

Application

Model CAR constant airflow regulator is designed to save a significant amount of money by precisely controlling airflow to balance HVAC systems without the need for electrical or pneumatic controls and sensors. A self-regulating aero-wing and spring piston design automatically adjust for variable duct pressures caused by building duct design, thermal stack effect, dust build up in filters, and other varying building conditions. The CAR constant airflow regulator works best to help control the volume of make-up or exhaust air in high rise applications.

Standard Construction

Frame: Fire resistant ABS plastic.

Blade: Self-regulating aero-wing.

Spring: Internal spring piston.

Seal: Full circumference rubber gasket.

Adjustment: T-10 Torx star drive.

Available Sizes: 3"Ø (76 Ø)
4"Ø (102 Ø)
5"Ø (127 Ø)
6"Ø (152 Ø)
8"Ø (203 Ø)
10"Ø (254 Ø)

Pressure Range: 0.2 in. wg. – 1.0 in. wg. (50 Pa – 249 Pa)

Options

- ☐ Optional pressure range:
 - ☐ Low pressure: 0.08 in. wg. – 0.4 in. wg. (20 Pa – 100 Pa)
 - ☐ High pressure: 0.6 in. wg. – 2.4 in. wg. (149 Pa – 597 Pa)

Available in Standard Pressure (0.2" wg. - 1" wg.)

CAR Diameter	3"	4"	5"	6"	8"	10"
CFM Range	10-30	10-30	10-30	10-30	10-30	10-30
		30-60	30-60	30-60	30-60	30-60
			60-105	60-105	60-105	60-105
				105-175	105-175	105-175
					175-295	175-295
						265-470

Optional Configuration in High Pressure (0.6" wg. - 2.4" wg.)

CAR Diameter	3"	4"	5"	6"	8"	10"
CFM Range	15-53	15-53	15-53	15-53	15-53	15-53
		53-100	53-100	53-100	53-100	53-100
			105-176	105-176	105-176	105-176
				176-295	176-295	176-295
					295-500	295-500
						500-765

Optional Configuration in Low Pressure (0.08" wg. - 0.4" wg.)

CAR Diameter	3"	4"	5"	6"	8"	10"
CFM Range	5-18	5-18	5-18	5-18	5-18	5-18
		18-35	18-35	18-35	18-35	18-35
			35-70	35-70	35-70	35-70

CFM Range in shaded cells optional and can be accommodated by special order. Consult factory for lead times.

Ratings

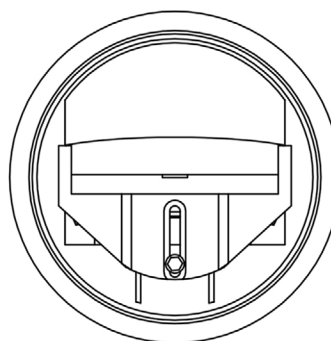
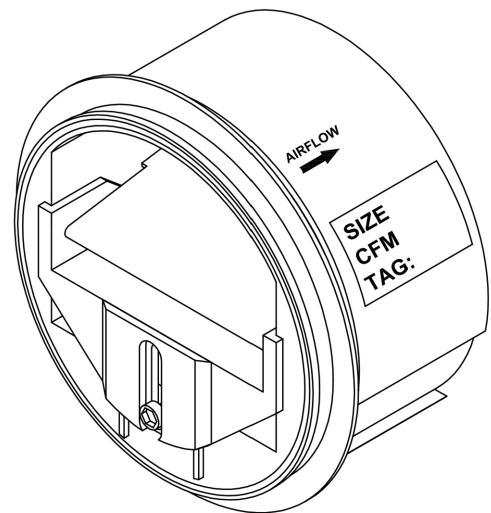
UL R38307/UL 2043: heat release rate and smoke optical density.

