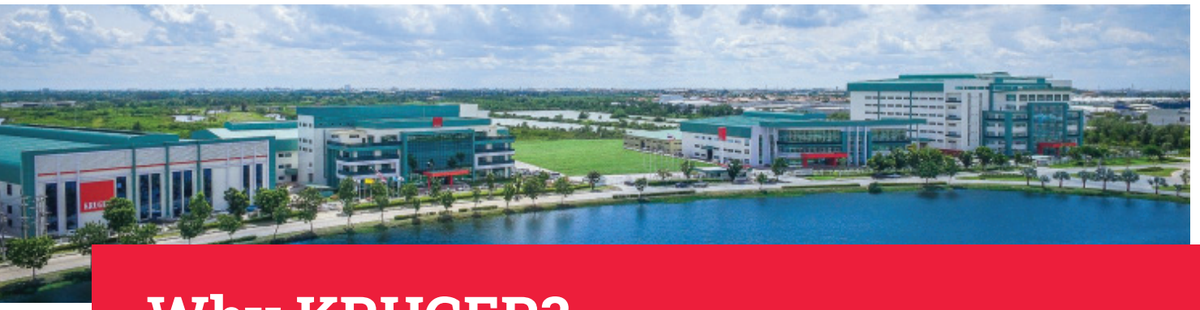
KRUGER



KVS Series

High Volume Low Speed Fans

Safe Operation Energy Saving Low Sound



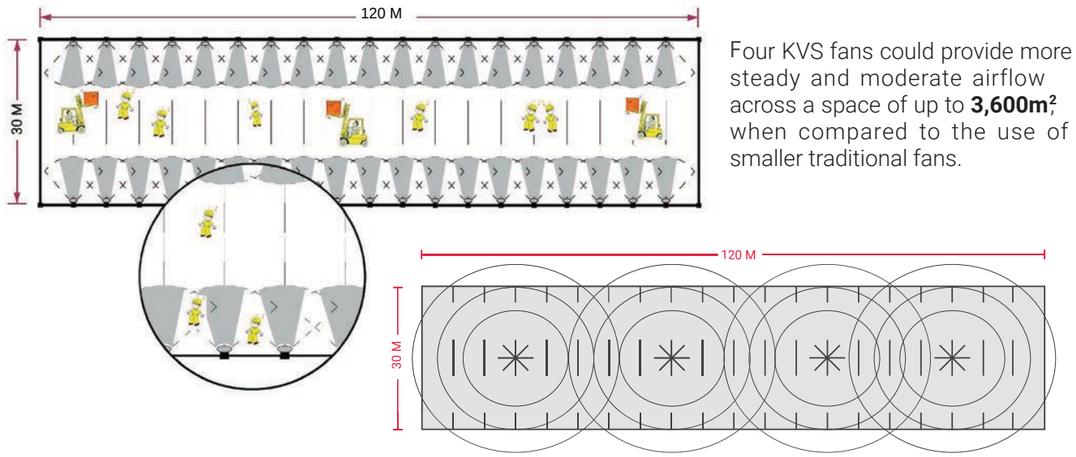
Why KRUGER?

KRUGER has been a leading innovator and manufacturer of residential, commercial and industrial fan application solutions across Asia since 1985. Today with a direct presence in over 18 regions throughout Asia; world class R&D and manufacturing facilities; KRUGER are able to offer their customers unparalleled service and support at a local level. Our customers place their trust in KRUGER.

What is a KRUGER KVS High Volume Low Speed Fans?

The KVS series is a ceiling mounted fan that can circulate a considerable high volume of air at a very low operational speed. KVS is designed for commercial or industrial areas with medium to high ceiling and where air conditioning is not an option. It helps to provide thermal comfort and make the area or buildings more comfortable for occupants.

Why KVS is Better Than Smaller Fan in Large Space Air Circulation ?



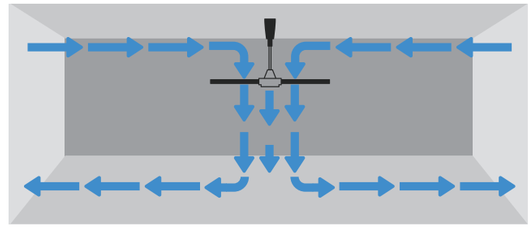
Four KVS fans could provide more steady and moderate airflow across a space of up to **3,600m²** when compared to the use of smaller traditional fans.

