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ABOUT US

Leading player in air treatment & ventilation systems!

Unique company DNA: Producer & Installer

Over 25 years of experience

Situated in Tessenderlo – Belgium







WHAT DO WE DO





PRODUCTION



INSTALLATION

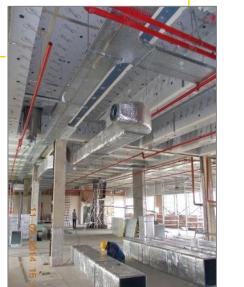


AFTERCARE



















WHAT MORE DO WE DO?

INNOVATION





DISTRIBUTION









WHAT MORE DO WE DO?







A unique & innovative partnership to distribute probiotics through the ventilation system!



INDUSTRY EVOLUTION

20 YEARS AGO



- Basic Insulation
- Not Airtight
- Natural Airsupply



TODAY

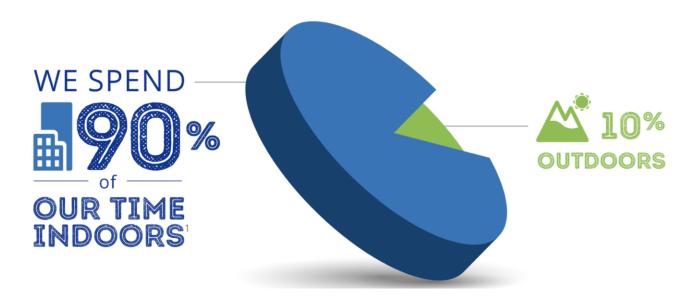


- Top-Insulation
- Airtight
- Mechanical Airsupply

Buildings have become significantly more airtight in recent years



INDOOR GENERATION



- 85% 90% of our time is spent indoors¹
 - At home, work, and public buildings (schools, malls, restaurants)
 - More than half of the body's intake during a lifetime is air inhaled in the home²



INDOOR AIR QUALITY

- We are spending more & more time inside buildings, and these buildings have become more
 & more tight, but are often not ventilated right...
- This has a profound impact on the Indoor Air Quality, and as a result our generation is almost constantly exposed to potential Indoor Air Pollution

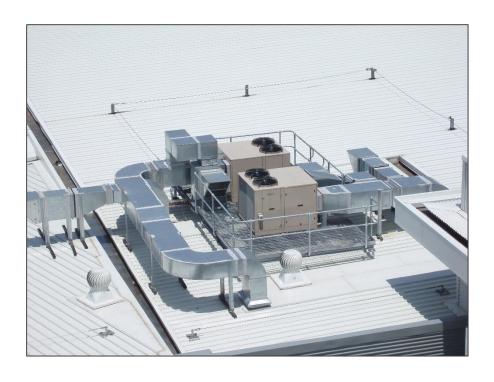
Some observations:

- Indoor Air Quality (IAQ) can be two to five times worse than outdoor air quality³
- A person's reaction to poor IAQ often mimic colds, allergies, flus or other illnesses
- To make matters worse: Those exposed for the longest periods are often those most susceptible to its effects – the young, elderly & chronically ill



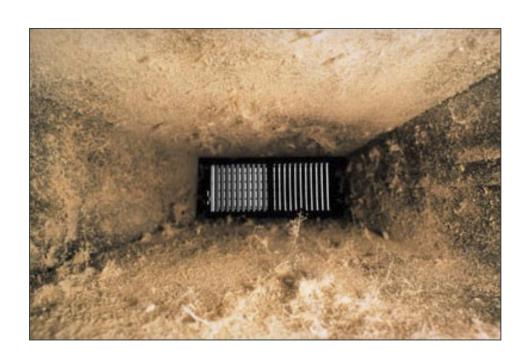
SHINY ON THE OUTSIDE







REALITY ON THE INSIDE





Ductwork often plagued by biofilm, volatile organic compounds, mould, allergens & dust...



TRADITIONAL "SOLUTION"

- Commercial Cleaning, Disinfection Cleaners, Deodorisation, ...
- Widely accepted, but major drawbacks:
 - UNSAFE: Biocides are used to <u>kill</u> all micro-organisms
 - LOW EFFICACY: Resistance of the biofilm
 - UNHEALTHY: Odour control with air refreshers
- These products **simply don't work!** They kill both the good & bad bacteria, and actually make things worse by giving new bacteria a food source (known as the biofilm) ...



