Air Cleaning Blowers™

Clean Air. No Filter Elements. Can't Clog.

Blow and Clean Air with No Filter Element!

No Filter Media. No Clogging. Predictable Air — Permanently.

Air-Cleaning Blowers™ (ACBs) clean air using **no filter elements, bags, or cartridges of any kind.** By eliminating filter media, ACBs deliver steady, predictable air flow, air pressure, air quality, and energy use — without clogging, pressure loss, or routine filter maintenance.

Clean Air For:
- Ventilation
- Pressurization
- Exhausting
- Feed Air

- **No Filter Media Means:** 95% Less Maintenance
- **No Clogging —Ever**
- No filter elements or bags to service, buy, replace, or dispose of

Why Choose an ACB
- Reduce maintenance and increase uptime
- Constant and predictable airflow and pressure
- Removes both solids and liquids
- **NEVER clogs**
- No hazardous materials to handle or pay to dispose of
- Minimize complaints and prevent warranty claims

Independent and U.S. Government Testing: ACBs remove nearly all particles larger than **2 microns**, including respirables and liquids — **without filter elements to clog.** *Special models clean air better than an N95 mask.*

What is an Air Cleaning Blower? (ACB)
A new class of self-cleaning air & gas filtration technology that removes solids and liquids **without filter media,** delivering steadier performance and cleaning air and other gases with less maintenance.

LESS MAINTENANCE. LESS ENERGY. MORE SAVINGS.

Air-Cleaning Blowers™ (ACBs) separate **Particles and Liquids** from air and other gases **using no filter media of any kind.**

Because ACBs do not collect debris in filter elements, they do not clog. As a result, air flow, air pressure, air quality, and energy consumption remain consistent and predictable over time — permanently.

Traditional filters trap and collect contaminants, which leads to:

- Progressive clogging
- Increasing pressure loss
- Rising motor load
- Increasing energy consumption
- Ongoing filter replacement and disposal costs
- Continuing maintenance and risk of deferred maintenance

In contrast, ACBs maintain virtually constant air flow and air pressure, resulting in **minimal change in energy consumption over time.**

ACB T20 Installed Outside View (left) and **Inside View (right)**

The Energy Penalty of Filters

Even small increases in static pressure from partially clogged filters can dramatically increase energy use:

- An increase from **0.25″ w.g.** (typical when new) to **0.5″ w.g.** can increase fan motor amperage about **84%.**
- Increasing pressure from **0.25″ to 1.25″ w.g.** can raise power consumption by **4.2 times (420%).**
- At **2″ w.g.**, energy use can increase to **8.6 times of 855%** energy uses when filters were new and clean.

Air-Cleaning Blowers™ do not experience these increases, be cause they do not clog.

ACBs Versus Self-Cleaning Filters

ACBs maintain constant system pressure. Self-cleaning filters don't typically initiate compressed-air or vibration cleaning at ~6″ w.g. and clean down ~2″ w.g. "Clean" at 2″ w.g. they still use *8X the energy as when the media are new and truly clean.* And filter elements ultimately need disposal.

ACB T20 Installed Indoors

Using ACBs with Specialized Post-Filters

Air Cleaning Blowers do not need a post filter but if chemical or other additional cleaning is required, downstream HEPA, activated carbon, or other filter media can be added. In these systems, ACBs serve as pre-cleaners and the blower/fan, and the ACB thereby eliminate the need for a separate fan stage!

ACBs clean the air before it passes through special, often expensive media, enabling those filters to last significantly longer and ELIMINATE need for separate fan stage. By removing most solids and liquids upstream, ACBs dramatically extend post-filter life while maintaining stable system performance.

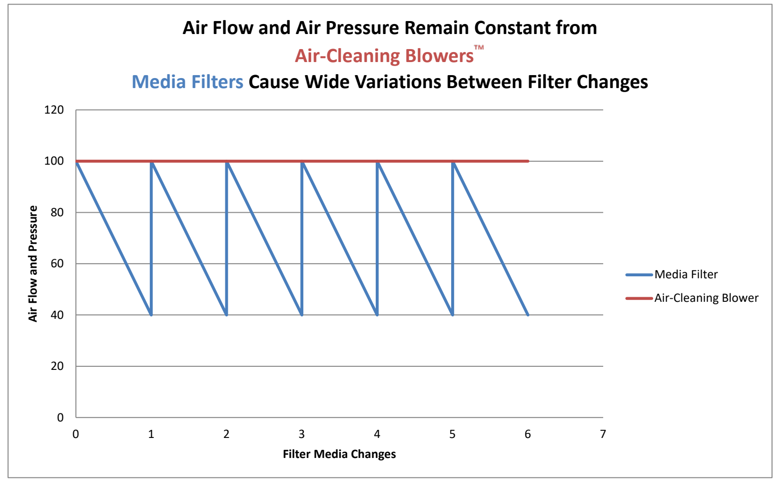
ACB T-50 unit installed at a Recycling Plant.

Eagle Mine a subsidiary of lundin mining | U.S. AIR FORCE | AK Steel | Georgia-Pacific | POWELL | NUCOR

HOW AIR CLEANING BLOWERS™ WORK

Outside view of an ACB unit mounted to the wall at the mine.

View of the same ACB mounted to the wall from the clean-air side.



