ACTIF

THERMODYNAMIC DIFFUSERS

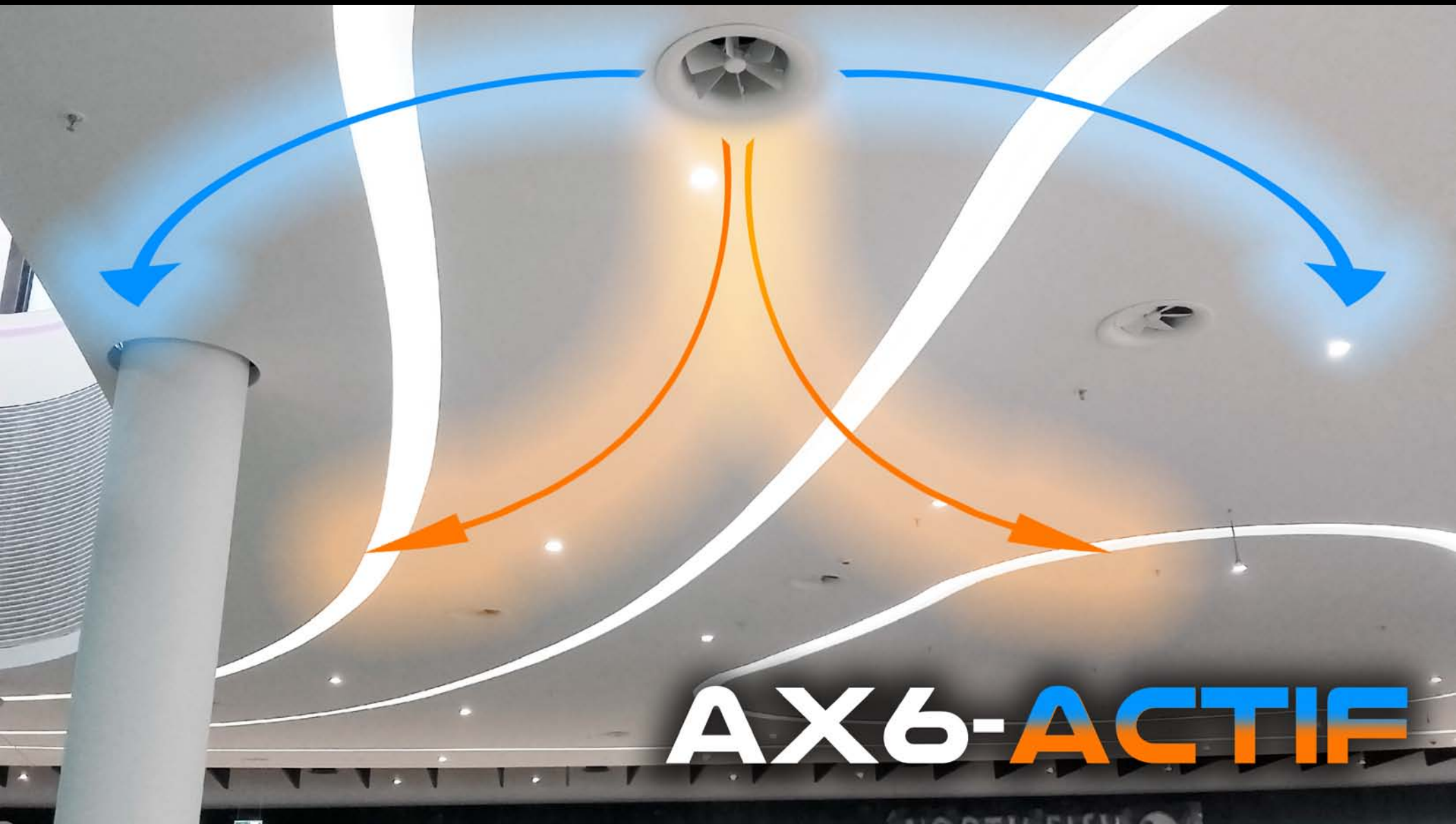
IMPROVING ENERGY EFFICIENCY, THERMAL COMFORT AND IAQ
IN BUILDINGS WITH HIGH CEILINGS

