



## Proven Dust-Tight Conveying Solutions



**Grisley**  
air-supported conveyors®



# GRISLEY® ASC

**Grisley ASC (Air-Supported Conveyor)** is an engineered conveyor designed for new construction and the retrofit of existing systems. The **Grisley ASC** is particularly well-suited for operation in harsh and dusty environments, such as coal, cement, and grain. It incorporates Grisley's proven dust-tight and weather-tight design that keeps the handled material in the conveyor, and eliminates contamination from outside sources.

The **Grisley ASC** operates on the established principle where, instead of using idlers, the belt floats on a very thin cushion of air on which the conveyor belt and the material glide with ease.



Because there are no idlers, common maintenance associated with a conventional conveyor is eliminated. The **Grisley ASC** operates with only four bearings - two at the head pulley and two at the tail. **Grisley ASC's** standard design includes an air-supported return plenum, so there are no idlers or bearings on the return side of the conveyor.



This commitment to building the smoothest, most reliable, and most cost-effective belt conveyors has made **Grisley ASC** the industry leader in air-supported conveying solutions. The demonstrated quality of Grisley ASC design, construction, and service at a lower cost is the reason why **Grisley ASC** is rewriting industry standards for high-performance conveying.



# STANDARD BOX PLENUM

## NEW CONVEYOR INSTALLATIONS

### BENEFITS

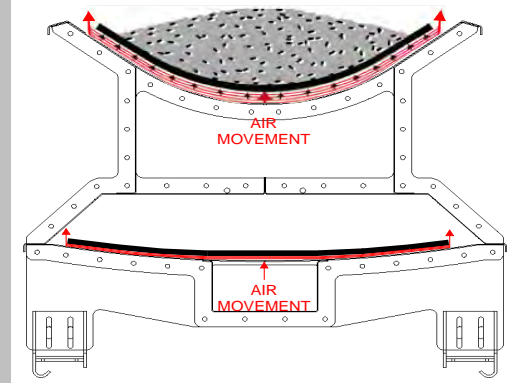
Our modular system replaces the need for conventional roller conveyors. The elimination of idlers means low maintenance, no pinch points, and less wear items.

### DUST-TIGHT DESIGN

Because of its inherent dust-tight design, the **Standard BOX Plenum** controls the dust that is generated during the transfer of product. This fully enclosed system prevents escape of fugitive material. Stable belt path in the trough eliminates the "roller-coaster" ride for material that leads to dust and spillage.

### IMPROVED SAFETY

Our system eliminates idlers, and also reduces friction, sparks, and heat. It reduces personnel exposure to moving parts.



### A PROVEN TECHNOLOGY

Grisley Standard Plenum designs are employed around the world in applications on a variety of materials including crushed coal, cement/clinker, precious metals, mining, wood chips, and grain.

### REDUCED DRIVE POWER

No compressor is required. Up to 500 feet of conveyor is supported by a single low-power centrifugal fan. Low system friction can reduce overall drive power requirement as much as 30% on a horizontal conveyor.

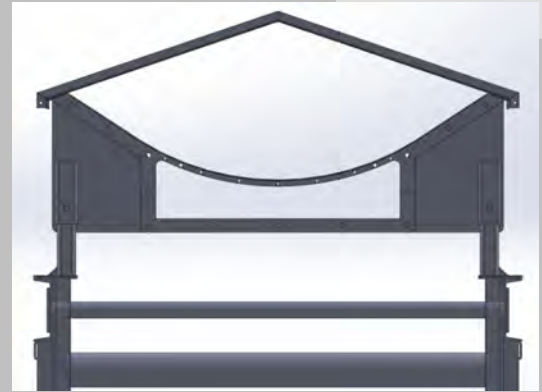
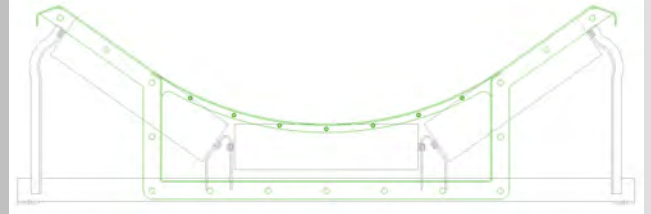


# RETROFIT PLENUM DESIGN

## RETROFITS EXISTING IDLER CONVEYORS

The Retrofit Plenum is Grisley ASC's patented retrofit design. The Retrofit Plenum allows the user to retrofit any portion of the existing roller-based conveyor with an air-supported carrying side that is dust tight and weatherproof.

