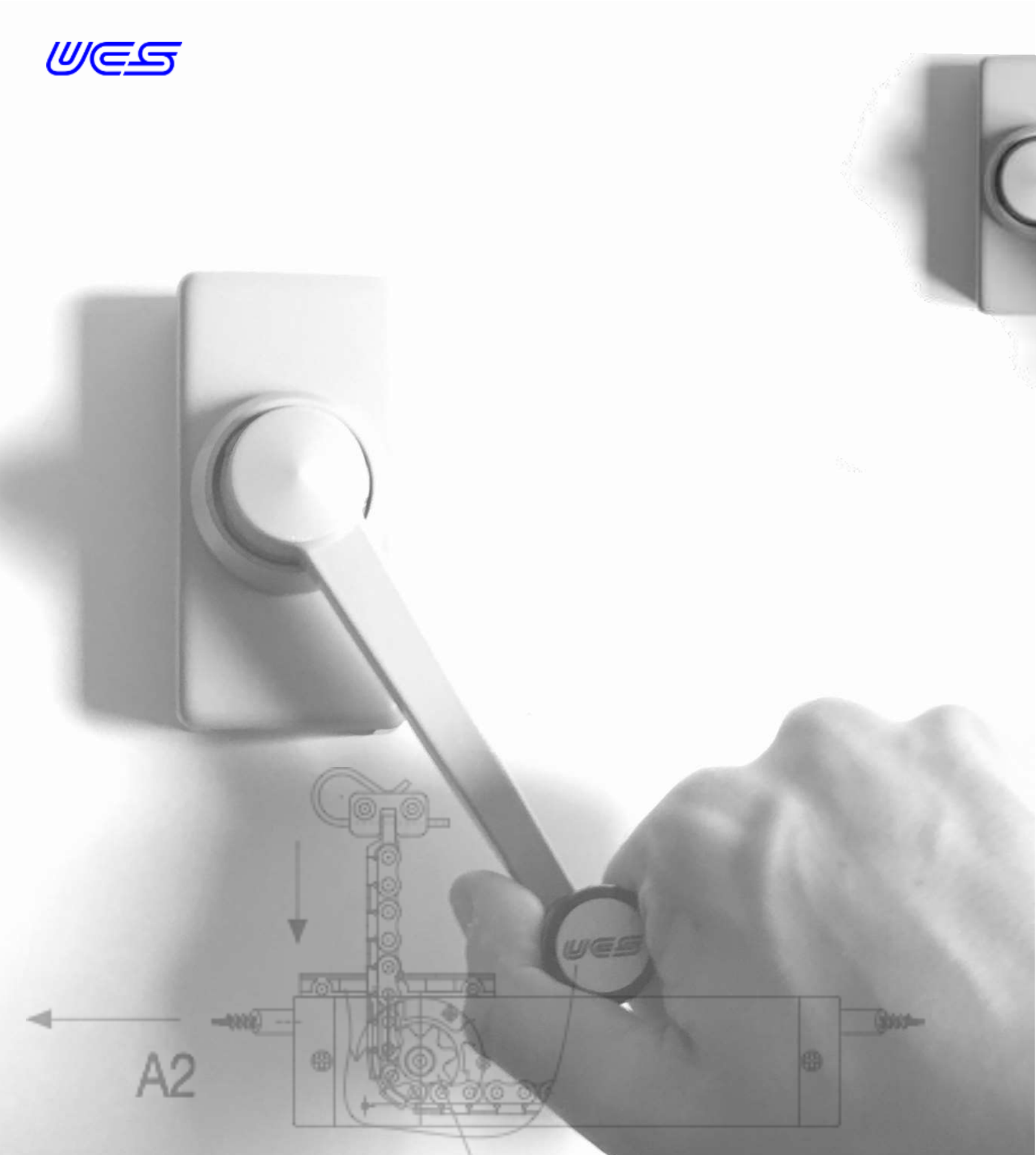
Ultraflex Control Systems

Window Automation for Green Building

Ultraflex Control Systems

We make buildings breathe



1970s

Manual solutions

Reliable and economical manual control for remote controlled windows. Basic natural ventilation without automatic environmental control.

