BROCHURE

CONTROL

VENTILATION

Optimize Airflow
Enhance Safety
Reduce Energy Costs

CRC™

Measure What Matters.

CONTROL
VENTILATION

Innovative Control Ventilation for Maximum Performance.

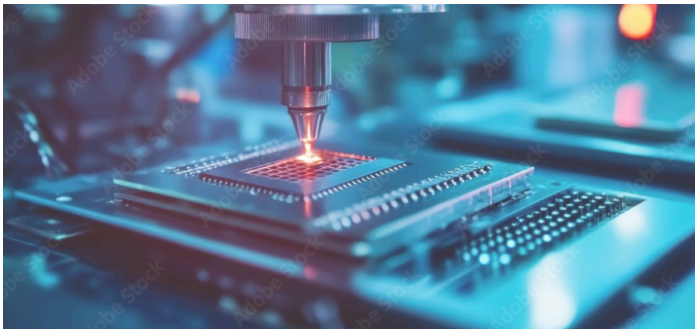
Trusted solutions for healthcare, labs, and critical environments.

HEALTHCARE & MEDICAL FACILITIES

- **Operating Rooms (ORs)**
  Precise airflow control for infection prevention.
- **Isolation Rooms (AII / PE)**
  Containment of airborne contaminants.
- **Compounding Pharmacies (USP795/797/800)**
  Compliance with standards for sterile drug compounding.
- **Sterile Processing Departments (SPDs):**
  Controlled ventilation for medical instrument sterilization.

LABORATORIES & RESEARCH FACILITIES

- **Biosafety Labs (BSL-1 to BSL-4)**
  Critical containment of hazardous pathogens.
- **Vivarium & Animal Research Facilities**
  Control for animal welfare and experiment integrity.
- **University & Industrial R&D Labs**
  Safe handling of chemicals and volatile compounds.
- **Fume Hoods & Exhaust Systems**
  Accurate airflow measurement for user safety.



CLEANROOMS & HIGH-TECH MANUFACTURING

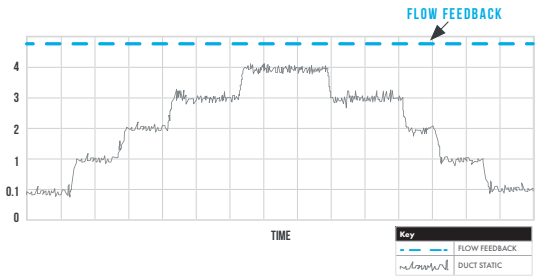
- **Semiconductor Fabrication**
  Particle control for microchip production.
- **Biotechnology & Pharmaceutical Production**
  Airflow regulation for GMP manufacturing.
- **Food & Beverage Processing**
  Hygiene control for contamination prevention.
- **Optical & Precision Manufacturing**
  Dust-free environments for lens and aerospace components.
- **Data Centers**
  Temperature and humidity management for optimal performance.

GOVERNMENT & INSTITUTIONAL BUILDINGS

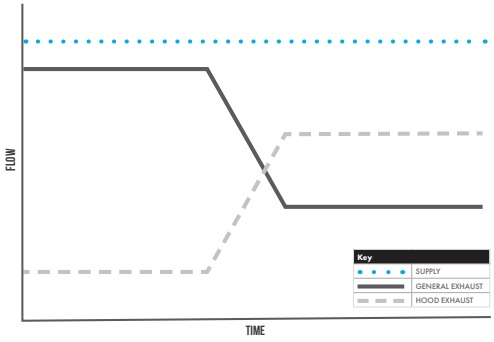
- **University Laboratories**
  Safe research environments for students and faculty.
- **Military & Defense Facilities**
  Secure environmental control for critical operations.
- **Museums & Archives**
  Humidity and airflow regulation to protect artifacts.
- **Correctional Healthcare Facilities**
  Containment of airborne diseases in medical units.
- **WWTP Facilities**
  Safe environments for process testing and regulatory compliance.

Take Control Of Your Environment.

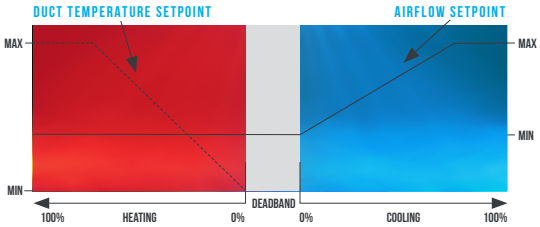
CRC has the solution for you.