The Grisley ASC Retrofit Plenum Air Supported Conveyor is a component-based method for upgrading troughing conveyors to more reliable and cost-effective air-supported conveyors. Designed according to CEMA (Conveyor Equipment Manufacturers Association) standards, the Retrofit Plenum utilizes the troughing conveyor's existing support structure, drive mechanism, and belt. The Retrofit Plenum ASC is available at a per-section cost comparable to that of a conventional and regularly-scheduled retrofit.



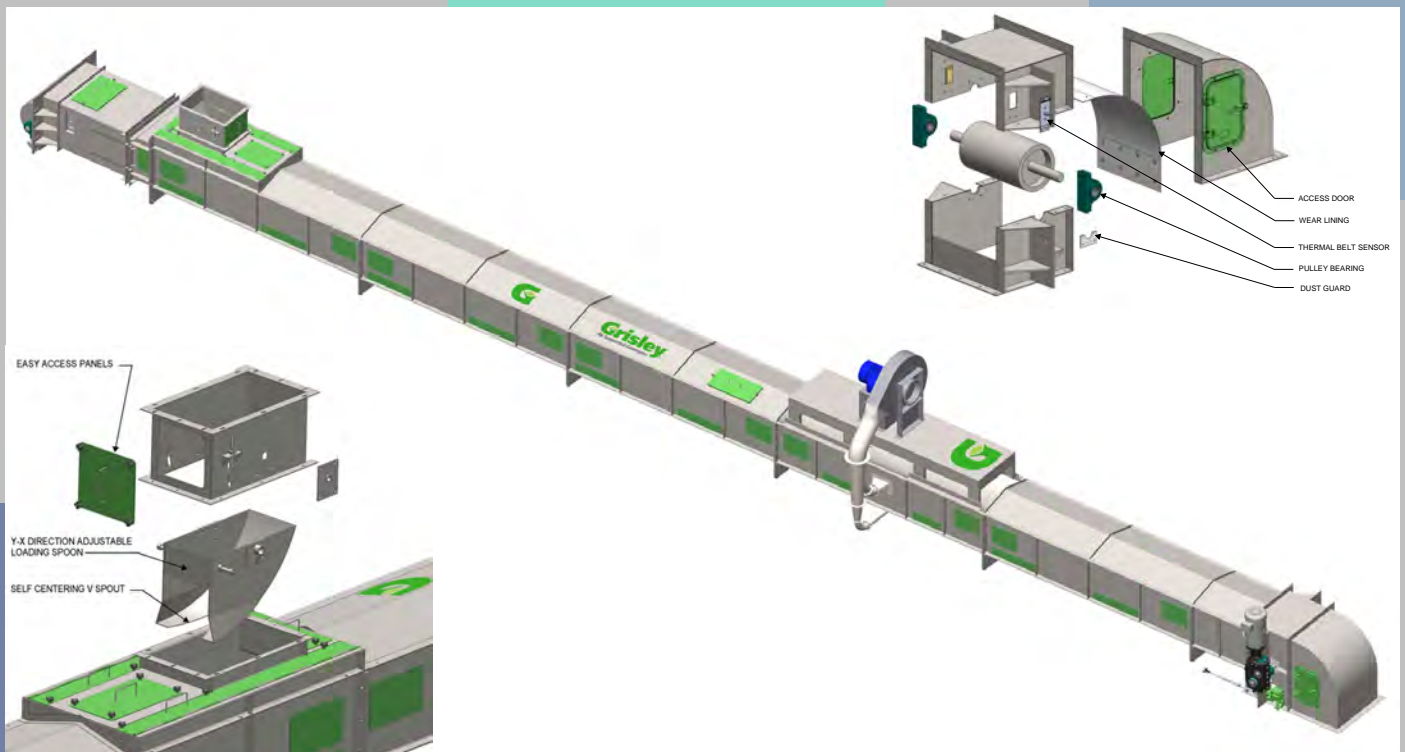
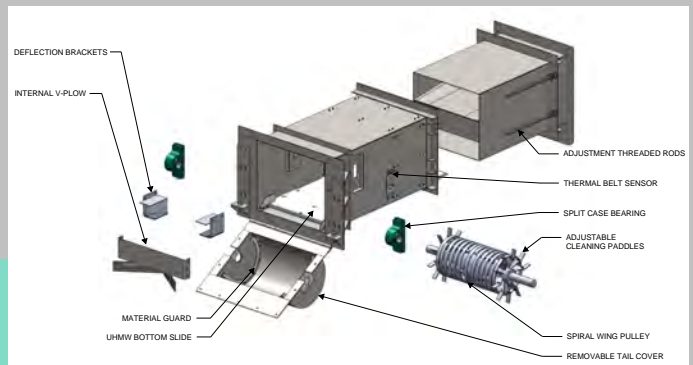
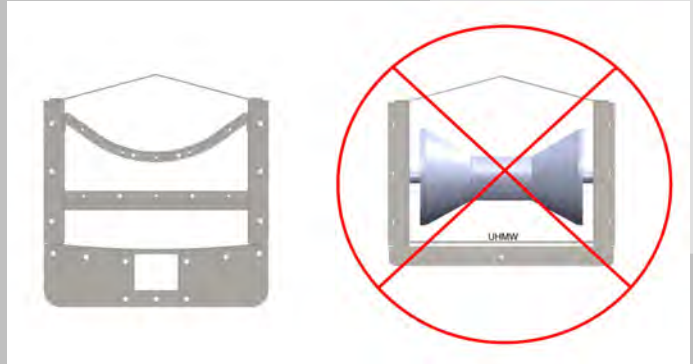
The Retrofit Plenum provides easy dust collection in tight spaces such as tunnels or areas well above grade with no additional ducting needed. The dust-tight design adds significant increase in safety to the work area environment.