1990s

Electric solutions

Introducing electrical window actuators and automatic meteorological control. Substantial improvement in comfort and ventilation creating the basis for today's integrated solution.

Evolution

Today Integrated solutions

New generation of compact actuators with integrated programmable circuit board, providing two-way communication with computer system. All actuator functions are totally programmable and the actuators provide 100% real-time feedback on their status. Integrating window automation with the BMS Building Management System will enable interaction with other systems in the building (HVAC, lighting …)

Energy saving
Comfort
Safety

Total communication between the natural ventilation system and mechanical/air conditioning system to optimize energy saving and assure thermal comfort and wellbeing, becoming health and productivity

At the same time the building's safety is assured by smoke ventilation in emergencies.

Energy saving

Natural Ventilation

Besides capital cost savings worth 15% as compared to air conditioning, naturally ventilated buildings also substantially save on energy due to lower costs for operating the natural ventilation solution (70 – 90% less), in addition to the qualitative, psychological effects on the building's occupants. With the mixed ventilation mode, integration and total communication is essential between the ventilation system and mechanical/air conditioning system, in order to reduce the power consumed by fans which could represent up to 25% of total power consumed by the building.

Comfort

Natural Ventilation

Latest surveys report that 90% of people are more satisfied with their indoor environment in naturally ventilated and mixed mode buildings than in buildings with mechanical ventilation and air conditioning; this preference is mainly due to the fact that occupants have easy access, can regulate their indoor environment and are not entirely cut off from the outside environment. A higher ventilation rate implies curbing the concentration of CO2 which can negatively affect people going about their daily tasks, and, in general, reducing cases of illness: 25% to 67% less sick building syndrome symptoms, to the advantage of productivity by 3-18%.

Safety

Smoke & Heat Extraction

Dedicated Control Panels and actuators, tested in fire conditions, operate windows, skylights and louvres to extract smoke.

- Smoke is the principal cause of death in a building on fire
- Emergency exits, escape routes must be free of smoke
- Firemen are able to enter, save lives and extinguish the fire

Adding value

Green building means added value

Natural Ventilation relies on natural forces and is therefore considered a passive solution by authoritative guidelines for sustainable and high performance building.

To conform to the U.S. Green Building Council guidelines, means to have the opportunity of earning credits for LEED certification and increase the value of the building

BMS LINE

Solution A

Integrating Window Automation with BMS

MY VENT

Solution B

Natural Ventilation Management System

Energy Saving
and Wellbeing

Reduced installation
& setup cost

Integration
in existing BMS

100% safety
condition

Benefits A + B

BMS LINE

MY VENT

Benefits

Saving on energy (40%-50%) and improved environmental wellbeing in the building.

Reduced cost of installation, maintenance and setup time.

Possibility to integrate with other Building Management Systems installed.

100% safety.

…without additional costs for royalties

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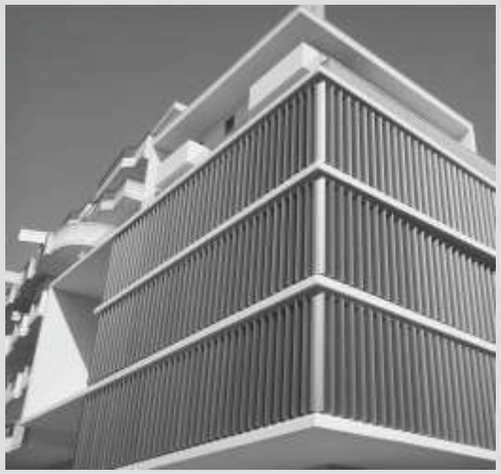

Kyprou Street, Greece

Mercedes Store, Jekaterinburg, Russia

KLIA Airport, Kuala Lumpur, Malaysia

Loyola University, Chicago, USA

DONG Energy HQ, Copenhagen, Denmark

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