

## Laboratory Exhaust

### Axijet<sup>®</sup> High Plume Exhaust Systems



**SAFETY**

**RELIABILITY**

**ECONOMICS**

The **Axijet**<sup>®</sup> High Plume Dilution Blower is a backwardly inclined airfoil centrifugal blower incorporating a specially designed housing and discharge venturi nozzle. The Axijet is AMCA certified, assuring the user and engineer of accurate performance.

The Axijet is used to extract laboratory, process, or fume hood effluent air and dilute the effluent with outside ambient air. Because of the nozzle design, the exhausted effluent is displaced high into the atmosphere at a constant high discharge velocity.

As a result, the Axijet has greater exhaust dilution, higher discharge velocity, greater exhaust mass, and a greater plume height than conventional blowers and fans.

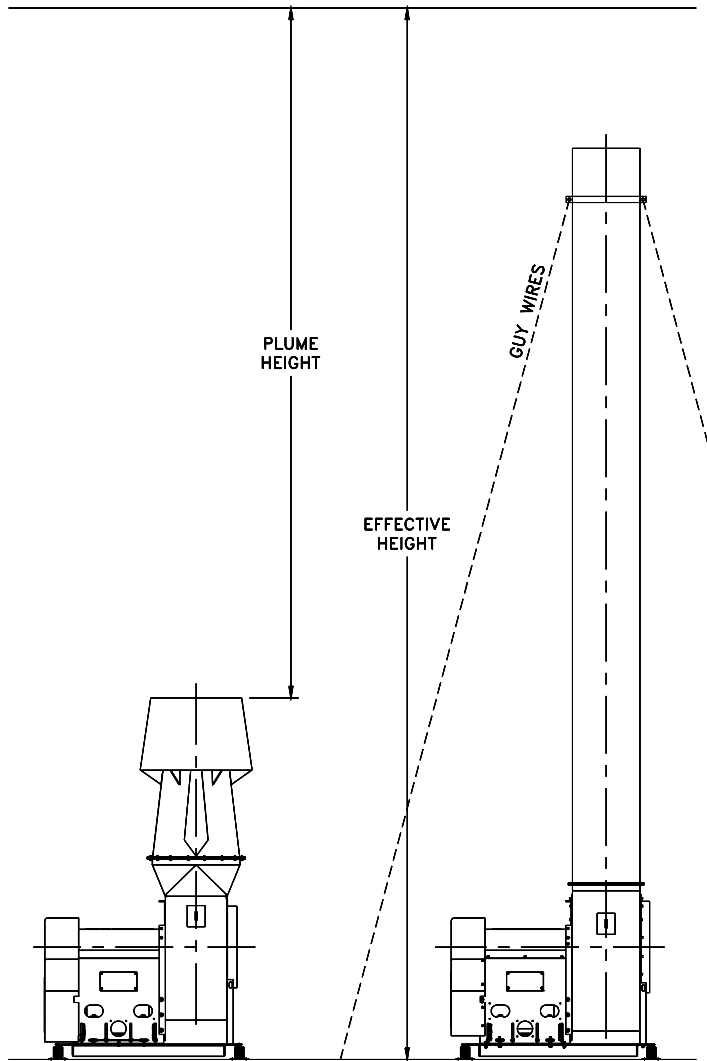
Many applications such as laboratory or process exhausts are hazardous and must be exhausted to ensure the safety of those working in close proximity to the source of the exhausted effluent.

Safety concern is extended to not only those in the immediate area where the fumes are generated, but also to others located in the building, as well as the occupants in surrounding building.

Improperly designed exhaust systems that ineffectively discharge high concentrations of effluent can result in re-entrainment of the hazardous or noxious exhaust into the building make-up air conditioning system, contaminating the fresh building air.

In applications where the exhaust is heavier than air and corrosive, the use of Axijet high plume blowers effectively displace the exhaust from the building roofing system and other roof mounted equipment, eliminating costly corrosion caused by the exhaust vapors.

M.K. Plastics Corporation certifies that the 1225 thru 7300 Axijet models shown herein are licensed to bear the AMCA seal for air & sound. The ratings shown are based upon tests and procedures performed in accordance with AMCA Publication 211 and 311, and comply with the requirements of the AMCA Certified Ratings Program.



