

**MATERIAL SAMPLING**

# **AUTOMATIC INDUSTRIAL SAMPLING**

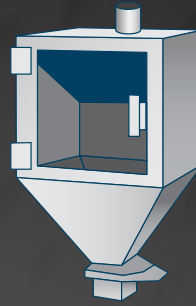


**PROVEN & DEPENDABLE™**

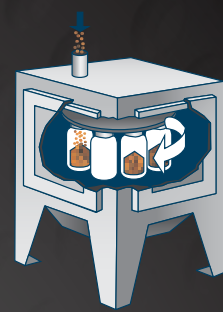
# AUTOMATIC INDUSTRIAL SAMPLING

## COLLECTION SYSTEMS

With an automated collection system such as the Rotating Indexing Cabinet, you can receive and store samples virtually unattended. An adjustable timer is pre-set to determine the number of samples (or duration) per container. When it is time, the system automatically positions the sealed containers for the next filling. Other collection systems provide for manual bag filling. Container size, type and quantity can be varied as required by application.



Hopper Style - Includes Hinged Plexiglass Door and a Sliding Manual Gate



Automated Rotating Indexing Cabinet and Jar Collection

## MECHANICAL DIVIDERS

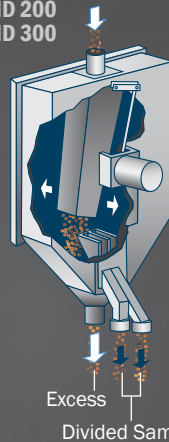
Mechanical dividers divide the extracted sample from the primary sampler down to a workable size while allowing the excess to return to the main material stream. These dividers are designed to maintain representative sample integrity and accuracy with lower handling costs.

MD 100, MD 200, MD 300: Swinging Spout Models

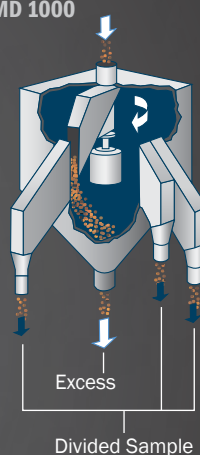
MD 1000: Rotating Spout Model for high volume applications

MD 50/50: Sample Splitter

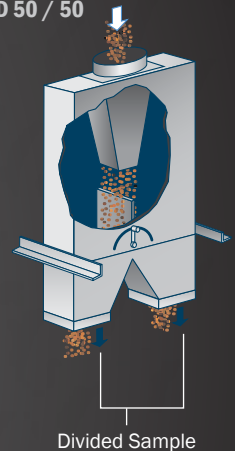
MD 100  
MD 200  
MD 300



MD 1000

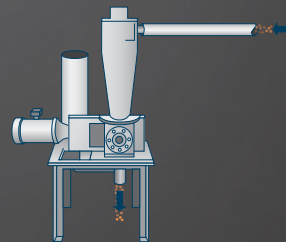


MD 50 / 50



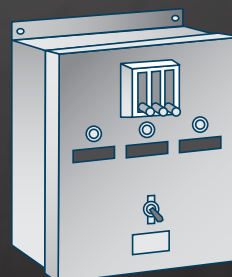
## PNEUMATIC SAMPLE DELIVERY UNITS

Sample delivery units are used to transport bulk samples from one point to another, reducing labor costs with efficient motor operation of blower and air lock. Units are available in 2" and 3" diameter sizes. Use is dependent upon volume of sample and distance to be transported.



## AUTOMATIC CONTROLS

- PLC driven control
- Automatic and/or manual operation
- Accommodates individual or multiple systems, including interlocks and dust-tight, water-tight, Class II-G classifications or other electrical codes
- Pneumatic, electric or hydraulic operation