# AIR-GLIDE CONVEYOR

SPECIFICALLY DESIGNED FOR THE AG INDUSTRY

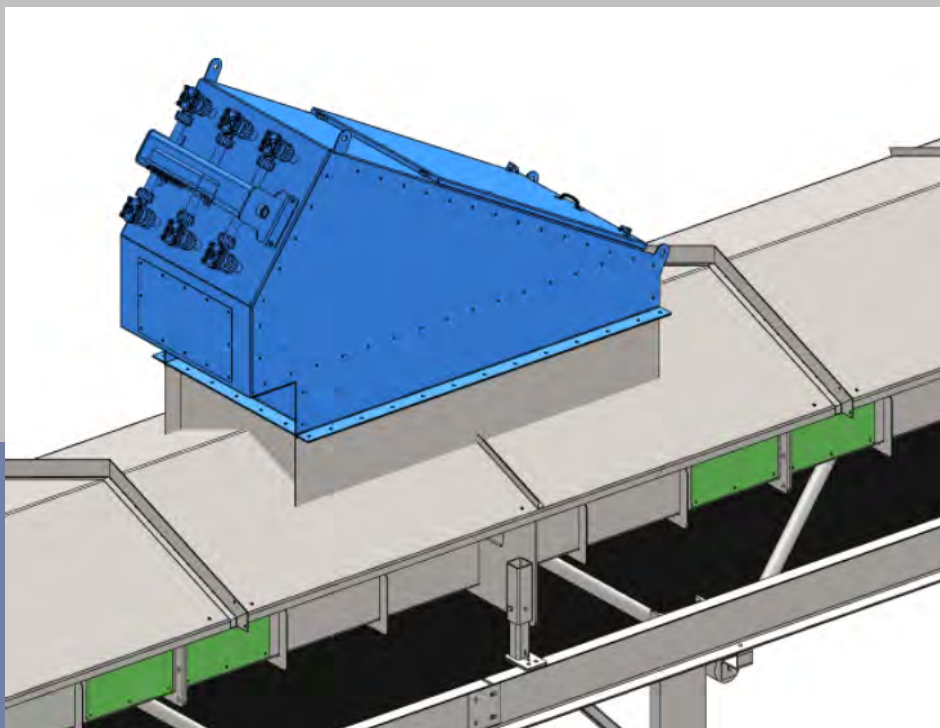
The Grisley AG air-supported conveyors is a fully enclosed air supported conveyor that uses a thin film of air to support the belt. It replaces traditional spool type conveyors with an air bearing. There are only 4 total bearings throughout the entire length of the conveyor. This is particularly beneficial to the grain industry as to minimize any potential fire hazard. Grisley AG Air-Glide is priced competitively with typical spool type conveyors. Its simple design and ease of installation, makes this a must for all plants experiencing fugitive dust compliance.



# DUST COLLECTION

## BOX PLENUM & RETROFIT PLENUM

Grisley ASC and Donaldson® are revolutionizing the way conveying systems control dust. With the combination of Grisley ASC's dust-tight conveyor design and Donaldsons CPV® filtering technology we are cutting the costs and inefficiencies associated with dust collection.



