

MICROCON® CALCULATING AIR CHANGES

Calculating Room Air Changes

To reduce the risk of airborne transmission of infectious pathogens, maintaining room air changes is critical. Use the formulas and chart below to easily calculate air changes at various air speed settings on your Microcon® device.

Determine Air Changes per Hour (ACH)

$$ACH = CFM \times 60 \text{ mins} / \text{Room Size in ft}^3$$

1. Calculate room floor area (ft²) by multiplying room length (ft) by width (ft)
2. Calculate room size (ft³) by multiplying the floor area (ft²) by ceiling height (ft)
3. Quickly convert floor area to Air Changes per Hour using the chart below
 - a. Locate your room floor area (ft²) in Column #1
 - b. Select Microcon® fan speed Cubic Feet per Minute (CFM) to locate corresponding air changes

Room size in square feet*	AIR CHANGES PER HOUR (ACH)					
	AT 150 CFM	AT 300 CFM	AT 400 CFM	AT 500 CFM	AT 600 CFM	AT 700 CFM
40	22.50	45.00	60.00	75.00	90.00	105.00
50	18.00	36.00	48.00	60.00	72.00	84.00
60	15.00	30.00	40.00	50.00	60.00	70.00
70	12.86	25.71	34.29	42.85	51.43	60.00
80	11.25	22.50	30.00	37.50	45.00	52.50
90	10.00	20.00	26.67	33.33	40.00	46.67
100	9.00	18.00	24.00	30.00	36.00	42.00
110	8.18	16.36	21.82	27.27	32.73	38.18
120	7.50	15.00	20.00	25.00	30.00	35.00
130	6.92	13.85	18.46	23.08	27.68	32.31
140	6.43	12.86	17.14	21.43	25.71	30.00
150	6.00	12.00	16.00	20.00	24.00	28.00
160		11.25	15.00	18.75	22.50	26.25
170		10.59	14.12	17.65	21.18	24.71
180		10.00	13.33	16.67	20.00	23.33
190		9.47	12.63	15.79	18.95	22.11
200		9.00	12.00	15.00	18.00	21.00
210		8.57	11.43	14.29	17.14	20.00
220		8.18	10.91	13.64	16.36	19.09
230		7.83	10.43	13.04	15.65	18.26
240		7.50	10.00	12.50	15.00	17.50
250		7.20	9.60	12.00	14.40	16.80
260		6.92	9.23	11.54	13.85	16.15
270		6.67	8.89	11.11	13.33	15.56
280		6.43	8.57	10.71	12.86	15.00
290		6.21	8.28	10.34	12.41	14.48
300		6.00	8.00	10.00	12.00	14.00
310			7.74	9.68	11.61	13.55
320			7.50	9.38	11.25	13.13
330			7.27	9.09	10.91	12.73
340			7.06	8.82	10.59	12.35
350			6.86	8.57	10.29	12.00
360			6.67	8.33	10.00	11.67
370			6.49	8.11	9.73	11.35
380			6.32	7.89	9.47	11.05
390			6.15	7.69	9.23	10.77
400			6.00	7.50	9.00	10.50
410				7.32	8.78	10.24
420				7.14	8.57	10.00
430				6.98	8.37	9.77
440				6.82	8.18	9.55
450				6.67	8.00	9.33
460				6.52	7.83	9.13
470				6.38	7.66	8.94
480				6.25	7.50	8.75
490				6.12	7.35	8.57
500				6.00	7.20	8.40

* Based on a 10ft ceiling height

Example:

1. Room floor area: 10 ft x 20 ft = 200 ft²
2. Room size: 200 ft² x 10 ft (ceiling height) = 2,000 ft³
3. Using ACH chart: 12x ACH @ 400 CFM (Microcon® MAP400)



