REFRESH® Fans inc.
Efficient. Effective. Essential.

EQ RANGE HIGH VOLUME LOW SPEED FANS

Technical Specification

CE

APPLICATION

The EQ range of high volume low speed fans are designed to be installed in high ceilings to redistribute air towards floor level.

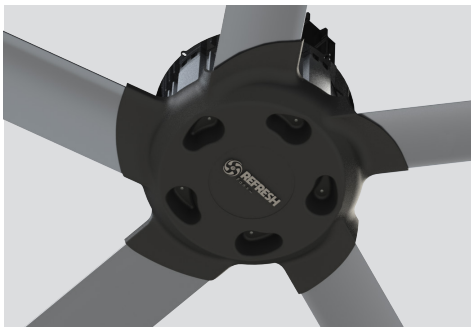
They generate an airstream which covers a large area and creates a cooling effect in summer months, while through destratification in winter pushing the warm air down to occupant level.
They are suitable for commercial, industrial and agricultural applications such as warehouses, manufacturing facilities, auto industry, shopping malls, airports, sports centers, greenhouses, cannabis production, and dairy farms.

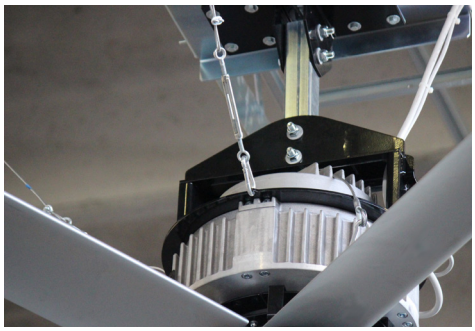
CONSTRUCTION

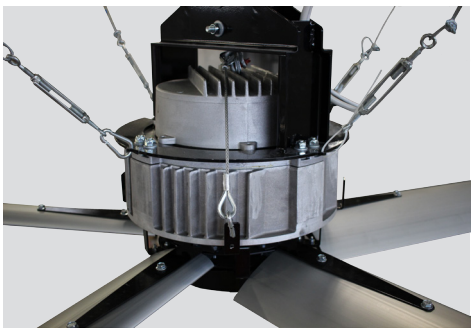
- Upper frame made of painted iron welded structure to protect the motor.
- Safety cables and guy wires included for maximum safety and stability
- Standard 32" downrod (different lenghts available).
- 5 specially designed airfoils made from aluminum EN AW 6063 T6. The surface is anodized to avoid corrosion.
- Aerodynamically shaped blade terminals made in plastic.
- Custom hub design, complete with redundant safety features.
- High efficiency three-phase EC brushless motor purpose built for HVLS technology, 200-480Vac/3ph/50/60Hz, IP65, with integrated electronic system and EMC filters. Suitable for S1 continuous service. Variable speed controllable.

FEATURES & BENEFITS

- Silent operation thanks to gearless motor and custom airfoil design.
- Ideal to integrate with HVAC systems, for energy saving and CO2 emission reduction.
- In winter months they are suitable for destratification of an environment by pushing the warm air towards the floor level, so to even the temperature and to prevent the HVAC system from running inefficiently.
- In summer months the constant breeze eliminates hot and cool spots in the building by improving the internal environment and creating a natural cooling effect. The air movement also helps keep insects away.
- Maintenance free motor.
- Robust steel structure for long life.
- Key safety features (main security wire, additional stabilizing cables, hub safety ring).
- Blades terminals designed to optimize performance and acoustic comfort.
- Hub cover to protect the motor from dust and better aesthetics.
- Simple electrical connections.
- Integrated EMC filters to prevent electromagnetic interference from other devices.
- Fan are suitable for operating temperatures up to +50°C.
- Unit performances are tested to the latest AMCA standard meaning accurate information that can be relied upon.
- Designed and manufactured in accordance with Machinery Directive (MD), Low Voltage Directive (LVD), Electromagnetic Compatibility Directive (EMC) and 327/2011 Regulation (ErP Directive).
- IP 65 rating for easy cleaning with water jets.