**Axijet High Plume Dilution Blower**

**Conventional Blower with Stack**



## EXCELLENT REASONS TO SPECIFY & USE THE AXIJET HIGH PLUME DILUTION BLOWER...

### AMCA Certified

#### Increases exhaust effluent dilution...

Discharge from venturi nozzle entrains ambient air with exhaust air up to 270% of primary exhaust effluent.

#### Minimizes exhaust re-entrainment without blower stacks...

Because of increased exhaust mass (270% of primary exhaust flow) and high discharge nozzle velocity, effluent is displaced high into the atmosphere.

#### Backward Inclined Airfoil non-overloading fan wheel...

High Efficiency Stable Operation Throughout Operating Curve, Low Radiated Sound Levels, Non-Overloading Power Characteristics, Greater Airflow capacity per Fan, High Static Pressure capabilities.

#### Choice of Materials of Construction...

Fiberglass Reinforced Plastics, Chemical resistant Epoxy Coated Steel, or Stainless Steel.

#### Choice of Belt Drive...

Allows air handling capacity of fan to match system requirements of flow and pressure, Lower horsepower required, Lower operating costs, Use standard frame and speed motors which are readily available, or Arrangement #4 Direct Drive.

#### Reliable...

Belt Drive sized for 200% of motor BHP for reliability, Bearings sized for an L-10 life of 200,000 hours.

#### Safe Maintenance...

Motor maintenance does not require contact with exhaust contaminated impeller.

#### Constant Volume or Variable Volume Exhaust Applications

### Axijet Abridged Performance (Axijet-F 1225-1500 & Axijet-S 1825-7300)

Axijet Size		Inlet Fan Flow (CFM)	Total Fan Discharge Flow (CFM)	Discharge Effective Height (FT)
1225	Max	2,700	6,300	24
	Min	1,200	2,700	14
1500	Max	3,600	8,200	29
	Min	1,600	3,500	16
1825	Max	5,700	13,200	37
	Min	2,500	5,800	20
2450	Max	11,000	25,300	53
	Min	4,600	10,600	27
3000	Max	16,500	38,000	67
	Min	7,200	16,600	35
3650	Max	27,000	43,200	69
	Min	11,500	18,400	37
4025	Max	31,500	50,400	76
	Min	13,500	21,600	41
4450	Max	34,500	55,200	80
	Min	15,000	24,000	44
4900	Max	42,500	68,000	83
	Min	18,000	28,800	45
5425	Max	52,500	84,000	85
	Min	23,000	36,800	48
6000	Max	64,000	102,400	94
	Min	28,000	44,800	53
6600	Max	75,000	120,000	101
	Min	34,000	54,400	59
7300	Max	95,000	152,000	116
	Min	41,000	65,600	64

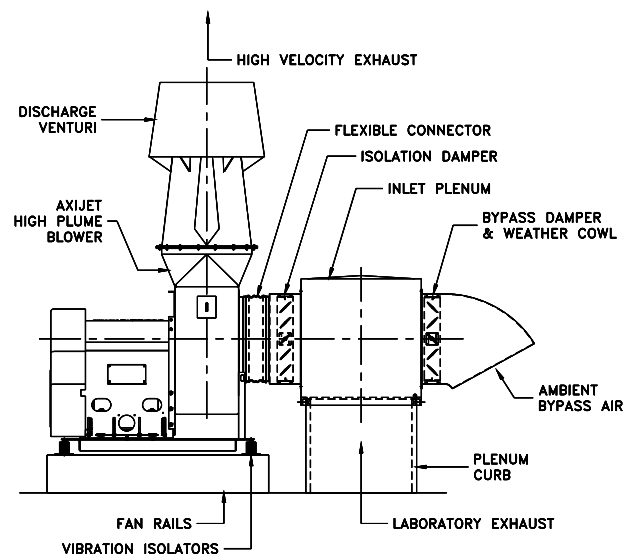
#### NOTES

Inlet Fan Flow = Laboratory Exhaust + Ambient Bypass Air  
 Total Fan Discharge Flow = Total Fan Inlet Flow + Induced Flow  
 Discharge Effective Height is at 10 mph wind  
 Per ANSI Z9.5, minimum stack velocity of 3000 fpm

### Axijet High Plume Exhaust System

External Static Pressure Capacity to 10"  
 Airflow Capacity to 95,000 CFM per Fan

- Performance certified is for installation Type C, Ducted - Inlet, Free Outlet.
- Power rating (BHP) does not include transmission losses.
- Performance ratings do not include appurtenances - (accessories).

