

Z-CHILL™ FAN & DIFFUSER SYSTEM is a breakthrough, patent-pending system designed to effectively spot cool or heat the unconditioned space within a facility by dispersing conditioned air and/or forced heat evenly over the Z-Tech™ fan blades to provide companies an economical spot cooling and heating system to keep businesses operating at their highest level.

Different is cool®.

Features

Blade & Hub Design

- Patent-pending Z-Tech™ blade design with 20° plus pitch
- Symmetrical Z-Tech™ blade design allows for true reversibility for year-round operation
- Pitched hub design with same 20° plus pitch as blade
- Designer series offers custom color combinations and designs

Motor

- NORD™ motor utilizes cast iron housing with a precise shaft and gear alignment that has a high load bearing capacity
- Single housing block in which all bearing points are integrated. No sealing faces are subjected to torque or lateral forces
- IP55; UL 1004; 120/230/460/575v; 1 and 3 phase available

Diffuser

- Patent-pending design tailored to the design of the Z-Tech™ blade technology

Controller

- Open-platform ABB™ controller
- NEMA 4X; IP66/67 variable frequency drive
- ESFR (Early Suppression Fast Response) and ROHS compliant
- NECA standard built-in LOTO (lock out, tag out) disconnect

Installation

- Suitable for mounting to I-beam, top or bottom chord angle iron, L-bracket and Z-purlin; multiple installation applications available

Benefits

Blade & Hub Design

- Moves air at 425,000 CFM (cubic feet per min)
- Increases coverage area up to 30% compared to other HVLS fans
- No wind chill created when using Z-Tech™ fan in reverse operation
- Up to 40K sq ft destratification coverage; reduces energy heating costs
- Eliminates air-flow dead zone under the fan
- Ability to customize Z-Tech™ fan to best compliment your facility

Motor

- Autovent prevents bearing and gear damage by utilizing cleaner gearbox oil with an extended lubrication life and longer lasting seals, gears and bearings
- Quadralip sealing provides superior protection against leaks and contaminants

Diffuser

- Even air or heat distribution across all 5 Z-Tech™ blades
- Internal insulation to prevent/minimize condensation on outside of diffuser; configured for 16" round ducting
- Maximum 20 ton capacity

Controller

- Steamline building management systems
- Largest heat sink in the industry
- Easy +24 VDC connection to existing alarm systems
- Control up to 26 fans from a single controller

Installation

- Safety ring: ¾" powder coated steel
- Safety cables: 5/16" stainless steel aircraft cable
- Guy wires: 1/8" stainless steel aircraft cable (with down tubes 4ft<)
- Lifetime warranty: blades, hub and mounting system
- 15-year warranty: motor, gearbox and hub

WHAT IS Z-TECH™

The patent-pending Z-Tech™ stepped blade is an enhanced form of venting and venting creates better air displacement.

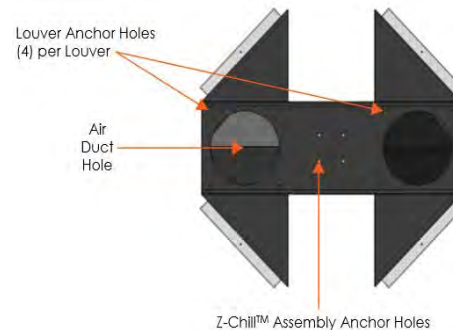
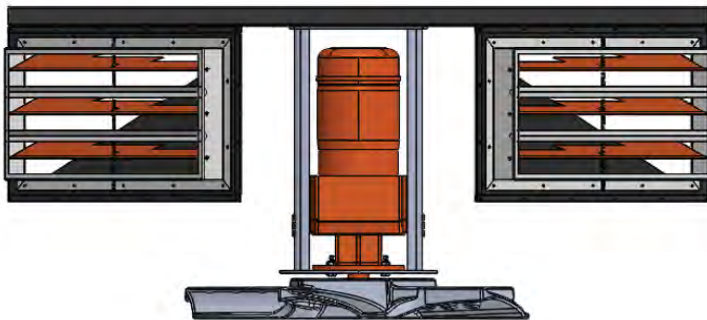
The stepped blade allows the velocity of air flow to move past the steps at which point the pressure immediately decreases allowing for a significant increase in thrust and air movement.



HOW TO SIZE A Z-CHILL™ FAN & DIFFUSER SYSTEM FOR YOUR FACILITY

Fan Diameter	Coverage Area (Cooling)	Coverage Area (Destratification)	Typical Spacing Between Fans	Minimum Spacing From Wall	Clearance Needed From Ceiling	Minimum Blade Height
16 FOOT	130 FT	160 FT	120 FT	16 FT	5 FT	16 FT
18 FOOT	135 FT	180 FT	125 FT	18 FT	6 FT	18 FT
20 FOOT	150 FT	200 FT	140 FT	20 FT	6 FT	20 FT
22 FOOT	165 FT	220 FT	155 FT	22 FT	6 FT	22 FT
24 FOOT	180 FT	240 FT	170 FT	24 FT	6 FT	24 FT

Z-CHILL™ DIFFUSER



- Dual Z-Chill™ diffusers are specifically designed to equally distribute both filtered, conditioned and or forced heat into the designed air distribution pattern of the Z-Tech™ (16 - 24ft) fans. Includes a closed cell thermal insulation design with pvc jacketing to prevent/minimize condensation on the outside of the entire unit.
- Z-Chill™ diffusers incorporate stepped Z-Tech™ internal prisms to equally split the incoming conditioned air and the adjustable stepped Z-Tech™ vented louvers are designed to equally distribute the air across the entire circumference of the 5-blade Z-Tech™ stepped fan blade design. The diffusers include bottom perforations that are designed to disperse air spread in the center.
- The system is direct mounted between the down tube and weldment and motor/hub mounting yoke hardware and requires no additional support. The incoming spiral insulated ducting (provided by others) will need support prior to final connections. Dual Z-Tech™ diffusers feature 16-inch round HVAC ducting receptacles. Receptacles are rated for 5-10 ton HVAC capacity each (supplied by others). It is recommended all attached spiral inlet ducting be wrapped and insulated.
- Z-Chill™ works the same with tempered forced air (HVAC systems) for both cooling and heating. Roof top (industrial & commercial) units as well as split systems incorporate energy efficient heat pumps that can disperse the heat through the Z-Chill™ dual diffusers.
- True reversibility is achieved because of the symmetrical Z-Tech™ blades including the engineered pitch, rake and cup. Applying forced heat and stratifying several thousand square feet without creating uncomfortable wind chills make this superior patent-pending technology the only chameleon to properly solve conditioned air movement in large spaces at a low operating cost.