

# pb prefilter housings

## Containment Bag-in/Bag-out Prefilter Housings



Containment level  
integrity for system  
prefiltration



Camfil Farr Prefilter Housings mate directly to Camfil Farr GB, FB, GN, and FN Series containment housings. Camfil Farr PB Prefilter housings:

- Are manufactured of the same materials as prime containment components
- Are continuously welded at all pressure barrier points
- Are reinforced to be capable of withstanding up to 15" w.g. positive or negative pressure
- Have hardware constructed of 300 Series stainless steel. The door knobs are cast aluminum to prevent galling of male stainless steel threads (per ERDA 76-21, 6.2.2)
- Include a bagging ring to facilitate safe change procedure to protect filter change out personnel
- Have doors that include silicone gasket for a positive seal during system operation.



All Camfil Farr PB Prefiltration Housings are manufactured to industry standard recommended practices and evaluation criteria.

The PB Series 200 will accept 2", 4" or 6" deep ASHRAE grade prefilters. The PB Series 212 will allow installation of a 2" deep prefilter and a 12" deep secondary filter.

Custom designs are also available to meet any individual containment requirement.



Camfil Farr	Product bulletin
Prefilter Sections	3403 - 0606
Camfil Farr—clean air solutions	

# PERFORMANCE & MODEL NUMBER DATA

# PB PREFILTRATION HOUSINGS

CF - 1 X 3 - 012H - 1 PB - SS

Number of filters high  
 1/2 - One door high (1/2 size)  
 1 - One door high  
 2 - Two doors high  
 3 - Three doors high  
 4 - Four doors high  
 5 - Five doors high

Number of prefilters wide  
 1/2 - One prefilter wide (1/2 size)  
 1 - One prefilter wide  
 2 - Two prefilter wide  
 3 - Three prefilter wide  
 4 - Four prefilter wide  
 5 - Five prefilter wide

PB - Prefilter housing bag-in/bag-out  
 PN - Prefilter housing non bag-in/bag-out

Access door arrangement  
 1 - 1 access door, 1 side  
 2 - 2 access doors, 1 on each side

Housing construction material  
 SS - T-304 stainless steel  
 AS - Aluminized Steel  
 304L - T-304L stainless steel  
 316 - T-316 stainless steel  
 316L - T-316L stainless steel

Prefilter Size (depth of prefilter)

14" deep housing      200 - 2" prefilter  
                                  400 - 4" prefilter  
                                  600 - 6" prefilter

26" deep housing      012H - One 12" deep prefilter with single header  
                                  012B - One 12" deep box style or double header prefilter  
                                  212H - One 2" prefilter and one 12" deep prefilter with single header prefilter  
                                  212B - One 2" prefilter and one 12" deep box style or double header prefilter

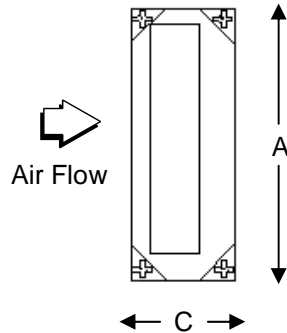
**Data Notes:**

Housing Dimensions A = Height B = Width C = Depth

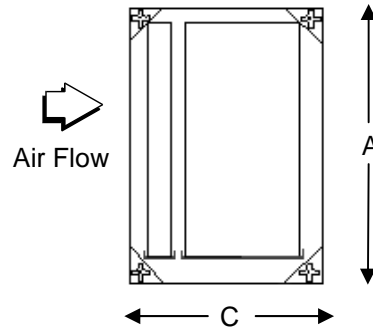
Unit is completely factory assembled.  
 Filters are not included and must be ordered separately.  
 A minimum of 4 feet of clearance on access door side is recommended for filter service.  
 Access door location must be specified. When standing upstream, facing the housing, (looking in the direction of the airflow), if the door is on the left the unit is left hand access, if the door is on the right then the unit is right hand access.

Housing Size/Configuration Chart - 200-1PB						
Housing Size (H x W)	Prefilter Depth (inches)	Door Arrangement	Dimension A (inches)	Dimension B (inches)	Dimension C (inches)	Shipping Weight (lbs)
1/2 x 1/2	2,4,6	1	18	15	14	85
1/2 x 1	2,4,6	1	18	27	14	110
1 x 1	2,4,6	1	30	27	14	130
1 x 2	2,4,6	1	30	51	14	190
1 x 3	2,4,6	1	30	75	14	245
2 x 1	2,4,6	1	60	27	14	230
2 x 2	2,4,6	1	60	51	14	330
2 x 3	2,4,6	1	60	75	14	425
3 x 1	2,4,6	1	90	27	14	335
3 x 2	2,4,6	1	90	51	14	470
3 x 3	2,4,6	1	90	75	14	605
4 x 1	2,4,6	1	120	27	14	435
4 x 2	2,4,6	1	120	51	14	610
4 x 3	2,4,6	1	120	75	14	785

