



Product News

Key Technology Introduces VERYX® Digital Sorters for Green Beans

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Key Technology introduces the VERYX® family of digital sorters for green beans. These chute- and belt-fed sorters identify and remove extraneous vegetable matter (EVM), including stalks, calyx, stems and several other types of unwanted vegetable materials often found with harvested green beans, as well as beans with blemishes and foreign material (FM) such as sticks, wood, glass and more. With optional three-way sorting, VERYX separates beans for rework while rejecting waste product and FM and passing good beans. Through improved sort accuracy, VERYX increases the removal of EVM, FM and defects to enhance product quality while virtually eliminating false rejects to maximize yield.



Ideal for many product varieties, **VERYX** can be tailored to sort whole or cut green beans, fresh or frozen, for fresh pack, frozen and canned product applications. These modular sorters are configured with the optimal sensor types, sensor positions, lighting, ejection system, product handling and software to meet the specific needs of each green bean processor. For multi-product lines that also process other vegetables such as cut corn, peas, carrots, beets and more, **VERYX** maximizes production flexibility with fast and accurate recipe-driven changeovers that ensure repeatable results. With chute- and belt-fed sorters available in a variety of widths for low- to high-capacity processing lines, **VERYX** can sort green beans before or after blanching and after freezing prior to packaging, depending on the products being produced and the processor's objectives. Thanks to inspection zones that are wider than other sorters with a similar footprint, **VERYX** enables processors to increase their throughputs by up to 15 percent while

conserving floorspace. Depending on the **VERYX** model size, system capacities range from up to 5.5 metric tons (12,000 lb.) of green beans per hour for VERYX B70 to up to 19 metric tons (42,000 lb.) of green beans per hour for VERYX B210, the largest sorter in the VERYX product family. Capacities are dependent on incoming defect levels and actual varieties. **VERYX** features next-generation 4-channel cameras and laser scanners that offer twice the resolution of previous generation sensors. Leveraging Key's unique multi-sensor Pixel Fusion™ detection technology and object-based recognition with advanced shape sorting algorithms, **VERYX** significantly improves detection accuracy. An innovative mechanical architecture, specialized product handling systems and new ejection system accurately separate EVM, FM and defects while virtually eliminating false rejects. Pixel Fusion is a patented detection technology that combines pixel-level input from multiple cameras and laser sensors to provide the clearest possible differentiation between good product, defects, FM and EVM using multispectral analysis. Object-based recognition and advanced shape sorting algorithms combine to recognize green beans with attached stalks, calyx and stems. Those beans can be separated for rework using the optimal ejection strategy for each item in the product stream. VERYX sorters offer in-air inspection and the ability to view all sides of the product, achieving complete surface inspection with no blind spots for superior detection and removal of green beans with surface blemishes. All-sided inspection is sustained throughout the production cycle without requiring manual cleaning, because **VERYX**'s architecture strategically positions sensor windows, light sources and sensor backgrounds away from product splatter and contamination zones. *"At Key, we have a long history and deep expertise sorting green beans, so we're in a great position to leverage our knowledge to improve the process, taking advantage of the newest detection technologies. We combine the most advanced green bean optical sorting with our mechanical grading and sizing systems and conveying solutions to help processors elevate their product quality and maximize yield," said **Marco Azzaretti**, Advanced Inspection Systems Product Manager at **Key Technology**. "VERYX is an extremely versatile sorter. We customize each system to the exact needs the processor, considering the nuances of specific green bean varieties and regional differences in customer needs."* As the world's most intelligent sorter, **VERYX** includes smart system features such as auto-learning, self-adjustment algorithms, predictive diagnostics and smart alerts including the **FMAIert™** feature. This enables **VERYX** to automatically adapt to normal changes in the product and environment, maintaining optimal performance. As result, **VERYX** can operate virtually unattended during normal production. Minimal sanitation requirements and simplified maintenance help reduce downtime and the customer's total cost of ownership. To further ease use and simplify operator

training, Key developed an intuitive new UI designed with Human-Machine Interface experts. The **VERYX** UI provides different views to users of various levels depending on their needs. Recipe-driven operation ensures customers can count on consistent performance from their **VERYX** sorter day in, day out, including when running the same product across multiple sorters on different lines. For customers running multiple product types on the same system, the ergonomic **VERYX** UI enables the sorter to run a new product or grade at the touch of a button. Operator qualification requirements are reduced, allowing a minimally-skilled individual to become a proficient user of the technology in less than one hour. **VERYX** features Key's Information Analytics, a powerful set of data acquisition and connectivity capabilities that allow users to gather a broad range of product and operational data from the sorter. Data can be shared for off-line analysis or exchanged directly with a customer's SCADA, Manufacturing Execution System or PLC network. [Key](#) manufactures **VERYX** sorters in both the U.S. and Europe, and supports customers worldwide through its global sales and service network. [About Key Technology, Inc.](#) **Key Technology** (NASDAQ: KTEC) *is a global leader in the design and manufacture of automation systems including digital sorters, conveyors and other processing equipment. Applying processing knowledge and application expertise, Key helps customers in the food processing and other industries improve quality, increase yield, and reduce cost. An ISO-9001 certified company, Key manufactures its products at its headquarters in Walla Walla, Washington, USA; Beusichem, the Netherlands; Hasselt, Belgium; and Redmond, Oregon, USA. Key offers customer demonstration and testing services at five locations including Walla Walla, Beusichem, and Hasselt as well as Sacramento, California, USA and Melbourne, Australia; and maintains a sales and service office in Santiago de Queretaro, Mexico.*