Grisley ASC's conveying systems eliminates the need for expensive baghouse unit costs and process air ducting which typically eliminates air-modification permitting.



# APPLICATIONS

## ENVIRONMENTALLY FRIENDLY

Grisley air-supported conveyors work well with a wide variety of materials and various industries. Coal, biomass, food, pulp, paper, cement and gypsum **applications** have incorporated our equipment all over the globe. From tunnels to ship loading, Grisley conveyors are designed for a clean **eco-friendly** system. Grisley ASC covers the full range of CEMA belt sizes from 18 to 72. We are fully capable of large - capacity conveying and there is no job too small.



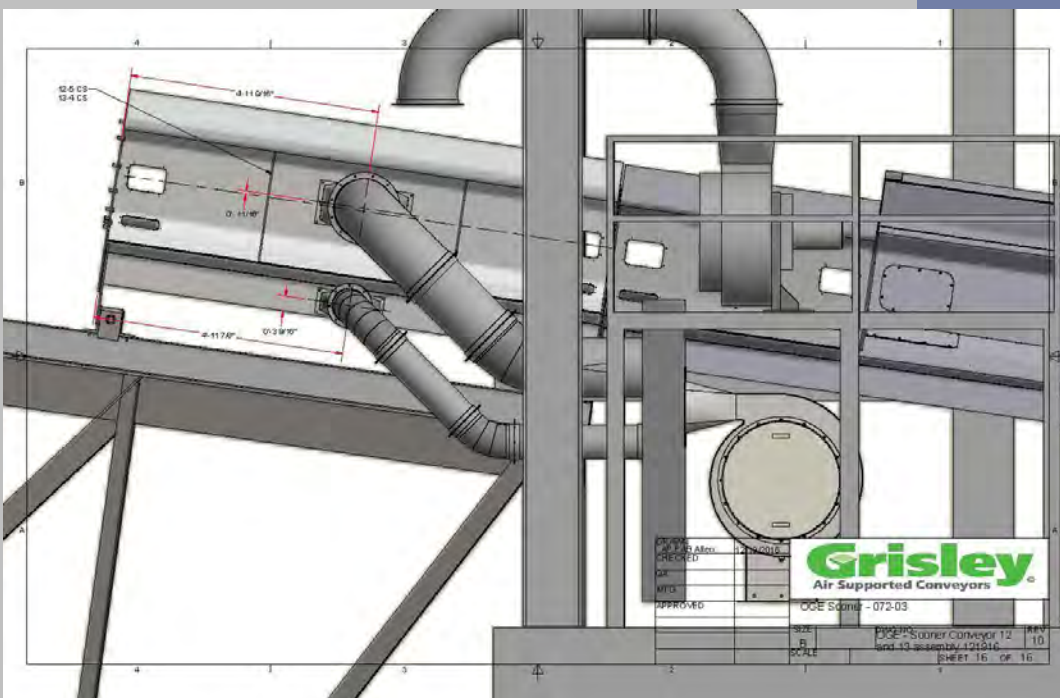
# ENGINEERING

## MECHANICAL DESIGN

| PULLEYS |                |       |      |      |            |      |         |   | SHAFTS   |         |     |      |         |       |       | BEARINGS     |      |       |                     |
|---------|----------------|-------|------|------|------------|------|---------|---|----------|---------|-----|------|---------|-------|-------|--------------|------|-------|---------------------|
| No.     | IDENTIFICATION | STYLE | QTY. | DIA. | FACE WIDTH | TYPE | CROWNED | LAGGING/THK./TYPE                                   | MATERIAL | A (in)  | B   | C    | D       | E     | F     | MANUFACTURER | TYPE | BOLTS | ASSEMBLY            |
| 1       | DRIVE          | SD    | 1    | 24"  | 90"        | DRUM | NO      | 1/2" DIAMOND GROOVED 60 DUROMETER RUBBER VULCANIZED | C1045    | 7.5"    | 42" | 4.5" | 5.9375" | 104"  | 15.9" | DODGE        | ISAF | 4     | P48534-ISAF-51SR(E) |
| 2       | BEND           | ND    | 1    | 24"  | 90"        | DRUM | YES     | 3/8" 60 DUROMETER SMOOTH VULCANIZED                 | C1045    | 5.9375" | 42" | 3.5" | 4.4375" | 91"   | -     | DODGE        | ISAF | 4     | P48526-ISAF-407R(E) |
| 3       | TAKE-UP        | ND    | 1    | 24"  | 90"        | DRUM | YES     | 3/8" 60 DUROMETER SMOOTH VULCANIZED                 | C1045    | 6.5"    | 42" | 4.1" | 4.9375" | 92.2" | -     | DODGE        | ISAF | 4     | P48528-ISAF-41SR(E) |
| 4       | BEND           | ND    | 1    | 24"  | 90"        | DRUM | YES     | 3/8" 60 DUROMETER SMOOTH VULCANIZED                 | C1045    | 6.5"    | 42" | 4.1" | 4.9375" | 92.2" | -     | DODGE        | ISAF | 4     | P48528-ISAF-41SR(E) |
| 5       | TAIL PULLEY    | ND    | 1    | 24"  | 90"        | DRUM | NO      | 3/8" 60 DUROMETER SMOOTH VULCANIZED                 | C1045    | 6.5"    | 42" | 4.1" | 4.9375" | 92.2" | -     | DODGE        | ISAF | 4     | P48528-ISAF-41SR(E) |