Housing Size/Configuration Chart - 212-1PB							
Housing Size (H x W)	Prefilter Depth (inches)	Secondary Filter Depth (inches)	Door Arrangement	Dimension A (inches)	Dimension B (inches)	Dimension C (inches)	Shipping Weight (lbs)
1/2 x 1/2	2	12	1	18	15	26	125
1/2 x 1	2	12	1	18	27	26	160
1 x 1	2	12	1	30	27	26	195
1 x 2	2	12	1	30	51	26	295
1 x 3	2	12	1	30	75	26	385
2 x 1	2	12	1	60	27	26	345
2 x 2	2	12	1	60	51	26	515
2 x 3	2	12	1	60	75	26	670
3 x 1	2	12	1	90	27	26	495
3 x 2	2	12	1	90	51	26	740
3 x 3	2	12	1	90	75	26	955
4 x 1	2	12	1	120	27	26	645
4 x 2	2	12	1	120	51	26	960
4 x 3	2	12	1	120	75	26	1240



Typical door arrangement 1 with a single prefilter. Designed to accommodate prefilter (s) through one door opening. Actual primary filter may be 2", 4", or 6" nominal depth.



Typical door arrangement 1 with prefilter and secondary filter. Designed to accommodate prefilter (s) and secondary filter (s) through one door opening. Prefilter depth limited to 2" nominal depth. Secondary filter limited to 12" nominal depth.

# SPECIFICATIONS



## 1.0 – General

1.1 - Housing shall be Camfil Farr PB (200, 400, 600, 012, 212) series side-access bag-in/bag-out, housing. The housing shall be adequately reinforced to withstand a negative or positive pressure of 15" water gage. The housing shall accommodate standard size filters that do not require any special attachments or devices to function properly in the housing.

1.2 – Sizes shall be noted on enclosed drawings or other supporting materials.

## 2.0 – Construction

2.1 – Housing shall be constructed of 14 gauge and 11 gauge T-304 stainless steel metal. All pressure retaining joints and seams shall be continuously welded with no porosities. Joints and seams requiring intermittent welds, such as reinforcement members, shall be intermittently welded. Housing shall be free of burrs and sharp edges. All weld joints and seams that are a portion of any gasket setting surface or duct connection flanges shall be ground smooth and flush with adjacent base metals. All welded joints and seams shall be wire brushed to remove heat discoloration. The housing shall be reinforced to withstand a positive or negative pressure of 15" w.g. The upstream and downstream ductwork connections shall have 1 1/2" outward-turned flanges.

2.2 - (Housing shall accommodate a 2", 4" or 6" nominal depth prefilter., Housing shall accommodate a 2" nominal depth prefilter and a 12" nominal depth secondary filter). Filters shall be industry standard 1/2 (12" by 24") or full (24" by 24") size.

2.3 - The housing shall have a bagging ring around each filter access port that is sealed by a gasketed filter access door. The filter access door gasket shall be silicone and shall be replaceable, if necessary. The bagging ring shall have two (2) continuous formed raised ridges to secure the PVC change-out bag. The bagging ring shall be hemmed on the outer edge to prevent the change-out bag from tearing.

2.4 – Ancillary hardware including door handles, door studs and labels shall be 300 series stainless steel. Filter access door knobs shall be cast aluminum and designed to prevent galling of threads.

2.5 - One (1) Camfil Farr manufactured PVC change-out bag shall be furnished with each filter access port. Change-out bags shall be 8-mil. thick with a yellow translucent, non-sticking, matte finish. It shall include a 1/4" diameter elastic shock cord hemmed into the opening of the bag so when stretched around the housing bagging ring flange, a secure fit is created. The bag shall include three (3) integral glove ports to assist in filter change-out. One (1) nylon security strap shall be included per filter access port to prevent the bag from sliding off the bagging flange during the change-out process. Design of components shall be such that all change-out operations shall be within the bag so there is a barrier between the worker and the filter at all times.

## 3.0 – Performance

3.1 - All welding procedures, welders, and welder operators shall be qualified in accordance with *ASME Boiler and Pressure Vessel Code, Section IX*. All production welds shall be visually inspected by qualified personnel, per Camfil Farr standard procedure number *CFW-10001, Visual Inspection of Welds*, which incorporates the workmanship acceptance criteria described in *Section 5 & 6 of AWS D9.1-1990, Specification for Welding of Sheet Metal*.

