



Selection Guide for Forward Curve Blower Wheels

Since 1903, Electric Trading Company has been providing it's customers with fine quality HVAC equipment & supplies, while always striving to offer exceptional service to our Customers.

We've compiled this selection guide to help you assure that what you order & what you will receive is the exact Blower Wheel you need which meets all of your requirements.

Some Basics: Single Inlet Forward Curve Blower Wheels

& How to determine Rotation Direction on a Single Inlet Blower Wheel



Single Inlet Blower Wheel – (shown here with Clockwise Rotation)

Does your blower wheel look something like this?

Congratulations! You have a "Single Inlet" forward curve blower wheel. The next step is to determine it's Rotation Direction for proper air flow.

Note: Single inlet wheels are made in numerous configurations, construction types including tabbed style, roll formed, riveted or welded, available materials including steel, stainless, plastic & aluminum. They may be made with inside or outside hubs, fitted with a keyway, and fitted additionally with reinforcing rods or rings for insuring the structural integrity during very high speed operation of heavy duty blower wheels.

Wheel Rotation: You must specify the direction of rotation the wheel will be operating or spinning at, as either Clockwise (CW) or Counterclockwise (CCW) rotation. The Correct Rotation is fundamentally critical to the Overall Performance and Air Flow Characteristics of a Blower Wheel. Incorrect direction of rotation will cause a blower wheel to not move air effectively nor efficiently, which seriously reduces performance & could lead to various forms of property or equipment damage. **It's critical to assure & specify the wheel's correct rotation direction.**

Follow these easy steps to determine direction of a Single Inlet Blower Wheel:

Step 1: Imagine the wheel is a cup. Now tip it so you're looking at the "bottom of the cup" - what we call the back plate or closed end is now facing you, as shown

Back Plate or Closed End of a Blower Wheel



Single Inlet Blower Wheel with Reinforcing Ring – Clockwise Rotation (CW) – as viewed from back plate / closed end



Step 2: While Looking at the closed end of the blower wheel, note the direction of the Blades. Are the Blades leaning or tilted toward Clockwise or Counterclockwise? Use the hands of a clock for reference. If they're tilted toward Clockwise Direction, as in the picture to the left, then you have a Clockwise Forward Curve Blower Wheel. That's the direction the blower wheel will spin or operate, and that's the direction of the intended air flow, as well.

Single Inlet Blower Wheel - Clockwise Rotation - viewed from the Back Plate / Closed End



If the blades are tilted toward a Counterclockwise direction, as in the picture to the left, then you have a Counterclockwise Blower Wheel.

Remember: With Single Inlet Blower Wheels, always view the direction of the blades from the Back Plate or Closed End Point of View!

Now you have to determine the correct dimensions and other particular, special characteristics of your Blower Wheel. We'll describe these details in the next sections.

If you would like assistance along the way, please contact our Customer Service Department.



Single Inlet Blower Wheel - Clockwise Rotation – (CW) – with Reinforcing Rings & Reinforcing Rods



Single Inlet Blower Wheel - Counterclockwise Rotation (CCW)

Please Remember – Don't Assume:

For Electric Trading Co., a Single Inlet Blower Wheel's Direction of Rotation is always described as being viewed while looking from the Back Plate or Closed End of the Blower Wheel, which correlates to NEMA MG-1 Motor & Generator specifications, but if you're ordering a wheel you haven't ordered from us before, please don't assume that everybody else supplying or manufacturing blower wheels follows that same standard. Always verify that the direction of rotation you are specifying, and that how you specify it or how you communicate that to us, actually represents your requirements.

Basics Continued: Double Inlet Forward Curve Blower Wheels

& How to determine Rotation Direction on a Double Inlet Blower Wheel



Double Inlet Blower Wheel - Counterclockwise Rotation (CCW) viewed from the Hub Projection

Does this look more like your blower wheel?

Congratulations! You have a "Double Inlet", forward curve blower wheel.

The next step is to determine it's Rotation Direction for proper air flow.

Note: Double inlet wheels are made in numerous configurations, construction types including tabbed style, roll or strip formed, riveted or welded, available materials including steel, stainless, plastic & aluminum. They may be made with dual hubs, inside or outside hubs, centered or offset, fitted with a keyway, and fitted additionally with reinforcing rods or rings for insuring the structural integrity during very high speed operation of heavy duty blower wheels, as well.

