

# ENGINEERING DATA SHEET

Data contained in this issue should be thoroughly understood, as it is of importance in properly choosing, applying, pricing, and ordering centrifugal fans of all types. The terminology contained is standard with the Air Moving and Conditioning Association (AMCA) and has been adapted by the industry as a whole. It should be a part of your every day language when considering fans.

1. FANS — Arrangement of Drive. Data sheet AS2404. This page illustrates the usual fan arrangements with their proper numbers. When ordering fans, or when requesting data or prices, the required fan arrangement **MUST** always be indicated. The data applies to all types of units, FC, BBC, RD, DD, etc. In some specifications, reference may be made to arrangement 10. AMCA has no such terminology, but it usually refers to a belted ventilating set where fan and motor are in an integral assembly with provision for protecting the motor and drive by means of a weather cover.

2. FANS — Designation of direction of rotation and discharge. Data sheet AS2406. Proper and required

terminology is clearly indicated on this page. When ordering equipment, or when requesting certified prints, always be sure to include this information. No order will be commenced in fabrication without it — if in doubt as to proper designation — draw a sketch. In the event that an angular discharge is required that is **NOT** at 45 degrees, be sure to clearly state what is required, such as “Top Angular Down 30 Degrees from horizontal” or “bottom angular up 20 degrees from horizontal.” Here again — draw a sketch if in doubt.

3. FANS — Motor position, belt or chain drive. Data sheet AS2407. This page indicates standard nomenclature for properly locating the motor in reference to the driving side of the fan. It is fully accepted by the industry, and by vibration base manufacturers as well. If a bare fan without motor or drive is ordered this information is not needed, but whenever a drive or vibration base is to be included this information is absolutely necessary. Please note that motor position is always determined from the driving side of the fan, and has no reference whatsoever to fan rotation or discharge.



**BARRY BLOWER DIVISION**  
WEIL-McLAIN COMPANY INC.  
99 N.E. 77TH WAY, MINNEAPOLIS, MINNESOTA 55432

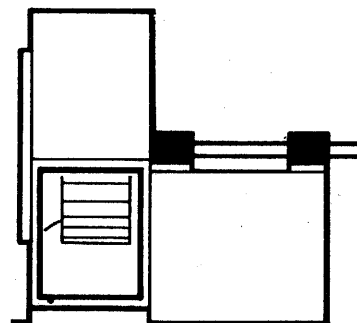


**CODE:**

- SW - Single Width
- SI - Single Inlet
- DW - Double Width
- DI - Double Inlet

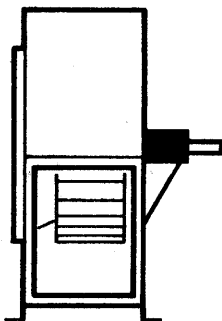
**NOTE:**

1. Arrangements 1, 3, 7 and 8 are also available with bearings mounted on pedestals or base set independent of the fan housing.
2. For designation of rotation and discharge, see AS 2406.
3. For motor position, belt or chain drive, see AS 2407.



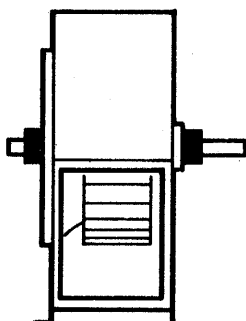
**ARR.1 SWSI**

For belt drive or direct connection. Wheel overhung. Two bearings on base.



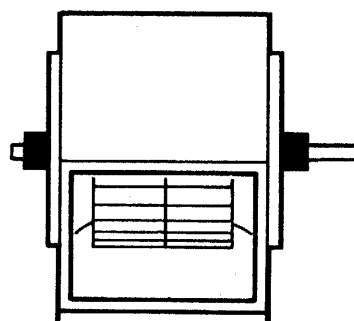
**ARR.2 SWSI**

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



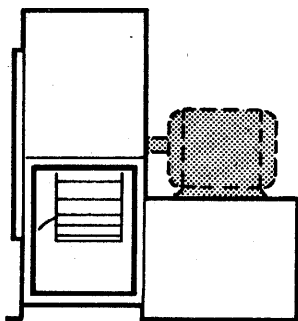
**ARR.3 SWSI**

For belt drive or direct connection. One bearing on each side and supported by fan housing. Not recommended in sizes 27-inch diameter wheel and smaller.



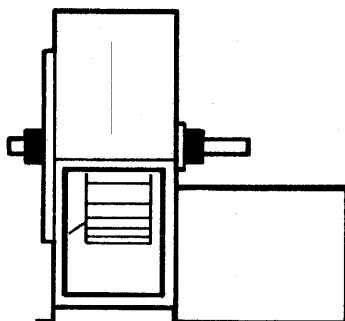
**ARR.3 DWDI**

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



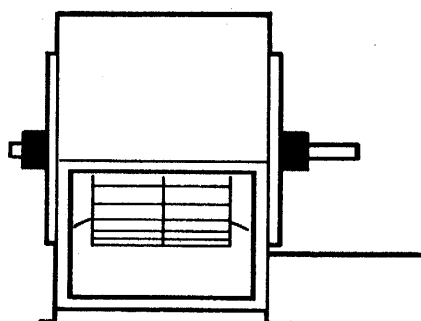
**ARR.4 SWSI**

For direct drive. Wheel overhung on prime mover shaft. No bearings on fan. Prime mover base mounted or integrally directly connected.



