



# WELL ROOTED

MSS helps its customer achieve success through a combination of R&D and a commitment to customer support

**M**SS, Inc., based in Nashville, Tennessee, has deep roots in the recycling industry. Founded 40 years ago by a pair of Vanderbilt University Ph.D.s the company has long prided itself on innovation and the application of advanced technology.

For many years, founding partner Dr. Garry Kenny led the company. Under his leadership, the firm produced the first commercially successful eddy-current separator, the PULSORT™, which was used to separate nonferrous materials, such as aluminum cans, from municipal waste. Numerous other products introduced over the years put MSS on the map as a leader in materials separation.

Today MSS offers a portfolio of sensor-based products that leverage high-resolution near-infrared (NIR), color camera and induction metal detector technologies. The equipment helps recycling operations upgrade and maximize recovery when processing plastics, e-scrap, paper, C&D, metals, and glass. It also ensures contaminant-free RDF and biomass products.

“MSS has been issued over 45 patents with several still pending. The company has really been built on the bedrock of technological innovation,” says Greg Thibado, vice president and

general manager of MSS. “We have a dedicated team of scientists that engage in continuous R&D. This allows us to develop and refine applications to meet our customers’ needs.”

In 2003, MSS was acquired by San Diego, California-based CP Manufacturing (a division of CP Group of Companies), the industry leader in supplying automated processing and sorting systems for material recovery and recycling facilities. Since then, MSS has continued to innovate equipment that has become standard in the industry.

## Technology That Leads the Industry

As the recycling industry continued to grow ever more sophisticated, the need to simultaneously maximize production rates while increasing recovery became more pressing than ever. This dual need drove MSS to develop its early products like the BottleSort® and PaperSort™.

“Back in 1991 we offered the BottleSort® line, an automated system designed to process postconsumer plastic containers. In 1999, we introduced the world’s first commercially available optical paper sorting equipment, the PaperSort™,” says MSS Sales Director Felix Hottenstein. “While other

companies are only now beginning to offer detection-based sorting equipment, we’ve been developing these solutions for decades.”

Today, MSS’s high-resolution NIR (CIRRUS™), color (L-VIS™) and metal sorters (MetalSort™) represent the industry’s best-in-class technology. MSS equipment provides two types of detection: 1) top-down reflection, or 2) illuminating from the bottom to look through material. The equipment is also capable of doing both at the same time, if the application requires it.

“Our technology also allows the back illuminated reference color to be changed on the fly when processing different product streams. This helps to maximize materials identification and separation,” says Thibado. “Some suppliers have offered background references through things like colored conveyor belts. However, keeping those clean, allowing the color to be true, is very difficult in a recycling plant. We do it with LED lighting and have included ways to keep it clean to ensure true color accuracy.”

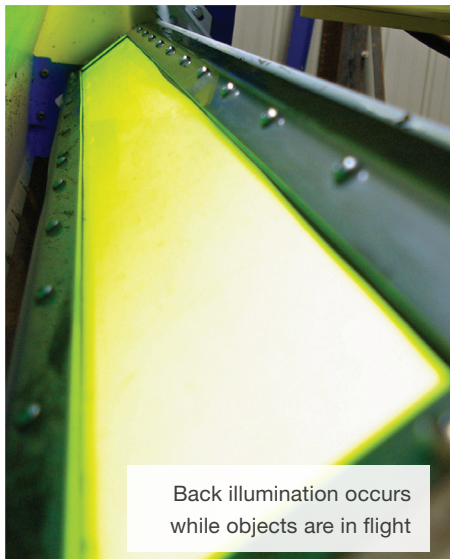
Thibado continues, “Our back illumination occurs while objects are in flight. The fact that we have been sorting materials in flight for more than 14 years allows us to fully leverage this technology. The air ejector then actuates to produce much cleaner products every time.”

