HCC
HEALTHY CLIMATE®
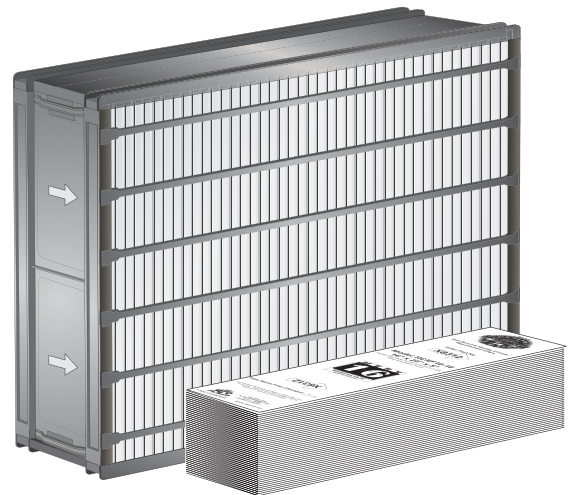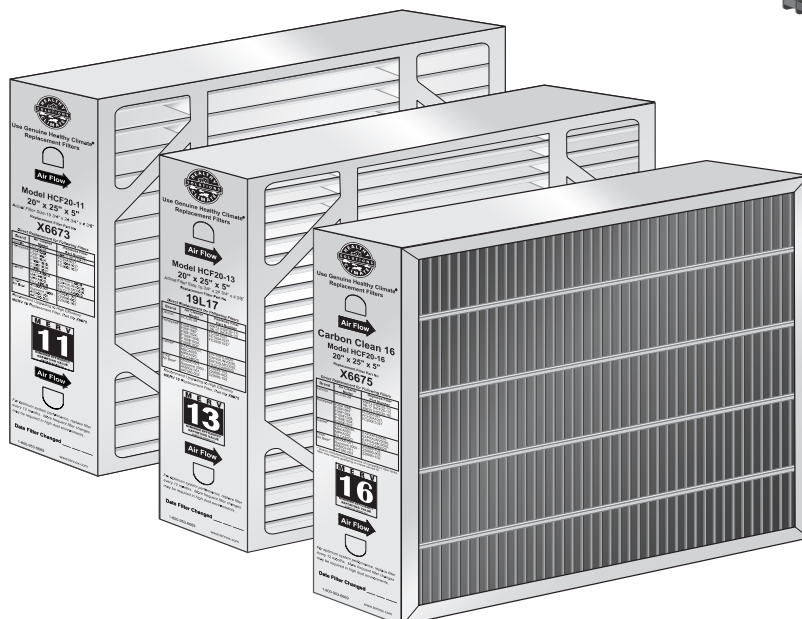## MERV 11, MERV 13, MERV 16 Media Air Cleaners

RESIDENTIAL
PRODUCT SPECIFICATIONS

HCC
Filter Cabinet
(With Filter
in Place)

HCXF MERV 11 Expandable Filter Kit
HCXF MERV 16 Expandable Filter Kit
(MERV 16 Shown)

HCF MERV 11 Filter
HCF MERV 13 Filter
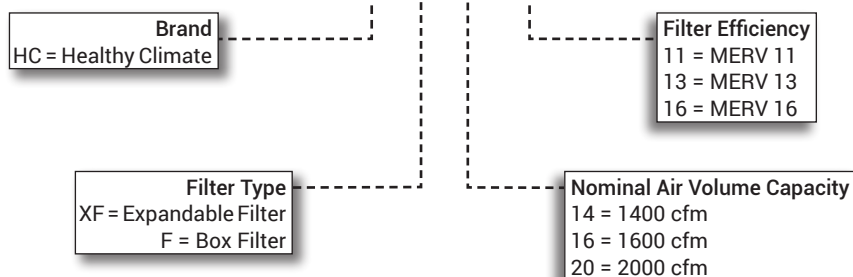HCF Carbon Clean 16® (MERV 16) Filter

