

Get Comfort and Save Energy with AirMotion Big Smart Fans™

a.k.a The Next Generation HVLS (High Volume Low Speed Fans)



Big Smart Fans are a study in leveraging Newton's three laws of motion.



Increase comfort and energy savings while reducing impact on the environment.

Key benefits

- **Cooling**
- **Heat DeStratification**
- **Supplement to Air Conditioning**
- **Ventilation**



Smartest Features in the industry



VPT™ (VARIABLE PITCH TECHNOLOGY)

**LETS YOU CHANGE THE BLADE PITCH 0° TO 20°
UP OR DOWN, TO CONTROL THE DIRECTION, INTENSITY
AND REACH OF THE AIR**



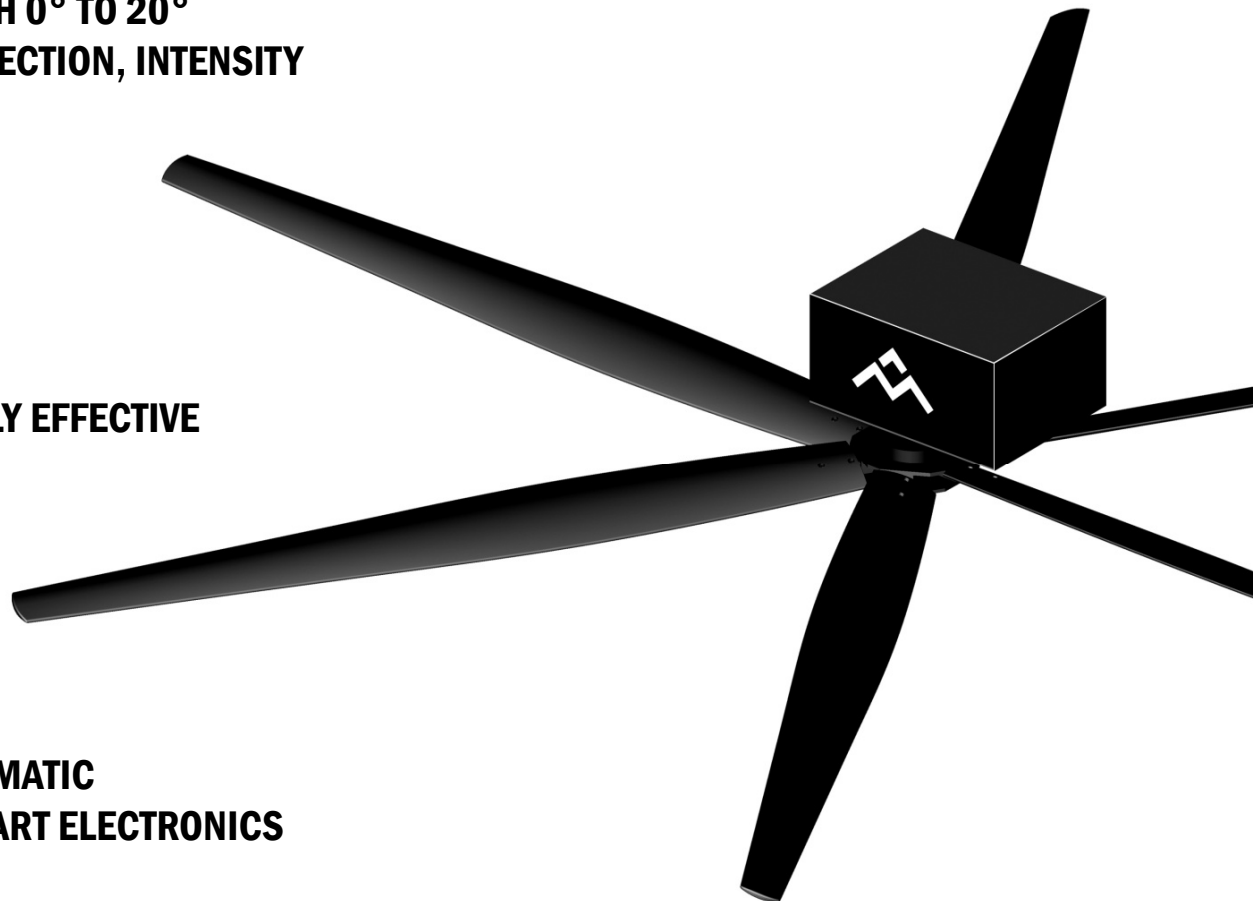
ROTATAIR™ COMPOSITE BLADES

**LOW TURBULENCE DESIGN, EQUALLY EFFECTIVE
IN MOVING AIR UP OR DOWN**

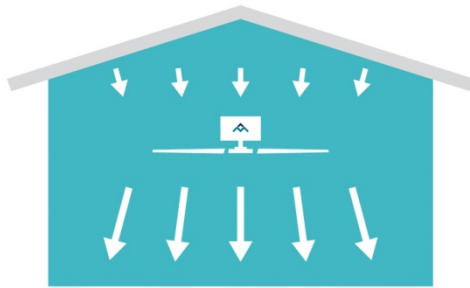


MULTIMODE SMART CONTROL

**PROVIDES MANUAL TO FULLY AUTOMATIC
FAN CONTROL WITH ON-BOARD SMART ELECTRONICS
AND TEMPERATURE SENSORS**

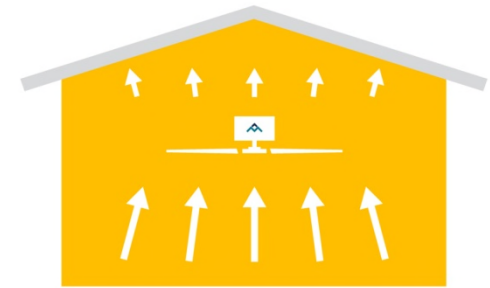


By using **Variable Pitch Technology™** Big Smart Fans provide you **Adjustable Air Movement** with one fan...