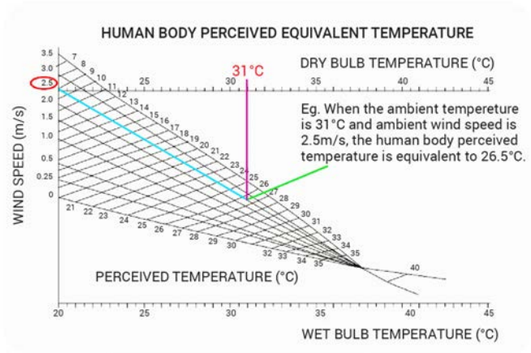
Fan Diameter (m)	CoveringArea (m^2)	Air Flow (m^3/s)	Fan Quantity (set)	Power (kW)	Operating Time (Hr)	Electric Consumption (kWH or degree)
7.3	2800	112	4	1.5	10000	60000
0.75	30	5	85	0.36		306000

Why use a KVS High Volume Low Speed Fans?

Improve Air Circulation in Large and Wide Space

The traditional ventilation system in large and wide space does not cover all places thus could not improve thermal comfort for all occupants. KVS series fans could improve the movement of air in large spaces, encouraging ventilation for all occupants.

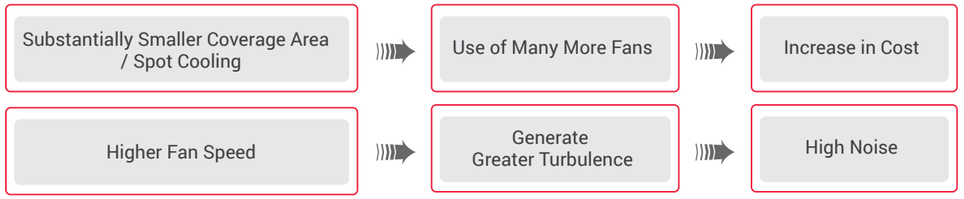




Provide Comfort Cooling

KVS fans provide evaporative cooling effect on the occupants and make occupants **feel up to 5 to 8°C cooler.**

Using smaller fans in a large space reveals various drawbacks, such as:



The below tables are example comparisons of using smaller fans and HVLS fans.

Application Attribute	Large Fan	Small Strong Fan
Coverage Area	✓	✗
Comfort	✓	✗
Easy Operation	✓	✗
Low Noise	✓	✗

Product Features



Safe Operation and Easy Installation

- The universal joint is designed for easy installation for both new construction and retrofit installation
- 6 safety protection and component.

High Volume

Large volume ➠ High efficiency ➠ Less fan required

Available up to 7.3m fan diameter and able to generate maximum flow rate up to 112 CMS.

Energy Saving

Using a high-efficiency EC motor that can reduce energy consumption, without sacrificing performance which integrated efficiency up to **114 CMS/kW.**

Variable fan speed control to reduce power consumption based on ventilation needs.

Low Noise

Super quiet operation and has no impact on environmental noise.

Maintenance Free

Gearless direct drive permanent magnet IP 65 motor; maintenance free, high speed running, long life service and stability operation.

Warranty

Kruger KVS fans come standard with the industry's longest 2 years warranty.

2 YEARS
EC Motor Models
WARRANTY

Product Specifications

Construction Features

Motor

Maintenence free permanent magnet IP65 motor with high full load and partial load efficiency.



Fan Blade

High efficiency aircraft-grade aluminum blade with internal reinforcement.



Color

Black and gray as standard.

Control System

Control Box and Remote Controller

IP51 protection grade and NEMA1 standard control box with built-in RF interference filter and brake chopper, to reduce excessive noise during fan start and stop.

Over temperature and short circuit protection.

The remote controller is available upon request.



Safety Protection and Component

Mounting Structure

Anti slip slot and locknut design prevent the fan from slipping and falling off.



Universal Joint

Alloy cast steel universal joint, mounted between fan and ceiling, to reduce vibration to the building structure.



Safety Steel Wire

Safety wire holds the fan to the building structure, to prevent accident.



L-Shaped Safety Buckle

Each fan blade is equipped with safety buckles that provide a secondary safety measure in the event of impeller failure.



Fasteners

All fasteners are equipped with anti-loose self-locking nuts and toothed anti-fall pads.



