



**INDOOR AIR QUALITY**

**HC10 / HC16**

**HEALTHY CLIMATE®**

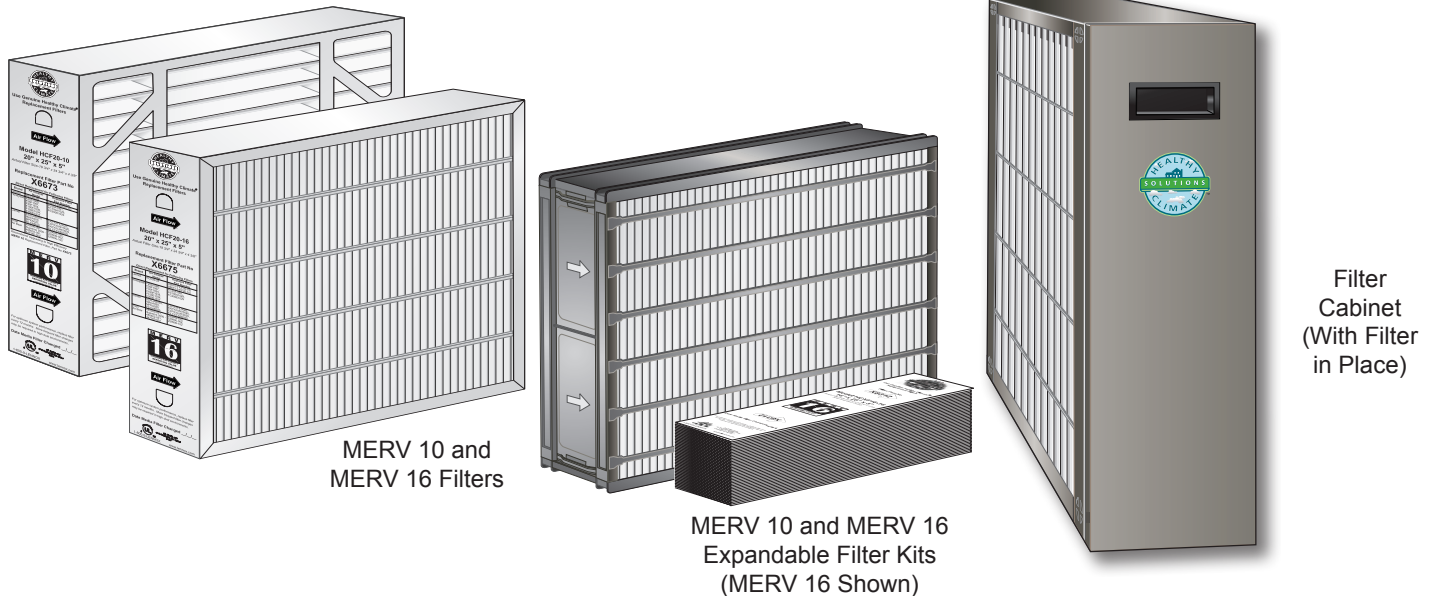
**MERV 10 or MERV 16 Media Air Cleaners**

Bulletin No. 210450

October 2010

Supersedes October 2009

**PRODUCT SPECIFICATIONS**



**MODEL NUMBER IDENTIFICATION**

**HC10 (MERV 10)**

consists of:

**(cabinet + box filter)**

HCC14-23 (Cabinet) + HCF14-10 (Filter) 1400 cfm

HCC16-28 (Cabinet) + HCF16-10 (Filter) 1600 cfm

HCC20-28 (Cabinet) + HCF20-10 (Filter) 2000 cfm

**(cabinet + expandable filter kit)**

HCC14-23 (Cabinet) + HCXF14-10 (Expandable Filter) 1400 cfm

HCC16-28 (Cabinet) + HCXF16-10 (Expandable Filter) 1600 cfm

HCC20-28 (Cabinet) + HCXF20-10 (Expandable Filter) 2000 cfm

**HC16 (MERV 16)**

consists of:

