

## Grand™24 XL Green Single Use Gamma Irradiated Hollow Fiber Cartridges Easy and Reliable



Offered in a 8.10 m<sup>2</sup> membrane surface area for large scale biopharmaceutical concentration/diafiltration and clarification unit operations, the Grand™24 XL Green hollow fiber membrane cartridge is one of WaterSep's larger production scale cartridges with a permeate flow rate of several thousand liters an hour with multi-cartridge set ups.

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

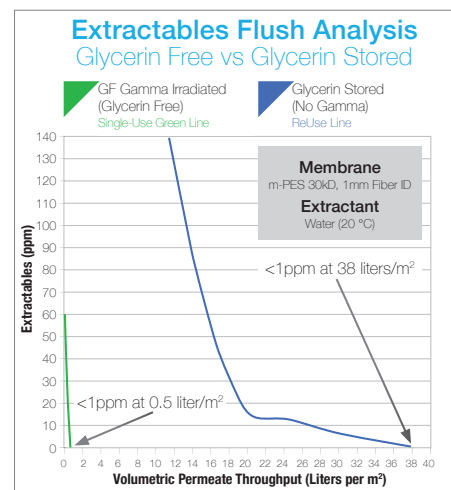
WaterSep offers the Grand™24 XL Green HF cartridges in molecular weight cut-offs (MWCO) from 3K-750K Dalton and pore sizes from 0.1 μm to 0.45 μm.

With a surface area of 8.10 m<sup>2</sup>, a Grand™24 XL Green HF cartridge can accommodate batch volumes between 250L and 800L, with an average permeate flow rate of 240-480 L/hr for ultrafiltration applications and 160-320 L/hr for microfiltration applications.

The Grand™24 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™24 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<sup>™</sup>24 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<sup>™</sup>24 XL Green HF Cartridge:

1.0 mm Fiber ID  
SU XXX 10GRA24 8L, 1/pkg

2.0 mm Fiber ID\*  
SU XXX 20GRA24 8L, 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 32.65" (82.93 cm)

Reducer Adaptor Dimensions  
6.0" (15.24 cm) x 2.5" (6.35 cm)

Membrane Surface Area  
87.2 ft<sup>2</sup> (8.10 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

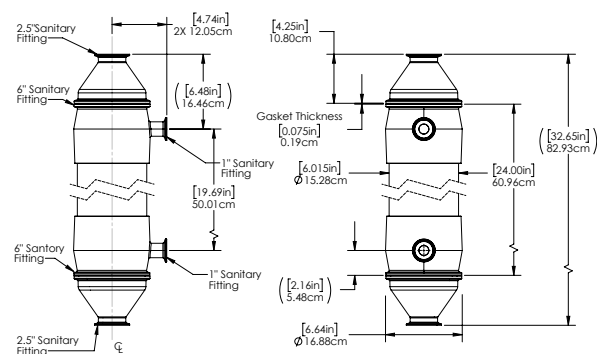
Encapsulant:  
Medical Grade Epoxy

### 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.