



eFlow-Constant Airflow Regulator (CAR)

### Application and Design

eFlow-CAR is factory set Constant Airflow Regulator designed to save significant amount of energy and money by precisely controlling airflow into or out of space, regardless of static pressure, and all along providing high Indoor Air Quality (IAQ). eFlow CAR is composed of fire resistant ABS plastic. It contains a self regulating aero-wing and spring piston design to maintain a factory preset air flow. These CAR's are designed to operate in pressure range Low Pressure (.08"-.4"w.c.), Standard Pressure (0.2"-1" w.c) and High Pressure (0.6"-2.4" w.c). They automatically adjust for variable duct pressures caused by building pressure, thermal stack effect, dust build up and other variable factors. This Constant Airflow Regulator creates cost effective answer to balancing air systems for HVAC and ventilation in high rise buildings, without the requirement for on-site balancing, electrical/pneumatic controls or sensors. eFlow-CAR may contribute to meeting USGBC LEED Building and Passive House Certification. eFlow CAR requires no maintenance under normal conditions.

#### **Standard Construction**

eFlow-CAR: Classified UL R38307 / UL-2043 for heat release rate and smoke optical density.

Damper (nominal)	С	D
3 (76)	3.0 (76)	2.2 (55)
4 (101.6)	3.8 (96.5)	2.8 (70)
5 (127)	4.8 (121.9)	3.4 (86)
6 (152.4)	5.8 (147.2)	3.6 (91)
8 (203.2)	7.7 (195)	3.6 (91)
10 (254)	9.6 (245)	4.7 (120)

<sup>\*\*</sup>Size in inches(millimeters)

.08" w.c.

0.4" w.c.

Low Pressure Range of

Minimum Maximum

Operation Static Pressure

Job Name:
Location:
Architect:
Engineer:
Contractor:

ant Airflow	
cant amount	
controlling	
ess of static	////
high Indoor	
composed	AIRFLOW
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iston design	
low. These	
ressure range	
ard Pressure	
'-2.4" w.c).	
riable duct	FRONT VIEW D
ure, thermal	OIDE WEW
er variable	SIDE VIEW
gulator creates	
ir systems for	
se buildings,	
e balancing,	
rs. eFlow-CAR	
EED Building	AIRFLOW
ow CAR requires	AIRFE
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	SIZE
07 / UL-2043	Sizh Cru
tical density.	CFN.
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s)	
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Standard Pressure Range	e     High Pressure Range of
of Operation Static Pressu	Operation Static Pressure
Minimum 0.2" w.c.	Minimum 0.6" w.c.
Maximum 1.0" w.c.	Maximum 2.4" w.c.
	☐ eFlow-Constant Airflow Regulator(CAR)
	(Supply, Exhaust)

DRAWN BY:

IL

DATE:

12-08-2018

REV. DATE:

02-19-2019

APPROVED BY

EL

REV. NO.

DWG. NO





eFlow-Constant Airflow Regulator (CAR)

# eFlow-Constant Airflow Regular CFM Range

Available in Standard Pressure (0.2" w.c1.0" w.c.)										
	CAR Diameter									
eFlow-CAR	3"	4"	5"	6"	8"	10"				
CFM Range	10-30 CFM									
CFM Range		30-60 CFM								
CFM Range			60-105 CFM	60-105 CFM	60-105 CFM	60-105 CFM				
CFM Range				105-175 CFM	105-175 CFM	105-175 CFM				
CFM Range					175-295 CFM	175-295 CFM				
CFM Range						265-470 CFM				

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

Special Configuration Available in Low Pressure (0.08" w.c 0.4" w.c.)									
	CAR Diameter	<b>CAR Diameter</b>	CAR Diameter						
eFlow-CAR	3"	4"	5"	6"	8"	10"			
CFM Range	5-18 CFM	5-18 CFM	5-18 CFM	5-18 CFM	5-18 CFM	5-18 CFM			
CFM Range		18-35 CFM	18-35 CFM	18-35 CFM	18-35 CFM	18-35 CFM			
CFM Range			35-70 CFM	35-70 CFM	35-70 CFM	35-70 CFM			
**blue highlighted CFM Range = standard			***yellow highlighted CFM Range = can be accomidated by special order						

