

## **Powered By**

## Perfect Exclusive Works

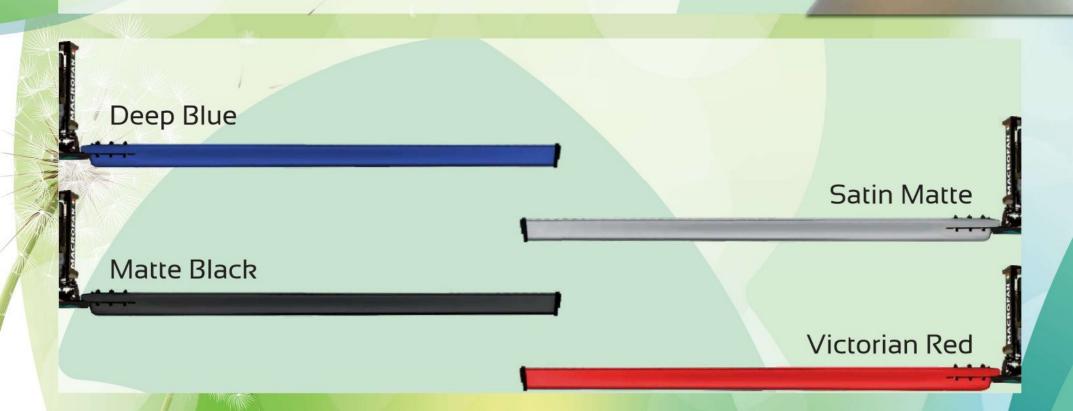
The Perfect Exclusive Works is a part of Perfect Engineering group of companies which was established in the year 1965. We can say that we are 56 years young company with the expertise in all engineering works. We are the leading supplier to ISRO.

Perfect Exclusive Works is created to manufacture exclusive HVLS

Fans with optimal safety features and easy to install technology.

We in Perfect are committed to give the best and premium class products since ages.

For HVLS fans we have sizes from 8 feet diameter to 24 feet diameter geared fans. As per requirement we can customise the size and colour as required.

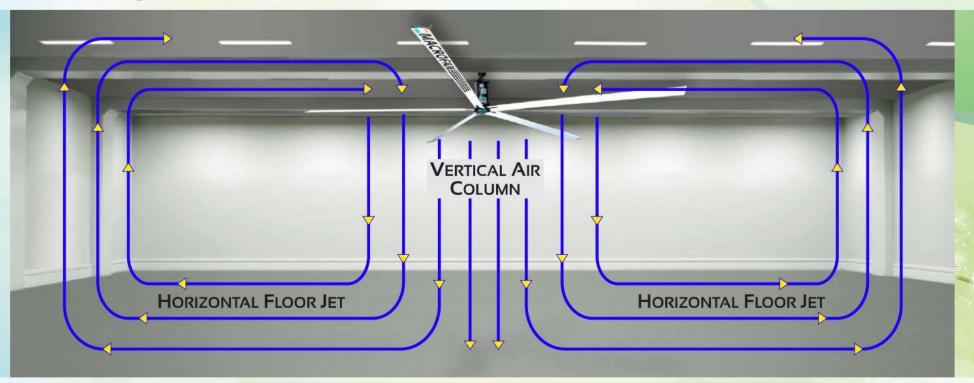


## MacroFan - Moving massive amounts of air comfortably and silently

Your warehouse is a big and voluminous space. Proper cooling and ventilation is important to increase work comfortability and productivity of people while preserving freshness of goods.

Our HVLS (High Volume Low Speed) fan provides advanced technology for high distribution of airflow throughout the entire warehouse space in the most energy efficient way and reduce dead heat spots or destratification, which is stagnant air formation.

With MacroFan, productivity and comfort of persons increases while reducing condensation, corrosion and mold on your equipment and goods.



MACROFANS produces a massive, cylindrical column of air that flows down to the floor and outward in all directions, creating a horizontal floor jet that consistently circulates air in large spaces. This "horizontal floor jet" pushes air a greater distance before it is pulled back vertically toward the blades. The greater the down floor, the greater the air circulation and resulting benefits.

