Bypass Air Plenum

for Vektor® Laboratory Exhaust Systems

VEKTOR®

Structural integrity, superior performance, flexibility – just a few of the characteristics that define Greenheck's Vektor bypass air plenums.

Greenheck's bypass air plenum is engineered to facilitate the addition of ambient air to the exhaust airstream. The additional air increases the dilution of the exhaust air and the discharge momentum, resulting in greater displacement above the roof. Designed to reduce fan inlet turbulence and improve performance, the modular plenums can be arranged for specific system configurations, reducing cost.

Greenheck Advantages

Plenum design minimizes system effects based on fan airflow capacities. Duct connection locations on bottom or side. Modular plenum design offers flexibility at the jobsite. Common plenum connects multiple fans to the exhaust system.

Isolation Dampers

- Parallel airfoil blades
- Isolate individual fans from the plenum when not in operation
- Prevent backward wheel rotation
- Slide out design allows for inspection and service without entering into the contaminated airstream
- Constructed to handle high pressures and corrosive atmospheres

Bypass Dampers

- Opposed airfoil blades
- Provide for full airflow control throughout the damper's operating range
- Dilutes bypass air exhaust concentration levels prior to entering into the fan
- Balance building flow variations to maintain constant fan volume and set plume height
- Sized specifically for volumes and pressures required on the application
- Built for accurate bypass air control

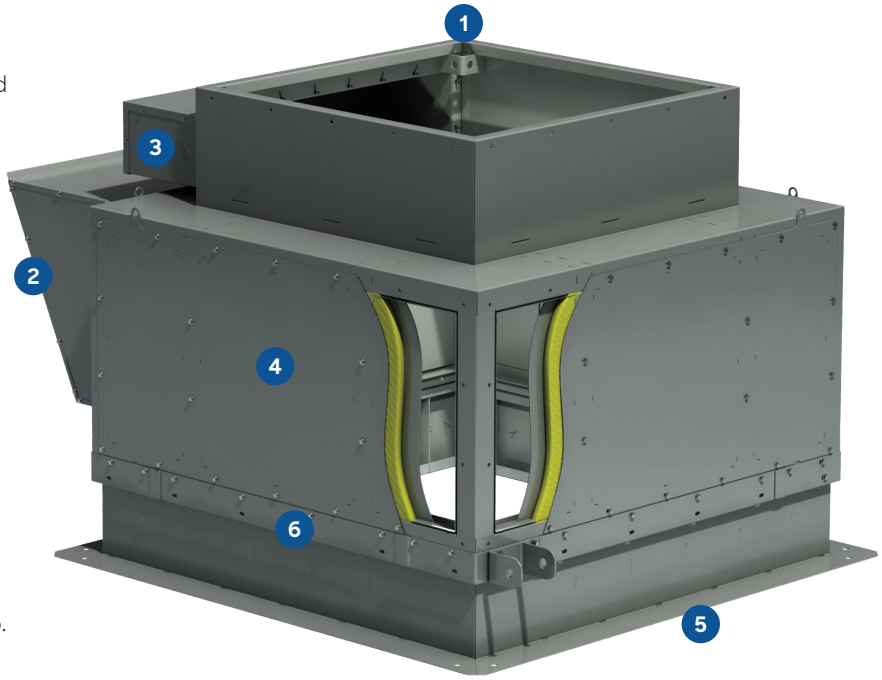
Optional Actuators

- Electric (two-position, spring return) or pneumatic (modulating) damper actuators are factory-mounted and wired to expedite system installation and to contribute to a safe, operational lab system
- Manual quadrants available
- Selected and sized on project specific operating torque requirements and control needs

Vektor® Plenum Design Features

All Vektor bypass air plenums are manufactured of laser cut and structurally formed heavy-gauge steel. Plenum assembly is continuously welded. The plenum assembly is then coated with LabCoat™, an electrostatically-applied powder coating with corrosion-resistant Hi-Pro Polyester topcoat and an epoxy primer, protecting it against a wide spectrum of acids, alkalies and solvents.

1. Corrosion-resistant, stainless steel lifting lugs.
2. Weatherhood protects bypass air damper and actuators from rain, moisture, dust and dirt, and minimizes water entrainment. Acoustical designs are available.
3. Isolation dampers can be removed from the bypass air plenum through an actuator cover; fan removal or entry into the contaminated plenum is not required.
4. Bolted and gasketed access panels prevent access to plenum interior by unauthorized individuals.
5. Plenums are designed for low fan entrance velocity, improving fan performance.
6. Plenum “skirt” acts as curb cap with prepunched holes that bolt to the Vektor curb.



Bypass Plenum Features and Options	Vektor-H Series	Vektor-M Series	Vektor-C Series
Single or multiple fan systems	Yes	Yes	Yes
Formed and fully-welded plenums	Yes	Yes	Yes
Modular plenum designs for future upgrades	No	Yes	Yes
Suitable for bottom or side air intake	Yes	Yes	Yes
Double-wall construction	No	Optional	Optional
316 SS perforated lining on double wall	No	Optional	Optional
Isolation damper(s) and actuator(s)	Optional	Optional	Optional
Bypass damper(s) and actuator(s)	Optional	Optional	Optional

Our Commitment

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

Product warranties can be found online at greenheck.com on the specific product page. Greenheck’s general warranty statement can be found under the Support section at Greenheck.com/Support/Post Construction.

GREENHECK
Building Value in Air.

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