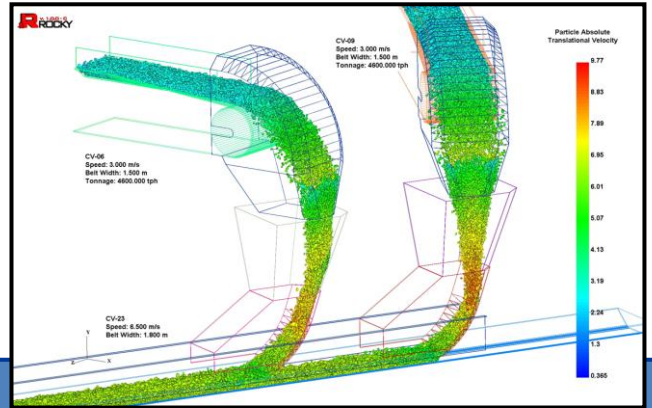




**CONVEYOR DYNAMICS, INC.**  
DESIGNERS OF BELT CONVEYOR SYSTEMS

## CHUTE DESIGN AND TESTING SERVICES



Conveyor Dynamics, Inc. (CDI) has the skill, experience, and technology to evaluate your transfer chutes, mills, and other materials handling systems. We can also help you use those results to engineer an optimized design.

Many design firms choose to buy their own DEM and CAD design programs, hire design engineers, and invest in many-cored servers to maximize their processing power. But using CDI for your design and testing needs has all of the following benefits:

✓ **Advanced DEM Software**

Our in-house Discrete Element Method (DEM) software, ROCKY, has more capabilities than the commercial version, enabling us to evaluate criteria like breakage and provide customized capabilities not possible out-of-the-box.

✓ **AutoCAD, Inventor, and SolidWorks Models**

CDI can work with designs in either AutoCAD, Inventor, or SolidWorks formats. In addition, we also have the ability to evaluate any STL, XGL, and DXF 3D model.

✓ **Specialized CAD Designers**

Our design engineers work exclusively on chutes and other materials handling designs so they have the skill and experience to understand and solve your materials handling problems.

✓ **Increased Processing Power**

Our in-house data center plays host to several large servers ranging from 32 to as many as 80 processing cores (and counting!). Your simulations will run faster and you'll get results quicker by leveraging our server power.

### The Benefits of DEM

Discrete Element Method (DEM) 3D modeling software helps designers evaluate bulk material handling systems by:

- Simulating particle flow through imported CAD geometries
- Predicting granular flow, power consumption, and belt & liner wear

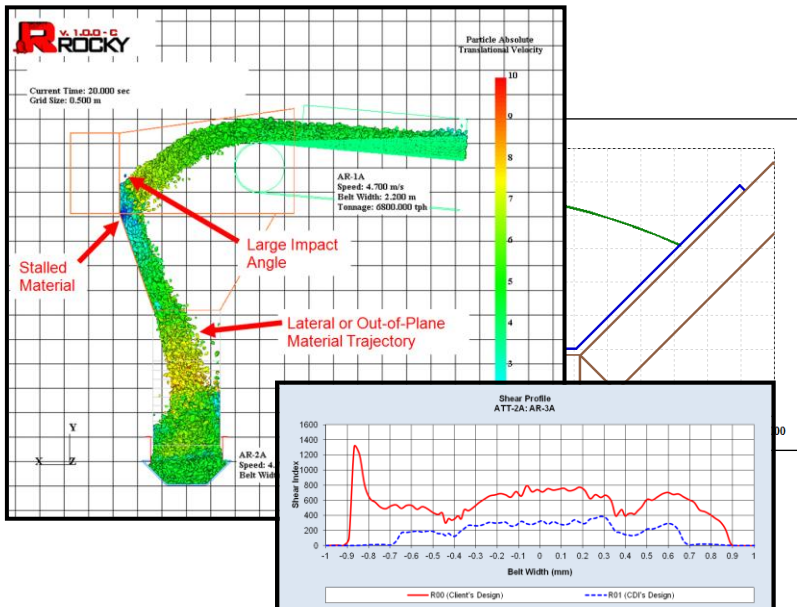
DEM can be used to:

- Increase belt and liner life
- Reduce liner wear
- Eliminate blockages & belt punctures
- Decrease spillage and product degradation
- Lower belt power consumption
- Improve belt tracking
- Minimize liner wear and maintenance

More about ROCKY DEM software can be found by visiting the following website.

[www.granular-dynamics.com](http://www.granular-dynamics.com)





## Chute Testing and Design Deliverables

For each geometry we evaluate, CDI creates a full-color analysis report that includes all of the following components:

- Descriptions and images for each geometry
- Areas of concern for each geometry
- Impact and shear wear data for each receiving belt
- Forces being applied in the X, Y and Z directions to each receiving belt (predicts tracking errors)
- Estimated power required to run each receiving belt
- CDI's suggested changes for each geometry

## Engagement Checklist for Chute Testing and Design

If you are interested in engaging CDI for our testing and design services, CDI requires the following information before project onset.

- 3D chute geometries or detailed drawings
- Bulk material properties (tonnage, type, density, moisture content and angle of repose)
- Discharging and receiving conveyor workpoints, as well as belt orientation and incline/decline angles
- Belt width, speed, and trough angle
- Pulley diameter and width

Incorporated in 1981, Conveyor Dynamics, Inc. (CDI) is a world leader in designing complex overland conveyor systems. Recognized internationally for our key involvement in some of the world's longest, strongest, fastest, and most economical conveyor systems, our primary focus is optimizing the designs of overland conveyor belts and related systems to solve our clients' unique mechanical, structural, control, electrical, terrain, and economic design challenges.

CDI is proud to serve the mining, mineral processing, construction, and manufacturing industries worldwide. Contact us to learn more about how we can help optimize your bulk material handling systems.



**Conveyor Dynamics, Inc.**

1111 West Holly Street  
Bellingham, WA 98225-2922 USA

Tel: 360-671-2200  
Fax: 360-671-8450  
E-Mail: [cdi@conveyor-dynamics.com](mailto:cdi@conveyor-dynamics.com)  
URL: [www.conveyor-dynamics.com](http://www.conveyor-dynamics.com)