassette formats.
- Gamma irradiated - ready to use - no pre-rinse required.
- No humectants - 80x less extractables, see [Extractables Flush Analysis](#).
- No need for time-consuming cleaning validation.
- Reduced risk of cross contamination.
- Consistent membrane performance batch to batch.
- Self-contained – no assembly – no expensive hardware – no membrane installation.
- Every HF cartridge is integrity tested and has an individual lot number for easy traceability.



### TYPICAL APPLICATIONS

- Clarification of **mammalian/CHO** cell cultures and maximizing **protein recovery**.
- **Cell-harvest**. (Excellent results have been achieved with both *E. Coli* whole cells and *E. Coli* lysates, as well as other microbial process streams.)
- Concentration and purification of **vaccines**.
- Concentration and diafiltration of **gene therapy** products.
- Concentration/diafiltration of **monoclonal antibodies, recombinant proteins, biological macromolecules** and **peptides**.

## Grand™ 43 XL Green

### ORDERING INFORMATION

Place orders online at [www.watersep.net](http://www.watersep.net), or email purchase orders to [orders@watersep.net](mailto:orders@watersep.net), sales order confirmation to follow.

#### Grand™ 43 XL Green HF Cartridge:

1.0 mm Fiber ID  
SU XXX 10GRA43 5L, 1/pkg

2.0 mm Fiber ID\*  
SU XXX 20GRA43 5L, 1/pkg

\*Available in 10K, 50K, 300K-750K and 0.1  $\mu\text{m}$  - 0.45  $\mu\text{m}$

Replace XXX with:

|             |              |                            |
|-------------|--------------|----------------------------|
| 003 for 3K  | 050 for 50K  | 750 for 750K               |
| 005 for 5K  | 100 for 100K | 910 for 0.1 $\mu\text{m}$  |
| 010 for 10K | 300 for 300K | 920 for 0.2 $\mu\text{m}$  |
| 030 for 30K | 500 for 500K | 945 for 0.45 $\mu\text{m}$ |

### SPECIFICATIONS

Cartridge Dimensions - with reducer adaptors (as shown)  
6.015" (15.28 cm) x 51.65" (131.19 cm)

Reducer Adaptor Dimensions  
6.0" TC x 2.5" TC x 4.25" long (10.80 cm)

Membrane Surface Area  
166.0 ft<sup>2</sup> (15.42 m<sup>2</sup>)

Molecular Weight Cut-off  
3K, 5K, 10K, 30K, 50K, 100K, 300K, 500K, 750K

Membrane Pore Size  
0.1  $\mu\text{m}$ , 0.2  $\mu\text{m}$  and 0.45  $\mu\text{m}$

Fiber ID  
1.0 mm and 2.0 mm

### MATERIALS OF CONSTRUCTION

The cartridge as assembled is USP Class VI compliant.

Membrane:  
Modified Polyethersulfone (m-PES)

Housing and Adaptors:  
White Polysulfone

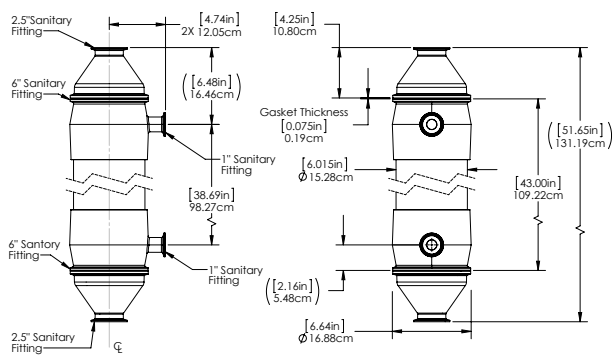
Encapsulant:  
Medical Grade Epoxy

### CONNECTIONS

Feed/Retentate  
6.0" TC Standard Sanitary Fitting

Reducer Adaptors  
6.0" TC Standard Sanitary Fitting x 2.5" TC Standard Sanitary Fitting

Permeate  
1.0" TC Standard Sanitary Fitting



Technical Support: [experttalk@watersep.net](mailto:experttalk@watersep.net)  
or call 508.970.0089 x 204.