

## Custom Air Recirculation Units For Whole Building Air Capture Filtering and Ventilating

Weld Smoke • Oil Mist Removal • Industrial, Agricultural Fine Powder  
Plasma or Laser Metal Cutting • Dust Collection  
Metal Grinding • Pharmaceutical Storage



### CAR-SERIES

Helps buildings meet ASHRAE 62.1 Ventilation for Acceptable Indoor Air Quality by providing better air quality and comfort using filtration without the high cost of ventilation exhaust.

- **Air Quality and Comfort** - Indoor air is filtered and recirculated while introducing fresh outdoor air into the space for pressurization.
- **Improved Processes** – Contaminants within the space are filtered for a cleaner, more productive work environment.
- **Energy Saving** - Clean, recirculated air is delivered into the space helping eliminate the need for costly exhaust.
- **Complete Air Management Solution** - Integrate filtering, building pressurization, fresh outdoor air and heating and/or cooling into one, custom engineered package.
- **Cost Saving** - Reduces installation time, ductwork materials and labor costs and can eliminate the need for a separate HVAC system.
- **Environmentally Friendly** – Building exhaust air configured units filter air before releasing it into the environment to help reduce pollution.
- **Versatile** – Used for whole building or ducted air capture while simultaneously providing heating and/or cooling to satisfy customer needs.

**According to a  
mechanical contractor,**

“One of the best ways to capture smoke and dust in a large, flexible manufacturing facility.”

**1.800.589.3691**  
**www.weather-rite.com**

# WEATHER-RITE™ Building Air Capture Systems

## How does it work?

WEATHER-RITE™ Building Air Capture Systems are designed to help provide improved air quality without the high cost of ventilation by combining our make-up air systems with high efficiency filtration.

Excess dust, smoke or oil laden air (within facility) is recirculated through cartridge filters (99.9% plus efficiency) on particles down to .05 micron. WEATHER-RITE™ CAR-Series systems with integrated heating and/or cooling can help maintain facility temperatures, while supplying fresh, clean air and maintaining a slightly positive building pressure.

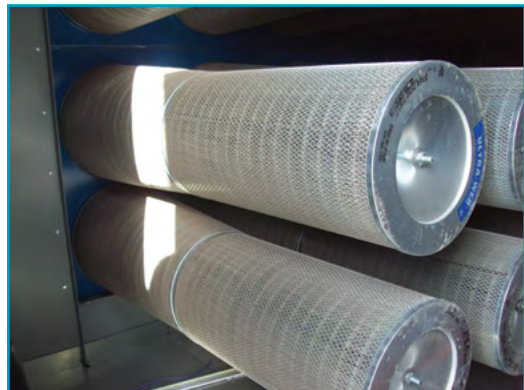
Filtering dust, smoke or oil can promote a cleaner, healthier work environment, reduced operating cost and improved productivity.



**Economizer and Outside Air Inlet**



**Self-Cleaning Cartridge Filter Array**



**After One Year**



**After Five Years**

## Ultra High Efficiency Cartridge Filtration

Proper removal of dust and smoke from a facility utilizes high efficient filtration methods in combination with dust collection and make-up air technologies. Recirculated air through high efficient cartridge filters removes particles down to .05 micron.

## Oil Mist Filtration

Due to the hazardous nature of oil mist within a facility, filtration is essential. Filtration can improve manufacturing processes and promote a safe, clean work environment helping increase worker comfort and productivity.

## Filtration for Exhaust

Exhaust extracted from a building to atmosphere must comply with EPA (Environmental Protection Agency) regulations and local ordinances. Air handlers configured with building exhaust filtration option, filter exhaust air to minimize contaminants, promoting a cleaner environment and helping reduce pollution.



**Customized Unit for Heating, Cooling and Make-Up Air**

# WEATHER-RITE™ CAR-Series Benefits

## Cleaner Air

Fresh outdoor air helps provide building pressurization while return air is filtered before recirculating back into the space.

## Reduced Filter Maintenance

Self-cleaning cartridge filters (based on application) can have up to five year life expectancy or more compared to replacement of costly and time consuming traditional make-up air filters.

