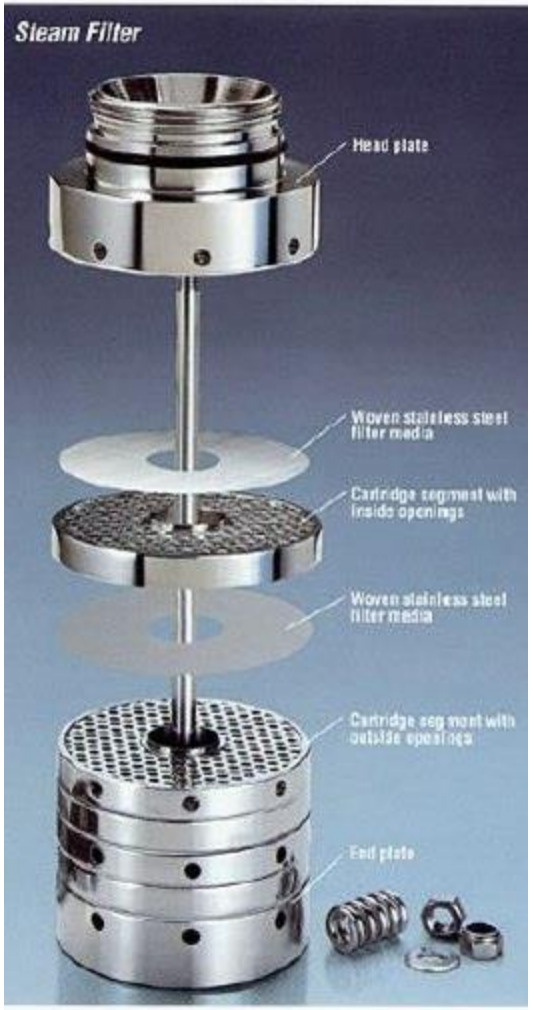
MICROPURE® FILTRATION

A Senney Enterprises Filtration Company

Steam Filters



Segmented Filtration Design

- Different than typical cartridge style element
- Element Built with Modular SS support Discs with filtration media in-between.
- Element height is built to application needs
- Unit Held Together by compression
- Only Filtration Media is replaced.

