

# SYMBIOSIS

## Backward Curved Aerofoil Blades

This impeller has ideal Aerodynamic characteristics with maximum Design efficiency up to 89%. It can be used for clean air or low dust concentrations for medium to high pressure industrial applications. 4 different series for varying wheel designs allow flexibility in selection.

The double-skin airfoil makes the blades sensitive to abrasive dust, and is to be used only for low dust loads.

### SYMBIOSIS MOST POPULAR MODELS FOR BACKWARD CURVED AEROFOIL BLADES

Model UDA 1

Model UDA 2

Model UDA 3

Model UDA 4

With years of application oriented experience and latest Manufacturing facilities, we manufacture these Impellers within close tolerances matching exact blade profiles using mechanized welding procedures.

With welding distortion Management, maintaining minimal impeller run out before dynamic balancing and with special handling of Impeller, SYMBIOSIS delivers world class fans and blowers for your Critical applications.

**Our Blowers are truly SYMBIOTIC to your process.  
Think of Air..... Think of SYMBIOSIS Blower.**

We offer the Aerofoil centrifugal fan in multiple sizes, arrangements, construction classes, impeller and housing widths. Whether standard or custom, each SYMBIOSIS Industrial Fan is designed and built with unmatched quality and backed by responsive service.

### AEROFOIL FAN PERFORMANCE & DESIGN

- Air volumes up to 9,50,000CMH
- Static pressures up to 1500 mmWC
- Temperatures up to 550 DegC
- High Peak Total Efficiency up to 89%
- Non-overloading power curve.
- Single Width, Single Inlet (SWSI) and Double Width, Double Inlet (DWDI).
- Silent in operation viz z viz other profiles for similar operation.
- Very high Strength of Impeller for clean gas application viz a viz other profiles for similar operation.



SYMBIOSIS

*"Go with the Flow"*



### MATERIAL OF CONSTRUCTION

Carbon Steel

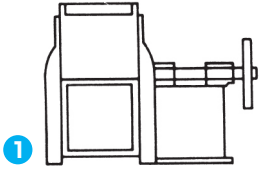
High Tensile Steel

Stainless Steel

### AEROFOIL FAN APPLICATIONS

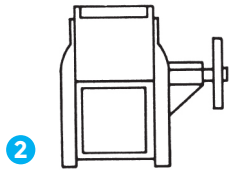
- Biomass
- Chemical Processing
- Cooling Systems
- Corrosive Gases
- Dairy Processing
- Dilution Air
- Dryers
- Food Processing
- Forced Draft
- Fume Control
- General Ventilation
- Incineration
- Induced Draft
- Odor Control
- Oven Exhaust
- Oven Recirculation
- Oxidizers
- Pharmaceutical Service
- Pollution Control
- Process Heating
- Scrubbers
- Selective Catalytic Reduction
- Spark Resistant Construction
- Tempering

# ARRANGEMENT OF DRIVE



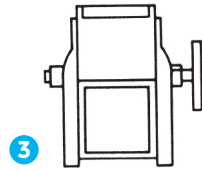
**ARRANGEMENT NO. 1 SWSI**

Wheel overhung. Bearing in bracket supported by fan housing. For belt drive or direct connection.



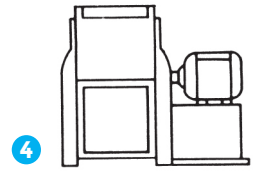
**ARRANGEMENT NO. 2 SWSI**

For belt drive or direct connection. Wheel overhung. Bearing in bracket supported by fan housing



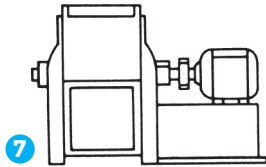
**ARRANGEMENT NO.3 SWSI AND DWDI**

For belt drive or direct connection. One bearing on each side and supported by fan housing.



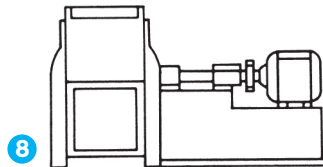
**ARRANGEMENT NO. 4 SWSI**

For direct drive. Wheel overhung on motor shaft. No bearing on fan. Base mounted or an integrally direct connected motor.



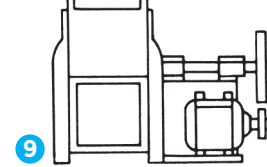
**ARRANGEMENT NO.7 SWSI AND DWDI**

For belt drive or direct connection. Arrangement No.3 plus base for motor.



**ARRANGEMENT NO.8 SWSI**

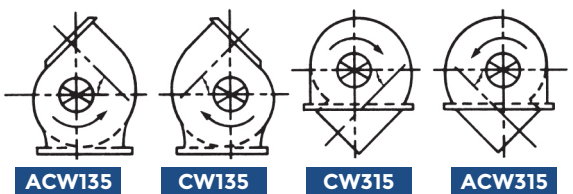
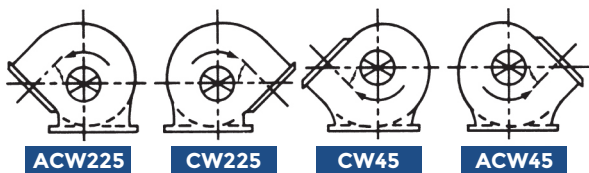
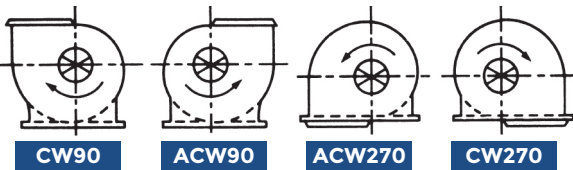
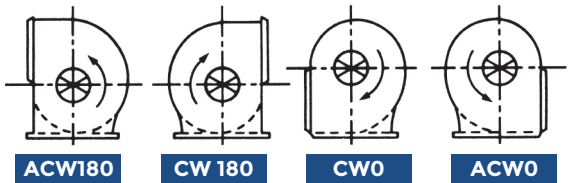
For belt drive or direct connection. Arrangement No.1 plus base for motor.



**ARRANGEMENT NO.9 SWSI**

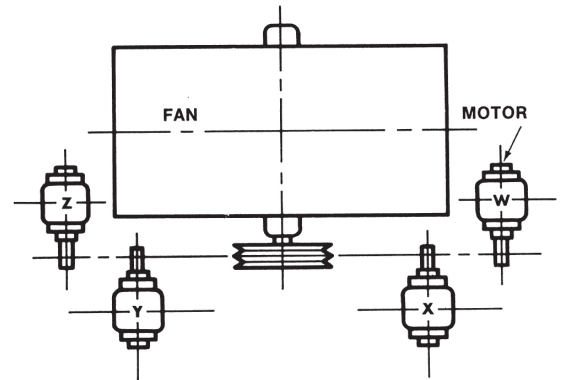
For belt drive Arrangement No.1 designed for mounting prime mover on side of base.

# DIRECTION OF ROTATION AND DISCHARGE



The location of motor is determined from plan view of the blower, designing the motor position by letters W, X, Y and Z as the case may be.

# STANDARD MOTOR POSITIONS



The Location of motor is determined from plan view of the blower, designing the motor position by letters W, X, Y and Z as the case may be.



# USHA DIE CASTING INDUSTRIES

ISO 9001 : 2015 CERTIFIED

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