Please Remember: Dual Inlet Blower Wheels are Described Differently than Single Inlet. Use extra care when examining / specifying. Double Inlet Blower Wheel Rotational Direction is always described as while viewed looking from or at the Hub Projection's face surface.

Wheel Rotation: as with Single Inlet Blower Wheels, excluding universal type *, You must specify the direction of rotation the wheel will be operating or spinning at, either **Clockwise (CW) or Counterclockwise (CCW) rotation.** The Correct Rotation is fundamentally critical to the Performance and Air Flow Characteristics of a Blower Wheel. Incorrect direction of rotation will cause a blower wheel to not move air effectively nor efficiently, this could lead to various forms of property or equipment damage. **It's very important to ascertain & specify the correct rotation.**

Please Note: * Universal Type. If the wheel is of a centered symmetrical construction, and there's hubs on both sides of the wheel's center disc plate, then the wheel is of universal type & can simply be flipped to change it's rotational direction. You can then set or verify the rotational direction of the wheel when you install it on its motor shaft. (denoted as Universal or CW/CCW type)

Step 1: Tilt the wheel towards you so you are looking directly at the hub projection's face.

Step 2: Look at the direction of the blades or vanes, are they tilted Clockwise or Counterclockwise?

Use the hands of a clock for reference. If they tilt Clockwise, as in the picture to the right, then you have a Clockwise Double Inlet Forward Curve Blower Wheel.



*Double Inlet Blower Wheel -
Clockwise Rotation – (CW) as
viewed from Hub Projection's face*



*Double Inlet Blower Wheel -
Counterclockwise Rotation (CCW) viewing
from the Hub Projection*

Conversely, if while looking at the hub projection's face, the blades are tilted Counterclockwise, as in the picture to the left, then you have a Counterclockwise Double Inlet Forward Curve Blower Wheel.

Now you have to determine the correct dimensions and other particular, special characteristics of your Double Inlet Blower Wheel. We'll describe these details in the next sections.

If you would like assistance along the way, please contact our Customer Service Department.