Advantages of Segmented Filtration

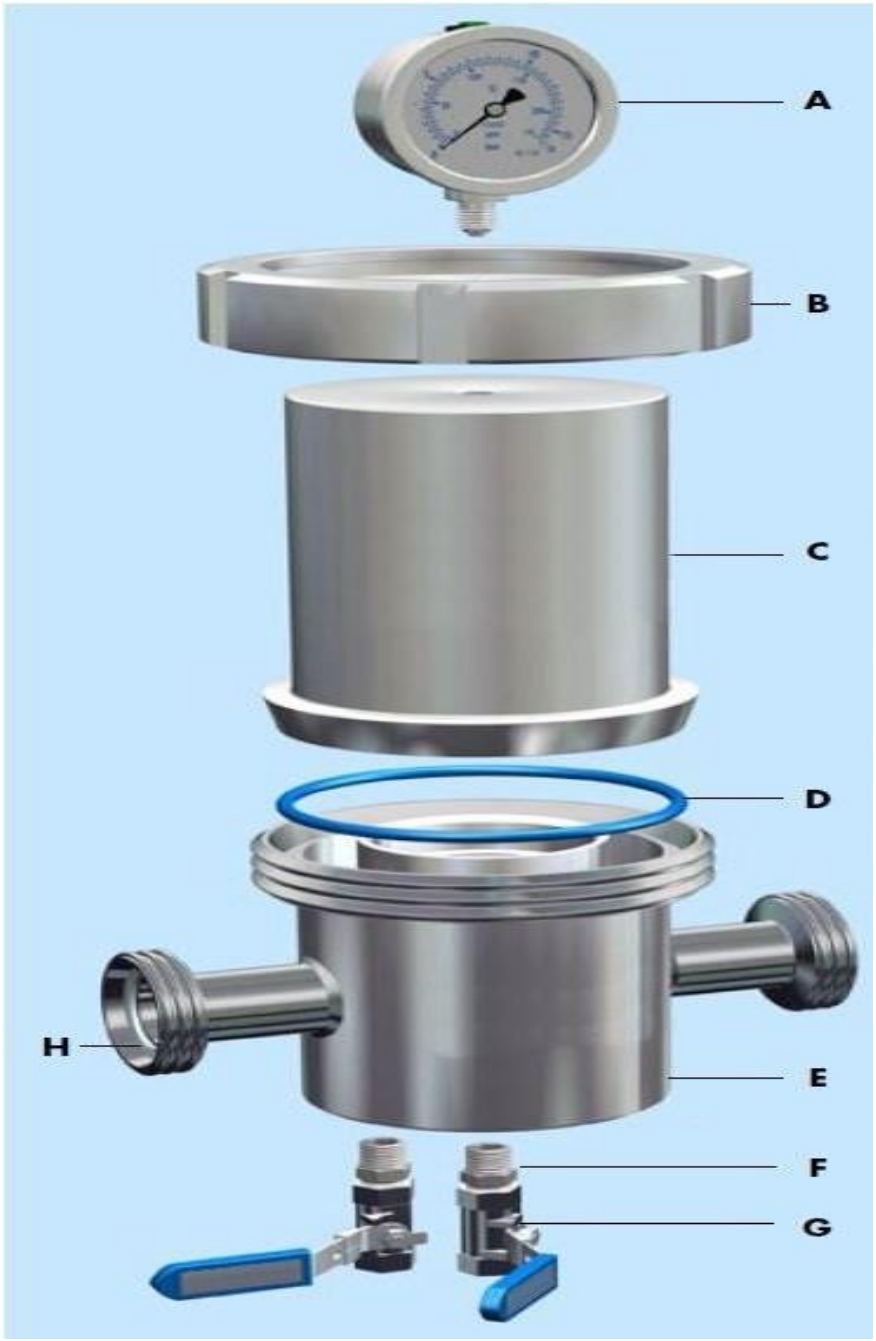
- High Quality Materials
  - Robust stainless steel construction(316)
  - Media made from Stainless Steel(316)
  - High Temperature and Pressure Resistance
- Unique Design
  - Ability for Bi-directional flow
  - Autoclave Sterilization possible
  - CIP or SIP possible
  - Compact Design

Advantages of Segmented Filtration

- Economical
  - Life of media
    - 150 cleanings or 1 year under normal working conditions*
  - Cost of media
    - Fraction to conventional cartridges
  - Reduced Inventory Space
  - Quick Return on Investment and Low Cost of Ownership

Advantages of Segmented Filtration

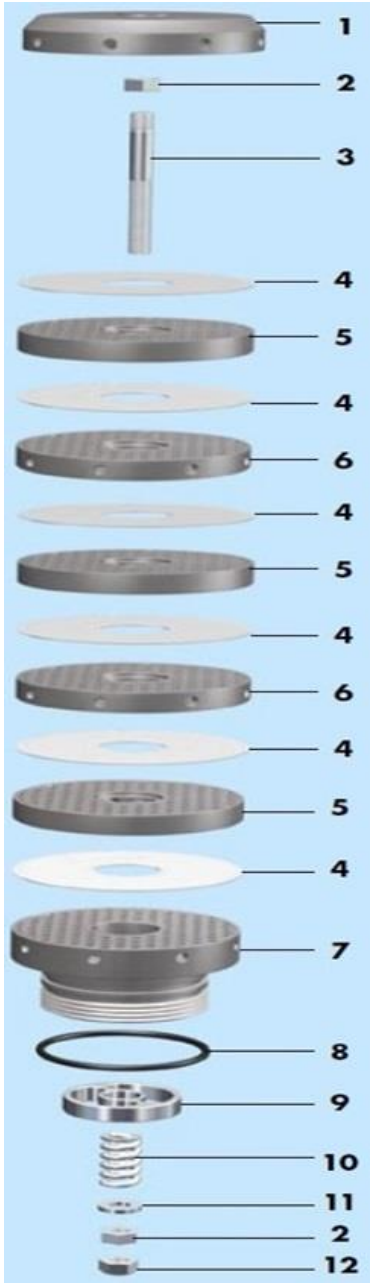
- Environmentally Friendly
  - Less filter changes per year
  - Less waste being thrown away.