MODEL NUMBER IDENTIFICATION

CABINET

HCC 16 - 28

Unit Type
HCC = Healthy Climate Cabinet

Nominal Air Volume Capacity
14 = 1400 cfm
16 = 1600 cfm
20 = 2000 cfm

Cabinet Depth
23 = 23 inches
28 = 28 inches

FILTER

HC XF 16 - 11

Brand
HC = Healthy Climate

Filter Type
XF = Expandable Filter
F = Box Filter

Filter Efficiency
11 = MERV 11
13 = MERV 13
16 = MERV 16

Nominal Air Volume Capacity
14 = 1400 cfm
16 = 1600 cfm
20 = 2000 cfm

CABINET AND FILTER COMBINATIONS

MERV Rating	Cabinet Model No.	Cabinet Depth (front to back)		Filter Model No.	Filter Type	Cfm
		in.	mm			
11	HCC14-23	23	584	HCF14-11	Box	1400
11	HCC16-28	28	711	HCF16-11	Box	1600
11	HCC20-28	28	711	HCF20-11	Box	2000
11	HCC14-23	23	584	HCXF14-11	Expandable	1400
11	HCC16-28	28	711	HCXF16-11	Expandable	1600
11	HCC20-28	28	711	HCXF20-11	Expandable	2000
13	HCC14-23	23	584	HCF14-13	Box	1400
13	HCC16-28	28	711	HCF16-13	Box	1600
13	HCC20-28	28	711	HCF20-13	Box	2000
16	HCC14-23	23	584	HCF14-16	Box	1400
16	HCC16-28	28	711	HCF16-16	Box	1600
16	HCC20-28	28	711	HCF20-16	Box	2000
16	HCC14-23	23	584	HCXF14-16	Expandable	1400
16	HCC16-28	28	711	HCXF16-16	Expandable	1600
16	HCC20-28	28	711	HCXF20-16	Expandable	2000

CONTENTS

APPROVALS AND WARRANTY

APPROVALS

- Filters - Minimum Efficiency Reporting Value based on ASHRAE 52.2
- All filters are certified to UL 900 standard for flammability only and Class 2 in accordance with ULC S111

WARRANTY

- HCC cabinet and HCXF reusable filter box
  - Limited five year limited warranty in residential applications
  - Limited one year in non-residential applications

NOTE - Filter media is not covered.

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

FEATURES

APPLICATIONS

NOTE - Cabinet and Filter must be ordered separately.

- 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 warm air furnaces and air handlers
- Cooling applications up to 5 tons
- Unit can be installed in upflow, downflow or horizontal unit applications
- Silent operation
- Requires no electrical component service
- 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 8

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 for filter access
- 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
- 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
- Shipped compact and requires minimum field assembly
- Cabinet panels snap together
- No tools required

FEATURES

FILTER MEDIA

Carbon Clean 16® (MERV 16) Box Filters
- 50% first-pass reduction of ozone
- Carbon coated fiber matrix reduces odors
- Hospital inpatient care/general surgery level filtration
- Removes 99% of airborne dust, dirt and pollen and filters more than 95% of airborne breathable particles
- Removes over 90% of ultra-fine particles down to 0.01 micron, including viruses and bacteria
- Double-wall beverage board frame for rigid construction
- Disposable
- Pleated

MERV 13 Box Filters
- Removes 90% of airborne dust, dirt and pollen and filters more than 85% of airborne breathable particles
- Double-wall beverage board frame for rigid construction
- Disposable
- Pleated

MERV 11 Box Filters
- Removes 85% of airborne dust, dirt, pollen and other contaminants
- Double-wall beverage board frame for rigid construction
- Disposable
- Pleated

Expandable Filter Kits (MERV 16 and MERV 11)
- Same features as MERV 16 and MERV 11 filters above
- All kits consist of an expandable filter media and reusable filter box frame
- Double-wall beverage board filter flaps on filter media and rigid reusable top, bottom and side frame pieces for rigid construction
- Filter kit is shipped compact for field assembly
- Top, bottom and side frame pieces snap together with filter media inside
- No tools required
- MERV 16 kits include reusable filter spacers

SPECIFICATIONS — MERV 11

General Data	Cabinet Model No.	HCC14-23	HCC16-28	HCC20-28
	Filter Model No. (Box Filter)	HCF14-11	HCF16-11	HCF20-11
	Filter Model No. (Expandable Filter Kit)	HCXF14-11	HCXF16-11	HCXF20-11
[1] MERV (Minimum Efficiency Reporting Value) rating		11	11	11
Air Flow	Air flow range - cfm	800 - 1400	800 - 1600	1400 - 2000
	Rated air flow - cfm	1400	1600	2000
Filter Data	Nominal Filter size - in.	20 x 20 x 5	16 x 25 x 5	20 x 25 x 5
	Actual Filter size - in.	20 x 19-3/4 x 4-3/8	15-3/4 x 24-3/4 x 4-3/8	19-3/4 x 24-3/4 x 4-3/8
Pressure drop @ rated flow - in. w.c.	Box filter - Initial	0.25	0.27	0.27
	- Final	0.40	0.40	0.40
	Expandable filter - Initial	0.27	0.30	0.27
	- Final	0.40	0.40	0.40
	[2] Filter estimated service life (months)	up to 12 months		
Shipping weight - lbs.	Cabinet	15	17	18

MAINTENANCE SUPPLIES - ORDER SEPARATELY

	HCC14-23	HCC16-28	HCC20-28
Replacement Box Filter	X0585	X6670	X6673
Replacement Expandable Filter (frame and media)	X8305	X8303	X8304
Replacement Expandable Filter (media only)	X8311	X8309	X8310

[1] Rated at 492 feet per minute
[2] Different 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.

