



QUALITY AIR MANAGEMENT



## Self-Cleaning Bag House Dust Collectors

# ULTRA-FLOW

### Advanced Technology eliminates design flaws; allows for High Ratio Operation

Guaranteed results vs. contemporary design dust collectors:

- **Over 4 times more efficient**, less than 1/4 the particulate emissions. Particulate emissions from conventional collectors have caused many health problems in all countries.
- **15-25% lower initial cost.**
- **50-80% lower operating & maintenance cost.**
- **25-35% less power consumption**, power utilities are applying more & more pressure to conserve.
- **25-30% smaller collector**
- **Trouble-free operation.**
- **Thousands of successful installations since 1977.**



BV Series bag house at 15:1 filter ratio, collecting fine carbon dust, no after-filter, recirculating clean air back into the plant.

### Performance Comparison

Woodworking, 20,000 CFM

**ULTRA-FLOW**

Contemporary Design

<b>Length</b>	136"	135"
<b>Width</b>	72"	115"
<b>Height (Collector only)</b>	120"	120"
<b>Height c/w stand, hopper</b>	222"	240"
<b>Weight (minus stand)</b>	7700 lbs approx	9480 lbs
<b># bags</b>	84	256
<b>Fan Power required</b>	50 HP	75 HP
<b>Air consumption</b>	4.65 SCFM	8.0 SCFM
<b>Dust emissions</b>	$4 \times 10^{-4}$ grains/cu.ft.	$66 \times 10^{-4}$ grains/cu.ft.



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## Self-Cleaning Dust Collectors

### Advanced Technology (compared to conventional designs)

**Cleaning Jet Characteristics**, forms a highly efficient filter cake, at air-to-cloth ratios of up to 18:1, reducing pressure drops to only 1.5-2.5 inches WC, at much reduced pulse frequencies. Conventional designs produce 4 to 8 inches WC, at much lower air-to-cloth ratios. The cleaning frequency is proportional to the pressure drop across the filters. Therefore advanced technology runs at 1/3 the cleaning frequency required for conventional designs.

**Use Supersonic Converging-diverging Nozzles** which convert pressure energy in the compressed air to velocity of the cleaning jet. For conventional orifices, each 1 SCFM of compressed air at 85 psig produces 0.103 HP to power the cleaning jet. Our converging-diverging nozzles produce 3.6 times more HP of energy to power the cleaning jet. The air consumption is reduced by over 65% if the same reverse air volume is required for the cleaning jets.

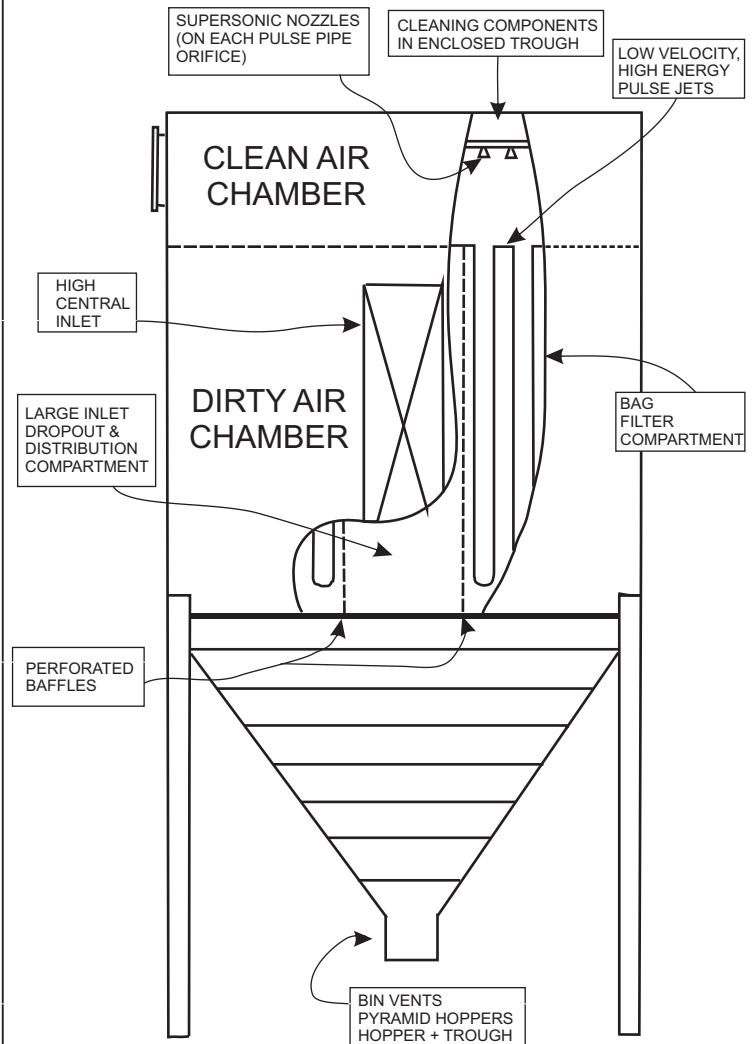
**Produce Lower Dust Penetration (puffing)**, 98% of dust penetration occurs immediately following the cleaning cycle on a pulse jet cleaning collector. This penetration is a function of the jet velocities. Conventional designs use jet velocities of 20,000 to 30,000 FPM. Advanced technology collectors operate in the 7,000 to 10,000 FPM range. When combined with the lower pulse frequencies, mentioned above, the penetration would be 27 times less than conventional designs.

**Unlimited Bag Life**, when applied to processes in which process gas characteristics are correct and corrosion effects are not an issue, bag lives in the range of 7-10 years are the norm. In general we expect bag life 3-4 times higher than collectors of the conventional designs on the same processes.

**High Side & Central Inlets** allow for ideal dust and gas distribution lowering any abrasive tendencies and producing zero upward "can" velocity.

**Perforated Baffles** separate the inlet compartment from the bag filter compartment(s) to drop out heavy, impulsive and abrasive dust loads.

**Cleaning System Components are Protected** by being mounted in a trough in the center of the collector. This allows quick and easy inspection and servicing without precarious position for the operating personnel. No special platforms are required for valve access. Valves are protected from wind and elements. Covers over trough can be provided for insulation, heating and cooling for various processes.



### A selection of models for all applications:

1. "LC" series, 500-3000 CFM, no frills, for small jobs
2. "BV" series, 5000-100,000 CFM, vertical bags
3. "BH" series, 3800-16,000 CFM, horizontal bags for limited head room applications

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Manufactured by QAM, Waterloo, ON Canada  
Phone: 1-800-267-5585, Fax: 519-746-6159, [www.qamanager.com](http://www.qamanager.com)

QAM has a policy of continuous research and improvement, and reserves the right to change design and specifications without notice.



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