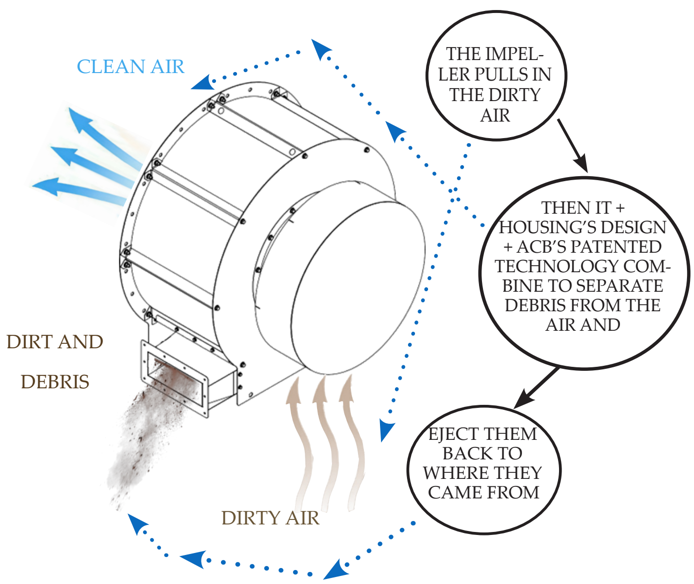
ACBs Provide Constant Airflow and Air Pressure

Media Filters, even "self-cleaning" models, Cause Wide Variations in Airflow, Air Pressure and Energy Consumption.

Consistent Predictable Performance

Air-Cleaning Blowers™ use the **momentum of particles and droplets** to separate them from the air and **eject them forcefully from the blower**. An ACB is not a cyclonic system and does not rely on valves, controls or other blowers.

Unlike cyclonic separators, ACBs do not spin particles until they fall out of the air — a process that causes pressure drops. Instead, ACBs actively eject contaminants, allowing them to function as true blowers that increase air flow and pressure, rather than reduce them.



Predictable Performance for System Designers

Benefits from Air-Cleaning Blowers™ because ACBs do not rely on filter media:

1. Air flow and pressure remain virtually constant throughout the life of the unit
2. Energy consumption remains stable
3. Motors are not required to compensate for increasing resistance

- Consequently, there is no need to oversize systems to compensate for clogging!
- In many installations, ACBs can operate for years without requiring service or cleaning.

...unlike media filters that clog, often quickly, Air Cleaning Blowers can go years without needing maintenance making them **truly sustainable!**

Separation Process

- Dirty air enters the ACB housing
- Advancing and rotating airflow causes particles and liquids to separate
- Separated contaminants are ejected from the housing
- Cleaned, dried air is delivered to the application at a consistent airflow and pressure

Self-cleaning Air-Cleaning Blowers™

Blow and clean air simultaneously, and require little maintenance.

Construction

- Interior frame & wall sleeve constructed of stainless steel — Type 304 or 316 — or other materials.
- Variable or constant speed models.
- Many power sources: A/C (50 or 60 Hz, single and 3 phase) and D/C current, motor shafts, direct drive or pulleys.
- Units meet NEMA 4, NEMA 4X, IP54 and IP55 standards.

Additional Features

- ACBs can include corrosion-resistant, heavy- duty electrical-resistance heating elements as an option.
- ACBs can be made suitable for **hazardous (explosive)** locations whether the hazards are caused by gases or dusts - All Classes, Groups and Divisions.

Who Needs ACBs

Who	Where
Agriculture & Food Processing	Agricultural Equipment, Grain Elevators, Silos, Food Processing, Bulk Solids, Powder Conveyors & Hoppers
Mining & Industrial Facilities	Mines, Coke Plants, Foundries, Steel, Aluminum & Paper Mills, Recycling Facilities, Sawmills, Air Compressors
Energy & Power Systems	508a and Other Electrical Panels, Power Plants (Fossil Fuel & Nuclear), Control Rooms, Motor Control Centers, Sub-Stations, Electrical Buildings/Enclosures
Healthcare & Clean Environments	Hospitals, Modular Clinics, Hospital Tents, Clean Rooms, Pharmaceutical Production, Nursing Homes
Telecom & Data Centers	Cell Towers, Communications Relay Stations, Data Centers
Military & Transportation	Military Vehicles, Electronics, Magazines, Locomotives, Passenger Rail Cars (Do Not Trap CBRN or Other Dangerous Debris To make Hot Spots)
Commercial, Residential & Modular Buildings	Hotels, Convention Centers, Office Buildings, Modular & Inflatable Buildings, LEEDs Buildings, Schools, Houses, Apartments

ACBs prevent contaminants from clogging the heat exchangers and keep the water serviceable longer in cooling towers.

Typical Model Options For Air-Cleaning Blowers™

Model Series	Air Flow - CFM	Air Flow - M^3H
ACB T1	100	170
ACB T3	300	510
ACB T5	500	850
ACB T7	700	1,190
ACB T10	1,000	1,700
ACB T20	2,000	3,400
ACB T35	3,500	5,950
ACB T50	5,000	8,500
ACB T75	7,500	12,750
ACB T100	10,000	17,000
ACB T150	15,000	25,500

Visit
Our Website!

ACB adds models to its line regularly from 0.5″ w.g. to 10+″ w.g.
In addition, custom designs are available for OEM and other special applications.
Patent #9,259,675. #10,118,115, #12,427,462. Others pending.
CAGE Code: 7ZFZ0 UEI: YHNCM31CBMV5

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