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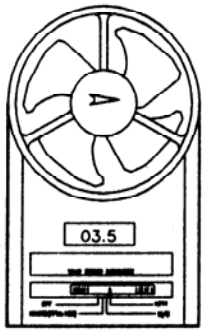

Air Velocity Meters

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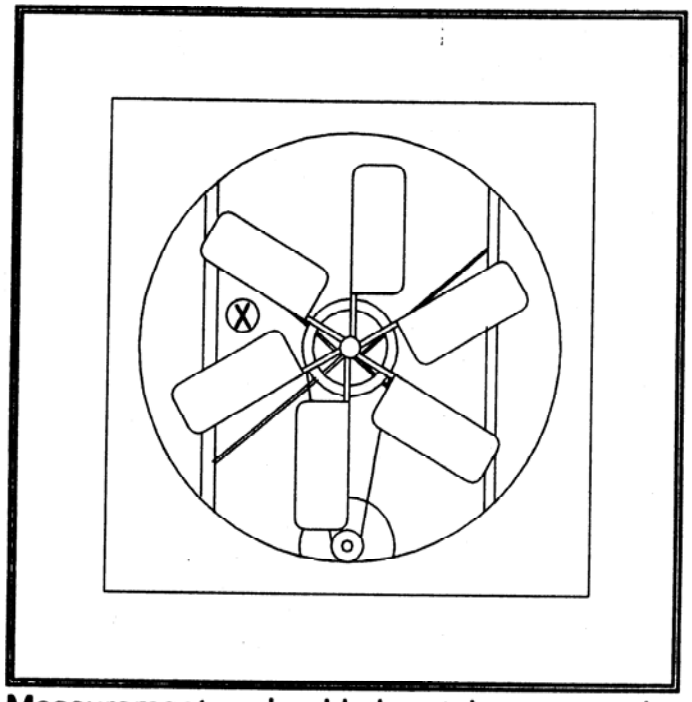
Trying to determine how well a ventilation system is operating can be a frustrating task. Glancing at the exhaust fans, they look like they are moving enough air, but are they? A sidewall curtain is cracked an inch, it looks about right, but should it be opened another inch or two? The circulation fans are running, but is there too much air movement for young chicks? When it comes to ventilation, there just seems to be no good way of figuring out if you're doing the right thing.

The reason for the confusion is quite simple, most servicemen and producers don't have the tools necessary to measure air movement. If you can't measure something it is very difficult to manage it. For example, house temperature is relatively easy to manage because with a couple of thermometers around the house, you have a pretty good idea of house temperature. If house temperature is not on target, adjustments are made to exhaust fans and heaters to bring it back in line. Think how difficult it would be to raise birds without any thermometers or thermostats.

Air movement is just as important as air temperature when it comes to managing environmental conditions. Too much or not enough air movement can present a number of problems both in terms of production and energy usage. In order to properly manage a ventilation system servicemen as well as growers need access to an air velocity meter.

In the past, the price of air velocity meters ($400 to $700) put them out of the reach of most servicemen and growers. Recent advancements in electronics have led to the development of a simple to use, accurate, relatively low cost (about $100) air velocity meter. The hand held, battery powered, meters measure the speed of the air through the use of a rotating propeller. The meter can display air speed in either miles per hour, meters per second, or feet per minute.



Measurements should be taken at point marked "X" between the shutters while they are held open. Use extreme caution not to get too close to the moving fan blades.

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Recommended Air Velocities

Location	Minimum (fpm)	Maximum (fpm)
floor air speed (summer - cooling)	200	800
floor air speed (winter - mixing)	-	200
floor air speed (winter/summer - chicks)	-	100
4" evaporative cooling pad (at pad surface)	-	250
6" evaporative cooling pad (at pad surface)	-	450
evaporative cooling pad (curtain opening)	350	500
tunnel with foggers (opening)	350	600
tunnel - foggers/pad (center of house)	350	600
sidewall inlet or curtain opening*	500	1200
36" exhaust fan**	1600	-
48" exhaust fan**	1800	-
beneath air deflectors	350	500

*when power-ventilating
**see figure on next page