RESIDENTIAL SYSTEM SOLUTIONS

IAQ-MPVS Expansion Kit

For Multi-Port Ventilator Kits
Continuous Exhaust

PRODUCT SPECIFICATIONS & TECHNICAL DATA

Each American Aldes IAQ-MPVS Expansion Kit allows the Ventergy® Series IAQ-MPVS Multi-Port Ventilator Kit to be used for one additional bathroom. Each IAQ-MPVS Expansion Kit contains 1 set of collar components, 1 CAR Classic, 1 Deco Grille, and 1 Universal Sleeve with "L" bracket. Up to 2 expansion kits can be added to each IAQ-MPVS Kit.

Optional Expansion Kit for IAQ-MPVS Kits

Part Number	Kit	Collar Components	CAR Classic	Deco Grille	Universal Sleeve with "L" Bracket
					
26 106	IAQ-SB	1	1	1	1

Collar Components

CAR Classic

Deco Grille

Universal Sleeve with "L" Bracket

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AIRFLOW & ZONE CONTROLS

CAR Classic

Constant Airflow Regulator

PRODUCT SPECIFICATIONS & TECHNICAL DATA

GENERAL

The model CAR Constant Airflow Regulator is a modulating orifice that automatically regulates airflows in duct systems to constant levels. The passive control element responds to duct pressure and requires no electric or pneumatic sensors or controls.

The CAR compensates for changes in duct pressure caused by thermal stack effect, building pressure, dust-clogged filters, etc. The CAR also provides a low-cost solution to balancing forced-air systems for heating, air conditioning and ventilation, eliminating the need for on-site balancing. The CAR will regulate airflow in supply, return, or exhaust duct systems.

The active control element of the CAR is a flexible bulb that inflates and deflates in response to the static pressure difference across the control. This operation regulates the free-area opening through the control, resulting in maintenance of velocity and specific airflow set points. Each CAR is designed and produced for control of air in temperatures ranging from -25° to 140°F (-32° to 60°C).

CONSTRUCTION

The round CAR regulating element is housed in a heavy-gauge rolled galvanized steel sleeve. Each sleeve is seam welded to prevent leakage. The assembly is sized to fit inside standard rigid round ducting, as well as fittings such as take-offs and tees. A brush or flex-type ring seal gasket around the circumference ensures a tight, no-leak fit. Spring-action metal clips on the housing grip the interior of the duct or fitting to secure the control firmly in place with minimal installation effort.

PERFORMANCE

The CAR airflow regulators control airflow accurately to within 10% of rated flow (15% for units 50 CFM or less) throughout the target operating pressure range of 0.2 to 0.8 in. w.g. (50 to 200 Pa). Each CAR is factory tested and calibrated to the rated set point before shipping. On-site field adjustment of airflow set points can be made for supply air applications (contact factory). Each diameter of CAR regulator is available in multiple factory-calibrated set points (see performance curves).

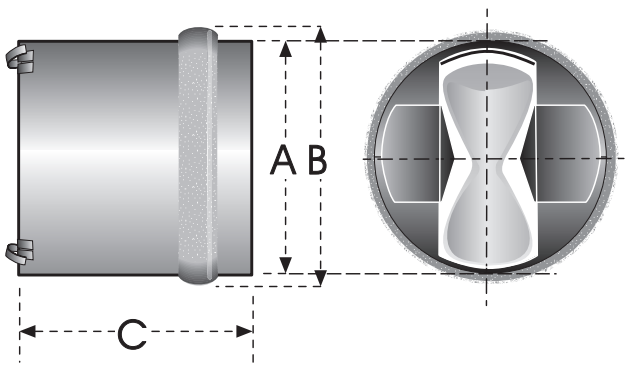
MAINTENANCE

The CAR needs no maintenance when used in normal conditions. There is no risk of dust deposits or obstruction because the CAR has no airways subject to clogging. If the intended application includes air heavily loaded with grease or dust, a fitting with an access panel or door, such as that used for flame dampers, should be provided.

