

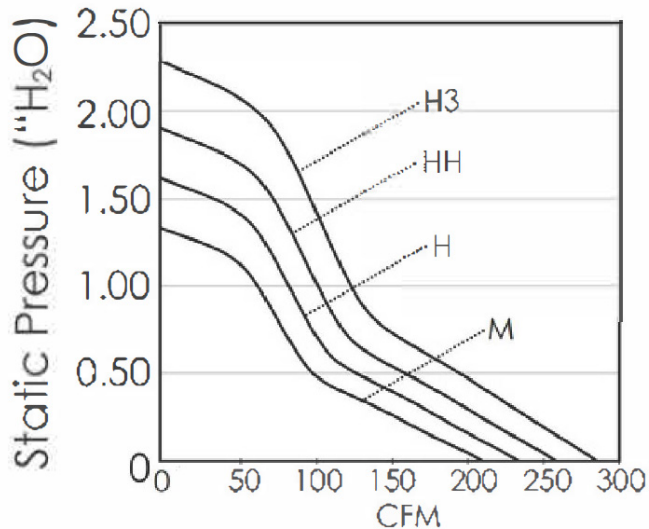
# HIGH SPEED/ HIGH PERFORMANCE FANS



## STATIC PRESSURE

High static pressure environments exist where air is restricted and doesn't easily move. Static pressure is a system's resistance to airflow and is usually measured in inches of water column ("H<sub>2</sub>O) or in millimeters of water (mmH<sub>2</sub>O). In the case of thermal management, static pressure refers to a fan's ability to move air through restrictive areas. The less resistance to airflow that a system encounters, the lower the system's static pressure. Fans and blowers can deliver more airflow and cool equipment more effectively when working against a lower static pressure.

### Static pressure curve



It is essentially a measure of the differential air pressure between the air pressure inside an application vs ambient air pressure outside of an application. There is an inverse relationship between airflow and static pressure. As the pressure differential rises, airflow drops.

The vertical axis labeled "Inches of Water" describes relative air pressure. The horizontal axis labeled "Airflow (CFM)" describes Airflow volume in relation to air pressure.

The curve tells the user approximately how much air a fan will move for a given pressure reading. For instance - the curve meets the horizontal line at the bottom of the graph at about 290 (Cubic Feet/Minute). Look left along the bottom horizontal axis and notice that the air pressure (Inches of Water) is zero (No pressure difference at all between the inlet and outlet side of the fan).

Notice that the curve meets the vertical axis at about 0.90 (Inches of Water) and that airflow is 0 (zero).

High static pressure environments are commonly found in networking & telecom enclosures, industrial electronic cabinets, and medical imaging equipment.

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## APPLICATIONS

These fans are perfect for applications that require higher airflow but the design doesn't allow for a larger fan. Many common applications include networking and telecom enclosures, fan trays, food and beverage industry, appliances, and electric car charging base stations.

## ORION FANS OFFERING

Orion Fans offers the ability to add special functions including PWM, tachometer, alarm, and thermal control. IP ratings are also available up to IP69K.

To learn more about the Orion Fans high speed/high performance offering, visit <https://orionfans.com/high-speed-performance/>