|        |    |      |    |         |    |      |    |      |                               |  |  |  |
|--------|----|------|----|---------|----|------|----|------|-------------------------------|--|--|--|
| DRIVE  | 1  | BEND | 2  | TAKE-UP | 3  | BEND | 4  | TAIL | 5                             |  |  |  |
|        |    |      |    |         |    |      |    |      |                               |  |  |  |
| PULLEY | ND | SD   | ND | SD      | ND | SD   | ND | SD   | PULLEY STYLE NO. (NON-DRIVEN) |  |  |  |

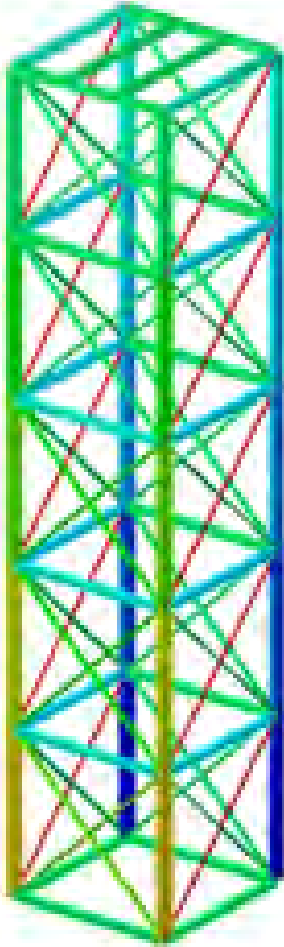
Grisley ASC has many years of mechanical-design experience. Our mechanical designers utilize industry standard conveyor analysis programing to make efficient, accurate, and reliable decisions. Grisley ASC has spent years researching and developing air-flow data which contributes to the success of every job. This proprietary design information is the "Secret Sauce" of what makes us who we are. In addition to this, Grisley ASC also takes the lead on the overall mechanical layout from specifying belts, components, and equipment. Grisley ASC's mechanical knowledge is not limited to air-supported conveyors. We can help you with all of your conveyor needs.



