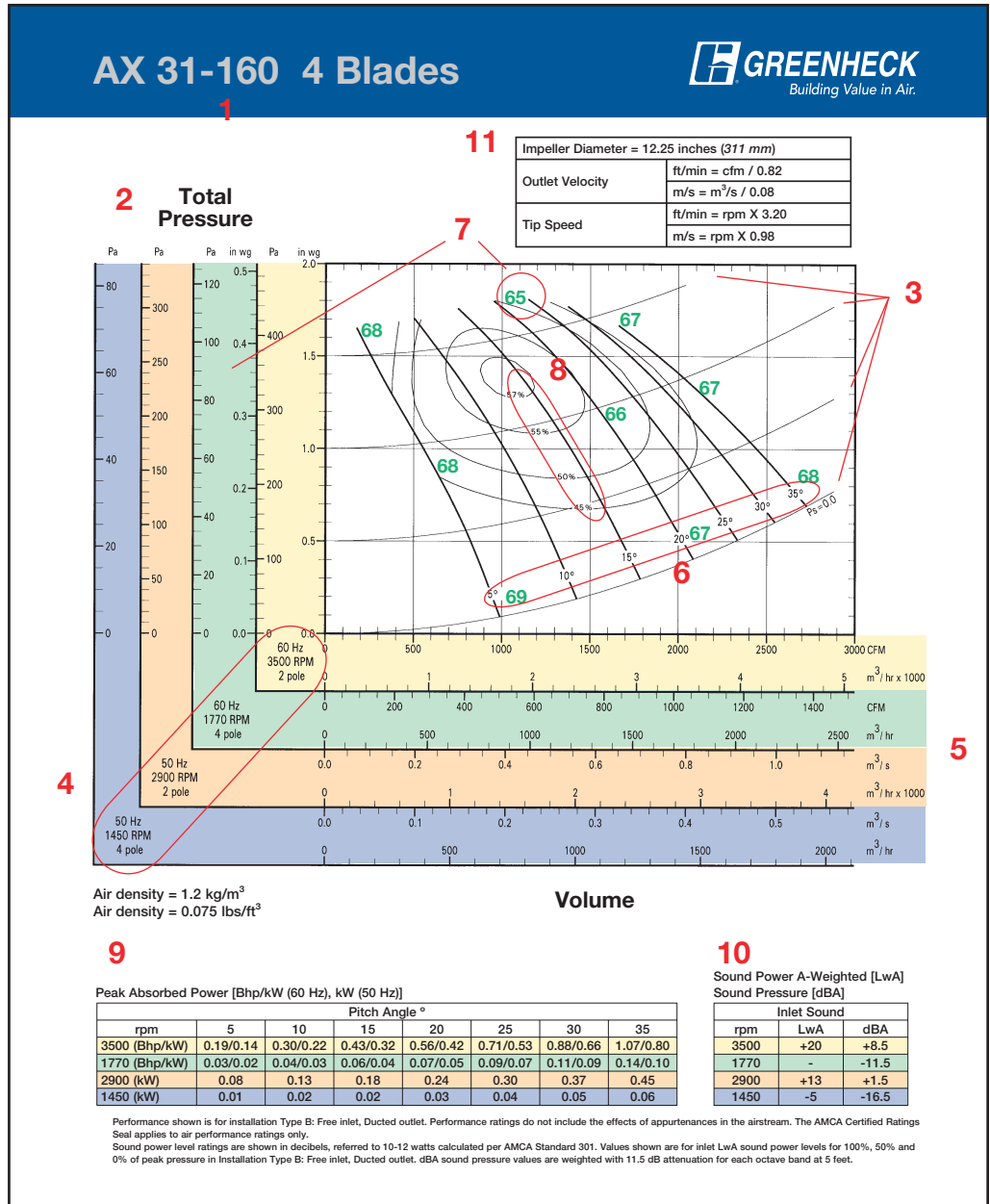


## How to use this performance manual

The performance pages contains information in metric and english units. These are color coded with motor power frequency and motor speed for easy and quick reference in finding air performance, power requirements, and sound information. See back cover for selection example.