**(cabinet + box filter)**

HCC14-23 (Cabinet) + HCF14-16 (Filter) 1400 cfm

HCC16-28 (Cabinet) + HCF16-16 (Filter) 1600 cfm

HCC20-28 (Cabinet) + HCF20-16 (Filter) 2000 cfm

**(cabinet + expandable filter kit)**

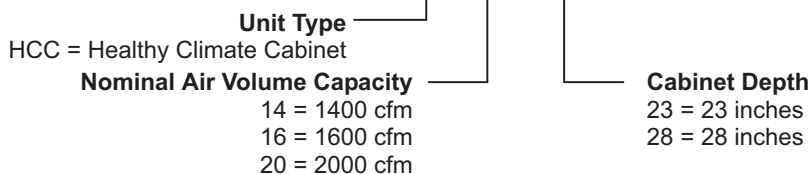
HCC14-23 (Cabinet) + HCXF14-16 (Expandable Filter) 1400 cfm

HCC16-28 (Cabinet) + HCXF16-16 (Expandable Filter) 1600 cfm

HCC20-28 (Cabinet) + HCXF20-16 (Expandable Filter) 2000 cfm

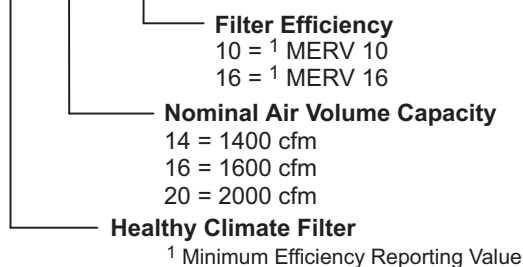
**CABINET**

**HCC 16 - 28**



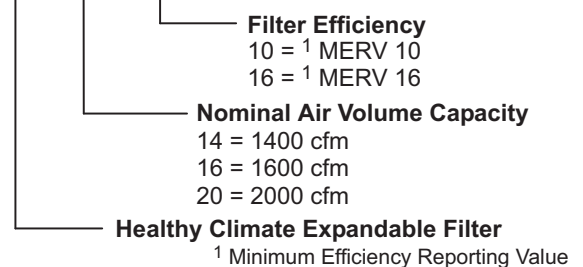
**BOX FILTER**

**HCF 16 - 10**



**EXPANDABLE FILTER KIT**

**HCXF 16 - 10**



## FEATURES

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### APPLICATIONS

NOTE - Cabinet and Filter must be ordered separately.

MERV 10 and MERV 16 filters (Minimum Efficiency Reporting Value based on ASHRAE 52.2).

High performance filtration with a narrow 7 in. cabinet.

Pleated filter design allows maximum air flow and filtration efficiency.

- Multi-position cabinet is available for installation on the return air opening of gas, oil or electric forced, warm air furnaces and air handlers with cooling applications up to 5 tons. The unit can be installed in upflow, downflow or horizontal unit applications.
- Silent operation, requires no electrical component service, and generates no ozone.
- Constant blower operation will achieve the best air cleaning results.
- No duct transition needed for most furnace applications. See Match-Up Table for additional details on page 5.

### WARRANTY

HCC cabinet and HCXF reusable filter box has a five year limited warranty in residential applications, one year in non-residential applications.

Filter media is not covered.

Refer to Healthy Climate Equipment Limited Warranty certificate included with cabinet for specific details.

### INSTALLATION CONSIDERATIONS

A 25 in. clearance in front of the air cleaner is required to allow removal of filter media.

Due to the flue location on downflow furnaces, the front of the air cleaner must be installed to the side or rear of the furnace cabinet. If installed in a confined space, service clearance may be restricted.

If an atomizing spray type humidifier is also used, it must be installed downstream from the air cleaner.

If a UV germicidal light is used in the system, maintain a minimum distance of 6 ft. from the air cleaner if they are in direct line of sight to one another. Maintain a minimum of 3 ft. if using a 90° bend or turn in the duct.

### CABINET

Constructed of pre-painted cold rolled steel.

Cabinet will withstand 400 lbs. static weight, enough to support the weight of a typical furnace and indoor coil or air handler.

Tool-less access door allows quick and easy replacement of filter media.

Mounts in any position. Air flow direction through the cabinet can be changed by re-positioning the filter. Arrows on filter indicate air flow direction.

Cabinet is shipped compact and requires minimum field assembly. No tools required.

### FILTER MEDIA

Disposable, pleated MERV 10 and MERV 16 filter (Minimum Efficiency Reporting Value based on ASHRAE 52.2).

Dust mites, pollen, mold spores, pet dander and other contaminants are captured by the filter.

Media is certified to UL 900 standard and UL/ULC classification - Class 2.

Recommended replacement of filter media depends on a variety of factors, see Specifications table.