OUR SOLUTION - I



- In order to tackle an issue that affects millions of people we developed a partnership with the leading player in the probiotics industry:
 - 25 years of experience in R&D and production
 - Stabilized Probiotics: Long Shelf-life
 - 100% Natural(!) micro-organisms
 - Best probiotics to battle and remove organic pollution
 - Safe for human & animal
 - No resistance → sustainable







OUR SOLUTION – II

- Together we harness the power of good bacteria to protect our environment (just like yoghurt for our body!)
- Not yet widely accepted, but major advantages:
 - SAFE: Creates a healthy & balanced microflora
 - HEALTHY: Protects indoor living spaces from air & surface contaminants
 - EFFICIENT: Ventilation perfectly distributes the probiotics
 - EFFECTIVE: Removes organic pollution by removing their food (the biofilm), without the biofilm there is no place for harmful germs to hide & hold dirt
 - SUSTAINABLE: 100% natural micro-organisms (no chemicals), safe for both human & animal



OUR SOLUTION IN THEORY

BEFORE CLEANING



All surfaces are covered with dirt and bacteria. Some colonies of bacteria are even protected by biofilm.



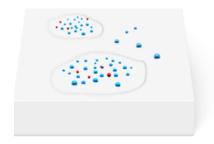
TRADITIONAL CLEANING



Detergents and Disinfectants kill most living microorganism on the surface, good or bad. Bacteria protected by biofilm remain mostly intact.



PROBIOTIC CLEANING



After ventilating with probiotics, the biofilm is consumed and harmful microorganism on the surfaces are reduced to the minimum.



Biofilm
 Dirt
 BadBacteria



OUR SOLUTION IN PRACTICE





FINAL THOUGHTS

- Ventilating is not the same as cleaning!
- Our solution makes your living environment clean, healthy & happy!
- Distributing probiotics by air is the perfect intersection between technology & biology:
 - 24/7 distribution Automated process increases comfort & life quality
 - Brings the indoor environment (air & surface) back in balance
 - Energy efficient
 - Quick & reliable add-on installation
 - Unique distribution technology with zero(!) impact on air humidity



SAFETY & SCIENCE

Vandini et al., 2014. Hard Surface Biocontrol in Hospitals Using Microbial-Based Cleaning Products.

Resultaten van de studie: In drie ziekenhuizen in België en Italië werd gedurende 2 jaar gereinigd met de probiotische PIP Ecolabel producten van Chrisal. Reeds na 3 weken werd een verlaging met 89% van het risico op resistente ziektekiemen vastgesteld in de verschillende ziekenhuizen.

Besluit van de studie: Probiotisch reinigen met de PIP Healthcare producten van Chrisal is een efficiëntere en duurzamere manier om een verlaagd risico op ziektekiemen in ziekenhuizen te bekomen op permanente basis.

Hard Surface Biocontrol in Hospitals Using Microbial Based Cleaning Products

Alberta Venden¹, Nebla Temmerman², Alexia Frabetti¹, Elizabetta Caselli¹, Paola Antonioli², Per Glorgio Balboni¹, Dorolei Pitanov², Alexia Brachen¹, Santa Rezacene²

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Caselli et al., 2016a. Impact of a Probiotic-Based Cleaning Intervention on the Microbiota Ecosystem of the Hospital Surfaces: Focus on the Resistome Remodulation.

Resultaten van de studie: Na twee jaar reinigen met de probiotische PIP Ecolabel producten ziekenhuizen, werd vastgesteld dat de hoeveelheid antibiotica resistentie sterk was gedaald. Bovendien bleken de probiotica geen enkel negatief effect te hebben op de aanwezige patiënten.

Besluit van de studie: Probiotisch reinigen met de PIP Ecolabel producten van Chrisal resulteert in de verlaging van antibiotica resistentie in ziekenhuizen en is volkomen veilig voor patiënten.



Caselli et al., 2016b. Safety of probiotics used for hospital environmental sanitation. Journal of Hospital Infection 94:193-208.

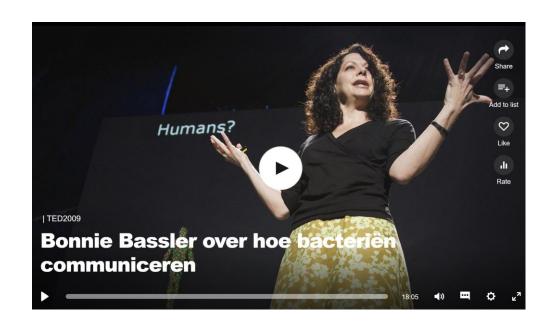
Resultaten van de studie: De PIP Ecolabel producten werden 6 jaar lang getest in ziekenhuizen en 32.000 stalen werden genomen om de veiligheid van de producten te testen.

Besluit van de publicatie: Het gebruik van de PIP Ecolabel producten in zorginstellingen is veilig, ook voor immuunverzwakte patiënten. Er was in al die jaren geen enkele melding van een veiligheidsprobleem met de patiënten.





SAFETY & SCIENCE



<u>Tedtalk</u> – How bacteria communicate



<u>Tedtalk</u> – Sick Building Syndrome



QUESTIONS?



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APPENDIX - SAFETY & SCIENCE

















O CPNP