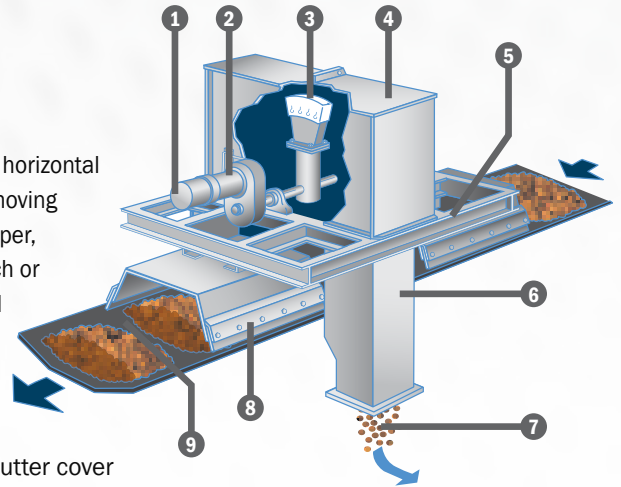


# AUTOMATIC INDUSTRIAL SAMPLING

## MID-BELT SAMPLER

### RS model for aggregates, coal, limestone, minerals & wood chips

The mid-belt sampler is designed with a direct motor drive (no belts or chains) for horizontal or inclined operations. The system provides an accurate, unbiased sample from moving belts. When activated, the rotating scoop, with a built-in adjustable and flexible wiper, obtains a sample from pre-determined intervals. The rotating scoop does not touch or damage the belt. The collected mid-belt sample, including fines, is then deposited into a gravity side chute for delivery to an InterSystems collection system. This sampler is fully assembled for ease of installation and meets ASTM D-2234.



Standard construction:

- Carbon steel housing
- Structural angle frame
- Carbon steel sample cutter cover

#### 1. Electric Braking

#### 2. Motor Drive (shown with gear reducer)

#### 3. Rotating Scoop (at the ready position) with Adjustable Wiper

#### 4. Section Hood for Easy Access

#### 5. Structural Tubing Frame

#### 6. Heavy I-Beam Construction

#### 7. To InterSystems Collection System

#### 8. Adjustable Belt Skirting

#### 9. Removed Sample Area

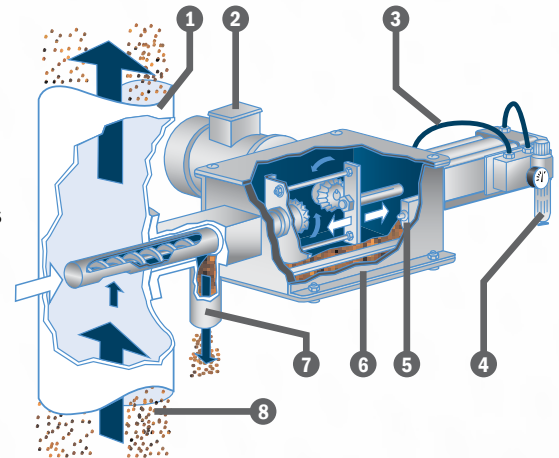
## PNEUMATIC LINE SAMPLERS

### PS model for free-flowing materials from microscopic powders to large granules & pellets or heavy viscosity liquids with solid suspensions

PS pneumatic line samplers collect accurate samples from gravity or pneumatic conveying systems (positive or negative, dense or dilute phase). They may be mounted in vertical or horizontal lines, spouts or chutes. When activated, a sample tube extends into the product stream and collects a sample. The sample tube then fully retracts, seals the line and eliminates product stream obstruction. A close tolerance auger then moves the sample to the discharge and provides excellent product clean-out.

Standard construction:

- Aluminum seal housing
- Stainless steel sample tube
- Stainless steel machined & polished auger with Teflon seals



#### 1. Pneumatic (or Gravity) Line with Product

#### 2. Gear Motor Drive

#### 3. Air Cylinder Actuation

#### 4. Pressure Regulator

#### 5. Limit Switch

#### 6. Sealed Housing with Removable Access Panels

#### 7. Sample to Discharge (gravity)

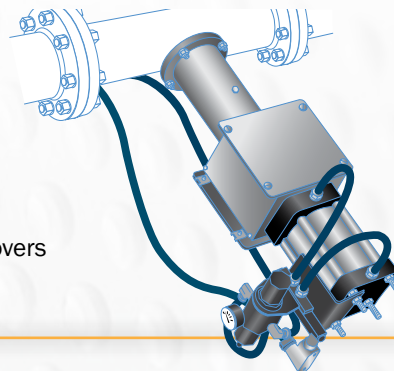
#### 8. Material Flow

### PDP model for light to heavy density powders, granules & flakes

The PDP is a sealed system that samples in a pressurized conveying line or pressure vessel (dense or dilute phase).