Filter Overview

Filter Overview

Housing Assembly		
Diagram #	Item Number	Description
A	PG-ALL	Pressure Gauge, 0-16 bar,0-232 psi
B	HSG-NUT	DIN 11851 Closure Nut
C	HSG-Top	Housing Top
D	GKT-	Housing Seal gaskets. DIN 11851 gasket
E	HSG-Bot	Housing Bottom
F+G	CDK-ALL	2 Valve Condensate Drain Kit. Each Valve includes two threaded connections and Viton seals for use in between valves and housing base
H	Pipe Seal	Gasket for ensuring Proper Sealing of Pipe to mating pipe. This is to be provided by the customer depending on the pipe connection



Element Overview

Element Overview

Element Assembly Components	
Diagram #	Description
1	End Plate
2	13 mm Hex Nut
3	M8 Threaded Rod
4	Micron rated Stainless Media
5	Stainless Steel Support Disc with interior Holes
6	Stainless Steel Support Disc with Exterior Holes
7	Headpiece
8	Teflon O-ring
9	Headpeice Spacer
10	75 KG compression spring
11	13 mm SS washer
12	13 mm Locking nut with Nylon insert

Filter Seals

Pressure Gauge Port

Housing closure Nut

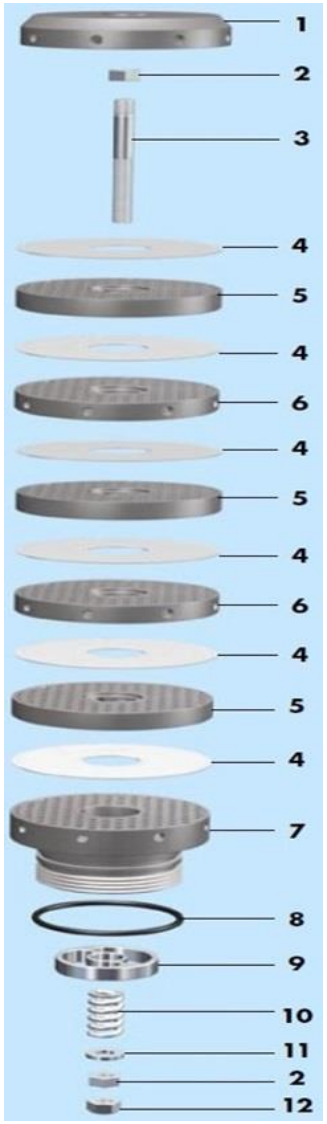
Element O-ring

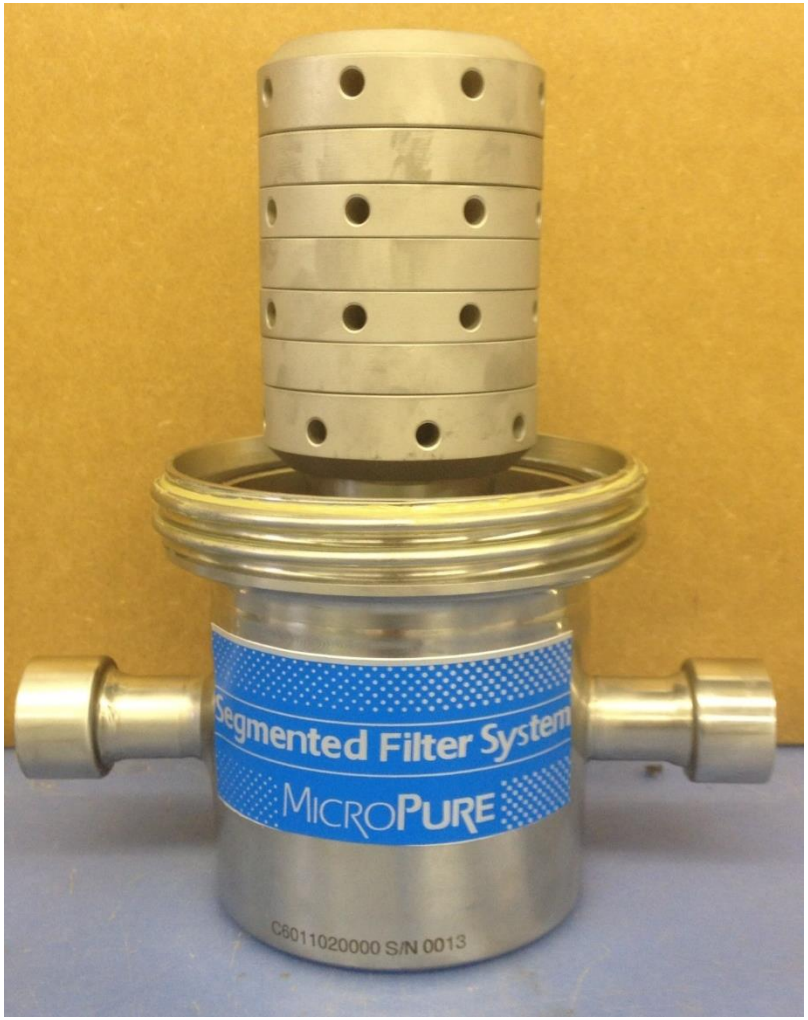
Drain Ports(2)

Spare Parts Kit

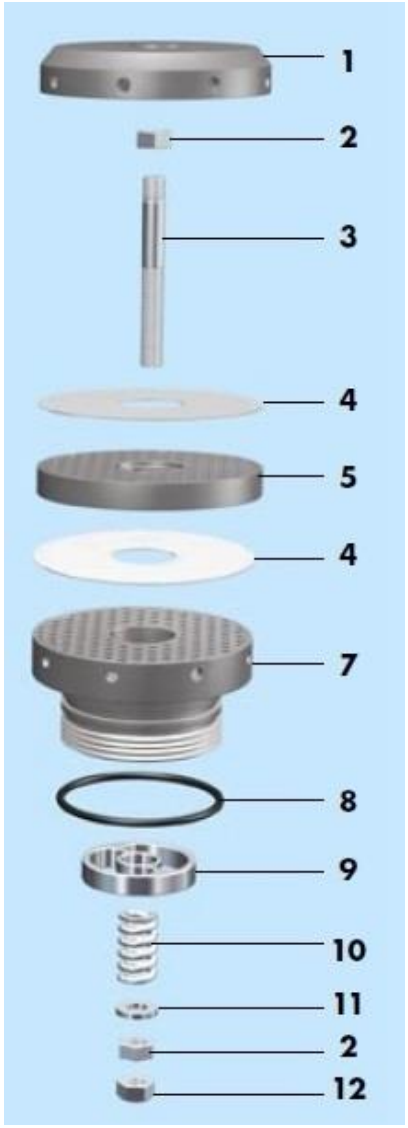
SPK Details			
Diagram #	Item Number	Description	Quantity
2	Nut,13 mm	13 mm Hex Nut	4
8	Oring-3EPDM	3” EPDM Black O-ring	2
10	Compression Spring	75 KG compression spring	2
11	Washer, 13 mm	13 mm SS washer	4
12	Nut, Lock 13 mm	13 mm Locking nut with Nylon insert	4
C	GKT	DIN 11851 Housing Gaskets	2

