

## Discover12 Steamer

Autoclavable, Gamma Irradiated  
Hollow Fiber Cartridges  
Easy and Reliable



The **Discover12 Steamer** is a small scale autoclavable, gamma irradiated, re-usable hollow fiber cartridge, made with WaterSep's low binding, glycerin free modified PES membrane. The **Discover12 Steamer** is ready to use without any pre-rinse or sanitization, or can be autoclaved as is, or in an assembly.

WaterSep's **Steamer Line** is true plug-and-play, at its best - connect, use and discard, or clean with 0.5-1.0 M NaOH and re-use. The extractable level is approximately 80x less than a glycerin conditioned membrane, see [Extractables Flush Analysis](#). After a quick buffer conditioning the HF cartridge is ready to be used or autoclaved. For autoclaving directions, please see the Steamer Validation Guide at [www.WaterSep.net](http://www.WaterSep.net).

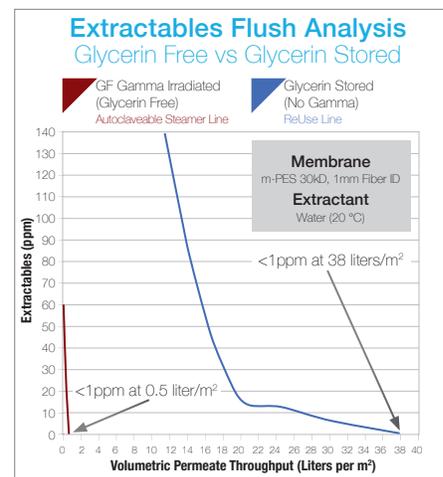
**Discover Steamer** hollow fiber cartridge products are in most applications superior to conventional techniques, like centrifugation, depth filters, stirred cells or dialysis bags.

The **Discover12 Steamer** cartridges have a membrane surface area of 52 cm<sup>2</sup>, providing a typical permeate flow rate of 16 to 31 ml/hr for ultrafiltration applications and 10 to 21 ml/hr for microfiltration applications. The recommended sample volume for the **Discover12 Steamer** is 10-250 ml.

The fluid path length for the **Discover24 Steamer** cartridges is similar to all other WaterSep 12" (30 cm) hollow fiber cartridges making scale up easy and predictable.

The **Discover12 Steamer** cartridges offer true ready to use crossflow filtration that is:

- Autoclavable as is or in an assembly.
- Gamma irradiated - ready to use - no rinse.
- Humectant free - 80% less extractables, see [Extractables Flush Analysis](#).
- Free of time-consuming cleaning validation.
- At a reduced risk of cross contamination.
- Consistent, membrane performance batch to batch.
- Self-contained and requires no assembly, no expensive hardware and no membrane installation.
- Significantly less expensive than traditional cassette formats.
- Every HF cartridge is integrity tested and has an individual lot number for easy traceability.



### TYPICAL APPLICATIONS

- **Cell perfusion** with an ATF system or conventional pump operated perfusion. (Bioreactor and **Steamer** hollow fiber assemblies can be autoclaved simultaneously.)
- Small **aseptic/sterile UF-MF applications** where autoclaving is required.
- Rapid clarification of small volumes of **cell culture, fermentation solutions and virus/vaccine suspensions**.
- Concentration and diafiltration of **monoclonal antibodies, enzymes, blood components** and other proteins.
- Preparative biopharmaceutical work.

# Discover12 Steamer

## 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.

### Discover12 Steamer HF Cartridge

0.5 mm ID\*

AU XXX 05DIS12 L6, 6/pkg

AU XXX 05DIS12 LD, 12/pkg

\*Not available in 0.65  $\mu$ m

1.0 mm ID

AU XXX 10DIS12 L6, 6/pkg

AU XXX 10DIS12 LD, 12/pkg

2.0 mm ID\*

AU XXX 20DIS12 L6, 6/pkg

AU XXX 20DIS12 LD, 12/pkg

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

Replace XXX with:

003 for 3K	100 for 100K	910 for 0.1 $\mu$ m
005 for 5K	300 for 300K	920 for 0.2 $\mu$ m
010 for 10K	500 for 500K.	945 for 0.45 $\mu$ m
030 for 30K	750 for 750K	965 for 0.65 $\mu$ m
050 for 50K		

## SPECIFICATIONS

Cartridge Dimensions

0.38" (0.95 cm) x 12.388" (32.72 cm)

Membrane Surface Area

0.056 ft<sup>2</sup> (52 cm<sup>2</sup>)

Molecular Weight Cut-off

3K, 5K, 10K, 30K, 50K, 100K, 300K, 500K, 750K

Membrane Pore Size

0.1  $\mu$ m, 0.2  $\mu$ m and 0.45  $\mu$ m, 0.65  $\mu$ m

Fiber ID

0.5 mm, 1.0 mm, 2.0 mm

## MATERIALS OF CONSTRUCTION

The cartridge as assembled is USP Class VI compliant.

Membrane:

Modified Polyethersulfone (m-PES)

Housing:

White Polysulfone

Encapsulant:

Epoxy

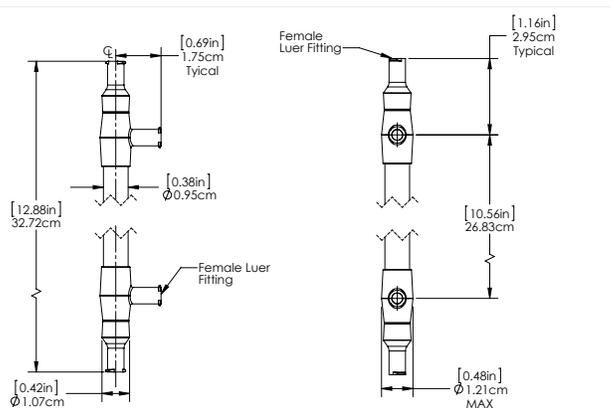
## CONNECTIONS

Feed/Retentate

Female Luer Fitting

Permeate

Female Luer Fitting



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