

Carbon V Housing and Carbon Trays

Activated Carbon of CTC>60%, Honeycomb or Carbon Trays

General Organic Vapours, Odours, Acid Gases, Sulphur Compounds

General Characteristics

Activated carbon is a tried and tested gas adsorbent with various applications. Organic compounds are retained on the surface of the carbon by the Van der Waals forces of weak intermolecular forces. Activated carbon is manufactured by the controlled burning of carbon-rich materials such as coal, wood and nut shell and then collected. Our carbon filters have a CTC activity of above 60% (CCl₄) measured by ASTM standard test method D3467-88. A CTC activity value of 60% can adsorb 60% of its weight in CCl₄.

Chemically impregnated carbons are available to better control both acid and bases gases such as H₂S, SO₂, NO_x, HCl, HF, Methyl Mercaptan, active sulphur composites, ammonia, formaldehyde and highly volatile radioactive organic iodides in Air and CO₂.

Construction

Carbon 2V,4V,10V Housing 1" thick Trays

2,4,10 Panels of 1 inch thick carbon bed trays in V-Bank configuration. Air contact time of 0.06s with activated carbon. Modular Housing sized up for higher airflows. Side access carbon panel trays. Minimum 40kg of carbon per 3400cmh of air flow @ 80 Pa. Option to come with a 2" prefilter layer.

10 panels of 1 inch thick Carbon Trays

4, 2 panels of 1 inch thick Honeycomb Carbon

Carbon 4V Housing 2" carbon Honeycomb

4 Panels of 2 inch carbon bed trays in V-Bank configuration to increase the air contact time to 0.12s with carbon. Unique modular design allows filter to be bolted or stacked together and can be sized up for higher airflows. Side access carbon panel trays. Minimum 20kg of carbon per 3400cmh of air flow @ 80 Pa

4 panels of 2 inch thick Carbon Trays

4 panels of 2 inch thick carbon Honeycomb

Enclosing Frame

Galvanised Steel, Powder-Coated

2 inch or 4 inch grease filter, pre-filter or fibreglass pre-filter available for oil mist, ink, paint or dust removal

Honeycomb Carbon (8mm, 1" , 2" thick)

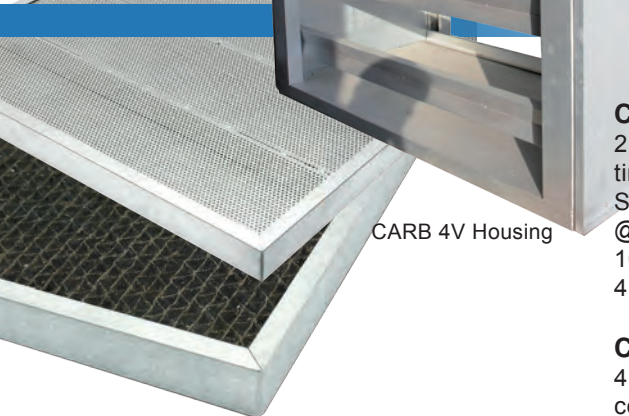
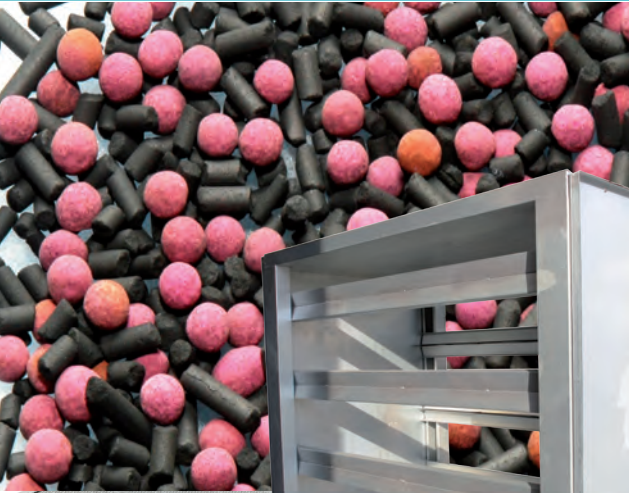
Used as panel trays in V configuration carbon housing. Plastic netting upstream and downstream enclosed with corrugated honeycomb kraft board design to reduce carbon dusting and increase airflow with equivalent carbon bed thickness.