General Data	Cabinet Model No.	HCC14-23	HCC16-28	HCC20-28
	Filter Model No. (Box Filter)	HCF14-13	HCF16-13	HCF20-13
[1] MERV (Minimum Efficiency Reporting Value) rating		13	13	13
Air Flow	Air flow range - cfm	800 - 1400	800 - 1600	1400 - 2000
	Rated air flow - cfm	1400	1600	2000
Filter Data	Nominal Filter size - in.	20 x 20 x 5	16 x 25 x 5	20 x 25 x 5
	Actual Filter size - in.	20 x 19-3/4 x 4-3/8	15-3/4 x 24-3/4 x 4-3/8	19-3/4 x 24-3/4 x 4-3/8
Pressure drop @ rated flow - in. w.c.	Box filter - Initial	0.21	0.26	0.26
	- Final	0.40	0.40	0.40
[2] Filter estimated service life (months)		up to 12 months		
Shipping weight - lbs.	Cabinet	15	17	18

MAINTENANCE SUPPLIES - ORDER SEPARATELY

| Replacement Box Filter	19L14	19L16	19L17

[1] Rated at 492 feet per minute

[2] Different 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.

General Data	Cabinet Model No.	HCC14-23	HCC16-28	HCC20-28
	Filter Model No. (Box Filter)	HCF14-16	HCF16-16	HCF20-16
	Filter Model No. (Expandable Filter Kit)	HCXF14-16	HCXF16-16	HCXF20-16
[1] MERV (Minimum Efficiency Reporting Value) rating		16	16	16
Air Flow	Air flow range - cfm	800 - 1400	800 - 1600	1400 - 2000
	Rated air flow - cfm	1400	1600	2000
Filter Data	Nominal Filter size - in.	20 x 20 x 5	16 x 25 x 5	20 x 25 x 5
	Actual Filter size - in.	20 x 19-3/4 x 4-3/8	15-3/4 x 24-3/4 x 4-3/8	19-3/4 x 24-3/4 x 4-3/8
Pressure drop @ rated flow - in. w.c.	Box filter - Initial	0.29	0.31	0.31
	- Final	0.40	0.40	0.40
	Expandable filter - Initial	0.29	0.31	0.31
	- Final	0.40	0.40	0.40
[2] Filter estimated service life (months)		up to 12 months		
Shipping weight - lbs.	Cabinet	15	17	18

MAINTENANCE SUPPLIES - ORDER SEPARATELY

Replacement Box Filter	X7935	X6672	X6675
Replacement Expandable Filter (frame and media)	X8308	X8306	X8307
Replacement Expandable Filter (media only)	X8314	X8312	X8313

[1] Rated at 492 feet per minute

[2] Different 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.
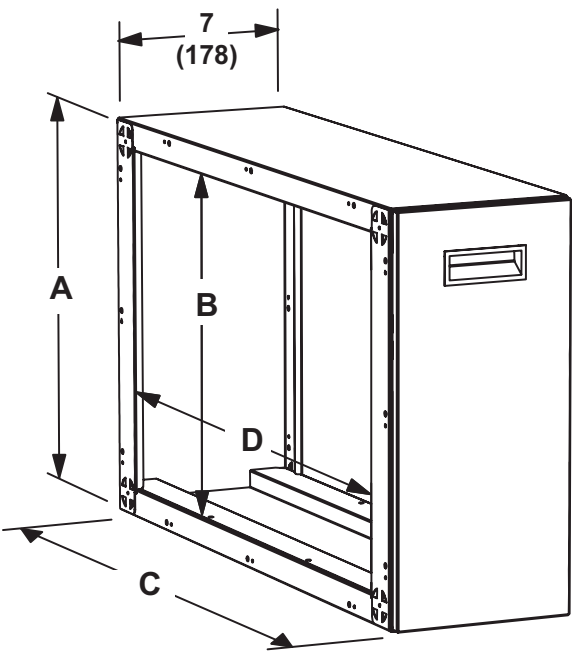
Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
HCC14-23	21-1/4	540	18-3/4	476	23	584	18-1/2	470
HCC16-28	17-1/4	438	14-3/4	375	28-1/2	7324	24	610
HCC20-28	21	533	18-1/2	470	28-1/2	724	24	610