EFFECTIV™

AX6-ACTIF thermodynamic swirl diffuser for high ceilings

Available for 10", 12", 16", 20" and 25" duct diameters

Optional security grille to protect the blades, i.e. for sports facilities

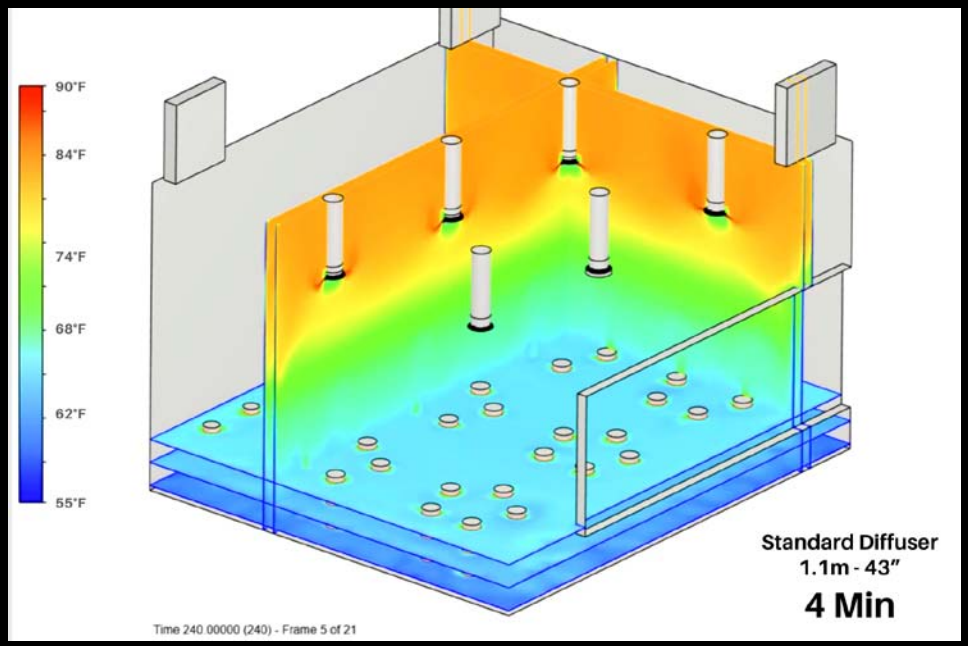


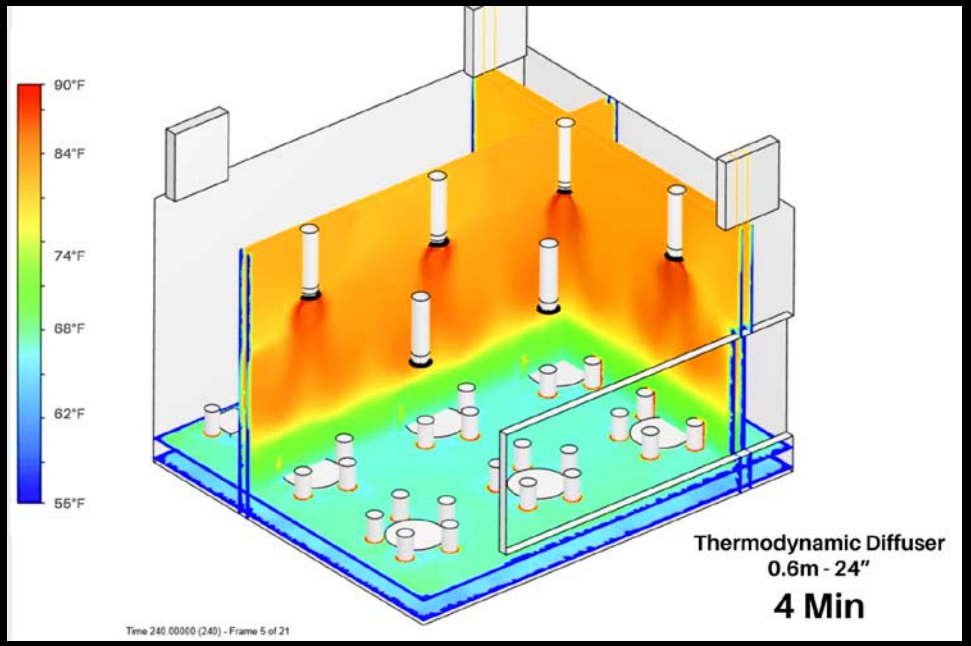
43% ENERGY SAVINGS IN HEATING

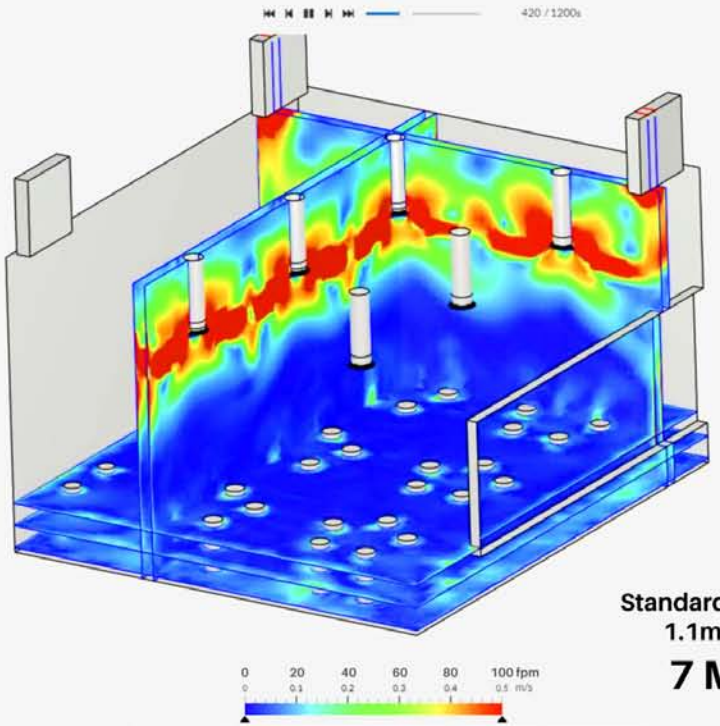
A CFD simulation of a restaurant with high ceilings concluded that thermodynamic diffusers helped improve thermal comfort and indoor air quality while saving 43% energy in heating.

AX6-ACTIF diffusers were compared to standard diffusers with and without ceiling destratification fans. AX6-ACTIF achieved occupants' thermal comfort much faster with less energy. They also provided better air jet velocity in the occupied space to ensure good air mixing for indoor air quality, without the undesirable air drafts provided by ceiling fans.

The thermodynamic diffusers were profitable as early as in the first year.