Carbon Tray (10mm to 4" thick)

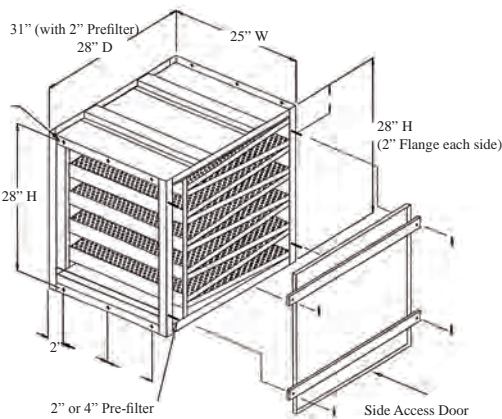
Used as panel trays in V-configuration carbon housing. Pre-filters are recommended to be installed upstream and downstream to prevent carbon dusting. GI perforated sheet both sides. Optional refill channels.

Applications

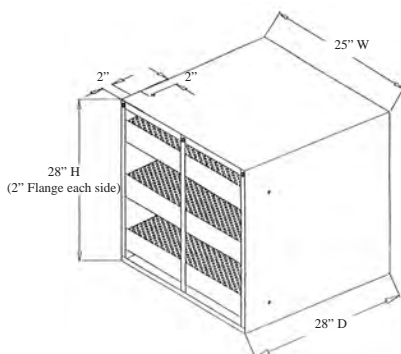
Air Handling Units of commercial malls, hospitals, laboratories, museums, libraries, airports, industrial, semiconductors clean rooms in gases, odours adsorption or chemical adsorption control. Exhaust Air Fans in fume hoods, kitchen exhaust, laboratories, industrial and paint exhaust.



CARB 4V Housing



RSE2000S Carbon 10V Housing



Carbon 4V Housing

Carbon V Housing and Carbon Trays

Activated Carbon of CTC>60%, Honeycomb or Carbon Trays

General Organic Vapours, Odours, Acid Bases Gases, Sulphur Compounds

Specifications

| Model | RSE2000 | CARB5V | CARB4V | CARB2V | CARB TRAY | | | CARB HON | | |
|---|--------------------|-------------------|-------------------|-------------------|------------------------|------|------|------------------|------|-----|
| Description | Carbon 10V Housing | Carbon 5V Housing | Carbon 4V Housing | Carbon 2V Housing | Carbon Tray | | | Carbon Honeycomb | | |
| Nominal Thickness, Actual in mm | 28" | 28" | 28" | 26" | 1" | 2" | 4" | 8mm | 1" | 2" |
| Rated Airflow cmh | 3400 | 3400 | 3400 | 3400 | 500 | 550 | 250 | 1700 | 1700 | 850 |
| Initial Pressure Drop Pa Honeycomb / Tray | 40 / 80 | 70 / 150 | 80 / - | 80 / - | 80 | 140 | 140 | 40 | 80 | 80 |
| Recommended Final Pressure Drop Pa | 80/120 | 100/200 | 120 | 120 | 120 | 200 | | 80/120 | | |
| Removal Efficiency up to % | 98.0 | 99.0 | 99.0 | 95.0 | to be sized to housing | | | | | |
| Carbon Bed Depth inches | 1" | 2" | 2" | 1" | 1" | 2" | 4" | 0.25" | 1" | 2" |
| Carbon Weight kg CA1 | 25.0 / 40.9 | 27.0 / 40.0 | 21.6 | 5.0 | 4.0 | 8.0 | 15.0 | 0.25 | 2.5 | 5.4 |
| Carbon Weight kg CA2/4 | 31.0 / 61.0 | 33.4 / 61.0 | 26.8 | 6.2 | 6.1 | 12.2 | 20.2 | 0.40 | 3.1 | 6.7 |

CTC Activity Rate of above 60% (CCI4). For guide, 0.6kg of CCl4 gas requires 1kg carbon to remove. Other gases varies from very low, low, medium to high adsorption.