## Energy Efficient

Recirculates facility air without exhaust, and helps provide free cooling with economizer capability.

## Environmentally Friendly

Exhaust air is filtered helping to comply with EPA (Environmental Protection Agency) regulations, reduce pollution and potential complaints from neighboring facilities and nearby residents.

## Reduced Infiltration

Maintaining a slightly positive pressurized facility helps prevent infiltration of untreated air and unwanted dust particles, increasing productivity and employee comfort.

## Lower Total Installed Equipment Cost

Air handler customization can combine make-up air systems and varying levels of filtration to provide economical total building capture, helping eliminate the need for multiple HVAC systems, reducing equipment cost compared to source capture systems.



Heating and Cooling Application for Dust Collection



Heating-Only Application for Weld Smoke Removal

## Cartridge Filter Array Sizes

(Contact factory for custom sizes)

Model	Cartridge Quantity	Columns	Rows	Maximum Filtration CFM*	Total CFM** with 20% Outside Air
TF-RC-12	12	3	2	8,000	10,000
TF-RC-16	16	4	2	10,500	13,125
TF-RC-20	20	5	2	13,000	16,250
TF-RC-24	24	4	3	16,000	20,000
TF-RC-36***	36	6	3	24,000	30,000
TF-RC-48***	48	6	4	32,000	40,000 †

Available in vertical or horizontal configurations. Contact factory for oil mist filtration.

\* Filtration (Recirculation) CFM based on 2.5 FPM filtration velocity (2.5:1 air to media ratio with 263 ft<sup>2</sup> cartridge). Unit capacity will be different based on other air to media ratios. Contact factory for oil mist filtration.

\*\* Assumes 20% outside air. If no outside air, total CFM equals filtration CFM. Higher levels of outside air are available for a given model size.

\*\*\* Horizontal configuration only.

† Larger sizes available on request.

# WEATHER-RITE™ CAR-Series Features

## Long Lasting Construction Provided by:

- Sturdy, integral frame welded together for durability and longer service life
- Heavy-duty, painted frame with corrosion resistant, galvanized steel or painted casing
- Heavy-duty, factory-installed motor and drive package
- Heavy-duty, pre-lubricated bearings
- Double wall construction using 2" insulation
- Pitched roof

## Optional Features

### Filters:

- Oil Mist Removal
- Pleated-panel Polyester
- Flat-panel Polyester
- Cartridge
- Bag
- High Efficiency
- Charcoal

### Cooling / Dehumidification:

- Chilled Water
- Direct Expansion (DX)
- Economized Air (Free Cooling)

### Heating:

- Direct-Fired
- Indirect-Fired
- Steam
- Hot Water
- Electric

### Humidification:

- Steam
- Water Mist

### Discharge Orientation:

- Downblast
- Horizontal
- Upblast
- Side

### Fans:

- Forward Curved
- Backward Curved
- Airfoil
- Plenum

### Other:

- Vestibule
- Low Leak Dampers
- Energy Recovery

## Control Options:

- Remote station with discharge or space temperature control
- Night setback thermostat with time clock operation
- Flame failure and clogged filter indicators
- Unit-mounted on/off toggle switch
- UL label on control panel
- Flexible custom controls options including DDC, and PLC controls



Flexible Designs to Meet Customers' Needs

### Installation Code and Annual Inspections:

All installation and service of WEATHER-RITE™ equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Weather-Rite LLC and conform to all requirements set forth in the WEATHER-RITE™ manuals and all applicable governmental authorities pertaining to the installation, service, operation and labeling of the equipment. To help facilitate optimum performance and safety, Weather-Rite LLC recommends that a qualified contractor conduct, at a minimum, annual inspections of your WEATHER-RITE™ equipment and perform service where necessary, using only replacement parts sold and supplied by Weather-Rite LLC.

**Further Information:** Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through WEATHER-RITE™ representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

**This product is not for residential use.**

**This document is intended to assist licensed professionals in the exercise of their professional judgment.**

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