

Filter housing with Tempest Sand Filter

Description

The InoVane® Tempest Z unit is a heavy duty self-cleaning filter, equipped with matrix modules of Inertial cyclone separators for filtration of both dry and wet contaminants. Modules in strong corrosion-free design and Construction.

The standard Cyclone Filter Module is mold-formed of rugged, high-density polypropylene. Through centrifugal force, contaminants are removed from the air stream as it is drawn through tubes. The cyclone Filter Module's remarkable efficiency is the culmination of years of engineering design, laboratory developments and field testing.



REDUCING DIRT

By greatly reducing dirt loading on secondary filter elements in a system, the Cyclone Filter Module provides long-term economies by extending the service life of an air-intake system. Used alone, it removes 98% of solid particles 15 microns and larger from an air stream. In addition, it will remove up to 99.4% of moisture, whether in the form of liquid mist or snow.

Unit enclosure / Casing: Galvanized steel
Stainless steel

Tempest Cyclone module: High Density PP

Efficient Operation

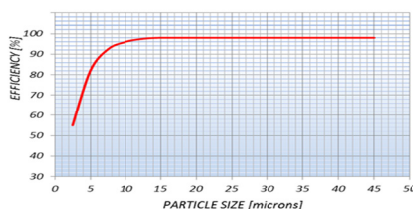
Air enters inlet tube, striking stationary spinner and developing high radial velocity.

Inertial action forces contaminants to the periphery of the tube, separating them from the main air stream. Main air stream, now cleaned, exits straight through the center discharge tube.

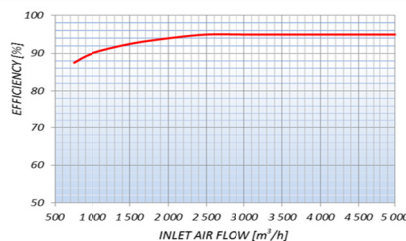
Secondary discharge

Contaminants are carried by a secondary discharge stream into a bleed duct system. The secondary airflow should be approximately 10% of the primary air flow. If additional ducting is required from the fan, the appropriate external resistance must be added.

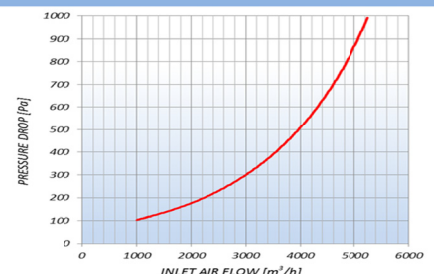
PERFORMANCE DATA



Efficiency vs Particle size: The InoVane Tempest has a dust removal efficiency of 98% for particles 15 microns and larger. This graph provides complete data on particle size removal efficiency showing that it will remove over 93% of all solid particles 8 micron or larger. In addition the InoVane Tempest has a water removal efficiency of over 90%.



Efficiency vs Air Inlet Air Flow: This graph indicates the effect at inlet air flow variance on efficiency. Based on AC Coarse Test Dust with particle size ranging from sub-micronic to 200 microns, it illustrates the efficiency of the InoVane Tempest module through a wide range of inlet flows.



Pressure Drop vs Air Inlet Air Flow: Pressure drop through the InoVane Tempest is low (after the stationary spinners) due to the straight air path through the tubes. The graph shows a pressure drop of 270 Pa at an air flow of 2750 m³/h through the standard Tempest module.