WARRANTY

Guaranteed for five (5) years, from date of shipment, against all defects in material or workmanship, provided that the material has been installed and used under normal conditions. This warranty is limited to the repair or replacement of the material.

CAR Classic Dimensions

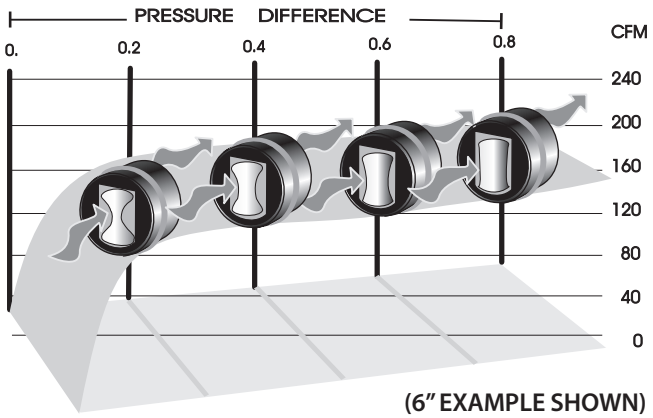


SIDE **FRONT**

DUCT	CAR Classic	A	B	C
4″	4″	3.9″	4.1″	3.1″
5″	5″	4.8″	5.0″	5.4″
6″	6″	5.7″	6.3″	5.4″
8″	8″	7.7″	8.1″	6.1″
10″	10″	9.7″	10.1″	7.5″

How the CAR Classic Works

Constant airflow is achieved by the inflating action of the CAR's bulb. At minimum static air pressure, the bulb is deflated and has a shape similar to an hourglass. As the static pressure increases across the bulb, it inflates, thereby reducing the free area around the bulb. At the same time, the higher static pressure increases the air velocity, resulting in CONSTANT AIRFLOW. This occurs regardless of pressure differences in the range of 0.2 to 0.8 in. w.g. (50 to 200 Pa). The air velocity in the duct is in the range of 60 to 700 ft/min. (0.3 to 3.5 m/s).



(6" EXAMPLE SHOWN)

Typical CAR Classic Applications

- **Supply and exhaust air for offices**
- **Balancing exhaust and supply airflows in high-rise building duct risers**
- **Bathroom exhaust in nursing homes, hotels, motels, dormitories, apartment buildings, offices, etc**
- **Clean room air supply balancing for ceiling filter modules. Maintains constant airflow, even as filter resistance increases**
- **Regulation of make-up air**
- **Balancing supply airflow from packaged roof-top A/C units**
- **Balancing supply and exhaust of heat recovery ventilation systems**
- **Regulating outdoor air injection from central supply fan into individual room fan coil units or heat pumps**
- **Balancing airflows on series-fan-powered terminal unit systems**
- **Supply air to sleeping quarters in military facilities, submarines, etc**

Typical Specification

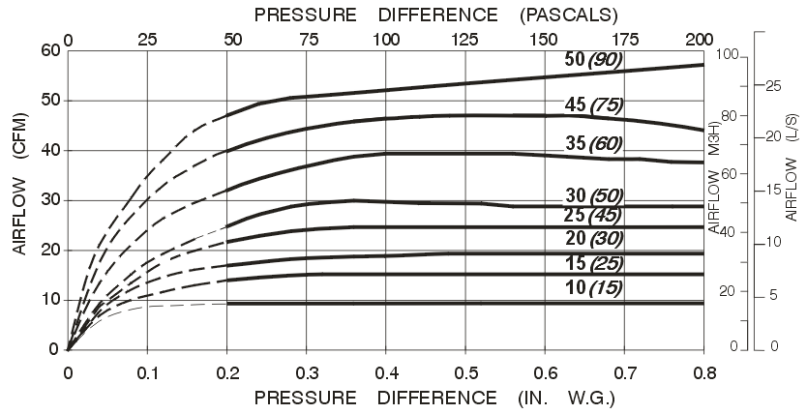
Model CAR Constant Airflow Regulators by American ALDES Ventilation Corporation, Bradenton, Florida, shall solely operate on duct pressure and require no external power supply. Each regulator shall be pre-set and factory calibrated, requiring no field adjustment to the airflows as indicated on the schedule. It shall be rated for use in air temperatures ranging from -25° to 140°F (-32° to 60°C).