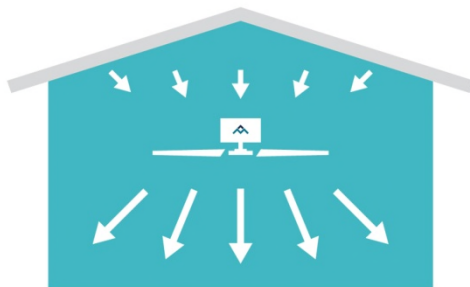
LOWER PITCH - DOWN

WHEN SET IN LOWER PITCH, THE FAN PROVIDES YOU A COLUMNAR AIR-FLOW



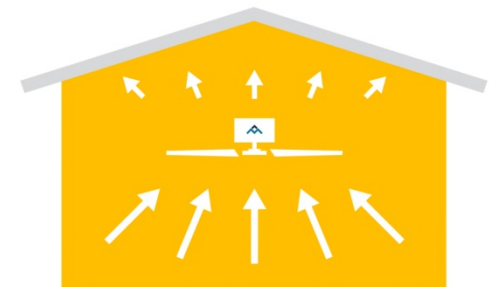
LOWER PITCH - UP

YOU CAN ALSO GET THE COLUMNAR AIR-FLOW UPWARD WITH THE SAME DEGREE OF PITCH SET IN REVERSE



HIGHER PITCH - DOWN

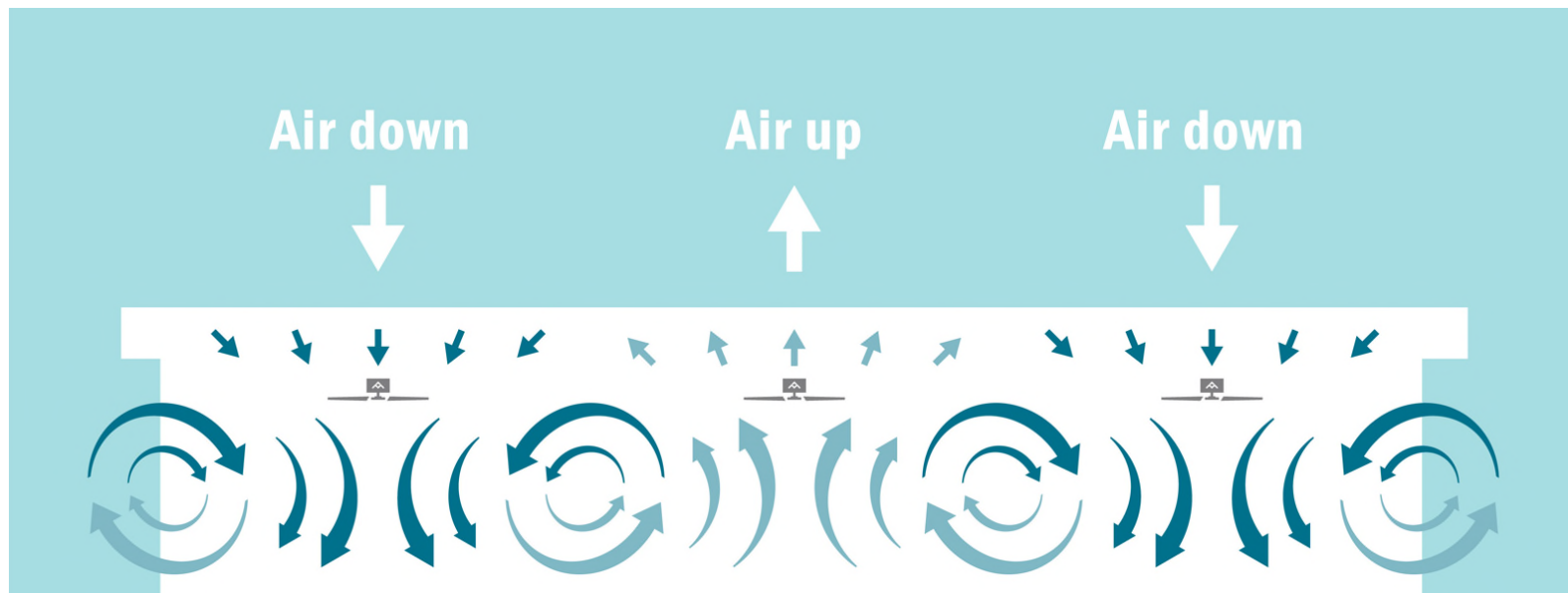
WHEN SET IN HIGHER PITCH, THE FAN PROVIDES YOU A MORE CONICAL AIR-FLOW FOR BROADER REACH, BETTER AIR MIXING, AND PERFORMANCE COMPARABLE TO MUCH LARGER HVLS FANS



