

Why measure house air tightness?

- In-house pressure can be used as an indication of house air tightness and must be at a certain level if air is to be drawn into the house at the correct speed to adequately ventilate the house and direct the incoming air where it is to go.
- Ventilation only works effectively if the house is adequately sealed / air tight and there are no air leaks present.
- In-house pressure should be monitored routinely and regularly over time to ensure the correct pressure is maintained and to identify the presence of any air leaks that may impair ventilation.



The procedure for measuring house air tightness using an in-house pressure meter

Equipment

1. An in-house or portable hand held pressure meter.

Procedure

House air tightness is measured by recording in-house pressure. During minimum ventilation, pressure can be measured anywhere in the house and should be consistent throughout the house. Measure in-house pressure before a flock is placed or when suspected issues with ventilation occur (e.g if condensation is seen, litter quality deteriorates or bird behavior is not as expected).

Step 1 Close all doors and inlets and have all fans switched off.

Step 2 If using a hand held pressure meter place the high pressure pipe (+ve) outside the house through an air inlet (being careful not to leave inlet open too much or to squash the pipe) and leave the low (-ve) pressure pipe inside the house.

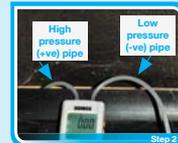
Note *If using a mounted in-house pressure meter it should have been calibrated at the beginning of the flock (see How To... Calibrate an In-House Fluid Filled Pressure Meter).*

Step 3 Ensure the pressure meter is zero'd.

Step 4 Switch off the side wall inlet winch so that the inlets do not open automatically.

Step 5 Turn on either 2 minimum ventilation (91 cm / 36 in) fans or 1 tunnel ventilation (122 cm / 48 in) fan.

Step 6 Allow pressure reading to stabilize and then record the reading on the pressure meter.



Interpreting results

The pressure within the house should ideally not measure less than 37.5 Pa (0.15 inches of water column). The pressures indicated below are **not** operating pressures. They are to determine whether the house is sealed effectively. Higher operating pressures may need to be used during minimum ventilation.

Pressure Reading	In-House Pressure	Effect	Action
< 37.5 Pa (0.15 inches of water column).	Inadequate.	Ventilation will be effected, air speed will be low and birds will not be ventilated adequately.	ACTION REQUIRED: Check for presence of cracks in the walls of the house, poorly fitting doors and inlets, damage to curtains or inefficient fans. Complete restorative maintenance.
37.5 - 42.0 Pa (0.15 - 0.17 inches of water column).	Adequate.	Ventilation will be ok but beware of wet patches developing in the litter, condensation, birds huddling and drafts.	ACTION REQUIRED: Check for presence of cracks in the walls of the house, poorly fitting doors and inlets, damage to curtains or inefficient fans. Complete restorative maintenance.
42.0 (0.17 inches of water column).	Ideal.		NO ACTION REQUIRED.