

An ISO 9001 : 2008 **Certified Company** 





SUBURBAN INDUSTRIAL WORKS PVT. LTD.









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### Welcome

Suburban Industrial Works (SIW) was incepted in the year 1954 for manufacture of Centrifugal and Axial Flow Fans with world renowned established design of Buffalo Forge and SIROCCO. Since 1957 SIW started marketing of products and increase their market share and customer base through widening its product range and capacity in terms of man power and product domain.

Since May 1981 Suburban Industrial Works Pvt. Ltd. came in to being with the up gradation of complete infrastructural setup with design, man power, plant and machinery. Personnel with experience of decades in respective field along with technically and qualified support staffs soon changed the complexion of the organization. Mingled with the product quality and a strong marketing network within a short span of time the company emerged as a force to reckon with HVAC, Processing and other core sector industries.

### Quality Management

SIWL has adopted very strict quality measures to ensure the uniform acceptable quality keeping in view the requirement of products and the application are met all times. Right from inputs to finished products the raw materials are tested from reputed and Govt. Approved test house before processing the finish products. During manufacture all products are subject to DP, Radiographic, Ultrasonic, X-Ray Tests as and when required. All Rotor portion are subject to Dynamic Balancing before assembly as per ISO: 1940. Any further tuning required is carried out by our additional facility of Portable Dynamic Balancing Machine. To ensure meeting guaranteed performances of products we have Testing Laboratory/ Test Beds for testing of fans as per AMCA, BS and IS Standards supported with varied range of measuring instruments with updated calibration

## Company Philosophy

With our established product credibility throughout the country our mission is to keep pace with the continuous and upgradation of technology as per demands of different segment of industry and excel with the product quality simultaneously. In support of our mission we are already an ISO 9001:2008 Certified organisation and our products have been conferred with the certification of the world body of our trade Air Movement and Control Association (AMCA), Illinois, USA for specific range of our product.



# CENTRIFUGAL FANS HVAC & General Ventilation

#### TYPE - SI, DI

Wheel Diameter 305 mm - 2762 mm.

Performance Maximum Airflow- 870000 CMH

Maximum Static Pressure - 355 MM WG

Design Feature Double width single width non overloading

characteristic backward curve impeller. Inlet vane are attached with inlet cone for pre-rotate of inlet

air.

Application Extensively used in HVAC System and general

ventilation handling of clean or light concentration

of fine particles



#### TYPE: AF, SISW & DIDW

Wheel Diameter 311mm-2260mm

Performance Maximum Airflow - 850000 CMH

Maximum Static Pressure- 355 MM WG

Design Feature Energy efficient hollow aerofoil blade, backward

curved, non-overloading characteristic,

Single Width (SW), Double Width (DW).

Application Extensively used in HVAC System handling clean

air or with gases containing small amounts of

erosive particles



#### TYPE: BI, SISW & DIDW

Wheel Diameter 311mm-2260mm

Performance Maximum Airflow - 585000 CMH

Maximum Static Pressure - 355 MM WG

Design Feature Backward Inclined flat blade non-overloading

characteristic, Single Width (SW), Double Width

(DW).

Application Extensively used in HVAC System and general

ventilation of industries. It is suitable for handling gas containing small and medium sized contaminant or humid air and also suitable for

elevated temperature









#### Type: PBI & PAF, SISW & DIDW

Wheel Diameter 311 mm- 1245 mm

Performance DW Fan Maximum Airflow -117230 CMH for SW Fan and 177324 CMH for

Maximum Static Pressure - 225 for SW Fan and 355 for DW Fan

Design Feature The casing of the fan is a square housing. Standard casing can be

used in desired orientation. Backward Curved or Aerofoil Section

blades are available for both SISW and DIDW.

Application Extensively used in HVAC System and general ventilation of

industries. It is suitable for handling gas containing small and medium sized contaminant or humid air and also suitable for

elevated temperature.