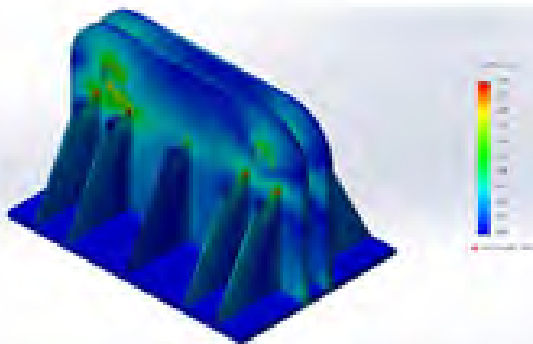


# ENGINEERING

## STRUCTURAL DESIGN

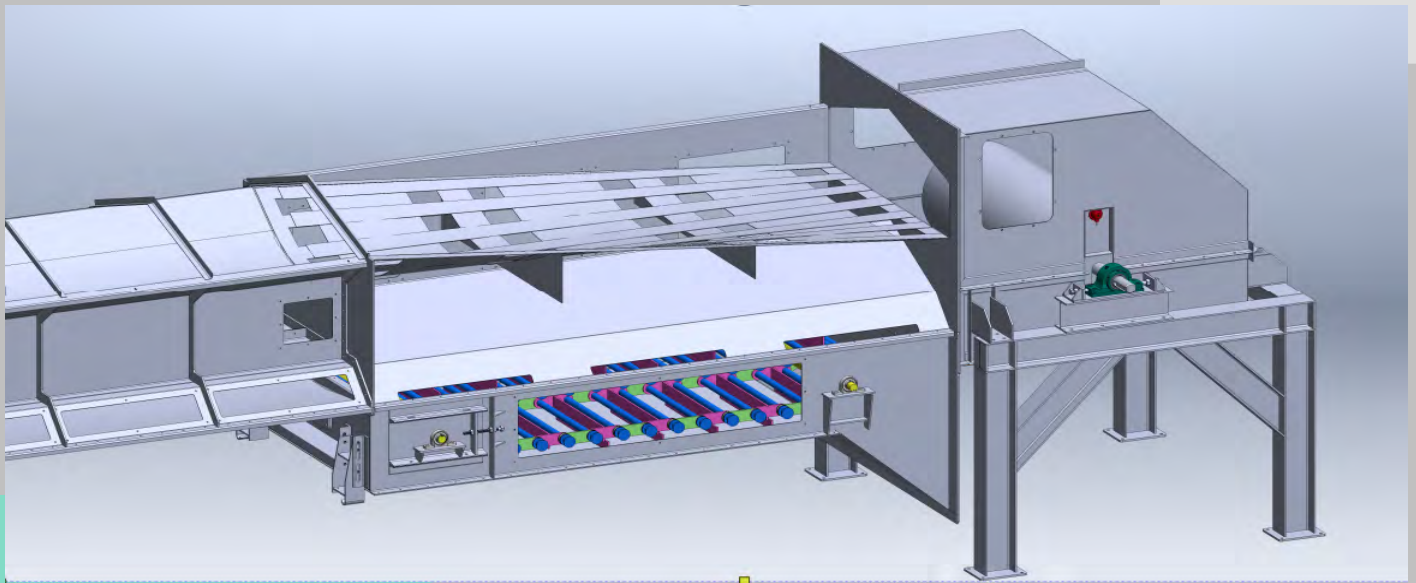


**Grisley ASC's** licensed in-house **structural design** utilizes structural software to allow for accurate design and ultimate reliability of structural systems while meeting site demands and customer specifications. Structural software is needed to account for the many different load cases that can be present in complex structural systems which allows us to efficiently provide code-compliant structural solutions.

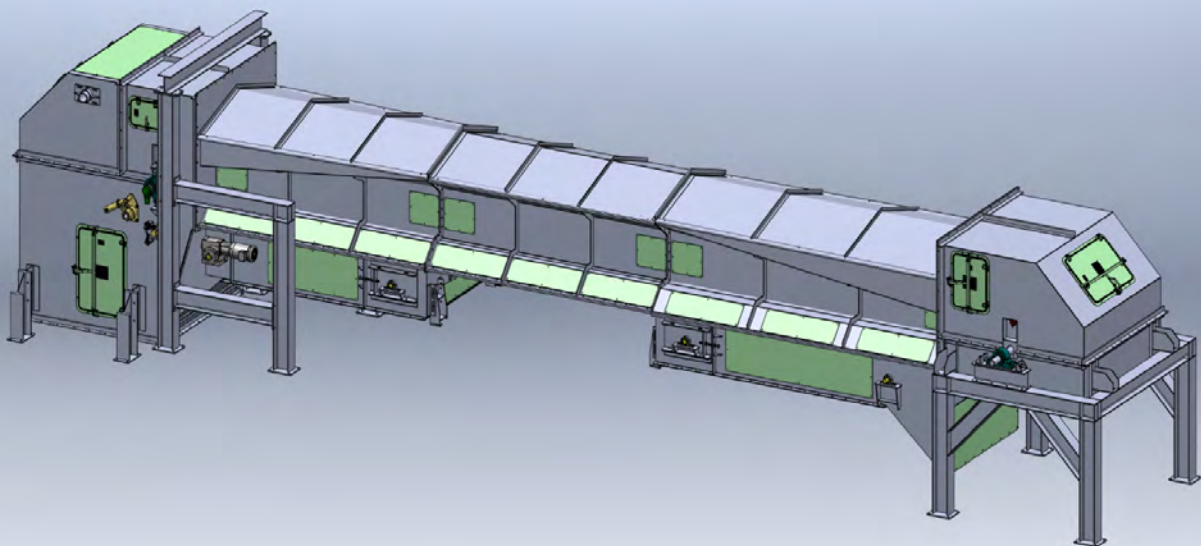


# 3D CAD DESIGN

**Grisley ASC** utilizes **3D CAD Design** using Solidworks to ensure that all designs fit together with high accuracy. Our models create a highly-efficient work flow that allows the same level of accuracy from the initial layout to shop fabrication sets.



