QUALITY MANUFACTURING

INNOVATIVE DESIGN

BAGHOUSE COLLECTORS | CARTRIDGE COLLECTORS
BIN VENTS | FUME COLLECTORS | ROTARY AIR LOCKS

ENGINEERED PRODUCTS

- BAGHOUSE COLLECTORS
- VERTICAL CARTRIDGE COLLECTORS
- HORIZONTAL CARTRIDGE COLLECTORS
- BIN VENTS
- FUME COLLECTORS
- ROTARY AIR LOCKS

THE RESULT OF

A COMMITMENT

TO EXCELLENCE

SCIENTIFIC DUST COLLECTORS

BAGHOUSE COLLECTORS
CARTRIDGE COLLECTORS
BIN VENTS
FUME COLLECTORS

Right from the start, **our dedication to the advancement of the dust collection industry has been evident.** Scientific Dust Collectors was formally established in 1981 when we received our first patent for cleaning system improvement. More than two decades and a multitude of patents later, we remain steadfast in our belief that better R & D translates to better performance. This concept is one of many key values that we inherited from our distinguished sister companies, one of which was established in 1888, and our parent company, Venturedyne, Ltd.

IDEAS CREATED FROM DUST

Today at Scientific Dust Collectors (SDC) we continue to work diligently to maintain **our reputation of integrity, dependability and innovation.** With Venturedyne's eight divisions, we are able to achieve excellence in diverse areas such as:

- dust collection
- indoor air quality
- makeup air systems
- environmental test chambers
- magnetic separation
- sub-micron laser particle counting for clean rooms

In the toughest industrial applications—where performance and efficiency are demanded—the choice is clear. At SDC, we deliver the best solution. This sounds like a bold statement, but it is driven by you. We listen to our customers and focus on solving their real-world problems. Through continual research, experience and cutting-edge technology, we are able to excel in today's competitive global marketplace.

At Scientific Dust Collectors, our dust collectors offer the value that is no longer a luxury: it is a requirement.

SCIENTIFIC DUST COLLECTORS: DIFFERENT BY DESIGN

At SDC, we take a different approach to the development of our products. While many companies may make this claim, we can back it up. Discover what our unique approach means to you.

- Superior Performance: delivers reliable dust collection with a smaller footprint and lower capital and maintenance costs.
- Attention to Detail: provides easy operation and durability for seamless startup, and, since we manufacture all our collectors in-house, we are able to provide consistent quality of manufacturing.
- Advanced Cleaning Technology: saves you energy, space and money. Our systems operate with fewer filters and with a lower pressure drop—the more efficient solution.
- Responsive Customer Service: means you get accurate answers—quickly.
- Value-focused Solutions: reflect our understanding of your budget and your needs. Features that competitors view as costly "options" we build into our standard models because they improve the performance of your dust collector. You will value the difference.

ALL DUST COLLECTORS ARE NOT CREATED EQUAL

At Scientific Dust Collectors we offer a more sophisticated alternative to the generic dust collector. Through in-depth exploration and testing of scientific principles such as velocity, gravity and pressure, we are able to engineer more efficient dust management systems. Our core product categories are listed below.

>> Baghouse Collectors: Our Solution is Out of the Bag

Our expertise in designing reverse pulse jet baghouses is extensive, and it shows. We are able to offer a wide range of powerful collector designs—all stamped with our brand of top quality. From pre-engineered units for nuisance dust control in a chemical processing plant to custom applications for environments that require large-volume air purification for hazardous emissions, such as lead oxide, we have the model to do the job.

>> Cartridge Collectors: Featuring Our Patented Cleaning System for Extended Filter Life–Double That of the Industry Standard