Pressure-independent air valves ensure precise and repeatable airflow measurement, maintaining accuracy despite fluctuations in duct static pressure. As inlet static pressure varies from 0.1" to 4.0" WC, the air valve sustains consistent flow feedback. The system remains stable even with duct static variations exceeding 30%.



Room ventilation tracking integrates fume hood operation, ensuring precise airflow control. The fume hood and general exhaust adjust to flow demand within <1 second based on sash position. The offset is maintained by supply air valve airflow.



Integrated airflow and reheat control ensure precise environmental stability and occupant safety under all operating conditions, maintaining minimum air changes per hour (ACH) while dynamically adjusting to thermal load and ventilation requirements.

HORIZON

The Horizon Air Valve is a standalone, high-precision airflow control device designed for seamless integration with third-party control systems. Utilizing CRC's patented CLV air valve technology, it delivers maintenance-free, highly accurate airflow management by leveraging the Venturi effect for consistent and repeatable performance.

The valve provides a linearized analog output signal proportional to airflow volume (CFM) and accepts an analog input signal for precise modulation. Engineered for optimal efficiency, it features minimal pressure drop and an industry-leading turndown ratio, ensuring superior responsiveness and energy savings in critical airflow applications.

SERIES 200

The Series 200 is an independent air control valve designed for precise, maintenance-free airflow management and seamless integration with third-party control systems. Utilizing CRC's patented CLV air valve technology, it delivers industry-leading performance with exceptionally low pressure drop and a wide operating range of 0–7,800 CFM, maintaining ±5% airflow accuracy across its entire range. Equipped with full network connectivity, the Series 200 ensures reliable and efficient airflow control with streamlined system compatibility

FUME HOOD CONTROL

The Fume Hood Control Solution, equipped with the advanced Fume hood Valve (FHV) and Fume Hood Controller (FHC) delivers comprehensive airflow monitoring and alarm functionality, supporting multiple sensing methodologies, including sash position sensing, sidewall velocity sensing, and constant volume control. It incorporates advanced control algorithms designed to enhance energy efficiency and maintain safety through precise and responsive airflow regulation. Featuring Immediate Valve Control™ (IVC) and Predictive Sash Valve Control™ (PSVC) technologies, the system achieves industry-leading response times, providing exceptional performance and reliability for critical containment environments.

INTEGRATED ROOM CONTROL SOLUTION

The Integrated Room (IR) System is a scalable, non-proprietary solution for precise environmental monitoring, control, and space management. Engineered for safety and operational efficiency, it provides accurate ventilation control, pressure regulation, and environmental monitoring through an intuitive, expandable touchscreen interface. The system delivers real-time room parameters, status updates, and alarms for streamlined operation.

When integrated with CRC's patented low-pressure-drop, energy-efficient air valves and advanced control accessories, the IR System ensures consistent, repeatable performance with long-term energy savings and minimal maintenance. Designed for critical environments of varying size and complexity, it guarantees reliable and secure operation.

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Levels of Integration with CRC Control Ventilation Solutions

Ensuring a safe and secure environment

FEATURES

Product	HORIZON	SERIES 200	Fume Hood Control	Integrated Room Control Solution
Room Level Control				●
Reheat Control				●
BACnet®		●	●	●
BAS Integration	Hardware Only	●	●	●
PI Control		●	●	●
Configuration	Integral Display	Configuration Tool	Integral Display	Integral Display
CLV Air Valve Technology	●	●	●	●
No Scheduled Maintenance	●	●	●	●
No Sensor Recalibration	●	●	●	●
Patented Indirect Airflow Sensing	●	●	●	●
High Turn Down	●	●	●	●
Respond Speed <1 Second	●	●	●	●
Fail-Safe & Fail-In-Place Modes	●	●	●	●
Control To Close	●	●	●	●
High-Capacity Airflow Range	Supports airflow rates from 0 to 7,800 CFM			
Low Pressure Drop	Low pressure drop design supports static pressures as low as 0.25 inWC			

OPTIONS & ACCESSORIES

- **Actuator Options:** Multiple actuator configurations to meet specific needs.
- **Stainless Steel Construction:** Additional durability for corrosive environments.
- **Protective Coating Options:** Enhanced resistance to challenging conditions.
- **Connection Configurations:**
  - Slip-in connections
  - Flanged connections
- **Draw Band Clamps:** For secure and adjustable installation.
- **Insulation:** For cooling applications.
- **Hot Water Coils:** Integrated heating options for added functionality.
- **Coil Transitions:** Seamless integration

