

Reliability in pet food production.



Schenck Process Group –

most comprehensive global line of process handling solutions for the pet food industry

Schenck Process Group – your partner worldwide



High-tech solutions for weighing, feeding, pneumatic conveying and filtration

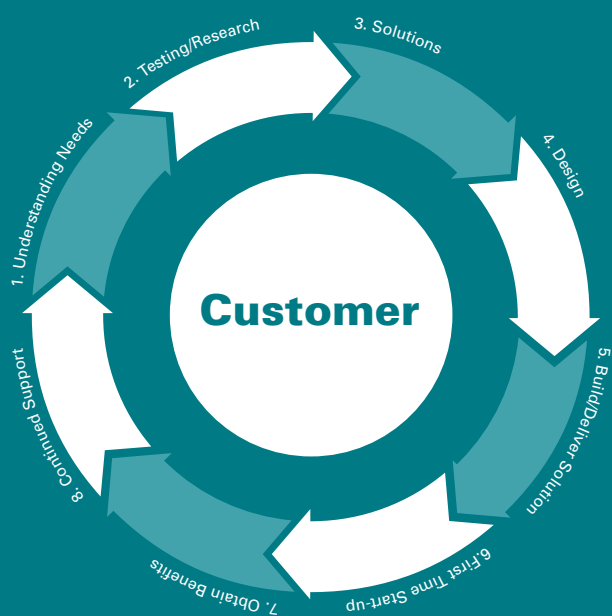
Precisely handled bulk materials are critical to the manufacture of the highest quality pet food brands. Our adaptable high-tech solutions are specially designed for the demands of the most stringent branded pet foods. Whether you need a gravimetric feeder for dosing digest, weighbelt feeder to coating, dilute phase conveying of mash, low pressure continuous dense phase of finished kibble to packaging, a general fugitive dust collection system or non-thermal plasma odor abatement – we have the right solution to meet your specific needs.

Complex process, precise solutions

Our weighing and measuring systems are perfectly suited for both batch and continuous processes. The dilute and dense phase pneumatic conveying systems we offer provide energy efficiency and low breakage for easily damaged finished kibble of various shapes and densities. For dust collection and explosion protection our air filtration systems deliver proven results.

At Schenck Process, everything we do is centered on customer satisfaction. We follow a customer focused eight step process that allows our experienced project managers and their teams of engineers to design the most efficient, cost effective system to meet your operational requirements on budget and on time.

Schenck Process project management



Whether we're doing a simple engineering study or a complete design-build project, we think and plan like your business partner.



Understanding Needs

Every project begins with your operation, your conditions, your application and your unique needs. We seek to understand the issues and problems that you are facing.

Testing/Research

Our TestCenters allow us to develop the most innovative solution that will solve any conveying, filtration, weighing or feeding challenge. In addition to our TestCenters, our database containing thousands of test records allows us to cross reference previously handled materials enabling quick identification of proven pneumatic conveying, filtration, weighing and feeding solutions.

Solution

During this stage, we discuss the testing and research analysis with you. Using that information, a systems quote is prepared to meet your exact needs.

Design

We discuss the proposal in greater detail with you in terms of initial and ongoing costs, energy consumption, delivery dates, project timetables and deadlines before agreeing and proceeding to the next step.

Build/Deliver Solution

No matter where you are located in the world, our global network allows us to engineer, project manage and deliver a solution.

First Time Start-up

Our rapid start-ups with onsite engineers enable you to quickly get your system up and running.

Obtain Benefits

With quick start-up you realize maximum productivity with minimal disruption at the time of implementation.