Standard construction:

- Aluminum seal housing
- Stainless steel sample tube, housing & covers



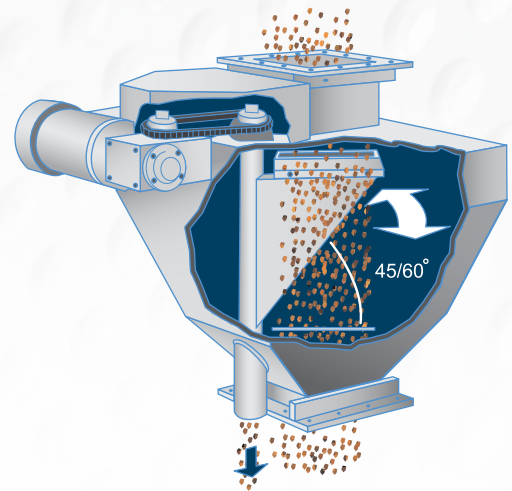
## GRAVITY CHUTE SAMPLERS

### GRE & GRA models for free-flowing materials including granules, powders & pellets

These samplers collect representative samples from gravity spouts and are designed to require very little space. When activated, a sample receiver pivots through the product stream, sweeping a 120° arc, collecting a true cross-section sample. The sample cutter is out of the product stream and is sealed when not sampling. This sampler meets ASTM D-2234.

Standard construction:

- Carbon steel or stainless steel

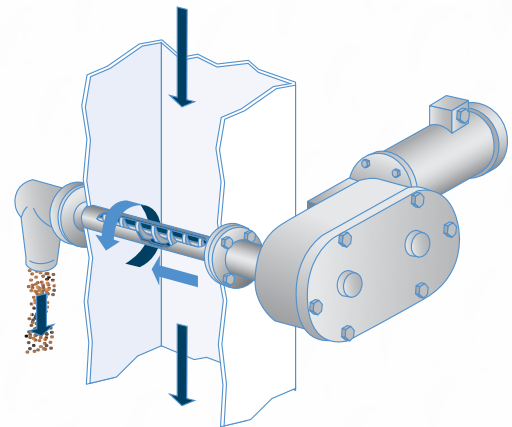


### GSS & GSS-U for free-flowing materials including pellets, chips, flakes, granules & powders

These samplers provide accurate, repeatable samples from gravity flow pipes, spouts or hoppers. They are ruggedly designed and require little space to install. A sample tube spans the product stream and is supported on both walls. When activated, the sample tube rotates 360° as the screw auger simultaneously moves the sample to the discharge. A close tolerance auger ensures excellent product clean-out.

Standard construction:

- Dust tight aluminum drive housing
- Stainless steel sample tube & auger



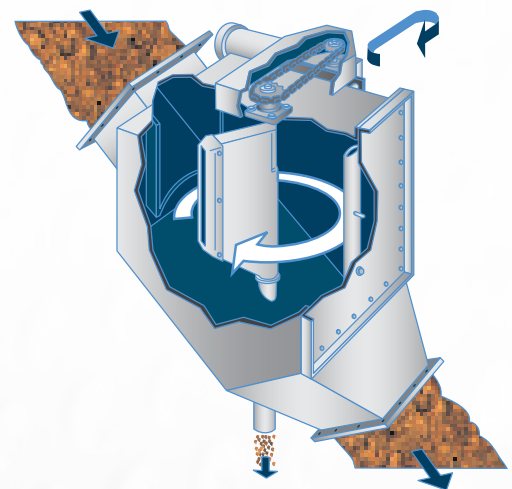
## SLOPED GRAVITY CHUTE SAMPLER

### GRES model for free flowing materials including granules, powders & pellets

This sampler design requires very little space and collects representative samples from sloped gravity chutes. When activated, a sample cutter pivots through the product stream, sweeping a complete 360° arc, collecting a true cross-cut sample. The sample cutter is parked away from the stream of material and sealed when not sampling. This sampler meets ASTM D-2234.

Standard construction:

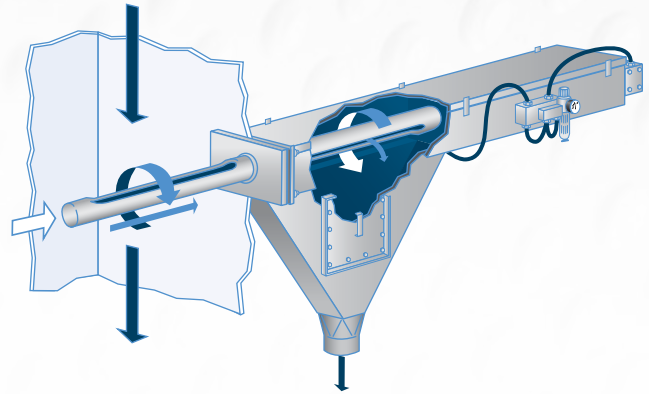
- Carbon steel or stainless steel



## GRAVITY CHUTE / BELT END SAMPLERS

### PRT & HD-PRT models for a wide range of fines, small or large particles & abrasive materials

These samplers employ very simple and reliable operation, and use minimum headroom. Mounting may be in chutes, hoppers, at belt end or head chutes. When activated, a slotted sample tube enters the product stream, rotates 270°, retracts into the sampler housing and rotates back to deposit the sample into the discharge. The sample tube can be driven pneumatically or hydraulically.