#### TYPE: TCL, TUBULAR CENTRIFUGAL FAN

Wheel Diameter 311mm- 1130mm

Performance Maximum Airflow- 94200 CMH

Maximum Static Pressure- 225 MM WG

Design Feature Backward Aerofoil Blade, non-overloading characteristic

(SW). The advantage of this fan is space saving flow

section and delivery is in the same axis. It is quite in operation.

Application Extensively used in HVAC System. Fume/Smoke

Removal, Boosting of Air, etc.

#### TYPE: SQL, SQUARE INLINE FLOW FAN

Wheel Diameter 311mm -927mm

Performance Maximum Airflow 47600 CMH

Maximum Static Pressure 114 MM WG

Design Feature Backward Inline limit load non-overloading characteristics,

quite in operation, casing of the fan is cabinet type.

Application Extensively used in HVAC system where fan inlet and outlet lie

on the same axis.

#### Type – DIF, DUCT INLINE FAN

Model: DIF-100, DIF-125, DIF-150, DIF-200A, DIF-200B, DIF-250A,

DIF-250B, DIF-315A, DIF-315B

Performance Maximum Airflow -1100 CMH

Maximum Static Pressure- 80 MM WG

Design Feature Forward curved G.I. Sheet blades and casing powder coating

finished. 50 and 60 Hz. variations, impeller fitted with external

rotor motor

Application Extensively used in HVAC Application such as hospitals,

theatre halls, multiplexes, residents, school building, etc.



## **INDUSTRIAL FANS**

#### Type - AH, BACKWARD IN CLINED BLADES, SISW

Wheel Diameter 324mm-2210mm

Performance Maximum Airflow 144000 CMH

Maximum Static Pressure 500 MM WG

Design Feature SISW Type Backward curved impeller, higher

efficiency fans.

Application Handling of gas containing medium size

containment. Used as a Force Draft (FD) and Induce Draft (ID) in the field of Industry. Also used

in high temperature application.



#### Type - MH, CENTRIFUGAL RADIAL BLADED FAN, SISW

Wheel Diameter 311mm-2134mm

Performance Maximum Airflow 144000 CMH

Maximum Static Pressure 500 CMH

Design Feature SISW type radial impeller non-overloading

characteristics

Application Handling of fumes, dust particles contained in air.

Extensively used in scrubber, cyclone, bag filter as a FD & ID Fan. Also used in high temperature

application.



## Type – LS CENTRIFUGAL RADIAL BLADED FAN WITH NO FRONT FLANGE SISW

Wheel Diameter 311mm-2134mm

Performance Maximum Airflow 144000 CMH

Maximum Static Pressure 500 MM WG

Design Feature Radial Bladed impeller without front flange, non-

overloading characteristics.

Application It is extensively used in jute, fibre industries where

chopping fibre appears in the air.



# Type - HIB - 20 & HIB - 24 HI - EFFICIENCY INDUSTRIA BACKWARD CURVED FANS.

Wheel Diameter 520mm-2305mm

Performance Maximum Airflow 300000 CMH

Maximum Static Pressure 914 MM WG

Design Feature High efficiency backward curved impeller, non-

overloading characteristics.

Application This is extensively used in industrial application as

a FD or ID Fan used with bag filter, scrubber, cyclone where dust particles exist in the air. It can

operate in high temperature application



# Type – SIAC CENTRIFUGAL BACKWARD AEROFOIL NARROW WIDTH HIGH PRESSURE FAN, SISW

Wheel Diameter 600mm-2500mm

Performance Maximum Airflow 200000 CMH

Maximum Static Pressure: 1200 MM WG

Design Feature High efficiency backward curved aerofoil section

blade, non-overloading characteristic

Application These fans are applied best in industries where

high volume and high pressure are

required. This is also suitable for elevated temperatures



# AXIAL FLOW FANS HVAC & Industrial Application

TYPE: TL & TS – TUBE AXIAL FLOW FAN WITH LONG CASING & SHORT CASING WITH TWO FLANGES.

Wheel Diameter 300mm - 2000 mm.