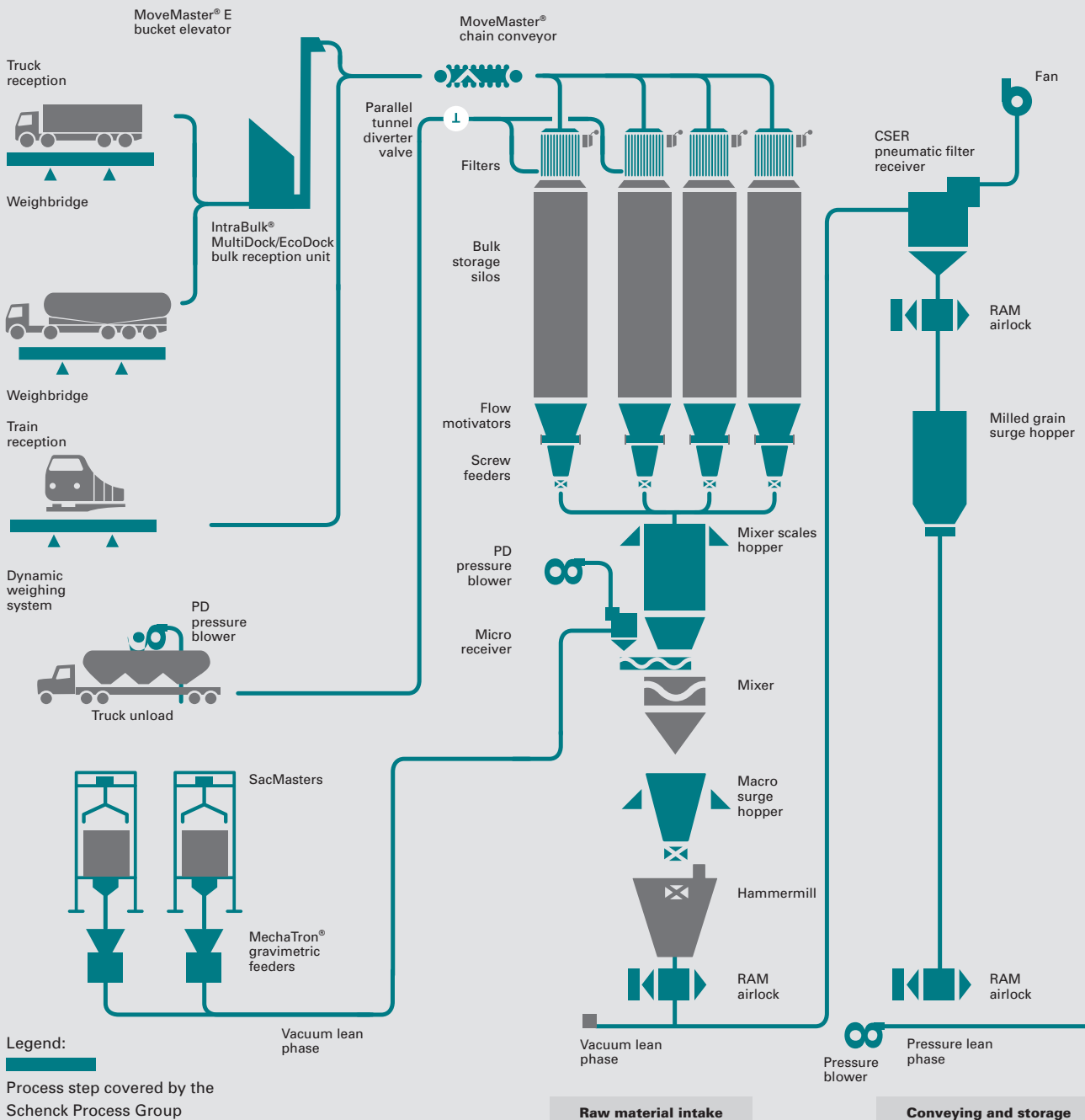
Customer Support

Our knowledgeable Service Center personnel are available 24/7 to assist you with ongoing support after equipment installation.

Delivering the most comprehensive dry material handling systems to pet food manufacturers

For over 40 years Schenck Process has supplied the most recognized pet food brands throughout the world with state-of-the-art dry bulk material handling systems. Our range of technology offerings includes pneumatic conveying, weighing, feeding, filtration and odor abatement. We can take your raw materials from the initial unloading stage and move them all the way through the plant to the final packaging area.

