

# Filter Chambers

Installation & Maintenance



## Introduction

Penguin filter chambers are designed to handle a large range of chemicals without difficulty. Completely constructed of CPVC, polypropylene or PVDF plastics and viton or EPDM elastomers where in contact with the solution being filtered, there is no fragile lucite or glass. There are no springs, no crushed tubes, no metal to liquid contact, and no center tube rod to break. Because of the unique tube compressor design, these chambers can accept tube lengths variance of 1/4" as well as carbon tubes. All filter chambers have been tested for leakage before leaving the factory. To obtain optimum service life, please follow all installation and operation instructions.

## Installation

### Plumbing

Model 3C filter chambers must be mounted vertically with the screwed head at top. The inlet and outlet ports are 3/4" FPT. They can accept hose connections or standard pipe fittings if rigid piping is desired. If purchased as a separate unit of a complete filter system, 3C filter chambers can be mounted singularly or base-mounted with pump on the floor, on the lip of a tank (Series A-A, A-L) or in a tank (Series A-B, A-BL). In-tank mounting will provide a compact unit with complete flow confined to in-tank, thus no possible loss of solution. This is recommended especially for precious metal filtering. All chambers purchased as systems include hoses, fittings and clamps. In-tank systems include B-mount brackets and union in lieu of hose clamps.

## Operation

### Tube Exchange

Each 3C-filter chamber is equipped with one initial 15-micron filter tube or carbon tube if the chamber is purchased as a Model 3CT. Following are filter tube lengths:

Model	No. of Tubes	Length of Tubes
3C-6	1	6"
3C-1	1	10"
3C-2	1	20"
3C-3	1	30"

Additional filter tubes in various micron ratings are available. Consult the factory for stock item.

There is no set timetable for filter tube replacement. The frequency of tube replacement varies based on type of solution, if continuous operation, filter tube micron porosity as well as practical size and distribution. As a helpful guide, an optional pressure gauge and guard can be supplied to help determine differential pressure between clean tubes versus those in (continue on back)

need of replacement. We suggest that all pressure gauge and guards be mounted on a tee in the vertical position either on the chamber inlet or outlet side, or both. However, they should not be mounted directly to the chamber head via the 1/4" FPT bleed plug hole, for they will easily be broken off when trying to remove the chamber head on cartridge filter change outs. The 1/4" FPT bleed plug may be replaced with a 1/4" valve for practical air venting purposes. (See maintenance for filter tube replacement instructions). An optional air vent valve can also be supplied to vent any air entrapped air from inside the chamber.

