

Alpha Frame

Holding Frame for HEPA Filters

General

Alpha Frames are permanent holding frames for field or OEM assembly of built-up HEPA filter banks. They may be used to hold Alpha 95 filters, Alpha 2000 or Alpha Cell HEPA filters. Standard sizes include the three most popular filter face sizes: 24"x24", 24"x12" and 12"x 24". Separate spring-loaded swing-arm assemblies are used to retain either 6" or 12" nominal depth filter casings. The entire assembly will have the same efficiency as the filters themselves without leaks or bypass when the filters and frames are installed as recommended.

Construction

Alpha Frames are constructed of all-welded 14 ga. galvanized steel with a 3/4" flange for rigidity. Factory-punched holes on each side facilitate positioning of the frames for easy filter bank assembly. The mounting holes on the top and bottom of each frame are surrounded by a formed raised dimple that both recesses the fastener and positions the filter. The contact surface for the filter gasket is smoothed and finished for a leak-tight seal.

Four cadmium-plated spring-loaded swing-arm assemblies are furnished with each frame. Spring-loading helps correct for gasket set over the life of the filter and maintains a leak-tight seal. The swing-arm assemblies are set into filter-aligning retainers attached to the inner vertical sides of the frame.

Important Features

- 14 ga. galvanized steel frame for corrosion resistance and rigidity
- Four spring-loaded swing-arm assemblies compress filter gasket for leak-tight seal
- Flat smooth-finished gasket sealing surface is backed by a rigid standing flange
- Pre-punched holes facilitate field assembly of built-up filter banks
- Swing-arm retainers position filter properly in frame
- Optional prefilter frame assembly available for direct attachment to swing-arm

Installation Considerations

Alpha Frames may be installed for either upstream (dirty side) or downstream (clean side) service. Filter installation and removal is greatly facilitated if at least 36" of service clearance upstream of the filter face is provided. The clearance space can be shared with downstream serviced ASHRAE- rated prefilters.

Installation recommendations are found on the Alpha Frame drawing. The dimensional drawings on this data sheet may be used for general layout purposes.

Optional Prefilter Frame Assembly

We can offer a prefilter frame assembly to hold standard face size nominal 2, 4, and 6" deep panel or rigid filters. The 16 ga. galvanized steel frames with a gasket on the prefilter-sealing surface attaches directly to specially designed spring-loaded swing-arm assemblies. The frame allows the prefilter to be serviced without disturbing the HEPA filter. Add suffix -PFA to the Alpha Frame model number to specify a prefilter frame.

Physical Data

Frame: All-welded 14 ga. galvanized steel

Filter Gasket Seat: Flat contact surface, ground and smooth-finished, backed by a standing flange for rigidity

Sealing Method: Spring-loaded swing-arm assemblies, 4 per frame

Provisions for Joining Frames: Minimum of 4 factory-punched holes per side

Guide Specifications

1.0 General

- 1.1 Permanent holding frames for HEPA filters shall be Alpha Frames as manufactured by Flanders Precisionaire.

2.0 Filter Construction

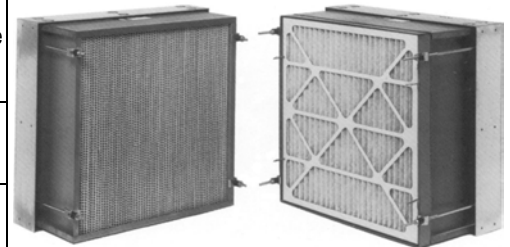
- 2.1 Frames shall be constructed of 14 ga. galvanized steel with pre-punched fastener holes for easy field assembly.
- 2.2 Frame depth shall be 5" in addition to 3/4" standing flange downstream of the sealing surface for rigidity.
- 2.3 Filter gasket contact surface shall be flat and smooth-finished.
- 2.4 Four spring-loaded swing-arm assemblies shall maintain compression on the filter and gasket for a leak-tight seal throughout the life of the filter.

3.0 Installation

- 3.1 Install frames in accordance with the manufacturer's written recommendations.
- 3.2 Furnish Model PFA prefilter frame assemblies if specified.

Alpha Frame Usage, Dimensions and Weights

Model Number Note 1	Alpha Frame Size H x W (inches)	Actual Size Alpha Cell Filter Required HxWxD (inches) Note 2	Overall Depth with Filter Dim "E" (in.)	Overall Depth with Prefilter Assembly Dim "F" (in.)	Weight per Frame (lbs.) Note 4
AF-242412	24-1/2 x 26	24 x 24 x 11-1/2	12-1/2	15-1/4	35
AF-242412	24-1/2 x 14	24 x 12 x 11-1/2	12-1/2	15-1/4	27
AF-242412	12-1/2 x 26	12 x 24 x 11-1/2	12-1/2	15-1/4	27
AF-24246	24-1/2 x 26	24 x 24 x 5-7/8	6-3/4	9-1/2	33
AF-24246	24-1/2 x 14	24 x 12 x 5-7/8	6-3/4	9-1/2	25
AF-12246	12-1/2 x 26	12 x 24 x 5-7/8	6-3/4	9-1/2	25



Notes:

1. Add suffix -PFA to the Alpha Frame model number if the optional prefilter frame assembly is specified.
2. Alpha Cell filters must be specified separately. Specify gaskets on both the upstream and downstream sides (Suffix B) when using the prefilter frame assembly.
3. Prefilters and fasteners must be specified separately for the prefilter frame assembly.
4. Add 8 lbs. each for the prefilter frame assembly less prefilters.

Nominal Prefilter Thickness (inches)	Dim. G (inches)
2	0
4	0
6	1.5
12	7.5