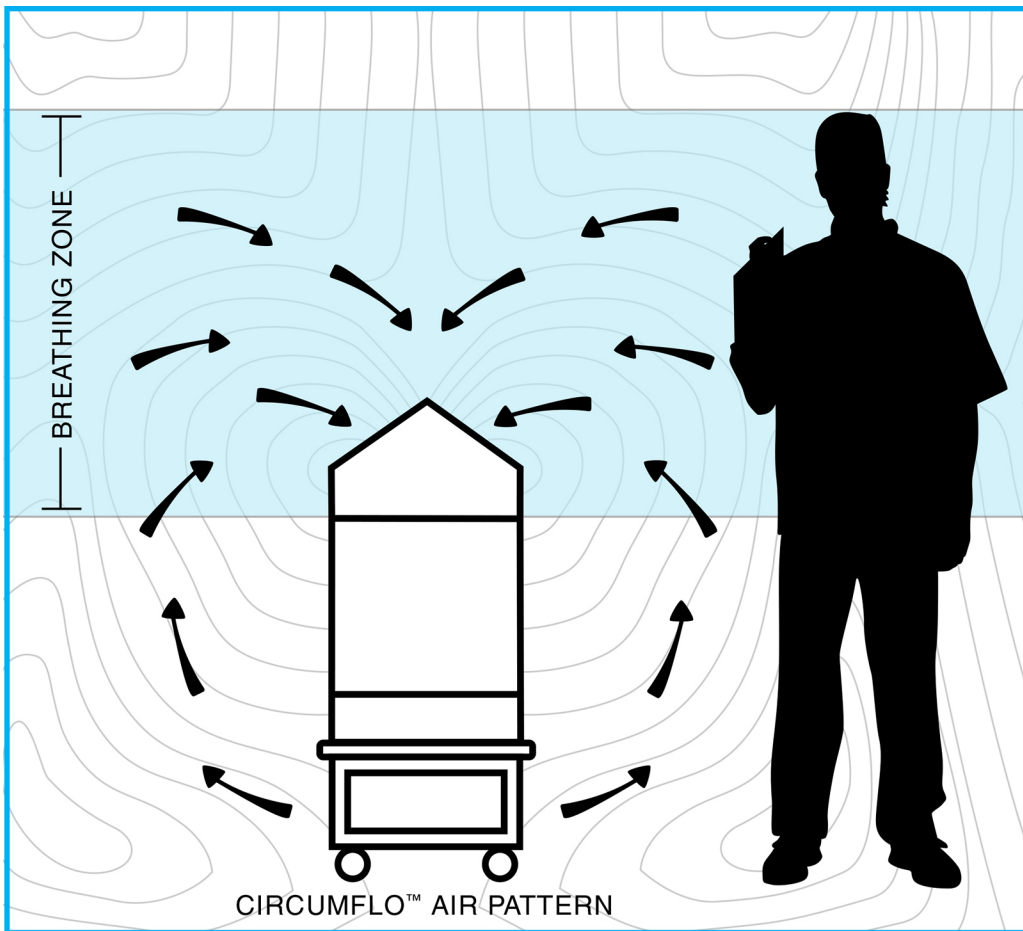
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Breathing Zone Filtration

All of the Microcon® models are designed specifically with 360 degree air intake within the respirable or 'Breathing Zone'. The 'Breathing Zone' ranges in height from 3 feet to 7 feet from floor level, and whether a patient is standing, sitting or laying down, this feature greatly enhances source capture of infectious airborne pathogens.

Circumflo™ Air Pattern

The Microcon® air intake draws air from the 'Breathing Zone' and exhausts to floor level in a unique 360 degree pattern. In creating the Circumflo™ air pattern, the Microcon® exhaust circulates air within the patient care room, eliminating stratification and dead spots while continually pushing particulate toward the air intake.



DIVISIONS



ISO 9001:2015 CERTIFIED COMPANY

1101 West 13th Street (Port of Palm Beach Enterprise Zone) Riviera Beach, Florida 33404

www.rgf.com

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