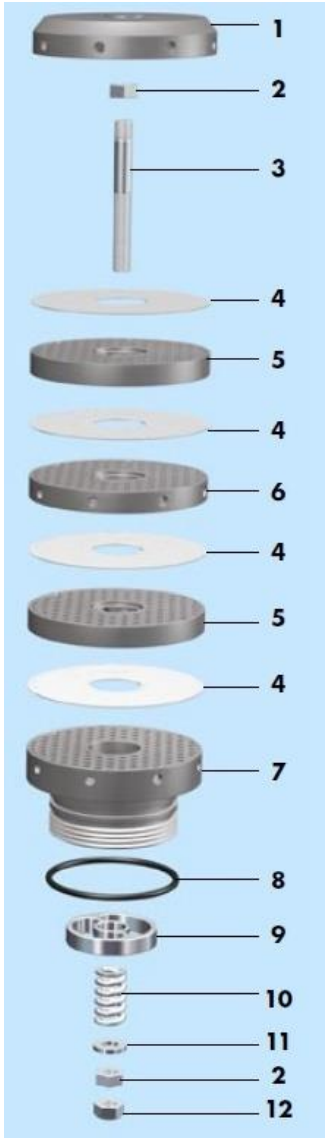
Steam Filter Design

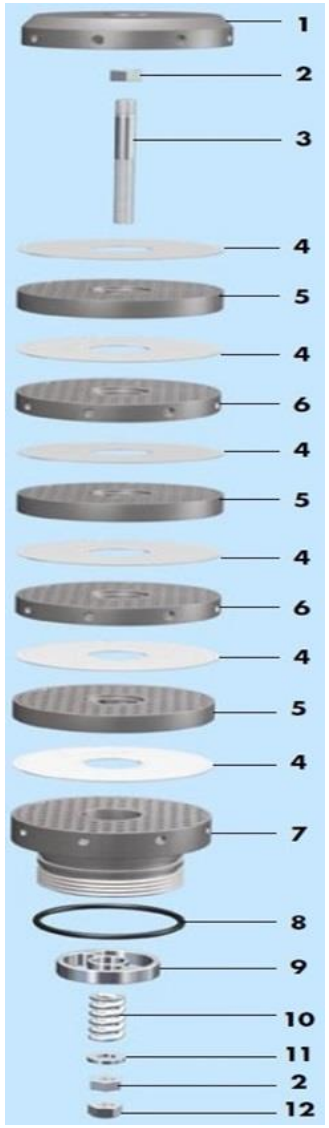




Modular Growth Capability







- Filter Capacity Growth can be achieved by added more support discs and filter media to your element.
- Multiple sizes fit into the same housing, so growth can be achieved without buying a new housing.

Steam Filter Design

Unit Compression

- Unit is compressed and held together with compression spring.
- Element Stack is held secure by Threaded Rod and Nuts on both ends

Steam Filtration Media

- Multiple micron ratings available based on application type.

  Sub 1 um-1000 micron
- Absolute rated media with 99.9999997% efficiency
- 316 Stainless Steel media
- High temperature and pressure resistance

Steam Filtration Media

- Multiple sterilization methods possible
  - Steam reverse flow
  - Autoclave
  - Stainless Steel compatible chemicals

- No deterioration or higher pressure loss after sterilizations
- 150 cleanings possible prior to replacement
- Simple Visual inspection of media integrity
- Quick and simple media replacement process