Job Name:	☐ eFlow-Constant Airflow Regulator(CAR)								
Location:	(Supply, Exhaust)								
Architect:									
Engineer:									
Contractor:	DRAWN BY:	DATE: 12-21-2019	REV. DATE:	REV. NO.	APPROVED BY:	DWG. NO.:			

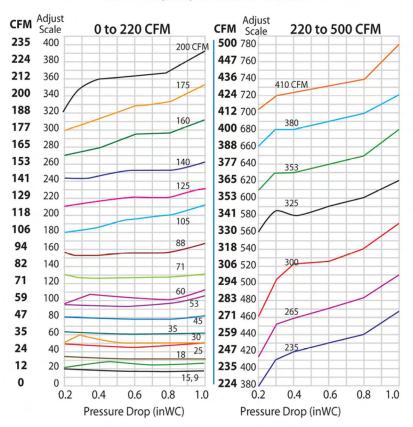




eFlow-Constant Airflow Regulator (CAR)

The performance charts reflect airflow measurements taken at 68 degree F (20 degree C) at 1 atmosphere pressure. eFlow-CAR is designed for system pressure between 0.2" w.c. 1" w.c. The charts show the approximate constant volume air flow through the CAR at a given pressure differential. As shown if the pressure across the CAR falls below 0.2 w.c. (50 Pa) then the airflow volume will be reduced. Likewise if the pressure across the CAR increases to over 1" w.c. (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 by 5%.

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



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				

\*\*\* 1w.c.= 250Pa

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Architect:								
Engineer:								
Contractor:	DRAWN BY:	DATE: 12-08-2018	REV. DATE:	REV. NO.	APPROVED BY:	DWG. NO		





eFlow-Constant Airflow Regulator (CAR)

The performance charts reflect airflow measurements taken at 68 degree F (20 degree C) at 1 atmosphere pressure. eFlow-CAR is designed for system pressure between 0.6" w.c-2.4" w.c. The charts show the approximate constant volume air flow through the CAR at a given pressure differential. As shown if the pressure across the CAR falls below 0.6 w.c. (150 Pa) then the airflow volume will be reduced. Likewise if the pressure across the CAR increases to over 2.4" w.c. (600 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 by 5%

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

Job Name:	☐ eFlow-Constant Airflow Regulator(CAR)						
Location:	(Supply, Exhaust)						
Architect:							
Engineer:							
Contractor:	DRAWN BY:	DATE: 12-08-2018	REV. DATE: 02-19-2019	REV. NO.	APPROVED BY:	DWG. NO	



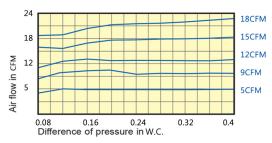


eFlow-Constant Airflow Regulator (CAR)

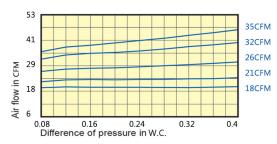
The performance charts reflect airflow measurements taken at 68 degree F (20 degree C) at 1 atmosphere pressure. eFlow-CAR is designed for system pressure between 0.08" w.c-0.4" w.c. The charts show the approximate constant volume air flow through the CAR at a given pressure differential. As shown if the pressure across the CAR falls below 0.08 w.c. (20 Pa) then the airflow volume will be reduced. Likewise if the pressure across the CAR increases to over 0.4" w.c. (100 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 by 5%.

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

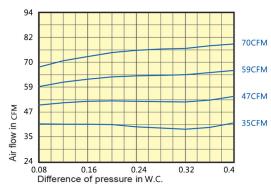
## eFlow-CAR LOW Pressure(LP) 3"/4"/5" 5 - 18CFM



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



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



Job Name:	☐ eFlow-Constant Airflow Regulator(CAR)					R)
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