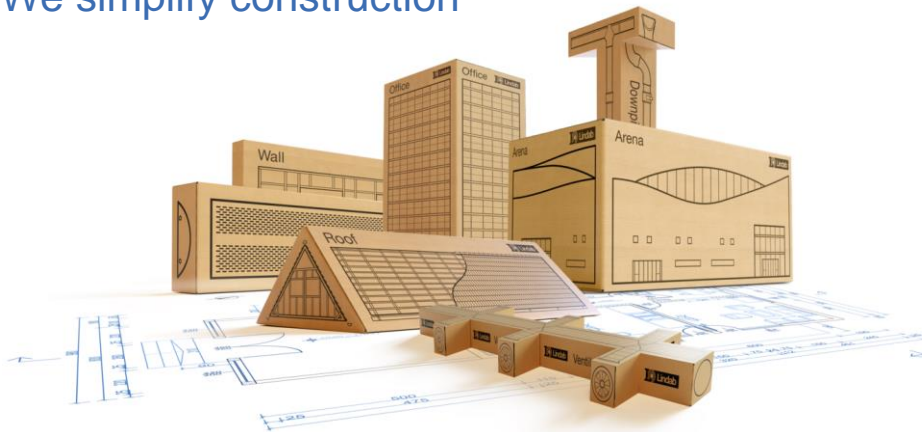




# Lindab Group

We simplify construction



## Measurement of air tightness in duct systems

- Quality label
- Handing over
- Saving energy





## Quality label

- More likely that the job is correct done
- Measurable value
- More interesting job for installer
- Recruit young good people
- Educate the installer to be better
- Professional pride



## Handing over

- Included in EN 12599
- Easy for the entrepreneur to check the system and pay the entrepreneur





## Save Energy

= Volume flow + Leakage

Pressure loss

$$P_{el} = \frac{\dot{V} \cdot \Delta p_t}{1000 \cdot \eta}$$

Save Energy  
Save Money  
Save The Earth



## Save Energy

$$P_2 = P_1 \times \left( \frac{\dot{V}_2}{\dot{V}_1} \right)^3$$

Save Energy  
Save Money  
Save The Earth



6% higher flow = 19% higher energy cost





## LT 600

- Simple machine
- Measure flow
- Measure Pressure
- Present result
- Professional presentation
- Conforms to all duct standards
- Able to measure AHU
- Able to measure without regulator



## Can be done by the installer

- Learn and make constantly better job
- Do not have to pay for expensive consultants.
- The test will be done





## Measurements accuracy

- Area Simple according to EN 14239
- Flow Difficult in 0,005-55 l/s
- Pressure Simple in 50-1000 Pa



## Accuracy LT 600

### Test values:

- **Pressure** measurement:
  - Principle: Piezoresistive semiconductor sensor
  - Measuring range:  $\pm 7000$  Pa
  - Resolution: 0.1 Pa to  $\pm 900$  Pa, then 1 Pa
  - Accuracy:  $\pm 0.5$  Pa or  $\pm 2.5\%$  of the test value, whichever is greater
- **Flow rate** measurement (based on 1013 hPa and 20 °C):
  - Principle: Hot film anemometer
  - Measuring range: 0.0000 to 55.00 l/s (230 V, 50 Hz)  
0.0000 to 40.00 l/s (110V, 60 Hz)
  - Resolution: 0.0001 l/s to 0.3000 l/s, 0.001 l/s to 3.000 l/s, 0.01 l/s > 3.00 l/s
  - Accuracy:  $\pm 0.0009$  l/s or  $\pm 5\%$  of the test value, whichever is greater
- Measuring range of adapters (5% accuracy):
  - Adapter 0.3: 0.01 to 0.3000 l/s
  - Adapter 3.0: 0.300 to 3.000 l/s
  - No adapter: 3.01 to 55.00 l/s
- Electrical connection
  - Power supply: 230 V, 50 Hz  
110 V, 60 Hz with reduced flow rate (40 l/s)
  - Current consumption: max. 9 A
- Working temperature range: 5 °C to 40 °C
- Storage temperature range: - 20 °C to + 50 °C
- Weight: approx. 9.5 kg (without accessories)





## Old system

- Bad accuracy
- Complicated to calculate



## We simplify construction