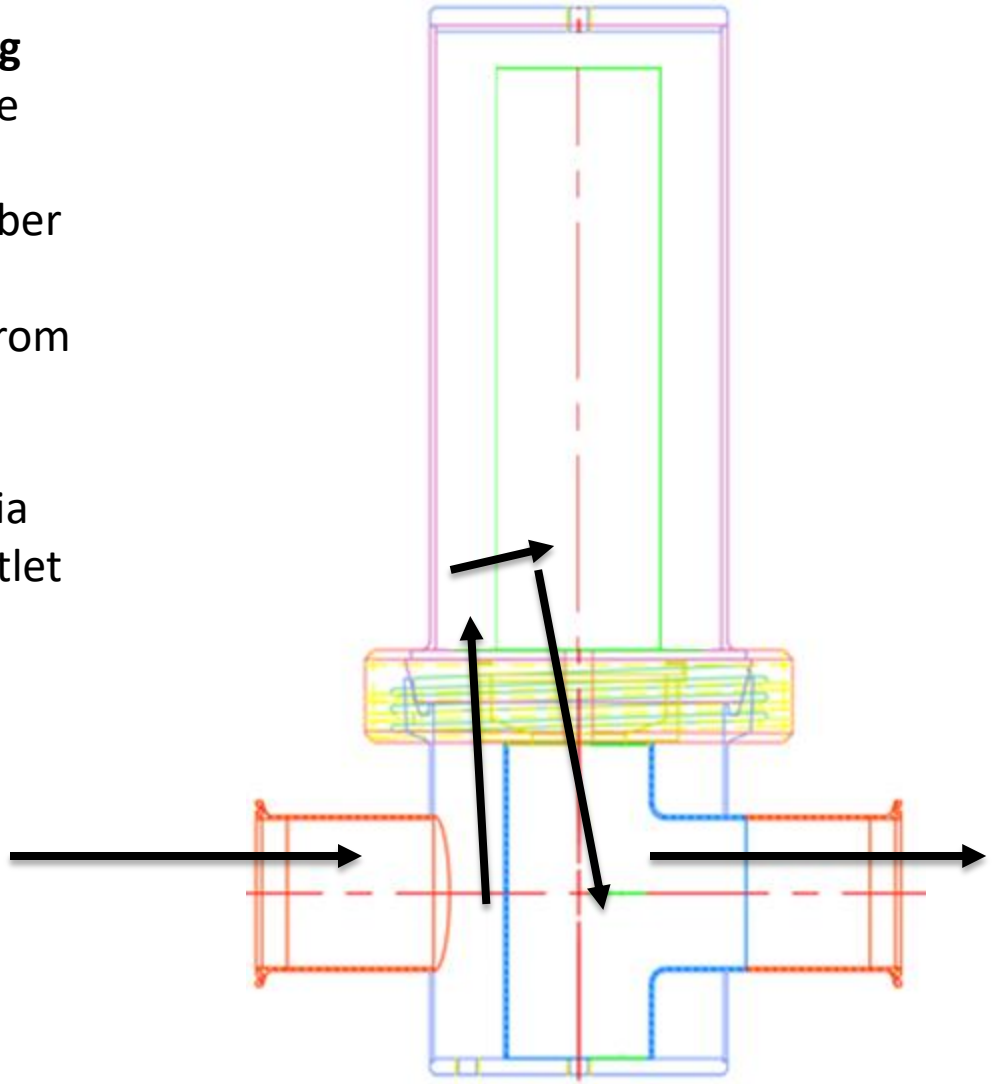
Steam Filtration Media

Picture showing impurities removed from steam flow on stainless steel media.