### **MACROFAN Ventilation Coverage**

Our MacroFan HVLS airflow pattern ensures air movement reaches all corners of your facility, maintaining consistent conditions throughout your building. Within the coverage areas, a person will feel the three dimensional natural breeze from four directions, so that the whole body would be covered by the air flow. Unlike traditional High Speed speed fan which blows directly to the human body or a

specific zone and may result in different areas of cooling or leads to dusty environment, the HVLS fan provide an optimum all around air speed of 1-3 m/s at a rotational speed off between 55 - 75 RPM, which is the best speed that humans can enjoy holistically, A 24' (7.3 m dia) fan can cover upto 8500 sq ft area, moving air up to 40m in all directions from the centre off the fan.

## Flow Diagram

#### 7.3m MACROFAN MFGR 24 (24 FEET DIAMETER)

- Test results are based on blade height of 24ft
- Results were measured at 1m height off the floor.
- Average air speeds were utilised as actual air velocity from fan is gusting.
- Results may vary depending on testing conditions.



## **Superior Technical Features**

High performance motors and drive system-enables the fan speed to be regulated to precise speeds while reducing energy consumption considerably.

Aerodynamically designed, light and highly strong fan blades - made from special aircraft aluminium with a highly optimised blade tail ensurers vortices are not formed at the tip of the blades which can cause air resistance and energy losses.



High torque drive in control system - With frequency inverter drive, the fan motors are powered at the most efficient energy level while offering surge and motor protection against electrical faults.

Energy saving - A large HVLS fan covers a big area and saves much more energy than many small ceiling fans. And there's never the need to run MacroFan at full speed - it's fan blades are designed to produce powerful consistent airflow ensures noiseless operation through its streamlined profile.

## A Refreshing Breeze

MACROFAN uses patent pending 240mm wide "Cambered Airfoil" blade technology which produces a large column of air which flows down to the floor and outward in all directions, creating a horizontal floor jet that effectively circulates air to Greater distances. It also has a much longer cord length that yields most precise airflow and higher mechanical efficiencies.

Slow moving MACROFAN creates a 4-5 kmh breeze which breaks the moisture saturated boundary layer surrounding the body, accelerating evaporation to produce a cooling effect up to 4-60 C in perceived temperature.



## **Air Flow Specifications**

Fan Diameter......12ft. (3.7mtrs.) 12 Max. Coverage Diameter......36ft Min. Installation Height.....14ft (Blade Distance from Floor) Min. Clearance from Roof......3ft. FEET Air Movement......138860 CFM DIAMETER Motor Rating...... 1.5hp (1.1KW) Amp Rating System......1.94amps @440v MF-GR-B5 12 O ft. 15 ft 15 ft System Weight......116kgs Fan Diameter......16ft. (4.9mtrs.) 16 Max. Coverage Diameter..... 50ft Min. Installation Height......16ft Min. Clearance from Roof......4ft. FEET Air Movement......185650 CFM DIAMETER Max. RPM......70 RPM Motor Rating......1.5HP (1.1kw) MF-GR-B5 16 Amp Rating System......2.15amps @440v 0 ft 25 ft 25 ft System Weight......132kgs Fan Diameter......20ft. (6.1mtrs.) Max. Coverage Diameter...... 70ft Min. Installation Height......22ft Min. Clearance from Roof......5ft. FEET Air Movement......345100 CFM DIAMETER Max. RPM...... 53RPM Motor Rating.....2HP (1.5kw) Amp Rating System......3.15amps @440v MF-GR-B5 20 O ft 35 ft 35 ft System Weight......144Kg Fan Diameter......24ft. (7.3mtrs.) Max. Coverage Diameter..... 80ft Min. Installation Height......24ft

- 14 ft

- 16 ft.

└ 0 ft.

- 18 ft.

- 20 ft

40 ft

0 ft

40 ft

FEET DIAMETER Min. Clearance from Roof......5ft.

