

**STABLE VORTEX<sup>®</sup> CHEMICAL FUME HOOD**

Beyond the 50-70% ventilation reduction, energy and improved safety, the Vortex II<sup>®</sup> hood by Flow Safe, Inc. offers design features that deliver a range of benefits, including:

- Simpler design than state-of-the-art VAV systems, offering easier, less expensive installations and minimal maintenance.
- Simple constant volume operation offering real zero risk safety, energy saving design not dependent on the operator.
- Increases in net usable space versus gross space, and decreases in duct chase sizes, floor to floor clearances, mechanical space, roof loads, steel and concrete.
- The narrowest high performance fume hood on the market reduces column spacing and building size, in some cases, a whole floor for free.

**THE INVENTION**

Robert Morris, Flow Safe’s President and CEO was honored as inventor of the year in 2004 for his creation of the Stable Vortex II<sup>™</sup> fume hood technology. The Vortex II<sup>®</sup> fume hood utilizes exclusive<sup>1</sup> Reynolds number design formulas to achieve 50-70% energy savings and enhanced worker safety. This is the only “standard depth” (34” deep) fume hood to achieve the EPA’s pre-purchase approval for high performance hoods.

**THE FLOW SAFE VORTEX II<sup>®</sup> STABLE VORTEX<sup>™</sup> SOLUTIONS FOR NEW CONSTRUCTION**

In mathematics something that is both simple and profound is said to be elegant. This rings true with the Stable Vortex II<sup>™</sup> fume hood technology by Flow Safe, Inc. This technology permits designers to easily achieve risk free first cost construction savings and long-term energy savings.

The dramatic reduction (up to 60%) of single pass air volumes translates into significant first cost savings. Temperature and humidity control are much easier to maintain. The required mechanical systems supporting the laboratory are literally 50% less than facilities constructed with traditional fume hoods. Moving forward real energy savings are a positive on the bottom line.

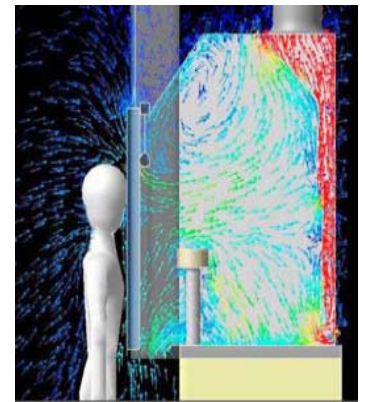
**FLOW SAFE’S EXCLUSIVE<sup>1</sup> STABLE VORTEX<sup>™</sup> EXISTING FUME HOOD CONVERSION INTO HIGH PERFORMANCE HOODS**

The elegant simplicity of the Stable Vortex II<sup>™</sup> technology is being applied to existing hood installations. Hoods can be converted in place into a high performance, low volume system in less than 1 day. The conversion kit provides a demonstrably safer piece of equipment and in all cases the energy savings pay for the conversion.

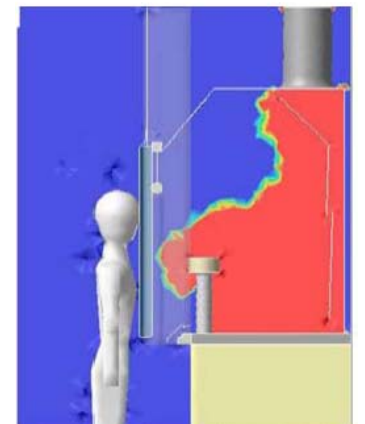
<sup>1</sup> 5,697,838 & 6131963 patents and patents pending

<sup>2</sup> New Jersey Inventors Hall of Fame

NOTE: Flow Safe, Inc. and Mr. Bob Morris invented and manufactures the Stable Vortex II<sup>™</sup> Fume Hood. PSA LabTech, Inc. is simply a manufactures representative.



CFD Model Vortex II<sup>®</sup> Side View Shows Airflow Patterns



CFD model Vortex II<sup>®</sup> Virtual Reality Tracer Gas Testing shows contamination cloud in Stable Vortex<sup>™</sup> Hood

Leading edge CFD software is used to visualize and analyze the airflow patterns in the fume hood

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LABORATORY DESIGN • SALES • TESTING & CERTIFICATION • SERVICE & REPAIR • CONSULTING

**Finally... a 34" deep, high performance, Stable  
Vortex<sup>™</sup> low air flow, fume hood!**

## **VORTEX II<sup>®</sup> BENCH HOOD**



**Exclusively\* from Flow Safe Inc., the leader in  
STABLE VORTEX<sup>™</sup> Fume Hood technology:**

- EPA tested & approved as high performance, low flow hood
- Combination sash 4,5,6,and 8 foot hoods, 34" deep
- Reduces aisle spacing requirements
- Easy installation - pass thru standard 3.0 doors
- New shorter silhouette --- a full 8" shorter than competitors
- CFD enhanced design
- Zero spills, ASHRAE performance tested at unrestricted, full vertical sash opening in less than ideal conditions @ <50 FPM face velocity
- Zero spills, ASHRAE performance tested against multiple hotplate challenge @ < 50 FPM face velocity
- Zero spills, ASHRAE performance tested for shorter workers @ < 50 FPM face velocity
- Exclusive Stable Vortex<sup>™</sup> design at effective Reynolds Numbers\*
- Energy Saving LEED'S point, maximum 50 cfm/square foot work surface

\* Patents 6,131,463; 5,697,838; and patents pending

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