

IMPROVE PRODUCT QUALITY AND REDUCE WASTE WITH

PARTICLE FLOW ANALYSIS

The Keen Project Solutions engineering team brings decades of hands-on experience designing and optimizing material handling solutions for the agriculture and food industries. Building on that deep industry knowledge, we use advanced **Discrete Element Modeling (DEM)** software to simulate and analyze the true behavior of flowable particles — not assumptions or approximations — and deliver precise, data-driven insights. This helps us analyze existing and design new material flows quickly and cost-effectively.

RETURN ON INVESTMENT



Optimize product
throughput



Improve product
quality, finishing,
and coating



Decrease rework and
waste by minimizing
particle damage



Lengthen
equipment lifespans
by minimizing wear

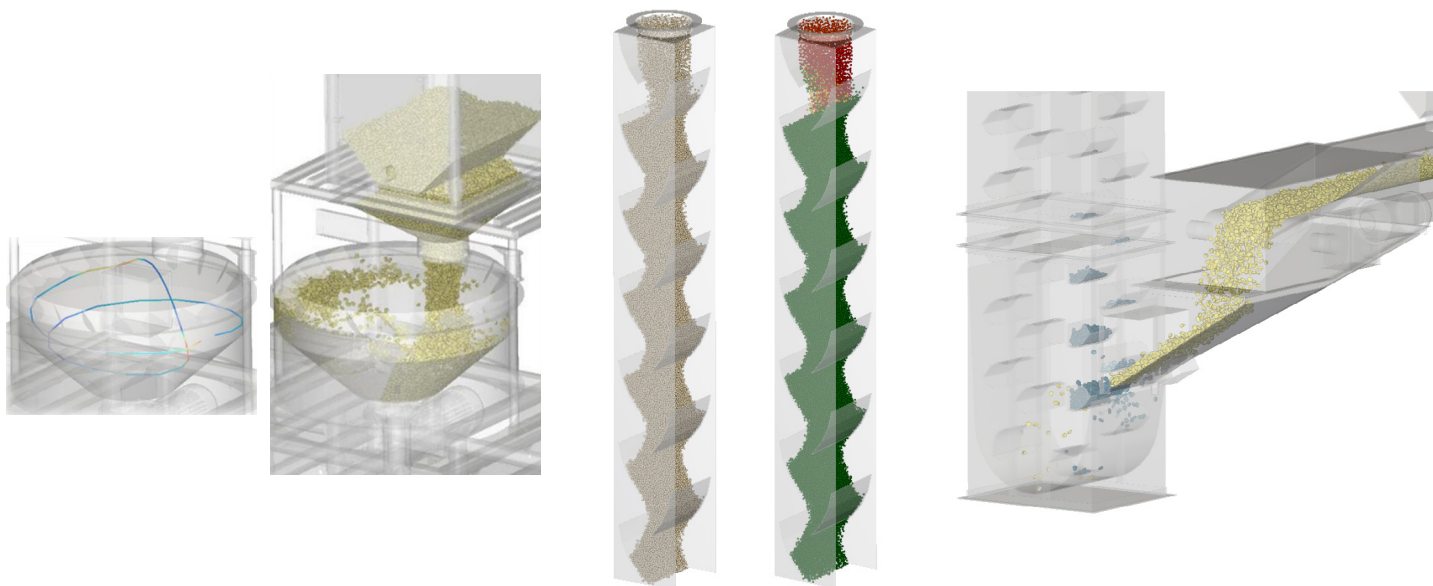


Train your staff
virtually

TAILORED SOLUTIONS FOR BULK SOLIDS PROCESSES

DEM analysis is highly effective for any industry handling dry, flowable materials, enabling tailored solutions across a wide range of bulk solids processes. When gentle handling is essential, our simulations provide detailed particle-level data to optimize handling systems and minimize product degradation. And when material or equipment reliability is critical, DEM reveals stress and wear patterns at key contact points, supporting proactive identification and mitigation of potential failure risks. **In addition to the following applications, we can tailor our approach to your specific process.**

PARTICLE FLOW ANALYSIS EXAMPLES



SEED TREATERS

- Evaluate wear to particles and equipment with impact force and energy data
- Assess coating performance with trajectory profiles

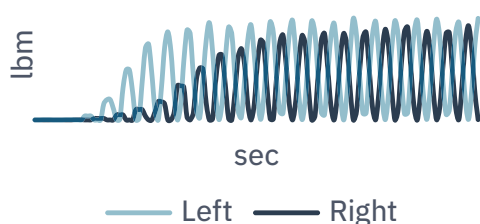
LETDOWN LADDERS

- Examine particle velocity to provide gentle handling solutions
- Measure and guarantee throughput capacity

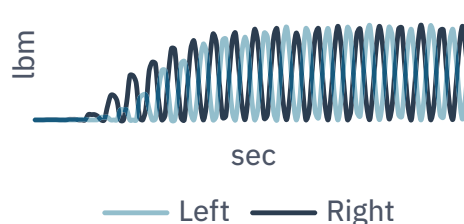
CONVEYOR TRANSITIONS AND BUCKET ELEVATOR LOADING

- Optimize flow and wear within transitions
- Ensure efficient and even bucket loading

Bucket Loading without Baffles



Bucket Loading with Baffles



SCHEDULE A CONSULTATION TODAY

Submit a request via our [contact form](#), email [Mike Larson](#) or call **515.231.9577**.
keenprojectsolutions.com / 3001 SE Convenience Blvd. Suite 101 / Ankeny, Iowa 50021