Jonell, INC

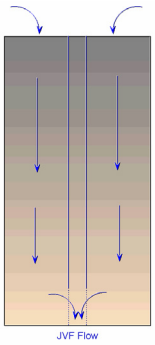
JVF Series Activated Carbon Canisters

Jonell Vertical Flow Activated Carbon Canisters increase fluid contact by eliminating the potential by-pass in using the relatively thin bed available in a radial flow configuration. Jonell JVF 1120 and 1122 canisters outlast the radial flow design by 45%.

Solid sidewalls indicate vertical flow construction

Dimensions

Model	OD	HT	ID
JVF 1120-C	10.75	20.25	2.06
JVF 1122-C	10.75	22.25	2.06
JVF 636	6	36	
JVF 636-610	6	36	



JRF Series Activated Carbon Canisters

Jonell Radial Flow Activated Carbon Canisters present a greater superficial area to the process fluid, lowering velocity to better deal with high solids contamination.

Dimensions

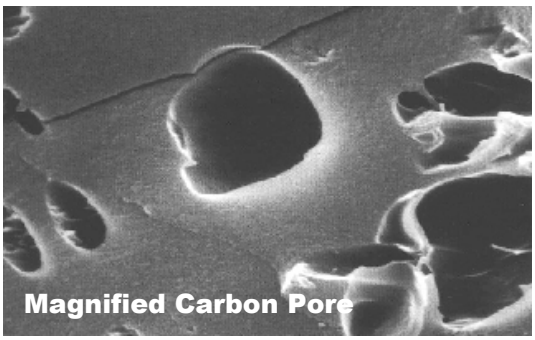
Model	OD	HT	ID
JRF 1120-C	10.75	20.25	2.06
JRF 1122-C	10.75	22.25	2.06
JRF 720	6.63	20	1.5
JRF 722	6.63	22.5	1.5

Perforated sidewalls indicate radial flow construction

Bulk Activated Carbon

Jonell Activated Carbon is specially selected to maximize performance in gas processing applications where the target contaminant is long chain hydrocarbon molecules. Used in all Jonell Carbon Canisters, it is also available in bulk form, in 100 lb bags, 200 lb drums, and 1100 lb super sacks


Granular Carbon


Magnified Carbon Pore

Jonell, INC

Jonell Coal Based Activated Carbon

Surface Area

Jonell coal based activated carbon has approximately 1150 sq meters per gram while lignite carbon, for example, has approximately 650 sq meters per gram. In a canister containing 1 cubic foot of carbon that means that the lignite based canister, with 24 pounds, would have about 7 million square meters. The Jonell coal based canister at 31 pounds delivers about 16.1 million square meters, more than double that of the lignite equivalent.

Pore Size

According to the manufacturer's published data, lignite carbon has an average pore size of 28—30 angstroms while coal based carbon has an average pore size of 23—25 angstroms. While most carbon is used in water treatment, the job of these carbon canisters is to remove long chain hydrocarbons with a mol weight in excess of 225. In this application Jonell's coal based carbon will retain 240 milligrams per gram of carbon compared to 120 milligrams per gram for the lignite based canister.

Capacity

By combining the weight factor in paragraph one with the capacity per gram in paragraph two, the coal based canister has a capacity advantage of 2.6:1

In an effort to reduce costs, many manufacturers have begun to use regenerated carbon in place of the virgin carbon that was previously the industry standard. The regeneration of activated carbon does not return it to it's original capacity. Losses depend on the original use and regeneration method. For these reasons, Jonell does not use regenerated carbon and does not recommend it's use.

Operating Parameters

Factors affecting carbon performance include temperature and contact time in addition to the type of carbon and the target contaminant. The maximum recommended operating temperature for carbon is 120^{O}F while exceeding 150^{O}F reduces capacity in hydrocarbon capture to levels that make the application practically ineffective. Similarly, high flows and the resulting reduced contact time reduce the ability of carbon to capture and retain contaminants and can cause abrasion within the bed. The carbon filter should be protected upstream and down by adequate particulate filtration to prevent fouling of the bed and to prevent any carbon fines from entering the system. In a properly configured system, the carbon filter should not develop any significant differential pressure over time.

Jonell Coal Based Carbon

8x30 Mesh
Surface Area : 1150 M2/gram
Weight per FT3= 31 LBS
Iodine No. : 900
Molasses RE : 60
Average Pore Size : 24 Angstroms

Lignite Based Carbon

8x30 Mesh
Surface Area : 650 M2/gram
Weight per FT3= 24 LBS
Iodine No. : 650
Molasses RE : 90
Average Pore Size : 29 Angstroms

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