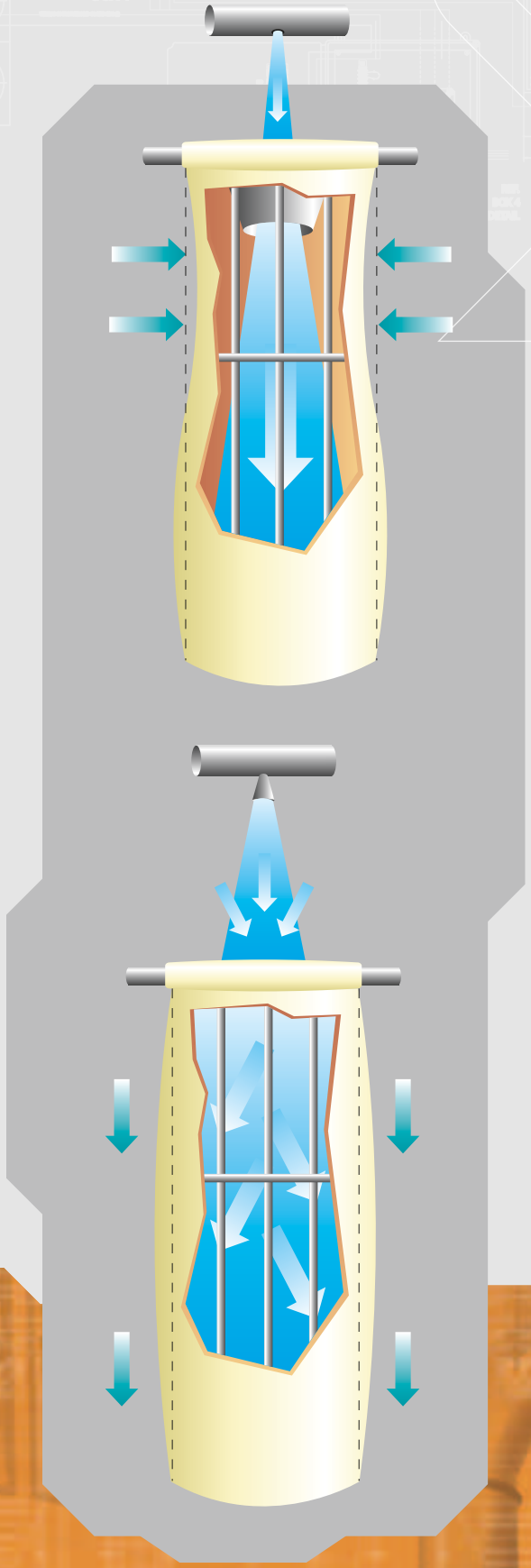
At SDC, our pioneering mindset is evident once again in the development of our cartridge collectors in the early 1980s. Inside, our unique cleaning system utilizes downward airflow. On the surface, our patented spring-loaded door seals tight to eliminate leakage.
In combination, these features create the highest filtration efficiency, while simultaneously reducing energy consumption and replacement cost. They also work together to properly load and clean the cartridges for unmatched cartridge life. The door allows easy access to internal parts.

>> Systems: We're More that Just Dust Collectors

When a more complete solution is needed, we are ready to help. At SDC, we can provide everything from integrated workstations to comprehensive systems that include blowers, explosion vents, rotary airlocks and other conveying devices. With decades of experience, we take the guesswork out of selecting the appropriate equipment to solve the complete problem. Our competitive prices and detail-oriented customer service staff help stretch your budget as well.

>> OUR PATENTS:

4,278,454
4,666,472
4,789,387
4,578,092
6,146,433
6,214,077
4,368,390
6,444,005



A CLOSER LOOK:
THE KEY IS IN THE NOZZLE

What makes us—Scientific Dust Collectors—so different? This concept may be explained best through the following case study.

Our problem-solving approach has allowed us to develop proprietary converging/diverging nozzles mounted on pulse pipes to induce more cleaning air for more effective cleaning. Nozzles within dust collector units process the air at orifice pressures to allow further conversion of pressure energy to velocity. In the orifice throat, the velocity is sonic, or 1,050 ft./sec. When converging/ diverging nozzles are mounted on the pulse pipe, the exit velocity from the nozzle will increase to supersonic velocity at 1,735 ft./sec., or almost MACH II sonic velocity with 90 psig in the pulse pipe.

At the bag's throat orifice, we take advantage of the higher velocity to induce more air into the cleaning jet. This engineering breakthrough results in better cleaning.

Collector efficiency is also improved by limiting the expansion of the air jet. This is done by stopping the induction of the induced air. Competitors use a flow-restricting venturi, which reduce overall cleaning power. Our solution is different. We employ the entire open area of the bag mouth to limit air induction. **The result is that Scientific Dust Collectors systems outperform the competition in both cleaning power and filter life.**

SCIENTIFIC DUST COLLECTORS ADVANTAGES:

FROM LOWER COSTS TO EASY MAINTENANCE

Our overall business philosophy is different, and it sets the pace for the technical and practical aspects of Scientific Dust Collectors. Our strategy is to provide our customers with the longest filter life possible and our design accomplishes this goal. Watch the differences multiply!