Performance 1250 – 280000 CMH upto 80 MM WG SP.

Mounting Duct, Floor & Wall upto 1200 mm dia.

Application Ideal for installation in Hospitals, Schools, Research

Labs, Exhaust Air & Supply Air System. It is most

often used in HVAC duct system.



TYPE: WM – WALL MOUNTED AXIAL FLOW FAN WITH INLET CONE AS AN INTEGRAL PART OF THE FAN.

Wheel Diameter 300 mm - 2000 mm.

Performance 280000 CMH upto 80 MM WG SP

Mounting Wall mounting & panel mounting.

Application Same as that of Tube Axial Flow Fan.



#### TYPE: RE -ROOF EXTRACTOR/ROOF VENTILATOR

Wheel Diameter 300 mm - 1600 mm.

Performance 1250 – 162000 CMH upto 30MM WG SP

Mounting Flat or sloping roofs.

Application Roof ventilators are ideal for clean air, low velocity

application in both supply and exhaust system.



#### TYPE: BF - BIFURCATED AXIAL FLOW FAN.

Wheel Diameter 500 mm - 1000 mm.

Performance 1250 – 73000 CMH upto 40 MM WG SP

Mounting Inline Duct and or Wall mounting.

Application These fans are suitable for handling hot, explosive,

corrosive and inflammable gases. Motor is enclosed

to prevent direct contact with air.



#### TYPE: MC – AXIAL FLOW MANCOOLER TUBULAR TYPE.

Wheel Diameter 450 mm- 1200 mm.

Performance 1500 – 90000 CMH at FAD.

Mounting Pedestal for standing on floor or bracket mounting

Application Man cooling quiet in operation and reliable to cool

selective area or work area.



#### TYPE: APG – VANE AXIAL FLOW FAN.

Wheel Diameter 254 mm - 3000 mm.

Performance 1500 – 850000 CMH upto 150 MM WG SP in single

& 300 MM WG in double stage.

Mounting Floor mounting.

Application These fans are generally provided for handling large

volume of air at comparatively higher pressure.

These are provided with outlet guide vanes and may or may not be provided with inlet guide vanes. These

fans are used for surface mine ventilation and

industrial process cooling application.



#### TYPE: AMV – AUXILIARY MINE VENTILATION FAN.

Wheel Diameter 510 mm.

Performance 18000 – 22000 CMH at 250-60 MM WG.

Mounting Floor, wall bracket mounting.

Application Auxiliary mine ventilation fan are double stage axial

flow fan fitted with DGMS flame proof motor. Extensively used in underground mining where inflammable and hazardous gas present in air.



#### TYPE: TSM, SMOKE SPILL FANS

Wheel Diameter 300mm-1000mm

Performance Maximum Airflow 65000 CMH

Maximum Static Pressure 56 MM WG

Mounting Floor and Ceiling Suspended

Application Used in case of fire at temperature of 250°C -

300°C for 2hrs. Specially designed thermal rated are used for these fans. Extensively used in Hospitals,

Schools, Multiplexes, Hotels, etc.



## **ACCESSORIES**

#### **OUTLET DAMPER**

(Opposed bladed or parallel bladed types) is best suited for control over board range of air volume and are highly efficient in performance. These dampers can be operated manually or automatic



#### VARIABLE INLET VANE DAMPER

Designed for accurate control of air volume. The damper will spin the air in the direction of wheel rotation resulting in a maximum saving in power at the reduced ratings desired.



#### **COMMON BASE FRAME**

It is structural steel bases with channels which provides common support to fan, motor and drive including guards.



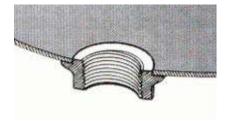
#### **ACCESS DOOR**

Access door is provided on the fan casing for inspection and maintenance. Asbestos rope or rubber gasket is used in between fan casing and access door to prevent air leakage. Bolted and quick clamp doors are available.