#### **Box Filters**

Double-wall beverage board box for rigid construction.

#### **Expandable Filter Kits**

Filter kit is shipped compact for field assembly.

All kits consist of an expandable filter media and reusable filter box.

MERV 16 kits also include reusable filter spacers.

## SPECIFICATIONS

General Data	Cabinet Model No.	HCC14-23	HCC16-28	HCC20-28	HCC14-23	HCC16-28	HCC20-28	
	Filter Model No. (Box Filter)	HCF14-10	HCF16-10	HCF20-10	HCF14-16	HCF16-16	HCF20-16	
	Filter Model No. (Expandable Filter Kit)	HCXF14-10	HCXF16-10	HCXF20-10	HCXF14-16	HCXF16-16	HCXF20-16	
<sup>1</sup> MERV (Minimum Efficiency Reporting Value) rating		10	10	10	16	16	16	
Air Flow	Air flow range - cfm	800 - 1400	800 - 1600	1400 - 2000	800 - 1400	800 - 1600	1400 - 2000	
	Rated air flow - cfm	1400	1600	2000	1400	1600	2000	
Filter Data	Nominal Filter size - in.	20 x 20 x 5	16 x 25 x 5	20 x 25 x 5	20 x 20 x 5	16 x 25 x 5	20 x 25 x 5	
	Pressure drop @ rated flow in. w.c. - Initial	HCF - Initial	0.25	0.27	0.27	0.29	0.31	0.31
		- Final	0.40	0.40	0.40	0.40	0.40	0.40
	HCXF - Initial	0.27	0.30	0.27	0.29	0.31	0.31	
		- Final	0.40	0.40	0.40	0.40	0.40	0.40
	<sup>2</sup> Filter estimated service life (months)		up to 12 months					
Shipping weight - lbs.	Cabinet	15	17	18	15	17	18	

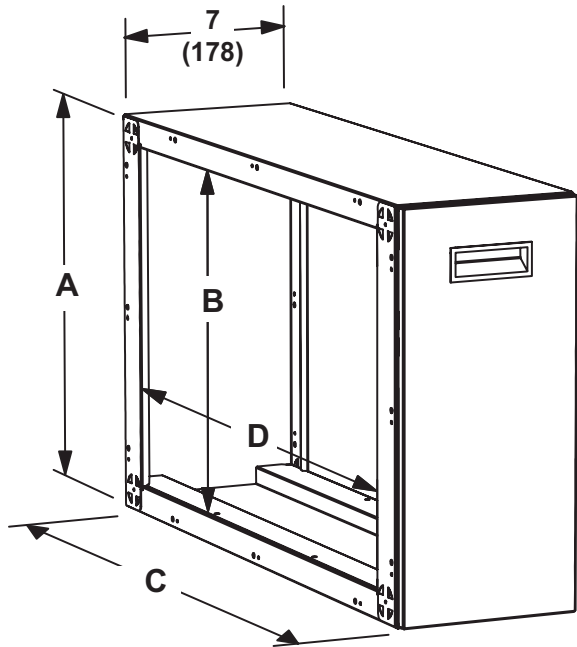
## MAINTENANCE SUPPLIES - MUST BE ORDERED EXTRA

Replacement filter media for Expandable Filter Kits	X8311	X8309	X8310	X8314	X8312	X8313

<sup>1</sup> Rated at 492 feet per minute

<sup>2</sup> Factors will influence the frequency of replacement of filter media, such as: the number of people in the home, activities, lifestyle, number of pets, and size of home.

## DIMENSIONS - INCHES (MM)



Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
HCC14-23	21-1/4	540	18-3/4	476	23	584	18-1/2	470
HCC16-28	17-1/4	438	14-3/4	375	28-1/2	732	24	610
HCC20-28	21	533	18-1/2	470	28-1/2	724	24	610

## FILTER AIR RESISTANCE - HCF

Air Flow (cfm)	Pressure drop (in. w.c.)					
	HCF14-10	HCF14-16	HCF16-10	HCF16-16	HCF20-10	HCF20-16
800	0.11	0.14	0.09	0.12	0.06	0.09
1000	0.15	0.18	0.13	0.16	0.09	0.12
1200	0.20	0.24	0.17	0.21	0.12	0.15
1400	0.25	0.29	0.21	0.25	0.15	0.19
1600	Not recommended		0.27	0.31	0.18	0.23
1800	Not recommended				0.22	0.27
2000	Not recommended				0.27	0.31

