

Forward Thinking. Real Results.

NATIONAL BULK EQUIPMENT

Dry Bulk Material Handling Systems for Food Packaging & Processing Applications

NBE bulk material processing systems and bulk material handling equipment deliver accurate, long-lasting, and safe operation regardless of material characteristics, line speed requirements, or process complexity. NBE material handling equipment and automated process systems include: bulk bag dischargers, bulk bag fillers, container dischargers, conveyance systems, storage, mixing and blending, weigh systems, and complete automation control design and manufacturing.

• Bulk Bag & Container Dischargers:

NBE process-integrated bulk bag and container discharging systems provide a total material process flow advantage; improving material introduction efficiency and ensuring accurate downstream material supply.



• Bulk Bag Fillers:

NBE bulk bag filling systems provide stable, accurately filled, dust-free bulk bags by managing application requirements such as material characteristics, fill rates, feeding equipment, and other process demands.



• Material Mixing & Blending:

NBE material mixing and blending systems process pellets, regrinds, and other free-flowing granular material. Complete systems provide fully-automated material introduction, mixing, discharge, and transfer of finished product to downstream equipment.



• Material Storage:

NBE material storage systems range from in-line agitator hoppers to large capacity silos designed to enable processing operations to profitably manage procurement, supply, and line introduction of bulk materials.



• Weigh Systems:

NBE weigh systems include NTEP-certified weighing to ensure accuracy of plus/minus 0.5%. NBE weigh system controls integrate with upstream systems to provide automated operation.



• Integrated Automation:

NBE built, and UL listed, automation controls include system-wide sensing, monitoring, communication, and operation. NBE integrated automation manages a complete processing operation from a single, menu-driven, touch screen interface.



“Every NBE bulk material handling system design starts with forward thinking; looking upstream and downstream to ensure accurate, repeatable delivery of your finished product. NBE material handling systems also deliver real results; the confidence that your finished product continuously meets process requirements, and ultimately, the approval of your customers. That’s our corporate mission. Forward Thinking. Real Results.”

Todd Reed, President

Integrated Automation

NBE automated bulk material handling systems fully integrate with upstream and downstream operations to ensure total line efficiency. From performance-proven design and construction, to custom-programmed PLCs and HMIs, NBE integrated automation centralizes system monitoring, sensing, communications, and reporting to a single, menu-driven controller interface. NBE automation optimizes line throughput, increases material delivery accuracy, and improves labor utilization. NBE integrated automation benefits include:



- Control of multiple process functions from one HMI.
- Custom PLC and HMI programming integrating legacy systems; Ethernet, PROFIBUS, and more.
- UL listed panels, designed and built by NBE. 508A or Class I, Div. 1 and 2, Groups A-D, F, and G.
- Process flow modeling, P&IDs, Factory Acceptance Testing.

Product Development & Production



NBE operations cover over 70,000 square feet, including a dedicated equipment R&D and testing lab. NBE equipment and process systems are produced using a fully-integrated engineering and manufacturing system supported by MRP operations and ISO 9001:2000-certified production procedures. This vertically integrated engineering and production environment enables NBE to produce equipment and systems to exceptional quality standards, within strict production schedules.

Equipment Design & Construction



Every dry bulk material handling unit and automated material processing system produced by NBE represents decades of design engineering expertise and an industry-leading, technologically-advanced manufacturing operation, including:

- 3-D product modeling to render pre-production equipment designs in 360° views, and in facility layout views.
- Equipment construction specifications that set the market standard, such as:
 - Largest standard hydraulic and pneumatic cylinder bore sizes.
 - Highest motor HP and torque rating on gear reducers and drives.
 - Heavier gauge sheet and plate construction with more robust structural tubing framework in carbon steel or 304/316L stainless steel.
- Integrated, in-house manufacturing and equipment fabrication systems, including:
 - Automated laser tables for highly accurate sheet and plate cutting to ensure tight fit and quality finish.
 - Rolls and press breaks for custom forming of metal plate and angle rolls.
 - Dedicated machining centers for high-speed production of NBE components to exacting tolerances.
 - Self-contained surface finishing facilities for defect-free sandblasting, coatings application, and final surface inspection.
 - Enclosed electrical panel build facility for construction of high quality cabinets and enclosures.



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