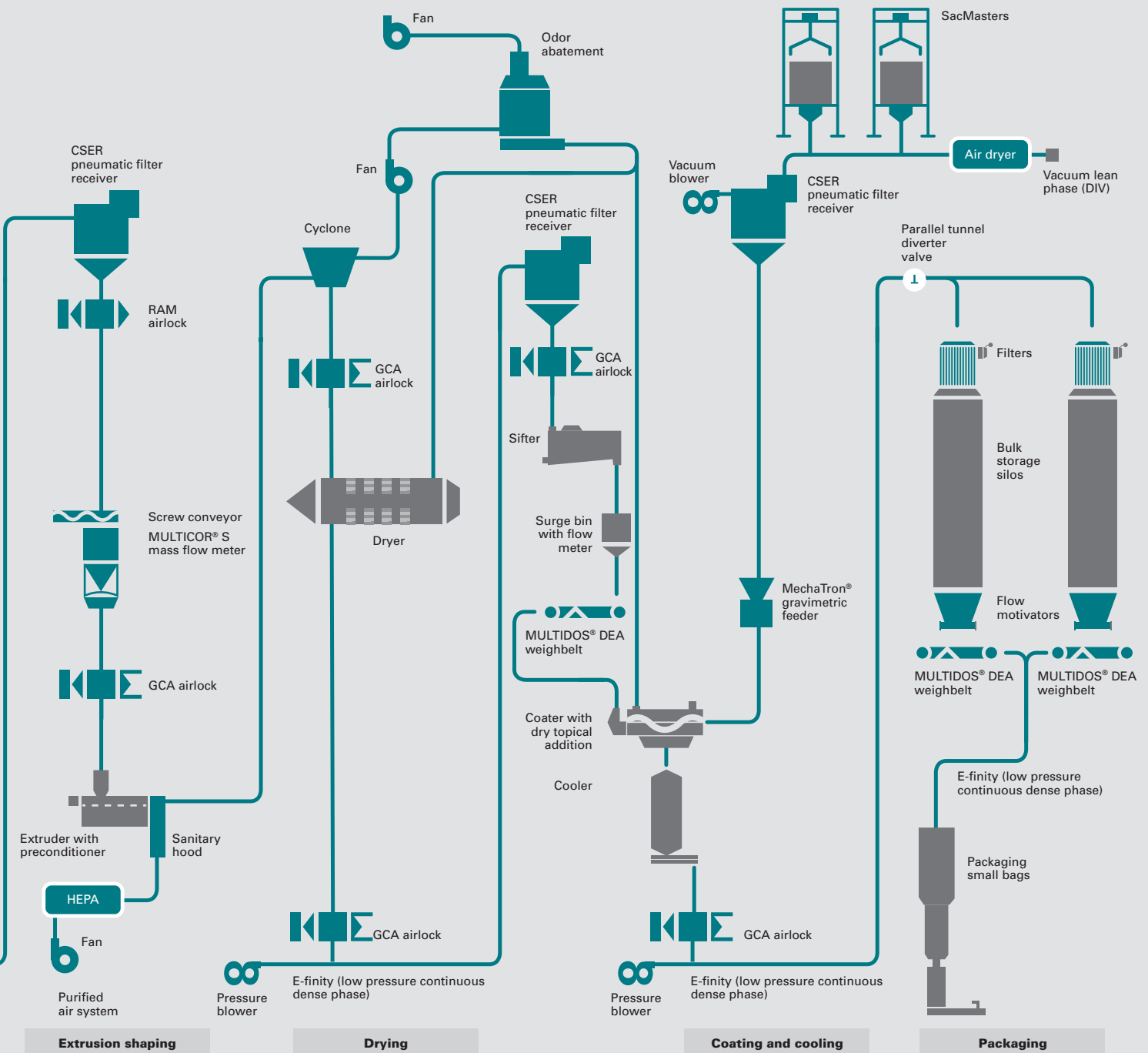
Our engineers are experienced in pet food manufacturing processes and will work with you to design the best system for conveying, weighing and feeding your dry ingredients as well as removing any dust hazards or process odors that may be present.