HIGHER PITCH - UP

YOU CAN ALSO GET THE CONICAL AIR-FLOW UPWARD WITH THE SAME DEGREE OF PITCH SET IN REVERSE

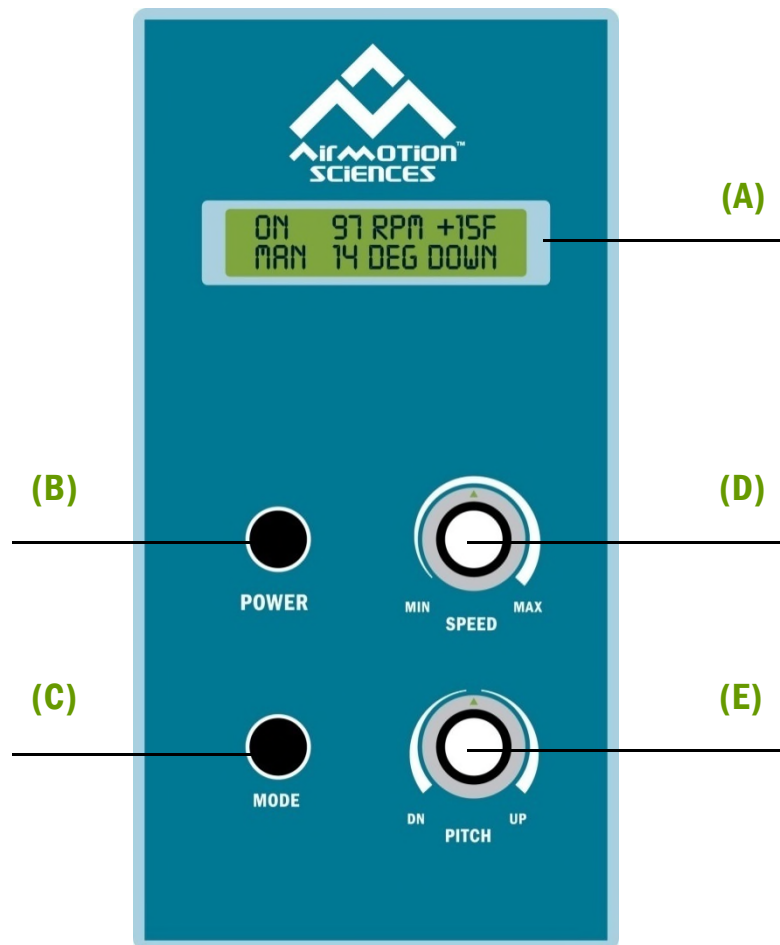
...and **Complete Facility Movement of air** with multiple fans arranged in an array at your facility.



WITH THREE OR MORE FANS ARRANGED IN AN ARRAY YOU GET AN ALL-ENCOMPASSING AIR MOVEMENT AND MIXING THROUGHOUT YOUR FACILITY BY ALTERNATING AIR FLOW DIRECTION UP AND DOWN - WHAT WE CALL COMPLETE FACILITY MOVEMENT OF AIR.

AirMotion Smart Controller

IT'S A SIMPLE BUT MULTI-FUNCTIONAL LOW VOLTAGE WALL BOX CONTROL UNIT THAT COMES WITH 100 FT OF WIRING SO IT MAY EASILY BE PLACED IN ANY CONVENIENT LOCATION TO OPERATE THE FAN.



(A) LCD DISPLAY

PROVIDES INFORMATION ON FAN SPEED, BLADE PITCH, OPERATING MODE, TEMPERATURE DIFFERENCES BETWEEN THE FAN UNIT AND THE CONTROL UNIT, AND OTHER FAN FUNCTIONS.

(B) POWER ON/OFF BUTTON

(C) MODE SELECTION BUTTON

SELECTS ANY OF THE FIVE OPERATING MODES.

(D) SPEED CONTROL DIAL

CONTROLS FAN SPEED FROM 20 - 120 RPM.

(E) PITCH SETTING DIAL

SETS THE BLADE PITCH FROM 0° TO 20° UP OR DOWN.

MultiMode Control Capability

MANUAL MODE

THE USER SETS THE FAN SPEED (20-120 RPM) AND BLADE PITCH ANGLE (0° TO 20° UP OR DOWN).

ECOMODE

THE FAN IS PROGRAMMED TO SELECT THE MOST ENERGY EFFICIENT PITCH ANGLE FOR A USER SET SPEED.

