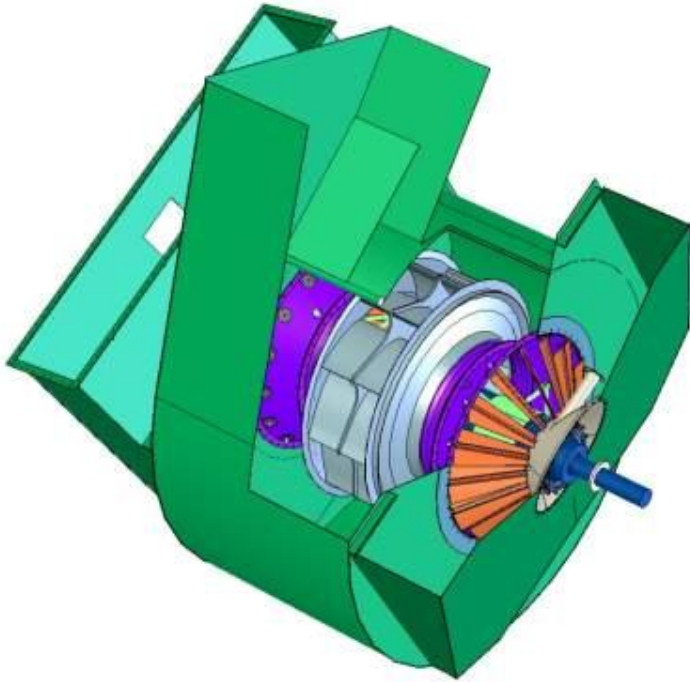
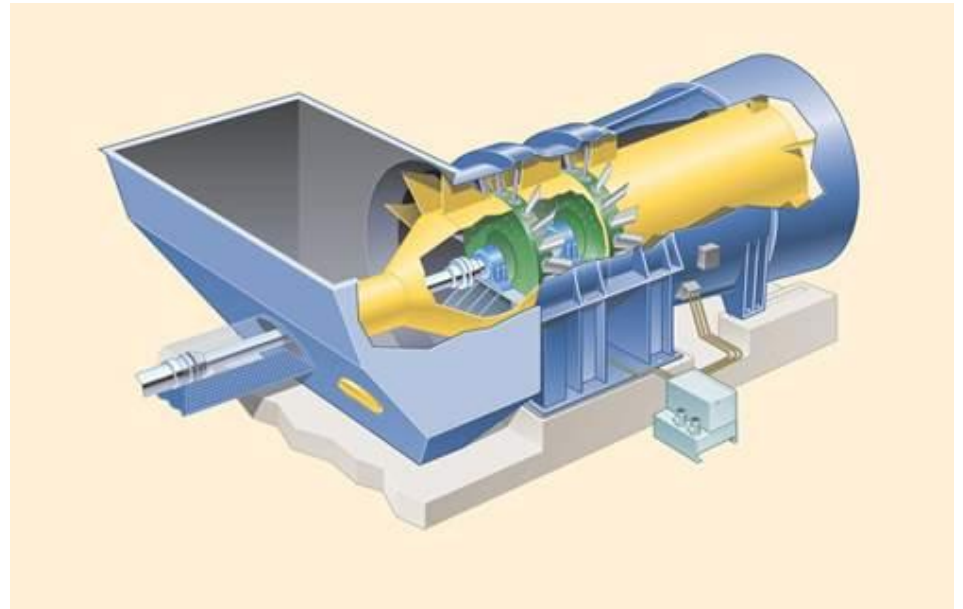


Choice of Fans for Utility Applications

- There are two basic choices of fan type available



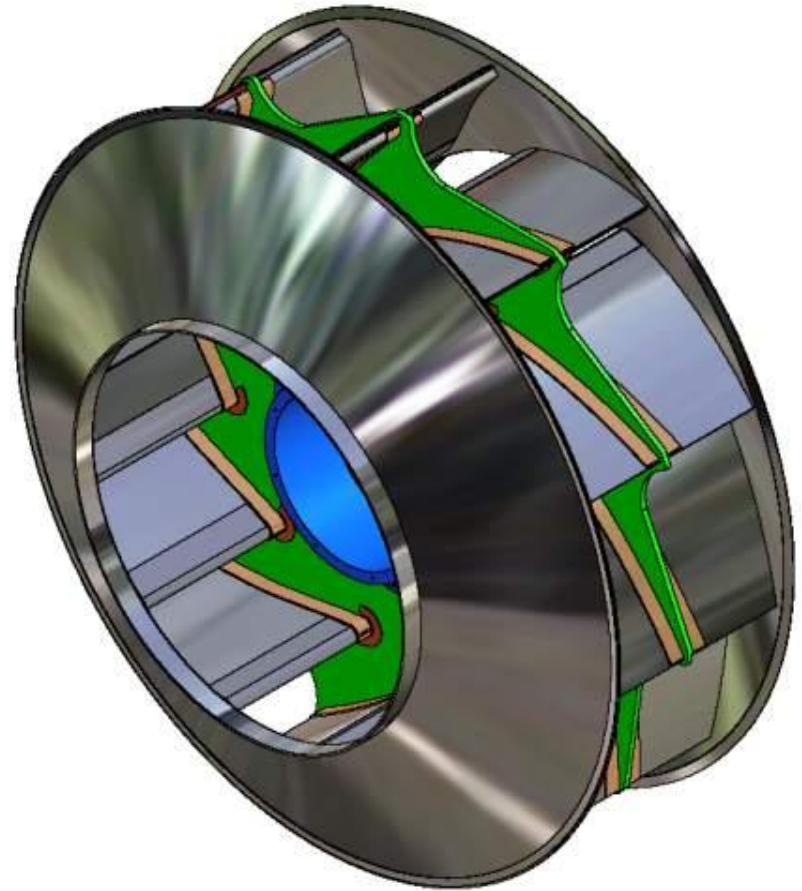
Centrifugal Fans



Axial Fans

Flow and Pressure Relationship - Centrifugal Fans

- Specified Flow for Centrifugal fans determines the Width of the fan wheel
- Specified Pressure for Centrifugal fans determines the tip speed for the wheel, or at a given speed determines the diameter of the wheel
- Centrifugal Fans are normally better selections for low to medium flows (below approximately 1,250,000 ACFM/fan) and medium to high pressures (30" WG or more at temperature) as these conditions produce fans that are efficient and are capable of being structurally designed to withstand the associated stresses.
- This means that centrifugal fans are well adapted to applications such as Primary Air Fans and multiple Fan ID Fan applications from a rating standpoint.
- Other factors such as fixed system resistance, high dust content, corrosive environment, limited axial space, and base loaded operation tend to favor centrifugal fans.



Flow and Pressure Relationship - Axial Fans

- Specified Flow for Axial fans determines the tip speed for the wheel, or at a given speed determines the diameter of the wheel
- Specified Pressure for Axial Fans fans determines the hub diameter for the wheel, (or the blade length) at a given speed as well as the number of stages. (Both single and two stage designs are available)
- Axial Fans are normally better selections for medium to high flows (1,000,000 ACFM/Fan or more) and low to medium pressures (below 35" WG per stage at temperature) as these conditions produce fans that are efficient and are capable of being structurally designed to withstand the associated stresses.
- This means that axial fans are well adapted to applications such as Forced Draft Fans, ID Booster Fans and ID Fan applications with a fewer number of larger fans from a rating standpoint.
- Other factors such as parabolic system resistance, lower dust content, limited horizontal space, and wider load variation tend to favor axial fans.

