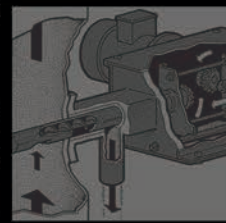


# Automatic Industrial Sampling



**intersystems**  
engineered material handling solutions

**Belt End**  
**Gravity Chute**  
**Sloped Gravity Chute**  
**Liquid**  
**Mid-Belt**  
**Pit**  
**Pneumatic Line**  
**Sample Collection**



## Mid-Belt Sampler

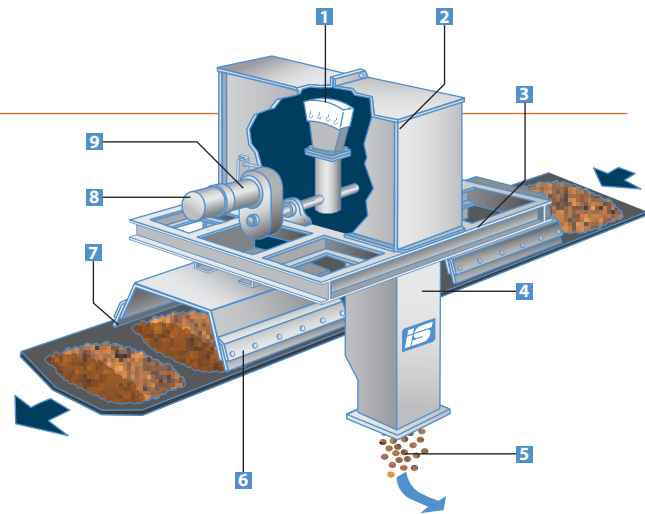
**RS model for aggregates, coal, limestone, minerals & wood chips**

- |   |  |
|---|--|
| <b>1</b> Rotating Scoop (at the ready position) with Adjustable Wiper | <b>5</b> To Intersystems Collection System     |
| <b>2</b> Section Hood for easy access                                 | <b>6</b> Adjustable Belt Skirting              |
| <b>3</b> Structural Tubing Frame                                      | <b>7</b> Removed Sample Area                   |
| <b>4</b> Heavy I-Beam Construction                                    | <b>8</b> Electric Braking                      |
|   | <b>9</b> Motor Drive (shown with gear reducer) |

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 pelican cover



## Pneumatic Line Samplers

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

- |   |  |
|---|--|
| <b>1</b> Pneumatic (or Gravity) Line with Product | <b>5</b> Limit Switch                                |
| <b>2</b> Gear Motor Drive                         | <b>6</b> Sealed Housing with Removable Access Panels |
| <b>3</b> Air Cylinder Actuation                   | <b>7</b> Sample to Discharge (gravity)               |
| <b>4</b> Pressure Regulator                       | <b>8</b> Material Flow                               |

The PS pneumatic line sampler collects accurate samples from gravity or pneumatic conveying systems (positive or negative, dense or dilute phase). It 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:

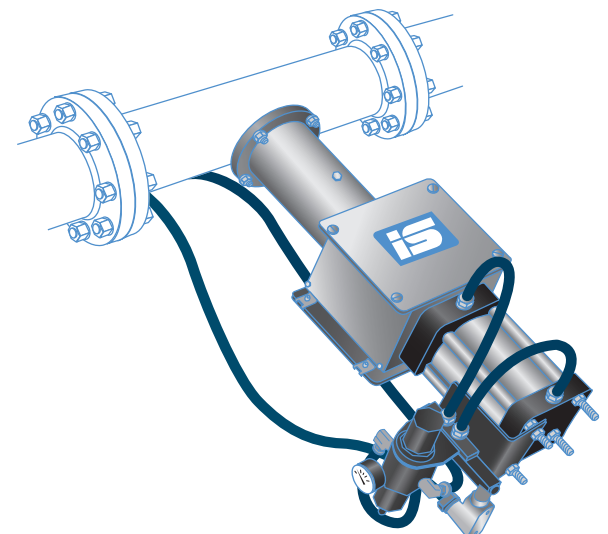
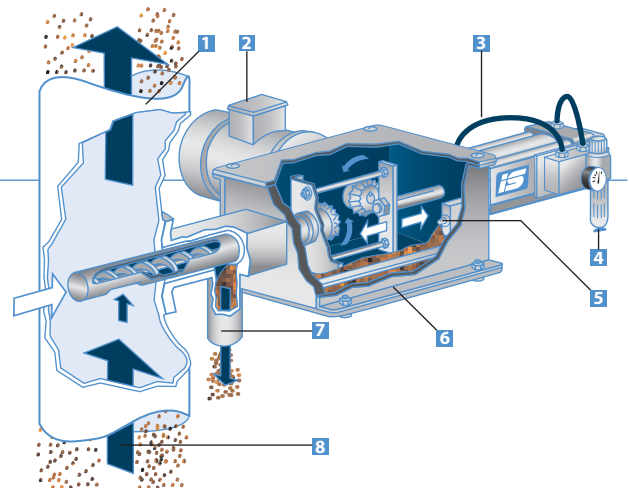
- Aluminum seal housing
- Stainless steel sample tube
- Stainless steel machined & polished auger with Teflon seals

