

- » Pneumatic Conveying
- » Feeding
- » Weighing
- » Screening
- » Milling
- » Mixing
- » Sifting
- » Dust Collection

Comprehensive Bulk Material Systems for Pet Food Processes



Schenck Process Group – your partner worldwide

High-tech solutions for weighing, feeding, pneumatic conveying, sifting, milling 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, a sifter for removing extraneous materials, milling to reduce material size, dry ingredient mixing, low pressure continuous dense phase conveying of finished kibble to packaging, or a general fugitive dust collection system – 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.



Schenck Process delivers custom-designed and engineered solutions for the following applications:

- » Truck or railcar loading, unloading and bulk storage systems
- » In-plant transfer for major, minor and micro ingredients
- » Minor and micro ingredient scaling systems
- » Low pressure continuous dense and dilute phase handling systems
- » Plant controls systems
- » Dust collection
- » Sifting, storage and mixer transfer systems
- » Ingredient unloading, cleaning and storage systems
- » Liquid storage, scaling and transfer systems
- » Closed loop N2 and CO2 systems
- » Dry ingredient convey systems
- » Trim and reclaim transfer systems
- » Batch and continuous feeding systems

Project management

At Schenck Process, everything we do is centered on customer satisfaction. We strive to make your equipment and systems robust and efficient. Our project management teams become an extension of your business with a direct line of communication to the many resources within the Schenck Process global network. Your Schenck Process team will take command of the design/build process from the project kick-off all the way to process commissioning. From start to finish, our teams are dedicated to meeting your business goals.

Process Controls

Our Process Controls Group has been entrusted to control processes for some of the world's most recognizable brands. We've been building customized controls for over 40 years and our engineers have an intimate knowledge of industrial processing and production. Our in-depth experience provides field proven solutions.

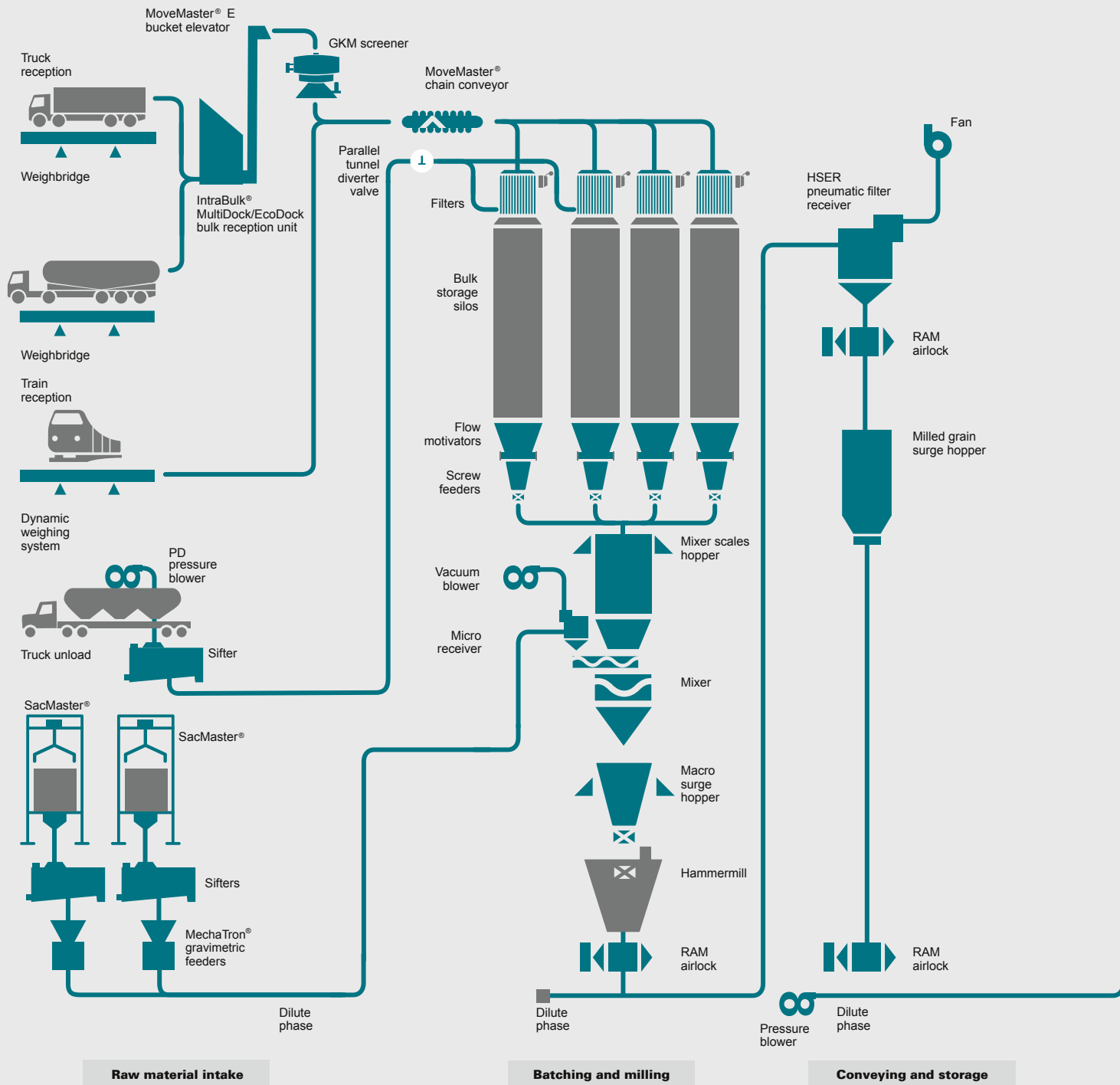
We can custom design whole-plant or partial systems for new plants or integrate legacy control systems. We make everything from small independent panels to complex multi-processor and distributed I/O control systems. Interface with warehouse management, MES and ERP software systems provide a seamless transfer of data throughout a facility. The Schenck Process Controls Group forges long term relationships with customers to support large control system implementations, typically utilizing remote access tools allowing rapid resolution of issues or minor operational adjustments.