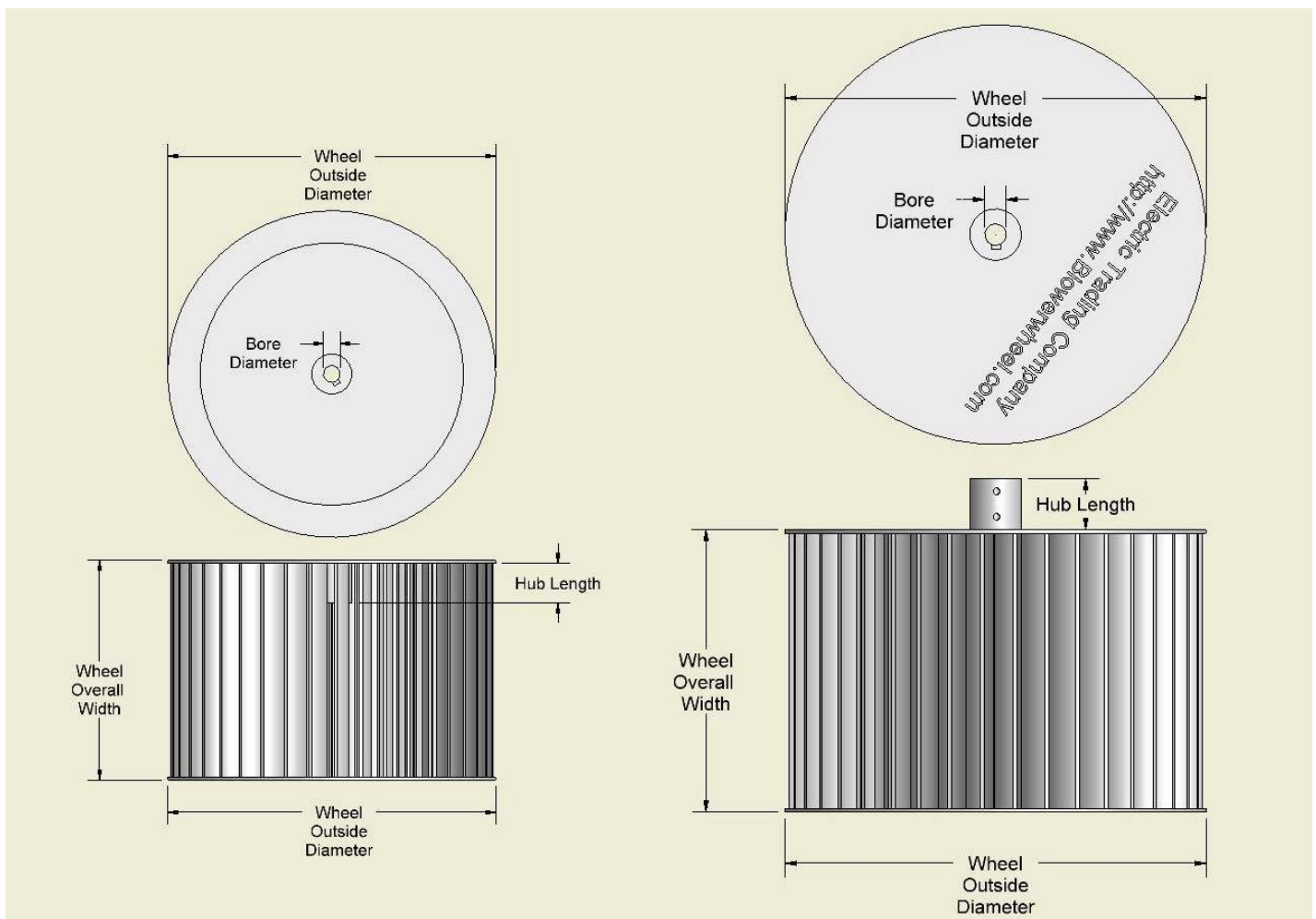


*Double Inlet Blower Wheel - Offset Type -
Counterclockwise Rotation (CCW) as viewed
from Hub Projection*

How to measure a Blower Wheel

The main measurements you need to know before you can start to order a standard or custom blower wheel with us or on blowerwheel.com, are the diameter or outside diameter, the overall width and the hub bore or mounting shaft diameter.

- 1) Measure the Diameter of the wheel. This Outside Diameter is the length of the straight line passing from side to side through the axis or center of the blower wheel, to the furthest outer edges of the blower wheel, as seen in the pictures below.
- 2) You can also specify the inner and outer diameter of the blade or vane section itself, but usually only if that is particularly necessary for very specialized applications.
- 3) Measure the Overall width of the blower wheel. The wheel overall width is normally described as the outside to outside width dimension of the air moving section of the blower wheel, as seen in the pictures below. (we don't include the length of the hub or hub projection in the wheel overall width dimension)
- 4) Lastly, measure the mounting bore diameter of the blowerwheel. The bore diameter is normally referenced as the shaft diameter the blowerwheel is intended to be installed on, and you can also note the hub length, if critical, as well.



At this stage, You should be getting pretty familiar with the basic steps to choosing or specifying a blower wheel.

When you're ready, You can call one of our friendly sales associates at 212-226-0575 or send us an email @ sales@blowerwheel.com to let us help you choose or finalize any other necessary details, or to assist You placing an order, and we also offer additional technical information to help you choose.

Some of the other necessary details you'll need to place an order might include the construction types including tabbed style, roll or strip formed, riveted or welded, the vane or blade quantity, specifying the material including steel, stainless, plastic or aluminum, and corresponding hub material. Wheels may also be made with dual hubs, inside or outside hubs, double inlet centered or offset, fitted with a keyway, and fitted additionally with reinforcing rods and/or rings for insuring the structural integrity of heavy duty blower wheels during high speed operation, as well. The intended operational RPM is typically specified when placing an order for custom heavy duty blower wheels, and blowerwheel's may have a maximum RPM operational specification associated with them, for appropriate safe use & application.

Within our website's technical library section there are outline drawings of many of the forward curve blower wheel types we offer. You can review them to help clarify your requirements, or print them, fill them out and send it to us for a quotation, or to then double check your requirements with one of our Customer Service Personnel. There are also drawings / specifications of standard and custom key way and material specifications. We are also pleased to work on developing entirely new, custom blower wheels of many different types and specialized applications for our customers.

We're pleased to assist You with all your Blower Wheel requirements. That's what we're here for.

Thank You for considering Electric Trading Company... Give us a call @ 212-226-0575

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