**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

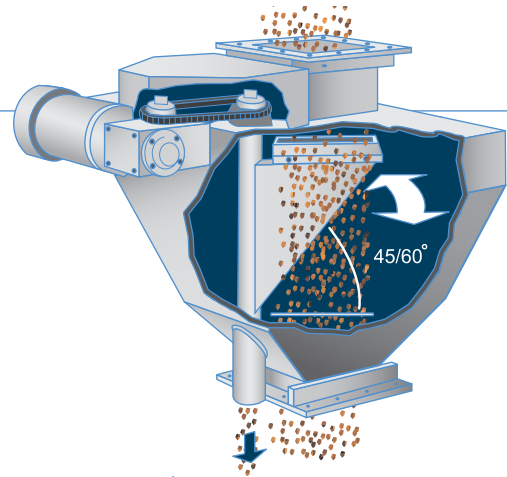


## Gravity Chute Samplers

### 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.

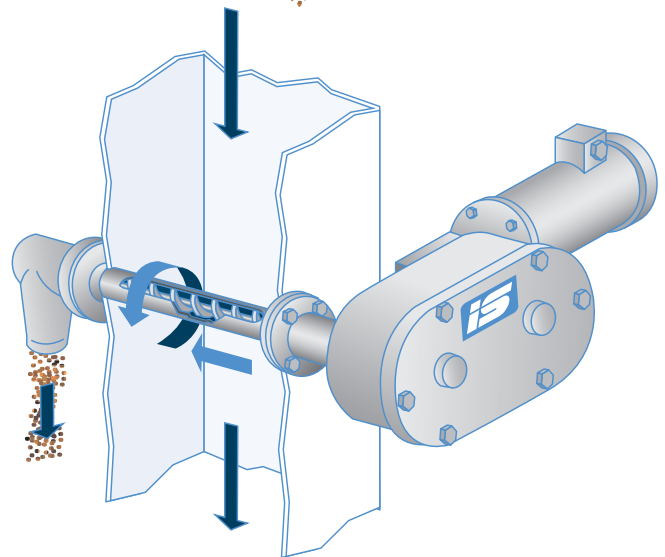
Standard construction:  
 Carbon steel or stainless steel



### 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

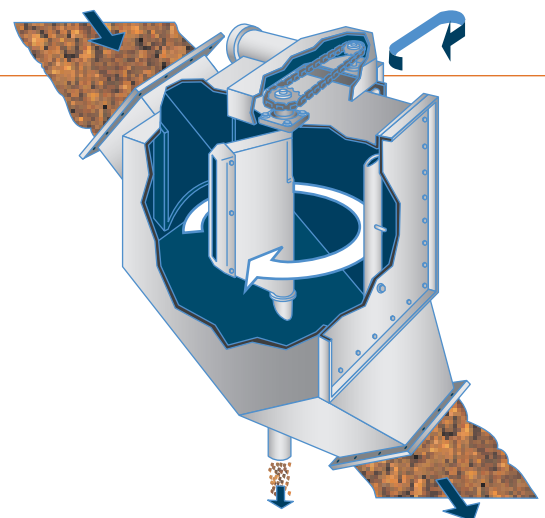


## Sloped Gravity Chute Sampler

### 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

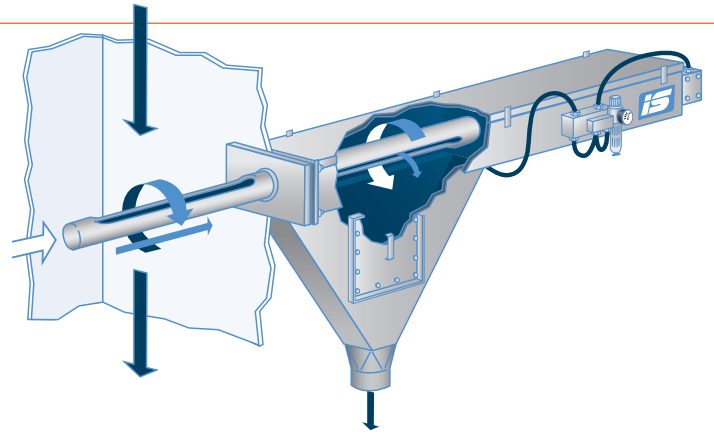


## Gravity Chute / Belt End Samplers

### 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, retracts into the sampler housing and deposits 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

