



Energy efficiency

Freedom from structural damage

Healthy indoor air

For a healthy home

- For enhanced insulation performance
- For maximum structural protection
- For effective and efficient energy savings



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Airtightness...



the essential element to ensure thermal insulation is perfect
resulting in warmer, drier, healthier homes – all year round

Why is an intelligent airtightness system necessary for New Zealand homes?

Water vapour (humidity) moves through building structures in the following ways:

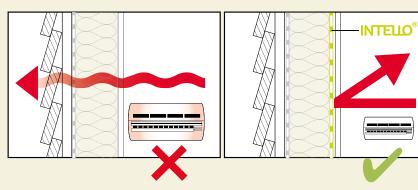
- a) air movement (convection)
- b) diffusion through materials

Therefore it is important to:

- 1. Control air movement through the building envelope
- 2. Protect structures from internally driven moisture
- 3. Allow structural drying to the inside

Benefits of Airtightness

Energy retention



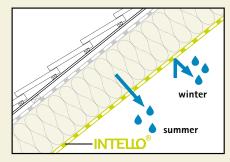
ENERGY EFFICIENCY

- Reduced air infiltration saves energy and therefore less heating / cooling appliances are needed
- Keeps your home warm in winter and cool in summer
- Solution to reduce New Zealand's overall energy dependence through greater energy efficiency

FREEDOM FROM STRUCTURAL DAMAGE

- Prevents moisture build up in the construction
- High drying capacity through the intelligent INTELLO membrane
- In-situ installation verification through WINCON test

Moisture control in summer and winter



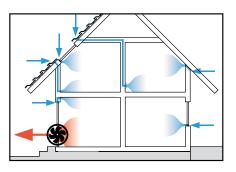
HEALTHY INDOOR AIR

- Eliminates contamination of the indoor air
- Prevents mould and mildew in the construction from internally driven moisture
- Enables controlled ventilation

Airtightness is measurable

WINCON - verification of installation

Verification of the installation of the Intelligent Airtightness System (IAS) is undertaken by using the pro clima WINCON. The simple and easy WINCON test allows air leakage to be identified by depressurising the building. The WINCON is readily available from your pro clima distributor.



Blower Door – measuring building performance

A Blower Door is a diagnostic tool which helps locate air leakage within the building envelope. Measurements are performed in pressurised or depressurised buildings, where climatic or other external influences are minimized due to the high pressure difference created by means of a fan. This allows for a reliable measurement of infiltration rates.

pro clima high performance Intelligent Airtightness System (IAS) for your home

- ✓ Humidity-variable airtightness membrane INTELLO®
- ✓ Multi-purpose adhesive tape TESCON VANA
- ✓ Multi-purpose liquid adhesive ORCON
- ✓ Airtightness grommets KAFLEX and ROFLEX
- ✔ Airtightness box for power points and light switches INSTAABOX



The INTELLO® airtightness membrane is laid on the interior, over the insulation. Bonding with adhesive tapes should be on the smooth printed side. Staples should be 10 mm wide and 8 mm long and set at a max distance of 100 mm -150 mm.

TESCON VANA



Seal the membranes at overlaps without strain or loading, using TESCON VANA adhesive tape. The tape should be applied centrally and pressed down firmly using, for example, pro clima PRESSFIX.

ORCON



The liquid adhesive ORCON is applied to join the INTELLO® membrane to concrete or wooden frames. Do not press the adhesive completely flat.



If pipes or cables penetrate the airtightness layer, they too must be securely sealed. KAFLEX cable grommets are self-adhesive. Remove the release paper, push over the cable and stick on.

ROFLEX



ROFLEX pipe grommets are affixed using TESCON VANA. Press firmly to secure the adhesive tape.



The airtightness box for power points and light switches is cut and fitted into the INTELLO® layer and then sealed by using TESCON VANA to create a seamless airtightness system.



INTELLO® PLUS Intelligent vapour check and airtightness membrane with humidity-variable diffusion resistance for active moisture management



ORCON

Multi-purpose liquid adhesive in cartridge or soft tubular film. The adhesive is applied to join the INTELLO membrane to concrete or wooden frames



TESCON VANA Multi-purpose adhesive tape for sealing membrane overlaps and other components



INSTAABOX This box allows for airtight installation of light switches and power plugs for wall systems without service cavity



ROFLEX / KAFLEX Sealing grommets for cables and pipes that penetrate through the INTELLO® membrane layer



WINCON Installation verification device

For more detailed information about the installation of the IAS please refer to the pro clima Installation DVD.

INTELO®

... the <u>essential</u> element to ensure thermal insulation performs to expectations resulting in warmer, drier, healthier homes – all year round

For more information please contact us:



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SOLITEX Roof Underlays and SOLITEX Wall Wraps are also offered by Pro Clima in New Zealand. These products provide a high degree of weather protection during construction and for the lifetime of the building.

The Intelligent Airtightness System "IAS" is very innovative and effectively eliminates uncontrolled air leakage and moisture build-up within the construction.

The INTELLO membrane whilst being airtight acts also as a "vapour check" eliminating condensation, damp, mould and rot. The result is structural soundness, enhanced thermal performance, reduced CO₂ emissions and improved indoor air quality. Homes and buildings are healthier, warmer, drier and more energy efficient throughout all seasons and regions in New Zealand.