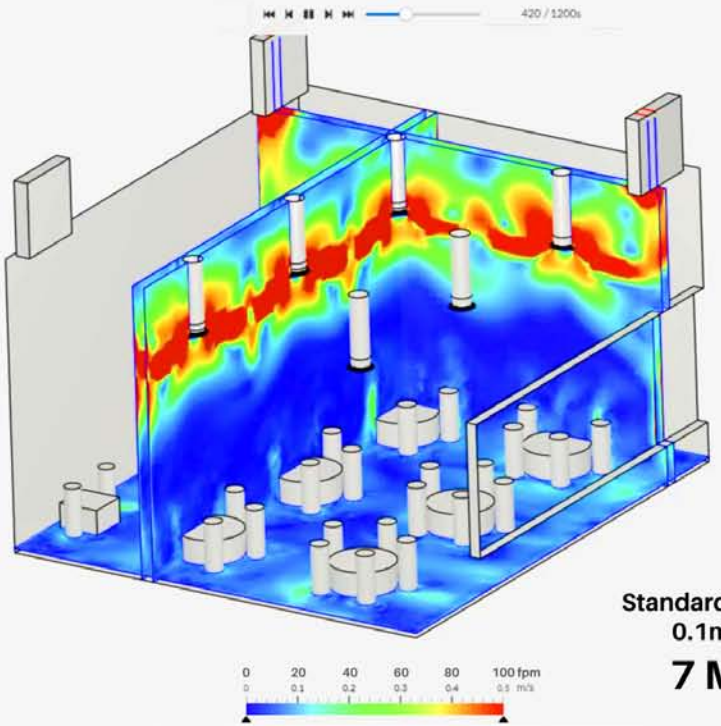






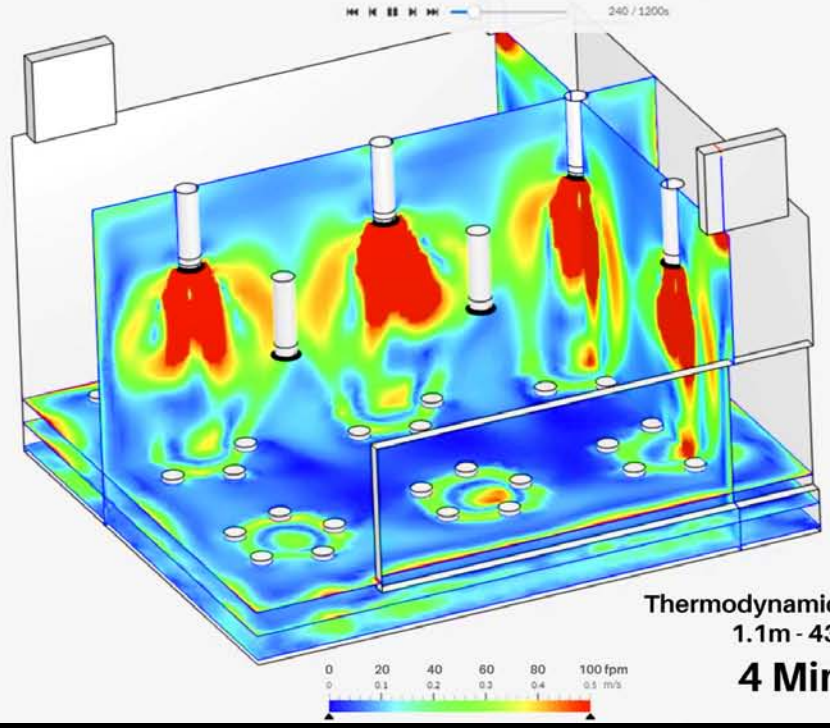
Standard Diffuser
1.1m - 43"

7 Min



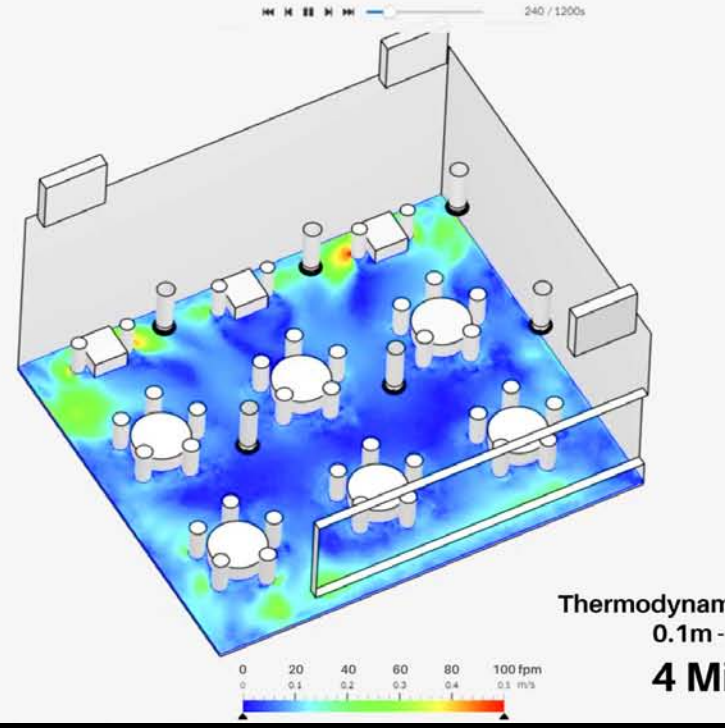
Standard Diffuser
0.1m - 4"

7 Min



Thermodynamic Diffuser
1.1m - 43"

4 Min



Thermodynamic Diffuser
0.1m - 4"

4 Min

DCG-ACTIF thermodynamic round diffuser for high ceilings

Available for 6", 8", 10" and 12" duct diameters

DCG-ACTIF

KAM-ACTIF

KAM-ACTIF thermodynamic nozzle jet diffuser

Available for 8", 10" and 12" duct diameters

Lower air density causes hot air to rise and stick to the ceiling, resulting in air stratification.

A lot of energy is wasted heating the air near the ceiling before we finally reach the desired temperature where occupants are.

Thermodynamic diffusers redirect the air jet based on the temperature of the air coming from the HVAC system and passing through the diffusers.

Hot air is diffused downward and cold air is diffused horizontally or upward in order to compensate for the difference in air density.

In other words, thermodynamic diffusers optimize air distribution to save energy and improve air mixing where it matters.

NO CONTROLS, NO ELECTRICITY

Thermodynamic diffusers use thermal spring or thermal wax actuators to automatically adjust the direction of the air jet. These are thermally reactive materials which do not require any electronics nor electricity to operate.

PLUG AND PLAY

No setup required. Thermodynamic diffusers are installed like regular diffusers and are already setup to work right out of the box.