## FILTER AIR RESISTANCE - HCXF

Air Flow (cfm)	Pressure drop (in. w.c.)					
	HCXF14-10	HCXF14-16	HCXF16-10	HCXF16-16	HCXF20-10	HCXF20-16
800	0.11	0.14	0.12	0.12	0.06	0.09
1000	0.15	0.18	0.19	0.16	0.09	0.12
1200	0.20	0.24	0.22	0.21	0.12	0.15
1400	0.27	0.29	0.26	0.25	0.15	0.19
1600	Not recommended		0.30	0.31	0.18	0.23
1800	Not recommended				0.22	0.27
2000	Not recommended				0.27	0.31

## MINIMUM FILTER EFFICIENCY

Filter Model No.	MERV Rating	<sup>1</sup> Filter Efficiency (percentage)		
		E1 (0.3 to 1.0 microns)	E2 (1.0 to 3.0 microns)	E3 (3.0 to 10.0 microns)
HCF14-10 / HCXF14-10 HCF16-10 / HCXF16-10 HCF20-10 / HCXF20-10	10	30%	69%	90%
HCF14-16 / HCXF14-16 HCF16-16 / HCXF16-16 HCF20-16 / HCXF20-16	16	95%	99%	99%

<sup>1</sup> Values are based on lab tests conducted with conditions included in ASHRAE Standard 52.2 2007.

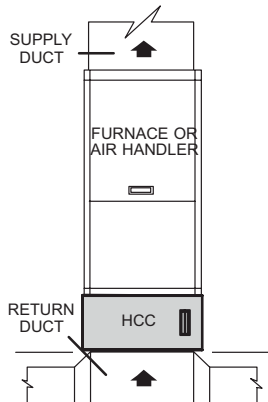
## MATCH-UPS - FILTER CABINET WITH FURNACE / AIR HANDLER

**ALSO SEE ILLUSTRATIONS ON NEXT PAGE FOR ADDITIONAL DETAILS**

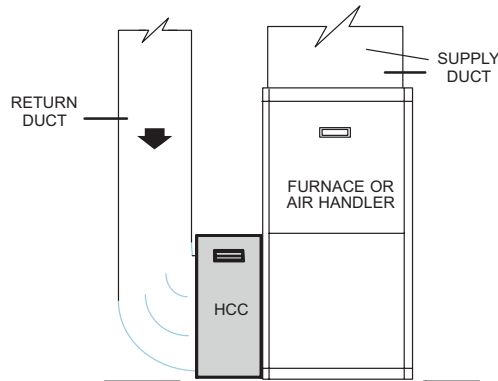
Furnaces	Filter Cabinet			Comment
	HCC14-23	HCC16-28	HCC20-28	
"A" Width Furnace with Side Return Air		•		No duct transition required.
"A" Width Furnace with Bottom Return Air		•		28-1/2" x 3" side seal strip or duct transition needed.
"B" Width Furnace with Side Return Air		•		No duct transition required.
"B" Width Furnace with Bottom Return Air		•		No duct transition required.
"C" Width Furnace with Side Return Air (up to 4 ton)		•	•	No duct transition required, for high system static application use HCC20-28.
"C" Width Furnace with Side Return Air (5 ton)			•	<b>Option 1</b> - No duct transition required, use Return Air Base (98M58). <b>Option 2</b> - Overcut top edge of side return opening by 1 in. to make opening 15 in. x 23 in. (H x W).
"C" Width Furnace with Bottom Return Air			•	No duct transition required.
"D" Width Furnace with Side Return Air			•	<b>Option 1</b> - No duct transition required, use Return Air Base (98M59). <b>Option 2</b> - Overcut top edge of side return opening by 1 in. to make opening 15 in. x 23 in. (H x W).
"D" Width Furnace with Bottom Return Air			•	28-1/2" x 3 1/2" side seal strip or duct transition needed.
Air Handlers	HCC14-23	HCC16-28	HCC20-28	Comment
Air Handler (W x D) - 16-1/4 x 20-5/8" CBX32MV-018/024 CBX32M-018/024	•	•		Duct transition required.
Air Handler (W x D) - 21-1/4 x 20-5/8" CBX27UH-018 CBX27UH-024 CBX32MV-024-030 CBX32M-030	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 22-5/8" CBX27UH-030 CBX27UH-036 CBX32MV-036 CBX32M-036-042 CBX40UHV-024-030-036	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 24-5/8" CBX27UH-042 CBX27UH-048 CBX27UH-060 CBX32MV-048-060 CBX32M-048-060			•	21" x 3" side seal strip or duct transition needed.
Air Handler (W x D) - 21-1/4 x 25-5/8" CBX40UHV-042-048-060			•	21" x 3" side seal strip or duct transition needed.
Air Handler (W x D) - 21-1/4 x 26-5/8" CBX32MV-068			•	No duct transition required.
Air Handler (W x D) - 18-1/2 x 22" CBX26UH-018-024	•			22" x 2" side seal strip or duct transition needed.
Air Handler (W x D) - 21-1/4 x 22" CBX26UH-030-036	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 26" CBX26UH-042-048-060			•	No duct transition required.
Hot Water Air Handlers	HCC14-23	HCC16-28	HCC20-28	Comment
"B" Width CBWMV with Side Return Air		•		No duct transition required.
"B" Width CBWMV with Bottom Return Air		•		No duct transition required.
"C" Width CBWMV with Side Return Air (up to 4 ton)		•	•	No duct transition required, for high system static application use HCC20-28.
"C" Width CBWMV with Side Return Air (5 ton)			•	<b>Option 1</b> - No duct transition required, use Return Air Base (98M58). <b>Option 2</b> - Overcut top edge of side return opening by 1 in. to make opening 15 in. x 23 in. (H x W).
"C" Width CBWMV with Bottom Return Air			•	No duct transition required.