DESTRAT MODE

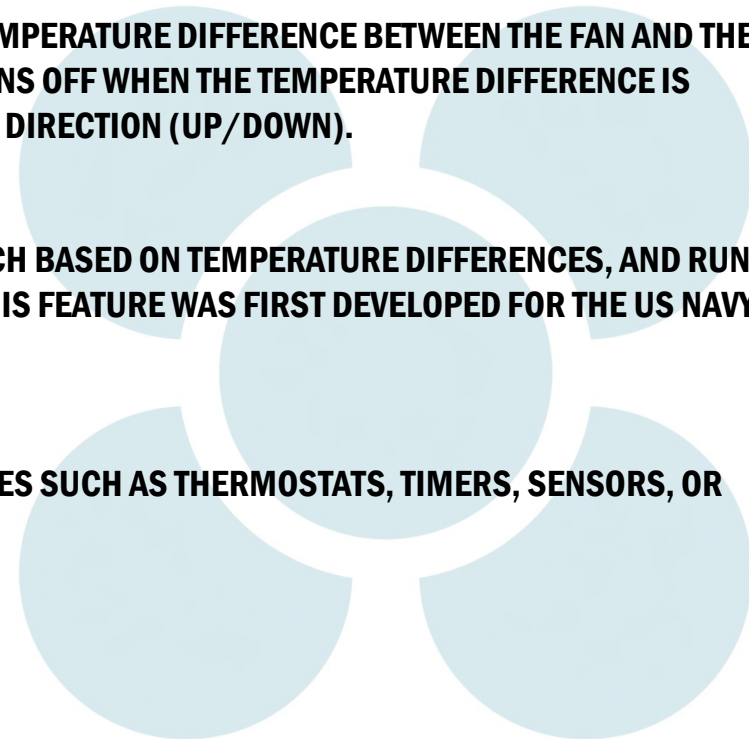
THE FAN TURNS ON AUTOMATICALLY WHEN THERE IS A PRE-SET TEMPERATURE DIFFERENCE BETWEEN THE FAN AND THE WALL BOX CONTROL UNIT (THE ROOF AND FLOOR LEVEL), AND TURNS OFF WHEN THE TEMPERATURE DIFFERENCE IS REDUCED TO A SET POINT; AT USER SET SPEED, PITCH ANGLE, AND DIRECTION (UP/DOWN).

AUTOMODE

THE FAN SELECTS THE COMBINATION OF OPTIMAL SPEED AND PITCH BASED ON TEMPERATURE DIFFERENCES, AND RUNS AUTOMATICALLY. THE USER JUST SETS DIRECTION (UP/DOWN). THIS FEATURE WAS FIRST DEVELOPED FOR THE US NAVY, NOW INCORPORATED IN ALL AIRMOTION BIG SMART FANS.

EXTERNAL INPUT MODE

THE FANS CAN ALSO BE RUN BY USER SPECIFIED EXTERNAL DEVICES SUCH AS THERMOSTATS, TIMERS, SENSORS, OR OTHER DEVICES.



A Fan For All Seasons – keeps you cool in summer, and warmer in winter.

Cooling

AirMotion big fans provide a natural cooling effect of 4-5° or more - by creating a pleasing, non-disruptive breeze. With the low to high speed capability of our fans (20 to 120 RPM) one can also adjust the fan speed to create a stronger breeze if desired.

Ventilation

AirMotion big fans mix incoming fresh air with the indoor stale air to maintain a refreshing and healthier environment while also minimizing the volume of air (and corresponding loss of warm or cool air) that needs to be replaced.

Heat DeStratification

In the winter, facilities with heaters installed at the roof level or around the walls, can experience 8° or more difference in temperature from floor to roof (as hot air always goes up). Big Smart Fans mix the trapped warmer air from roof level with colder air down at the floor level to maintain a uniform temperature throughout the facility and save 20% or more in heating costs.