Air Movement......402600 CFM

Max. RPM......53 RPM Motor Rating......2HP (1.1kw) Amp Rating System......3.15amps @440v

MF-GR-B5 24

### **GEARLESS MOTOR NOISE LESS**

## **Technical Specifications**

MACROFAN Model Code	No. Of Blades	Fan Dia	Motor Power Kw / Hp	Full Load  Current Ampere	Max Speed (RPM)	AirQty (CFM)	Area Coverage - Feet in Diameter from the centre of Fan	Sound (dB)	Weight (kg)
MF GL 24	5	24' (7.3m)	1.4 / 2.0	1.8@ 440V	50	402600	90	39	128
ML GL 20	5	20' (6.0m)	1.4 / 2.0	1.8@ 440V	50	345100	80	39	125
ML GL 18	5	18' (5.4m)	1.4 / 2.0	1.8@ 440V	50	324158	75	39	120
ML GL 16	5	16' (4.9m)	1.2 /1.5	0.9@ 440V	70	185650	70	39	115
ML GL 14	5	14' (4.2m)	1.2 /1.5	0.9@ 440V	70	154526	60	39	110
ML GL 12	5	12' (3.6m)	1.2 /1.5	0.9@ 440V	70	138860	50	39	106
ML GL 10	5	10' (3.0m)	1.2 /1.5	0.9@ 440V	70	112545	40	39	101
ML GL 08	5	08' (2.4m)	1.2 /1.5	0.9@ 440V	70	89500	30	39	98

MacroFan is thrilled to announce the introduction of the "GearLess" option, now available due to popular demand!



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#### **Geared Motor**

## **Technical Specifications**

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			Kw / Hp	Current Ampere					
MF-GR-24	5	24' (7.3m)	1.5 / 2.0	3.15@440V	55	402600	90	60	148
MF-GR-20	5	20' (6.0m)	1.5 / 2.0	3.15@440V	60	345100	80	60	140
MF-GR-18	5	18' (5.4m)	1.5 / 2.0	3.15@440V	60	324158	75	60	136
MF-GR-16	5	16' (4.9m)	1.1 / 1.5	2.15@440V	70	185650	70	60	128
MF-GR-14	5	14' (4.2m)	1.1 / 1.5	2.15@440V	70	154526	60	60	118
MF-GR-12	5	12' (3.6m)	1.1 / 1.5	2.15@440V	70	138860	50	58	106
MF-GR-10	5	10' (3.0m)	1.1 / 1.5	2.15@440V	70	112545	40	58	98
MF-GR-08	5	08' (2.4m)	1.1 / 1.5	2.15@440V	70	89500	30	58	92

MacroFan, renowned for delivering the best in High Volume Low-Speed (HVLS) fans, proudly offers both geared motor and gearless motor options to suit your specific requirements.

## Not all fans need a ceiling

At MACROFAN we believe that innovation distinguishes between a leader and a follower.

Hence, for the very first time in India, we introduce the concept of pole mount HVLS fans. These fans are specially designed for places without a ceiling such as party lawns, Garden, restaurants, stadiums, amphitheatres.

MACROFAN creates a multi directional air flow which virtually gives feeling of a natural breeze around the body. As a stand alone cooling system or in conjunction with HVAC, MACROFAN provide an efficient, cost effective solution to cooling large Open spaces that enhances the comfort and productivity of occupants. Yielding documented cost savings, micro fan contribute to LEED ®, certification and Building System economies.

- · Whisper quite in performance.
- Creates 100% NATURAL BREEZE effect.
- Patent pending 240mm "Cambered Air foil" blades.
- Delivers 35% more air flow than the leading competitor's comparable model.
- Creates 360° air flow.
- Better aerodynamics, lower consumtion.
- Customized mounting options.
- Custom colors in powder coating & anodizing available.
- Precisely balanced for minimal vibration.
- · Upto 30% saving on CAPEX.
- · 5 point safety system.
- Genuine warranty & reliable after sales support.

### A Customer Centric Approach

We study your establishment in terms of the dimension roofing structure plant layout and existing environment. Post which we come up with a customized solution to create a perfect working environment.



Onsite assembly and installation search for massive device is very complex. Are skilled taskforce easily handles the installation at your facility within hours following strict safety norms and industry standards.

We believe in building a strong and sustainable relationships with our clientele. Hence if you need any assistance post installation we are just a call away.