FILTER AIR RESISTANCE HCF BOX FILTER

Air Flow (cfm)	Pressure drop (in. w.c.)								
	HCF14-11	[1] HCF14-13	HCF14-16	HCF16-11	[1] HCF16-13	HCF16-16	HCF20-11	HCF20-13	HCF20-16
800	0.11	0.10	0.14	0.09	0.10	0.12	0.06	0.07	0.09
1000	0.15	0.13	0.18	0.13	0.13	0.16	0.09	0.10	0.12
1200	0.20	0.17	0.24	0.17	0.17	0.21	0.12	0.13	0.15
1400	0.25	0.21	0.29	0.21	0.21	0.25	0.15	0.16	0.19
1600	Not recommended			0.27	0.26	0.31	0.18	0.19	0.23
1800	Not recommended						0.22	0.22	0.27
2000	Not recommended						0.27	0.26	0.31

[1] Calculated values based on HCF20-13 ASHRAE Standard 52.2-2017 performance.

FILTER AIR RESISTANCE HCXF EXPANDABLE FILTER

Air Flow (cfm)	Pressure drop (in. w.c.)					
	HCXF14-11	HCXF14-16	HCXF16-11	HCFX16-16	HCXF20-11	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	Filter Efficiency (percentage)		
		E1 (0.3 to 1.0 microns)	E2 (1.0 to 3.0 microns)	E3 (3.0 to 10.0 microns)
HCF14-11 / HCXF14-11 HCF16-11 / HCXF16-11 HCF20-11 / HCXF20-11	[1] 11	28%	65%	87%
HCF14-13 HCF16-13 HCF20-13	[2] 13	54%	86%	99%
HCF14-16 / HCXF14-16 HCF16-16 / HCXF16-16 HCF20-16 / HCXF20-16	[1] 16	95%	99%	100%

[1] Values are based on lab tests conducted with conditions included in ASHRAE Standard 52.2 2012.
[2] Values are based on lab tests conducted with conditions included in ASHRAE Standard 52.2 2017.
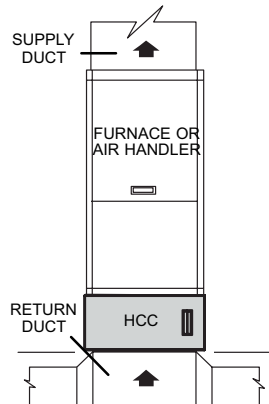
MATCH-UPS - FILTER CABINET WITH FURNACE / AIR HANDLER
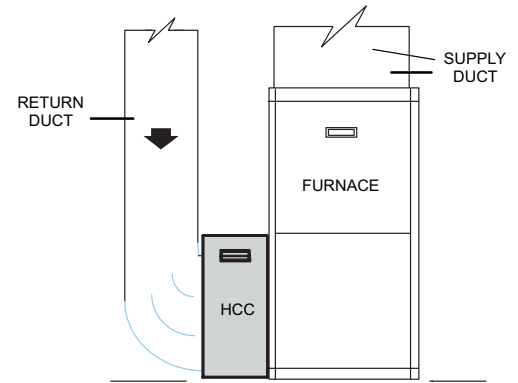
ALSO SEE ILLUSTRATIONS ON NEXT PAGE FOR ADDITIONAL DETAILS