Temperature: -25°F to 145°F (-32°C to 63°C)

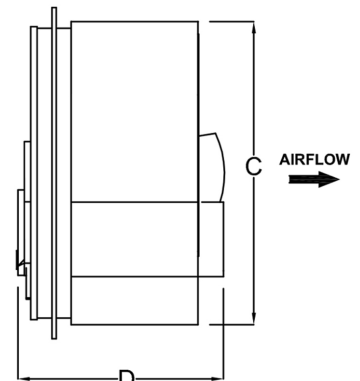
Sizing Chart

Damper (duct size)	C (diameter)	D (depth)	Standard CFM Range
3" (76)	3.0" (76)	2.2" (55)	10-30
4" (102)	3.8" (97)	2.8" (70)	30-60
5" (127)	4.8" (122)	3.4" (86)	60-105
6" (152)	5.8" (147)	3.6" (91)	105-175
8" (203)	7.7" (195)	3.6" (91)	175-295
10" (254)	9.6" (245)	4.7" (120)	265-470

See available pressure range charts for more information



Front View

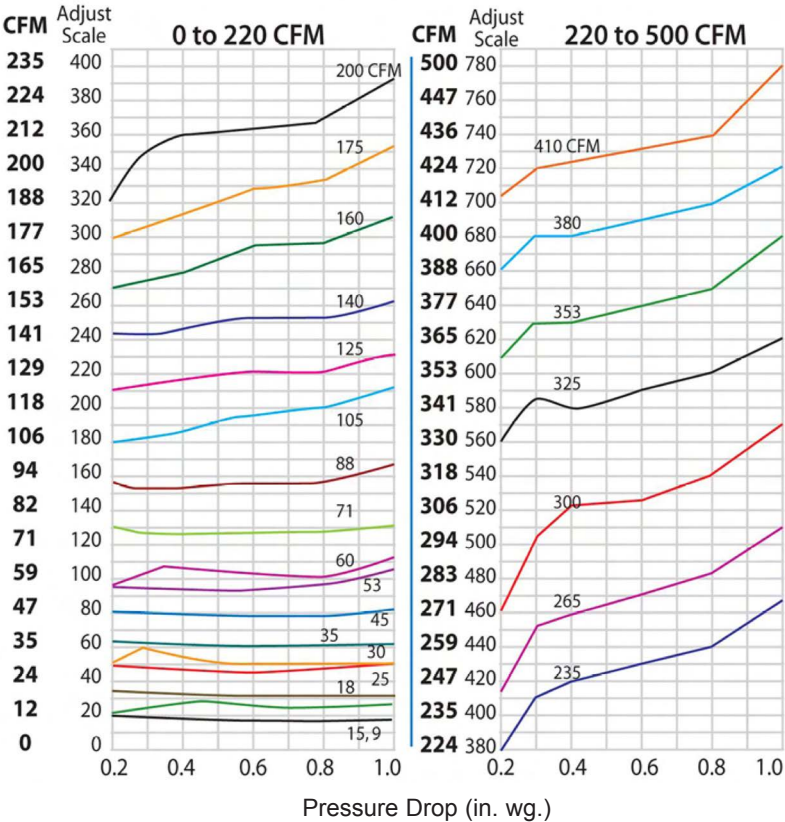


Side View

Standard Regulator Details

Standard Pressure CAR Performance Curves - Volume (cfm) vs Static Pressure

The performance charts reflect airflow measurements taken at 68° F (20° C) at 1 atmosphere pressure. CAR is designed for system pressure between 0.2 in. wg. - 1 in. wg. The charts show the approximate constant volume airflow through the CAR at a given pressure differential. As shown if the pressure across the CAR falls below 0.2 in. wg. (50 Pa), then the airflow volume will be reduced. Likewise, if the pressure across the CAR increases to over 1 in.wg. (250 Pa), then the airflow volume will be increased. Please note that these CAR's are factory set to the specific airflow. They can be field modified to desired airflow with the help of a standard screwdriver. The graphs shown are averages and can vary from 5%.



Acoustic Data

eFlow-Constant Airflow Regulator Acoustic Data				
Lw in dB(A)				
Flow m3/h	50 Pa	100 Pa	150 Pa	200 Pa
15	25	29	32	35
30	26	31	35	38
45	27	33	36	39
60	32	37	39	42
75	32	37	40	42
90	32	38	41	44
120	30	34	39	42
150	33	37	41	45
180	34	40	44	47
210	34	40	42	44
240	35	41	44	47
270	37	43	45	49
300	33	37	42	45
350	35	40	44	47
400	37	42	45	50
450	38	44	46	51
500	39	46	48	53

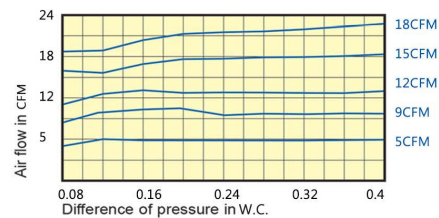
1 in. wg. = 250 Pa

Regulator Details (Optional)