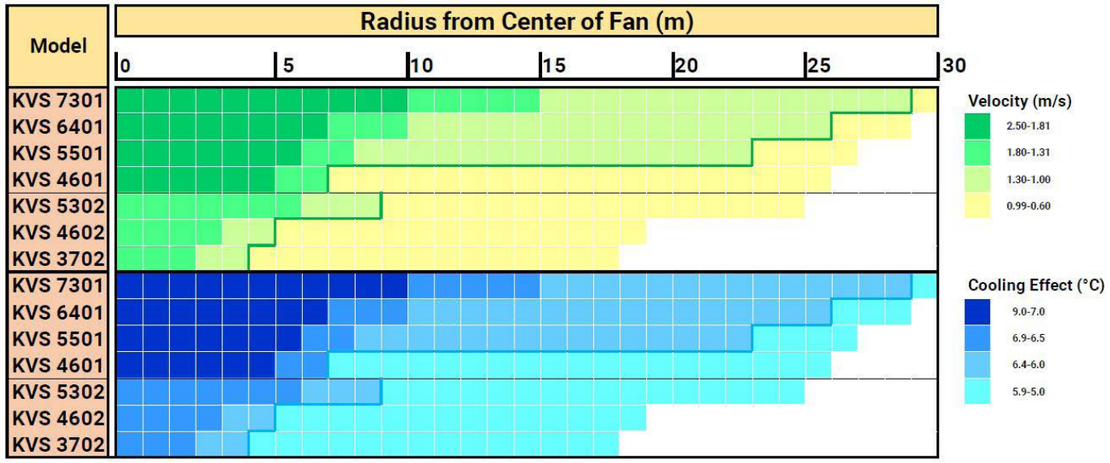
Accessories

- Monitoring control system to variable speed as per temperature, CO_2 and humidity.
- Light option is available upon request.

How to Select a Kruger High Volume Low Speed Fans

Recommended Maximum Coverage Area

The below selection guide will help you to identify the KVS fan that best suits your application needs, based on fan size, air velocity and desired cooling effect.

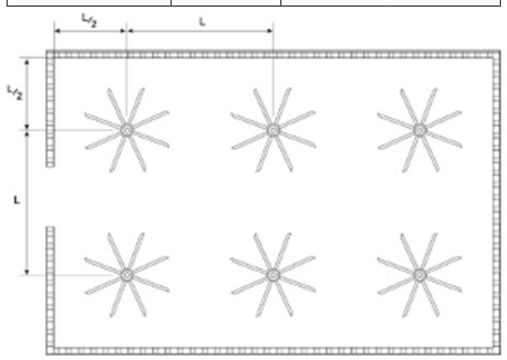


* Testing conditions are based on a fan operating at full speed, mounted at the indicated height from the floor with air velocity measured at a height of 1m. The above table is shown at **6m and the selection guide for 3m to 14m** above the floor are available upon request.

Quick Selection Guide

Recommended Distance Between Fans

	Ceiling Height (m)		
	≤7	8 - 10	>10
Model	Distance, L (m)		
KVS 7301	18 - 25		18 - 20
KVS 6401			
KVS 5501			
KVS 4601			
KVS 5302	15	-	
KVS 4602			
KVS 3702			



Number of KVS Fans Required

At the designated space dimension and ceiling height, the number of KVS fans required to ventilate the space can be estimated using the following simple formula:

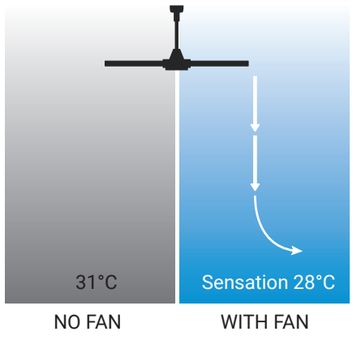
(Width /L) x (Length/L) = Number for fans required

Example of Fan Selection

A space with Width 50m x Length 150m x Ceiling Height 6m. If KVS7301 is selected, the required fan number to ventilate this space would be:

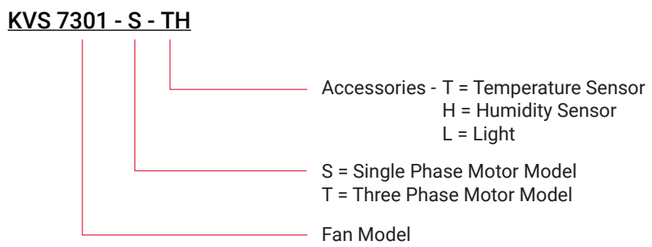
(50m/25m) x (150m/25m) = 12 units of KVS7301