Constant Airflow Regulators shall be capable of maintaining constant airflow within +/- 10% of scheduled flow rates (15% for units 50 CFM or less) within the operating range of 0.2 to 0.8 in. w.g. differential pressure. Sound power levels shall not exceed those for each size and CFM rating as scheduled. Regulators shall be provided as an assembly consisting of a flame-resistant plastic body with self-inflating silicon element housed within a 0.75mm galvanized steel sleeve or flanged plate for mounting in either round or rectangular duct. Each round sleeve must be fitted with a brush gasket to assure perimeter air tightness with the interior surface of the duct. All Constant Airflow Regulators will require no maintenance and must be warranted for a period of no less than five (5) years. Constant Airflow Regulators shall be installed in tight ducting systems in accordance with all applicable codes and manufacturer's instructions.

CAR Classic Airflow Performance Data

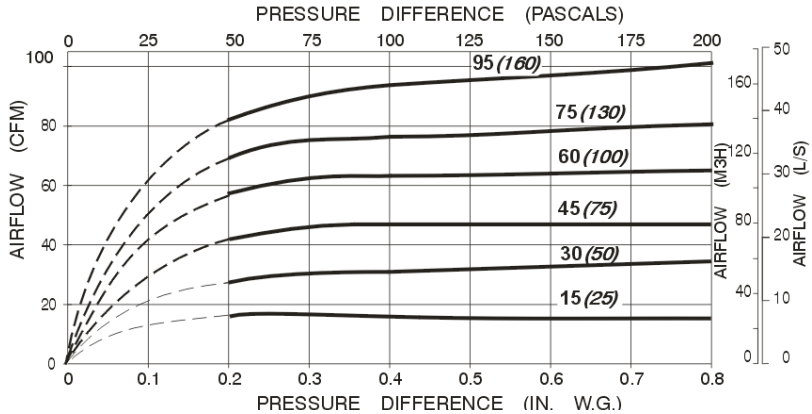
Performance charts reflect airflow measurements taken at 68°F (20°C) at 1 atmosphere pressure. Airflows are rounded to the nearest 5 CFM or 5 m³/h. Sizes are nominal. Product is designed to be inserted into duct of indicated diameter. Airflows are factory pre-set and cannot be modified by installer. When ordering, specify the part number (p/n), diameter, and airflow.

4" DIAMETER (100 mm) REGULATING ELEMENT



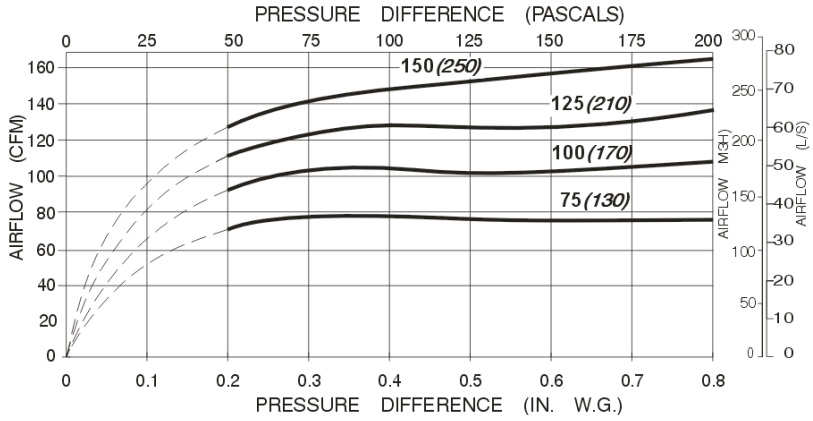
PART NUMBER	AIRFLOW
16 630	10 CFM (15 m³/h)
16 336	15 CFM (25 m³/h)
16 331	20 CFM (30 m³/h)
16 332	25 CFM (45 m³/h)
16 337	30 CFM (50 m³/h)
16 333	35 CFM (60 m³/h)
16 334	45 CFM (75 m³/h)
16 335	50 CFM (90 m³/h)

