

VALUE THROUGH PERFORMANCE

DELTA

KC SERIES

COLOR-CHANGE VAPOR
COMPRESSED AIR FILTERS



KC Series Color Change Vapor Filters— For A Higher Level Of Protection You Can See

KC Series Compressed Air Filters

Deltech's KC Series filter represents the state-of-the-art in hydrocarbon vapor filter technology. It combines maximum vapor protection with an exclusive color-change cartridge that continuously signals service-life and protects downstream equipment from harmful vapor breakthrough. Every KC Series filter offers these unique benefits:

Highest protection against oil vapors

- Color change signals cartridge replacement before vapor breakthrough
- Greater carbon bed depth increases contact time for highest vapor retention

Longest cartridge life

- Multi-stage filtration precleans air prior to adsorption stage
- Up to 25 times more carbon removes more vapor before cartridge changeout
- No guessing about cartridge life; replace only as needed

Simple to install, use and service

- In-line piping (except Model KC11) minimizes materials and labor
- Color-change signal is readily visible through transparent housing
- Cartridge replaces without breaking air line connections
- Large sump and high-capacity drain connection allow convenient discharge of separated contaminants (automatic drain valve is recommended for most reliable performance)

Removing vapors*

Organic vapors are commonly removed from compressed air by adsorption on granules of activated carbon. The carbon is usually contained in a replaceable cartridge. Adsorbed vapors are captured on the granule surfaces; when the adsorption capacity of the carbon is reached, the cartridge must be replaced.

* Some hydrocarbon vapors are not removed by activated carbon. For relative vapor-removing performance of activated carbon, consult Deltech.

Cartridge life

The effective life of the cartridge is determined by several variables: the concentration of contaminants in the inlet air; inlet air temperature, pressure and flow rate; and the adsorption capacity of the carbon.

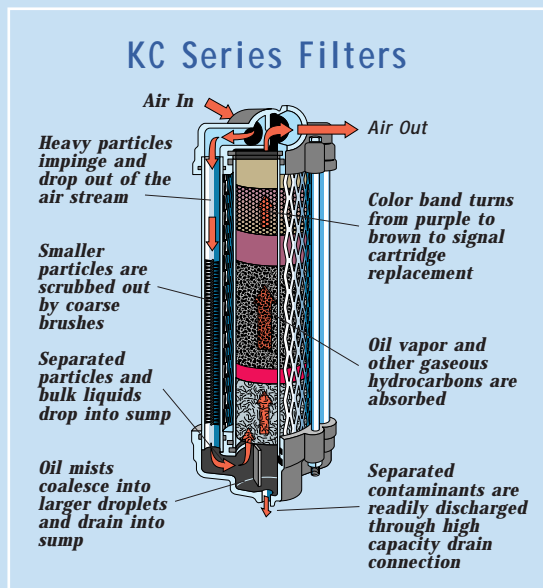
Until the development of the KC Series color change, there had been no reliable service-life indicator for vapor-removing cartridges. In the KC Series, a band of color-change medium built into the cartridge turns from purple to brown as hydrocarbon vapors are adsorbed. When the band is completely brown, it's time to change the cartridge.

For these applications

Deltech KC Series filters are especially effective in removing oil vapor and other gaseous hydrocarbons that cause objectionable tastes and odors in compressed breathing air. KC Series filters, however, must not be used to supply breathing air unless the air meets at least the requirements of the specification for Grade D air. For the removal of carbon monoxide and condensed hydrocarbons to meet Grade D specifications, a Del-Monox® purifier may be required; request Bulletins 212 and 299.

KC Series applications are also found in the food, pharmaceutical, electronics and other demanding industries where stringent air quality standards require the removal of not only solid, liquid and aerosol contaminants, but trace amounts of organic vapors as well. Re-rating is required for best results in these applications. See re-rating factors beneath the Model Selection Chart (right).

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How To Select Your KC Series And K Series Filter

Determine your required flow rate, measured in scfm, and the pressure of the air to be filtered. Select the appropriate filter from the Model Selection Chart below.

Example: For an air system operating at 110 psig, select a filter to remove oil vapor from 175 scfm compressed air for general industrial use.

On the Model Selection Chart, read across to 110 psig inlet air pressure. Read down this column to the flow equal to or greater than 175 scfm. Select Model KC15 or K15.

The operating range of each KC Series and K Series filter is broad enough to cover a wide range of flow rates and pressures without loss in performance. However, prolonged operation above the maximum recommended inlet air flow should be avoided.

Important: Do not select filter by pipe size. Make selection by flow rate and operating pressure only.

Note: Prefilter required for effective removal of liquids and to extend the usable element life.