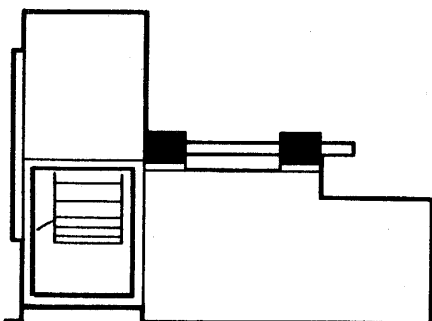
**ARR.7 SWSI**

For belt drive or direct connection. Arrangement 3 plus base for prime mover. Not recommended in sizes 27-inch diameter wheel and smaller.



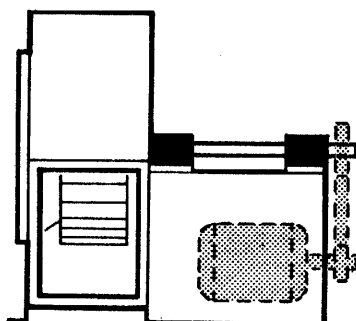
**ARR.7 DWDI**

For belt drive or direct connection. Arrangement 3 plus base for prime mover.



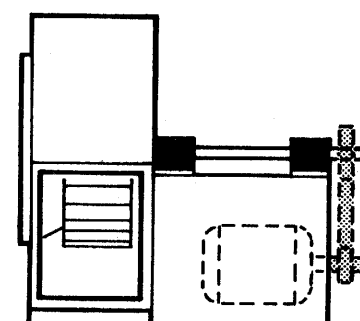
**ARR.8 SWSI**

For belt drive or direct connection. Arrangement 1 plus extended base for prime mover.



**ARR.9 SWSI**

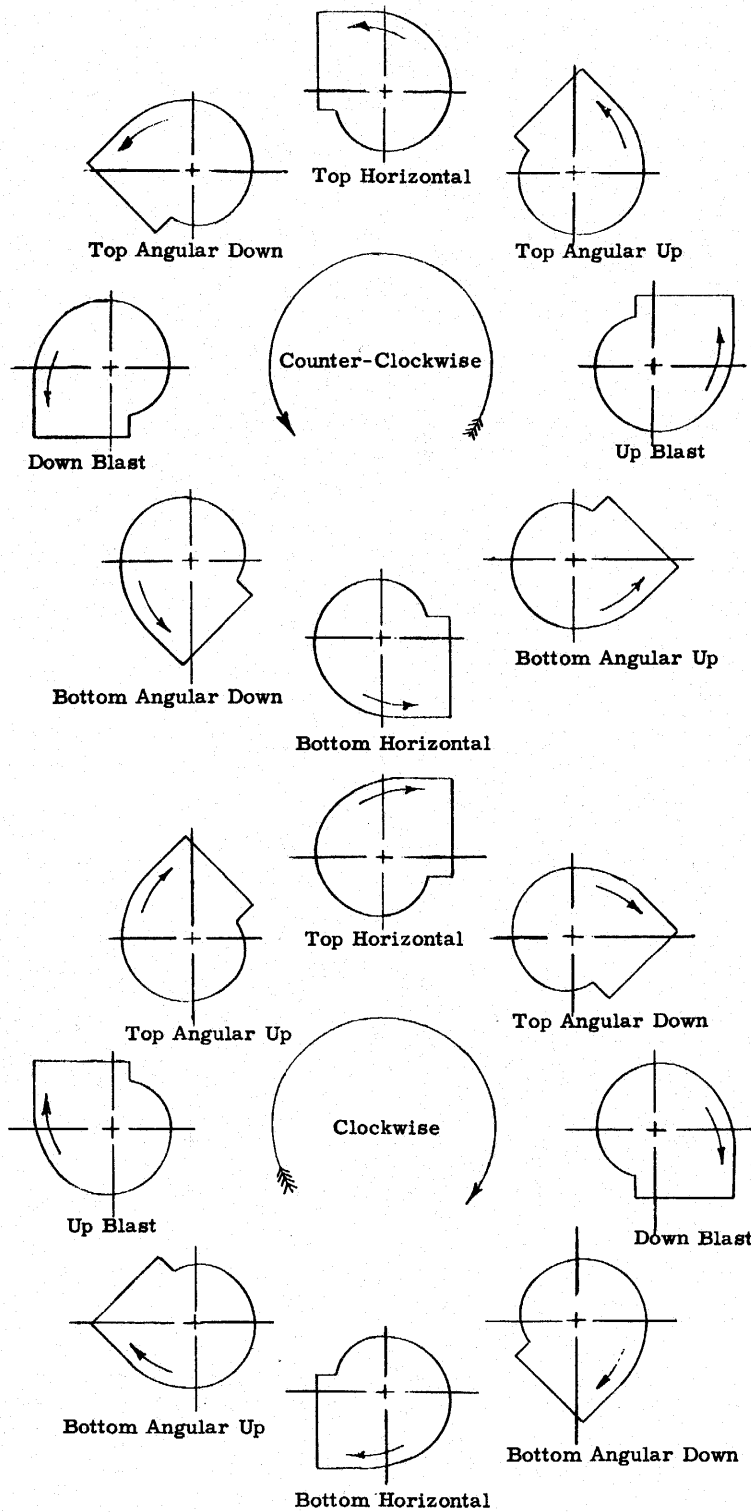
For belt drive. Wheel overhung, two bearings, with prime mover outside base.