- 1 Model size and hub diameter
- 2 Total Pressure Axis in Pascals (Pa) and Inches Water Gauge (in. wg)
- 3 Static Pressure - Lines of constant static pressure
- 4 Color coded power frequency and motor speed (rpm)/poles
- 5 Volume - Axis displays two different units of measure for each power frequency and motor speed.
- 6 Blade pitch - Shown in 5 degree increments, integral pitches are available between the displayed limits.
- 7 Sound power (LwA) - Color coded sound power level levels are displayed as a percentage of peak power; 100%, 50% and 0%. Use corrections in the sound power table to find corresponding LwA and dBA levels for a specific power frequency and motor speed.
- 8 Total Efficiency curves - Curves show total efficiency levels at different performance points. Those curves do not reflect static efficiency levels.
- 9 Peak Absorbed Power table - Table displays the maximum power required by pitch angle and motor rpm. Values provided are in brake horse power and kilowatts.
- 10 Sound Power and Sound Pressure table - Table displays the corrections required by motor rpm.
- 11 Outlet Velocity and Tip Speed formulas - For deriving outlet velocity, use either cfm or m<sup>3</sup>/s in the appropriate Outlet Velocity equation. Tip speed equation is only dependent on motor rpm.



# Selection Example and Warranty

Performance:

Volume - 0.5 m<sup>3</sup>/s

Pressure - 170 Pa Static Pressure

Power Frequency - 50 Hz

Results:

Following the constant static pressure line a size 31 with 160 hub and 4 blades needs:

- 15 degree blade pitch setting
- 2900 rpm motor

From the chart

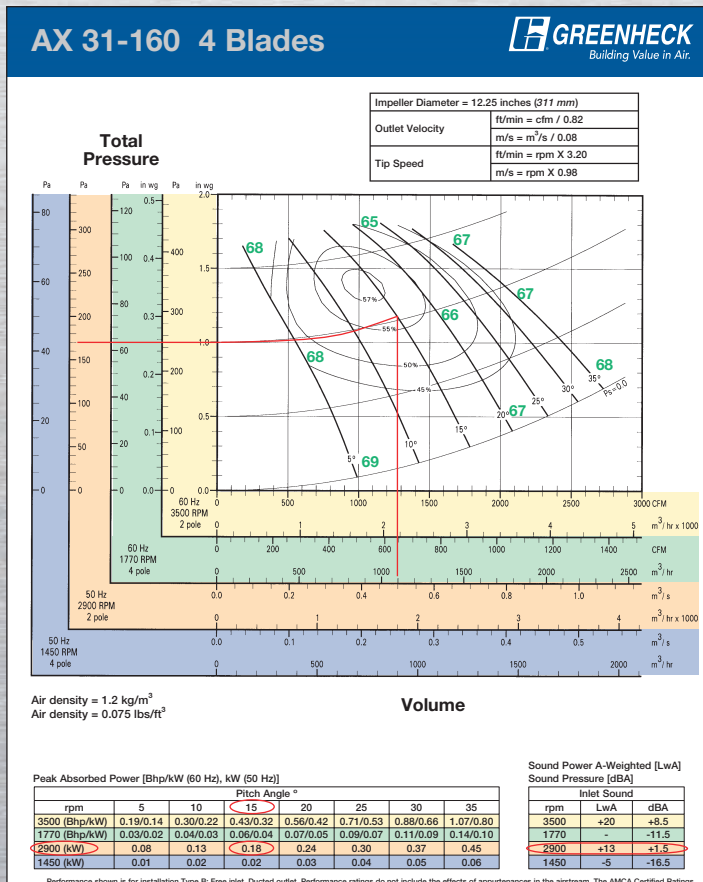
- The operating efficiency is between 55 and 57%

Using 2900 Motor rpm and Peak Absorbed Power Table

- 0.18 kW peak absorbed power

Sound power falls between 68 and 66 LwA for the color matched 1770 rpm. Using the Inlet Sound table and estimating 67 LwA with 2900 rpm, the calculated sound power and pressure are:

- Sound Power of 80 LwA
- Sound Pressure of 68.5 dBA



## Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of

top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time.

And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

## Our Warranty

Greenheck warrants this equipment to be free from defects in material and workmanship for a period of one year from the purchase date. Any units or parts which prove defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid. Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Greenheck prove defective during this period, they should be returned to the nearest authorized motor service station. Greenheck will not be responsible for any removal or installation costs.

*As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.*



Prepared to Support Green Building Efforts