**3D CAD Design** not only catches errors before they happen, it cuts down on design time by allowing our design team to make quick changes and production decisions.

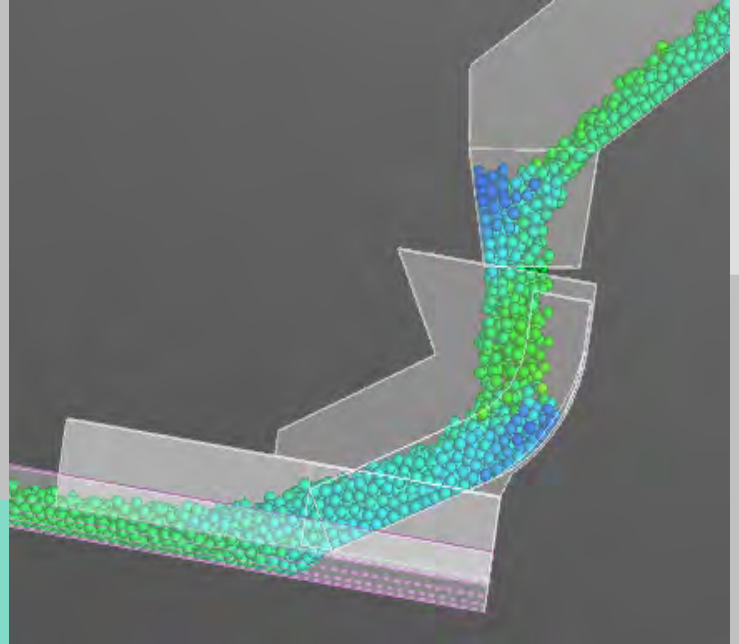




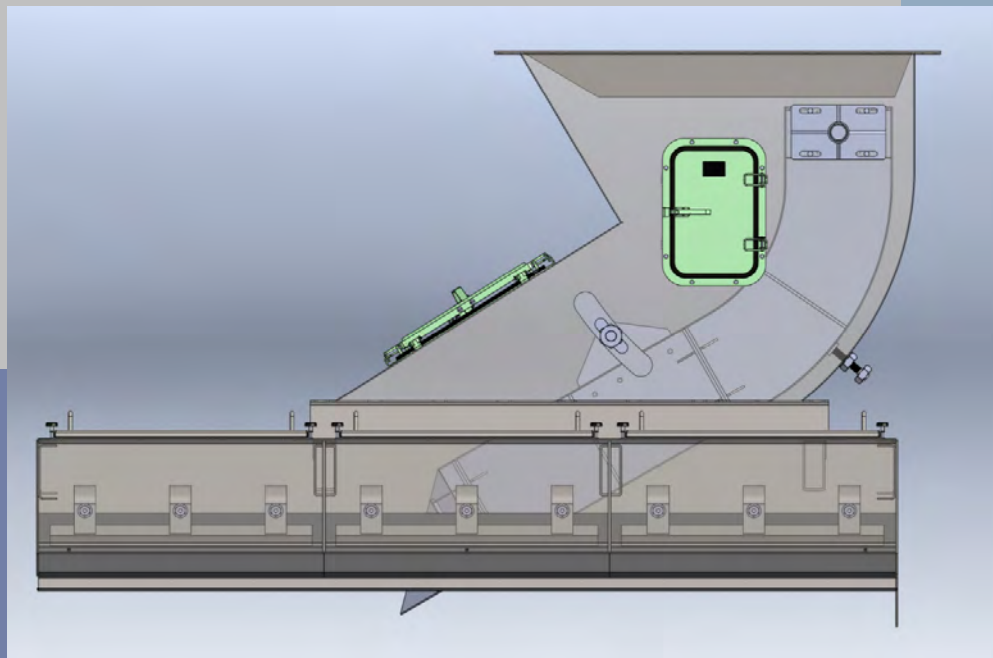
# DEM MODELING

## CONVEYORS

For the design of material flow on to conveyors, **Grisley ASC** utilizes state-of-the-art **DEM** technology developed to eliminate the problems associated with bulk-material flow. **DEM** modeling helps **Grisley ASC** avoid conveyor problems such as belt wear, off-center belt loading, and belt tracking, which are all critical for the design of air-supported conveyors.