Standard construction:

- Carbon steel or stainless steel housing
- Stainless steel sample tube

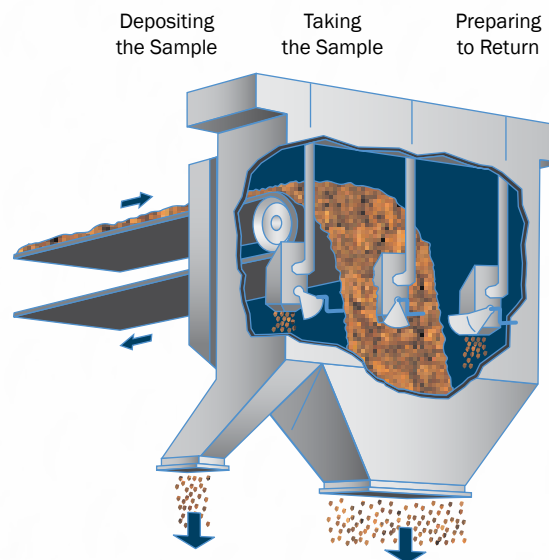
## BELT END SAMPLER

### HD-BD model for granules, pellets, chips and other types of material

This sampler provides accurate, representative samples from the discharge end of belt conveyors. It is built to take the stress of extended use and designed to use very little headroom by replacing the front portion or entire hood section. When activated, a sample cutter passes through the material flow in a straight path, collecting a true cross-section sample. The sampler is lined at all critical wear points with abrasion-resistant liners. This sampler meets ASTM D-2234.

Standard construction:

- Carbon steel or stainless steel housing
- Sample receiver with urethane dust seals



# INDUSTRIES SERVED

## INDUSTRIAL SAMPLING

Industrial samplers are used to extract samples of free-flowing materials such as coal, aggregate, wood chips, plastics and liquid. The design and operation of the sampler eliminates issues inherent with hand-sampling methods and provide representative and repeatable samples. GSI InterSystems samplers are designed and manufactured to be rugged systems for a variety of applications. They can be used in gravity, pneumatic or liquid lines and can be installed in chutes or at the end and middle of moving belts. Controls and accessories such as collection carousels and PLC interface-capability are available.



## BIOFUELS

GSI InterSystems equipment is supplied to the ethanol industry for conveying, elevating, weighing and sampling the feed stocks needed to produce ethanol and the DDG (dried distilled grains) byproduct. InterSystems equipment has been installed in more than 50 ethanol plants across the U.S.



## CEMENT

Several models of GSI InterSystems industrial sampling systems are ideal to suit the diverse needs of the cement industry where unattended systems ensure a representative and repeatable sample. Samplers and the collection systems are applied in the truck and rail loadout areas.



## FRAC SAND

InterSystems samplers are the best choice for the frac sand and silica industry, providing the means to automatically collect the sample for quality evaluation. The complete line of InterSystems sampling equipment is manufactured to obtain representative samples from conveyor belts, gravity chutes, and truck and rail loadout systems.



## FOOD AND FEED PROCESSING

In addition to handling feed and food ingredients, equipment from the InterSystems material handling line can be manufactured in food-grade to be used for inbound and outbound transferring. GSI InterSystems sampling systems obtain representative samples and ensure quality control.



## MINING AND MINERALS

GSI InterSystems solutions are a leader in automatically collecting samples for the mining and mineral industries, utilized in gypsum, precious metals, coal, rock, sand and gravel mines worldwide. Our mid-belt sampler is the "standard" in the construction and mining industry. Processing is simplified with the use of an InterSystems automatic gravity chute sampler and automated collection system.



## CHEMICAL & PETROCHEMICAL

GSI InterSystems provides custom sampling systems to chemical and oil companies in domestic and foreign markets. Standard stainless steel construction provides a long-term solution in the most corrosive of environments. Intrinsically safe and explosion-proof controls provide secure operation in hazardous areas.



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