The Airflow Projected Downwards, Improves The Feeling of Well-being



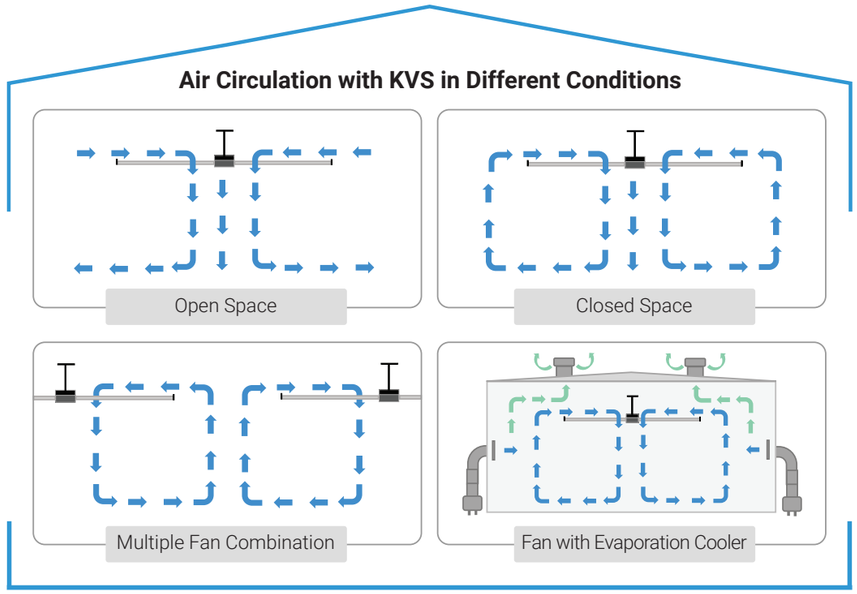
Fan Nomenclature and Technical Data

Model Number Nomenclature



Fan Technical Data										
Motor Specification: 220V (Single Phase) / 380V (Three Phase), 50 / 60Hz										
Model	Diameter (m)	Fan Speed (RPM)*	Air Flow (CMS)	Thrust (N)	Sound Level (dBA)**	Motor kW (kW)	Input kW (kW)	Integrated Efficiency (CMS/kW)	Weight (kg)	Max. Coveage Area (m^2)***
KVS 7301	7.3	54	112	357	52	1.50	1.49	75	138	2,800
KVS 6401	6.4	60	85	284	51	1.50	1.04	85	130	2,600
KVS 5501	5.5	70	71	258	52	1.50	0.94	76	121	2,300
KVS 4601	4.6	80	48	167	51	1.50	0.81	60	112	2,100
KVS 5302	5.3	56	47	118	47	0.60	0.41	114	80	1,950
KVS 4602	4.6	69	38	106	46	0.60	0.47	82	75	1,100
KVS 3702	3.7	81	24	63	44	0.60	0.49	49	70	1,000

* Speed (RPM) shown is nominal. Performance is based on the actual Speed of the test.
** Sound pressure levels Lp(A) are measured at 3.5m from the fan.
*** Maximum coverage area (round) is based on a fan operating at full speed mounted at 6m from the floor above.



Applications

Fan Cooling in Wide Spaces, Mall, Hall , Factory, Airport, Gymnasiums, Canteen, Agricultural Facilities, Distribution Center, Stadium, Arenes, etc.



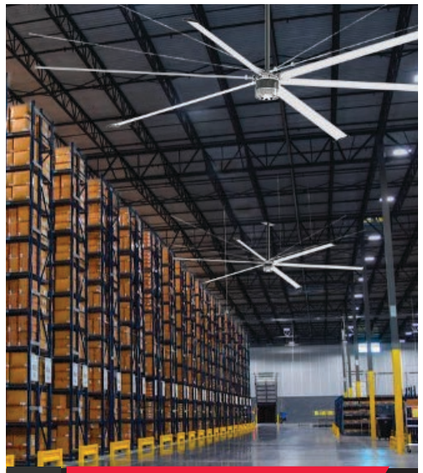
RAILWAY PLATFORM



MALL



CAFETERIA



WAREHOUSE & FACTORY



STADIUM

KRUGER

KRUGER Ventilation Group

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