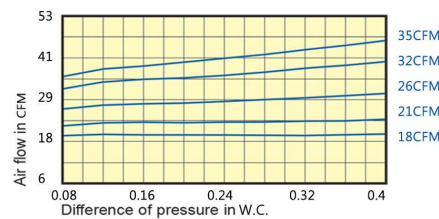
Low Pressure CAR Performance Curves - Volume (cfm) vs Static Pressure

The performance charts reflect airflow measurements taken at 68° F (20° C) at 1 atmosphere pressure. Low pressure CAR is designed for system pressure between 0.08 in. wg. - 0.4 in. wg. The charts show the approximate constant volume airflow through the low pressure CAR at a given pressure differential. As shown if the pressure across the low pressure CAR falls below 0.08 in. wg. (20 Pa), then the airflow volume will be reduced. Likewise, if the pressure across the low pressure CAR increases to over 0.4 in.wg. (100 Pa), then the airflow volume will be increased. Please note that these low pressure CAR's are factory set to the specific airflow. They can be field modified to desired airflow with the help of a standard screwdriver. The graphs shown are averages and can vary from 5%.

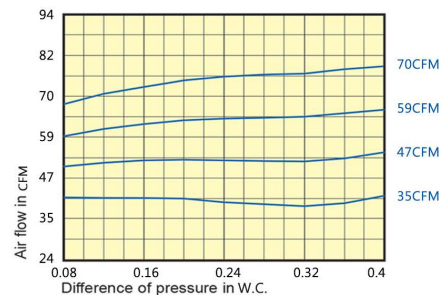
eFlow-CAR LOW Pressure(LP) 3"/4"/5" 5 - 18CFM



eFlow-CAR LOW Pressure(LP) 4"/5" 18 - 35CFM

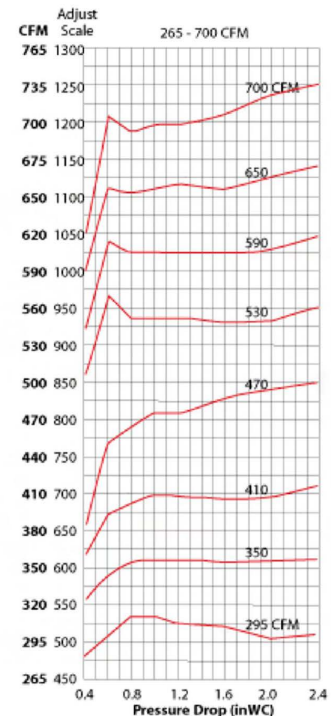
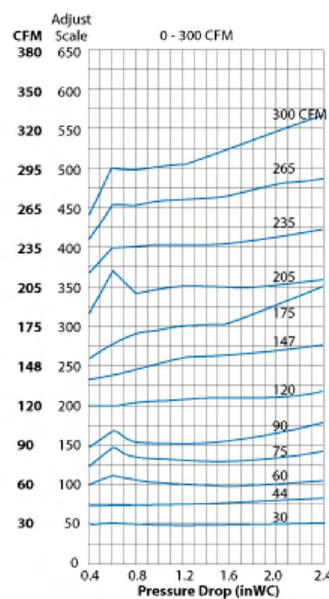


eFlow-CAR LOW Pressure(LP) 5" 35 - 70CFM



High Pressure CAR Performance Curves - Volume (cfm) vs Static Pressure

The performance charts reflect airflow measurements taken at 68° F (20° C) at 1 atmosphere pressure. High pressure CAR is designed for system pressure between 0.6 in. wg. - 2.4 in. wg. The charts show the approximate constant volume airflow through the high pressure CAR at a given pressure differential. As shown if the pressure across the high pressure CAR falls below 0.6 in. wg. (150 Pa), then the airflow volume will be reduced. Likewise, if the pressure across the high pressure CAR increases to over 2.4 in.wg. (600 Pa), then the airflow volume will be increased. Please note that these high pressure CAR's are factory set to the specific airflow. They can be field modified to desired airflow with the help of a standard screwdriver. The graphs shown are averages and can vary from 5%.



Pressure Drop (in. wg.)