5" DIAMETER (125 mm) REGULATING ELEMENT



PART NUMBER	AIRFLOW
16 340	15 CFM (25 m³/h)
16 341	30 CFM (50 m³/h)
16 342	45 CFM (75 m³/h)
16 343	60 CFM (100 m³/h)
16 344	75 CFM (130 m³/h)
16 345	95 CFM (160 m³/h)

6" DIAMETER (150 mm) REGULATING ELEMENT

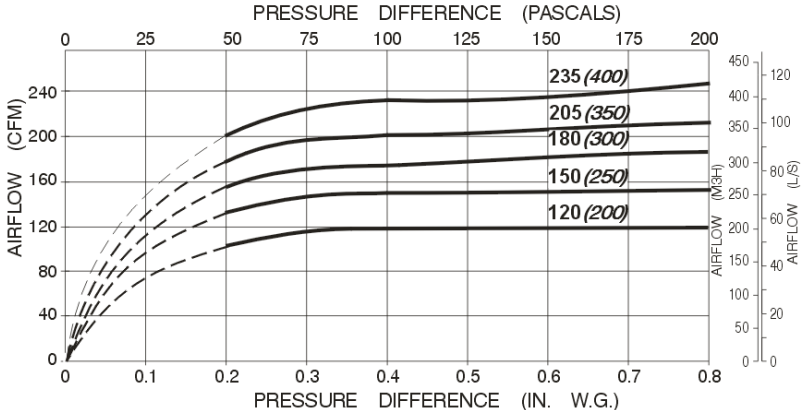


PART NUMBER	AIRFLOW
16 370	75 CFM (130 m³/h)
16 371	100 CFM (170 m³/h)
16 372	125 CFM (210 m³/h)
16 373	150 CFM (250 m³/h)

CAR Classic Airflow Performance Data

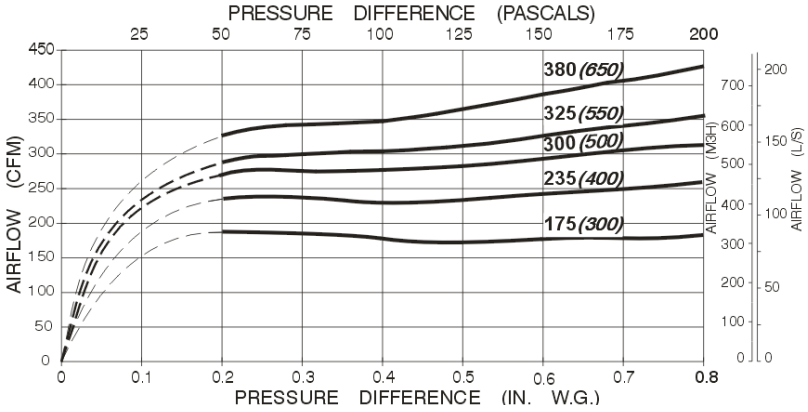
Performance charts reflect airflow measurements taken at 68°F (20°C) at 1 atmosphere pressure. Airflows are rounded to the nearest 5 CFM or 5 m^3/h. Sizes are nominal. Product is designed to be inserted into duct of indicated diameter. Airflows are factory pre-set and cannot be modified by installer. When ordering, specify the part number (p/n), diameter, and airflow.