Model Selection Chart

Model	Inlet Air Pressure (psig)													
	10	20	30	40	50	60	70	80	90	100	110	125	150	
	Maximum Inlet Air Flow (scfm)													
KC11, K11 & K11R	2-1/2	3-1/2	4-1/2	6	7	8	9	10	11	12	13	14	17	
KC12, K12 & K12R	6-1/2	9	12	14	17	20	22	25	27	30	33	37	43	
KC13, K13 & K13R	11	15	19	24	28	33	37	41	46	50	54	60	72	
KC14, K14 & K14R	22	30	39	48	56	65	74	83	91	100	109	122	144	
KC15, K15 & K15R	41	57	74	91	107	124	140	157	174	190	205	230	272	
KC16, K16 & K16R	60	85	109	134	158	182	207	231	256	280	304	341	402	

Special safety features

KC and K Series filters are fitted with transparent tubes and expanded-metal safety shields. The loose-fitting shields guard against damage from external blows or air system upsets.

K Series filters may be fitted with metal tubes in place of the transparent tube and safety shield. Metal tubes must be ordered if the filter is expected to be in contact with solvent-type paints, phosphate ester-based lubricants, aromatic or chlorinated hydrocarbon solvents, methanol, acetone or other ketones or lacquer solvents. These materials attack the transparent tube and cause it to dissolve or stress crack. Metal tubes are fitted with sight glasses for viewing the replaceable element. Filters with metal tubes are designated by the suffix "R" in the model number.

Application	Re-rating Factor
Instrumentation	0.75-1.0
Taste, Odor removal	0.25-0.75
Food, dairy, pharmaceutical	Not to exceed 0.25

Operating Conditions:

- Maximum inlet pressure: 150 psig (10.3 barg)
- Maximum inlet air temperature: 150°F (66°C)
- Maximum recommended filtration temperature: 120°F (49°C)

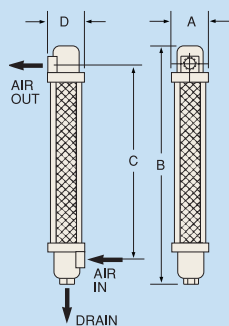
Materials & Construction

Components	Model			
	KC11 & K11	KC12, K12, KC13, K13, KC14, K14, KC16 & K16	KC15 & K15	K11R through K16R
Tube	Double-annealed cast methyl methacrylate	Extruded polycarbonate (Lexan)	Double-annealed cast methyl methacrylate or extruded polycarbonate (Lexan)	Electrogalvanized steel with sight glasses
Top and bottom heads	Head treated ASTM 356-T6 aircraft-quality aluminum alloy casting			
Downcomer tubes	Electrogalvanized steel			
Tie rods	Electrogalvanized steel			
Nuts	Electrogalvanized steel			
Wire mist separator	0.010-inch aluminum-wire mesh			

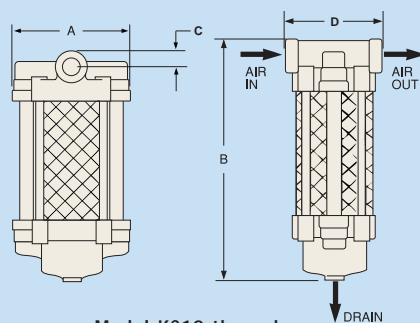
Specifications

Model	Capacity ¹ (scfm)	Dimensions (inches)				Connections (inches NPT)			Approx. Ship. Wt. (lbs.)	
		A	B	C	D	Inlet	Outlet	Drain	Transparent Tube	Metal Tube
KC11, K11 & K11R	12	2.5	16.0	13.3	2.5	1/2	1/2	1/4	4	8
KC12, K12 & K12R	30	6.0	15.8	0.8	4.0	1/2	1/2	1/4	8	14
KC13, K13 & K13R	50	6.0	16.3	1.0	5.0	1	1	1/4	10	17
KC14, K14 & K14R	100	8.5	18.5	1.0	6.0	1	1	1/2	23	3
KC15, K15 & K15R	190	10.0	19.3	1.3	7.8	1-1/2	1-1/2	1/2	29	48
KC16, K16 & K16R	280	12.0	21.5	1.0	9.3	1-1/2	1-1/2	1/2	47	78

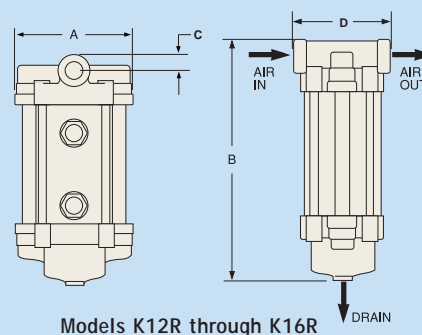
¹ To achieve air quality required by more stringent applications, adjust airflow as recommended on previous page.



Model KC11 and K11
K11R*



Model KC12 through
KC16 and Models K12
through K16



Models K12R through K16R



*Note: Model K11R is shown without sight ports for clarity.



DELTECH

A United Dominion Company

Flair Industrial Air

4647 S.W. 40th Avenue
Ocala, Florida 34474
Tel 352-873-5700
Fax 352-873-5744

www.udi-flair.com/deltech
deltech@udi-flair.com

U.S. Facilities

Ocala, Florida
New Castle, Delaware*
Stanley, North Carolina
Rich Creek, Virginia

Canadian Facilities

Brockville, Ontario
Blainville, Québec
Tel 800-893-5247
Fax 800-318-0952

European Facilities

Horndean, Hants, England
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