Schenck Process has 22 production facilities on 5 continents, 130 agencies and over 3,000 employees worldwide. A global infrastructure capable of delivering solutions on a supply only or turnkey basis make Schenck Process the ideal choice for pet food manufacturer material process handling needs throughout the world.

Pet Food Process Applications

- Raw material unloading & storage
- Batching
- Mixing
- Extrusion
- Milling & majors/minors/micros batching
- Drying
- Coating
- Cooling
- Finished product blending
- Dust collection
- Odor abatement



Raw Material Unloading & Storage

During raw material unloading Schenck Process has a wide range of product solutions for either mechanically or pneumatically conveying materials to bulk storage areas. Additionally, a full line of air filtration products are available for removing any dust hazards.

Batching

With most pet food plants scaling raw materials in batches, it is critical for plant operators to have equipment that can handle materials in major and minor processing systems. The MechaTron® dry material feeder and E-finity pneumatic convey system are a perfect fit when batch feeding or pneumatic conveying is required.

→ RAILCAR WEIGHING



→ RECEIVING



→ MECHANICAL CONVEYING



Train Weighing

Accurate railcar measurement

- ❖ Dynamic railway scale for all railcar types
- ❖ Legal-for-trade accuracy
- ❖ No foundation
- ❖ No rail gap
- ❖ Fully automatic operation
- ❖ Very quick installation
- ❖ Static/dynamic platform weighbridges also available

IntraBulk®

Truck unloading

- ❖ Bulk intake system capable of handling rates up to 500 tons per hour
- ❖ Accepts most products delivered by truck or front loader shovel
- ❖ Above ground installation means no expensive civil work
- ❖ Modular construction simplifies transport and erection
- ❖ Environmentally friendly and safe operation

MoveMaster®

Bulk conveying

- ❖ Tube belt conveyor
Three-dimensional transportation over long distances (up to approximately 3,280 ft. (1,000 m)) and problematic topographical areas
- ❖ U belt conveyor
Conveying powdery and granular materials horizontally
- ❖ Corrugated belt conveyor
Cross rigid belt with deads and sidewalls, inclined or vertically upward material conveying
- ❖ En-masse chain conveyor
Horizontal and/or upward material conveying (max. inclination 75°) over medium distances (up to 230 ft. (70 m))

Mixing

All the dry raw materials are joined at the mixing step and Schenck Process supplies air filtration systems for dust collection in and out of the mixer as well as dilute pneumatic conveying systems to and from the mixer.

Extrusion

During the extrusion process the Schenck Process MULTICOR® coriolis mass flow meter with a GCA airlock or screw conveyor at the discharge is the ideal solution for extruder milled feed metering. Our Extruder Negative Airlift vacuum convey system picks up product from the discharge end of the extruder and gently conveys it to the inlet distributor of the dryer.

→ PNEUMATIC CONVEYING

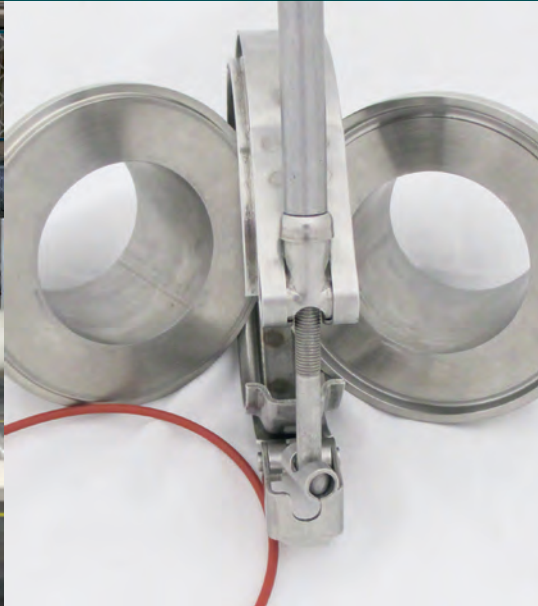


E-finity

Low pressure continuous dense phase conveying system

- ❖ The blower air source designed for less than 15psig (1 bar) can be located nearly anywhere in the plant
- ❖ Multiple E-finity systems can be operated from a single blower air source
- ❖ Various systems can be turned on and off as needed, and air delivery from the PD blower compensates automatically
- ❖ Mid-range pressure pumps can also be used to achieve pressures up to 30psig (2bar)

