

Sorbent Containment Systems

- Treatment vessels
- Carbon-holding baskets
- Activated carbon packs

Treatment Vessels are standard Rosedale strainer/filter housings, available in carbon steel, and 304 or 316 stainless steel. They are made in many sizes. Single-basket models are pressure rated from 75 to 500 psi, with pipe connections from 3/4-in.-NPT to 4-in.-flange. Multi-basket models can hold from 2 to 23 baskets and are pressure rated at 150 psi. Pipe sizes are from 2 to 12 inches (flanged).

Sorbent-Holding Baskets are made in two styles: the RS, for recirculating systems, passes liquid (horizontally) through a shallow bed (approximately 2-1/2 inches deep); the SP, for single-pass systems, has a deep (vertical) bed (approximately 29 inches deep).

Baskets are made entirely of 304 stainless steel, and are of high quality construction. They are easily recharged with sorbents such as activated carbon. Turning the large lifting handle opens a cover so that they can be emptied and refilled. The particles are retained by 100-mesh wire screening.

These baskets can also be filled with materials other than activated carbon. Other processing media might include deionizing resin beads, silica gels, alumina, green sand, and odorizing agents.

Activated Carbon Packs are pre-measured amounts of 20 x 50-mesh-size activated carbon, packaged to protect against moisture. A universal grade of carbon is used, offering good flow rates.



An SP-style basket being put into a Rosedale Model 8-30 vessel. An RS-style basket is in the foreground.

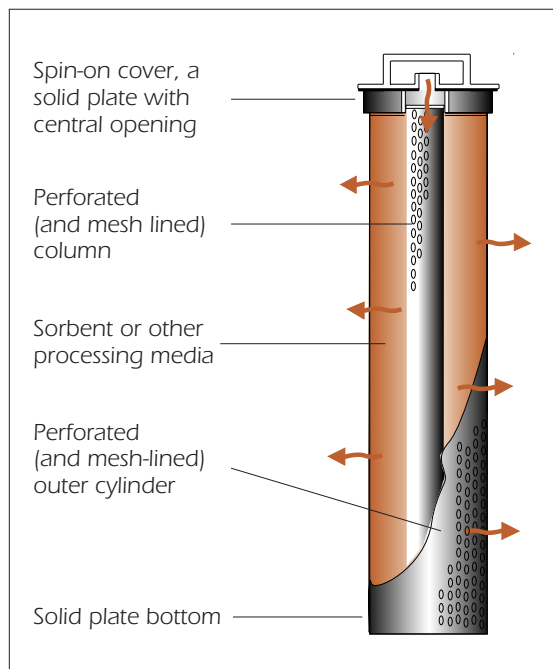
Designing An Optimum System

While carbon granules can act as a filtering media to remove solid particulate from a liquid, it is far more economical to pre-filter liquids entering a carbon adsorption vessel to avoid impeding the adsorption process. It is also recommended that a second filter be placed downstream of the carbon unit to catch any carbon particles that might be flushed out by the fluid stream. Rosedale bag filters are excellent in these roles.

A combination carbon adsorption and downstream filtering unit can be ordered. Available in the larger single-basket and all multi-basket vessels, it positions the carbon-holding basket inside a larger filter bag-holding basket. A variety of filter bag media is offered.

