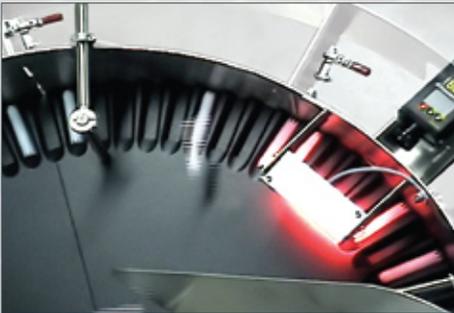




Medical Device Small Part Assembly Sort Parts, Assemble & Load Labeler



Process, Features & Benefits

Component A is sorted in a Farason Slant Disc Sorter that singulates the cylindrical parts, hangs them by the larger diameter end, and releases them into a C-shaped chute, such that they exit onto a conveyor traveling supine, end to end, uniformly oriented.

Component B is sorted in a Farason Pocketed Disc Sorter that singulates the tubular part in pockets located radial on a peripheral edge of a rotating plastic disc. The pockets are contoured to suit the part shape. A Banner Presence Plus camera, mounted to the outside of the sorter bowl, looks down inside on the parts as they pass beneath, to determine orientation by identifying the presence or absence of castellation. Incorrectly oriented components are ejected from their pockets by a blast of air, before they can exit the feeder bowl.

The Farason Slant Disc and Pocketed Disc Sorters are ideal for a wide range of components, and offer sufficient flexibility by use of tool-less, nonadjustable change parts tooling for a family of component sizes and shapes.

Component B exits the bottom of the sorter and enters a 90° vertical twister that reorients it so that its longitudinal orientation is across a rubber belted conveyor with diameter to diameter in the direction of travel. The components are fed around the end of the conveyor and into a vertical chute where a column is formed.

The walking beam assembly carriage removes Components B from the column and transfers them toward Component A. Traveling perpendicular to the assembly carriage, Component A enters the walking beam and travels parallel and adjacent to a corresponding Component B.

The walking beam provides controlled, accurate movement and positioning of the components, to allow for subsequent assembly. Assembly occurs downstream by means of a pneumatic pusher that extends and contacts Component A and drives it into Component B. An overhead containment holds Component B in position during the assembly process.

A Banner Laser Gauging Sensor verifies components have been assembled to a precise overall length. A two-axis Cartesian style pick and place, equipped with a 6-up vacuum end effector, removes assemblies from the walking beam and transfers them into the fixtures of an Accraply Labeler infeed conveyor. Assemblies deemed as rejects are not removed from the walking beam and exit off the end into a collection receptacle.

More Information

For more information on this, and many other Farason projects, please visit our website at www.farason.com or call us at (610) 383-6224.

