Table 4: Airflow Ranges (Velocity Wing™ Sensor)

Type	Direct Digital		Analog Electronic		Pneumatic		Pneumatic	
Controller	Model ABC-7001,3		Model 51		Models 23, 24		Model 31	
Inlet Size	Min Airflow	Max Airflow	Min Airflow	Max Airflow	Min Airflow	Max Airflow	Min Airflow	Max Airflow
5" Ø	50	251	22	305	57	287	50	287
6" Ø	81	409	45	470	94	469	81	469
7" Ø	106	534	70	635	122	612	106	612
8" Ø	150	757	90	835	173	867	150	867
9" Ø	190	958	115	1100	220	1098	190	1098
10" Ø	234	1181	145	1355	271	1353	234	1353
12" Ø	312	1573	155	1740	360	1802	312	1802
14" Ø	428	2155	250	2300	494	2469	428	2469
16" Ø	583	2938	447	3390	673	3366	583	3366
24 x 16	1101	5550	650	6480	1272	6358	1101	6358

Notes:

1. Minimum and maximum values shown are CFM
2. Minimum and maximum airflow with pressure independent controls based on the following flow sensor signals:
   Model 51 Controller - 1 VDC – 10 VDC
   Model 31 Controller - 0.03" w.g. – 1.0" w.g.
   Models 23, 24 Controllers - 0.04" w.g. – 1.0" w.g.
   Models ABC-7001, 7003 Controllers - 0.03" w.g. – 0.76" w.g.
3. Settings below the minimum are not recommended for accurate control when using pressure independent controls. Minimum airflow for pressure dependent applications is 0 cfm.
4. Pressure independent controls may be set for 0 CFM, at or above the minimum airflow shown in table 4, but not between.
5. Model 23 controller available as direct acting for normally open or model 24 controller available as reverse acting for normally closed damper positions. Factory set non-field adjustable start point and reset span.
6. Model 31 controller can be used either as direct or reverse acting for normally open or normally closed damper positions. Field adjustable start point and reset span.
7. Models 23, 24, 31 controllers equipped with separate adjustable knobs for maximum and minimum airflow settings.
8. Model 51 electronic analog controller maximum and minimum airflow settings field adjustable at the thermostat.
9. Models ABC-7001, 7003 BACnet DDC controllers are factory programmed.
10. Airflow rates above maximum shown are available. Contact your Anemostat representative for application assistance.

Table 5: Airflow vs. Velocity Wing™ Signal

Sensor	Inlet Size									
	5	6	7	8	9	10	12	14	16	24x16
ΔP	CFM									
0.03	50	81	106	150	190	234	312	428	583	1101
0.04	57	94	122	173	220	271	360	494	673	1272
0.06	70	115	150	212	269	331	441	605	824	1557
0.1	91	148	194	274	347	428	570	781	1064	2011
0.2	128	210	274	388	491	605	806	1104	1505	2843
0.3	157	257	335	475	601	741	987	1352	1844	3482
0.4	182	297	387	548	694	856	1140	1562	2129	4021
0.5	203	332	433	613	776	957	1274	1746	2380	4496
0.6	222	363	474	672	851	1048	1396	1912	2607	4925
0.7	240	392	512	725	919	1132	1508	2066	2816	5319
0.8	257	419	547	775	982	1210	1612	2208	3011	5687
0.9	272	445	581	823	1042	1284	1710	2342	3193	6032
1 (K)	287	469	612	867	1098	1353	1802	2469	3366	6358
1.5	352	574	750	1062	1345	1657	2207	3024	4122	7787
Inlet Area (sq. ft.)	0.130	0.188	0.258	0.338	0.430	0.532	0.769	1.05	1.38	2.67

Airflow Calculations

Velocity Wing Sensors
Sensor $\Delta P = (CFM/K)^2$
$CFM = K(\sqrt{\Delta P})$

Example: For a 12" inlet unit with a sensor ΔP signal of 0.60 inches w.g., the CFM is calculated to be 1400 CFM.

$CFM = K(\sqrt{\Delta P}) = 1802(\sqrt{0.60}) = 1400$ For a 12" inlet unit with 1400 CFM, the sensor ΔP signal is calculated to be 0.60 inches w.g. $\Delta P = (CFM/K)^2 = (1400/1802)^2 = 0.60$" w.g.

Note: K factors shown in 1.0 ΔP row.