

**AIVC Airtightness Workshop
3rd TightVent Workshop on
Building and Ductwork Airtightness**

WORKSHOP SUMMARY

**19 April 2013
Rockville Maryland, USA**

An Airtightness Carol
with apologies to Charles Dickens

**The Past, Present and Future of
Building Airtightness**

Ghost of Airtightness Past

Measurements of air leakage in
Hermetic buildings and the
Limited energy use in
North America
Building energy performance
Control systems
Johnny... syndrome
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...erwise
...de by 20



Harrje, Blomsterberg, Persily. 1979. Reduction of Air Infiltration Due to Window Retrofits in an Older Home. Princeton University/CEES report 85.

Gadsby, Linteris, Dutt, Harrje. 1981. The Blower Door. Princeton University/CEES report 124.

Shaw, Sander, Tamura. 1973. Air Leakage Measurements of the Exterior Walls of Tall Buildings. ASHRAE Transactions. Vol 79(2).



Ghost of More-Recent Past

Data, but more needed

Standard test methods, need improvement

Airtightness requirements in standards and regulations

(Anis, Szymanski)

IAQ considerations, designed ventilation strategies

Large buildings (Anis, Bohac, Emmerich, Gorzenski, Grimnes, Jones, Zhivov)

Duct leakage (Francisco, Modera, Schneider)

Leakage at interfaces (Birkelbach, Van Den Bossche, Hagerman)

Airtightness

Improved test methods
serious test

Better energy
(Borsboom)

ASHRAE 90.1

Leakage-systems

Different sea
Harrington



few years

(n), more
Brennan)

impacts

CoE 2009;

'Brien)

hovac,

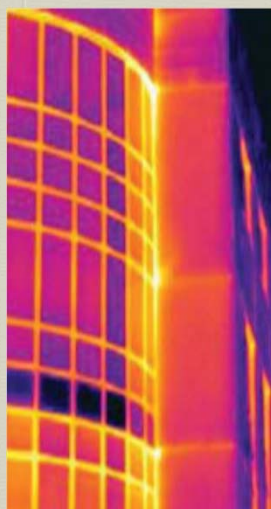
The Ghost of Airtightness Future

Materials
(White)
Education
Building &
Gonçal
IAQ impa
Retrofits
Stop using



Harrington,
Fagan,

Photographic highlights



Gadsby, Linteris, Dutt, Harrje.
1981. The Blower Door. Princeton
University/CEES report 124.

ADJUSTABLE WIDTH
ADJUSTABLE HEIGHT
FAN & PROTECTIVE SCREEN
PRESSURE DIFFERENTIAL GAUGE
RPM GAUGE
FAN SPEED CONTROL
BLOWER DOOR AND CONTROL PANEL

SEALS
PLYWOOD 3/4"
detail of width adjustment
INSIDE
KNURLED KNOBS
ALUMINUM PLATE
CONTROL CABLE BOX

Harrje, Blomsterber
Reduction of Air In
Window Retrofits in
Princeton University/CEES report 85.