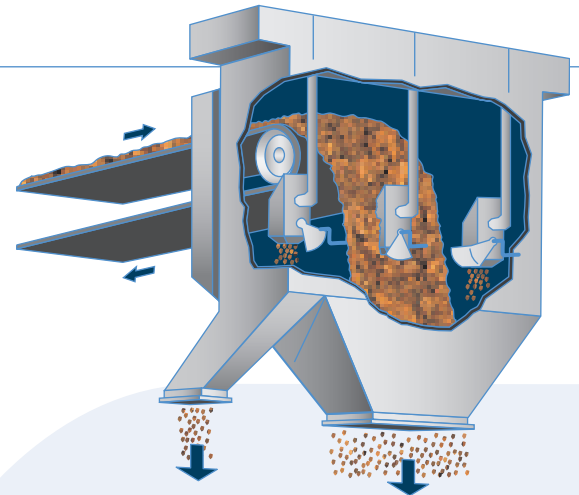


## Belt End Sampler

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

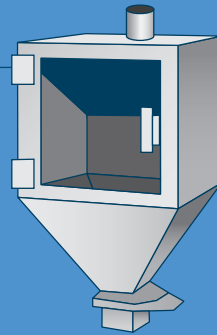
This sampler provides accurate, representative samples from the discharge end of belt conveyors. It is built to take the stress of extended use and designed to use very little headroom by replacing the front portion or entire hood section. When activated, a sample cutter passes through the material flow 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

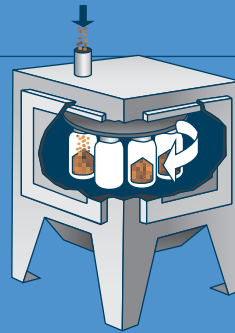


## Collection Systems

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 & Jar Collection

## Mechanical Dividers

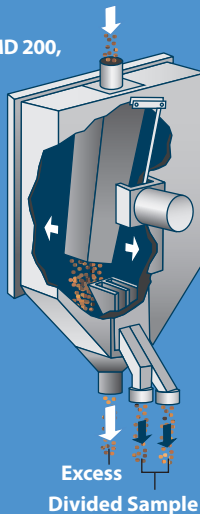
Mechanical dividers divide the extracted sample from the primary sampler down to a workable size while allowing the excess to return to the main material stream. These dividers are designed to maintain representative sample integrity and accuracy with lower handling costs.

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

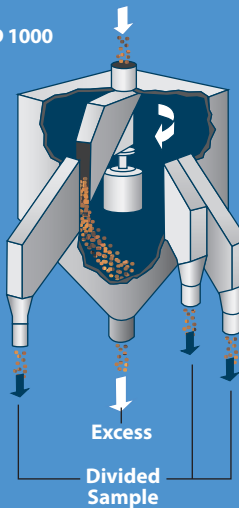
MD 1000 : Rotating Spout Model for high volume applications

MD 50/50: Sample Splitter

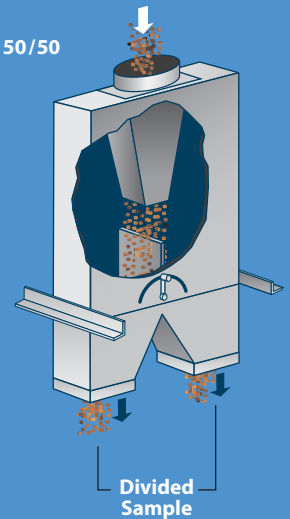
MD 100, MD 200, MD 300



MD 1000

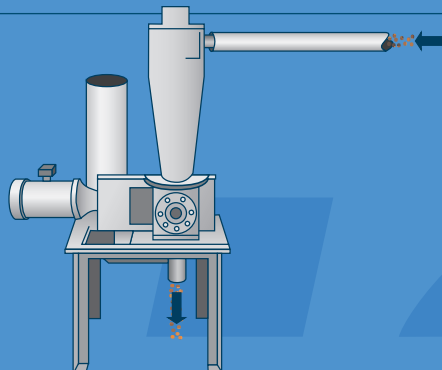


MD 50/50



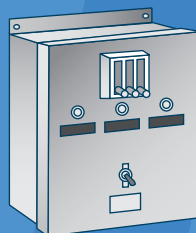
## Pneumatic Sample Delivery Units

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





# intersystems

InterSystems reaches a worldwide market and numerous industries with expertise in the engineer and manufacture of bulk material handling products and industrial sampling systems. InterSystems is based in Omaha, Nebraska and operates out of a 200,000 square foot state-of-the-art manufacturing facility.

InterSystems is ISO 9001 and 14001 certified.

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