* Pressure Drop based on Carbon Honeycomb Filters selection.

** Pressure Drop based on Carbon Tray

Higher Airflow Volume are to be sized accordingly to number of trays required in carbon 10V, 5V, 4V or 2V configuration

The lower the velocity, the better the removal adsorption rate.

| Carbon Type | Application |
|---|--|
| CA1 Activated Carbon >60%CTC | For general odours and organic fumes |
| CA2 Impregnated Activated Carbon >60%CTC | For acid fumes and organic solvents, HCl, Chlorine Dioxide, SO ₂ , H ₂ S |
| CA2B Impregnated Activated Carbon > 60% CTC | For bases fumes, ammonia gases |
| CA4 Impregnated Activated Carbon > 60% CTC | For general hydrocarbons, acid gases, sulphur compounds, Mercaptans, SO ₂ , NO ₂ |

Technical Data

| | |
|---|--------|
| Filter Media Activated Cylindrical Carbon | |
| Enclosing Frame Galvanised Steel (GI) Option Powder Coated or Stainless Steel 304 | |
| Housing Side Access Housing Optional: Both Sides Access Door | |
| Downstream Faceguard Perforated sheet for Carbon Tray Expanded GI mesh for Honeycomb | |
| Sealant Water based Glue | |
| Continuous Operating Temperature | 50°C |
| Relative Humidity | 70% |
| Recommended Final Pressure Drop | 250 Pa |
| Maximum Final Pressure Drop | 375 Pa |

Dimensions

| Description | Model | Nominal Size W x H x D inches | Actual Size W x H x D mm | No of filters per 24x24 face area |
|--|-----------|-------------------------------------|--------------------------------|--|
| RSE2000 Carbon 10V Housing 10 trays of 1" Trays | RSE2000 | 25 x 28 x 28 | 635 x 710 x 710 | 10 |
| Carbon 5V Housing 5 trays of 2" or 1" Honeycomb | CARB5V | 25 x 28 x 28 | 635 x 710 x 710 | 5 |
| Carbon 4V Housing 4 trays of 2" or 1" Honeycomb | CARB4V | 25 x 28 x 28 | 635 x 710 x 710 | 4 |
| Carbon 2V Housing 2 trays of 1" Honeycomb | CARB2V | 25 x 28 x 26 | 635 x 710 x 650 | 2 |
| Carbon Tray 1" | CARB TRAY | 24 x 24 x 1 | 595 x 595 x 22 | 10 |
| Carbon Tray 2" | CARB TRAY | 24 x 24 x 2 | 595 x 595 x 45 | 5 |
| Carbon Tray 4" | CARB TRAY | 24 x 24 x 4 | 595 x 595 x 95 | - |
| Honeycomb Tray 0.5" | CARB HON | 505 x 315 x 0.5 | 505 x 315 x 8 | 1 |
| Honeycomb Tray 1" | CARB HON | 24 x 24 x 1 | 595 x 595 x 22 | 2,4,5 |
| Honeycomb Tray 2" | CARB HON | 24 x 24 x 2 | 595 x 595 x 45 | 4,5 |

Odd sizes can be custom fabricated accordingly. Width and height dimensions are interchangeable.

Carbon Trays and Honeycomb Trays are for Carbon V housing installations.

Optional : 2" pre-filter section layer upstream & downstream to prevent carbon dusting

Applications

- Cooker Hoods and Kitchen Exhaust
- Airports
- Public and Office Buildings
- Air Conditioning/Heating Systems
- Smoking Rooms
- Industrial and Chemical Processing
- Pulp and Paper Mills
- Oil Refineries
- Poultry Farms
- Fertiliser Manufacture
- Sewage Treatment
- Plastics Industry
- Semiconductor and Clean rooms
- Hospitals and Laboratories
- Funeral Parlours
- Fume Hoods
- Libraries
- Art Galleries and Museums