Air Con Supplement

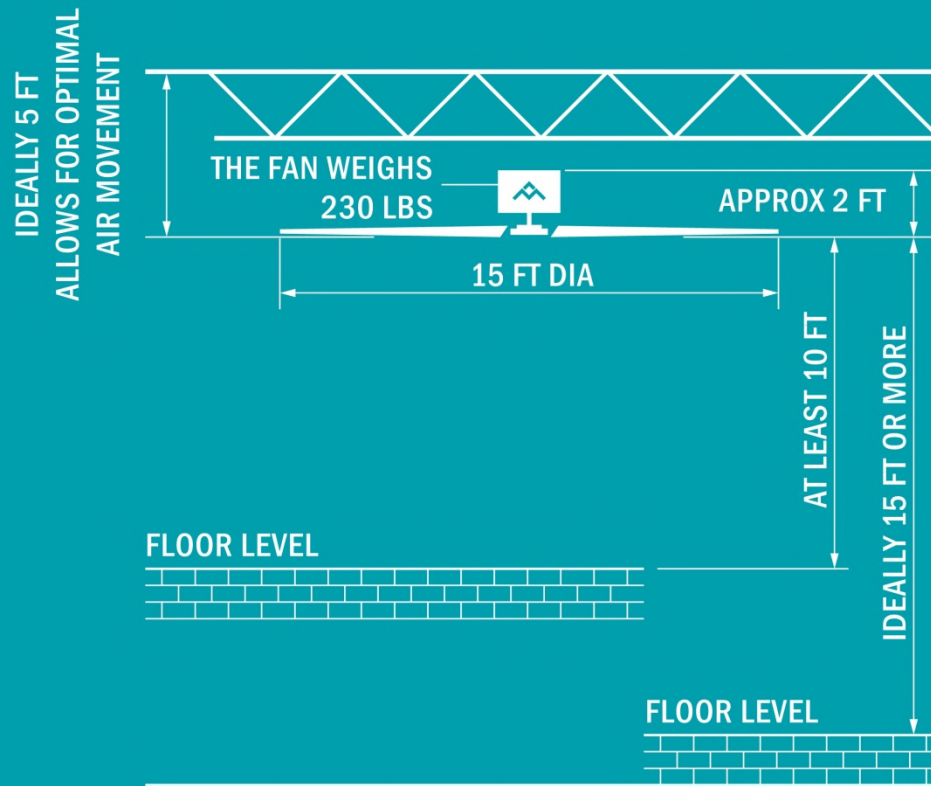
AirMotion big fans are an effective supplement to Air Conditioning. They allow for 4° to 5° higher thermostat settings by creating equivalent cooling effect (of lower settings) with efficient air mixing, and provide 3% to 5% savings on energy costs per degree of thermostat reduction. They also reduce the need for costly ducting installation

Key Specifications (for 4.5 m diameter fan)

NUMBER OF BLADES	6 ROTATAIR™ COMPOSITE BLADES
MOTOR	ONE 1.5 HP TEFC HIGH EFFICIENCY
FAN SPEED	20 RPM (MIN) TO 120 RPM (MAX)
BLADE PITCH	VARIABLE (VPT™) 0° TO 20° UP/DOWN
M³/M (CUBIC METERS PER MINUTE)	9,600 M³/M (340,000 CFM) @ 90 RPM AND 20° PITCH (ACTUAL FIGURE DEPENDS ON THE SPEED AND PITCH OF OPERATION)
APPROX. FAN WEIGHT	110 KG. (INCLUDING CONTROL UNIT AND MOUNTING HARDWARE)
POWER SOURCES	240V SINGLE PHASE IS STANDARD (DESIGNED TO WORK WITH ALL POWER SOURCES)
EFFECTIVE COVERAGE AREA	UP TO 1,850 M² OR MORE (DEPENDING ON SPEED AND PITCH)
RECOMMENDED SPACING	UP TO 27 M OR MORE BETWEEN FANS (DEPENDING ON SPEED, PITCH, AND AIR MOVEMENT OBJECTIVES)
MINIMUM HEIGHT	TOP OF UNIT 0.3 TO 0.9 M BELOW ROOF LEVEL, BLADES SHOULD BE MINIMUM 3 M ABOVE FLOOR

Big Smart Fans are designed to provide a complete and more effective air movement than most larger fans.