- Lower Capital & Maintenance Costs

> Smaller unit spells lower costs for you

> Fewer moving parts bring maintenance costs down

> Reduction of filters and associated filter disposal costs

> Smarter products with built-in "extras" bring the VALUE to you

- Easy Set-up

> System completely assembled and tested

> System matches drawing, exactly, so set-up goes quickly and easily

- Simple, Minimal Maintenance

> Longer filter life means reduced maintenance time commitment for you

> Easy-to-access filters with precision fit and alignment for simple installation

> Easy-to-remove support cage

> Fewer filters and parts needed equals less work for you

> More evenly distributes air throughout the entire filter, resulting in less wear and tear on the filters and better filtration

- Advance Technology and Design

> Our superior technology has created products that work better in less space, saving you money

> Our patented high velocity converging/diverging nozzle allows our systems to operate at a higher air-to-cloth ratio than that of generic systems

> SDC holds many patents in dust collection technology: a sign of our progressive technology

> Generous 7.5" bag spacing (center to center) more evenly distributes air throughout the entire filter, resulting in less wear and tear on the filters and better filtration

> Baffled high side inlets, a standard feature, allow gravity to do its job—direct dust down into the hopper

- Reliability of Product

> Fewer parts to replace

> Innovative design and quality construction mean dependability you can count on

> Anticipating your needs through smart design

> Efficient for sub-micron applications

> Our cartridge spring design guarantees never to allow for cartridge leaking

- Company with Proven Track Record and Responsive Ongoing Support

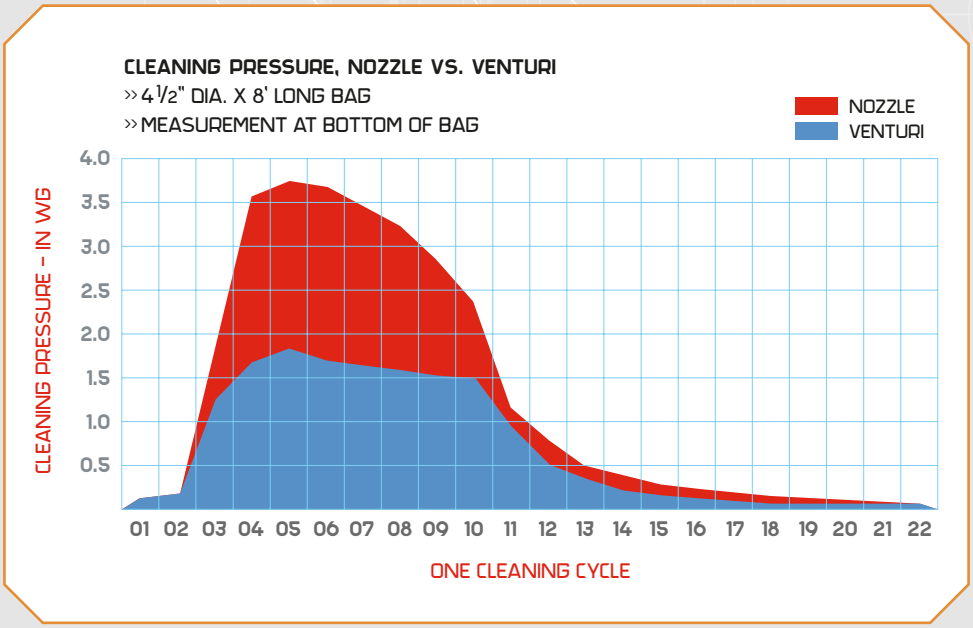
> A company that has been delivering solutions for more than twenty-five years: we will be there for you

