

REO Processing

Optical Sorting

Optical Sorting is one of the most efficient ways to recover contaminated plastic pellets or to upgrade pellets to greater than prime quality. Originally developed for the food industry, optical sorting is used today across a wide range of industries. It is particularly effective at solving post extrusions problems. There are several *Optical Sorting* processes that can be used to separate good pellets from contaminated (fine carbon speck) colored, burnt, or deformed pellets.

There are three primary types of Optical Sorting: Fine Speck, Color and Shape.

Fine Speck Sorting: These machines use ultra-high definition cameras to detect small specks on or within the pellets. Some machines can detect contaminants as small as 60-microns. Once a pellet with a defect is identified the machine removes it from the stream with a puff of air from an ejector.

Color Sorting: Color Sorters use high density color cameras to identify pellets that deviate from a specified color. Typically, to be removed, more than 25% of the pellet needs to be off specification to be identified. Additionally, the color must deviate by approximately 4 RGB units.

Shape Sorting: Shape Sorting is generally connected to Fine Speck or Color Sorting. This process is completed by either an additional laser that is added to the primary machine or by software analyzing the data from the cameras. Irregular shapes down to 5 camera pixels can be detected.

Product contaminated by carbon specks, mixed color resins, burnt pellets or damaged pellets from dull dies can be recovered using these Optical Sorting processes. Product needed for critical medical, optical, or sheeting applications can be upgraded by removing the normally acceptable level of fine speck contamination.

REO is equipped to address all your *Optical Sorting* needs. Our array of equipment includes multiple Color, Fine Speck and Shape Sorters. For those customers who require more than one of these services, REO has equipment that combines all these technologies into single units. Our state-of-the-art equipment conveys product through these sorters to further optimize performance for different flowing materials. REO has units located in West Virginia and Texas.

Please contact REO to discuss your *Optical Sorting* and other Tolling needs.

www.reoprocessing.com

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