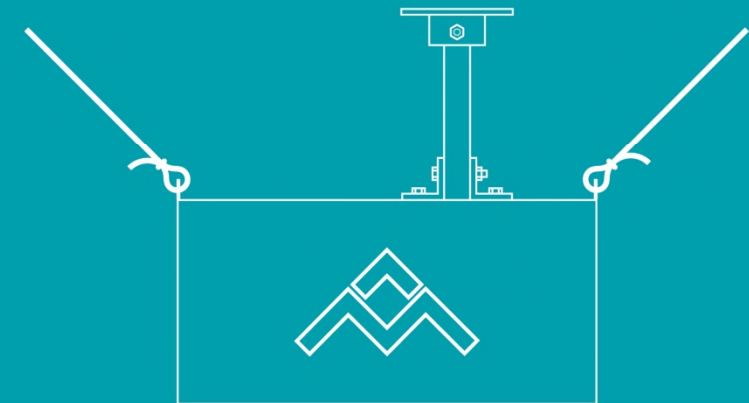
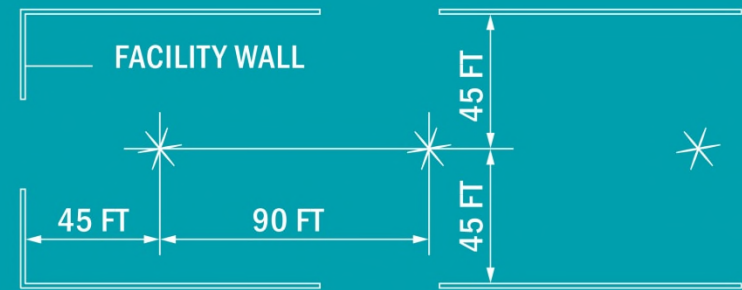
Locating The Fan



ROOF LEVEL

FLOOR LEVEL

FLOOR LEVEL



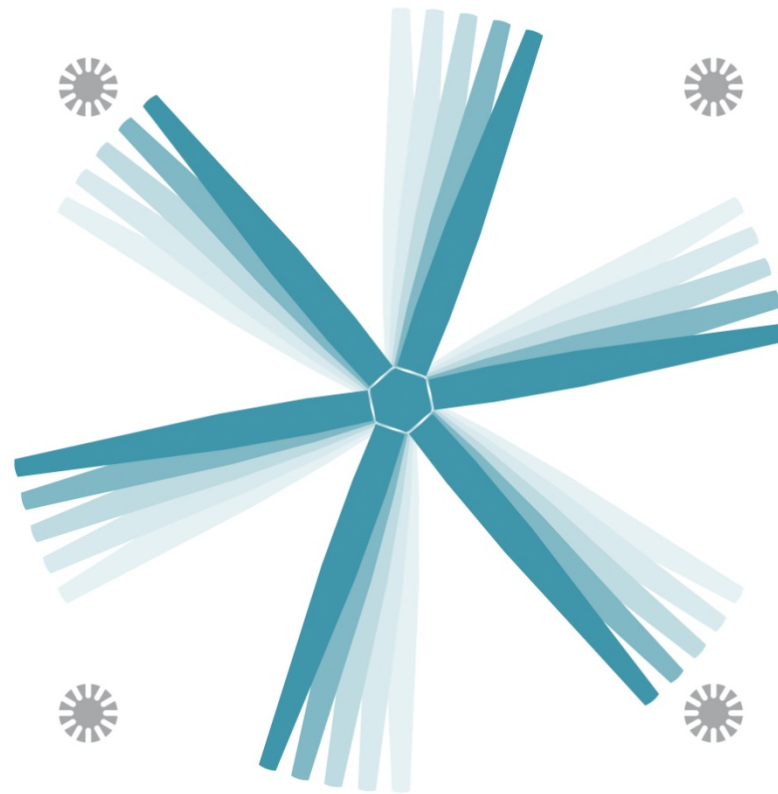
For typical cooling objectives we recommend one fan for up to 900 m² or more, and for heat de-stratification and general air mixing we recommend one fan for up to 1,800 m² or more as desired.