**ARR.10 SWSI**

For belt drive, wheel overhung, two bearings, with prime mover inside base.

**AIR MOVING & CONDITIONING ASSOCIATION, INC.**  
 2159 Guardian Building - Detroit 26, Michigan



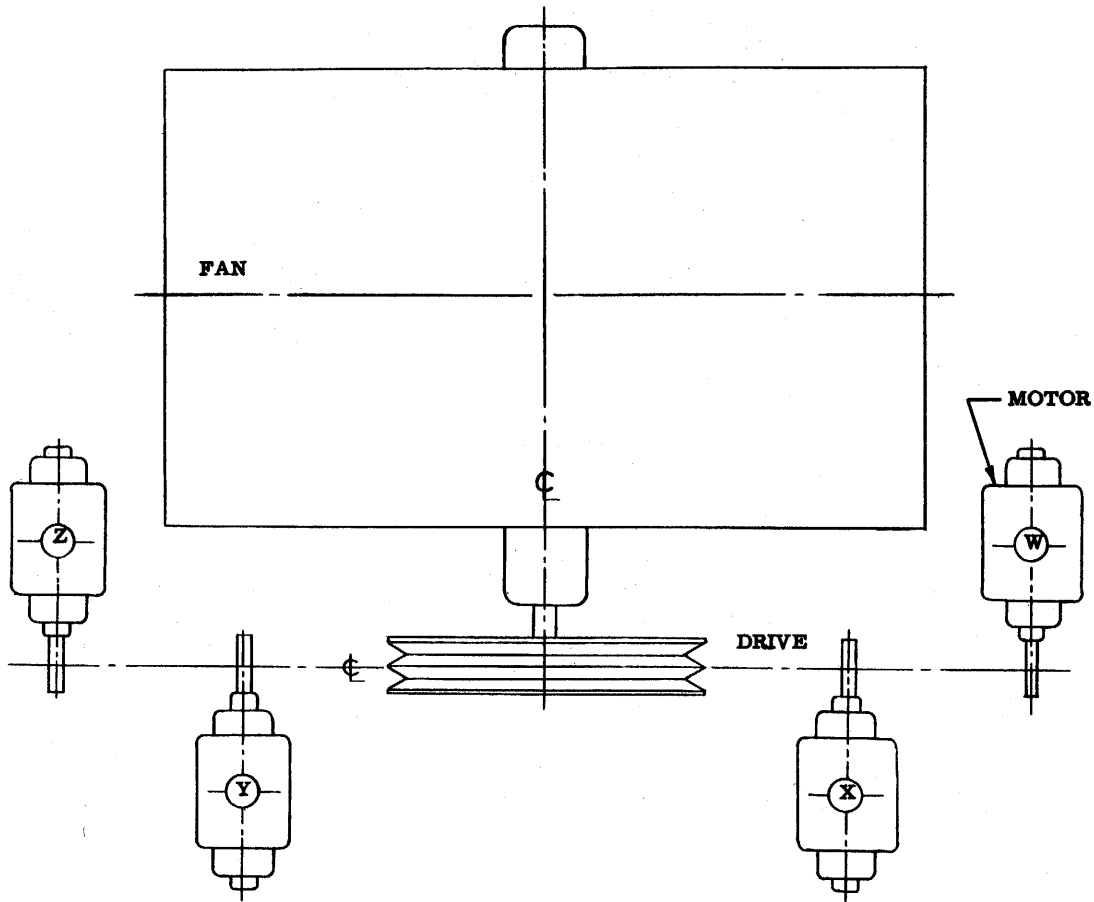
- Note:**
1. Direction of rotation is determined from drive side of fan.
  2. On single inlet fans, drive side is always considered as the side opposite fan inlet.
  3. On double inlet fans, when drives are on both sides of fan, drive side is that side having the higher horsepower driving unit.
  4. Direction of discharge is determined in accordance with diagrams. Angular of discharge is referred to the horizontal axis of fan and designated in degrees above or below such standard reference axis.
  5. For fan inverted for ceiling suspension, or side wall mounting, direction of rotation and discharge is determined when fan is resting on floor.

AMCA STANDARD

**FANS - Designation of Direction of Rotation and Discharge**

**AS2406**

APPROVED: 5-26-60 REVISED



**Plan View**

**Note 1.** Location of motor is determined by facing the drive side of fan and designating the motor position by letters W, X, Y, or Z as the case may be.

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AMCA STANDARD

**FANS - Motor Position, Belt or Chain Drive**

**AS2407**