→ PNEUMATIC CONVEYING



No-Ledge Coupling

Smooth interior for reducing fines

- ❖ Self-aligned connection points deliver ledge-free joints to protect fragile products
- ❖ Easy cleaning and inspection
- ❖ Tool-free assembly speeds installation
- ❖ Recessed o-ring gasket clear of product stream

→ FILTRATION



MCF PowerSaver

Industrial air filtration

- ❖ Operates with medium-pressure cleaning air (7-9psig)
- ❖ Total filter area available exceeds 23,000 ft² (7,000 m²)
- ❖ Cleaning capacities over 250,000 CFM
- ❖ Timing mechanism non-electrical – safe in dusty, explosive atmosphere
- ❖ Good for use in high temperatures 500° F (260° C) and higher

Drying

Schenck Process equipment has been integrated with a number of gas fired vertical or horizontal dryers from multiple manufacturers. Dryer aeration cyclones, odor abatement and dry discharge E-finity continuous dense phase pneumatic conveying to the coating/cooling process are offered solutions for drying applications.

Coating

For coating applications, infeed weighbelts, dry powder digest unloading equipment, digest conveying and digest metering equipment and a dense phase system exiting the coater are all systems supplied by Schenck Process. Due to contamination issues associated with coating, easily cleaned equipment such as the MechaTron® feeders, GCA airlocks and SEntry filters are available.

→ BULK BAG UNLOADING



→ FEEDING



→ METERING



SacMaster

Bulk bag discharge system

- ❖ Posi-flow agitation to eliminate material bridging and promote full bag emptying
- ❖ Two agitation and two pivoting paddles for full bag support
- ❖ Modular design for easy system customization and compatibility
- ❖ Pre-programmed control minimizes set up time
- ❖ Easily integrated with a dry material feeder

MechaTron®

Volumetric and gravimetric feeders

- ❖ Ideal for feeding major and minor ingredients
- ❖ Complete disassembly from the non-process side speeds cleaning and maintenance
- ❖ Sanitary and industrial models available
- ❖ Gravimetric accuracies of $\pm 1/4\%$ to 1% of feed rate setpoint at 2 sigma
- ❖ Feed rates up to 1,100 ft³ (32,000 l) per hour are achievable

MULTICOR® S

Mass flow meter

- ❖ Continuous mass flow measurement based on the Coriolis principle
- ❖ Direct weighing technology eliminates outside forces on measuring and feeding accuracy
- ❖ Compact design is perfect for applications with limited space requirements
- ❖ Accurately meters raw materials as part of the extrusion process.
- ❖ Dust tight housing reduces the risk of airborne materials

Cooling

Cooler aspiration cyclones, odor abatement systems and E-finity dense phase pneumatic conveying to and from the cooler are solutions for this part of the process.

Finished Product Blending

After product blending, Schenck Process weighs or meters and then conveys the materials to packaging with its line of weighbelts, solids flow meters and E-finity low pressure continuous dense phase conveying systems.

→ FEEDING



MULTIDOS® L

Weighing and feeding

- ❖ Excellent for weighing and feeding easily damaged materials
- ❖ Easy accessibility for cleaning and maintenance
- ❖ Product contact parts are manufactured with stainless steel
- ❖ Simple belt change
- ❖ Highly accurate
- ❖ MULTIDOS® F open frame design for sanitary washdown applications
 - ❖ Excellent for weighing and feeding easily damaged materials
 - ❖ Tool-less belt removal for quick cleaning and maintenance
 - ❖ Operates as a weight controlled feeder, weight indicator and totalizer or for batching