Innovative Fan Sizes

THE INNOVATIVE SIZING OF AIRMOTION BIG SMART FANS ALLOWS THEM TO BE INSTALLED AND OPERATE WITHIN MOST COMMONLY SPACED FIRE SUPPRESSION AND LIGHTING SETUPS.

A 4.5 m Big Smart Fan can provide up to 33% more M^3/M than older generation 7 m HVLS fans, and save more energy.

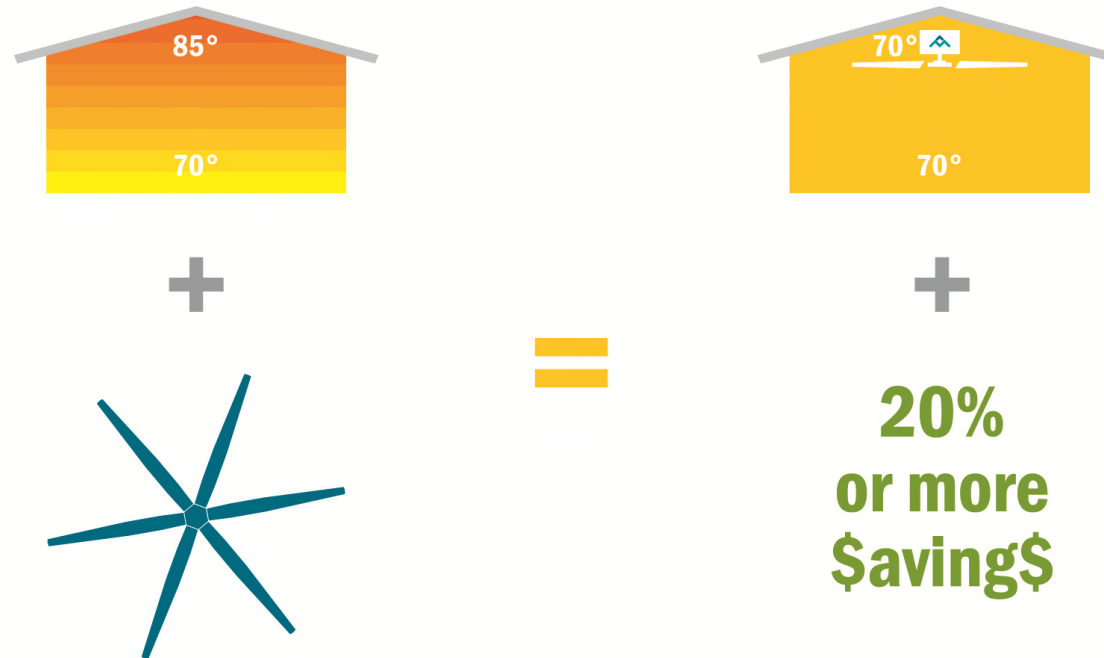
It doesn't need to be So Big, if it's Smart.



Big Smart Fans are one of the fastest, easiest, least expensive, and smartest ways for facilities to go green when compared with other technologies like wind power or solar energy.



ENERGY SAVINGS



IN THE COLDER MONTHS, GREATER COMFORT MAY BE ACHIEVED FROM RUNNING THE FANS AT LOWER SPEEDS AND ALTERED PITCH (WITHOUT CREATING A CHILLING BREEZE), INCLUDING BLOWING AIR UPWARDS, TO BRING TRAPPED WARM AIR FROM THE ROOF DOWN TO FLOOR LEVEL TO MIX AND MAINTAIN A UNIFORM TEMPERATURE (CALLED, DE-STRATIFICATION OF THE HEATED AIR) THROUGHOUT THE FACILITY, WHILE MAKING SIGNIFICANT ENERGY SAVINGS BY REDUCING HEATER CYCLE TIME.



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