> Continuity of product and service will save you money

> Professional support staff that is eager to help

Truly a Difference You Will Notice

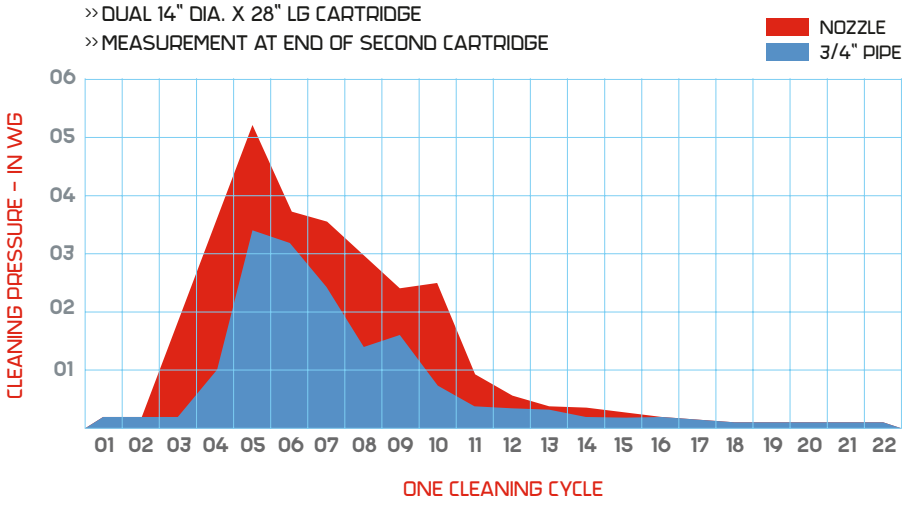
CLEANING PRESSURE: NOZZLE VS. VENTURI IN BAGHOUSE



Graph depicts the cleaning pressure at the furthest point (bottom or end, depending on the system) from entrance of the filter. Based on the compressed air blast along with 9.15 times the amount of induced cleaning air, the SDC nozzle achieves a 111% increase in peak cleaning pressure capability when compared to generic baghouse cleaning systems. In addition, the nozzle geometry produces air velocities much higher than previously possible. This increased velocity allows a significantly greater volume of secondary cleaning air to be induced.

CLEANING PRESSURE: CARTRIDGE COLLECTOR

Graphic depicts the cleaning pressure at the furthest point (bottom or end, depending on the system) from entrance of the cartridge. Based on the compressed air blast along with 6.4 times the amount of induced cleaning air, the SDC nozzle achieves a 53% increase in peak cleaning pressure capability when compared to generic cartridge cleaning systems. In addition, the nozzle geometry produces air velocities much higher than previously possible. This increased velocity allows a significantly greater volume of secondary cleaning air to be induced.



MANUFACTURING:
WHERE OUR SUPERIOR IDEAS BECOME SUPERIOR PRODUCTS

Our dedication to innovative, quality products continues from concept through the entire production process. Skilled craftsmen operate sophisticated, modern equipment in our suburban Chicago plant. **Quality craftsmanship is evident in every piece of Scientific Dust Collectors equipment, because we build them ourselves.**

Our unique combination of people who know how to get the job done right and a facility with the capacity to transport 80 tons of product results in a better, more competitively-priced product. Our rigid control standards, enforced by inspections in every department, ensure that Scientific Dust Collectors is the name you can trust. When your product is complete, our shipping staff is ready to deliver with care and close attention to detail. They will determine the best possible schedule, route and transport—whether by rail, truck, plane or ship—to fulfill your delivery requirements.

R&D AND TESTING

THE RESEARCH TEAM AT SCIENTIFIC DUST COLLECTORS: REDEFINING "CLEAN"

Our R & D team is never satisfied! For you, that means continual improvement and a line of equipment that is second to none. At Scientific Dust Collectors, we consider research a key element to our success. Our state-of-the-art lab is where we tackle the tough questions—and develop the answers. These improvements and new products then undergo stringent testing in environments that are true to life in order to ensure success. We can even simulate your unique operating conditions, resulting in custom solutions that are tried and tested for you. At SDC, our research, backed up by exhaustive testing and sound scientific principles, is what sets us apart.

ENGINEERING: MAKING IT ALL HAPPEN

Our engineers are ready to make your request a reality. From the initial concept stages, through manufacturing, shipping, installation and start-up, your dedicated Scientific Dust Collectors engineer guides your project to completion. This method ensures that all of your requirements are communicated and met. The result is an effortless process and a quality system that meets functionality, timing and budgetary goals.

SALES: RESPONSIVE TO YOUR UNIQUE NEEDS

Our knowledgeable sales staff goes beyond the typical sales role. With extensive experience in air pollution control, they are able to suggest the quality solution that will work best for you. Most of our dust collection systems are customized to satisfy your precise air purifying needs, and our sales staff is ready to help in this process. Always professional and friendly, they are there to assist you every step of the way.

BAGHOUSES
CARTRIDGES

GLOBAL REACH: PUT THE POWER OF SCIENTIFIC DUST COLLECTORS ON YOUR SIDE

The unmatched technology and experience of Scientific Dust Collectors is within your reach, whether you're across the street or around the world. Our global network of qualified representatives is eager to facilitate your dust collection system design and delivery. We are in your neighborhood and ready for your call.

SCIENTIFIC DUST COLLECTORS

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