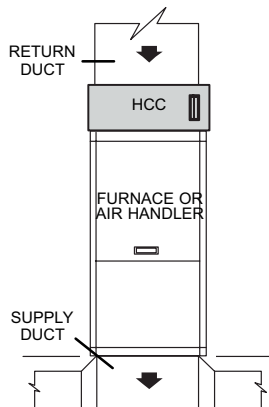| Furnaces	Filter Cabinet			Comment
	HCC14-23	HCC16-28	HCC20-28	
"A" Width Furnace with Side Return Air		•		No duct transition required.
"A" Width Furnace with Bottom Return Air		•		28-1/2 x 3 in. side seal strip or duct transition needed.
"B" Width Furnace with Side Return Air		•		No duct transition 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)			•	**Option 1** - No duct transition required, use Return Air Base (**98M58**). **Option 2** - Overcut top edge of side return opening by 1 in. to make opening 15 x 23 in. (H x W).
"C" Width Furnace with Bottom Return Air			•	No duct transition required.
"D" Width Furnace with Side Return Air			•	**Option 1** - No duct transition required, use Return Air Base (**98M59**). **Option 2** - Overcut top edge of side return opening by 1 in. to make opening 15 x 23 in. (H x W).
"D" Width Furnace with Bottom Return Air			•	28-1/2 x 3 1/2 in. side seal strip or duct transition needed.
Air Handlers	**HCC14-23**	**HCC16-28**	**HCC20-28**	**Comment**
Air Handler (W x D) - 15 x 22 in. CBX25UH(V)-018	•			Duct transition required.
Air Handler (W x D) - 18-1/2 x 22 in. CBA25UH(V)-018-024-030 CBX25UH(V)-024-030	•			22 x 2 in. side seal strip or duct transition needed.
Air Handler (W x D) - 21-1/2 x 22 in. CBA25UH(V)-036-042-048-060	•			No duct transition required.
Air Handler (W x D) - 21-7/8 x 22 in. CBX25UH(V)-036	•			No duct transition required.
Air Handler (W x D) - 21-7/8 x 26 in. CBX25UH(V)-042-048-060			•	No duct transition required.
Air Handler (W x D) - 21-1/4 x 20-5/8 in. CBA27UHE-018 CBA27UHE-024 CBA38MV-018/024	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 22-5/8 in. CBA27UHE-030 CBA27UHE-036 CBA38MV-030-036	•			No duct transition required.
Air Handler (W x D) - 21-1/4 x 24-5/8 in. CBA27UHE-042 CBA27UHE-048 CBA27UHE-060 CBA38MV-042-048-060			•	21 x 3 in. side seal strip or duct transition needed.

UPFLOW FURNACE/AIR HANDLER
(Bottom Return Air)

SUPPLY DUCT

FURNACE OR AIR HANDLER

RETURN DUCT

HCC

UPFLOW FURNACE
(Side Return Air − up to 4 ton)

RETURN DUCT

SUPPLY DUCT

FURNACE

HCC

DOWNFLOW FURNACE/AIR HANDLER

RETURN DUCT

HCC

FURNACE OR AIR HANDLER

SUPPLY DUCT

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

SUPPLY DUCT

RETURN DUCT

FURNACE

OPTIONAL RETURN AIR BASE

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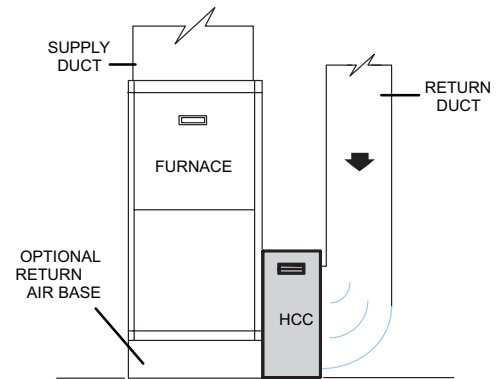
HORIZONTAL FURNACE/AIR HANDLER

SUPPLY DUCT

DUCT TRANSIITON (Field Furnished)

RETURN DUCT

FURNACE OR AIR HANDLER

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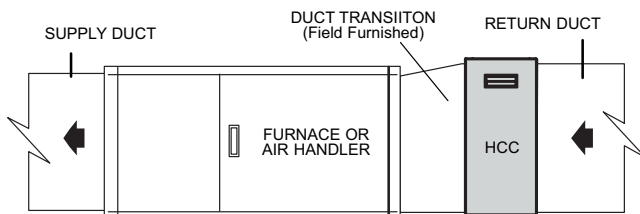
UPFLOW FURNACE
(Option 2 − Side Return Air − 5 ton)
(Modified Return Air Opening)
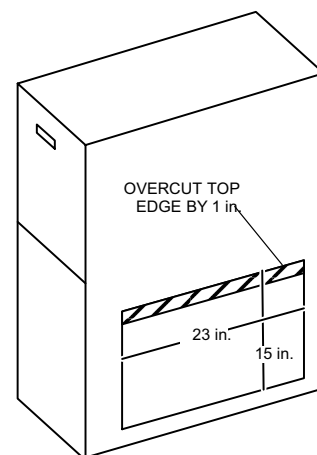
OVERCUT TOP EDGE BY 1 in.

23 in.

15 in.

Air Filter Unit
As to flammability only
838H R5277
Class 2 in accordance with ULC S111