**MATCH-UPS - FILTER CABINET WITH FURNACE / AIR HANDLER**

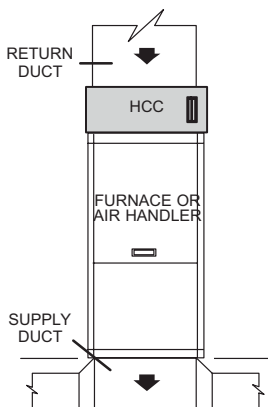
**UPFLOW FURNACE/AIR HANDLER  
(Bottom Return Air)**



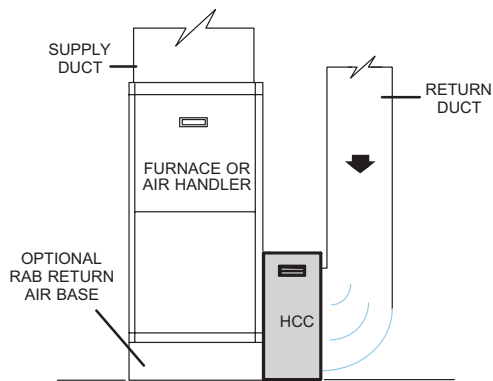
**UPFLOW FURNACE  
(Side Return Air - up to 4 ton)**



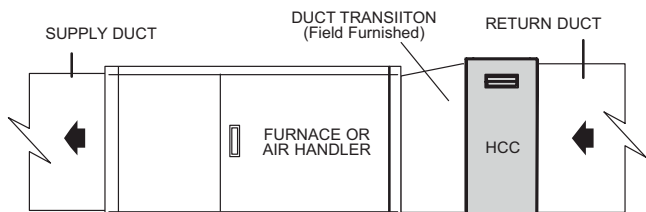
**DOWNFLOW FURNACE/AIR HANDLER**



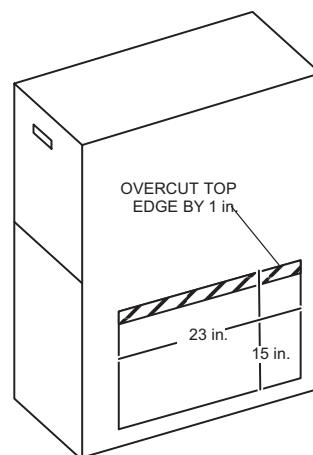
**UPFLOW FURNACE  
(Option 1 - Side Return Air - 5 ton)  
(With Optional Return Air Base)**



**HORIZONTAL FURNACE/AIR HANDLER**



**UPFLOW FURNACE  
(Option 2 - Side Return Air - 5 ton)  
(Modified Return Air Opening)**





## REVISIONS

Sections	Description of Change
Document	Updated to new publishing software. No changes to data.



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