→ FILTRATION

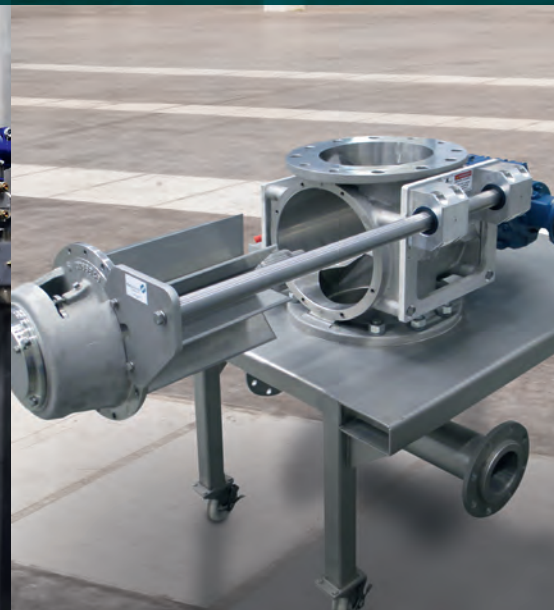


Cleanable Side Entry Receiver (CSER)

Air filtration

- ❖ Simple design with minimal internal structure enables thorough clean-down
- ❖ Single point access to both clean and dirty volumes of the filter
- ❖ Ideally suited for low headroom applications under pressure or vacuum
- ❖ Side entry and tool-free cartridge removal speeds maintenance with no confined space entry
- ❖ Operates as a filter receiver at the end of a pneumatic conveying system

→ PNEUMATIC CONVEYING



GCA Global Clean Airlock

Pneumatic conveying

- ❖ Demountable rotor with tool-free disassembly facilitates cleaning and inspection
- ❖ Oversized rotor shaft creates a naturally radiused rotor pocket for more complete product release
- ❖ Product contact manufactured with stainless steel and FDA-approved seals and bearing lubricants
- ❖ Available design for NFPA 69 blocking valve requirements
- ❖ CE & ATEX variants (optional)

Packaging

E-finity dense phase pneumatic convey systems move the finished product from the blend bins to the packaging lines.

Odor Abatement

For the reduction of pet food and aqua feed manufacturing odors, the ModuPlasma™ is an odor abatement system that uses direct treatment, which means the emission is led through the energy field, in opposition to other plasma solutions, where ozone is injected into the emission. This direct treatment results in oxidation 1 to 10 million times faster than in nature.

→ FILTRATION



Cyclone Collectors

Air filtration

- ❖ Capable of handling heavy dust loads
- ❖ Designed to separate product from an air stream
- ❖ Easy to wash down and sanitize reducing the risk of cross contamination
- ❖ No moving parts or maintenance
- ❖ Ideal for applications where high moisture and high material fat content is present

→ ODOR CONTROL



ModuPlasma™

Odor abatement system

- ❖ Removes odor and particulates from emissions with an abatement efficiency of 75-99%
- ❖ Handles emission volumes from <math><10,000\text{ m}^3/\text{h}</math> to $2,000,000\text{ m}^3/\text{h}$
- ❖ Small footprint
- ❖ Simple on/off operation
- ❖ Very low maintenance and operation cost

→ WEIGHING ELECTRONICS



DISOCONT® Tersus

Weighing and feeding electronics

- ❖ For control of multiple continuous weighing and feeding applications
- ❖ In field or control cabinet installation
- ❖ Communication with PLC by fieldbus technology (Profibus, Modbus, DeviceNet, etc.)
- ❖ Commissioning and diagnostics supported by graphics
- ❖ Wireless access for service



Process
Advanced
Service
System

PASS

Complete solutions for your requirements

Looking for after-sales solutions? Our extensive Process Advanced Service System (PASS) provides you with after-sales services – customized to your specific requirements.

The framework of our PASS program is designed with you in mind. With the guidance of our experienced after-sales team, you can create PASS packages comprised of original spare and wear parts, various services and high quality components to meet your needs.

PASS is based on a modular principle – you can pick and choose any individual PASS product or a combination of products. Four categories help to easily find appropriate PASS products.