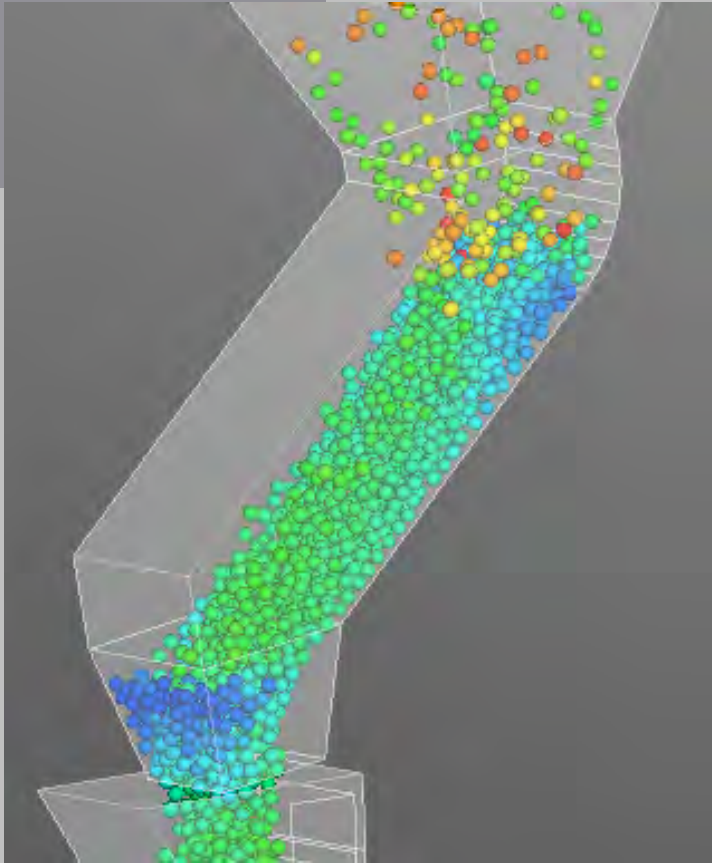


**Grisley ASC** uses Solidworks modeling in combination with proprietary software to create a superior work flow that solves geometric fit-up issues while considering the flow capabilities of the material involved. This gives us a distinct competitive edge with our abilities to quickly go from analysis to final geometric design for chutes and loaders.



# DEM MODELING

## CHUTES



For the design of material flow in chutes, **Grisley ASC** also utilizes **DEM** technology developed to eliminate the problems associated with bulk-material flow. **DEM** modeling chutes help **Grisley ASC** avoid problems such as chute plugging, chute wear from abrasion, material degradation, and off-center belt loading.

Like most conveyor systems, material loading is critical for the overall performance. We employ precise methods to insure perfect center loading onto our belts.





# FABRICATION

As you may know, all projects have different contract structures which makes the flow of information difficult to manage and can compromise the accuracy level of various subcontracted deliverables. Our in-house engineering and 3D-design allow for a highly accurate work flow from layout to **fabrication**.



We have the ability to export a wide range of industry-standard file formats. Whether we are going to a Grisley ASC specialty shop or we are required to get the job done on the other side of the globe, we have the tools and expertise to maintain a high-quality **fabrication** standard.

# GRISLEY-ASIA

## JOINT VENTURE

Grisley has formed a joint venture in Asia to continue producing high quality conveying solutions in the global market.



16 acre campus built to facilitate large scale production needs.



At present Grisley has built the worlds longest air-supported conveyor. We continue to innovate and perfect the science of air-supported conveying.







Grisley ASC designs and builds air-supported conveyors for bulk solids handling applications world-wide. Our conveyors use a thin cushion of air, rather than idlers or troughing rollers, to support the conveyor belt. Eliminating mechanical friction, the Grisley ASC conveyor is the smoothest, most reliable, most cost-effective belt conveyor on the market. Grisley ASC has years of experience developing and building air-supported conveyors. This allows us to provide superior design and engineering, better construction, lower costs, and the best customer service. With their superior performance, energy saving, and clean, quiet safe operation, Grisley air-supported conveyors are quickly re-writing industry standards for smooth, reliable, cost-effective conveying.



[info@grisley.com](mailto:info@grisley.com)



**(303) - 756 - 6474**

**[www.grisley.com](http://www.grisley.com)**  
**[www.grisley.cn](http://www.grisley.cn)**