From analysis and planning, through equipment and control panel design, to testing and long-term service, our customers work with a single point of contact throughout the project.

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

For over 50 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, feeding, milling, mixing, sifting and dust collection. 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.

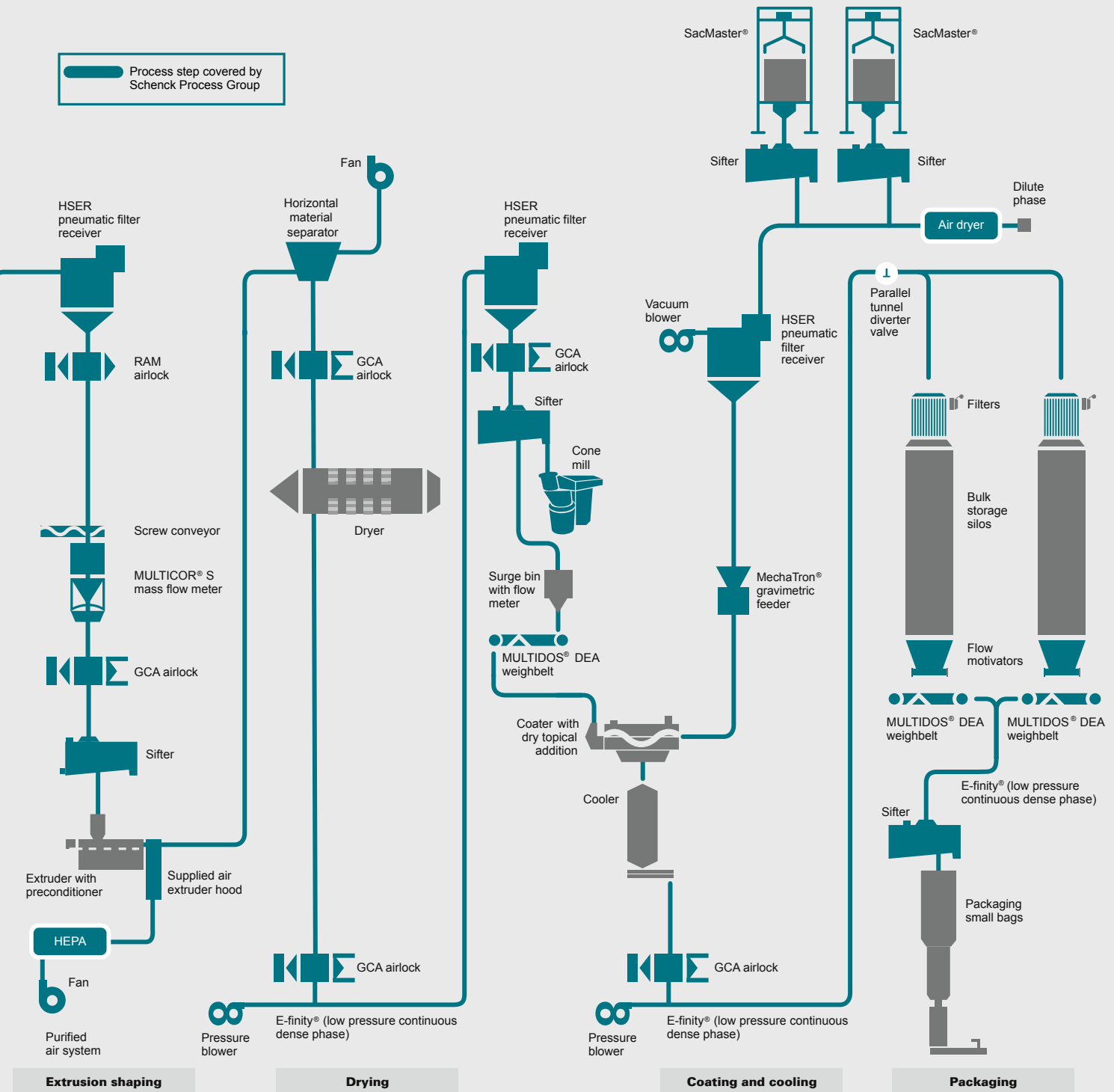
Our engineers are experienced in pet food manufacturing processes and will work with you to design the best system for conveying, weighing, feeding, milling, mixing or sifting your dry ingredients as well as removing any dust hazards that may be present.