3.2 - The filter housing shall be manufactured under a Camfil Farr Quality Assurance Program (see Note 1 below). The filter housing shall be factory tested for filter fit, flatness of filter sealing surface and operation of filter clamping mechanism. The filter sealing surface and the complete assembly pressure boundary shall be leak tested by the pressure decay method as defined in *ASME N510-1995 Reaffirmed., Testing of Nuclear Air Cleaning Systems*, paragraphs 6 and 7. The filter sealing surface shall be tested at +10" water gage and have a maximum leak rate of 0.0005 cfm per cubic foot of housing volume. The overall system pressure boundary shall be leak tested at +15" water gage and have a maximum leak rate of 0.0005 cfm per cubic foot of housing volume.

3.3 - Manufacturer shall provide evidence of facility certification to ISO 9001:2000.

3.4 - Filter bags shall be capable of continuous operating to temperature extremes of 0° F to 150° F.

3.5 – Multi-wide housing shall be equipped with a filter removal rod to pull the filters to the change-out position. The removal rod shall operate from the inside of the filter change out bag.

**Note 1** (to specifying engineer): Camfil Farr manufacturers all of its containment products using more than one Quality Assurance Program. Our *product-wide* Quality Assurance Program is a stringent process that ensures the equipment is produced in conformance with our understanding of the intended application. However, this *product-wide* program does not address all the items specified in ASME-NQA-1. If this product must be manufactured under an ASME NQA-1 Quality Assurance Program, please add the following to this statement "including the basic requirements of ASME NQA-1." Please contact the factory if specific clarifications are required.

Multiple items in ( ) parenthesis require selection.

## Optional Components

### Camfil Farr 30/30® Prefilter

Setting the industry standard for over 40 years, the Camfil Farr 30/30 provides ASHRAE MERV 7 efficiency in a 2" deep filter. The 30/30 has guaranteed integrity to 2" w.g.. Consult Camfil Farr Bulletin # 1002.



### Camfil Farr Riga-Flo® Prefilter/Secondary Filter



Riga-Flo integrity to 10" w.g. the Riga-Flo sets the standard for supported media filters. Available in ASHRAE efficiencies of MERV 9 to MERV 14 in 6" or 12" deep configurations. Consult Camfil Farr Bulletin # 1303.

### Camfil Farr Aeropac® Prefilter/ Secondary Filter

The Aeropac is the choice for applications that may be subjected to high humidity or moisture laden conditions. Available in efficiencies of MERV 11 to MERV 14 in 6" or 12" deep configurations. Consult Camfil Farr Bulletin # 1602.



### Camfil Farr Durafil® Secondary Filter



The Durafil offers increased airflow, extended filter life and energy savings. Available in ASHRAE efficiencies of MERV 11 to MERV 14 in 6" or 12" deep configurations. Consult Camfil Farr Bulletin # 1515.

### Banding Kit

The Camfil Farr Banding Kit includes a case/lap apron, a heavy duty tie-banding gun, PVC bag cutting shears, a 7" Velcro cinching strap and ten 100-lb tensile strength banding ties. The kit offers assurance that all required change components are readily available in one convenient package. Consult Camfil Bulletin 3410.



*Camfil Farr has a policy of uninterrupted research, development and product improvement. We reserve the right to change designs and specifications without notice.*

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## Construction Materials

Alternate materials of construction are available. Please consult the factory if your application requires non-listed components of construction.

## Aerosol/Freon Test Ports

Test ports are available for aerosol/Freon sampling and air uniformity readings.

## Filter Change-out Tray

A filter change-out tray provides support for the filters during the service process. Connecting conveniently to the door latches, it can support filters and bagging components up to 300-lbs. Filter change-out trays are highly recommended for housing applications where ladders may be required for service or housings are in a difficult-to-reach location. Consult Camfil Bulletin 3410-0902

## Lifting Lugs

Camfil Farr can provide lifting lugs for unit transport and support during installation. The lugs are of 1/4" thick 304 stainless steel and have a pre-drilled 1-1/2" hole. Common lifting lug locations include the top or side of the housing.

## Pressure Taps (static)

Static pressure taps are available to facilitate the connection of gages or other ancillary equipment. For on-site application of gages, taps include a removable brass plug.

## Pressure Gages

Camfil Farr can provide factory-mounted differential pressure gages to evaluate resistance across individual filters or any combination of internal components. Gage connections include copper tubing and brass fittings. Stainless steel tubing and fittings are also available.

## Weather Caps

Although Camfil Farr housings are weatherproof, an optional weather cap of the same construction materials as the housing, may be included to prevent water accumulation on the top of the housing. Standard weather caps are attached and sealed against weather intrusion. If pre-drilled flanges are required the weather cap is bolted to the housing to allow access to mounting flanges.