WARRANTY AND DURABILITY

Our standard 2-year warranty against manufacturing defects applies to thermodynamic diffusers. The life expectancy of thermal actuators surpasses the normal life cycle of diffusers. Some thermodynamic diffusers were installed more than 10 years ago and are still functionning perfectly.

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EFFECTIV™

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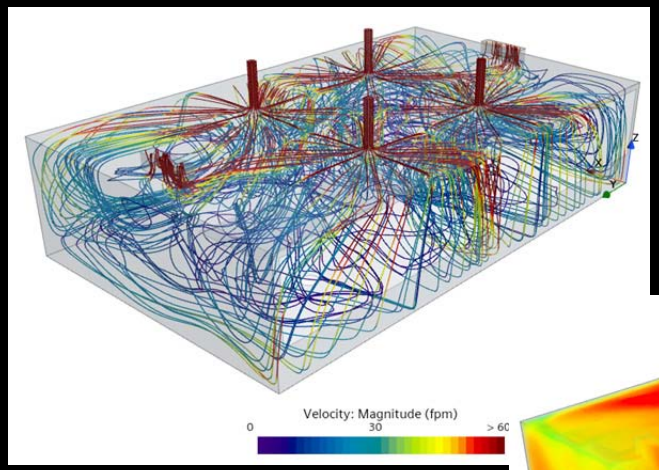
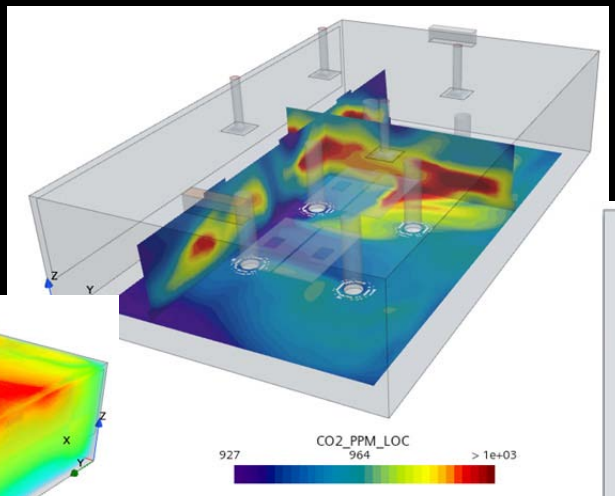
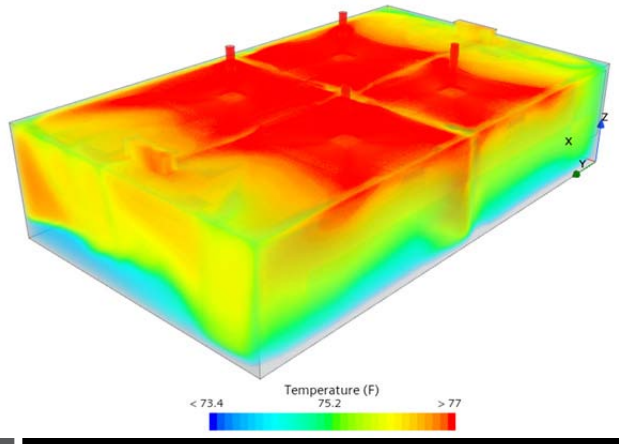
Air Distribution Performance CFD Validation Service

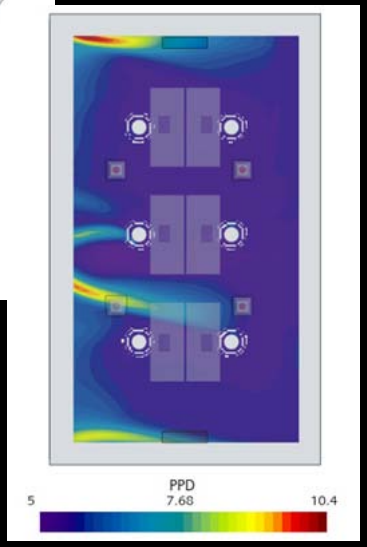
An advanced tool to validate and optimize your design, preventing problems before they happen

Obtain a detailed report about energy efficiency, thermal comfort and IAQ









Data included in report

Temperature	PMV/PPD
Air Velocity	CO2 PPM
Mean Age of Air	Ez Factor

Reports available within a few days

More information at EffectiV-HVAC.com/Verified