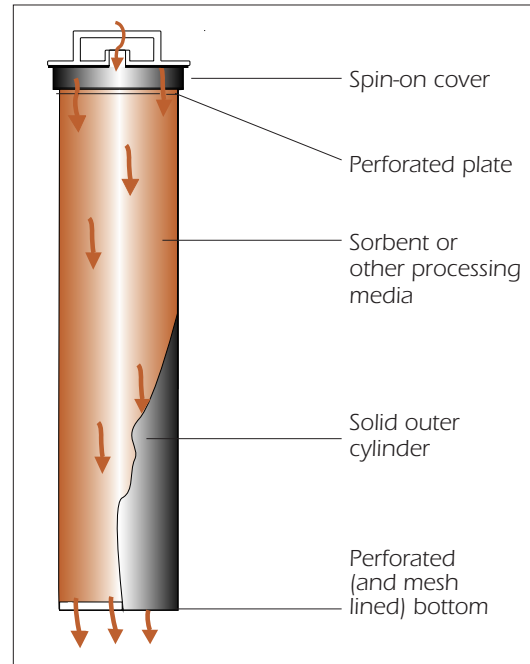
RS Style For Recirculating Systems

Flow enters from the top, into a perforated cylinder around, which is packed activated carbon. Flow moves radially through the carbon and exits through the side wall, which is perforated and lined with 100-mesh screen. (See diagram below.)



SP Style For Single-Pass (One-Time) Processing

Flow enters from the top through a perforated cover and into the activated carbon bed. Flow moves down through the carbon and exits through the bottom plate, which is perforated and lined with 100-mesh screen. (See diagram top right)



Activated carbon is a "black magic" material that removes molecules of organic pollutants from various liquids by physical adsorption. (It does not act by chemical bonding.) It is a surface attraction, and the fine porous carbon particles have an incredibly large surface area. (Used carbon can be reactivated by oxidizing the adsorbed contaminant.)

Uses of carbon adsorption include:

1. Purification of sugar syrups, liqueurs, glycerine, pharmaceuticals, etc.
2. Treatment of water to remove chlorine and odor, and improve color and taste.
3. Purification of process effluents, per EPA requirements.
4. Drying, degumming, and decolorization of fuel and lubricants, organic solvents, vegetable oil, and animal fats.



Treatment Vessels

Any of Rosedale's standard single or multi-bag housings can be used as the treatment vessel see pages 4 through 18 pages 25 through 38, pages 55 through 61 or pages 65 through 69.

Activated Carbon Packs

Order carbon packs by using the basket order number (as shown below) plus the suffix 'CP'.

Example: To order a replacement pack of carbon in an amount sufficient to fill an O-730-RS basket, order number O-730-RS-CP

Ordering Information

Carbon-Holding Baskets				Carbon-Holding Baskets			
Flow Rate (gpm)	Carbon Capacity (cu.in.)	To fit vessel (Model No.)	Basket Order No.	Flow Rate (gpm)	Carbon Capacity (cu.in.)	To fit vessel (Model No.)	Basket Order No.
RS-style (for recirculating systems)				SP-Style (for single pass systems)			
2.5	66	4-6	O-46-RSB-6671	1.25	70	4-6	O-46-SPB-6673
5.0	130	4-12	O-412-RSB-6675	2.5	140	4-12	O-412-SPB-6677
4.0	197	6-12	O-612-RSB-4359	4.0	235	6-12	O-612-SPB-4367
10.0	296	6-18	O-618-RSB-4361	5.0	353	6-18	O-618-SPB-4365
15.0	494	6-30	O-630-RSB-4363	7.5	589	6-30	O-630-SPB-5046
15.0	484	8-15	O-715-RSB-1538	5.0	494	8-15	O-715-SPB-1537
20.0	963	8-30	O-730-RSB-8119	10.0	1020	8-30	O-730-SPB-8432
To fit Model 8 vessels with backup filter bag baskets				To fit Model 8 vessels with backup filter bag baskets			
	249	8-15	I-715-RSB-1617		285	8-15	I-715-SPB-1615
	574	8-30	I-730-RSB-1625		658	8-30	I-730-SPB-7669
To fit multi-basket vessels				To fit multi-basket vessels			
15.0*	484	15-in.nom.	O-915-RS	5.0*	494	15-in.nom.	O-915-SP
20.0*	963	30-in.nom.	O-930-RSB-1534	10.0*	1020	30-in.nom.	O-930-SPB-1215
To fit multi-basket vessels with backup filter bag baskets				To fit multi-basket vessels with backup filter bag baskets			
	249	15-in.nom.	I-915-RS		285	15-in.nom.	I-915-SP
	574	30-in.nom.	I-930-RS		658	30-in.nom.	I-930-SP

*Flow rate is per basket: Multiply by number of baskets in vessel.