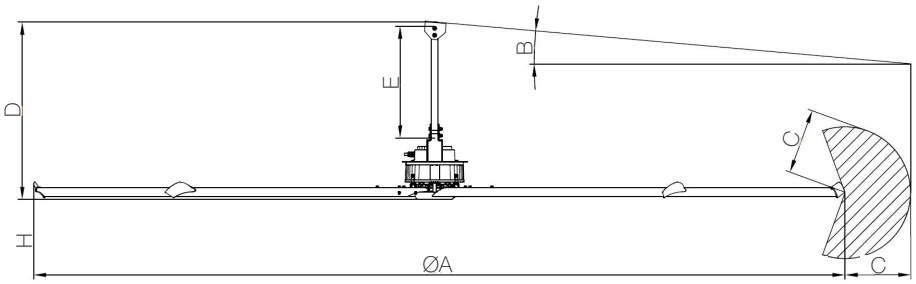
TECHNICAL SPECIFICATIONS

Description	Diameter (A)	Weight	Airfoil Clearance on sides (C)	Max Speed	Max affected diameter	Sound[1] Lp	Electric Power	Max Current	Minimum Circuit Size
	ft (m)	lb (kg)	ft (m)	RPM	ft (m)	dB(A)	hp (kW)	A	
EQ10	10 (3.1)	176 (80)	1.2 (0.35)	130	98 (30)	55	1.1 (0.85)	3.8	10A@200-240V, 3Φ 10A@400-480V, 3Φ
EQ12	12 (3.7)	194 (88)	1.5 (0.45)	85	117 (36)	52	0.8 (0.60)	2.6	
EQ14	14 (4.3)	220 (100)	1.5 (0.45)	80	136 (41)	55	0.9 (0.66)	2.7	
EQ16	16 (4.9)	234 (106)	1.8 (0.55)	70	156 (48)	56	1.1 (0.80)	3.5	
EQ18	18 (5.5)	249 (113)	1.8 (0.55)	63	176 (54)	49	1.2 (0.86)	3.6	
EQ20	20 (6.1)	260 (118)	1.8 (0.55)	55	195 (59)	50	1.2 (0.90)	3.7	
EQ24	24 (7.3)	282 (128)	1.8 (0.55)	51	234 (71)	55	1.6 (1.20)	4.8	

@240V/60Hz supply, max speed

(1) Sound testing taken with the sensor 1.5m above the floor and 6m from the centre of the fan at 5m high, measured in a laboratory environment. Actual results in field conditions may vary due to sound reflecting surfaces and environmental conditions.

Description	EQ10	EQ12	EQ14	EQ16	EQ18	EQ20	EQ24
CFEI @ 100%	1.07	1.32	1.01	1.07	1.27	1.05	1.37
CFEI @ 40%	2.92	2.86	2.27	2.36	2.68	1.69	1.56



Description	ØA	B max ceiling slope	C min safety distance from side obstruction	D fan height with standard downrod	E standard downrod length	H min fan installation height
	in. (mm)	°	in. (mm)	in. (mm)	in. (mm)	in. (mm)
EQ10	120 (3050)	15	14 (350)	49 (1250)	32 (800)	120 (3050)
EQ12	144 (3650)		18 (450)			
EQ14	168 (4250)			50 (1270)		
EQ16	192 (4850)		22 (550)			
EQ18	216 (5450)			51 (1304)		
EQ20	240 (6050)					
EQ24	288 (7300)					

NFPA 13 STANDARDS FOR HVLS FANS

Maximum allowable fan diameter of 24 feet.
Fans must be approximately centered between four adjacent sprinklers.
There must be a 3 foot minimum clearance from the sprinkler deflector to the fan.
Fans must be interlocked to shut down immediately upon receiving a water flow signal from the fire alarm system.

ACCESSORIES

- Different length downrod.
- Potentiometer speed control with LED indicator.
- iBeam mounting kit.
- Glulam mounting kit.
- Aesthetic hub cover.
- Smart Touch Controller.
- Z purlin brackets.
- Custom blade color.

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