8" DIAMETER (200 mm) REGULATING ELEMENT



PART NUMBER	AIRFLOW
16 360	120 CFM (200 m^3/h)
16 361	150 CFM (250 m^3/h)
16 362	180 CFM (300 m^3/h)
16 363	205 CFM (350 m^3/h)
16 364	235 CFM (400 m^3/h)

10" DIAMETER (250 mm) REGULATING ELEMENT



PART NUMBER	AIRFLOW
18 365	175 CFM (300 m^3/h)
18 366	235 CFM (400 m^3/h)
18 367	300 CFM (500 m^3/h)
18 368	325 CFM (550 m^3/h)
18 369	385 CFM (650 m^3/h)

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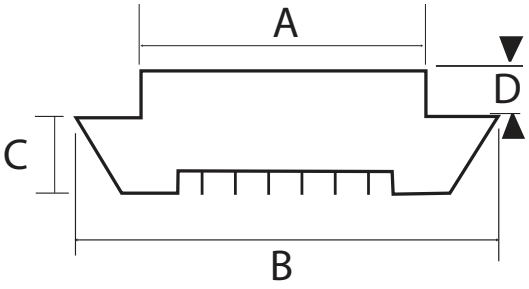
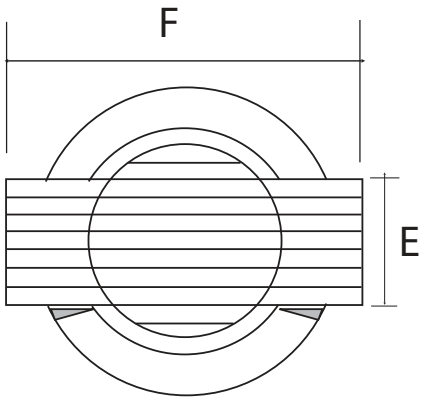
Deco Grilles

White Plastic Grilles





DIMENSIONAL DATA								
PART NUMBER	SIZE	DESCRIPTION	A	B	C	D	E	F
22 073	3"	White Plastic ABS Grille	3"	4-3/4"	1/2"	5/8"	1-7/8"	4-3/4"
22 079	4"	White Plastic ABS Grille	3-7/8"	5-3/4"	11/16"	1"	2-1/2"	6-1/4"
22 078	5"	White Plastic ABS Grille	4-7/8"	6-1/2"	5/8"	1-1/4"	3-1/8"	7-3/4"

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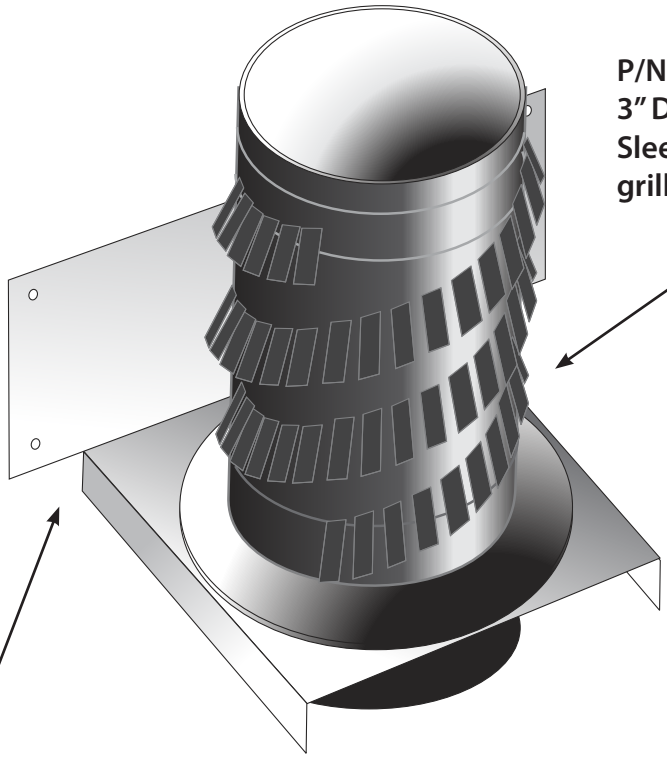
ROOF CAPS, WALL HOODS, GRILLES & DUCT FITTINGS

Mounting Sleeve

With Ceiling-Mount Bracket

PRODUCT SPECIFICATIONS & TECHNICAL DATA



P/N 22 001:
3" Diameter Mounting Sleeve for connecting grille to flexible duct work

P/N 54 020:
3" Ceiling-Mount Bracket enables ceiling rough-in when used with mounting sleeve

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