Control Ventilation

Air valves with CLV technology

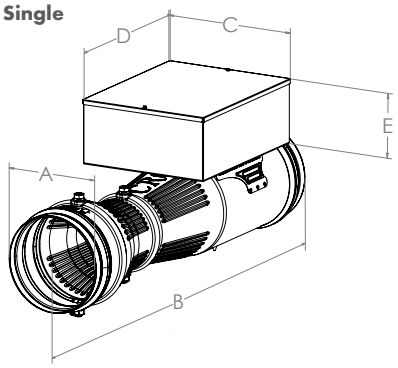
PERFORMANCE DATA

					Optimal Performance Design Range										
Valve Size	Eng. Units	±20%	≤15%	≤7%	≤5%	≤3%	≤2%	≤1%	≤1%	≤1%	≤1%	≤1%	≤1%	Max CFM	Valve Size
106	CFM	0-30	30	40	60	100	120	220	300	380	440	480	540	600	106
108	CFM	0-60	60	80	100	160	200	360	540	680	800	900	980	1050	108
110	CFM	0-80	80	140	170	300	400	640	900	1140	1320	1440	1600	1700	110
112	CFM	0-160	160	200	240	380	560	920	1420	1720	2000	2280	2500	2900	112
114	CFM	0-180	180	240	310	540	800	1200	1720	2100	2420	2700	2960	3100	114
116	CFM	0-210	210	315	420	700	1000	1580	2210	2730	3125	3520	3850	4200	114
212	CFM	0-230	230	350	460	660	1100	1760	2520	3040	3520	3800	4100	4600	212
214	CFM	0-360	360	480	600	1080	1600	2400	3240	4200	4840	5200	5400	6000	214
216	CFM	0-420	420	630	780	1400	2000	3160	4420	5460	6250	6800	7200	7800	216
ΔPS	inWC	≤0.005	≤0.005	≤0.005	≤0.005	0.01	0.02	0.05	0.10	0.15	0.20	0.25	0.30	inWC	ΔPS

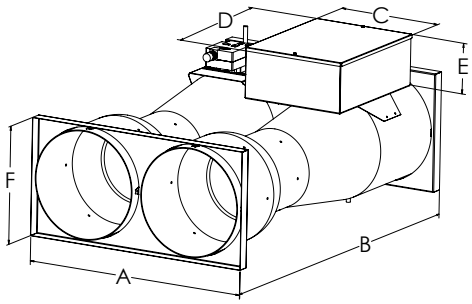
⚠ To achieve optimal energy-efficient performance, choose a valve size that maintains a maximum pressure drop of 0.25" at the design airflow rate.

DIMENSIONAL DATA

Single



Dual



SINGLE

Valve Size	A	B	C	D	E
	in [mm]	in [mm]	in [mm]	in [mm]	in [mm]
106	5.9 [149]	28.5 [724]*	13.6 [345]	17.1 [435]	6.5 [165]
108	7.9 [200]	34.8 [884]*	13.6 [345]	17.1 [435]	6.5 [165]
110	9.9 [251]	39.3 [998]*	13.6 [345]	17.1 [435]	6.5 [165]
112	11.9 [302]	40.5 [1029]*	13.6 [345]	17.1 [435]	6.5 [165]
114	13.9 [352]	48.0 [1220]	13.6 [345]	17.1 [435]	6.5 [165]
116	15.9 [381]	48.0 [1220]	13.6 [345]	17.1 [435]	6.5 [165]

*Length measurement is taken from gasket to gasket to account for the slip-fit connection.

DUAL

Valve Size	A	B	C	D	E	E
	in [mm]	in [mm]	in [mm]	in [mm]	in [mm]	in [mm]
212	26.0 [660]	48.0 [1220]	13.6 [345]	17.1 [435]	6.5 [165]	13.0 [165]
214	30.0 [762]	48.0 [1220]	13.6 [345]	17.1 [435]	6.5 [165]	15.0 [165]
216	34.0 [864]	48.0 [1220]	13.6 [345]	17.1 [435]	6.5 [165]	17.0 [165]

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Critical Room Control
9275 North 49th Street
Brown Deer, WI 53223

414.324.8978
Sales@criticalroom.com