“Our new NIR technology allows us to see substrates through labels when processing materials like PET bottles with PLA, PVC and OPP labels” says Hottenstein. “This allows recyclers to maximize production and separation at

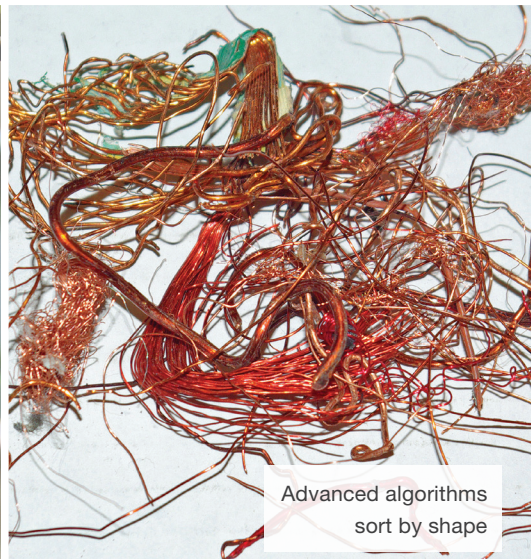




CIRRUS™ - the newest high resolution NIR and color sorter



Back illumination occurs while objects are in flight



Advanced algorithms sort by shape

the same time, leading to increased plant production and profitability.”

Hottenstein adds, “Our patented materials handling technology also allows us to sort paper at up to 1,200 feet per minute conveyor speeds. This is also a distinct operating advantage that allows recycling operations to maximize production and profitability. For MSS, it has always been about helping recyclers maximize recovery, purity and profitability.”

The sorting equipment manufacturer also prides itself on the fact that all software is developed in-house. This means that MSS customers receive a vertically integrated software and hardware solution.

“For example, one of the most recent developments by our software engineers

customers find them very quick to learn and easy to use,” offers Thibado.

### Focused on the Future

Later this year, MSS will move into a new facility in the Nashville area. It’s an important move for the 40-year-old business that will allow it to further extend its deep commitment to customers, product development and support.

“Our new building allows us to significantly increase the space dedicated to R&D,” says Thibado. “New product development and continual refinement of current technologies has always been important to MSS. Our new facility substantially expands the space for that and allows us to increase the number of engineers dedicated to that work.”

to apply to a given material and the best system configuration to maximize recovery, purity, and production. “Our new facility will have more extensive testing and demonstration capabilities,” says Thibado. “This will allow us to collaborate even more effectively with our customers and other CP Group divisions to demonstrate how our equipment can make their plants more effective and profitable.”

Hottenstein explains, “While the number of MSS installations grows worldwide, we have more processors approaching us in need of proven solutions. They know the MSS name and that our equipment works not just in a laboratory but in high-production environments. High-volume production is often essential to ensure consistent profitability. We understand that.”

Offering best-in-class technology that delivers superior operating results has been the hallmark of MSS throughout its history. The company’s roots in R&D combine with an absolute commitment to customer support to help its customers achieve the highest possible success.

**Our back illumination occurs while objects are in flight. The fact that we have been sorting materials in flight for more than 14 years allows us to fully leverage this technology. The air ejector then actuates to produce much cleaner products every time.**

has been advanced algorithms for the sorting of material by shape. This is particularly useful when sorting fine materials, such as wire from electronics scrap,” says Hottenstein.

MSS has developed numerous plants and retrofits for electronics processing, helping the industry manage these material flows in a profitable manner.

Additionally, all MSS equipment is equipped with a state-of-the-art user interface. “The graphics and logic make our control systems highly intuitive. Our

The new facility is a response to dramatic growth that MSS has experienced during recent years. As part of the CP Group, MSS supplies other CP divisions while also working with long-time customers, emerging sectors and recycling operations around the world.

“Our business in processing glass, electronics, and plastics has remained an important part of our customer base,” says Hottenstein.

MSS conducts ongoing testing to determine the best sorting technology

**MSS** | **40 YEARS**  
OF INNOVATION  
1974 - 2014

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