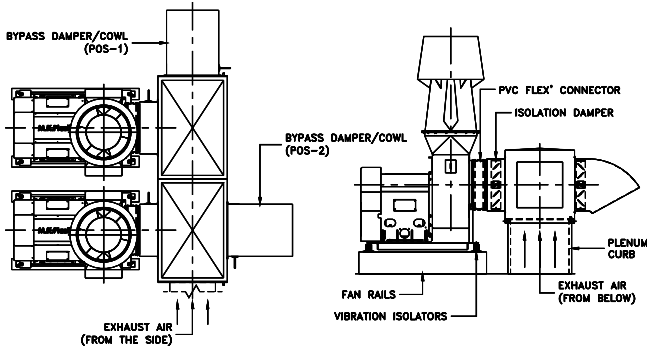


**M.K. Plastics**  
CORPORATION

Montréal, Québec [www.mkplastics.com](http://www.mkplastics.com)

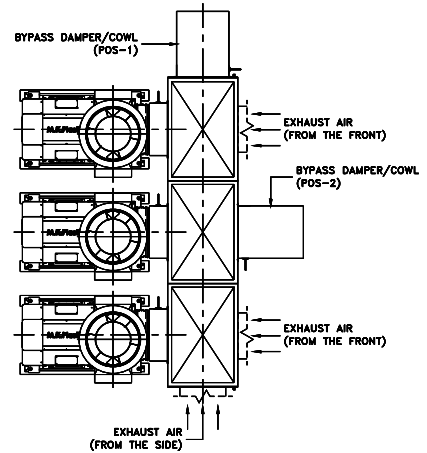
We would be pleased to provide you with a copy of the Axijet Laboratory Exhaust Engineering manual. This publication includes selection, application, performance and dimensional information on designing exhaust systems for critical laboratory applications. It also includes general information on all the M.K. Plastics fans, exhaust systems and exhaust system components. This design resource is available from your local technical sales representative or M.K. Plastics directly.

We look forward to assisting you with your important application.

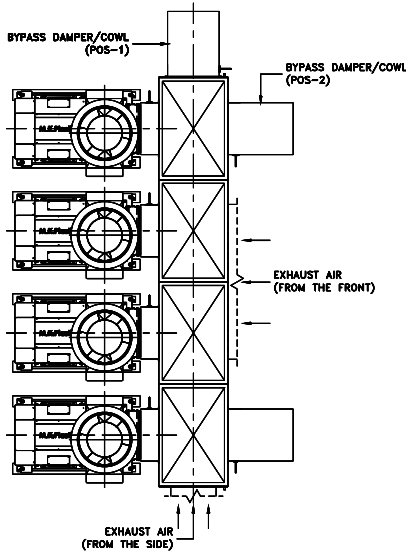


Dual Fan Plan View

Section Elevation

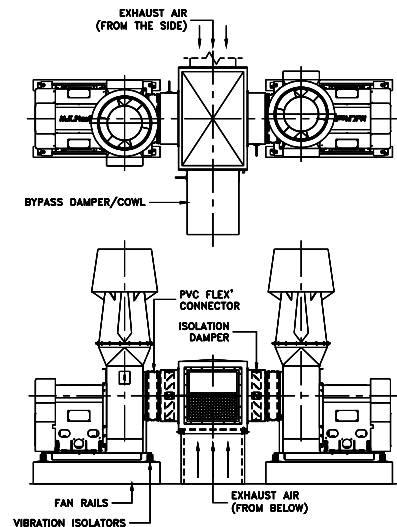


Triple Fan Plan View



Quad Fan Plan View

**Axijet  
High Plume  
Dilution Blower  
Systems**  
are available in  
standard and  
custom  
configurations for  
any flow  
capacity...



Redundant Fan Systems

About **M.K. Plastics**  
CORPORATION

For over 35 years, M.K. Plastics has been engineering, designing, and fabricating corrosion resistant ventilation components and systems for institutional applications. Founded in 1963, today M.K. Plastics has facilities and offices in Montréal, Québec, Canada; Spiez, Switzerland & Mooers, NY, USA. In major cities throughout the United States, Europe and Asia, M.K. Plastics is represented by technical sales representatives.

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