## **One Fan Numerous Applications**



PLACES OF WORSHIP



**DAIRY FARMING** 



FACTORY



- from Satisfaction till loyalty

**PARTY LAWN** 



SERVICE CENTRE



SPORTS COMPLEX



**STADIUM** 



WAREHOUSE







### Our valueable Clients

JAGTAB ENGINEERING WORKS (VADODARA) 2

GOVARDHAN ECO VILLAGE (GEV) (WADA MAHARASTARA) ISKCON 3

HITACHI METALS INDIA PVT LTD. GURUGRAM HARYANA 2

HIND ELASTOMARS PVT LTD. BHIWANDI MAHARASTRA. 2

ISKCON NAVSARI GUJARAT 1

BGS INTERNATIONAL PUBLIC SCHOOL (BENGALURU) 1

ARWACHIN BHARTI BHAWAN SENIOR SECONDRAY SCHOOL, NEW DELHI 2

BGS NATIONAL PUBLIC SCHOOL BENGALURU 2

NARAYAN POWERTECH (PADRA) 2

SORGEN INC (POR) 1

NIKKISO COSMODYNE INDIA PVT LTD. POR VADODARA 2

ELMEX CONTROLS PVT LTD. VADODARA 1

SHANKAR DAIRY (UMETA) 1

KITRI STAMPING PVT LTD. PALEJ 1

STOMY ENGINEERING WORKS, VADODARA 3

Harsh Indra Ent

Pranay Anodizer Pvt Ltd.

Nysha Mobility.

Elmex Electrical.

Flec Steel

MEDINNOVA SYSTEMS PVT. LTD.

UNIQUE LASER WORKS. SHREE INFINITY ENGITECH.

UNIQUE CHILLERS

CHEMBOND WATER TECHNOLOGY LTD. 1

AFC SYSTEMS PVT LTD. NEW DELHI 1

ARWACHIN WORLD SCHOOL NEW DELHI 2

PROTERIAL PACKAGING NEW DELHI 2

ABIRAMI SOAP WORKS, PONDICHERY 1

PUDUVAI PACKAGING PONDICHERY 1

YERA INTERNATIONAL SHRENO LTD 2

PARMANAND INDUSTIRES VADODARA. 1

ALEMBIC GROUP VADODARA.

TAQIA MASJID PHIILIBIT BISALPUR 1

TARA BABA KI KUTIYA, SIRSA HARYANA, 3

SD KANYA MAHAVIDYALAY NARWANA. 2

SD MAHILA MAHAVIDYALAY NARWANA. 1

IIIT COLLEGE, ETCHERLA ANDRA PRADESH 2

SHAYONA GLASS JAMBUSAR, 1

BIG BASKET AHMEDABAD.

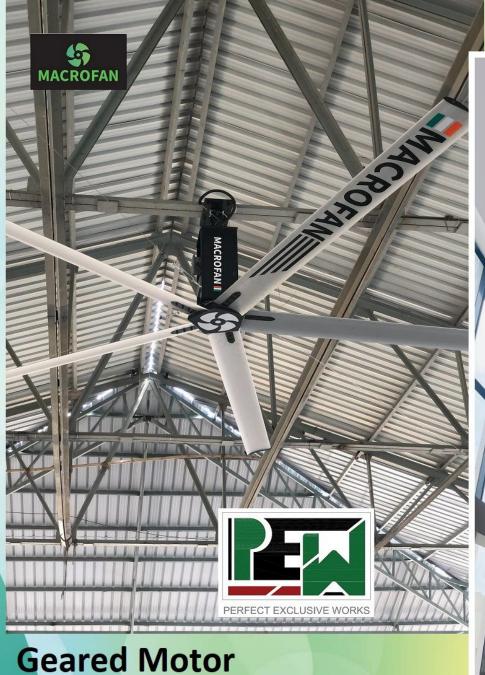
GANESHRAM NAGAR SARASWATI SHISHU BALIKA VIDHYA

MANDIR 2

JAI ROAD LINES

HEVINS ENGINEERING PVT LTD Bharatiya Janata Party (Bhavnagar)





# **Gearles BLDC PMSM MOTOR**