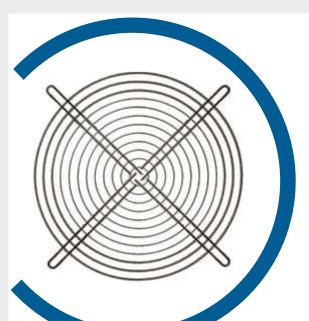
#### HEAT SLINGER / SHAFT COOLER AND SHAFT SEAL

Aluminium shaft cooler is used dissipating heat and protecting bearing from high temperature. Shaft cooler is used generally in fans which handle very high temperature flue gas.



#### **HOUSING DRAIN**

A socket welded at the lowest point of housing scroll for drainage of water in order to protect the fan from rusting.



#### **INLET AND OUTLET SAFETY SCREENS**

Inlet and Outlet Guard are used for protection of the inlet and the outlet from foreign particles entering the fan. It safe guards the inside of the fan from any outside material to enter through the vents.



#### **VIBRATION ISOLATOR**

Rubber - in - shear or spring type vibration isolators are available for all sizes and arrangement.



#### **BELT GUARD**

A belt guard protects personnel from the moving drive parts. Both standard and totally enclosed type guards are available.



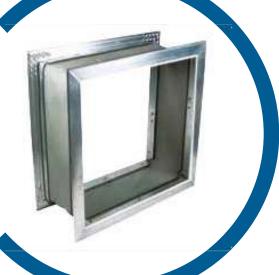
#### V-BELT DRIVE SET

Drive Set consists of dynamically balanced pulleys and V-Belt. Pulley is made from cast iron or cast sheet material.



#### COUPLING

Metal Grid type coupling are used where transmission of high power is required. Tyre type couplings are best for low power transmission; they are also flexible in case of out of alignment



#### **FLEXIBLE CONNECTION**

Plastic impregnated canvas material is generally used for flexible canvas connection where two metal flanges are fitted at both ends. Flexible material such fire proof cloth, rubberised tarpaulin, neoprene rubber for elevated temperature.

# **MOTORS**

Along with our fans SIWL offers a wide range of motors for different applications as per customer requirement.

The mostly commonly used motor is the Squirrel Cage Type. This is type is used for all general applications and purposes. Another rare type of motor used with our fans is the Slip Ring Type. These motors are used in those fans from which high torque is required such as main mine ventilation fans.



TEFC SQUIRREL CAGE MOTOR

# We Supply Our Equipment with the Following Specifications of Motors

Enclosure: Totally Enclosed, Squirrel Cage Motor.
Mounting: Foot Mounted, Flange Mounted.

Pole: 2, 4, 6, 8, Dual Speed Motor.

Insulation: Class 'F'/'H'
Degree of Protection: IP-55, IP-54, IP-56

Ambient Temperature: 45°, 50° C

Frequency: 50 Hz and 60 Hz supply

Efficiency Class: Eff-1 and Eff- 2

Smoke Spill Motor as per BS 7346 Part-2 1940 is used for smoke exhaust fans. These motors can run for at least 2 hrs and withstand upto 250°C-300°C temperature and run for at least 2 hrs in case of fire.

Flame Proof Motor is used in hazardous areas where flammable gas and vapour exists such as underground mines, battery rooms, etc.



**SMOKE SPILL MOTOR** 

### Our Regular Brands of Motor Supply are

- Marathon Electric
- ABB
- Bharat Bijlee Ltd. (BBL)
- Hindustan Motor
- Havells
- Laxmi Hydraulic
- Rotomotive





## **Unique Engineers**





































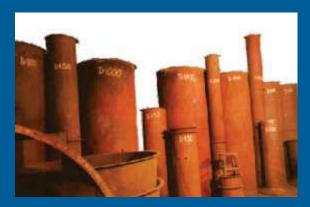


We are also geared up with Performance Testing facility of Fans as per National and International <u>Standards</u>.

a) BIS- 4894 c) AMCA- 210 b) BIS-3588 d) BS-848 Part-I



In House Dynamic Balancing Facility



In House Performance Testing Facility



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