Schenck Process has 22 production facilities on 5 continents, 130 agencies and over 2,500 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
- » Screening
- » Sifting
- » Drying
- » Coating
- » Cooling
- » Finished product blending
- » Dust collection
- » Weighing



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.



MCF PowerSaver®

Industrial air filtration

- » Operates with medium-pressure cleaning air (7-9 psig)
- » 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



GKM Screeners

Controlled screening and multi-deck separation of fines

- » De-dusting of dry, powdered or granular products
- » Suitable for high feed rates
- » Handles difficult to screen lightweight products
- » Screens down to 200µ



Gardner HE Horizontal Mixer

High-efficiency mixing system

- » Short mixing times combined with energy requirements
- » High-efficiency double helix agitator
- » Ideal for sticky powders
- » Large top cover for easy access

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.

GCA Global Cleanable 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)

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

Supplied Air Extruder Hood

Conveys extrudate from the extruder to the dryer

- » Helps eliminate potentially contaminated air from the extruder room floor
- » Supports clean in place processes and is easily dismantled for cleaning
- » Space saving design provides smaller footprint
- » Moving parts are internalized keeping operators safe



Drying

Schenck Process equipment has been integrated with a number of gas fired vertical or horizontal dryers from multiple manufacturers. Dryer aeration cyclones 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 HSER filters are available.



MULTIDOS® DEA

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® DEA open frame design for sanitary washdown applications



Horizontal Material Separator (HMS)

A cyclone that separates conveyed material from the conveying airstream

- » Decreased vertical footprint reducing process space needs
- » Good interior access keeps operators safe during maintenance
- » Interior product contact welds ground smooth to resist buildup
- » Ideal for handling large and small kibble



E-finity®

Low pressure continuous dense phase conveying system

- » The blower air source designed for less than 15 psig (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

Cooling

Cooler aspiration cyclones 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.

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

Hygienic Side Entry Receiver (HSER)

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

SacMaster®

Bulk bag discharge system

- » 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



Sifting

For the removal of any extraneous materials or fines the KEK Centrifugal Sifters can be used for direct inline installation into pneumatic conveying lines.

Packaging

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



Kemutec Kek Cone Mill

High efficiency material size reduction

- » Gentle grinding action
- » Uniform size distribution results in minimal fines generation
- » Low dust levels eliminate the need for air filtration
- » Ideal for sizing in both wet and dry granulation processes

Kemutec KEK Sifters

Rotary sifter for powder and granule processing

- » High capacity and high-efficiency sifting
- » Gravity and inline pneumatic conveying designs
- » 30 second screen changes
- » Rates from a few pounds to over 200,000 lbs./hr.
- » Easy disassembly for cleaning and maintenance

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



Complete after-sales solutions for your requirements

Looking for after-sales solutions? Our extensive AfterMarket program provides you with after-sales services – customized to your specific requirements.

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

Our AfterMarket program is based on a modular principle – you can pick and choose any individual product or a combination thereof. AfterMarket service categories focused on repair, inspection, management and support help to easily find the appropriate products.

We welcome the opportunity to provide you with individual consultation, either as part of an AfterMarket contract or on an individual basis. Whatever Full Service means to you – let's create it together!

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Schenck Process provides the widest selection of bulk material handling equipment and systems for pet food processes. We are committed to providing excellent products and services to customers serving the pet food industry throughout the world.

Our systems keep pets well fed



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we make processes work