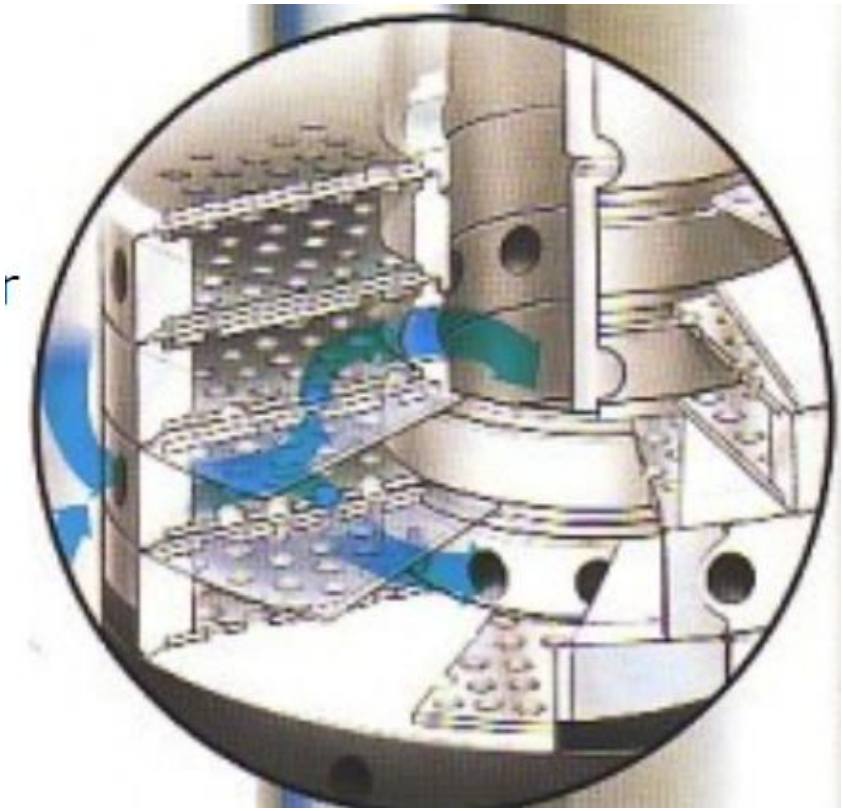
Flow through Filter Housing

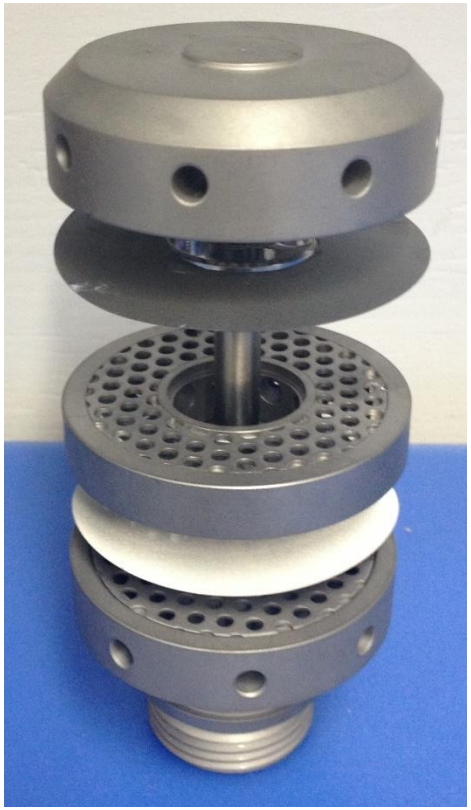
Steam flow through Filter Housing

- Steam enters through inlet pipe
- Steam goes into housing chamber
- Steam goes through element from outside
- Steam goes through filter media into clean side and through outlet pipe



Flow through filter





2 Layer element with media

Steam flow can be is bidirectional

- steam enters element through holes in disc
- steam goes up or down through filtration surface
- steam exits adjacent disc through opposite sided holes

Maintenance Information

Disassembly Instructions

1. Loosen and Remove Housing nut
2. Remove Housing Top
3. Turn Element and pull out
4. Loosen and Remove nuts and compression spring
5. Remove Stainless steel support discs and media

Routine Check Points

1. All Seal Points
2. Nuts and Washers
3. Compression Springs
4. Rod
5. Media Pieces

Assembly Instructions

1. Insert rod and secure nut to endplate
2. Place filter media piece on endplate
3. Place disc with interior holes on media
4. Place filter media piece on disc
5. Place Disc with exterior holes on media
6. Repeat process (2-5) until desired number of layers is built.
7. Once last filter media piece is in place, install head plate, compression springs and nuts.

Assembly Check Points

1. Compression Spring
2. Order of Support Discs
3. Check each Layer for media

Assembly Continued

1. Insert Element into filter adapter
2. Turn element so locking tabs match with locks on filter adapter
3. Put on housing top
4. Secure nut to create housing seal

Assembly Continued

1. Insert Element into filter adapter
2. Turn element so locking tabs match with locks on filter adapter
3. Put on housing top
4. Secure nut to create housing seal

Lubrication Points

1. Any O-ring Seal
2. Threaded Rod
3. Threads on Housing Closure Nut

MICROPURE® FILTRATION
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