We welcome the opportunity to provide you with individual consultation, either as part of a PASS contract or on an individual basis.

Whatever Full Service means to you – let's create it together!

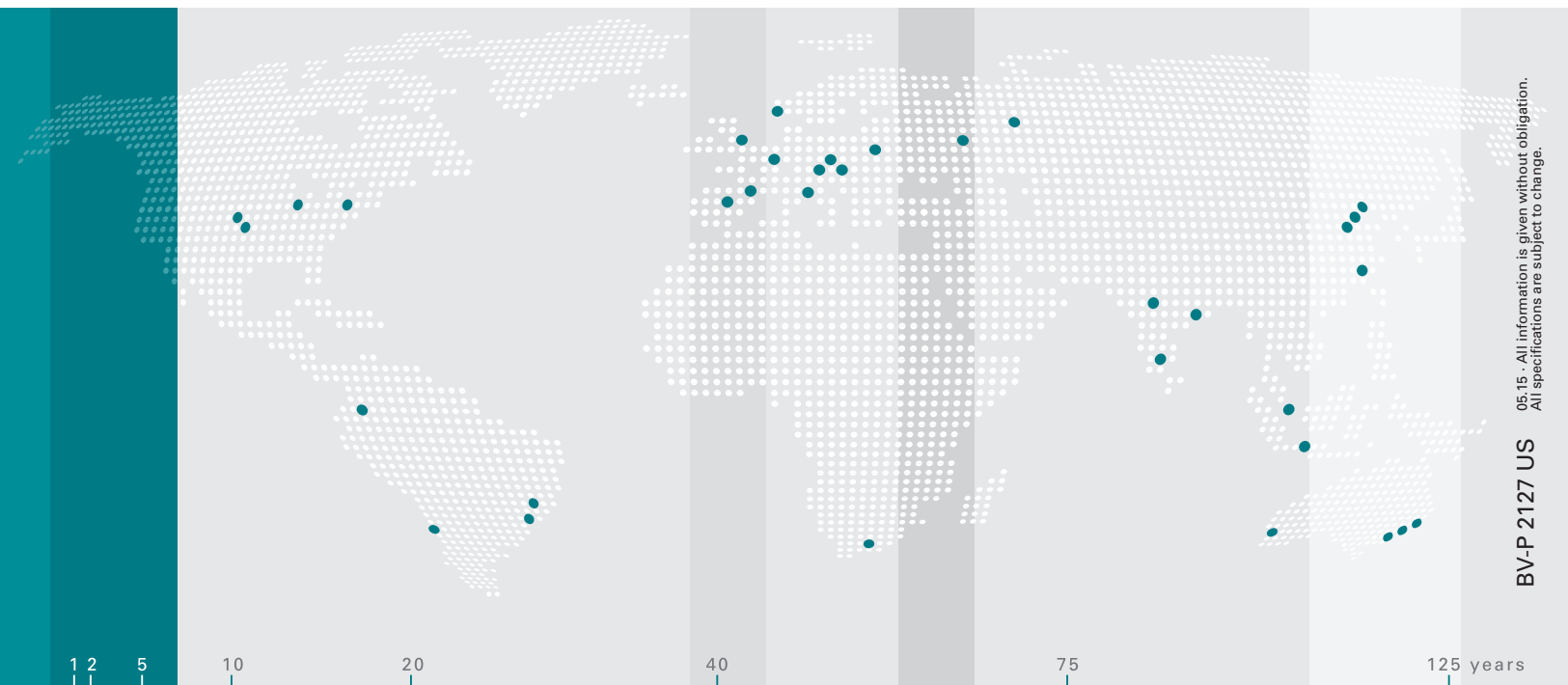
Our PASS service categories

PASS Repair

PASS Inspection

PASS Management

PASS Support



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The Schenck Process Group is a global market leader in weighing and feeding technology /// screening and separation systems for bulk materials /// dust collection and air filtration technology /// pneumatic and mechanical conveying solutions /// automation and diagnostic technology

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we make processes work