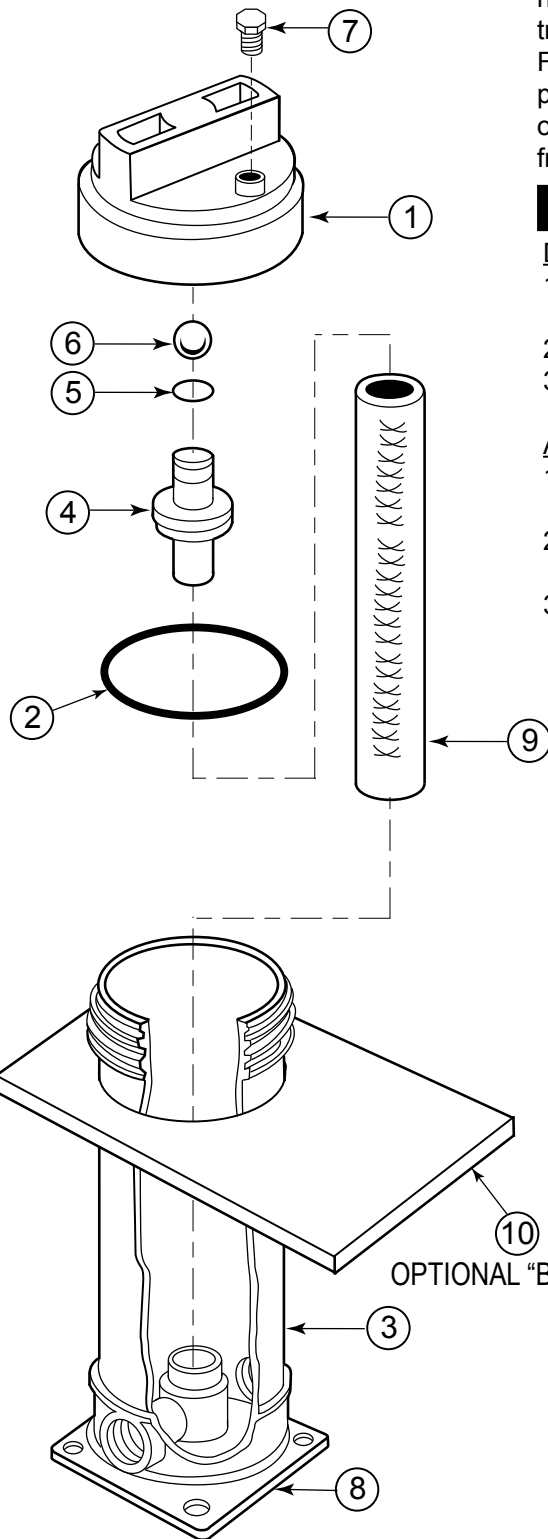
## Maintenance

### DISASSEMBLY

1. Grip head, turn counterclockwise and remove. Head O-ring can easily be replaced.
2. Filter tube can be removed from chamber for replacement.
3. If compressor ball or tube compressor O-ring need to be replaced, move tube compressor with a rocking motion.

### ASSEMBLY

1. Place new filter tube into chamber. The ID of the tube should fit over tube port at bottom of chamber.
2. Place head on chamber over rim. Be sure head O-ring is properly in place and tube compressor fits the ID of filter tube.
3. Turn head clockwise until tight.



### 3C FILTER CHAMBER SPARE PARTS LIST

Item	Description	Part Number	Quantity Required
1A	Head - CPVC	C-300-01A	1
1B	Head - Polypro	C-300-01B	1
1C	Head - PVDF	C-300-01C	1
2E	Head O-Ring - EPR	C-300-02E	1
2V	Head O-Ring - Viton	C-300-02V	1
3-A-6	Shell - CPVC 6"	C-300-03A-6	1
3A-1	Shell - CPVC 10"	C-300-03A-1	1
3A-2	Shell - CPVC 20"	C-300-03A-2	1
3A-3	Shell - CPVC 30"	C-300-03A-3	1
3B-1	Shell - Polypro 10"	C-300-03B-1	1
3C-1	Shell - PVDF 10"	C-300-03C-1	1
4A	Tube Compressor - CPVC	C-300-04A	1
4B	Tube Compressor - Polypro	C-300-04B	1
4C	Tube Compressor - PVDF	C-300-04C	1
5E	Tube Compressor O-ring - EPR	C-300-05E	1
5V	Tube Compressor O-ring - Viton	C-300-05V	1
6V	Compressor Ball	C-300-06V	1
7A	Bleed Plug - CPVC	C-300-07A	1
7B	Bleed Plug - Polypro	C-300-07B	1
7C	Bleed Plug - PVDF	C-300-07C	1
8A	Base - CPVC	C-300-08A	1
8B	Base - Polypro	C-300-08B	1
8C	Base - PVDF	C-300-08C	1
9-6	Filter Tube - 6"	**	1
9-1	Filter Tube - 10"	**	1
9-2	Filter Tube - 20"	**	1
9-3	Filter Tube - 30"	**	1
10A-1	B-Mount 3CN-1A, CPVC	B-3C-01A	1
10A-1	B-Mount 3CN-2A, 3CN-3A, CPVC	B-3C-02A	1
10B-1	B-Mount 3CN-1B, Polypro	B-3C-01B	1
10C-1	B-Mount 3CN-1C, PVDF	B-3C-01C	1

\*\* Consult Factory

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